

Chuave Phonemic Statement
(Tentative)

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O. Introduction

The Chuave language is spoken by more than 20,000 persons living in the Chimbu District of Australian New Guinea. The language area extends for a distance of ten or fifteen miles south from the Chuave sub-district office. Wurm (1961) classifies the language as a member of the Hagen-Wahgi-Jimi-Chimbu language family, and the Chimbu-Chuave sub-family. It is bordered by related languages SinaSina, Dom, and Nomane, as well as unrelated languages Gimi and Siane.

This paper is a revision of several papers written by Joyce Swick concerning Chuave phonology and based on the dialect spoken at Gomia No. 1. This paper is based on the speech of men living at Mainamo, a village some two miles from Gomia No. 1. It was prepared after nine months of fieldwork under the auspices of the Summer Institute of Linguistics between March, 1969 and May, 1970. Our primary informant was Kama, a young man about sixteen years old.

1. Outline of Phonemes

1.1 Chart of Phonemes

1.11 Consonants

	<u>Bilabial</u>	<u>Alveolar</u>	<u>Velar</u>
Stops			
vl.		t	k
vd.	b	d	g
Fricatives	f	s	
Nasals	m	n	
Vibrant		r	
Semi-Vowels	w	y	

1.12 Vowels

	<u>Front</u>	<u>Central</u>	<u>Back</u>
High	i		u
Low	e	a	o

1.2 Contrastive Features

Chuave consonants contrast as to point of articulation and manner of articulation. They employ three points of articulation, bilabial, alveolar, and velar, while varying in manner of articulation from full closure (stops) to complete opening (semi-vowels).

Chuave vowels contrast in regard to point of articulation and height of tongue. The vowels also employ three points of articulation, front, central, and back, and use two positions of the tongue, high and low.

2. Interpretation of Suspicious Segments and Sequences

2.1 Interpretation of Suspicious Segments

Theoretically the consonants [w] and [y] and the vowels

[u] and [i] are two ways of writing the same sound. In Chuave there are no consonant clusters within a syllable, nor are their vowel clusters in a syllable. Therefore, when [w] and [y] occur as syllable margins, they are interpreted as consonants and written /w/ and /y/. When they occur as syllable nuclei, they are interpreted as vowels and written /u/ and /i/. Examples: [k^hew] /kewa/ "pit-pit"; [wiye] /wiye/ "I come"; [k^habu] /kabu/ "moon"; [yai] /yai/ "man"; [k^haniye] /kaniye/ "I see".

2.2 Interpretation of Suspicious Sequences

Suspicious sequences of consonant clusters are rare in Chuave, the only ones being [mb], [nd], [ŋg]. Since there are no clear cases of consonant clusters occurring within a syllable, these suspicious sequences are considered two phonemes with a syllable break between them. Examples: [k^hoŋ.go] /kongo/ "rock"; [k^ha.mu.n.di.a.u] /kamundiau/ "blue"; [mam.bu] /mambu/ "pumpkin".


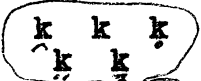
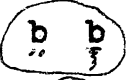
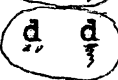


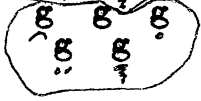






Vowel sequences which could be considered a unit are much more common in Chuave. However, these vowel sequences are treated as a sequence of two vowels primarily because they pattern as two syllables when checking for tone and stress. Examples: [ya.i] /yai/ "man"; [k^ha.u.wom] /kauwom/ "his leg"; [k^he.i] /kei/ "dog"; [bi.a.ŋ.ge] /biange/ "marriage-able".

Because of this pattern, labialization is being treated as a CV.V pattern, rather than as a separate syllable pattern.

3. Description of Phonemes

3.1 Consonants

3.1.1 Work Chart

	<u>Bilabial</u>	<u>Alveolar</u>	<u>Velar</u>
vl. Stops			
vd.			
Fricatives			
Nasals			
Vibrant			
Semi-Vowels			

3.1.2 Description of Consonants

/b/ is a voiced bilabial stop and has two allophones:

[b] a fortis variant of the voiced bilabial stop which occurs word initial and as the second member of a consonant cluster;

[b̥] a lenis variant of the voiced bilabial stop which occurs intervocalically. Examples:

For [b] : [budiye] /budiye/ "I run"

[beiye] /beiye/ "I am making"

[mambu] /mambu/ "pumpkin"

[k^homboi] /komboi/ "komboi"

For [b̥] : [k^hab̥uga] /kabuga/ "bird"

[k^heb̥anam] /kebenam/ "a sibling of the opposite sex"

/t/ is a voiceless alveolar aspirated stop which has two allophones: [t^h] a fortis variant of the aspirated alveolar stop which occurs word initial and as the second member of a consonant cluster; [t̥^h] a lenis variant of the aspirated alveolar stop which occurs intervocalically.

Examples:

- For $[t^h]$: $[t^h_{\text{haw}}]$ /tawa/ "here"
 $[t^h_{\text{okhoi}}]$ /tokoi/ "again"
 $[k^h_{\text{amunt}^h_{\text{agome}}}]$ /kamuntagome/ "daytime"
 For $[t^h_{\text{f}}]$: $[a_{\text{rowat}^h_{\text{eye}}}]$ /arowateye/ "I walk leisurely"
 $[k^h_{\text{ik}^h_{\text{at}^h_{\text{eme}}}}]$ /kikateme/ "He is playing"

/d/ is a voiced alveolar stop with two allophones:

$[d]$ a fortis variant of the voiced alveolar stop which occurs word initial and as the second member of a consonant cluster;
 $[d_{\text{f}}]$ is a lenis variant which occurs intervocalically. Examples:

- For $[d]$: $[d_{\text{uw}}]$ /duwa/ "mouse"
 $[d_{\text{ume}}]$ /dume/ "he talks"
 $[ond_{\text{i}}]$ /ondi/ "truth"
 $[k^h_{\text{amundiau}}]$ /kamundiau/ "blue"
 For $[d_{\text{f}}]$: $[mado]$ /mado/ "Stop it"
 $[d_{\text{udume}}]$ /dudume/ "He is crazy"

/k/ is a voiceless aspirated velar stop. It has five allophones: $[k^h_{\text{f}}]$ a fronted variant which occurs before front vowels; $[k^h]$ the phonetic norm, which occurs before central vowels; $[k^h_{\text{b}}]$ a backed variant which occurs before back vowels; $[k^h_{\text{f}}]$ a fortis variant which occurs word initial and as the second member of a consonant cluster; and $[k^h_{\text{f}}]$ a fortis variant which occurs intervocalically. Examples:

- For $[k^h_{\text{f}}]$: $[k^h_{\text{f}}_{\text{ir}}]$ /kira/ "fence"
 $[d_{\text{ik}^h_{\text{eme}}}]$ /dikeme/ "It is not there"
 For $[k^h]$: $[k^h_{\text{ab}}]$ /kaba/ "moon"
 $[k^h_{\text{ik}^h_{\text{at}^h_{\text{eme}}}}]$ /kikateme/ "he is playing"
 For $[k^h_{\text{b}}]$: $[k^h_{\text{uok}^h_{\text{auo}}}]$ /kuokauo/ "cloud"

- [k^hom[^]] /koma/ "before"
- For [k^h] : [k^hopare[^]] /kobare/ "dish"
- [k^hogonan[^]] /kogonan/ "work"
- [denk^habu[^]] /denkabu/ "mosquito"
- [k^hank^heye[^]] /kankeye/ "I don't see"
- For [k^h] : [fik^heye[^]] /fikeye/ "I don't hear"
- [t^haik^han[^]] /taikan/ "something"

/g/ is a voiced velar stop which has five allophones:

[g_^] a fronted variant which occurs before front vowels; [g] , the phonetic norm, which occurs before central vowels; [g_^] a backed variant which occurs before back vowels; [g_^] a fortis variant which occurs word initial and as the second member of a consonant cluster; [g_^] a lenis variant which occurs intervocalically. Examples:

- For [g_^] : [igi] /igi/ "house"
- [giwi] /giwi/ "division"
- For [g] : [gam] /gam/ "his skin"
- [igai] /igai/ "inside"
- For [g_^] : [goume] /goume/ "it is finished"
- [igom] /igom/ "his house"
- For [g_^] : [gauwo] /gauwo/ "small"
- [gurom] /gurom/ "joint"
- [k^hongo] /kongo/ "stone"
- [moiŋga] /moinga/ "he is there and..."
- For [g_^] : [fege] /fege/ "white"
- [mugom] /mugom/ "seed"

/f/ is a voiceless labiodental fricative which has but one allophone: [f] . Examples:

[fuiye] /fuiye/ "I go"

[wifaime] /wifaime/ "He is sleeping"

/s/ is a voiceless alveolar grooved fricative with [s] as its only allophone. Examples:

[sume] /sume/ "He hits"

[k^hasu] /kasu/ "a lie"

/m/ is a voiced bilabial nasal with one allophone: [m]. Examples:

[mansinom] /mansinom/ "his ground"

[dumanom] /dumanom/ "old"

[durom] /durom/ "grease"

[suwambo] /suwambo/ "Will it rain or..."

[k^honmori] /konmori/ "road"

/n/ is a voiced alveolar nasal with three allophones: [n̠] a fronted variant which occurs syllable initial; [n], the phonetic norm, which occurs syllable final; [ŋ] a voiced velar nasal which occurs before the voiced velar stop. Examples:

For [n̠] : [nik^hi] /niki/ "bad"

[fino] /fino/ "Do you understand"

For [n] : [s(n)] /sin/ "ant"

[k^hank^heye] /kankeye/ "I don't see"

For [ŋ] : [k^hoŋgo] /kongo/ "stone"

[wifaɪŋgu] /wifaingua/ "bed"

/r/ is a voiced alveolar flap with [r̠] as its one allophone. Examples:

[arar̠i] /arari/ "long"

[ber̠a] /bera/ "wallaby"

/w/ is a voiced labiovelar semi-vowel with the one

allophone [w] . Examples:

[wiye] /wiye/ "I come"

[k^hauwom] /kauwom/ "his leg"

/y/ is a voiced palatal semi-vowel with [y] as its allophone. Examples:

[yai] /yai/ "man"

[k^haniye] /kaniye/ "I see"

3.13 Contrasts Between Consonant Phonemes

/b/ contrasts with /w/ in analogous and identical environments:

/biyai/ "old"

/wiye/ "I come"

/weiye/ "I cut"

/beiye/ "I make"

/awom/ "his father"

/abom/ "his daughter"

/nubi/ "sick"

/nuwi/ "water"

/bauwime/ "he is
playing"

/wauwime/ "he is
digging"

/d/ contrasts with /t/ in analogous environments:

/doidoi/ "corn"

/toisuo/ "Split it!"

/dou/ "frog"

/toukoime/ "it is thick"

/dem/ "feces"

/teme/ "up"

/sidome/ "it is full"

/sitome/ "he hit him"

/dudume/ "he is crazy"

/ditome/ "He told him"

/d/ contrasts with /r/ in analogous environments:

/amedo/ "Sit down!"

/bera/ "wallaby"

/fudome/ "he went"

/durom/ "grease"

/godiye/ "I am cutting"

/kori/ "door"

/bidome/ "It is soft"

/girom/ "his mouth"

/budio/ "Run!"

/buro/ "stick"

/t/ contrasts with /r/ in analagous environments:

/ditome/ "He told him"	/diro/ "He said and..."
/tobatoba/ "butterfly"	/are/ "sun"
/mitigi/ "church"	/iriri/ "bridge"
/kikateme/ "he is playing"	/kobare/ "dish"
/sitome/ "he hit him"	/girom/ "mouth"

/g/ contrasts with /k/ in identical and analagous environments:




/gam/ "his skin"	/kam/ "his name"
/gimigirom/ "banana leaf"	/kimi/ "bow"
/giram/ "his mouth"	/kira/ "fence"
/igi/ "house"	/niki/ "bad"
/ogom/ "his hand"	/tokoi/ "again"

/m/ contrasts with /n/ in identical and analagous environments:

/mam/ "his mother"	/man/ "ground"
/maram/ "his belly"	/naromo/ "Naromo"
/fimo/ "Do they understand?"	/fino/ "Do you understand?"
/mogo/ "male"	/nogonam/ "my neck"
/kom/ "yam"	/kon/ "road"

3.2 Vowels

3.21 Vowel Chart

	Front	Central	Back
High			
Low	 	 	 

3.22 Description of Vowels

/i/ is a high close front unrounded vocoid with two allophones: [i] the high close front unrounded vocoid which occurs in open syllables; [ɪ], the high open front unrounded vocoid which occurs in closed syllables. Examples:

For [i]: [iɾiɾi] /iriri/ "bridge"
 [mansinɔm] /mansinom/ "his ground"
 [aɾaɾi] /arari/ "long"

For [ɪ]: [sɪnboiye] /sinboiye/ "I push (it)"
 [dɪn] /din/ "axe"

/e/ is a mid open front unrounded vocoid which has two allophones: [e], the mid close front unrounded vocoid which occurs word final and immediately preceding [y] and [w]; [ɛ] the mid open front unrounded vocoid occurs word medially except before [y] and [w]. Examples:

For [e]: [dume] /dume/ "he said"
 [fik^heye] /fikeye/ "I didn't hear"
 [k^hewʌ] /kewa/ "pit-pit"

For [ɛ]: [ɛmɛɾom] /emerom/ "sibling of the same sex"
 [t^hɛme] /teme/ "up"
 [ɛɾi] /eri/ "wood"

/a/ is a low open central unrounded vocoid with two allophones: [a] the low open central unrounded vocoid which occurs word medially and word finally only after velar consonants; [ʌ] the mid open central unrounded vocoid which occurs word finally except after velars. Examples:

For [a]: [k^habuga] /kabuga/ "bird"
 [man] /man/ "ground"

[a^oro] /aro/ "sun"

For [ʌ]: [duwʌ] /duwa/ "mouse"

[kamʌ] /kama/ "black"

[kirʌ] /kira/ "fence"

/u/ is a high close back rounded vocoid with two allophones: [u] the high close back rounded vocoid which occurs in open syllables; [ʊ], the high open back rounded vocoid, occurs in closed syllables. Examples:

For [u]: [bunʌ] /buna/ "short"

[ume] /ume/ "he comes"

[abu] /abu/ "female"

For [ʊ]: [k^hamʊn] /kamun/ "sky"

[iginʊm] /iginum/ "your house"

[munmani] /munmani/ "many"

/o/ is a mid close back rounded vocoid with but one allophone: [o]. Examples:

[onobʌ] /onoba/ "snake"

[k^hon] /kon/ "road"

[k^hano] /kano/ "Do you see?"

3.23 Contrasts Between Vowel Phonemes

/i/ contrasts with /e/ in identical and analogous environments:

/ibaden/ "flying insect" /ebena/ "now"

/igai/ "inside" /egoi/ "forest"

/nimi/ "rain" /nem/ "father of"

/sin/ "ant" /sen/ "necklace"

/kimi/ "bow" /me/ "taro"

/e/ contrasts with /a/ in analogous environments:

/egoi/ "forest"	/agai/ "place"
/emenam/ "sibling of the same sex"	/amedo/ "sit down!"
/dem/ "intestines"	/dame/ "a type of nut"
/dinebe/ "dirty"	/nabune/ "we will go"
/me/ "taro"	/kama/ "black"

/a/ contrasts with /o/ in identical and analagous environments:

/agome/ "he is holding"	/ogome/ "later"
/ari/ "men"	/ori/ "big"
/gam/ "his skin"	/kom/ "yam"
/tawa/ "here"	/towani/ "one"
/onoba/ "snake"	/orobo/ "down"

/u/ contrasts with /o/ in identical and analagous environments:

/uno/ "Do you come?"	/onoba/ "snake"
/ubune/ "We come"	/oba/ "type of tree"
/kuri/ "fear"	/kori/ "door"
/dume/ "he talks"	/dome/ "it shines"
/abu/ "female"	/bo/ "sugar cane"

3.3 Supra-segmental Features

3.31 Stress, Tone, and Length

Stress ['] contrasts with non-stress in identical and analagous environments:

[bi'ɔm] "his head"	[bi'yom] "wild pig"
[k ^h a'wom] "good talk"	[k ^h awom] "his leg"
[k ^h ub [^]] "stick"	[k ^h u'b [^]] "bamboo"
[k ^h anom] "his name"	[k ^h a'nom] "his string"
[k ^h aw [^]] "this place"	[k ^h e'w [^]] "pit-pit"

Because stress carries very little meaning load in the language, it has been decided at this stage not to write stress in the practical orthography.

High tone is almost always correlated with stress. Only at the end of an utterance, where pitch has a marked downward drift which washes out any high/low pitch contrasts, is it difficult to correlate the two. Stressless syllables, on the other hand, correlate with low tone.

Vowel length is non-phonemic and hence need not be indicated in the orthography. Vowels tend to be shorter between consonants, longer in word final and stressed positions.

3.32 Intonation

Intonation is a feature of the phonological phrase, other features being stress and pitch. A phonological phrase is a sequence of phonological words (stress groups) which ends in a final or non-final intonation and has one heavy stress overlaying one of the stresses of the phonological words. Pitch may either rise, fall, or remain constant depending on the type of intonation at the juncture.

There is one type of final pause and three types of tentative pause. The three types of tentative pause are (1) Narrative-Continuation; (2) Anticipation; and (3) Hesitation.

3.321 Final Pause /./

Final pause intonation is characterised by a rapidly falling pitch over the last few syllables with the final syllable very often lengthened. Towards the end of the utterance, the speaker often slurs the syllables together and lowers his voice to the point of complete unvoicing.

Examples:



yo moranga faikemiau

"It is not right to do nothing."



fino.

"Do you understand?"



mora gOUNGuaite.

"It is completely finished."

3.322 Narrative-Continuation Tentative Pause /.../

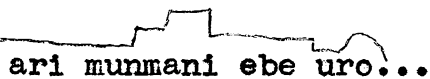
Narrative-continuation tentative pause is characterized by a rising pitch and a short fall just before the pause.

Examples:



ne uro moingai...

"You have come and are here..."



ari munmani ebe uro...

"Many people come in this way..."



koimoi tauromai...

"morning and afternoon..."


3.323 Anticipation Tentative Pause /and.../

Anticipation tentative pause is characterized by a rising pitch which has no down glide. The speaker has more to say and does not want anyone to begin speaking as he hesitates. Examples:



ka ebe duo ebe duo dierowabungerei...

"We like to talk to them like this and..."



mora ebe...

"It is finished and..."



ebena kagom...

"Now at this time and..."

3.324 Hesitation Tentative Pause /---/

Hesitation tentative pause is characterized by an even pitch while the speaker considers what to say next. The final syllable of the utterance is lengthened considerably.

Examples:

kando te---

"look and---

niki dongua ko---

"part was bad---

4. Distribution

4.1 Syllables

The Chuave syllable consists of an obligatory vowel nucleus with optional consonant margins. There are four phonemic syllable patterns: V, VC, CV, CVC. There are no limitations in the distribution of these syllable patterns into the phonological word. That is, all the syllable patterns may occur initially, medially, or finally in the phonological word.

4.2 Consonants

Of the twelve Chuave consonants, all may occur initially in the syllable, but only /m/ and /n/ may occur syllable final. Within words, all consonants with the exception of /r/ occur word initial, all may occur word medially, but only /m/ and /n/ may occur word finally. Consonant clusters are limited to a word medial position and occur only across syllable boundaries.

4.3 Vowels

The five Chuave vowels may occur as the nucleus in

any of the four phonemic syllable patterns. Chart one shows the vowel clusters which occur in Chuave words. These clusters are considered to occur only across syllable boundaries.

	a	e	i	o	u
a			ai		au
e	ea		ei		
i	ia	ie		io	
o			oi		ou
u	ua		ui	uo	

Chart 1. Vowel Clusters

Chart two shows where these vowel clusters may occur in a word.

	ai	au	ea	ei	ia	ie	io	oi	ou	ua	ui	uo
Initial	x	x		x			x	x	x			
Medial	x	x		x	x	x	x	x	x	x	x	
Final	x	x	x		x	x	x	x		x		x

Chart 2. Position of Vowel Clusters

There are a few instances of three vowel sequences:
/kamundiau/ "blue"; /kulekeme/ "she doesn't bear (a son)"

Vowels occur with most consonants but there are some exceptions. /i/ and /u/ do not occur in the same syllable as /t/. /o/ does not occur with /s/. /u/ does not occur with /r/ nor with /w/. And finally, /i/ does not occur with /y/.

5. Controversial Issues

The decision not to write stress in the practical orthography is, of course, not final. We will want to test this decision in literacy classes and with other members

of the society who are already able to read.

6. Orthography

6.1 Suggested Orthography

/Phoneme/	Allophones	Practical Orthography
/b/	[b̥] [b̚]	b
/t/	[t̥ ^h] [t̚ ^h]	t
/d/	[d̥] [d̚]	d
/k/	[k̥ ^h] [k̚ ^h] [k̥ ^h] [k̚ ^h] [k̥ ^h]	k
/g/	[g̥] [g̚] [g̥] [g̚] [g̥]	g
/f/	[f]	f
/s/	[s]	s
/m/	[m]	m
/n/	[n̥] [n̚] [ɲ]	n
/r/	[r̥]	r
/w/	[w]	w
/y/	[y]	y
/ʔ/		unsymbolized
/i/	[i] [ɪ]	i
/e/	[e] [ɛ]	e
/a/	[a] [ʌ]	a
/u/	[u] [ʊ]	u
/o/	[o]	o

6.2 Previous Orthography

The previous orthography for the Chuave language was composed by the former S.I.L. team, Ron and Joyce Swick. Their practical orthography was the same as that presented in this paper. The only differences occur in the allophones.

6.3 Pidgin Words as Pronounced by Vernacular Speakers

[k^hari] /kari/ "car"[t^hunde] /tunde/ "Tuesday"[dak^h] /dak/ "dog"[k^hak^haruk^h] /kakaruk/ "chicken"[p^has] /pas/ "pass"[p^hep^hΛ] /pepa/ "paper"[b(kp^hɛlΛ)] /bikpela/ "big"

[ain] /ain/ "iron"

[yesʊs] /yesus/ "Jesus"

[t^habak^h] /tabak/ "tobacco"

[skɪn] /skin/ "skin"

6.4 Sample Text

ɛbɛnΛ k^hagom k^hogonan nɪk^hi dɔŋɡuΛ munmane wom

ebena kagom kogonan niki dongua munmane wom

k^hogonan ɔɾi faɪŋɡɔɾo t^he k^hogonan inabune diɾe beɪbʊŋɡɔɾo

kogonan ori faingoro te kogonan inabune dire beibungoro

nubi nɪk^hi dɔŋɡuΛ t^he nowai ɡanom k^hɪbɪ na nubi nɪk^hi dɔŋɡuΛ

nubi niki dongua te nowai ɡanom kibi na nubi niki dongua

wom ɡanommuɪ fʊɡadʊŋɡɔɾo aɾɪ muɾuo nubi faɪɾo k^hogonan

wom ɡanommuɪ fʊɡadungoro ari muruo nubi fairo kogonan

inabune diɾo moɾΛ k^hundaikeɓunɪe i nubi t^howane nɪk^hi dɔŋɡuΛ

inabune diro mora kundaikeɓunɪe i nubi towane niki dongua

uŋɡuΛ ɪɾan i nɪk^hi ɔɾɪ wom dɛfiɾo t^he k^hogonan k^hoɾɔbane

ungua iran i niki ori wom defiro te kogonan korobane

muɾuo ɡosume ɛbe.

muruo ɡosume ebe.

Now is a bad time for work. Many people want work, but they are sick. All the people are sick with a cough or with aches and pains so they can't work. We don't want to just lay about doing nothing but this very bad sickness has come upon us so we have to rest. So all the work falls through.