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A PRELIMINARY BERIK PHONOLOGY

Peter and Susan Westrum

ICHITAS:

Kertas ini menyajikan analisa tatabunyi pendahuluan mengenai bahasa Berik. Bahasa Berik mempunyai 30 fonim, 23 konsonan dan 7
vokal. Penjelasan mengenai fonim-fonim ini dan contoh-contohnya dibe-
rikani dalam kertas ini. Kontras ditunjukkan dengan mempergunakan
titik-titik artikalisi dan distribusi dalam-kata fonim-fonim tersebut.
Deskripsi, variasi, dan distribusi suku kata juga ditunjukkan. Pada
akhir analisa disajikan pembacaraan mengenai kata-fonologis, yang
merupakan suatu untai dari sampai empat suku kata dengan tekanan uta-
ma hampir selalu pada suku kata pertama. Ejaan menurut pola Bahasa
Indonesia juga disajikan, dan naskah bahasa Berik terdapat pada akhir
kertas ini.

0 INTRODUCTION
1 INTERPRETATION
2 PHONEMES
3 THE SYLLABLE
4 THE PHONOLOGICAL WORD
5 TENTATIVE ORTHOGRAPHY
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0 INTRODUCTION

Kira-kira ada 1000 orang yang berbicara dalam bahasa Berik
dan merupakan kelompok-kelompok campung disepanjang sugai Tor dan ter-
letak di pantai utara Propinsi Irian Jaya, Indonesia. Bahasa Berik
tidak ada hubungan family dengan Austronesia. Berik juga "lingua
franca" pada kelompok-kelompok kecil di daerah itu, yakni Mander pada
anak cabang sungai Tor dan Segar Tor pada hulu sungai Tor. Keteragan
yang lengkap tentang suku Berik, bisa membaca buku Karangan Oesterwal,
G., People of the Tor, Assen, 1961.

Kami mulai belajar bahasa Berik di kampung Tenwer pada tang-
gal 1 Oktober 1974, dan melanjutkan lapangan pekerjaan ini sampai bulan
September 1974 dengan hanya selama enam bulan belajar bahasa itu
di daerah tersebut. Penduduk Tenwer dan daerah Tor dengan senang
hati mengajar kami bahasa mereka. Terutama Matius Nussey, Niko Borom
dan Maggelen Borom banyak menolong kami. Kami bekerja dibawah lin-
dungan Summer Institute of Linguistics yang bekerjasama dengan Univers-
itas Cenderwasih. Kami juga berterima kasih kepada penasehat
S.I.L., Nona Anne Cochran, yang sangat menolong dengan urai-
uraiannya.
A PRELIMINARY BERIK PHONOLOGY

The Berik language is spoken by about 1000 people grouped in villages along the Tor river on the north coast of the province of Irian Jaya (formerly Dutch New Guinea), Indonesia. It is a non-Austronesian language of the Tor stock. Berik is also the "lingua franca" of smaller language groups in the area, namely the Mander on a tributary of the Tor and the Segar Tor at the Tor's headwaters. For more detailed information about the Berik people, see Oesterwal, G., People of the Tor, Assen, 1961.

We began our study of the Berik language in the village of Tenwer on October 1, 1973 and have continued this field work to the present, September, 1974, with six of those months actually in the language area. The residents of Tenwer and the Tor area have willingly taught us their language. More specifically, Matius Russey, Noko Borom, and Magdelena Borom have been especially helpful. We are doing our work under the auspices of the Summer Institute of Linguistics in co-operation with the Cenderawasih University. We are grateful for S.I.L. consultant, Miss Anne Cochran, who has helped us with the analysis.

1 INTERPRETATION
1.1 Contoid versus Vowoid
(y) versus (i)
The voiced high close front unrounded vowel occurs in the non-syllabic position as (y) and in the syllabic position as (i).
['yɔpʰə?] 'psayə' ['iʃʰan] 'liver'
['sə̝sə̝yeʔ] 'black' ['kʰitə̝bə̝l] 'give'
(w) versus (u)
The voiced high close back rounded vowel occurs in the non-syllabic position as (w) and in the syllabic position as (u).
['wɔʃə̝m] 'cough' ['uʃə̝mə̝] 'urinate'
['wə̝wə̝s] 'blood' ['duʃə̝wə̝f] 'behind'
['gu] 'cassowary'

A PRELIMINARY BERIK PHONOLOGY

1.2 Sequence versus Unit

Contoids

Non-suspect CV patterns in Berik are as follows:
CV: ['dun] 'spatula'
CVCC: ['mə̝nə̝p] 'room'
CVCCVC: ['wə̝tə̝fə̝m] ‘waist’

Non-suspect contoid cluster patterns in Berik are as follows:
VCVC: ['tə̝mə̝n] 'your'
CVCCVC: ['sə̝mə̝nə̝f] 'good'
CVCCVCV: ['də̝mə̝nə̝nə̝m] 'one'
CVCC: ['nuə̝nə̝f] 'want to sit'

Since Berik has no non-suspect word initial dual consonant clusters or word medial triple consonant clusters,

(1) (pʰ), (tʰ), and (kʰ) are interpreted as single segments.
['pʰə̝sə̝pʰ] 'a boy's name'
['tʰə̝mə̝l] 'eat'
['kʰə̝nə̝pʰ] 'button'
['tʰə̝fə̝] 'dirty'

(2) (bʰ) is interpreted as a labialized consonant.
['bʰə̝fə̝] 'pain'

(3) The affricate (də̝) is interpreted as a single unit and will be written as (j).
['də̝fə̝m] /'ajə̝m/ 'I'

Also, a lengthened nasal is interpreted as a geminate cluster of two nasals crossing a syllable boundary and will be written as CC.

These occur very rarely.
['tə̝nə̝i] ['tə̝nə̝i] 'bead'
Vowels

Non-suspect VC patterns in Berik are as follows:

VC  ['oʔ]  'teeth'
WVC  ['iʔiʔ]  'thunder'
VCVCV  ['oʔeʔeʔ]  'chim'
VCVCVCV  ['onemenaʔ]  'wild'

Non-suspect vocoid cluster patterns in Berik are as follows:

VCVCV  [eʔeminiʔ]  'build'
CVVCVC  [seafteʔ]  'all'

There are no patterns with V final as all final vowels not followed by any other consonant are followed by a glottal stop. Since glottals only occur in this position, we conclude that they are predictable. Thus, they will no longer be written in this paper.

Since Berik has non-suspect word initial and word medial vocoid cluster,

(1) the suspect vocoid cluster (iæ), (ia), (ui), (ue), and (ua) which have two mora timing are interpreted as VV.

['giFian]  'shallow'
['tiajia]  'leaf'
['suin]  'sit'

(2) The suspect vocoid glides (ai), (ao), (ui), and (oi) which have one mora timing and in which both vocoids receive equal stress are interpreted as complex syllable nuclei and are also written as VV.

['siyi]  'careful'
['titseui]  'throw away'
['soʔe]  'there'

It is interesting to note that in all suspect vocoid clusters which have two mora timing, the first member is a high vocoid and the second member is lower. In the suspect glides which have one mora timing, the first member is lower than the second, or both are high and close.

2 Phonemes

2.1 Phoneme Chart

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<tr>
<td>Low open</td>
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</tbody>
</table>
2.2 Description of Phonemes

All Berik phones are produced with egressive lung air.

**Consonants**

/p/ [p] Voiceless bilabial stop.
Occurs word initially, as the first member of a CC, and word finally and is in free variation with [pʰ] in all these positions.

/pasip/ ['pasip] 'a boy's name'
/yapka/ ['yapka] 'papaya'
/onap/ ['onap] 'jungle'

[pʰ] Voiceless bilabial aspirated stop.
Occurs word initially, as the first member of a CC, and word finally and is in free variation with [p] in all these positions.

/pasipʰ/ ['pasipʰ] 'a boy's name'
/yapkaʰ/ ['yapkaʰ] 'papaya'
/onapʰ/ ['onapʰ] 'jungle'

/b/ [b] Voiced bilabial stop.
Occurs word initially, intervocically, and as the second member of a CC.

/betef/ ['betef] 'bamboo needle'
/surbun/ ['surbun] 'born'
/gubi/ ['gubi] 'get'

/bw/ [bʷ] Voiced bilabial labialized stop.
Occurs word initially and intervocically.

/bwera/ ['bwera] 'pain'
/bubwa/ ['bubwa] 'ulcer'

/t/ [t] Voiceless alveolar stop.
Occurs in all positions and is in free variation with [tʰ] in all positions.

/tarkwena/ ['tarkwena] 'scab'
/orotona/ ['orotona] 'boil'
/gwełman/ ['gwełman] 'near'
/kaktař/ ['kaktař] 'grass'
/at/ ['at] 'canoe'

[tʰ] Voiceless alveolar aspirated stop.
Occurs in all positions and is in free variation with [t] in all positions.

/tarkwenaʰ/ ['tarkwenaʰ] 'scab'
/orotonaʰ/ ['orotonaʰ] 'boil'
/gwełmanʰ/ ['gwełmanʰ] 'near'
/kaktařʰ/ ['kaktařʰ] 'grass'
/atʰ/ ['atʰ] 'canoe'

/tw/ [tʷ] Voiceless alveolar labialized stop.
Occurs word initially and as the second member of a CC.

/twir/ ['twir] 'uncooked sago'
/tantan/ ['tantan] 'baby'

/d/ [d] Voiced alveolar stop.
Occurs word initially, intervocically, and as the first and second member of a CC.

/darga/ ['darga] 'a man's name'
/bodik/ ['bodikʰ] 'headband'
/medna/ ['medna] 'bone'
/ungundusa/ ['ungundusa] 'large'

/dw/ [dʷ] Voiced alveolar labialized stop.
Occurs word initially and intervocically.
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/dwak/  ['dawak]  'head'
/udwas/  ['udwas]  'a family name'

/k/ [k] Voiceless velar stop.
Occurs in all positions and is in free variation with [kʰ].
/koksa/  ['koksa]  'bud'
/abaka/  ['abaka]  'a long time'
/komkoma/  ['komkoma]  'thief'
/sirwak/  ['siʁwayk]  'betelnut'

[kʰ] Voiceless velar aspirated stop.
Occurs in all positions and is in free variation with [k].
/koksa/  ['kʰoksa]  'bud'
/abaka/  ['abakaʰ]  'a long time'
/komkoma/  ['kʰomkoma]  'thief'
/sirwak/  ['siʁwakʰ]  'betelnut'

/kʷ/ [kʰ] Voiceless velar labialized stop.
Occurs word initially, intervocally, and as the second member of a CC.
/k'^i'nar/  ['kʰi'nar]  'jungle wanderer'
/tokwa/  ['tokwə]  'fire'
/tarkwena/  ['tarkwena]  'scab'

/g/ [g] Voiced velar stop.
Occurs word initially, intervocally, and as the first and second member of a CC.
/gom/  ['gom]  'thigh'
/tagara/  ['tagarə]  'chop'
/yogbet/  ['yogbetʰ]  'a woman's name'
/dango/  ['daŋgo]  'chest'

/gʷ/ [gʰ] Voiced velar labialized stop.
Occurs word initially, intervocally, and as the second

A PRELIMINARY BERIK PHONOLOGY

/gwana/  ['gʷiŋwa]  'go'
/yaʃiŋgwa/  ['yaʃiŋgwa]  'girl'
/foʃiŋgwa/  ['foʃiŋgwa]  'whistle'

Occurs in all positions.
/fas/  ['fas]  'none'
/ofu/  ['ofu]  'bee'
/safa/  ['safa]  'hit'
/kasfin/  ['kasfin]  'cassava'
/tof/  ['tof]  'foot'

/fʷ/ [fʰ] Voiceless labiodental labialized fricative.
Occurs word initially, intervocally, and as the second member of a CC.
/fwerwa/  ['fʰerwa]  'where'
/sofwe/  ['sofwe]  'go'
/fwerfwa/  ['fʰerfwa]  'thin'

/s/ [s] Voiceless alveolar grooved fricative.
Occurs in all positions.
/son/  ['son]  'ashes'
/tisiŋ/  ['tisiŋ]  'go tomorrow'
/bosna/  ['bosna]  'name'
/nensa/  ['nensa]  'different'
/fas/  ['fas]  'none'

/sw/ [sʰ] Voiceless alveolar labialized grooved fricative.
Occurs word initially and intervocally.
/swera/  ['sʰerwa]  'gills'
/uswana/  ['uswana]  'a fruit'
/ʃ/ [ʃ]: Voiced alveopalatal grooved affricate.
Occurs word initially, intervocally, and as the second member of a CC.
/ju/ ['ju] 'bird'
/nejam/ ['nejam] 'we'
/gamerje/ ['gamerje] 'not yet'

/m/ [m]: Voiced bilabial nasal.
Occurs in all positions.
/mase/ ['mase] 'nose'
/gumap/ ['gumap] 'lap'
/jimna/ ['jimna] 'his'
/gwetman/ ['gwetman] 'near'
/mom/ ['mom] 'breast'

/n/ [n]: Voiced alveolar nasal.
Occurs in all positions.
/nuna/ ['nuna] 'ripe'
/binbini/ ['binbini] 'sharp'
/falnu/ ['falnu] 'on top of'
/nin/ ['nin] 'meat'

/ŋ/ [ŋ]: Voiced velar nasal.
Occurs intervocally, as the first member of a CC and word finally.
/tninanna/ ['tninanna] 'carry'
/banbansona/ ['banbansona] 'clap'
/aiyan/ ['aiyan] 'chicken'

/r/ [r]: Voiced alveolar flap.
Occurs intervocally, as the first member of a CC and word finally and is in free variation with [F] according to speakers idiolect.

/ɬ/ [ɬ] Voiced alveolar lateral.
Tends to occur intervocally as the onset of a closed syllable, in free variation with [ʃ] as the first member of a CC whose second member is a non-nasal, and occurs word finally following low vowels.
/foriar/ ['foʃiaɾ] 'arrive'
/irjm/ ['iʃjim] 'day before yesterday'

/ɭ/ [ɭ] Voiced alveolar lateral flap.
Tends to occur intervocally as the onset of an open syllable and occurs word finally following central vowels.
/tesala/ ['tʃala] 'sago leaves'
/jabol/ ['j abol] 'gable'

/ʃː/ [ʃː] Voiced velar constricted lateral.
Occurs word finally after high vowels.
/gwil/ ['gwil] 'banana'

[r] Voiced retroflexed nonsyllabic voiced.
Occurs medially in free variation with [ɭ] as the first member of a consonant cluster whose second member is a non-nasal.
/nabalsafa/ ['nabalsafa] 'hair'

[d] Voiced alveolar retroflexed stop.
Occurs as the first member of a consonant cluster whose second member is a nasal.
/bubolna/ ['bubolna] 'long'

/w/ [w]: Voiced bilabial semi-consonant.
Occurs word initially, intervocally, and as the second...
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\[/\text{werem}/ \quad [\text{werem}] \quad 'cough'\]
\[/\text{iwili}/ \quad [\text{iwili}] \quad 'turtle'\]
\[/\text{falwinir}/ \quad [\text{falwinir}] \quad 'under'\]

\(/y/ \quad [\text{y}]\) Voiced palatal semi-consonant.

Occurs word initially, intervocally, and as the second member of a CC.
\[/\text{yafintogwai}/ \quad [\text{yafintogwai}] \quad 'girl'\]
\[/\text{aiyu}/ \quad [\text{aiyu}] \quad 'sago basket'\]
\[/\text{aolyan}/ \quad [\text{aolyan}] \quad 'got go'\]

Vowels

\(/i/ \quad [\text{i}]\) Voiced high close front unrounded vocoid.

Occurs in all positions.
\[/\text{inanaf}/ \quad [\text{inanaf}] \quad hiccough'\]
\[/\text{fina}/ \quad [\text{fina}] \quad 'stand'\]
\[/\text{sinsi}/ \quad [\text{sinsi}] \quad 'white'\]
\[/\text{tiala}/ \quad [\text{tiala}] \quad 'leaf'\]
\[/\text{daiwer}/ \quad [\text{daiwer}] \quad 'a boy's name'\]

\(/e/ \quad [\text{e}]\) Voiced high open front unrounded vocoid.

Occurs word initially and medially.
\[/\text{innai}/ \quad [\text{innai}] \quad 'beads'\]
\[/\text{betik}/ \quad [\text{betik}] \quad 'mud'\]

\(/e/ \quad [\text{e}]\) Voiced mid close front unrounded vocoid.

Occurs finally and in other open syllables contiguous to /s/, /y/, /t/, and preceding other vowels.
\[/\text{seseeye}/ \quad [\text{seseeye}] \quad 'black'\]
\[/\text{iye}/ \quad [\text{iye}] \quad 'mother'\]
\[/\text{nabi tenur}/ \quad [\text{nabi tenur}] \quad 'comb'\]

\(/e/ \quad [\text{e}]\) Voiced mid open front unrounded vocoid.

Occurs in closed syllables and in open syllables contiguous to consonants other than /s/, /y/, and /t/.
\[/\text{bes}/ \quad [\text{bes}] \quad 'vegetable'\]
\[/\text{dmezna}/ \quad [\text{dmezna}] \quad 'one'\]
\[/\text{sanfer}/ \quad [\text{sanfer}] \quad 'good'\]
\[/\text{ene}/ \quad [\text{ene}] \quad 'big toe'\]

\(/a/ \quad [\text{a}]\) Voiced low close front unrounded vocoid.

Occurs word initially in initial syllables.
\[/\text{arem}/ \quad [\text{arem}] \quad 'mouth'\]
\[/\text{wakena}/ \quad [\text{wakena}] \quad 'good'\]

\(/a/ \quad [\text{a}]\) Voiced low open central unrounded vocoid.

Occurs in all positions and is in free variation with (a) word initially, medially, and finally with a tendency to (a) in stressed syllables.
\[/\text{babara}/ \quad [\text{babara}] \quad 'delicious'\]
\[/\text{kotitw}/ \quad [\text{kotitw}] \quad 'enter'\]
\[/\text{titw}/ \quad [\text{titw}] \quad 'to scratch'\]

\(/a/ \quad [\text{a}]\) Voiced mid open central unrounded vocoid.

Occurs word initially, medially, and finally in free variation with (a) with a tendency to (a) in unstressed syllables.
\[/\text{babara}/ \quad [\text{babara}] \quad 'delicious'\]

\(/u/ \quad [\text{u}]\) Voiced high close back rounded vocoid.

Occurs word initially, medially except: preceding /n/ and /k/, and finally.
A PRELIMINARY BERIK PHONOLOGY

/urum/ ['urum] 'bow (and arrow)'
/ofu/ ['ofu] 'bee'

[u] Voiced high open back rounded vocoid.
  Occurs in final syllables preceding /n/ and /k/.
/iburum/ ['iburum] 'born'
/kobuk/ ['kobuk] 'kapak'

/o/ [o] Voiced mid close back rounded vocoid.
  Occurs in all positions.
/osu/ ['osu] 'brother'
/soon/ ['soon] 'ashes'
/gwaoma/ ['gwaoma] 'yawn'
/doi/ ['doi] 'money'

2.3 Phoneme Contrasts

Consonants

There are three emic points of articulation in Berik: labial, alveolar, and velar.

The stops /p/, /t/, /k/, /b/, /d/, /g/ can be subdivided into sets by a ± voicing feature and all stops except /p/ by a ± labialization feature.

Voiceless stops contrast word initially, medially, and finally.

/pasu/ 'a boy's name' /sapusona/ 'sweep'
/tasu/ 'sago' /orotona/ 'boil'
/kasian/ 'peanut' /bokor/ 'fill'
/gumap/ 'lap'
/at/ 'canoe'
/takerbak/ 'a family name'

Voiced stops and labialized stops contrast word initially and medially.

The fricatives /f/, /h/, /s/, /sw/ can be subdivided into sets by a ± labialization feature.

The non-labialized fricatives contrast word initially, medially, and finally.

/fon/ 'net bag' /bafa/ 'why'
/son/ 'ashes' /basa/ 'what'
/sawef/ 'crayfish'
/bes/ 'vegetable'

The labialized fricatives and /j/ contrast word initially and medially.

/swera/ 'where' /sfwa/ 'go'
/swema/ 'gills' /uswam/ 'a type of fruit'
/jerem/ 'his' /ujia/ 'out-house'

The nasals /m/, /n/, /ng/ contrast word initially with the exception of /n/, medially and finally.

/mase/ 'nose' /wambata/ 'crocodile'
/nase/ 'story' /sanbaka/ 'big'
/banbanjona/ 'clap'

/ljam/ 'you'
/umiyan/ 'cloud'
/aiyan/ 'chicken'
A PRELIMINARY BERIK PHONOLOGY

The labials /p/, /b/, /kw/, /t/, /kw/ contrast word initially and medially.

/pasip/ 'a boy's name' /samusona/ 'sweep'
/batol/ 'cling' /gobali/ 'give'
/bwatiok/ 'clam shell' /bubwa/ 'ulcer'
/fatar/ 'fork' /fofangwana/ 'whistle'
/fwater/ 'old' /sowfa/ 'go'
/mato/ 'star' /koka/ 'steal'

The non-labialized alveolars /t/, /d/, /s/, /n/ contrast word initially, medially, and finally with the exception of /d/.

/tum:1/ 'eat!' /orotona/ 'boil'
/dum/ 'sago spatula' /dodok/ 'a boy's name'
/suber/ 'raft' /oso/ 'younger brother'
/nustona/ 'sleep' /konop/ 'button'
/wat/ 'palm frond' /bas/ 'okay'
/umiyan/ 'cloud'

The labialized alveolars /tw/, /dw/, /sw/ contrast with the other alveolars /t/, /d/, /s/ word medially.

/tanwai/ 'baby'
/udwa/ 'a family name'
/uswam/ 'a type of fruit'
/uja/ 'out-house'
/masola/ 'beak'
/mura/ 'month'

The velars /k/, /g/ contrast word medially and finally.

/tiala ikkini/ 'green' /mak/ 'saliwa'
/ti:lnana/ 'carry' /aiyan/ 'chicken'

All velar stops /kw/, /g/ contrast word initially and.

Vowels

There are seven phonemic vowels in Berik. They are differentiated as to high versus mid versus low tongue positions and front versus central versus back tongue positions and in the high front position as to close versus open. The vowels contrast word initially medially, and finally with the exception of /i/, /u/.

/ir/ 'yesterday' /mir/ 'forehead'
/rem/ 'your' /mur/ 'corn'
/erio/ 'afraid' /merete/ 'scare'
/area/ 'mouth' /meri/ 'illegitimate'
/are/ 'my' /armosa/ 'close'
/urum/ 'bow (and arrow)' /ura/ 'month'
/or/ 'teeth' /morele/ 'ankle'
/tafaguri/ 'five'
/aore/ 'there'
/naora/ 'two'
/muru/ 'corn'
/mugunuboro/ 'dirty'

2.4 Phoneme Distribution

Consonants

All consonants except /n/, /l/, /r/ occur word initially.

/p/ /pagawa/ 'a boy's name'
/b/ /bar/ 'finished'
/bw/ /bwil/ 'a yellow fruit'
/t/ /tofra/ 'short'
A PRELIMINARY BERIK PHONOLOGY

/\w/  /\w\r/  'uncooked sago'
/\d/  /\d\m/  'see'
/\d\w/  /\d\w\s/  'sand'
/\k/  /\k\p/  'bad'
/\k\w/  /\k\w\m/  'jungle wanderer'
/\g/  /\g\r/  'deep'
/\g\w/  /\g\w\r/  'cover'
/\f/  /\f\m\n/  'under'
/\f\w/  /\f\w\f\w\r/  'thin'
/\s/  /\s\k/  'lower leg'
/\s\w/  /\s\w\r/  'gills'
/\j/  /\j\l/  'ant'
/\m/  /\m\r\e\r/  'die'
/\n/  /\n\o\d\n\o\r\a\r/  'four'
/\w/  /\w\r\t\a\b\a\l\r/  'wash'
/\y/  /\y\p\k/  'papaya'

All consonants except /\w/ occur in the intervocalic position.

/p/  /\p\s\u\p\s\u\r\n/  'sweep'
/b/  /\b\r\m/  'new'
/bw/  /\b\w\b\w\b\w\n/  'scar'
/t/  /\t\i\t\a\n\b\l\i\l/  'to string beads'
/\d/  /\d\b\i\k/  'head band'
/\d\w/  /\d\w\u\d\w\r/  'a family name'
/k/  /\k\r\a\r/  'hot'
/kw/  /\k\w\i\k\w/  'stop'
/g/  /\g\j\r/  'fish'
/gw/  /\g\w\u\g\w\l\w\n\e\r\n/  'play'
/\f/  /\f\t\f\n/  'skin'
/fw/  /\f\w\s\f\w\e\r\n/  'not go'
/s/  /\s\w\r\w\s\r\a/  'cold'
/sw/  /\s\w\w\r/  'a yellow fruit'
/j/  /\j\b\j\u\a/  'distant'

The following consonants occur as the first member of a medial CC cluster:

/p/  /\p\r\p\s\r\o\s\r/  'turn off'
/t/  /\t\r\g\e\t\m\r/  'nearby'
/d/  /\d\r\n/  'bone'
/k/  /\k\r\d\w\x\r\m\u/  'brain'
/g/  /\g\r\u\g\l\g\w\e\n\r\w\n/  'play'
/\f/  /\f\r\k\f\s\a/  'stop'
/s/  /\s\r\j\e\s\h\f\r/  'don't!!'
/m/  /\m\r\n\e\m\a/  'our'
/n/  /\n\r\s\a\n\f\r/  'good'
/\n/  /\n\r\m\o\d\n\o\r\n\o\r\a\r/  'three'
/l/  /\l\r\w\e\l\k\r\a\r/  'yellow'
/t/  /\t\r\e\f\l\s\a\r\r/  'fever'

The following consonants occur as the second member of a medial CC cluster:

/b/  /\b\r\n\o\m\b/  'machete'
/t/  /\t\r\s\a\m\t\e\r/  'knife'
/tw/  /\t\r\w\t\a\w/  'baby'
/d/  /\d\r\u\g\u\n\d\u\s\a/  'large'
/k/  /\k\r\a\m\k\o\m/  'almost'
/kw/  /\k\w\r\t\k\w\m\a/  'scab'
/g/  /\g\r\u\g\w\a\n\g\r\e\r\n/  'big'
/gw/  /\g\w\r\u\g\w\a\n\g\r\w\a\r/  'many'
A PRELIMINARY BERIK PHONOLOGY

<table>
<thead>
<tr>
<th>/f/</th>
<th>/dwakfak/</th>
<th>'bald'</th>
</tr>
</thead>
<tbody>
<tr>
<td>/fw/</td>
<td>/fewfwef/</td>
<td>'thin'</td>
</tr>
<tr>
<td>/s/</td>
<td>/wisemsonar/</td>
<td>'chills'</td>
</tr>
<tr>
<td>/j/</td>
<td>/gamjum/</td>
<td>'repeat'</td>
</tr>
<tr>
<td>/m/</td>
<td>/gwetmanar/</td>
<td>'nearby'</td>
</tr>
<tr>
<td>/n/</td>
<td>/usmanar/</td>
<td>'defecate'</td>
</tr>
<tr>
<td>/l/</td>
<td>/uglugwenar/</td>
<td>'play'</td>
</tr>
<tr>
<td>/r/</td>
<td>/fwatramana/</td>
<td>'old'</td>
</tr>
<tr>
<td>/w/</td>
<td>/falwnir/</td>
<td>'under'</td>
</tr>
<tr>
<td>/y/</td>
<td>/nuynen/</td>
<td>'not sitting'</td>
</tr>
</tbody>
</table>

Distribution of Consonants in Medial CC Clusters

<table>
<thead>
<tr>
<th>First Member</th>
<th>Second Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>b t tw d k kw g gw f fw s sw j m n l r w y</td>
</tr>
<tr>
<td>t</td>
<td>X X</td>
</tr>
<tr>
<td>d</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>k</td>
<td>X X X X</td>
</tr>
<tr>
<td>g</td>
<td>X X X X</td>
</tr>
<tr>
<td>f</td>
<td>X X X X</td>
</tr>
<tr>
<td>s</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>m</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>n</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>ñ</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>o</td>
<td>X X X X</td>
</tr>
<tr>
<td>l</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>r</td>
<td>X X X X X X</td>
</tr>
</tbody>
</table>

A PRELIMINARY BERIK PHONOLOGY

All medial CC clusters except /gl/ and /tr/ occur across syllable boundaries.

| /p/    | /taptasmi/ | 'throw away' |
| /pk/   | /sapkkam/ | 'tobacco' |
| /ps/   | /kopsana/ | 'stop' |
| /ts/   | /gatantasi/ | 'thumb' |
| /tm/   | /gwetmana/ | 'near' |
| /tn/   | /inatnat/ | 'hiccough' |
| /tr/   | /fwatramana/ | 'old' |
| /dn/   | /naodnjna/ | 'three' |
| /kt/   | /kaktar/ | 'grass' |
| /kf/   | /dwakfak/ | 'bald' |
| /ks/   | /kokska/ | 'bud' |
| /gl/   | /uglugwenar/ | 'play' |
| /gw/   | /egwer/ | 'a woman's name' |
| /ft/   | /seaftet/ | 'all' |
| /fs/   | /jafsar/ | 'go tomorrow' |
| /fn/   | /tfanaguri/ | 'five' |
| /fw/   | /sofwef/ | 'want to go' |
| /sb/   | /nasbaer/ | 'angry' |
| /st/   | /nusta/ | 'sleep!' |
| /sf/   | /asfiba/ | 'wait' |
| /sm/   | /kismen/ | 'a family name' |
| /sn/   | /susmanar/ | 'urinate' |
| /sw/   | /eswat/ | 'broon' |
| /nh/   | /tambor/ | 'toe' |
| /mt/   | /samtent/ | 'knife' |
| /mk/   | /komkoma/ | 'steal' |
| /ms/   | /kimsar/ | 'remember' |
| /mj/   | /gamjam/ | 'repeat' |
| /sm/   | /jenna/ | 'his' |
| /ml/   | /pamlen/ | 'a girl's name' |
| /mw/   | /temwa/ | 'ear' |
A PRELIMINARY BERIK PHONOLOGY

The following consonants occur word finally:

/p/ /fimip/ 'coast'
/t/ /ut/ 'thorn'
/k/ /tita:k/ 'floor'
/f/ /sot/ 'cloth'
/s/ /swis/ 'blood'
/m/ /jam/ 'he, she'
/n/ /itan/ 'liver'
/o/ /fiar/ 'a family name'
/l/ /tul/ 'eel'
/r/ /ungur/ 'belch'

The first member of word final consonant clusters is always an alveolar nasal. The second member can be /f/ or /t/.

/e/ /twef/ 'want to eat'
/t/ /nasonant/ 'spoke'

Vowels

All vowels occur word initially.

/i/ /ibiri/ 'new'
/s/ /sma/ 'yours'
/e/ /erme/ 'afraid'
/m/ /mre/ 'here'
/a/ /aro/ 'rain'
/u/ /wui/ 'shadow'
/o/ /orbom/ 'cheek'

All vowels occur word medially.

/i/ /jii/ 'house'
/s/ /bermi'/ 'buttocks'
/e/ /gwebo/ 'anoint'
/m/ /warem/ 'a paddle'
A PRELIMINARY BERIK PHONOLOGY

The following vowels occur as the first member of a VV cluster across syllable boundaries:

**Initial** /e/ /eebali/ 'do'
/ɪ/ /girien/ 'shallow'
/e/ /seafter/ 'all'
/u/ /muar/ 'moon'

**Final** /ɪ/ /sia/ 'yes'
/u/ /nue/ 'eye'

The following vowels occur as the second member of a VV cluster across syllable boundaries:

**Initial** /e/ /eemni/ 'build'
/ɪ/ /nuun/ 'sit'
/e/ /nuefo/ 'tear'
/a/ /kasiian/ 'peanut'

**Final** /ɛ/ /sirue/ 'stand up!'
/ʌ/ /foria/ 'arrive'

The following vowels occur as the first member of a complex syllable nucleus:

**Initial** /a/ /aiyu/ 'sago basket'

**Medial** /a/ /gwona/ 'yawn'

**Final** /aɪ/ /aiyi/ 'careful!'
/ʌ/ /tetesui/ 'open'
/o/ /do/ 'money'

The following vowels occur as the second member of a complex syllable nucleus:

**Initial** /i/ /aiya/ 'older brother'
/ai/ /ai/ 'I, this'
/ao/ /ao/ 'come'

**Medial** /i/ /girien/ 'shallow'
/ia/ /tiala/ 'leaf'
/ea/ /seafter/ 'all'

Distribution of Vowels in VV Clusters

Since vowels in a complex syllable nucleus do not co-occur with single vowels in clusters as the nuclei of two syllables, there are no triple vowel clusters. Therefore, in the following chart V.V and complex syllable nuclei VV are combined.

Note that in the complex syllable nuclei the first member is lower than the second or both are high and close. For ease of reading the chart these complex syllable nuclei are joined VV on the chart.

<table>
<thead>
<tr>
<th>First Member</th>
<th>Second Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>i e a o</td>
</tr>
<tr>
<td>e</td>
<td>ie ia</td>
</tr>
<tr>
<td>a</td>
<td>aj ee ea aɔ</td>
</tr>
<tr>
<td>u</td>
<td>uj uu ue ua</td>
</tr>
<tr>
<td>o</td>
<td>oj</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial</th>
<th>Second Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ee/ /eemni/</td>
<td>'build'</td>
</tr>
<tr>
<td>/ai/ /ai/</td>
<td>'I, this'</td>
</tr>
<tr>
<td>/ao/ /ao/</td>
<td>'come'</td>
</tr>
<tr>
<td>/ie/ /girien/</td>
<td>'shallow'</td>
</tr>
<tr>
<td>/ia/ /tiala/</td>
<td>'leaf'</td>
</tr>
<tr>
<td>/ea/ /seafter/</td>
<td>'all'</td>
</tr>
</tbody>
</table>
The basic syllable structure with single mora timing in Berik is $C_1 V (C_2) (C_3)$, in which $V$ is the nucleus and may be filled by any vowel. $C_1$ may be filled with any consonant except /n/. $C_2$ may be filled by any consonant except voiced and labialized stops. $C_3$ may be filled only by /l/ or /r/ when $C_2$ is /n/.

3.1 Syllable Contrast

Nine distinct and contrasting syllable types have been found. These are: $V$, $VV$, $VC$, $VVC$, $CV$, $CVC$, $CVV$, $CVCC$, and $CVVCC$. CV is the most common syllable type, occurring in 52% of our data. CVC occurs in 34% of the data. All other patterns occur in less than 5% of the

words. All syllable types except VVC occur as monosyllabic words. CVVC only occurs as a monosyllabic word. We have as yet discovered only one word with this syllable type, and this word is the desiderative form of /nun/ 'sit'. When the desiderative suffix is affixed to the stem the two syllable stem is contracted into a syllable of one mora timing. See the chart showing the distribution of syllable types for contrastive examples of these monosyllabic words.

The syllable types $V$, $VC$, $CV$, $CVC$, $CVV$ contrast word initially, medially, and finally. Syllable breaks are indicated by a period between syllables.

<table>
<thead>
<tr>
<th>Initial</th>
<th>Middle</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V.CVC$</td>
<td>$/t.ris/)$</td>
<td>'thunder'</td>
</tr>
<tr>
<td>$VC.CVC$</td>
<td>$/u.n.gur/$</td>
<td>'belch'</td>
</tr>
<tr>
<td>$CV.CVC$</td>
<td>$/be.rek/$</td>
<td>'tin can'</td>
</tr>
<tr>
<td>$CVC.CVC$</td>
<td>$/bos.taf/$</td>
<td>'jump'</td>
</tr>
<tr>
<td>$CVV.CVC$</td>
<td>$/da.i.wer/$</td>
<td>'a boy's name'</td>
</tr>
<tr>
<td>$CV.V.CV$</td>
<td>$/nu.e.fo/$</td>
<td>'tear'</td>
</tr>
<tr>
<td>$CV.V.CV$</td>
<td>$/nu.in.te/$</td>
<td>'sit'</td>
</tr>
<tr>
<td>$CV.V.CV$</td>
<td>$/go.ba.li/$</td>
<td>'give'</td>
</tr>
<tr>
<td>$CV.V.CV$</td>
<td>$/ga.mer.je/$</td>
<td>'not yet'</td>
</tr>
<tr>
<td>$V.CV.V.CV$</td>
<td>$/a.sai.yu/$</td>
<td>'laddle'</td>
</tr>
<tr>
<td>$CV.V$</td>
<td>$/si.a/$</td>
<td>'yes'</td>
</tr>
<tr>
<td>$CV.VC$</td>
<td>$/mu.ar/$</td>
<td>'moon'</td>
</tr>
<tr>
<td>$CV.CV$</td>
<td>$/na.sa/$</td>
<td>'who'</td>
</tr>
<tr>
<td>$CV.CVC$</td>
<td>$/so.nap/$</td>
<td>'room'</td>
</tr>
<tr>
<td>$CVV.CV$</td>
<td>$/su.sui/$</td>
<td>'throw away'</td>
</tr>
</tbody>
</table>
A PRELIMINARY BERIK PHONOLOGY

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>V.V.C</td>
<td>/ai.yu/</td>
<td>'sago basket'</td>
</tr>
<tr>
<td>V.C.V</td>
<td>/ao.doa/</td>
<td>'go'</td>
</tr>
<tr>
<td>V.C</td>
<td>/o.do/</td>
<td>'bee'</td>
</tr>
<tr>
<td>V.C</td>
<td>/am.na/</td>
<td>'my, mine'</td>
</tr>
<tr>
<td>C.V.C</td>
<td>/ma.se/</td>
<td>'nose'</td>
</tr>
<tr>
<td>C.V.C</td>
<td>/sa.f.ta/</td>
<td>'hi'</td>
</tr>
<tr>
<td>C.V.C</td>
<td>/nso.ra/</td>
<td>'two'</td>
</tr>
</tbody>
</table>

The syllable type CVCC occurs alone or word finally and contrasts with all other syllable types except VV and VMC as these occur only word initially and never alone.

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV.CV.CVCC</td>
<td>/na.so.nant/</td>
<td>'spoke'</td>
</tr>
<tr>
<td>CV.CV.V</td>
<td>/ja.li.a/</td>
<td>'I'm going'</td>
</tr>
<tr>
<td>CV.CV.C</td>
<td>/ti.to.ar/</td>
<td>'to scratch'</td>
</tr>
<tr>
<td>CV.CV.C</td>
<td>/ta.na.mi/</td>
<td>'heel'</td>
</tr>
<tr>
<td>CV.CV.CVC</td>
<td>/ge.aa.nar/</td>
<td>'anoint'</td>
</tr>
<tr>
<td>CV.CV.VCC</td>
<td>/gi.ta.wai/</td>
<td>'boy'</td>
</tr>
</tbody>
</table>

3.2 Syllable Variation

Two syllable types, VC and CVC, have the allosyllable C. These allosyllables are the result of contractions which occur in the Berik language. The ones we have encountered are:

1. The imperative marker /das/ when placed before verbs
   /das tate/  'lie down'
   /das nuunte/ 'sit down'
   /das ti/    'go!' in the contracted form becomes a syllabic [ŋ]:
   ['tate]    ['nuunte]  ['ti]

This single consonant, syllabic [ŋ], is an allosyl of the syllable type CVC and occurs only in such contracted forms.

2. The Berik word /en.ga/ which means 'yes' in the contracted form becomes ['ŋga]. This single consonant, syllabic [ŋ] is an allosyl

3.3 Syllable Distribution

As is noted in the contrast section, the syllable types VV and VMC occur only word initially and the type CVCC occurs alone or word finally. The following chart (p. 32) illustrates the distribution of the basic syllable types in relation to each other in the first and second positions of Berik words. Monosyllabic words are given in first column.

4 THE PHONOLOGICAL WORD

The phonological word in Berik is a sequence of one to four syllables with one primary stress always occurring word initially except in the case of word initial /e/ followed by /e/ in which case the stress falls on the second syllable. Since stress is predictable, it is non-phonemic and has not been written other than in the phonetic transcription.

There are four types of phonological words:

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/gu/</td>
<td>['gu]</td>
<td>'cassowary'</td>
</tr>
<tr>
<td>/amkom/</td>
<td>['am.kom]</td>
<td>'almost'</td>
</tr>
<tr>
<td>/sarboi/</td>
<td>['saɾ.boi]</td>
<td>'hear'</td>
</tr>
<tr>
<td>/fongalabar/</td>
<td>['foŋ.aa.bar]</td>
<td>'when'</td>
</tr>
<tr>
<td>/eboi/</td>
<td>['eboi]</td>
<td>'do'</td>
</tr>
</tbody>
</table>

Compound words may have more than four syllables and more than one stress. See Section 4.2.

4.1 The Shape of the Phonological Word

One syllable words utilize all but one of the nine syllable type types.

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>/l/</td>
<td>'heart'</td>
</tr>
<tr>
<td>VV</td>
<td>/ao/</td>
<td>'come'</td>
</tr>
<tr>
<td>First Position</td>
<td>Second Position</td>
<td>VV</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------</td>
<td>----</td>
</tr>
<tr>
<td>Monosyllabic</td>
<td>Words</td>
<td>/ol/</td>
</tr>
<tr>
<td>Distribution</td>
<td>of Basic Syllable Types</td>
<td>/e.m./</td>
</tr>
<tr>
<td>A PRELIMINARY BERIK PHONOLOGY</td>
<td>/e.m./</td>
<td>/build/</td>
</tr>
<tr>
<td>VC</td>
<td>/or/</td>
<td>'teeth'</td>
</tr>
<tr>
<td>WC</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>CV</td>
<td>/nu/</td>
<td>'day'</td>
</tr>
<tr>
<td>CVC</td>
<td>/mi/</td>
<td>'lips'</td>
</tr>
<tr>
<td>CVV</td>
<td>/na/</td>
<td>'rattan'</td>
</tr>
<tr>
<td>CVCC</td>
<td>/tu/</td>
<td>'want to eat'</td>
</tr>
<tr>
<td>CVVCC</td>
<td>/nu/</td>
<td>'want to sit'</td>
</tr>
</tbody>
</table>

Two syllable words are composed of the following combinations of syllable types:

V.CV /u.wa/ 'father'
V.CVC /u.swa/ 'a red fruit'
VV.CV /ai.yu/ 'sago basket'
VV.CVW /ai.yai/ 'careful'
VV.CVC /ai.yaq/ 'chicken'
VVC.CV /aol.na/ 'go'
VVC.CVCC /aol.yan/ 'not going'
VCC.CV /aol.gwa/ 'man'
VCC.CVCC /aol.kom/ 'almost'
VC.CVW /in.nai/ 'bead'
CV.V /si.a/ 'yes'
CV.CV /tu.tu/ 'upper arm'
CV.VC /mu.ar/ 'moon'
CV.CVC /da.fef/ 'afternoon'
CV.CVW /swa.rao/ 'go back'
CVV.CV /tai.ni/ 'adopted'
CVV.CVCC /da.i.wer/ 'a name'
CVC.CV /nus.ta/ 'sleep'
CVC.CVV /jen.twai/ 'alone'
CVC.CVC /tam.bor/ 'toe'

Three syllable words are composed of the following combinations of syllabic types:
A PRELIMINARY BERIK PHONOLOGY

V.CV.CV
/u.da.ra/ 'airplane'
V.CV.CV
/i.bir.mi/ 'new'
V.CV.CV
/a.sai.yu/ 'ladle'
VC.CV.CV
/er.er.te/ 'scare'
VC.CV.CV
/un.gwan.fer/ 'many'
CV.CV
/nu.e.fo/ 'tear'
CV.CV
/nu.in.te/ 'sit'
CV.CV
/nu.in.yen/ 'not sitting'
CV.CV
/ja.fi.a/ 'going'
CV.CV
/ti.tu.ar/ 'to scratch'
CV.CV
/go.ba.li/ 'give'
CV.CV
/gi.ta.wai/ 'boy'
CV.CV
/gw.bar.nar/ 'anoint'
CV.CV
/na.so.mant/ 'spoke'
CV.CV
/ga.mar.je/ 'not yet'
CV.CV
/ta.gar.sus/ 'tall'
CV.CV
/kao.ti.a/ 'enter'
CV.CV
/tar.kwe.na/ 'scab'
CV.CV
/sar.ba.su/ 'hear'
CV.CV
/bin.bin.i/ 'sharp'
CV.CV
/ker.kel.na/ 'hard'
CV.CV
/gwir.mir.jen/ 'day after tomorrow'

Four-syllable words are composed of the following combinations of syllabic types:

V.CV.CV /e.m.ni/ 'build'
V.CV.CV /o.ro.to.na/ 'boil'
VC.CV.CV /u.jun.du.sa/ 'large'
CV.CV.CV /ki.to.ba.li/ 'give'
CV.CV.CV /ba.te.tom.mor/ 'bathe tomorrow'
CV.CV.CV /fo.fa.q.gw.na/ 'whistle'
CV.CV.CV /ya.sin.to.gwai/ 'daughter'
CV.CV.CV /d.o.m.let.sant/ 'looked'

A PRELIMINARY BERIK PHONOLOGY

CVV.CV.CV.CV /t.m.ta.se.ni/ 'throw away'
CVV.CV.CV.CV /f.o.g.a.la.bar/ 'when'
CVV.CV.CV.CV /nu.ger.ne.ne/ 'run'
CVV.CV.CV.CV /ba.tan.toi.ya/ 'little'

4.2 Compound Words

Compound words do occur in Berik. They have three, four, or five syllables. The primary stress often occurs on the first syllable and a secondary stress occurs on the first syllable of the second part of the compound. In some cases there is primary stress on the first syllable of the second part of the compound.

/o.re.le.sa.fa/ ['o.re.le.'sa.fa] 'beard'
/nu.e.ti.fin/ [nu.e.'ti.fin] 'eyelid'

4.3 Word Repetition

Repeating whole words or syllables of words occurs in Berik. In such cases, the initial syllable of the repeated part of the word receives the same stress as the initial syllable of the word.

/wak.wan.wak.wensus/ ['wak.wak.wensus'] 'best'
/gwtmg.wtm.sus/ ['gwtm.'gtm.sus] 'nearest'

4.4 Influence of Other Languages on Berik Words

Bahasa Malayu and more recently Bahasa Indonesia have had their influence on Berik speakers all through the 1900's. Words which have been borrowed with no change in form or meaning include:

<table>
<thead>
<tr>
<th>Berik</th>
<th>Indonesian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>paksian</td>
<td>'paksian'</td>
<td>'clothes'</td>
</tr>
<tr>
<td>kursi</td>
<td>'kursi'</td>
<td>'chair'</td>
</tr>
<tr>
<td>meja</td>
<td>'meja'</td>
<td>'table'</td>
</tr>
</tbody>
</table>

Other words display affixation, yet retain the essential meaning of the borrowed word.

tulistabalir 'tulis' 'write'
The phoneme /h/ has also been introduced to Berik speakers as non-Berik names have been chosen for children and adults. /h/ occurs name initially and medially:

/hans/ /pinehas/
/habel/ /abraham/

5 TENTATIVE ORTHOGRAPHY

At present only a very few Berik speakers are literate. Schools are being established in rural areas and primary education is being conducted in the national language, Bahasa Indonesia. Many adult men speak Bahasa Indonesia. As both men and women now become literate, it is important that Berik orthography conforms to Bahasa Indonesia.

Thus, because the phoneme /ŋ/ in Bahasa Indonesia is written as 'ng', we have chosen this also.

As there are no minimal pairs showing contrast between /i/ and /i/ we have chosen to symbolize them both as 'i'. For ease of writing and typing we have chosen 'aa' for /a/. The phonemes /i/ and /a/ do not occur in Bahasa Indonesia.

The Berik phonemes, their allophones and a proposed orthography are listed below.
A PRELIMINARY BERIK PHONOLOGY

6 TEXT - "Hunting Wild Boar"

Niko Borom gave this story during a linguistic workshop at Sawar, Irian Jaya, on September 9, 1974. Sentences are numbered. // signifies the termination of a phonological phrase, and //// signifies the end of a phonological sentence. An English and Indonesian free translation follow the story.

1. Ai ransunt arao onap jamere tataisat// 2. Sameer gapeh I went rain jungle.to.there far slowly at.there
wofeafsant/ enggama avilsint// 3. Fona jimwer/ ai sarsant walked.around then crossed river other.side I heard
twina gola targa bi sisint// 4. Anetwin tafa termat/ boar nest.leaf.cutting shoot.boar.underarm entered
tenungritsint Tefer annap/ gasap tersent// 5. Jeweraga ai Tafer headwaters.at.there died there.at I
it.ran tererbiswitsint/ numa ai tetesant// 6. Emal anggatesant twina search-for eye I raised I saw boar
dukwai/ ai domoltesansat// 7. Ai gusunt maigam nui saw/ aje samam head I looked I thought still living I again
ai fagatasants okokame// 8. Tini ai goltesans/gamer ai I jumped backwards stick I grabbed then I
tobalsiusint twin sagabe// 9. Gamer ai farebisensiensat/ ai throw.towards boar on.back then I tied I
tiengonsant// 10. Mariana enejieta nelehojo/ jega jebah carried Mariana mother.father we.met he.pl. together
alte tianggonfalsanyan// 11. Ai wesant/ taban ai sinulsunt jebe duka I carried.return I cut until I divided his
tetmisint// Tabana gaaf. gave until here

'I walked quite far into the rainy forest. I slowly walked around, crossed a river, and there I heard a pig cutting leaves for a shelter. Quickly I shot it behind its front foreleg. And it ran towards the head waters of Tafer stream and there it died. At that place as I was searching for it, I lifted my head. I noticed the pig's head as I gazed. I thought it was still alive so I jumped back. Then I picked up a stick and threw it at the pig's back. Then I tied its legs and carried it. I met Mariana's mother and father. They helped me carry the pig and we returned home. I cut and divided up the meat and gave away his head too. That's all!'
A TENTATIVE PHONOLOGY OF ISIRAWA

Hiroko Oguri and Carol Erickson

ICHITISAR:


Kertas ini menyajikan deskripsi sistim tatabunyi bahasa Isirawa dan memberikan saran mengenai sistim ejaan bahasa itu, yang mencakup 11 konsonan dan 8 vokal. Kertas ini didasarkan pada analisa pendahuluan tentang tingkat di atas suku kata dengan naskah bahasa yang terbatas.

Kerja-lapangan dilaksanakan dengan bantuan the Summer Institute of Linguistics dengan kerjasama dengan Universitas Cenderawasih.

1 INTRODUCTION
2 OUTLINE OF PHONEMES
3 THE SYLLABLE
4 THE PHONOLOGICAL WORD
5 THE PHONOLOGICAL PHRASE
6 THE PHONOLOGICAL SENTENCE
7 TENTATIVE ORTHOGRAPHY
8 INFLUENCE OF OTHER LANGUAGES
9 TAPE TEXT
BIBLIOGRAPHY

INTRODUCTION

The Isirawa language (also known as Saberi) is spoken in the Sarmi Kecamatan (subdistrict) of the Jayapura Kebupaten (district), located along the north coast of the province of Irian Jaya, Indonesia. Approximately 2000 speakers live in about 18 villages, 10 of these along the coast. Isirawa is a Non-Austronesian language and according to Anceaux and Voorhoeve is tentatively classified as a family-level isolate within the Kwerba stock. There seem to be a few minor dialec-

tical differences between the villages east of Amsira and those west of Amsira. The village in which we did our fieldwork uses both, but this analysis is based primarily on the east one. We began work on November 5, 1973 under the auspices of the Summer Institute of Linguistics in conjunction with the Cenderawasih University, and have had 7 months of actual fieldwork. Our principal language teachers have been Toncé Mammin, Ruben Merne, Filipus Mamawiso, and Salmon and Makarita Numre, all approximately 25 to 30 years of age. The other 230 men, women, and children who make up the village have played a large part in helping us learn their language. About 15 of the men are able to read and write the national language. Most of the men are reasonably fluent in the national language, but the women know only enough to buy and sell their produce in Sarmi.

We have only done a preliminary analysis of the levels above the syllable, based on limited text material. We would like to gratefully acknowledge the help of S.I.L. consultant, Miss Anne Cochran, whose guidance and encouragement helped speed our analysis.

Throughout the paper an Indonesian gloss has been typed in italics.

1 INTERPRETATION
1.1 The Suspect Segments Which May Be Either Consonant or Vowel
1.1.1 [y] versus [i]

The semi-consonant [y] occurs as the onset of a syllable and [i] occurs as the nucleus.

/\'triya/ 'crocodile'
/popistin/ 'hit him'

1.1.2 [w] versus [u]

The semi-consonant [w] occurs as a syllable onset while [u] functions as the nucleus.
A TENTATIVE PHONOLOGY OF ISIRAMA

1.2 The Suspect Segments Which May Be Either Sequences or Unit

1.2.1 CVP versus CPV

CPV could possibly be interpreted as CVP but since [pF] never occurs with a transition vocoid between the consonants, and as stress usually occurs on the penultimate syllable, CPV has been interpreted as a sequence of consonants.

/apre/ ['apFe] 'bird' burung
/apre'sa/ ['apFe'sa] 'lower arm' lengan bawah
/pran'ka/ ['pFan'ka] 'cooking pot' perahu
/mri/ [mri] ~ [mFt] 'one' satu
/strifa/ ['strifa] 'language' bahasa
/krai kr'ai/ [kFrai kFrai] 'bird type' macam burung

1.2.2 The Affricate [tF]

[tF] has been interpreted as a unit [F] as the second member of the other consonant clusters is always [F] and as [F] never occurs as a separate phone.

1.3 Vowel Clusters

The following vowel clusters occur: [ia], [io'], [iu], [ei], [e'1], [eu], [ai], [au], [ao], [o'1], [o'a], [oi], [o], [oa], [ui], [ue], [ua], [i'ai], [tao'], [o'au], and [oai].

/pia'ni'ha/ '4 days ago' or '4 days from now' empat hari yang lalu atau empat hari yang akan datang
['pinio'] 'morning' pagi
/im'numa/ 'shade' sombar
[te'tesina] 'to hear' dengar
[se'i?] 'bird of paradise' burung Cenderawasih

A TENTATIVE PHONOLOGY OF ISIRAMA

[pipl'scuna] 'hit her' pukul dia (perempuan)
['t'mya] 'short' pendek
[s'a?u] - [s'ru] 'arm band' gelang tangan
['alfa] 'coconut' kelapa
[sa'o] 'house' rumah
['kao''ra] 'tree type' macam pohon
[sese'kusa] 'knock' ketok
[mo''ifa] 'here' diini
[po''a'ri'mi] 'let's go' marilah
[momo'itesa] 'to buy' beli
[mo'tocka] 'squash' labu
[momo'moara] 'insane' orang gila
[pul'kes] 'to sweep' menyapu
[fufu'tama] 'shrimp type' macam udang
[sua] 'insect type' macam serangga
[wu'li'ina] 'to write' tulis
[sis'tao''fan] 'place name' nama tempat
[ro'ro'numa] 'to pluck or cut off fruit' memotik
[as't'moa] '(male) friend' kawan (laki-laki)

1.3.1 Dicliters

In considering these vowel clusters, there might be three solutions: First, they could be the nuclei of two or three syllables; second, they could be vowel glides; and third, they could be complex syllable nuclei.

Solution 1:

As there are univalent vowel clusters, it would be possible to interpret all clusters as sequences but for the following reasons this has not been considered favorable. First, all of these clusters are of one mora timing. Second, where two vowels occur as the nuclei of two syllables, a distinct semi-consonant is articulated between the vowels in contrast to a lack of a semi-consonant where two vowels
occur as the nucleus of one syllable.

[tsuwa] 'tree type' macam pohon
[su] 'insect type' macam serangga
[so'soa] 'vegetables' sayur-sayuran
[me'bo'wa] 'cigarette paper' kertas rokok

Third, on some words, stress fluctuates between speakers from one vowel to another within the same cluster.

[mo'tfa] - [mo'tfa] 'here' disini
[ma'ma'una] - [ma'mauna] 'to see' lihat
[pa'fü'ufa] - [pa'fü'ufa] 'tree type' macam pohon

Fourth, stress never occurs before the antepenultimate syllable, therefore if vowel clusters are interpreted as sequences, a new stress pattern would be set up.

[wamu悤] 'shark' ikan gorano
[悤ai] 'banana type' macam pisang

Solution 2:

That they could be vowel glides does not seem feasible either because: First, there are the non-suspect clusters [oa] and [oe].

[mo'moa] 'insane' orang gila
[sos'resta] 'dirty' kotor

Second, there are the reverse sequences of [ua] and [au], [e] and [u], and [oa] and [ao].

[sua] 'insect type' macam serangga
[na'nut] 'bamboo type' macam bambu
[pipip'suuma] 'to hit (a female)' pukul (permampuan)
[fu'fü'amma] 'shrimp kind' macam udang
[so] 'fish scales' etik
[sao] 'house' rumah

A TENTATIVE PHONOLOGY OF ISIRAMA

Solution 3:

Since each of the two vowels in these clusters seem to be of equal length even though spoken in one mora of time, and since the stress fluctuates in some words with different speakers, the preferable solution is interpreting them as complex syllable nuclei.

1.3.2 Tricusters

The vowel clusters [iəi], [o'au], and [oai] are definitely perceived as one unit of time. There is no articulation of a semi-consonant between the vocoids and like the diclusters, each vowel has equal time. Since there are no consonant clusters syllable final, the final vowel cannot be interpreted as a semi-consonant. For these reasons, they have been set up as complex syllable nuclei also.

2 OUTLINE OF PHONEMES

2.1 Charts

<table>
<thead>
<tr>
<th>Consorants</th>
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<th>alveolar</th>
<th>alveopalatal</th>
<th>velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>stop</td>
<td>p</td>
<td>t</td>
<td>k</td>
<td></td>
</tr>
<tr>
<td>fricative vl.</td>
<td>f</td>
<td>s</td>
<td>i</td>
<td>h</td>
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<tr>
<td>vd.</td>
<td>b</td>
<td></td>
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<tr>
<td>nasal</td>
<td>m</td>
<td>n</td>
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<tr>
<td>flap</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>semi-consonant</td>
<td>w</td>
<td></td>
<td></td>
<td>y</td>
</tr>
</tbody>
</table>
2.2 Description of Phonemes

All phonemes are produced with egressive lung air.

All vowels except for [ʌ] tend to be longer in stressed position than the same vowels in unstressed positions.

Consonants:

/p/ [P] Voiceless bilabial unreleased stop occurs only word finally. 
/'porip/' ['pɔrıp] 'go to tidurlah sleep'

[b] Voiced bilabial stop fluctuates freely with [p] following a nasal.
/ko'mampa/ [ko'mampa] ~ [ko'mampa] pulau 'island'

[p] Voiceless bilabial stop occurs elsewhere.
/'pina/ ['pina] 'ocean' laut
/'apre/ ['apre] 'bird' burung

/t/ [t] Voiceless alveolar stop occurs both word initially and medially.
/te'teina/ [te'teina] 'to hear' dengar
/pu'mita/ [pu'mita] 'flood' banjir

/k/ [k] Voiceless velar unreleased stop occurs only word finally except when following [ʌi] and [ʌ].
/so'wek/ [so'wek] 'all' semua

[ʔ] Voiceless glottal stop occurs only in one syllable words after [ʌi] and [ʌ].
/sauk/ [sauʔ] 'armband' gelang tangan
/sai/ [saiʔ] 'bird of paradise' burung Condor maathi

[k] Voiceless velar stop occurs elsewhere.
/ka'fo'/ [ka'fo'] 'black' hitam
/al'ki/ [al'ki] 'mother' ibu

/m/ [m] Voiced bilabial nasal occurs initially, medially, and finally.
/'muna/ ['muna] 'mouth' mulut
/'no'ma/ ['no'ma] 'hot' panas
/'ma/m/ [ma'm] 'enough' cukup

/n/ [n] Voiced alveopalatal nasal occurs before high close front unrounded vowel [i] fluctuating with [n] between speakers.
/'nani/ ['nani] - [nani] 'dog'
/'ni'nifa/ [ni'nifa] - [ni'nifa] 'cold'

/o/ Voiced velar nasal occurs before the velar voiceless stop [k] fluctuating with [n] between speakers.
/sanka'kamma/ [sanka'kamma] ~ [sanka'kamma] 'medicinal plant'
/pran'ka/ [pran'ka] ~ [pran'ka] 'cooking pot'
A TENTATIVE PHONOLOGY OF ISIRAMA

[n] Voiced alveolar nasal occurs elsewhere.

/'ina/  ['ina] 'mosquito' nyamuk
/'noti/  ['noti] 'smoke' aap

[f] Voiceless labiodental fricative occurs word initially, medially, and finally.

/'fona/  ['fona] 'turtle' pengu
/'tofe/  ['tofe] 'near' dekat
/'ba'raf/  ['ba'raf] 'dawn' siang

[s] Voiceless alveolar grooved fricative occurs word initially, medially, and finally.

/'sana/  ['sana] 'open sore' luka
/isi'mara/  ['isi'mara] 'song' nyawian
/'poteris/  ['poteris] 'go home' pulanglah (banyak, many)

[ә] Voiceless alveolar grooved affricate occurs in word initial and medial positions only.

/'cara/  ['cara] 'Cassowary' pokon Kanawari
/'maiĉe/  ['maiĉe] 'later' nanti

[h] Voiceless glottal fricative restricted to several words, some of which fluctuate freely with [s].

/ha/  [ha] 'yes' ya
/horam'tiya/  [horam'tiya] 'plant type' mosam tanaman
/pe'sem/  [pe'sem] - [pe'hem] ada
  'there is'
/masita/  [masita] - [ma'ita] anak perempuan
  'daughter'

[t] Voiced alveolar flap fluctuates with voiced short alveolar flap [d] except before [l].

/piri'sira/  [piri'sira] - [piri'sĩra] romput
  'hair'
/'rara/  ['rara] - ['řara] jalan
  'road'

[æ] Voiced alveolar trill occurs only contiguous to another consonant.

/far'so/  [far'so] 'canoe' dagung
/'miśtu/  ['miśtu] 'corn' jagung
/čočoka'k्रina/  [čočoka'kɾina] 'to pull' tarik

[d] Voiced short alveolar flap occurs elsewhere.

/ri'ri/  [ri'ri] 'new' baru
/so'biĉe/  [so'biĉe] - [so'biĉe] lalat babi
  'horsefly'

[b] Voiced bilabial fricative occurs word initially, medially, and finally.

/'biso/  ['biso] 'big' besar
/'iba/  ['iba] 'sound' buyi
/'pa'takrah/  ['pa'takrah] 'disintegrate' memecahkan

[w] Voiced lenis velar fricative occurs only between back vocoids fluctuating with [w].

/kakatrũwo'na/  [kakatrũwo'na] - [kakatrũwo'na] 'to open' buka

[y] Voiced palatal fricative fluctuates freely with [y].

/e'riya/  [e'riya] - [e'riya] buaya
  'crocodile'
Voiced palatal semi-consonant occurs intervocalically.

/'biyt/  ['biye]  'dislike, tidak mau don't want'

Vowels:

/i/  [i]  Voiced high close front unrounded vocoid occurs word initially, medially, and finally.

/i'nasi/  [i'nasi]  'day after tomorrow or day before kemarin dulu yesterday'

/a/titi/  [a'titi]  'arm'  langan

/e/  [e]  Voiced mid close front unrounded vocoid fluctuates with [i] medially.

/teʃa/  [teʃa]  -  [tiʃa]  anak 'child'

/meʃaʃa/  [meʃaʃa]  -  [weʃaʃa]  macam serangga 'insect type'

[iystem]  Voiced high open front unrounded vocoid occurs word initially, medially, and finally.

/'i'ba/  ['i'ba]  'lazy'  malas

/o'muta/  [o'muta]  'star'  bintang

/p'teʃi/  [p'teʃi]  'there is'  ada

/e/  [e]  Voiced mid close front unrounded vocoid occurs word finally and fluctuates freely with [e] in other positions.

/tetʃa/  [tetʃa]  -  [teʃa]  sendok sagu 'sago spoon'

/kkeʃana/  [kkeʃana]  -  [kkeʃana]  mati 'to die'

/tote/  [toʃe]  'near'  dekat

/e/  Voiced mid open front unrounded vocoid occurs elsewhere.
/o'meta/ [o'meta] 'robbert' penunur
/tote/ ['tote'] 'near' dekat
/ono/ ['ono] 'sky' langit

/o"/ [o"]& Voiced mid close lowered back rounded vocoid occurs word initially, medially, and finally.
/o"'meta/ [o"'meta] 'star' bintang
/triso"/ ['triso"] 'middle' tengah
/no"'prakri'manai/ [no"prakri'manai] 'two dupa orang clap their tangan hands'

2.3 Phoneme Contrasts

Consonants:

Bilabial, alveolar, and velar stops contrast word initially and medially.

Initial Medial
/p/ /'posu/ 'go' /pa'paru/ 'to joke'
/t/ /'tona/ 'stomach' /ta'tafa/ 'to play'
/k/ /'komra/ 'vine type' /ka'kana/ 'child'

Bilabial and alveolar nasals contrast word initially and medially.

/m/ /mu'mura/ 'itch' /no'ma/ 'hot'
/n/ /nu'suma/ 'thigh' /mo'na/ 'want'

Bilabial, labiodental, alveolar, alveopalatal, and glottal fricative contrast word initially while all but the glottal fricative contrast word medially.

/f/ /fa'foli/ 'egg plant' /o'nafo/ 'medicinal plant'
/s/ /so'pova/ 'mouse' /ma'rasa/ 'goosebumps'

Labial, stop, fricative, nasal, and semi-consonant contrast word initially and medially.

/p/ /pa'raufa/ 'sago type' /pipi'sina/ 'to hit (several) times' /pukul (banyak kali)
/f/ /fa'tiya/ 'drum' /'ifiya/ 'wind'
/b/ /ba'ba/ 'wide' /biwiri'sina/ 'to lose'
/s/ /ma'rasa/ 'goosebumps' /mimiris'na/ 'to rum (pl.)'
/w/ /wa'ra/ 'tree' /wiwi'kina/ 'to hit (once)'

Alveolar and alveopalatal stop, nasal, fricative, affricate, semi-consonant and flap contrast word medially, while all but the semi-consonant contrast word initially.

/t/ /'tari/ 'water' /i'sita/ 'thatch'
/n/ /'nani/ 'dog' /si'sina/ 'afraid'
/s/ /'saka/ 'sound of waves' /om'isa/ 'tree type'
/ç/ /'co'kara/ 'Cassowary' /mimija'siwa/ 'knife'
/y/ /toa'biya/ 'bird type' /ma'rum buwang
A TENTATIVE PHONOLOGY OF ISIRANA

/ɪ/ /'rama/  'path'

The velar stop and glottal fricative contrast word initially.

/k/ /'kao'ra/  'tree type'

/h/ /ha/  'yes'

Vowels:

All vowels contrast word medially, while all but /ʌ/ contrast
word initially and finally.

Medial

/ɪ/ /'titi'busa/  'to feed (a male)'

/e/ /'titi'runa/  'to open'

/ɛ/ /'ett'busa/  'to fan'

/ɒ/ /'tita'na'pa/  'to get down'

/a/ /'tataba'ni'ba/  'to fly'

/ʊ/ /'to'to'nsa/  'to cut hair'

/o/ /'to'tu'ana/  'to put into'

/u/ /'tutu'wma/  'string bag'

Initial  Final

/ɪ/ /'ina/  'afraid'  /'i'tami/  'bag for sago'

/ɪ/ /'ina/  'mosquito'  /pe'sɛmi/  'there is'

/ɛ/ /'ena/  'doorway'  /'somɛ/  'sago'

/a/ /'ana/  'rotten'  /nu'suma/  'thigh'

/ɒ/ /'o'na/  'sago grubs'  /wa'namo/  'bat or flying fox'

/o/ /'onja/  'totem'

/u/ /'una/  'date'

2.4 Phoneme Distribution Within the Syllable

Consonants:

Any consonant may fill the syllable single onset, however /y/
never occurs word initially.

/ŋ/, /ts/, /k/, /m/, /f/, /s/, and /h/ may fill the first part of
a complex onset.

Only /r/ may fill the second part of a complex onset.

/ŋ/, /k/, /m/, /n/, /l/, /f/, /s/, and /h/ may fill the syllable
coda slot.

Vowels:

Any vowel may fill the simple nucleus of an open syllable, how-
ever /ə/ never occurs as a V syllable.

/ɪ/, /ɛ/, /a/, /o/, and /o/ may fill the simple nucleus of
a closed syllable.

/ai/, /oi/, /ei/, /ai/, /ui/, /au/, /cu/, /nu/, /ao/, /oa/, /ia/,

/oʊ/, /oe/, /uɛ/, /iɛ/, /oi/, /au/, /oʊni/, may fill the complex nucleus of
an open syllable.

/ai/, /eɪ/, /æi/, /au/, /nu/, /ɛu/, /iɛ/, and /oʊni/ may fill
the complex nucleus of a closed syllable.

3 THE SYLLABLE

A syllable of a single mora of timing consists of a nucleus of
one, two, or three vowels preceded by an optional one or two consonant
onset, and followed by an optional consonant coda.

4.1 Syllable Types

There are 13 syllable types: V, VV, VC, CV, CVV, CVV, CVC, CVVC, CCV, CCV, CCVC, CCVC.
4.2 Syllable Distribution

CV, CVV, CVC, CCV, and CCVV can occur word initially, medially, and finally.

CVVC occurs in one syllable words, and medially and finally in words of more than one syllable.

V, W, and VC occur only word initially.

CCVC occurs only word initially or finally.

CVVV never occurs word initially.

CCVC and CVVC occur only word finally.

The most common syllable type is CV.

4 THE PHONOLOGICAL WORD

The phonological word consists of a segment of one to seven syllables with one primary stress and is bounded by a short pause. There is usually only one complex onset, complex nucleus, or closed syllable within a word. Words of more than five syllables in length have an open syllable word initially.

4.1 Stress

There are three places in which stress may occur: ultimate, penultimate, or antepenultimate. Even though some words are differentiated by stress only:

/topa/ 'tree roots' akar kayu
/to'pa/ 'bow' anak noi
/tore/ 'tree type' macam pohon
/to're/ 'name of a river' nama sungai

almost all non-verbal words and all the long form of verbs have penultimate stress. The few words with non-penultimate stress are names of places, kinship words, adopted words, and words that are possible historical compound words. In words of more than three syllables stress seldom occurs non-penultimately.

A TENTATIVE PHONOLOGY OF ISIRAWA

Verbs usually occur clause final. If the short form of the verb is used, it carries phonological phrase or sentence primary stress. Its secondary stress pattern is unpredictable.

Stress usually becomes very weak and almost disappears in rapid speech. Non-phonemic vowel length which often occurs with stress also decreases or disappears.

4.2 Word Tone

Tone in Isirawa is predictable. In non-verbs, the stressed syllable always has the high tone. If the first syllable in a word is not stressed, it has a mid tone. If there are two or more syllables before the stressed one, the second and any others between also have high tone along with the stressed one.

\texttt{/e.pi.ta.wane/} \quad \texttt{'ant type'} \quad \texttt{macam semut}

\texttt{/e.pi.ta.wane/}

The high tones preceding stressed high tone may be mid with some speakers. In rapid speech mid tone perturbs to high.

The long form of the verb, always three or more syllables, is characterized by a high to low tone glide on the stressed syllable and follows the same tone pattern as non-verbs on the syllables preceding the stressed one. In other forms of the verb the stressed syllable also has high tone which falls to mid and low on the following syllables.

\texttt{/me.mo.sa.kri.maha/} \quad \texttt{'to wash'} \quad \texttt{curi}

\texttt{/po.la.ezan/} \quad \texttt{'go home'} \quad \texttt{pulanglah}

4.3 Syllable Combinations

One Syllable Words:

V /\ 'man' \texttt{orang}
VV /au/ 'I' \texttt{eaya}
CV /pu/ 'water' \texttt{air}
<table>
<thead>
<tr>
<th>Phonology</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV</td>
<td>/pai/</td>
<td>'no'</td>
</tr>
<tr>
<td>CCV</td>
<td>/tri/</td>
<td>'thunder'</td>
</tr>
<tr>
<td>CVC</td>
<td>/man/</td>
<td>'enough'</td>
</tr>
<tr>
<td>CVVC</td>
<td>/kauk/</td>
<td>'until'</td>
</tr>
<tr>
<td>V.CV</td>
<td>/'t.na/</td>
<td>'mosquito'</td>
</tr>
<tr>
<td>V.CV</td>
<td>/a.'mo'a/</td>
<td>'seedling'</td>
</tr>
<tr>
<td>V.CV</td>
<td>/'a.pre/</td>
<td>'bird'</td>
</tr>
<tr>
<td>VV.CV</td>
<td>/'ai.sa/</td>
<td>'shrimp'</td>
</tr>
<tr>
<td>CV.CV</td>
<td>/'bi.sa/</td>
<td>'all'</td>
</tr>
<tr>
<td>CV.CV</td>
<td>/'so.rai/</td>
<td>'snake type'</td>
</tr>
<tr>
<td>CV.CCV</td>
<td>/'so.kra/</td>
<td>'mouse'</td>
</tr>
<tr>
<td>CV.CVC</td>
<td>/'wa.nap/</td>
<td>'five'</td>
</tr>
<tr>
<td>CV.CVVC</td>
<td>/pi.'tein/</td>
<td>'can hear'</td>
</tr>
<tr>
<td>CV.CV</td>
<td>/'ta.ya/</td>
<td>'short'</td>
</tr>
<tr>
<td>CV.CV</td>
<td>/'si.'rai/</td>
<td>'mists'</td>
</tr>
<tr>
<td>CV.CV</td>
<td>/to.'kra/</td>
<td>'width'</td>
</tr>
<tr>
<td>CV.CV</td>
<td>/pui.'kts/</td>
<td>'to sweep'</td>
</tr>
<tr>
<td>CCV.CV</td>
<td>/'tri.so/</td>
<td>'middle'</td>
</tr>
<tr>
<td>CCV.CV</td>
<td>/krai.'krai/</td>
<td>'bird type'</td>
</tr>
<tr>
<td>CVC.CV</td>
<td>/'nap.ni/</td>
<td>'two'</td>
</tr>
<tr>
<td>CVC.CV</td>
<td>/'nab.sra/</td>
<td>'three'</td>
</tr>
<tr>
<td>CCVC.CV</td>
<td>/pran.'ka/</td>
<td>'cooking pot'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/i.'ro.'ro/</td>
<td>'animal type'</td>
</tr>
<tr>
<td>V.CV.CVV</td>
<td>/a.'si.'sia/</td>
<td>'friend'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/i.'kau.ba/</td>
<td>'door'</td>
</tr>
<tr>
<td>V.CV</td>
<td>/'a.pre.sa/</td>
<td>'lower arm'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/a.'srau.na/</td>
<td>'to swim'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/cr.'we.te/</td>
<td>'snake type'</td>
</tr>
<tr>
<td>V.CV.CCV</td>
<td>/en.'to.fra/</td>
<td>'ring finger'</td>
</tr>
<tr>
<td>CV.CV.CV</td>
<td>/pu.'ma.ta/</td>
<td>'flood'</td>
</tr>
<tr>
<td>CV.CV.CV</td>
<td>/wa.nu.rai/</td>
<td>'fish type'</td>
</tr>
<tr>
<td>CV.CV.CCV</td>
<td>/fi.ta.'mra/</td>
<td>'corpse'</td>
</tr>
<tr>
<td>CV.CV.CVC</td>
<td>/we.'werp/</td>
<td>'enter'</td>
</tr>
<tr>
<td>CV.CV.CVC</td>
<td>/po.mo.sais/</td>
<td>'wash'</td>
</tr>
<tr>
<td>CV.CV.CVVC</td>
<td>/po.'wi.ricin/</td>
<td>'write'</td>
</tr>
<tr>
<td>CV.CV.CCV</td>
<td>/pa.'t.na.krab/</td>
<td>'disintegrate'</td>
</tr>
<tr>
<td>CV.CV.CVC</td>
<td>/po.'ma.braun/</td>
<td>'bring it'</td>
</tr>
<tr>
<td>CV.CV.CV</td>
<td>/pa.'rai.fu/</td>
<td>'sago type'</td>
</tr>
<tr>
<td>CV.CV.CVC</td>
<td>/po.moi.tes/</td>
<td>'buy it'</td>
</tr>
<tr>
<td>CV.CV.CVVC</td>
<td>/po.moi.tin/</td>
<td>'buy them'</td>
</tr>
<tr>
<td>CV.CV.CVVC</td>
<td>/ro.ro.'nu.na/</td>
<td>'pluck (fruit)'</td>
</tr>
<tr>
<td>CV.CV.CV</td>
<td>/we.'ti.ni.mai/</td>
<td>'we sing'</td>
</tr>
<tr>
<td>CV.CCV</td>
<td>/tr.'tr.na/</td>
<td>'to eat vegetables'</td>
</tr>
<tr>
<td>CV.CVVC</td>
<td>/to.'tr.ni.na/</td>
<td>'to cook in fire'</td>
</tr>
<tr>
<td>CV.CV.CV</td>
<td>/pia.'ni.ba/</td>
<td>'4 days from now'</td>
</tr>
<tr>
<td>CV.CV.CV</td>
<td>/poc.'kam.ma/</td>
<td>'untasty, tasteless'</td>
</tr>
<tr>
<td>CV.CV.CV</td>
<td>/tan.'ta.ne/</td>
<td>'job's tears'</td>
</tr>
<tr>
<td>CV.CV.CV</td>
<td>/tin.'fo.i.ni/</td>
<td>'part of roof'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/i.'si.'sia.na/</td>
<td>'water falls'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/a.'srau.na/</td>
<td>'to swim'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/ko.'ko.'ta.ya/</td>
<td>'insect type'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/po.'ti.te.kru/</td>
<td>'open'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/si.'ri.sia.wa/</td>
<td>'lazy'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/wi.wi.'ri.ei.na/</td>
<td>'write'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/wi.'kri.na/</td>
<td>'to hit'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/wa.wa.'fri'a.na/</td>
<td>'to wear'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/nc.'nei.'sia.na/</td>
<td>'to drink'</td>
</tr>
<tr>
<td>V.CV.CV</td>
<td>/kn.'kra.ra.'ro/</td>
<td>'crab type'</td>
</tr>
</tbody>
</table>

### Notes
- CV: Consonant-Vowel
- CCV: Consonant-Consonant-Vowel
- CVC: Consonant-Vowel-Consonant
- CVVC: Consonant-Vowel-Consonant-Vowel
- V.CV: Vowel-Consonant
- V.CVVC: Vowel-Consonant-Vowel-Consonant
- CV.CV: Consonant-Consonant
- CCV.CV: Consonant-Consonant-Vowel
- CV.CVVC: Consonant-Vowel-Consonant-Vowel-Consonant

### Additional Notes
- 'maoom ikan': Ikan fish
- 'maoom serangga': Insect type
- 'maoom ketam': Crab type
A TENTATIVE PHONOLOGY OF ISIRAWA

CV.CV.CV.CV /si.yar.'ko.re/ 'name of village' nama kampong
CV.CV.CV.CV.CV /ma.mau.'kri.na/ 'to sharpen a pencil' menajakkan pensil
CV.CV.CV.CV /we.ne.'bi.ya/ 'ant type' maam nemat
CV.CV.CV.CV.CV /po'a,.ri.bi.nai/ 'let's go' marilah
CV.CV.CV.CV.CV /san.ku.'kam.ma/ 'medicinal plant' tanaman bahan obat

Five Syllable Words:
V.CV.CV.CV.CV /e.re.ru.'wa.ri/ 'crooked' bengkok
CV.CV.CV.CV.CV /ka.ne.si.sa.'ni/ 'yellow' kuning
CV.CV.CV.CV.CV /ma.se.ne.'te.ru/ 'we left' kami berankat
CV.CV.CV.CV.CV /ti.te.'kru.na/ 'to open' buka
CV.CV.CV.CV.CV /we.rei.'ni.ba/ 'to give away a boy' menyerahkan anak laki-laki
CV.CV.CV.CV.CV /ta.ta.bra.'ni.ba/ 'to fly' terbang
CV.CV.CV.CV.CV /mi.mi.ris.'ni.ba/ 'we run' kami lari
CV.CV.CV.CV.CV /po'a,.ri.bi.na.ne/ 'let's return' mari kembali
CV.CV.CV.CV.CV.CV /po.e.mo.'sa.kri.nai/ 'let's wash' mari cuci

Six Syllable Words:
V.CV.CV.CV.CV.CV /i.ri.me.'ne.ni.yu/ 'we brought' kami bawa
V.CV.CV.CV.CV.CV /a.rie.'te.ra.pa.pi/ 'we returned' kami kembali
CV.CV.CV.CV.CV.CV /mo'.mo'.sa.kri.'ma.na/ 'to wash' cuci
CV.CV.CV.CV.CV.CV /fa.fania.kri.'ma.na/ 'to cut' potong

A TENTATIVE PHONOLOGY OF ISIRAWA

CV.CV.CV.CV.CV /pi.na.'mi.ra.na.ni/ 'we (2) run' kami (2) lari

Seven Syllable Words:
V.CV.CV.CV.CV.CV.CV /i.ri.'ma.na.brou.na.ps/ 'walk together' jalan bersama

5 THE PHONOLOGICAL PHRASE

The phonological phrase consists of one or more phonological words bounded by pauses. The initial syllable of the final word carries the primary phrase stress while secondary phrase stress is on the penultimate syllable. If a non-verb is last, its last two syllables have mid tone while those preceding carry high tone. If a verb is the last word, the prefixes have high tone while the stem and the suffixes have mid tone.

6 THE PHONOLOGICAL SENTENCE

The phonological sentence consists of one or more phonological phrases bounded by pauses. Declarative, interrogative, and imperative sentences have heavy stress on the nucleus which occurs in the final phonological phrase with tone falling from high on the stressed syllable to mid to low. This stress and intonation pattern also occurs on emphasized words, phrases, and lists of words spoken in isolation.

7 TENTATIVE ORTHOGRAPHY

7.1 The Isirawa phonemes, their allophones, and a proposed orthography are listed below.
A TENTATIVE PHONOLOGY OF ISIRAWA

### PHONEME | ALLOPHONES | ORTHOGRAPHIC SYMBOL
--- | --- | ---
/ʌ/ | [p], [p], [b] | p
/e/ | [ɛ], [ɛ], [ɛ] | ɛ
/ɪ/ | [i], [i] | i
/ʊ/ | [u], [u] | u
/a/ | [a] | a
/o/ | [o] | o
/æ/ | [æ] | æ
/e/ | [ɛ], [ɛ], [ɛ] | ɛ
/i/ | [i] | i
/ɛ/ | [ɛ], [ɛ], [ɛ] | ɛ
/u/ | [u] | u
/ɒ/ | [o] | o
/ɒ/ | [o] | o

7.2 Comments on Orthography
Although stress is not completely predictable, most words do have penultimate stress, therefore it will probably not be necessary to mark stress.

/a/ could have been symbolized as 'b', but since the national language has a voiced bilabial stop symbolized as such, and since 'v' is also a voiced labial fricative and is used in loan words in the national language, the voiced bilabial fricative has been symbolized as v.

A TENTATIVE PHONOLOGY OF ISIRAWA

The vowels /ʌ/, /ɒ/, and /ɒ/ could have been symbolized by doubling one of the other vowels; however, with di- and tri-clusters of vowels this would have been difficult. The symbols ü for /ɪ/, ü for /ɒ/, and ü for /ɒ/ seem to be quite acceptable to Isirawa men who were our language teachers.

*k* will not be written for /k/ as those literate in Bahasa Indonesia prefer to omit it, and as most nouns end in a vowel rather than a consonant.

8 INFLUENCE OF OTHER LANGUAGES

Isirawa speakers have had close contact with the Air Mati and Sobei languages and many of the men speak and understand Bahasa Indonesia, the national language.

Words borrowed from Bahasa Indonesia tend to be adapted into the Isirawa stress and CV pattern. Nouns never end in a consonant, therefore an extra vowel is added and the stress changed.

/a'yama/ 'ayam 'chicken'
/o'bata/ 'obat 'medicine'

Verbs are also given the appropriate affixes.
/tutukara'sina/ tutar 'to change'

Words borrowed from Sobei tend to retain their original stress.

/maro/ 'wind' angin
/ansa'mo/ 'tree type' mnon pokho

9 TAPE TEXT

Stress in the phonemic text will be symbolized as follows: word stress '1, phrase primary stress '2, and sentence stress '3. Where word and higher level stress occur in the same place, the word stress marker is dropped. One slash / follows a phonological phrase and two slashes // follow a phonological sentence.
A TENTATIVE PHONOLOGY OF ISIRAWA

Piter Rarara

Phonemic:
ge pehö°c̣ànimapi fa'tımaw//

Orthographic:
Ne pehöc̣ımṽ̄napi fatimawai.

English, literal:
we two came drum for

Bahasa Indonesia, literal: kami dua datang tifa untuk

P: fa'tımawai// annirapau 'maso/ fa'tımaw tibo°kémaw iri°mawri//
O: Fatimawai. Annirapau maso, fatime Tivökenmai irimâvri.
E: drum for we run here drum Tivöke, for we took
B: tifa untuk kamí lari distin tifa Tivöke untuk kamí ambil

P: tibo°kémaw iri°mawri// fa'tiyè 'ñasra/ '_pwååe èøèbaso
O: Tivökenmai irimâvri. fatiye navra. Peware cecevaso
E: Tivöke, for we took drum three then
B: Tivöke, untuk kamí ambil tifa tiga lalu

P: pìnà'miramani °enosamai// an°mßrau mor°raso/ 'nìfà
O: plönâmíramani Enosamai. Aanmurau Morraso. Ñàra
E: we two ran Enos this we two ran Morra sago
B: kamí dua lari Enos ini kamí dua lari Morra sago

P: 'afri°n°peni peso'ntíf ñappalaru iri'maríre// an°mßrab
O: afrën, peni pesonife sappara irímùntirst. Aanmrau
E: ate then from there arrow we two took we two ran
B: makan lalu dari situ ponah kamí dua ambil kamí dua lari

P: o se'miain// o°maro ai sâwîya 'maiya ánhin⁰aipi¥
O: o Seriani. Òmaro ai Séwîya maiya anhîniyape
E: until Seriani how ? Séwîya this we two took
B: sàmpai Seriani baqëmëna ? Sëwîya ini kamí dua ambil

P: ne 'pini mave'rtítapai ba°ra°f// pini°ofasë 'taka maso'ntíf
O: Ne pini maverítapai varaf. Pinífase taka masonife
E: we night slept dawn morning ? from here
B: kamí malam tidur stang pagi ? darësini

P: 'porim°pókrauß// tîre so'wëk maso'nißa// 'vant/
O: porimpókrözës. Tëre sowe níssona fa'ma
E: many arrived children all from here Yane
B: baŋgët tîba anak semi darësini Yane

P: 'ra°meka/ 'amusa/ 'mar'ënàa/ pini°abec pini°abe 'ntrëamai
O: Rameka, Amusa, Martena. Piniau, pinia Nêramai
E: Rameka Amusa Martena night night Nêra this
B: Rameka Amusa Martena malam malam Nêra ini

P: 'pini° 'wêtnìpà/ 'pinio° 'wêtnìpà/ ne 'pini mabe'rmíni
O: piniù wetùnîpa, piniù wetùnîpa, ne pini maveríni
E: tomorrow she comes tomorrow she comes we night slept
B: besok dia datang besok dia datang kamí malam tidur

P: ba°raß// pini°ofasë 'ntrëomai ari'tetmìpì mra'rimanàpëi
O: varaf. Pinífase Neromai arëtëmìpì mra'rimanàpëi
E: dawn morning Nëro this she came bathed
B: stang pagi Nëro ini dia datang nandi

P: 'taka ai po°'arëbinai/ ne 'swase fati'mai irîme'neniyëw
O: Taka ai pòwrëbinai. Ne ceusate fatima irimënyëw
E: ? ? wë many went we ? drum this we brought
B: ? ? kamí baŋgaₜëti pagi kamí ? tìfa in korì ambil

P: s'u°nëfi// s°u'k// ra°raço//
O: sëuñëfi, seu, raraco,
E: leaf type armband leaf type
B: dawn dawn macam gelang tangan dawn dawn macam

P: so'tipçu// wa'mëraço// ta'ki waro°metañë//
O: sotíñpu, wàmëraço. Taki Warometañë
E: Cassowary feathers Hornbill feathers father Warôme walked along
B: bulu. Kasowarti bulu. burung tahan bapak Warome jalang langgar
Free Translation

Peter's Story

'We came to get the drum. We hiked here in order to get the drum. We took the Tivoke drum. We took three Tivoke drums. Then Enos and I hiked with the drums. We hiked to Morara. We ate sago pudding, then we took some arrows and hiked to Seriani. How did we do it? We took the drums. We slept from sunset to dawn. In the morning the local villagers arrived. All the young people came: Yane, Rameka, Amusa, and Martena. That evening we heard that Nero was coming in the morning. Since she was coming in the morning, we slept until dawn. Nero arrived in the morning. After she bathed, we all went. We brought the drums, various kinds of leaves, armbands, Cassowary and Hornbill feathers. Father then came across the Warome river. We sang Garame. How do we sing Garame? "Pesaware pisanuru, pesaware pisanuru." which means 'Why don't you want to wake me up?' We then came to a place on the Önari river where the Sèsre офaniya river joins it. We began to dance and continued dancing with the people of Siyarkore. We noticed that Yusup had come. We danced to the Potiva river, and continued dancing to Sëwamôro. We rested two days and the third day too. After that we left and returned home to Seriani. That's all.'

Terjemahan Bebas

Cerita Peter


BIBLIOGRAPHY


ACKNOWLEDGEMENT

Professor Dr. M. T. Walker of Southern Illinois University, U.S.A., who came to the Institute for Anthropology, Cenderawasih University, in June 1971, returned to S.I.U. in July 1974.

The Director and Staff of the Institute wish, although late but with no less sincerity, to express their gratitude to Dr. Walker for all he has done for the Institute.

It was Dr. Walker, who initiated the publication of the IRIAN, and thus made the Institute better known outside Indonesia. Dr. Walker was responsible for the research experiences acquired by the young staff members of the Institute, and he also gave encouragement to them to publish their work in English. In June 1972, Dr. Walker was directly involved in the planning and execution of the Symposium in Education, in which participants from Jakarta, Jayapura, and Papua New Guinea read their papers.

NEWS AND NOTES

New Rector for Cenderawasih University

Cenderawasih University has had a new Rector. Dr. Rubini Atsawidiyaja, a Forest Engineering graduate of the State University of New York at Syracuse, U.S.A., is now at the helm of the Indonesian easternmost university.

New Director for the Institute for Anthropology

As of April the directorship of the Institute for Anthropology, which has been vacant for the past year, is held by Dr. Ignatius Suharno. Dr. Suharno is a linguist and earned his doctorate at Georgetown University, Washington, D. C., U.S.A.

New Editorship for the IRIAN

As of this issue, the editorship of the IRIAN is as shown on the inner front cover. New members are Dr. Ignatius Suharno of the Institute as Editor and Robert Sterner of the Summer Institute of Linguistics as Associate Editor.

UNCEN-SIL Workshop in Linguistics

From January 28 to March 22 a workshop in Linguistics was held in Danau (Lake) Bira, in the jungles about 175 miles from Jayapura, the province capital on the north coast of Irian Jaya. The workshop was a joint project of Cenderawasih University (UNCEN) and the Summer Institute of Linguistics. Consultants of the workshop were Dr. Kenneth L. Pike of the University of Michigan at Ann Arbor, Mrs. Evelyn G. Pike, and Anne Cochran of the PNG branch of SIL. Representing Cenderawasih University was Dr. Ignatius Suharno. A mono-
graph of 15 papers reporting on the workshop, with Drs. Pike and Suharno as editors, is going to print.

New Publications

Out of print but subject to availability for a sufficient number of requests against a remittance of US$1.50 or Rp.500,- are:


NOTES ON CONTRIBUTORS

Carol Erickson

Carol Erickson is a member of the Summer Institute of Linguistics and has been working in Indonesia for two years. She began studying the Isirawa language in November 1973. Miss Erickson has previously worked as a registered nurse in the U.S.A. and Viet Nam.

Hiroko Oguri

Hiroko Oguri is a member of the Summer Institute of Linguistics and has been working in Indonesia for two years. In November 1973 she began studying the Isirawa language. Prior to beginning her work as a linguist in Indonesia Miss Oguri lectured in Greek in a Japanese theological college.

Peter and Susan Nestrum

Peter and Susan Nestrum are members of the Summer Institute of Linguistics and have been working in Indonesia for three years. They began their work on the Berik language on October 1, 1973. In addition to their linguistic training, Peter holds a Bachelor of Arts degree from the University of Minnesota, U.S.A., and Susan is a registered nurse.