

BAKOSSI PERMANENT  
FILE

PHONOLOGY  
OF  
AKOŌSĒ

(Bakossi)

Akoŋse  
LIN-2

Permanent file

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O N A R E S T

PHONOLOGY OF AKÓŌSĒ  
(BAKOSSI)

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by

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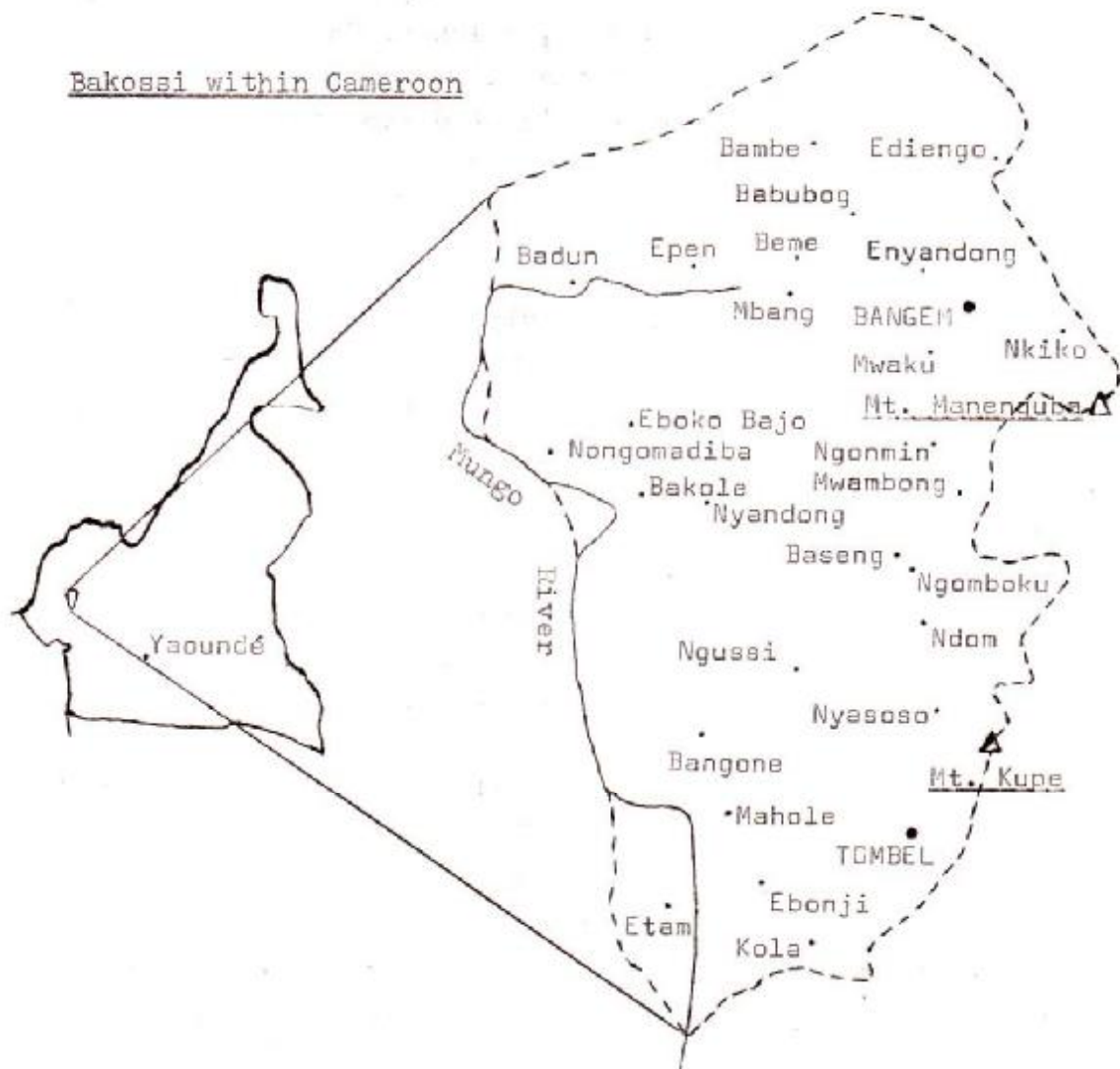
0. Introduction

0.1 The Bakossi people

0.1.1 Location

The Bakossi people live in the Tombel and Bangem Sub-Division in the South-West Province of the United Republic of Cameroon.

Bakossi within Cameroon



According to S.N. Ejedepang-Koge<sup>1</sup> the Bakossi area is situated

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1 cf. S.N. Ejedepang-Koge, 1971, p.1 and map p.43-44.



between latitudes 4°36' and 5°15' North of the Equator and between longitudes 9°28' and 9°51' East of Greenwich. In the west the River Mungo forms in parts a natural boundary. The Kupe and Manenguba mountains indicate the eastern limits.<sup>1</sup>

#### 0.1.2 Historical Background

It is said that the Bakossi people are descendants of Ngoe. Other peoples sharing the same ancestry are Bafaw, Bakundu, Balong, Bassossi, Mbo, Abo, Miamilo, Baneka, Muamenam, Mwangel, Eareko, Bakaka, Babong, Balondo, Manehas, Bongkeng and Bakem.<sup>2</sup> Ngoe is said to have lived around the Manenguba lakes and his descendants migrated from there to the various places occupied today.

#### 0.1.3 Population

Population figures vary greatly. Figures from 30,000 to 60,000 have been quoted. A figure somewhere near the latter is probably correct. The results of the 1976 population census will hopefully soon give a clearer picture.

#### 0.1.4 Name of the people

The name Bakossi is commonly used to refer to the people living in the area described under 0.1.1, used by the people themselves as well as by others. This name refers to the people, the country and the language. However in the language itself the people are called bèkò:sé (pl.), òkò:sé (sg.), the area èkò:sé, and the language àkò:sé.

The term Bakossi has been used in a variety of ways, sometimes exclusively for southern Bakossi, sometimes in the sense used here including the clans of upper Bakossi like Elung, Ninong, etc., sometimes including even Bassossi to the

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1 Further investigation will be necessary to clarify the eastern limits linguistically. From the wordlist of Ngol/Manehas (cf. chapter 9) it is evident that this dialect is essentially the same as Bakossi.

2 taken from S.W. Ejedepang-Koge, 1971, p.24.

north-west.

The origin of the name Bakossi or Bèkô:sé is not quite clear. People like Authenreith (1895), Dorsch (1900/11) and Esch (1904) seem to have used the term Nkosi or Nkosi to refer to the people, language and region. Meinhof used the term Bakosi or Bakosi in 1915 as well as Ittmann in articles between 1929-40. The term Kosi or Kosi has been used by the latter in writings between at least 1936 and 1962 "leaving off the Bantu-prefix"<sup>1</sup>.

One theory is that bèkô:sé is derived from békô: sé 'they-hate us'<sup>2</sup>. Ittmann quotes<sup>3</sup> a story transcribed in àkô:sé with German translation entitled "Ngane Bekôsé be kude adab din" ('How the Bakossi got their name') and explains that Nkôse is derived from \*N-kôd-è-sè meaning 'the squirrel from the ground' ('squirrel' is /kôd/).

## 0.2 The language

### 0.2.1 Classification

Heinrich Dorsch affirms already at the turn of the century (1900/01)<sup>4</sup> that àkô:sé is a Bantu language, but he adds that it is "only a degenerated dialect of Douala". Meinhof (1915)<sup>5</sup> says a similar thing in less derogatory language: "a Bantu language closely related to Douala".

H.H. Johnston (1919, 1922) has the following groups of Bantu languages: Spanish Guinea - West Cameroons, Manenguba, Middle Sanaga, Fang, etc., the first being subdivided into Lower Sanaga Sub-Group, Douala Sub-Group, Rumpi Sub-Group, Mongo Sub-Group, etc. Bakossi is found in his Manenguba Group together

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1 cf. Ittmann, 1956, footnote p.380.

2 cf. Ejedepang-Koge, 1971, p.61 ff.

3 in Ittmann, 1937/38, p.25.

4 in Dorsch, 1910/11, p.242.

5 in Preface to Dorsch's Vocabularium der Nkosi-Sprache, second part, 1915.



with Balun, Bafu and Ba-ngante (Ngosten)<sup>1</sup>.

Guthrie and Tucker (1956) have the following division of Bantu languages: Lundu Group, Duala Group, Mbo Cluster, N. Mbene Group (Basa), etc., with Bakossi and related dialects in the Mbo Cluster. They say that this cluster "exhibits such unity in most aspects that for purposes of classification it can be usefully considered a separate entity, with a particular relationship to Ewondo, N. Mbene and Bulu".

Guthrie in 1970 lists the Mbo Cluster (A.15) as a member of his Lundu-Balong Group (A.10) which is parallel to the Duala Group, Bube-Benga Group, Basa Group, Bafia Group, Sanaga Group, Yaunde-Fang Group, etc.

#### 0.2.2 Dialects

Small variations in pronunciation occur between neighbouring villages and sometimes even within a village. The people are very conscious of dialect differences and make a basic distinction as to "Upper Bakossi" and "Lower Bakossi". Dialect differences are mainly differences in consonants, vowel quality, and some differences in lexicon but very rarely differences in tone. Tone seems to be the most stable element. Despite the differences, the various dialects appear to be mutually intelligible. There is however much comparative work to be done within Bakossi and between Bakossi and related groups. A sample comparative list is to be found in chapter 9.

#### 0.2.3 Bilingualism

English is the official language of instruction in the schools and is used by some in daily conversation. Pidgin English is however the most widely used second language in the area. Some older people, especially women, know little of English or Pidgin and prefer to use *akó:sé* exclusively.

Douala was introduced into the area by the Basel Mission as

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1 For a discussion of the identity of this last language see Johnston (1922) p.172.

the official church language and was used extensively in their schools. Since the introduction of English into the school system in the early 1960's, it has lost ground considerably. Few of the younger generation know the language and it is only heard rarely amongst older people in daily conversation. Its influence is still felt in the church through the use of the Douala hymn book and Bible.

As a note of interest, in a number of villages there are some old men who still remember German from the German era over 60 years ago.

#### 0.2.4 Linguistic work done on the language

The earliest material on àkò:sé is found in Koelle's Polyglotta Africana (1854) where he gives a vocabulary list apparently mislabelled as "Nhalemoe".

Another person who took an interest in studying àkò:sé was Basedow, a missionary with the Basel Mission before 1900. However nothing of his notes, which were handed on to his successor Dorsch, seems to have survived.

Heinrich Dorsch says that he used and improved on Basedow's materials<sup>1</sup>. He published a grammar of 43 pages in 1910/11 and a vocabulary between 1911 and 1915 (ca. 1400 entries).

A third person to mention here is Dr. Johannes Ittmann (also with the Basel Mission). He did not write specifically on àkò:sé (the language) but published 700 àkò:sé proverbs in 1936 with comments in German and included àkò:sé words and expressions in his 1953 publication. Besides that he has published various text materials transcribed in àkò:sé.

Recently many theses have appeared written by young Bakossi men covering various aspects of Bakossi tradition but surprisingly no linguistic study seems to have been attempted and made available. Ejedepang-Koge has devoted 24 pages to àkò:sé in his book "The Tradition of a people: Bakossi", and says:

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1 cf. Dorsch 1910/11 p.241 (translated into English by Dr. Heinrich Balz in 1974, Presbyterian Theological College, Nyasoso).



"Our purpose, however, is not to treat the language here as the linguist would do.... We merely wish to put down a few aspects of this language and thus throw a challenge to linguists to study the language....", which challenge we have taken up!

### 0.3 This paper

Research for this paper was carried out over a period of approximately 18 months between August 1974 and December 1976. We were first resident in Ndom-Bakossi and then in Nyasoso. The following three people were our assistants for various periods of time: Mr. Joseph A. Epang of Ndom, Mr. Martin E. Mesumbe and Mr. Roggy G. E. Metuge, both of Nyasoso.

This paper has been written within a hierarchical framework. For purposes of description the following levels have been set up: Breath group, Elision group, Phonological word, Syllable and Phoneme.

Because the scope of this paper did not allow us to describe simultaneously all the dialects, we concentrated on just one of them, namely that of Lower Bakossi. Much of what is presented will be relevant beyond this dialect. At some points we have included examples from other dialects and have given wordlists from a number of different dialects to illustrate the differences. We do not consider this to be an exhaustive study and hope that some young Bakossi people will take up the challenge and study in detail different aspects of their own language.

### 0.4 Acknowledgements

We are very grateful to our three assistants, Mr. Epang, Mr. Mesumbe and Mr. Metuge who with patience and perseverance helped us to study and learn àkó:sé, and the many others who gave of their time. Without their help this paper would have been impossible.

We are also grateful to our colleagues from the Summer Institute of Linguistics who have given many helpful suggestions. Among others we should like to thank especially Mr. John Wat-

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# List of abbreviations and symbols

AM	associative marker
C	consonant
cl.	noun class
h	homorganic syllabic nasal
N	nasal
nvP-word	non-verbal phonological word
P-word	phonological word
pl.	plural
sg.	singular
V	vowel
V:	long vowel (e.g. a:)
ʏ	voiceless vowel
Ṽ/Ċ	nasalised vowel or consonant
vd.	voiced
vl.	voiceless
vP-word	verbal phonological word
[....]	phonetic data
/..../	phonemic data
'....'	English gloss
'(.....)'	English gloss: a kind of ....
*	non-existent form
>e	centralized vowel
~	alternative form
>	becomes, is realized as
<	derived from
ɪ	high open spread front vowel
ʊ	high open rounded front vowel
ɨ	high open spread back vowel

## Tone Symbols

ˊ or H	high tone
ˋ or L	low tone
ˆ or HL	high-low falling tone
ˋ or LH	low-high rising tone
ˑ	downstep
ˆ or HˑH	high-"mid" falling tone
ˑ	upstep
ˋ or ˑHˑH	"mid"-high rising tone



## 1. Breath group

### 1.1 Structure

The breath group consists of one or more elision groups.

### 1.2 Features

The following features mark the breath group. There is an intake of breath at the beginning and downdrift throughout. It is marked by an obligatory pause at the end with resetting of the pitch level after pause at the beginning of the next breath group.

Downdrift here consists of both automatic downdrift and downstep as described in the chapter on Tone (chapter 7). The effect of these two tonal features has sometimes been described as terracing, hence "terraced-level tone" system. Downdrift is partially compensated for by the lowering of the low tones so that the high-low contrast is maintained throughout the breath group. However the pitch range is always smaller at the end than at the beginning. If in a pause group all the tones are high and uninterrupted by low tones or downstep, no downdrift takes place; all tones are on the same level.

Downdrift extends to the end of the breath group where there is a pause and new intake of breath and the pitch level is reset.

## 2. Elision group

### 2.1 Function and structure

The elision group functions in the breath group. It consists of one or more major phonological words, with optionally occurring minor phonological words.

### 2.2 Features

Within the elision group elision takes place. Vowels, consonants and tones elide at word boundaries. An optional pause may occur at the end, but there is no breath intake or resetting of the pitch level. Word initial vowels are preglottalized elision group initially after pause. Elision group finally before pause, voiced stops are realized as unreleased stops.

### 2.3 Elision

Since elision is a very frequent phenomenon, some of the most common examples will be listed here.

#### 2.3.1 Elision of segments

Adjacent vowels elide frequently. Usually when two short vowels elide the resulting vowel is still short. The most typical types of vowel elision observed are illustrated below.

e + e > e	ḥzé + édé > [ḥzédé]
	if it-is 'if it is'
	mbàngé + édé > [mbàngé <sup>h</sup> é]
	cocoyam it-is 'cocoyam is'
a + a > a	hâ + áhóbé > [hâ <sup>h</sup> óbé]
	there he-said 'there he said'
ɛ + e > e	ḥ <sup>ɥ</sup> ě + é <sup>ɥ</sup> ěsé > [ḥ <sup>ɥ</sup> ě <sup>ɥ</sup> ěsé]
	come! sit-down! 'come sit down!'

a + e > e	ǎ + ɛwàkè > [ǎwàk <sup>h</sup> è]	he-said gorilla 'he said: the gorilla'
	ǎ + ɛdíb > [ǎdíP]	at stream 'at the stream'
	kâ + ɛkó:sé > [k <sup>h</sup> ǎ:k <sup>h</sup> ó:sé]	or Bakossi-land 'or Bakossi land'
a + e? > a?	ǎ + ɛ'lám > [ǎ'lám]	in trap 'in the trap'
	ǎ + ɛ'léb > [ǎ'léP]	he-said black-snake 'he said: the black snake'
e + a > ε <sup>1</sup>	ɛtédɛ + ǎbàd > [ɛt <sup>h</sup> éǎbàT]	I-took cloth 'I took the cloth'
ε + a > ε	ád <sup>y</sup> ɛ + ǎsé > [ád <sup>y</sup> ǎsé]	she-sits down 'she sits down'
V <sub>x</sub> + e > V <sub>x</sub>	(V <sub>x</sub> = any vowel of the P-word nucleus)	
	mětǎ + ɛlém > [mět <sup>h</sup> ǎlém]	I-will-tie domestic-animal 'I will tie the domestic animal'
	pí + ɛdé > [p <sup>h</sup> í:dé]	viper it-is 'the viper is...'
	ɛbú + ɛtánténé > [ɛbú:t <sup>h</sup> ánt <sup>h</sup> éné (mè)]	rain it-met '(I) met rain'
	kòkò + ɛcé > [k <sup>h</sup> òk <sup>h</sup> ò:cé]	trouble which 'trouble which...'
V <sub>y</sub> + a > V <sub>y</sub>	(V <sub>y</sub> = non-high vowel of the P-word nucleus)	
	..átǎ + ǎ + b <sup>y</sup> ǎ > [..át <sup>h</sup> ǎ:b <sup>y</sup> ǎ]	to-tie in grass '...to tie in the grass'
	ǎbó + ǎdé > [ǎbó:dé]	heap it-is 'the heap is'

1 the [ε] here is often heard as a slight glide towards an [a] sound.



àsê + ádé > [àsê:édé]  
(tree) it-is '(tree) is'

$V_z + a > V_z \varepsilon$  ( $V_z$  = high vowel of the P-word nucleus)

àbí + ádé > [àbí:édé]  
colanut it-is 'the colanut is'

àbú + ádé > [àbú:édé]  
excrement it-is 'the excrement is'

Nasals sometimes assimilate in point of articulation to the following consonant.

n + w > ɲw òhóbé + nèn + wě > [òhóbénɲwě]  
you-said that speech-introducer-2nd ps. sg. 'you said that ...'

ɲ + b > mb bòn + béd<sup>y</sup>ǎg > [bòmbéd<sup>y</sup>ǎk]  
then they-eat 'then they eat'

n + b > mb béhóbé + nèn + bán > [béhóbénɛmbán]  
they-said that speech-introducer-plural 'they said that ...'

Word final [ɲ] tends to drop out preceding a vowel, while that vowel then assimilates to the vowel preceding the elided [ɲ].

àhón + á + ñàm > [àhó:ñàm]  
fat of animal 'fat of animal'

kèn + ádé > [k<sup>h</sup>â:édé]  
chief he-is 'the chief is there'

Note that when a velar nasal is elided it is usually compensated for by lengthening the vowel.

Metathesis between a word final [m, n, or l] and the glottal stop of a following minor P-word is very common:

$\begin{Bmatrix} m \\ n \\ l \end{Bmatrix} + ?V > ? \begin{Bmatrix} m \\ n \\ l \end{Bmatrix} V$  còm + ʔè > [cǎʔmè]  
thing too 'the thing too..'  
băn + ʔè > [bǎʔnè]  
children too 'the children too..'

kál + ʔɛ̃ (àlúm) > [kʰáʔlɛ̃ (àlúm)]  
ask! also (debt) 'ask also for (the debt)'

Some speakers however prefer the following:

$\begin{Bmatrix} m \\ n \\ l \end{Bmatrix} + ʔV > \begin{Bmatrix} mm \\ nn \\ nl \end{Bmatrix} V$ 
 $\begin{matrix} côm + ʔɛ̃ > [côm̩mɛ̃] \\ bân + ʔɛ̃ > [bân̩nɛ̃] \\ kál + ʔɛ̃ > [kʰán̩lɛ̃] \end{matrix}$

Word final stops (which are either unreleased before pause or voiced if followed by a vowel) elide with a following glottal stop as follows:

$\begin{Bmatrix} b \\ d \\ g \end{Bmatrix} + ʔV > \begin{Bmatrix} p \\ t \\ k \end{Bmatrix} V$ 
 $\begin{matrix} àhóɓ + ʔɛ̃ > [àhópʰɛ̃] \\ \text{talk too} & \text{'the talk too..'} \\ bād + ʔɛ̃ > [bātʰɛ̃] \\ \text{people too} & \text{'people too..'} \\ èhóg + ʔɛ̃ > [èhókʰɛ̃] \\ \text{one too} & \text{'one too..'} \end{matrix}$

Word final glottal stop always drops out except before pause.

One very specific instance of elision is the following, where the word bād 'people' elides with bé 'AM cl.2' or 'verb prefix cl.2':

$bād + bé + dʷād > [bā:dʷāt]$   
people of town 'people of the town'  
 $bād + bépémé > [bā:pʰémé]$   
people they-carried 'people carried'

### 2.3.2 Resyllabification

Looking at elision from the point of view of the syllable, we could talk of resyllabification. When for example a CV syllable elides with a syllable of type 2 or 3 (V, VC or N) a new syllable of type 1 results:

$CV + V > CV$ 
 $bébidé + ébʷóg > [bébířébʷók]$  'they went outside'  
they-went outside  
 $CV + VC > CVC$ 
 $ɛ̃kʷèdɛ + ánzì: > [ɛ̃kʷèřénzì:]$  'I fell down'  
I-fell on-road

Note that in the third example the syllabic nasal loses its syllabicity and the tone may be either lost or realised on the resulting syllable. When a closed syllable is followed by a type 2 syllable (V or VC) the coda of the first syllable becomes the onset of the second syllable.

CVC + VC > CV.CVC      àkàb + ámhá: > [àk<sup>h</sup>á.bámhá:] 'big share'  
share                      big

### 2.3.3 Elision of tone

- 1) loss of syllables
- 2) reduction of tone glides
- 3) replacement of low tones.

H + H > H      ńáké      +      édé      >      [ńák<sup>h</sup>édé]      'bananas  
banana      they-are      are....'

bébidé      +      átònté      >      [bébířét<sup>h</sup>ònt<sup>h</sup>é]      'they  
they-came-out      from-room-      came  
                 inside      out of the room'

L + L > L      èné      +      mbà:ngé      >      [ènémbà:ngé]      'that  
that      cocoyam      cocoyam'



H + LL > HL      wəsədɛʔ<sup>1</sup> + əhɪdénám > [wəsə́ɾəhɪdénám] 'don't  
                              don't lick bone                          lick the bone'

Under other conditions the loss of low tone results in downstep. (For loss of L resulting from the reduction of tone glides see 2.3.3.2.) The rule for the loss of L resulting from the loss of a syllable is as follows:

H + LH > H:H    ànóné + ñdáb > [ànónén'dáP] 'he looked at the house'  
                          he-looked house  
                          àbèlè + àkób > [àbèlèk<sup>h</sup>òP] 'he always takes'  
                          he-always takes

In the locative phrase a low tone is frequently lost but although preceded by a downstep, the result is one downstep, not two:

H<sup>i</sup> + LH > H!H    á:<sup>i2</sup> + ndáb > [ándáP] 'at/in the house'  
                         locative         house  
                         marker  
     cf.: á:<sup>i</sup> + kálàg > [ák<sup>n</sup>álàK] 'on/in the book'  
                         locative         book  
                         marker

Sometimes there may be a loss of syllables without a loss of tone, two tones forming a glide on the syllable preceding the lost one.

L + H > LH      ñgũ:    +    ɛbè > [ñgũ:bè] 'two pigs'  
                          pig                      two  
     (cl,10)

mbũm + ñ + ñgũn > [mbũmñgũn] 'corn kernel'  
                  seed    AM    corn

### 2.33.2 Reduction of tone glides

HL and LH tone glides are frequently reduced to a simple high tone in fast speech.

- 1 word final glottal stop drops out in sequence.
- 2 the locative marker has a downstep /!:/ as part of its tone pattern.

For example:

- HL + L > HL      sêpêdê      > [sêp<sup>h</sup>êrê] 'we reached'  
we-reached
- HL + H > H!H      kâd + póg > [k<sup>h</sup>âtp<sup>h</sup>ók] 'one age group'  
age-group one
- H + LH > H!H      èdê + côm + é + b<sup>w</sup>âm > [èdêcôméb<sup>w</sup>âm] 'it is a  
it-is thing AM good      good thing'

Downstep appears where a low is lost between two high tones.

### 2.33.3 Replacement of low tones

In the two preceding sections it can be seen that low tones lost in the environment H\_H result in downstep. That phenomenon can be described in purely phonological terms. However some grammatical contexts have been found where low tone in the environment H\_H becomes a high tone regardless of the loss of syllables; in very deliberate register the low tone may remain:

- H + LH > H(H)H
- téd + mëndíb > [t<sup>h</sup>éd mëndíP] (~[téd mëndíP]) 'take water'  
take water
- èpíd + é + mól > [èp<sup>h</sup>ířémól] 'oil bottle'  
bottle AM oil
- ésèbê + èbúm > [ésèbêbúm] 'without a mat'  
without mat
- ké + ñdí:téd > [k<sup>h</sup>éndí:t<sup>h</sup>éT] 'even food'  
even food

In the first example it can be shown that the low tone is not lost but simply replaced by a high tone.

By analogy one can say that in the second example the L in the LH glide is replaced by a H resulting in a single high tone on that syllable.

In the last two examples, one can say that the syllable with the low tone replaced by high tone has been lost. Because L

is replaced by H, a downstep never occurs in these contexts. Replacement of low tone cannot be described apart from its grammatical context. At this point in our research we can say that this phenomenon is strictly limited to the following:

- 1) the object position after some but not all verb forms,
- 2) the associative construction,
- 3) after /ké/ 'even'.

Replacement of low tone however does not apply to non-prefixed disyllabic nouns with the tone pattern LH:

téd+ kòndé [t<sup>h</sup>étk<sup>h</sup>índé] not \*[t<sup>h</sup>étk<sup>h</sup>índé] 'take the  
take armchair armchair!'



### 3. The phonological word

#### 3.1 Function and structure

The phonological word (P-word) functions in the elision group. It is composed of syllables.

Two kinds of phonological words are distinguished: major phonological word (major P-word), and minor phonological word (minor P-word). The major P-word is further subdivided into verbal P-word (vP-word) and nonverbal P-word (nvP-word) because of certain structural differences. In the following this distinction will only be made where relevant.

#### 3.2 The major P-word

The major P-word has an obligatory nucleus, which is optionally preceded by a premargin of one (or two) syllable(s) and/or optionally followed by a postmargin of one or two syllables.

The nucleus is characterized by the least restriction in the occurrence of phonemes, by the presence of certain allophones and the occurrence of the features of labialization and palatalization. The nucleus can be only of syllable type 1. All tones can occur on the nucleus.

The premargin may consist of any of the three syllable types; the postmargin, only of syllables of type 1. In both pre- and postmargins the distribution of vowel and consonant phonemes is limited. There is no labialization or palatalization feature in the margin. Length may occur on the nucleus and postmargin but not on the premargin.

#### 3.3 The minor P-word

In order to simplify the description of the P-word certain phonologically bound but grammatically independent forms are treated as minor P-words. They function within the elision group but they do not occur independently of major P-words. The structure of the minor P-word may be of any of the three

syllable types.

Some examples are given below but the rest of this paper is concerned only with the major P-word.

CV	/mé/	'AM (cl.6)'
	/dè/	'AM (cl.5)'
	/ʔǎ/	'too, also, etc.'
	/ʔě/	'too, also, etc.'
VC	/éʔ/	'AM (cl. 8 and 19)'
V	/à/	'AM (cl.1)'
	/é/	'AM (cl.7 and 10)'
	/ã/	'speech introducer (3rd ps. sg.)'
	/ǎ/	'locative marker'
N	/ǎ/	'AM (cl.3 and 4)'

### 3.4 The structure of the non-verbal phonological word (nvP-word)

The structure in terms of syllables is diagrammed as follows:

$$\pm \left\{ \begin{array}{c} N \\ V(C) \\ CV(C) \end{array} \right\} + \underline{CV(C)} \pm CV(C) \pm CV(C)$$

The nucleus is underlined and corresponds with the root initial syllable. Only very few words (ca. 0.5% or less) have two syllables in the postmargin.

Some examples:

<u>CV</u>	/pó/	'mouse'
<u>CVC</u>	/kúb/	'chicken'
<u>CV.CV</u>	/sàlé/	'house rat'
<u>CV.CVC</u>	/kálàg/	'book'
<u>CVC.CV</u>	/túmbé/	'extended family'
<u>CVC.CVC</u>	/kâlbàg/	'armpit'
N.CV	/ǎtũ/	'too much work'
V.CV	/ǎkè/	'honey comb'
VC.CV	/ǎmpé/	'again'

VC. <u>CVC</u>	/àndáñ/	'(basket)'
CV. <u>CVC</u>	/bēbā:d/	'women'
CVC. <u>CVC</u>	/mēndīb/	'water'
N. <u>CVC</u> .CV	/Abínzē/	'net, fishing line'
N. <u>CV</u> .CV	/àg <sup>w</sup> àsǎ/	'dry plantain leaves'
V. <u>CV</u> .CVC	/àbúbóñ/	'knee'
V. <u>CVC</u> .CV	/èkómbé/	'umbrella tree'
VC. <u>CV</u> .CV	/āñgáké/	'jug'
VC. <u>CV</u> .CVC	/èhl <sup>w</sup> àgèl/	'(tree)'
CV. <u>CVC</u> .CV	/mèlòñgé/	'bucket'
CV. <u>CV</u> .CV	/mésólè/	'(mushroom)'
CVC. <u>CV</u> .CVC	/mèñgègéd/	'windpipe'
CVC. <u>CV</u> .CV	/bēmbèlé/	'cats'
<u>CV</u> .CV.CV	/hínágé/	'red cocoyam'
N. <u>CV</u> .CV.CV	/àg <sup>w</sup> àsàmé/	'(wood)'
N. <u>CV</u> .CV.CVC	/àkèñgèn/	'skeleton'

### 3.5 The structure of the verbal phonological word (vP-word)

The following diagram summarizes the structure of the vP-word:

$$\pm \left\{ \begin{array}{c} N \\ V(C) \\ CV(C) \end{array} \right\} \pm CV(C) + \underline{CV(C)} \pm CV(C) \pm CV$$

The nucleus is underlined and corresponds with the verb-root initial syllable.

The maximal expansion of the vP-word is 5 syllables as seen from the above formula. There are however the following restrictions:

- the second syllable in the formula is obligatorily preceded by the first;
- N always stands alone as premargin.

Some examples of vP-words in minimal and maximal expansions (nucleus underlined):

<u>CV</u>	/hè/	'put!'
<u>CVC</u>	/kǎb/	'share!'
<u>CV</u> .CV	/wòbé/	'wash!'



CV.CVC	/yégéd/	'teach!'
CVC.CVC	/bòñsén/	'prepare!'
N.CV	/Abí:/	'I know'
V.CVC	/áčám/	'he will cook'
VC.CVC	/àmpém/	'she carried'
CV.CVC.CVC	/sèk <sup>w</sup> énlèh/	'we are crossing'
V.CVC.CV	/èyégaté:/	'he is not teaching'
VC.CVC.CVC	/āñwāmsén/	'he hurried'
CV.CV.CVC.CV	/bék <sup>w</sup> āgēnlé/	'they will not bite'
VC.CVC.CV.CV.CV	/èñkēñh <sup>y</sup> ōmēté/	'he did not go round'
CVC.CVC.CV	/mèñkēmbá:/	'I was not'
V.CV.CV	/ésèbè/	'without, lit: it not being'
CVC.CVC.CV.CV	/ñíñkēnlá:hé/	'you (pl.) didn't tell'

### 3.6 Features of the phonological word: labialization and palatalization

Labialization or palatalization may optionally occur on the nucleus of the P-word.

There are some restrictions as to cooccurrence of these features with syllable onsets ( $C_1$ ) and syllable nucleus ( $V_1$ ). Cf. the following charts:

#### 3.6.1 Cooccurrence of labialization with $C_1$ :

The eleven underlined consonants can be labialized.

<u>p</u>	<u>t</u>	<u>c</u>	<u>k</u>
<u>b</u>	d		g
	<u>s</u>		<u>h</u>
	z		
<u>m</u>	n	<u>ñ</u>	
	<u>l</u>	y	<u>w</u>

Examples:

/ə.p <sup>w</sup> èn/	'pincers'	/əh.t <sup>v</sup> é/	'(wax)'
/b <sup>w</sup> ém/	'throw!'	/é.s <sup>w</sup> è/	'wrestling'
/m <sup>w</sup> ān/	'child'	/əh.l <sup>w</sup> ā.gəl/	'(tree)'

/c <sup>w</sup> âl/	'(plant, leaf)'	/a.h <sup>w</sup> êh/ <sup>1</sup>	'he is returning'
/è.k <sup>w</sup> è/	'bag'	/h.w <sup>w</sup> êh/ <sup>1</sup>	'I am killing'
/h.g <sup>w</sup> â/	'partridge'		

Note: Labialized /z/ has been observed in the western dialect in words which are palatalized by speakers in Ndom and Nyasoso. Cf:

/h.z<sup>y</sup>êg/ ~ /h.z<sup>w</sup>êg/ 'elephant'

### 3.6.2 Cooccurrence of palatalization with C<sub>1</sub>

The eleven underlined consonants can be palatalized:

p	<u>t</u>	<u>c</u>	k
<u>b</u>	<u>d</u>		g
	<u>s</u>		<u>h</u>
	<u>z</u>		
<u>m</u>	<u>n</u>	<u>ñ</u>	
	<u>l</u>	y	w

Examples:

/è.p <sup>y</sup> ê/	'juju society'	/s <sup>y</sup> âd/	'soldier ant'
/h.b <sup>y</sup> êm/	'blossoms'	/h.z <sup>y</sup> éñ/	'abuse'
/m <sup>y</sup> âm/	'drizzle' (also /m <sup>w</sup> âm/)	/h.l <sup>y</sup> êg/	'a catch (of something)'
/h.t <sup>y</sup> ég/	'box'	/c <sup>y</sup> â/	'leaf'
/d <sup>y</sup> é.sîd/	'crab'	/h <sup>y</sup> ô:b/	'hawk'

---

1 No noun has been found with labialized /h/ or /w/.

### 3.6.3 Cooccurrence of labialized consonants with vowels

	i <sup>1</sup>	e	ɛ	ə	ə	ɔ	o	u <sup>1</sup>
p <sup>w</sup>			x					
b <sup>w</sup>		x	x	x	x	x <sup>2</sup>	x <sup>2</sup>	
m <sup>w</sup>		x	x	x				
t <sup>w</sup>			x					
s <sup>w</sup>		x	x	x				
l <sup>w</sup>			x	x				
c <sup>w</sup>			x	x				
k <sup>w</sup>		x	x	x				
ɕ <sup>w</sup>			x	x				
h <sup>w</sup>			x	x				
w <sup>w</sup>			x					

### 3.6.4 Cooccurrence of palatalized consonants with vowels

	i <sup>1</sup>	e	ɛ	ə	ə	ɔ	o	u <sup>1</sup>
p <sup>y</sup>			x					
b <sup>y</sup>		x	x	x		x		
m <sup>y</sup>		x	x	x				
t <sup>y</sup>		x			x	x		
d <sup>y</sup>		x	x	x	x	x	x	
s <sup>y</sup>			x	x	x	x	x	
z <sup>y</sup>		x			x	x		
l <sup>y</sup>			x		x	x		
c <sup>y</sup>			x	x				
h <sup>y</sup>		x	x	x		x	x	

#### Notes:

1 The high vowels do not occur after labialized and palatalized consonants. It is interesting to see in Dorsch (1911/12) the word /əpíd/, 'bottle' written both as epid and epúid, and the word /bín/, 'day' as buin.

Other dialects have /i/ after labialized consonants:

e.g. /ábú:/ ~ /áb<sup>w</sup>í:/ 'breast' (Nyale, Mwanyo).

2 No labialized consonants are followed by back vowels except b<sup>w</sup>.



### 3.7 Distribution of phonemes

The distribution of phonemes is best described in the framework of the P-word. Because of differences in structure and phoneme distribution the nvP-word and the vP-word will be treated separately.

#### 3.7.1 Premargin of the nvP-word

	N	C V (C) <sup>1</sup>	V (C) <sup>1</sup>
b		x	
m		x x	x
n		x	x
ñ <sup>2</sup>		x	x <sup>3</sup>
h			
ɸ	x		
e		x	x
a			x

#### 3.7.2 Premargin of the vP-word

	1st syllable			2nd syllable
	N	C V (C) <sup>1</sup>	V (C) <sup>1</sup>	C V (C) <sup>1</sup>
k				x
b		x		
d		x		
m		x x	x	x
n		x	x	x
ñ <sup>2</sup>		x x	x	x
s		x		x
h			x <sup>3</sup>	
w		x		
ɸ	x			
i		x		
e		x	x	x
ɛ		x		
a			x	

Notes: 1 The choice of the nasals in this position is determined by the point of articulation of the following consonant.  
 2 The phoneme /ñ/ is [ɲ] syllable finally and [ɲ̃] elsewhere.  
 3 /h/ is realized as [ʔ] in this position.

### 3.7.3 Nucleus and postmargin of the nvP-word

	nucleus	postmargin	
		1st syllable	2nd syllable
	C V (C)	C V (C)	C V (C)
p	x	x	
t	x	x	
k	x	x	
b	x x <sup>2</sup>	x x	
d	x x	x x	x
g	x <sup>3</sup> x	x <sup>3</sup> x	x
m	x x	x x	
n	x x	x x	x
$\tilde{n}^1$	x x	x	x
s	x	x	x
z	x <sup>3</sup>	x <sup>3</sup>	
c	x		
h	x		
l	x x	x x	x
y	x		
w	x		
i	x	x <sup>4</sup>	
e	x	x	x
ɛ	x	x	x
a	x	x	
ə	x		
o	x	x <sup>5</sup>	
o	x	x <sup>5</sup>	
u	x	x <sup>4</sup>	

Notes: The above chart shows that only in the word nucleus can all consonant and vowel phonemes occur.

Restrictions:

- 1 Cf. note 2 under section 3.7.2.
- 2 /b/ rarely occurs word medially in this position - only in nouns derived from verbs.
- 3 /g/ and /z/ occur only after nasals.
- 4 High vowels are rare in the postmargin. /u/ only occurs in a few words word finally. e.g. /sɛsú/ 'comb', /ɛsɛsú/ 'jigger', /ɛbɛsú/ '(dance)'.
- 5 /o/ and /o/ are rare in the postmargin.

### 3.7.4 Nucleus and postmargin of the vP-word

	nucleus	postmargin	
	C V (C)	1st syllable C V (C)	2nd syllable C V
p	x	x	
t	x	x	x
k	x	x	
b	x x	x	
d	x x	x x	
g	<sup>2</sup> x	x	
m	x x	x	
n <sub>1</sub>	x x	x x	x
n <sup>1</sup>	x x		
s	x	x	
z	<sup>2</sup>		
c	x		
h	x x <sup>3</sup>	x x	
l	x x	x x	x
y	x		
w	x		
i	x		
e	x	x	
ε	x	x	x <sup>4</sup>
a	x	x	x
ə	x		
ɔ	x		
o	x		
u	x		

Notes: As in the nvP-word phonemes have the widest distribution in the nucleus.

Restrictions:

- 1 Cf. note 2 under section 3.7.2.
- 2 /g/ and /z/ never occur as C<sub>1</sub> of the nucleus.
- 3 In C<sub>1</sub> position /h/ is realized in both nvP-word and vP-word<sub>1</sub> as [h]. Elsewhere in the nucleus and in the postmargin of the nvP-word /h/ does not occur, whereas in the vP-word it is realized as [ʔ].
- 4 In the second syllable of the postmargin only /e/ and /ε/ have been observed in the nvP-word and only /ε/ and /a/ in the vP-word.



### 3.8 Cooccurrence of phonemes

The following charts show certain cooccurrences and restrictions observed so far in the distribution of phonemes.

#### 3.8.1 Cooccurrence of C and V in the P-word nucleus

There are very few restrictions in the cooccurrence of phonemes in the nucleus.

nvP-word: CV(C), CV(C), CV

	i	e	ɛ	a	ə	ɔ	o	u
p	x	x	x	x	x	x	x	x
t	x	x	x	x	x	x	x	x
k	x	x	x	x	x	x	x	x
b	x	x	x	x	x	x	x	x
d	x	x	x	x	x	x	x	x
g	x	x	x	x	x	x	x	x
m	x	x	x	x	x	x	x	x
n	x	x	x	x	x	x		
ñ	x	x	x	x	x	x	x	x
s	x	x	x	x	x	x	x	x
z	x	x	x	x		x	x	x
c	x	x	x	x	x	x	x	x
h	x	x	x	x	x	x	x	x
l	x	x	x	x	x	x	x	x
y			x	x	x			
w	x	x	x	x		x	x	x

As shown in the above chart /n/ is not followed by /o/ and /u/; /z/ and /w/ are not followed by /ə/; and /y/ is not followed by /ɛ/, /e/<sup>1</sup>, /ɔ/<sup>1</sup>, /o/<sup>1</sup>, and /u/.

- 
- 1 /y/ is followed by /e/, /ɔ/ and /o/ in examples like: /mè yè:/ 'me' or 'it's me' (in reply to a question); /mě yð:/ 'expression to draw attention'; /ähiné yð:/ 'evening greeting'. All these are not lexical items but forms used to call someone at a distance or to call attention.

vP-word: CV(C). CV(C). CV

	i	e	ɛ	a	ə	o	u
p	x	x	x	x	x	x	x
t	x	x		x	x	x	x
k	x	x	x	x	x	x	x
b	x	x	x	x	x	x	x
d	x	x			x		x
m	x	x	x	x		x	x
n		x		x	x	x	
ñ	x	x	x	x	x	x	x
s	x	x	x	x	x	x	x
c	x	x	x	x	x	x	x
h	x	x	x	x	x	x	x
l	x	x	x	x	x	x	x
y			x	x	x		
w		x	x	x		x	x

The above chart shows that in addition to the cooccurrence restrictions of C + V in the nvP-word, the vP-word has the following: /t/ is not followed by /ɛ/; /d/ is not followed by /ɛ/, /a/ and /o/; /m/ is not followed by /ə/ and /o/; /n/ is not followed by /i/ and /ɛ/; /ñ/ is not followed by /u/; and /w/ is not followed by /i/.

It has already been noted that /g/ and /z/ do not occur in the vP-word in root initial position.

### 3.8.2 Cooccurrence of consonants between nucleus and the first postmargin syllable

The phonemes are restricted in their combinations across syllable boundaries as shown in the following charts:

nvP-word: <u>.CVC.CV</u>		onset of postmargin					
		t b d g z					
coda	g	x					
of	m		x				
nucleus	n			x		x	
	ñ				x		

CVC.CVC		onset of postmargin					
		t k g n s l					
coda	b	x					x
of	g					x	
nucleus	m	x					x
	n						
	ñ		x	x	x		x

As can be seen from the above two charts it is significant for the cooccurrence of consonants whether the post-nuclear syllable is closed or not.

vP-word: <u>CVC.CV(C).CV</u>		onset of postmargin					
		t g m n s l					
	b	x				x	
	d		l			x	
coda	g	x			x	x	x
of	m	x		x <sup>2</sup>	x	x	x
nucleus	n	x			x <sup>2</sup>		x <sup>2</sup>
	ñ	x	x		x	x	x
	l	x			3		x <sup>2</sup>
	h <sup>2</sup>				(x)(x)		(x)

#### Notes:

1 /t/ can follow all consonants apart from /d/ and /h/. The first instance can be explained by saying that \*/dt/ becomes /t/.

2 Cf. section 5.2.

3 The sequence \*/ln/ is never found, but /nl/ occurs instead possibly resulting from a process of metathesis. This is illustrated in the verb forms below. On analogy with the first example one would expect /ln/ but /nl/ is the form found:

/kúðén/ 'stay still!'      /ákúðné/ 'he stood still'  
 /bèlén/ 'use (it)!'      /àbènlé/ 'he used (it)'



### 3.8.3 Cooccurrence of consonants in adjacent postmarginal syllables

The cooccurrence of consonants across the syllable boundary of the first and second postmargin syllables is very restricted. The vP-word has the following combinations:

CVC.CVC.CV

		onset	
		n	l
coda <sup>1</sup>	n	x	x
	l		x
	h	(x)	(x)

#### Note:

- 1 The three phonemes listed here are alternatives in this position. Older people prefer /h/. See section 5.2.

No nvP-word has yet been found with two consonants across the boundary of the first and second postmargin syllables.

### 3.8.4 Cooccurrence of vowels in nucleus and postmargin

In the vP-word no cooccurrence restriction has been observed. Any vowel in the nucleus may be followed by *ε* or *a* (cf. section 3.7.4 on V and C distribution in the vP-word). This could be explained by the fact that the vowels in the postmargin are usually verbal suffixes which are not restricted in their distribution, hence occur with any root vowel.

Cooccurrence of vowels in the nvP-word could be charted as follows:

CV.CV

		vowel of postmargin							
		i	e	ε	a <sup>1</sup>	ə	ɔ	o	u
vowel of nuc- leus	i	x	x	x	x				
	e		x	x					
	ε		x	x					x
	a		x	x					
	ə		x	x					
	ɔ		x	x					
	o		x	x				x	
	u		x	x	x				x

CVC.CV

		vowel of postmargin							
		i	e	ε	a	ə	ɔ	o	u
vowel of nuc- leus	i		x	x					
	e		x						
	ε		x						
	a		x	x					
	ə		x	x					
	ɔ		x	x					
	o		x	x					
	u		x						

CV.CVC

		vowel of postmargin							
		i	e	ε	a	ə	ɔ	o	u
vowel of nuc- leus	i	x		x	x				x
	e		x		x				
	ε		x	x	x				
	a		x	x	x				
	ə		x	x					
	ɔ	x	x	x				x	
	o		x	x					x
	u		x	x	x		x	x	x

CVC.CVC

		vowel of postmargin							
		i	e	ε	a	ə	ɔ	o	u
vowel of nuc- leus	i		x	x	x				
	e		x	x					
	ε								
	a		x	x	x				
	ə		x	x					
	ɔ		x	x					
	o	x	x	x					
	u				x	x			

#### Notes:

- 1 /a/ in a non-nuclear syllable never occurs word finally; i.e. it is always followed by a consonant, either a coda or the onset of the next syllable.

- 2 It seems significant for vowel distribution and cooccurrence whether open or closed syllables are involved. For example, if the nucleus is a closed syllable then /e/, /o/, /o/ and /u/ may not occur in the next syllable (except in reduplicated or compound forms).
- 3 /e/ and /ε/ are by far the most common vowels in the syllable following the word nucleus.
- 4 Holes in the chart represent vowel restrictions. However as more material is collected some holes may still be filled.



### 3.8.5 Cooccurrence of syllable nuclei and codas

There are some restrictions as to which vowels may be followed by which consonant in a closed syllable. In the following the vP-word and the nvP-word are handled separately. Separate charts are also given for nuclear and post-nuclear syllables.

#### The nvP-word

CVC. CV(C). CV(C)

	b	d	g	m	n	ñ	l
i	x	x		x	x	x	
e	x	x		x	x		x
ε		x		x	x		x
a	x	x	x	x	x	x	x
ə		x	x		x	x	x
o	x	x	x	x	x		x
o		x	x	x	x	x	x
u	x	x		x	x		

CV(C). CV(C). CV(C)<sup>1</sup>

	b	d	g	m	n	ñ	l
i	x	x			x		
e		(x)			x		
ε					(x)		(x)
a	x		(x)		x	x	x
ə							
o		x					
o	x			x		x	
u							x

#### The vP-word

CVC. CV(C). CV

	b	d	g	m	n	ñ	l	h
i	x	x		x	x	x		
e	x	x		x	x			
ε		x			x		x	x
a	x	x	x	x	x	x	x	x
ə		x	x		x	x	x	x
o	x	x	x	x	x		x	x
o	x	x	x	x	x	x	x	x
u	x	x		x	x			x

CV(C). CV(C). CV

	d	n	l	h
e	(x)			
ε		(x)	x	x
a		x		

#### Notes:

- 1 The VC cooccurrence of the second postmargin syllable is not charted because of lack of data.
- 2 /g/ and /ñ/ are most limited in occurrence.
- 3 As can be seen comparing the charts, the two on the left are essentially the same with the exception of /h/ occur-

ring in the vP-word but not in the nvP-word. The sequence /ob/ is not found in the nvP-word nor /em/ in the vP-word.

- 4 Circled crosses indicate the most frequent combinations.
- 5 Colon (:) indicates that the vowel is always long.
- 6 Comparing the charts shows that the vP-word is severely restricted in the postmargin. This is due to a limited number of verb formations.
- 7 Gaps are probably cooccurrence restrictions although more data may alter the charts slightly.

### 3.9. A note on occurrence of tone in the P-word

Here we will make only a few general remarks instead of listing the ca. 38 patterns for the nvP-word and the ca. 84 patterns for the vP-word.

For the nvP-word the following could be said:

- 1) On the premargin low tone is predominant; glides never occur.
- 2) Not more than one glide may occur in one word.
- 3) With one exception, downstep occurs only between premargin and nucleus.

In the vP-words:

- 1) All tones may occur on a monosyllabic premargin.
- 2) On a disyllabic premargin no rising or falling to "mid" has been observed.
- 3) On a disyllabic postmargin only the following tone sequences have been found: HH, LH, LLH.
- 4) Falling tone does not occur on the postmargin.
- 5) Usually only one downstep may occur, either between premargin and nucleus or after the nucleus when it is followed by one syllable. Two downsteps occur only in vP-words with a disyllabic premargin.
- 6) More than one glide may occur on vP-words.

#### 4. The syllable

##### 4.1 Function

The syllable functions in the phonological word. It functions as nucleus, pre- and postmargins. There are two classes of syllables, Class A and Class B.

Class A syllables occur as nucleus, pre- and postmargins. They are: CV(C) (type 1).

Class B syllables occur only as premargin of the P-word (and as minor P-words).

They are: V(C), N (types 2 and 3).

##### 4.2 Structure

The structure of the syllable is described in terms of phonemes. There are three types of syllables:

###### Type 1

Syllable type 1 consists of an obligatory nucleus, preceded by an obligatory onset and followed by an optional coda.

This would be diagrammed as follows: CV(C).

###### Type 2

Syllable type 2 consists of an obligatory nucleus and an optional coda: V(C).

###### Type 3

Syllable type 3 consists of a syllabic nasal: N.

##### 4.3 Features of the syllable

###### Distribution of phonemes within the syllable

Cf. sections 3.7.1-4.

###### Length (cf. also section 5.1)

Syllable nuclei may be either short or long except when occurring in the premargin of the P-word.



## 5. Interpretation problems

Certain phenomena of the phonological structure are ambiguous in terms of typical syllable patterns and therefore call for interpretation. The question is whether these phenomena fit the typical CV patterns or whether they represent additional syllable patterns.

Unambiguous syllable patterns are:

CV	[sɛ]	'we'	[mɛ.sɛP]	'horns'
CVC	[bɛT]	'people'	[mɛl]	'(juju)'
V	[ɛ.dɪP]	'stream'	[ɛ.sɛP]	'horn'

The following phenomena call for interpretation:

1. Long vowels
2. Long consonants
3. Nasals plus homorganic voiced consonants
4. Syllabic nasals
5. Affricates
6. Labialization and Palatalization
7. Tone glides
8. Nasalization

### 5.1 Long vowels

All vowels occur short and long. Although there are only few minimal pairs distinguished only by vowel length, there is enough evidence to prove the contrast.

[ábɪ]	'his (class 2)'	[ábɪ:]	'he knows'
[álá]	'exclamation'	[álá:]	'stone'
[ɛʷsɛ]	'face'	[sɛ:]	'we'
[ət <sup>h</sup> ú]	'share'	[ət <sup>h</sup> ú:]	'ear'
[p <sup>h</sup> ɛn]	'close!'	[p <sup>h</sup> ɛ:n] ~ [p <sup>h</sup> ɛ̃:n]	'bring'
[áčɛ]	'thorn'	[ɛp <sup>h</sup> ɛ:]	'skin of fruit'

Length is interpreted as a feature of the syllable for the following reasons:

1. There are no unambiguous VV clusters.
2. Syllables with long vowels are produced with one chest pulse.
3. Level tones and glides occur with both short and long

#### 4.4 Tone (cf. chapter 7)

Every syllable carries either one tone (H or L), or a sequence of tones, i.e. tone glides (HL, LH, H:H).

Syllable type 1 may carry any tone or tone glide: H, L, LH, HL or H:H.

Syllable type 2 may carry the following tones or tone glides: H, L, LH or HL.

Syllable type 3 carries either H or L.

Tone is spread over the whole syllable, i.e. over the voiced elements including onset, labialization, palatalization and coda.

vowels.

To interpret long vowels as a sequence of two vowels belonging to two separate syllables is undesirable because:

1. The V(C) syllable type would then occur not only in the premargin of the P-word but also in the nucleus and postmargin, thus making the word structure more complex, as well as the distribution of syllable types within the word.
2. No glides would then occur on a single V of a VV sequence.

Although it can usually be determined quite easily whether a vowel is long or short, in some forms it is not so clear. In some words vowels seem to be ambivalent as to length, especially when accompanied by glides.

cf.	[bãP]	~	[bã:P]	'their friends'
	[bẽT]	~	[bẽ:T]	'our friends'
	[àk <sup>h</sup> ɔsé]	~	[àk <sup>h</sup> ɔ:sé]	'Bakossi language'
	[mbàngé]	~	[mbà:ngé]	'cocoyam'
	[b <sup>w</sup> âm]	~	[b <sup>w</sup> â:m]	'good, well'

In the premargin of the P-word no long-short contrast has been observed. However, vowels accompanied by glides are slightly longer than vowels with level tones.

## 5.2 Long consonants

Long [m:], [n:] and [l:] occur across syllable boundaries and are interpreted as two segments, that is, as coda and onset of adjacent syllables.

[bãm:é]	>	[bãmmé]	'dodge!'
[mbàn:ẽʔ]	>	[mbãnnèʔ]	'I am putting'
[èk <sup>w</sup> é1:é]	>	[èk <sup>w</sup> éllé]	'you crossed over'

A dialect difference is worth mentioning here. Whereas younger people use the sequence [mm], [nn] and [ll] ~ [nl], older people prefer [ʔm], [ʔn] and [ʔl].



### 5.3 Nasals plus homorganic voiced consonants

Sequences such as [mb], [nd], [nz] and [ŋg] as found in, for example, [bòm**p**é] 'sugar', [áìlènd**è**] 'tree', [m̀bínz**é**] 'fishing net' and [h̃t<sup>h</sup>éŋ**g**é] 'bunch' are interpreted as two separate segments in the light of non-ambiguous sequences in similar positions:

[bám.t <sup>h</sup> én]	'come near!'	[són.t <sup>h</sup> én]	'understand!'
[wám.sén]	'hurry!'	[èhín.t <sup>h</sup> én]	'darkness'
[t <sup>h</sup> əŋ.nét]	'use something to tie'		

To interpret the sequences in question as one unit would add more phonemes, which is undesirable.

The distribution of /m/, /n/ and /ŋ/ in syllable coda supports this interpretation.

Having interpreted the nasals as coda of one syllable and voiced stops and /z/ as onset of the next, a further syllable pattern results:

VC occurring only in the premargin of the P-word.

[àn.dán] 'large basket' [àn.gák<sup>h</sup>é] 'jug, glass'

[ám.bəŋ] 'down'

### 5.4 Syllabic nasals vs. prenasalization

Word initial nasals preceding a consonant are treated as separate segments and not as forming a cluster with the following consonant. The reasons are:

1. Each nasal carries its own tone<sup>1</sup>:

[h̃dáp] 'house' [h̃hál] '(bird)' [áméT] 'goat'

2. All root initial consonants may be preceded by a nasal, therefore it would be uneconomical to posit a whole series of prenasalized consonant phonemes:

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1 This can be demonstrated by tone changes in sequence such as: /átédé/ + /áló/ > /átédéríló/ 'he took the head' where the low tone of the nasal is manifested as a downstep influence. Due to resyllabification, the nasal loses its syllabicity and tone, forming the coda of the preceding open syllable.

/Àpòñ/ 'tuber'	/Àtân/ 'slave'	/Àcém/ 'bat'
/Àbòñ/ 'toad'	/Àdím/ 'corpse'	/Àyágtèh/ 'I am tea- ching'
/Àmìn/ 'crease'	/Àzì:/ 'road'	
	/Àlém/ 'heart, lung'	/Àkóñ/ 'neck'
	/Ànàm/ 'blessing'	/Àgàn/ 'proverb'
		/Àhóm/ '(vine)'
		/Àwágèñ/ 'resembl- ance'

This interpretation yields one more syllable pattern: N.

At this point it is necessary to draw attention to the following fact. There is a clear phonetic difference between the *n* in verbs and in nouns, preceding voiced stops. In verbs the *n* is always clearly a phonetic syllable whereas in nouns the *n* is pronounced more as one unit with the following stop.

e.g. [À.bó.t<sup>h</sup>é] 'I made disappear', [Àbó.t<sup>h</sup>é] 'shirt'.

This however does not invalidate the above statement about tone being carried by the *n*. We still consider *n* in nouns and verbs as phonologically a separate syllable.

## 5.5 Affricates

[tš] and [dž] are interpreted as single units for the following reasons:

1. No unambiguous CC sequence exists in àkó:sé.
2. They can be palatalized and labialized.
3. [š] and [ž] do not occur as separate segments (but cf. section 6.1.3, tables 6 and 7).

[tš] and [dž] are represented by *c* and *j* respectively throughout this paper.

## 5.6 Labialization and palatalization

High vocoids [u] and [i] are interpreted as [u] and [i] when functioning as syllable nucleus:

CY	[bù]	'not feeling fine'	[ábí]	'his (class 2)'
CVC	[k <sup>h</sup> ÁP]	'hen'	[p <sup>h</sup> IT]	'thirst'

Word initially and intervocalically they are interpreted as [w] and [y] functioning as syllable onset:



CVC	[wén] 'sow!'	[yǎl] 'body'
V.CVC	[àwém] 'my (cl.1)'	[àyèn] 'palm wine'

In the position C\_V high vocoids are interpreted as a feature of the phonological word, that is as labialization and palatalization realised on the nuclear syllable of the P-word.

[b <sup>w</sup> ém]	'throw!'	[mb <sup>y</sup> ém]	'blooming'
[m <sup>w</sup> èsú]	'fork'	[m <sup>y</sup> éràk]	'jaws'
[k <sup>w</sup> ét]	'death'	[h <sup>y</sup> èn]	'mushroom'

(Cf. also 'Labialization and palatalization' in chapter 3.)

The reasons for this interpretation are:

1. There are no unambiguous VV sequences.
2. Syllables with these features take the same tones (level and glides) as syllables without these features.
3. Syllables with labialization and palatalization are produced with one chest pulse.
4. Labialization and palatalization seem to be an unstable feature in some words as seen when comparing dialects; where one dialect has palatalization, another has labialization:

<u>Ndom</u> and <u>Nyasoso</u>	<u>Bakolle</u>
/ès <sup>y</sup> ògè/ 'basket'	/ès <sup>w</sup> òg(è)/
/t <sup>y</sup> ég/ 'spoon'	/t <sup>w</sup> òg/

Where one dialect has palatalization or labialization another has none:

<u>Ndom</u>	<u>Nyasoso</u>
/èd <sup>y</sup> àngè/ 'love'	/èdèngè/
<u>Upper Bakossi</u>	<u>Lower Bakossi</u>
/b <sup>w</sup> èn/ 'day'	/bìn/
/èp <sup>w</sup> éd/ 'bottle'	/èpíd/

Even the same word may have two different forms in one speaker:

/b <sup>w</sup> ém/ ~ /b <sup>y</sup> ém/	'things'
---	----------

Some occurrences of labialization and palatalization seem to be more prominent than others. However no contrast between C<sup>y</sup>V/C<sup>w</sup>V and CìV/CùV has been found. The more or less vocalic quality is determined by the syllable onset. For example, labialization in /èt<sup>w</sup>è/ 'wax', /m<sup>w</sup>é/ 'year' and /p<sup>w</sup>éd/ 'chrysalis' is more vocalic than in /èk<sup>w</sup>è/ 'bag' and /b<sup>w</sup>él/ 'tree'.



## 5.7 Tone glides

Basically three tone glides have been found: falling (to low), rising, and falling to mid.

Falling to low: (^)

[dû] 'teat', [k<sup>h</sup>ôT] 'age mates', [sêk<sup>h</sup>âbá:] 'we were sharing', [âbî:] 'breast'.

Rising: (v)

[dũ] 'fireplace' [k<sup>h</sup>ôT] 'pluck (w. stick)!', [dëk<sup>h</sup>âbă:] 'we (excl.) were not sharing', [âk<sup>h</sup>î:] 'in-law'.

Falling to mid: (ˆ)

[m<sup>w</sup>ê] 'friend', [âk<sup>h</sup>ô:sé] 'Bakossi language', [sêk<sup>h</sup>âbă:] 'we were not sharing'.

The above examples show that all tone glides occur with long and short vowels. Therefore they could be interpreted as single tone units. It seems however preferable to interpret the glides as complex tone units consisting of two level tones:

- the falling to low tone consisting of a high and a low tone (HL or ^);
- the rising tone consisting of a low and a high tone (LH or v);
- the falling to "mid" tone consisting of a high followed by a downstepped high (H!H or ˆ).

The main reason for this interpretation is that some occurrences of these glides on short and long syllables in the verb can be analysed as consisting of two tones with lexical and grammatical function respectively. The LH glide in [k<sup>h</sup>ôT] 'pluck!' could be analysed as consisting of a low lexical tone and a high tone marking imperative. Similarly the HL glide in [délân] 'let's read' can be analysed as a high lexical tone plus a low tone marking the jussive.

[m<sup>w</sup>ê] 'friend' has a more basic form [m<sup>w</sup>ê]. On analysing m<sup>w</sup>ê as consisting of m<sup>w</sup>ê + é it is evident that the H!H glide is derived from a HL glide plus a H tone, the L being realised as a downstep. A number of instances of the H!H glide can be analysed in a similar way. On the other hand there

are some cases where there is no evidence for analysing the H!H glide as above, but where it is now considered the inherent lexical or grammatical tone.

One more glide has been observed in the very limited context of upstep (see section 7.2.3), a glide from "mid" to high (↗).

## 5.8 Nasalization

There are two kinds of nasalization.

1. In the environment of nasal consonants vowels may be nasalized, more or less strongly.

[mǎ:] /mǎ:/ 'headband'    [lǎn] /lǎn/ 'read'

2. The second type of nasalization occurs where a velar nasal has been lost or suppressed. Compare the following:

'his father' may be [əcɪ sǎn] or simply [sǎ:] but not \*[sǎn]; 'tell!' is [lǎ:] (but not [lǎn] which means 'read!') and 'he told' is [ǎlǎngé]. This shows that the nasalization of the vowel stems from a velar nasal in a related form. This type of nasalization which occurs frequently in verbs could be called phonemic. It is not usually used however by the younger generation of speakers and seems to be disappearing. Nasalization will not be indicated in the data unless it is important for a certain discussion.

- 5.9 In conclusion it could be said that structural ambiguities can be resolved in the light of typical patterning. In the process of interpretation two new syllable types (VC and N) have been established. Thus there are the following syllable types: CV(C), V(C) and N.

## 6. The phoneme

### 6.1 The consonants

#### 6.1.1 Chart of consonant phones

Allophones of the same phoneme are circled.

	bilabial	alveolar	palatal	velar	glottal
aspirated	p <sup>h</sup>	t <sup>h</sup>		k <sup>h</sup>	
vl. unaspirated	p	t		k	ʔ
stop unreleased	p̚	t̚		k̚	
vd. implosive	b			g	
flapped vibrant	b̥	ɾ			
affricate vl.			c		
vd.			j		
fricative vl.		s	ʃ		h
vd.		z	ʒ	ɣ	
nasal	m	n	ɲ	ŋ	
syllabic nasal	m̥	n̥	ɲ̥	ŋ̥	
lateral		l			
semivowel			y	w	
nasalized high front vocoid			ɥ		
voiceless mid-close front vocoid			e̥		

Note: [f] and [v] are found only in ideophones such as:  
 [f::] 'descriptive of a ball leaking air',  
 [v̥P] 'descriptive of a fire catching light or flaming up', and in some loan words:  
 [kɔ̃fi] 'coffee', [àviyón] 'aeroplane'.



### 6.1.2 Evidence for contrasts

The following tables show the contrasts between phonetically similar sounds.

Table 1 Contrasts between bilabial consonants and /w/

/p/	/b/	/m/	/w/
[p <sup>h</sup> i:] 'viper'	[b <sup>i</sup> :] 'soft (cooked)'	[m <sup>i</sup> :] 'oil palms'	[w <sup>i</sup> n <sup>i</sup> ] 'over there'
[p <sup>h</sup> ɛn] 'close!'	[bɛn] 'themselves (cl.2)'	[mɛn] 'itself (cl.3)'	[wɛn] 'plant!'
[p <sup>h</sup> ɛt] 'fork of a tree'	[bɛ:t] 'my friends'	[mɛl] 'trees'	[wɛ:t] 'my friend'
[p <sup>h</sup> ál] 'hunt!'	[bál] 'borrow'	[mál] 'a juju society'	[wál] 'bask by the fire!'
[p <sup>h</sup> ók] 'kidney'	[bók] 'bark!'		
[p <sup>h</sup> úm] 'blow out!'	[bú:m] 'Buma tree'	[mũm] 'nests'	[wũP] 'uproot!'

Table 2 Contrasts between alveolar consonants

/t/	/d/	/s/	/z/	/n/	/l/
[t <sup>h</sup> i:] 'condi- tion'	[d <sup>i</sup> :] 'I am'	[s <sup>i</sup> :] 'file'	[z <sup>i</sup> :] 'road'		[l <sup>i</sup> :] 'I just hoed'
[t <sup>h</sup> álɛʔ] 'you are writing'	[dɛlɛ] 'you are heavy'	[sɛP] 'dry season'	1	[ánén] 'this'	[ɛlém] 'thin'
[t <sup>h</sup> ál] 'small beam'	[dáp] 'house'	[sàn] 'peace'	[zàP] 'soup'	[nàm] 'bless- ing'	[láp] 'stem'
[t <sup>h</sup> ón] 'walking stick'	[dón] 'pepper'	[sòn] '(name)'	[zón] 'gun barrel'	[nòn] 'roof'	[lón] 'bush with thorns'
[t <sup>h</sup> ũm] 'roast!'	[dũm] 'seize!'	[sũm] 'put into ground!'	[zũm] 'fight'		[lũm] 'throw!'

1 /z/ is always preceded by a nasal.

Table 3 Contrasts between palatal consonants

/c/	/y/	/ñ/
[cáK] 'invite!'	[yáK] 'circumcision'	[ñáK] 'cow'
[cám] 'cook!'	[yálé] 'share out!'	[ñám] 'meat'
[cágé] 'go up!'	[yàgé] 'teach!'	[ñàké] 'pen knife'
[ècèn] 'your (pl. cl.9)'	[mèyèn] 'palm wines'	[èñèn] 'sunshine'
[célé] 'call!'	[yé1] 'slice veg.'	[ñě] 'excrete!'

Table 4 Contrasts between postpalatal consonants

/k/	/g/	/h/	/w/
[ḡk <sup>h</sup> èn] 'guest'	[ḡgèn] 'times'	[ḡhèl] 'wickedness'	[ḡwénàK] 'planting'
[ḡk <sup>h</sup> àn] 'scabies'	[ḡgàn] 'sorcerer'	[ḡhāl] '(bird)'	[ḡwáK] '(cloth)'
[ḡk <sup>h</sup> ù:] 'night'	[ḡgù:] 'pig'	[ḡhú:] 'I went home'	[ḡwú:] 'I killed'
[ḡk <sup>h</sup> ók] 'grind'	1	[ḡhók] 'one (cl.9)'	[wók] 'rub!'
[ḡk <sup>h</sup> èn] 'small dry branches'	[ḡgèn] 'branch'	[ḡhèd] 'twin'	[ḡwèl] 'provocation'
[ḡk <sup>h</sup> ṭ] 'satisfied'	1	[ḡhṭ] 'rise!'	[wṭP] 'play a drum!'

---

1 /g/ is always preceded by a nasal.

Table 5 Contrasts between nasal consonants

/m/	/n/	/ɲ/
[m̃an] 'plait!'	[ñan] 'drive away!'	[ɲ̃an] 'claw, fingernail'
[m̃ɔK] 'oils'	[ñɔK] 'bend!'	[ɲ̃ɔl] 'chisel of hard wood'
[əm̃ɛl] 'crop of hen'	[əñɛn] 'this'	[ɛ̃ɲɛn] 'sunshine'
[l̃im] 'dig!'	[d̃in] 'name'	[l̃ɪŋ] <sup>1</sup> 'blame!'
[l̃am] 'put trap!'	[l̃an] 'ladder'	[l̃aŋ] <sup>1</sup> 'read!'
[w̃amsɛn] 'hurry!'	[w̃ɛn <sup>h</sup> ɛn] 'remember!'	[s̃ɔŋt <sup>h</sup> ɛn] <sup>1</sup> 'understand!'
[m̃ɛ] 'road junction'	[ñɛ: 'mother'	[ɲ̃ɛ] 'excrete!'
[ɲ̃m̃ɔŋ] 'your (sg. cl.3)	[ɲ̃ñɔŋ] 'roof'	[ɲ̃ɲ̃ɔŋ] 'sharp iron'

Table 6 Contrasts between liquids (lateral and semivowels)

/l/	/y/	/w/
[l̃aK] 'expression of pain'	[ỹaK] 'circumcise!'	[w̃aK] 'hurt, pain!'
[l̃aKsɛn] 'excuse!'	[ỹaɣɛn] 'circumcise with!'	[w̃aɣɛn] 'resemble!'
[l̃ɛl] 'be hard!'	[ỹɛl] 'slice vegetable!'	[w̃ɛl] 'provoke, joke!'
[l̃ɛK] 'remain!'	[ỹɛK] 'be ripe!'	
[ɛ̃lɛn] 'new cutlass'	[ɛ̃yɛn] 'palm wine'	[ɛ̃wɛn] 'your (pl. cl.1)'
[ɛ̃lɛŋgɛ] 'blanket'	[ɛ̃yɛlɛ] 'word'	[ɛ̃wɛŋgɛ] 'aluminium pot'

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1 [ŋ] is allophone of /ɲ/.



### 6.1.3 Evidence for allophonic variation

The following tables show sets of similar phones which are either in complementary distribution and/or fluctuate in certain environments. Since they do not exhibit contrasts they are treated as allophones of the various phonemes.

The first three charts need some comments as to the reason why the unreleased and unaspirated voiceless stops are assigned to the voiced phonemes /b, d and g/ rather than to the voiceless /p, t and k/.

In syllable final position the contrast voiced-voiceless is neutralized. There are three ways of handling the sounds in that position.

1. We could set up archiphonemes /P/, /T/ and /K/.
2. The sounds in question could be assigned to the voiceless phonemes /p/, /t/ and /k/.
3. They could be assigned to the voiced phonemes.

The third solution is the one taken here because:

1. To set up archiphonemes adds unnecessarily to the number of phonemes.
2. In very deliberate register people voice the unreleased stop.
3. Native reaction seems quite unanimous for writing the voiced stop.
4. Word final unreleased stops when in sequence followed by a vowel are always realized by the voiced allophones.
5. The third choice will simplify the morphophonemic description greatly, i.e. it will not be necessary to posit two allomorphs for all the words with a final stop.

Table 1 Variants of the phoneme /b/

[b]	[P]	[p]	[ɓ]	[ɗ]
[bɪn] 'day'	[dɪP] 'find!'	[ɗdɪpt <sup>h</sup> é] 'I found out.'	[ɗgàé] '(rope)'	[éʔbè] 'two'
[bàT] 'people'	[ɗdàP] 'house'	[ɗlépt <sup>h</sup> éT] 'message'	[ɗbóè] 'eyebrows'	[éʔbàlê] '(chair)'
[bòm] 'hit, beat!'	[hóP] 'talk!'	[sápnéT] 'pay for!'	[héé] 'help!'	[éʔbòm] 'beautiful', 'goodness'
[băn] 'children'	[káP] 'antelope'	[ɗhópt <sup>h</sup> éT] 'talk'		[éʔbəl] 'stomachs'
[běP] 'tie!'	[ɗbéP] 'bad'	[nàpnéT] 'repair!'		
[ɗbɪT] 'wild cola nut'				
[ɗbɔlɔK] 'pestle'				
[ɗbàK] 'cloud'				
[túmbé] 'family'				

The above table gives the impression that [ɓ] occurs exclusively in the environment of [ʔ]. It has also been found, however, in root initial position in free variation with [b]. To find any more precise statement on conditioning has been found very elusive.

Table 2 Variants of the phoneme /d/

[d]	[t]	[t]	[ř]
[dɪn] 'name'	[mɪt] 'eyes'	[at <sup>h</sup> étnèt] 'group work'	
[dɛl] 'be heavy!'	[at <sup>h</sup> étnèt] 'group work'	[nètnèt] 'open for!'	[s <sup>w</sup> érét] 'ask!'
[ɲdáp] 'house'	[pát] 'pluck!'	[pàtnèt] 'suddenly get loose'	[ápáré] 'he plucked'
[dɔk] 'deceive!'	[cót] 'light, blow!'	[còtnèt] 'tell off!'	[ácáré] 'he lit'
[dũné] 'bush baby'	[hút] 'remove!'	[àsũtné] 'he is sad'	[áhúré] 'he removed'
[póndé] 'time'		[èk <sup>h</sup> itnèt] 'threshold'	[ɲdèrè] 'garden egg'
			[ɲgúrè] '(mushroom)'
			[at <sup>h</sup> ářè:] '(colanut)'

Table 3 Variants of the phoneme /g/

[g]	[K]	[k]	[ɛ]
[ɲgàn] 'crocodile'	[ɲák] 'cow'	[awákt <sup>h</sup> è:] '(plant)'	[ɲlàgè:] 'large antelope'
[ɲgése:] 'belt'	[p <sup>h</sup> ék] 'kidney'	[ák <sup>h</sup> əksèn] 'examination'	[hógé] 'measure!'
[ɲgòm] '(drum)'	[t <sup>h</sup> ɔk] 'make noise!'	[èñɔklét] 'foolish'	[ès <sup>v</sup> əgè] 'basket'
[ɲgèp] 'skin, bark'	[ɲsèlák] 'quarrel'	[èt <sup>h</sup> ókneñ] 'important'	[mèl <sup>y</sup> ógèn] 'drum stick'



Table 4 Variants of the phoneme /c/

[c]	[j]
[bɛciP] 'thieves'	[ɲjiP] 'thief'
[ɲciβɛ] 'I stole'	[ɲjɛm] 'husband'
[ɛʔcũ:] 'honey'	[ɲjũn] 'old'
[ci:] 'today'	[ɲji:] 'boundary'
[cɛlé] 'call'	[ɲjɛɾ] 'handle'
[ɲcɛnlá:] 'I was calling'	
[ac̥] 'thorn'	

Note that following nasals, verbs have the [c] allophone, nouns have the [j]. The above distribution of [c] and [j] is true for only some speakers. It has been observed that older people use the [j] in all environments. On the other hand in another dialect (from Upper Bakossí) all occurrences of /c/ are realized as [c].

Table 5 Variants of the phoneme /h/

[h]	[ʔ]	[s]	[ɛ]
[hîn] 'plenty'	[êbî:ʔɛ] 'he doesn't know'		
[hôm] 'place'	[êwð:ʔɛ] 'he will not laugh'		
[hʷèn] 'mushroom'	[béwð:ʔɛ] 'they were laughing'		
[âhéP] 'fever'	[bébónsá:ʔná:] 'they were preparing'		
[hám] '(vine)'	[êcáʔmé] 'she will not cook'		
[mèhéle] 'race'	[âwð:ʔ] 'he is laughing'		
	[wèlángɛʔ] 'don't tell'		
[èhín] 'axe'	[èʔlém] 'domestic animals'		
[èhîT] 'bone'	[èʔhîT] 'bones'		~ [èehîT] 'bones'
	[èʔhèl] 'monitor lizards'		~ [èehèl] 'monitor liz- ards'
	[èʔhà:] 'thickness'		~ [èehà:] 'thickness'
	[èʔsîT] 'hairs'	~	[èssîT] 'hairs'
	[èʔsél] 'small antelope'	~	[èssél] 'small antelope'

Table 6 Variants of the phoneme /s/

[s]		[ʃ]
[sàbé]		
'orange'		
[sǎ:mbé]		
'seven'		
[sèP]		
'(squirrel)'		
[sʷâT]	~	[ʃʷâT]
'soldier ant'		
[sʷɔ́gɛ́]	~	[ʃʷɔ́gɛ́]
'go down!'		
[sʷéŋ]	~	[ʃʷéŋ]
'abuse!'		
[èsʷɔ́gɛ́]	~	[èʃʷɔ́gɛ́]
'basket'		

Table 7 Variants of the phoneme /z/

[z]		[ʒ]
[nzòm]		
'(leaves)'		
[nzêT]		
'(ring)'		
[nzâP]		
'soup'		
[nzʷèT]	~	[nzʷèT]
'beard'		
[nzʷəK]	~	[nzʷəK]
'elephant'		
[nzʷéŋ]	~	[nzʷéŋ]
'abuse'		



Table 8 Variants of the phoneme /n/

[n̄]	[n]
[n̄aT] 'buffalo'	[l̄an] 'read!'
[n̄ə] 'snake'	[n̄gən] 'bells, chimes'
[n̄in] 'be cold!'	[l̄in] 'be angry!'
[n̄n̄ək] 'oil of palm kernel'	[n̄h̄on] 'roof'
[n̄n̄ən] 'sunshine'	[n̄m̄on] 'tadpole'
[n̄ik <sup>h</sup> ək] 'you go!'	[n̄p <sup>h</sup> óngé] 'calabash (of oil)'
	[n̄b <sup>w</sup> àngé] 'coconut'

Table 9 Variants of the phoneme /n/

[m]	[n]	[n̄]	[ŋ]	[ɹ]
[m̄b̄əT] 'goat'	[n̄d̄im] 'blind'	[n̄j̄ən] 'planting season'	[n̄ḡen] 'for nothing'	[ɹȳèlé] 'I sliced'
[m̄b̄v̄ə:] '(hawk)'	[n̄t <sup>h</sup> əg] 'flowers (of maize)'	[n̄j̄ém] 'bat'	[n̄k <sup>h</sup> ək] 'abscess'	[ɹȳék <sup>h</sup> é] 'I learnt'
[m̄p <sup>h</sup> ûP] 'dried plantains'	[n̄n̄ám] '(food)'	[n̄c̄á:] 'I gave birth'	[n̄h̄el] 'wickedness'	[ɹȳékt <sup>h</sup> én] 'I mimic'
[m̄p <sup>w</sup> èn] 'pincers (of crab, etc.)'	[n̄s̄əl] 'mouth'	[n̄c̄uné] 'I am old'	[n̄h̄on] 'marrow'	
[m̄m̄in] 'crease'	[n̄z̄on] 'gall'	[n̄n̄ēmè] 'waking up'	[n̄w̄on] 'joint'	
[m̄m̄w̄ək] 'castrated animal'	[n̄l̄èm] 'wizard'	[n̄n̄alé] 'I swam'	[n̄w̄ənt <sup>h</sup> én] 'hope'	
		[n̄n̄ámé] 'bitter leaf'		

#### 6.1.4 Chart of consonant phonemes

		bilabial	alveolar	palatal	postpalatal
Stop	vl.	p	t	c	k
	vd.	b	d		g
Fricative	vl.		s		h
	vd.		z		
Nasal		m	n	ɲ	
Liquid			l	y	w
Syllabic nasal			ɱ		

#### 6.1.5 Descriptive statement of the consonant phonemes

There are seventeen consonant phonemes grouped into stops, fricatives, nasals, liquids and syllabic nasal. All are produced with egressive lung air with the exception of the [ð] allophonic variant of the phoneme /b/ which is produced with pharynx air.

##### The stops

The stops occur both voiced and voiceless with the exception of the palatal stop where the voiced-voiceless contrast is non-distinctive.

The voiceless stops contrast as to point of articulation as follows: bilabial, alveolar, palatal and postpalatal. The bilabial, alveolar and postpalatal voiceless stops are very lightly aspirated. The palatal stop is affricated, and has two allophones, a voiced one occurring in nouns in root initial position following a nasal, the voiceless allophone occurring elsewhere. (But cf. also note under Table 4, Variants of the phoneme /c/, section 6.1.3).

/p/	[p <sup>h</sup> ip <sup>h</sup> ín]	/pípín/	'cockroach'			
	[áp <sup>h</sup> ím]	/ápòm/	'round calabash'			
/t/	[ɲt <sup>h</sup> èt]	/ɲtèt/	'heavy burden'			
	[àt <sup>h</sup> ì:]	/àtì:/	'seat'			
/c/	[ɲjîP]	/ɲcîb/	'thief'	[bècîP]	/bècîb/	'thieves'
	[ɲjáK]	/ɲcág/	'axe handle'	[cǒl]	/cǒl/	'boil, tumour'

/k/	[k <sup>h</sup> úP]	/kúb/	'hen'
	[ák <sup>h</sup> òŋ]	/ákòŋ/	'spear'

The voiced stops contrast as to the following points of articulation: bilabial, alveolar and postpalatal. /b/ has five allophones, /d/ and /g/ have four. Each has an unreleased allophone [P, T and K] occurring syllable finally before pause, and an unaspirated voiceless allophone [p, t and k] occurring syllable finally followed by a consonant. (The transition to the following consonant is always close.) Each phoneme has a further allophone [ɸ, ɹ and ɣ] occurring intervocalically in non-root-initial position, [ɸ] and [ɣ] being lenis voiced fricatives, [ɹ] a voiced flapped vibrant. The phoneme /b/ has an imploded allophone [ɓ] occurring after a glottal stop and elsewhere in free variation with [b]. Finally each phoneme has a voiced allophone [b, d, g] occurring elsewhere.

/b/	[ʔhɔP]	/ʔhɔb/	'side'	[ʔbépt <sup>h</sup> é]	/ʔbébté/	'he spoilt something'
	[ʔdɔ:P]	/ʔdɔ:b/	'floor, earth'	[ʔkɪpné]	/ʔkɪbné/	'I twisted something'
	[wɔbɛ]	/wɔbɛ/	'wash.'			
	[ʔhɪbɛ]	/ʔhɪbɛ/	'(tube)'			
	[ɛʔbɛ]	/ɛʔbɛ/	'two'	[bɔŋ]	/bɔŋ/	'brain'
	[ɛʔbɛn]	/ɛʔbɛn/	'sourness'	[ɛbɛm]	/ɛbɛm/	'shade'
/d/	[t <sup>h</sup> ɪT]	/tɪd/	'louse'	[wɛsùtnɛʔ]	/wɛsùdnɛh/	'don't be sad.'
	[ɛbùT]	/ɛbùd/	'black frog'	[bɛbót <sup>h</sup> né]	/bɛbód <sup>h</sup> né/	'they ducked down'
	[ʔdɛɹɛ]	/ʔdɛdɛ/	'garden egg'	[d <sup>ɣ</sup> àT]	/d <sup>ɣ</sup> àd/	'town'
	[bɔɹɛn]	/bɔdɛn/	'duck down'	[ɛdɪP]	/ɛdɪb/	'river'
/g/	[ʔsɪsàK]	/ʔsɪsàg/	'dragon-fly'	[ʔwàkt <sup>h</sup> ɛ:]	/ʔwàgtɛ:/	'(plant)'
	[ɛb <sup>w</sup> əK]	/ɛb <sup>w</sup> əg/	'mortar'	[ʔwák <sup>h</sup> né]	/ʔwágné/	'he resembles'
	[ʔlāgɛ:]	/ʔlāgɛ:/	'large antelope'	[ʔgáP]	/ʔgáb/	'money, wealth'
	[ʔábáɛ]	/ʔábágé/	'he gave'	[ʔgɔl]	/ʔgɔl/	'sympathy'



### The fricatives

There are three fricatives, contrasting as to point of articulation as follows: alveolar and postpalatal. In the alveolar position there is a voiced-voiceless contrast.

Both alveolar phonemes have two allophones, a palatal allophone [š and ž] respectively, occurring with palatalization in free variation with [s] and [z]; and an alveolar allophone [s and z] respectively, occurring elsewhere.

The postpalatal fricative /h/ has four allophones: [h] occurring in root initial position, voiceless [ç] in free variation with [ʔ] before [h], [s] in free variation with [ʔ] before [s] and glottal stop [ʔ] occurring elsewhere.

/s/	[sʲâT]	{	/sʲâd/	'soldier, ant.		
	[šʲâT]					
	[sôn]		/sôn/	'grave'		
	[ʂsêT]		/ʂsêd/	'sunbird'		
/z/	[ʂzʲê:T]	{	/ʂzʲê:d/	'beard'		
	[žʲê:T]					
	[kʰûnzê]		/kûnzê/	'free'		
	[ʂzi:]		/ʂzi:/	'road'		
/h/	[hʲô:P]	{	/hʲô:b/	'hawk'	{	
	[ʂhôn]					/ʂhôn/
	[çssá:]		{	/çpʰiT/	/çnpíd/	'bottles'
	[çʲsá:]					
		{	/çcâmêʔ/	'I am cooking'		

### The nasals

All nasals are voiced. They contrast as to point of articulation as follows: bilabial, alveolar and palatal. The palatal nasal has two allophones: a velar nasal [ŋ] occurring syllable finally and a palatal nasal [ɲ] occurring elsewhere.

/m/	[m̌m]	/m̌m/	'wine, drink'		
	[m̌ʷán]	/m̌ʷán/	'child'		
/n/	[ňê:]	/ňê:/	'mother'		
	[ňăn]	/ňăn/	'drive away!'		
/ɲ/	[ɲ̌õ:T]	/ɲ̌õ:d/	'bee'	[ťhón]	/ťón/ 'room'
	[ɲ̌ák <sup>h</sup> é]	/ɲ̌áké/	'banana'	[ɲ̌gón]	/ɲ̌gón/ 'bell'

### The liquids

All liquids are voiced. They contrast at the following points of articulation: alveolar, palatal and postpalatal. The alveolar liquid is a lateral, the others are semivowels. The /w/ phoneme is classified as velar because when preceded by a syllabic nasal it acts like other postpalatal phonemes in cooccurring with the velar nasal rather than with the bilabial.

/l/	[ľm]	/ľm/	'dig!'		
	[m̌l]	/m̌l/	'trees'		
/y/	[y̌l]	/y̌l/	'body'		
	[ây̌n]	/ây̌n/	'palm wine'		
/w/	[w̌a:m]	/w̌a:m/	'eight'		
	[ɲ̌w̌l]	/ɲ̌w̌l/	'joke'		

### The syllabic nasal

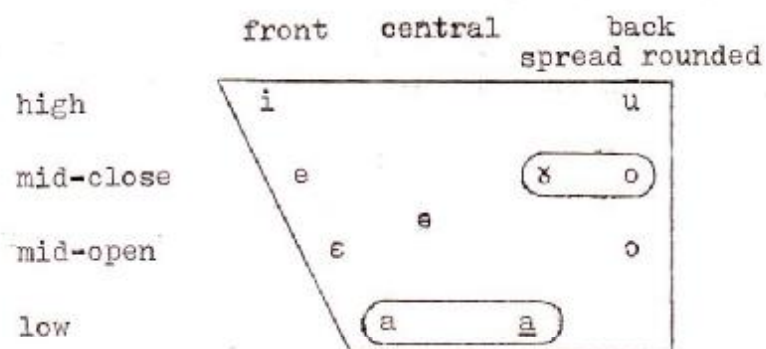
The syllabic nasal is always voiced. It functions as syllable nucleus of syllable type 3 (N). It has five allophones occurring before the following consonants.

	/	p	b	m	t	d	s	z	n	l	c	ñ	y	k	g	h	w	/
[ɱ]		x	x	x														
[ɱ]					x	x	x	x	x	x								
[ɱ]											x	x						
[ɱ]													x	x	x	x		
[ɱ]														x				
/n/	[ɱp <sup>w</sup> ɛn]	/ɱp <sup>w</sup> ɛn/																'pincers'
	[ɱbɔt]	/ɱbɔd/																'goat'
	[ɱdáp]	/ɱdáb/																'house'
	[ɱsón]	/ɱsón/																'work'
	[ɱjəm]	/ɱcòm/																'husband'
	[ɱnámɛ]	/ɱnámɛ/																'bitter leaf'
	[ɱyéɛhʔ]	/ɱyéɛh/																'I slice vegetable'
	[ɱyók <sup>h</sup> ɛʔ]	/ɱyókɛh/																'I am learning'
	[ɱgi:]	/ɱgi:/																'lion'
	[ɱhɛl]	/ɱhɛl/																'wickedness'



## 6.2 The vowels

### Chart of vowel phones



6.2.1 Evidence for contrasts

/ɪ/	/e/	/ɛ/	/a/	/ə/	/o/	/o/	/u/
[kʰɪn] 'refuse:'	[kʰɛn] 'either'	[kʰɛn] 'louse'	[kʰən] 'escape:'	[kʰən] 'ambition'	[kʰən] 'sing:'	[kʰən] 'beans'	[kʰɪn] 'secret conversation'
[pʰɪɪ] 'leave it:'	[kʰwɛɪ] '(yam)'	[kʰɛɪ] 'cashew nut'	[kʰəɪ] 'drum'	[kʰəɪ] 'midday'	[kʰəɪ] 'age-mate'	[kʰɛɪ] 'eat to the full:'	[kʰɪɪ] 'sparrow'
[ʔɪɪ] 'colanut'	[ʔɛɪ] 'those (cl.2)'	[ʔɛɪ] 'fashion'	[ʔəɪ] 'liver'	[bɛɪ] 'they, emphatic'	[ʔəɪ] 'heap'	[ʔɛɪ] 'he divorced'	[ʔɪɪ] 'excrement'
[ʔɪɪ] 'he ironed'	[ʔɛɪ] 'down'	[ʔɛɪ] 'toothstick'	[ʔəɪ] 'plum'	[ʔəɪ] '(tree)'	[ʔəɪ] 'tail of bird'	[ʔəɪ] 'it will flow'	[ʔɪɪ] 'he went back'
[ʔɪɪ] 'in-law'	[ʔɛɪ] 'basket for storing'	[ʔɛɪ] 'judge'	[ʔəɪ] 'he will judge'	[ʔəɪ] 'to hinder'	[ʔəɪ] 'to hate'	[ʔɪɪ] 'pole'	[ʔɪɪ] 'up, east'
[pʰɪɪ] 'anger'	[pʰɛɪ] 'change:'	[pʰəɪ] 'hunt:'	[pʰəɪ] 'ulcer'	[pʰəɪ] 'punctual'	[pʰəɪ] 'miss:'	[pʰɪɪ] 'shout:'	[pʰɪɪ] 'possess:'
[bɪɪ] 'go out:'	[bɛɪ] 'pacify:'	[bɛɪ] 'our friends'	[bəɪ] 'people'	[bɛɪ] 'bark:'	[bɛɪ] 'don't:'	[bɛɪ] 'light:'	[bɪɪ] 'be old:'
[cɪn] 'be small:'	[cɛn] 'itself (cl.9)'	[cɛɪ] 'chin'	[cən] 'one day removed'	[cək] 'call:'	[cɛɪ] 'fish:'	[cɛɪ] 'light:'	[cɪn] 'be old:'

### 6.2.2 Evidence for allophonic variation

Table 1 Variants of the phoneme /o/

[ɤ]		[o]	
[àk <sup>h</sup> ɤn]	'pole'	[àk <sup>h</sup> òn]	'spear'
[lɤn]	'firewood'	[lòn]	'build!'
[t <sup>h</sup> ɤm]	'pass!'	[t <sup>h</sup> òn]	'prong, spike'
[k <sup>h</sup> ɤn]	'beans'	[k <sup>h</sup> òl]	'tortoise'
[mɤt]	'person'	[mòl]	'oil'
[ɲk <sup>h</sup> ɤbè]	'shirt'	[ɲk <sup>h</sup> òlè]	'disease, sickness'
[ɲbɤt]	'goat'	[àbòk]	'fracture'
[wɤp]	'play drum!'	[wòk]	'listen!'
[sɤ]	'we, us'		
[bɤ]	'break, divorce!'		

Table 2 Variants of the phoneme /a/

[a]		[a]	
[hàp]	'house'	[h <sup>h</sup> ân]	'slave'
[lám]	'put traps!'	[lân]	'read!'
[àbám]	'sheath'	[àbán]	'scar'
[k <sup>h</sup> ât]	'drum, tank'	[k <sup>h</sup> âk]	'go!'
[m <sup>w</sup> ân]	'child'	[m <sup>w</sup> âk]	'leave!'
[àp <sup>h</sup> âp]	'paper'	[àp <sup>h</sup> âk]	'thick forest'
[h <sup>h</sup> âl]	'small rafter'	[h <sup>h</sup> ân]	'shelf'
[p <sup>h</sup> ál]	'hunt!'	[p <sup>h</sup> ân]	'scatter!'
[wál]	'bask!'	[wâk]	'hurt!'
[àsá:]	'plum'		
[èk <sup>h</sup> á:]	'hand'		

### 6.2.3 Allophones or phonemes?

Above we have presented evidence to show that [ɤ] and [o] are allophones of the phoneme /o/ and that [a] and [a] are allophones of the phoneme /a/. This is true of the majority of the material studied. However there are a number of items which appear to show that the four sounds in question are separate phonemes.



From the charts above it can be seen that [o] occurs preceding velars and [l], [ɣ] occurs elsewhere. [a] precedes velars only, [a] occurs elsewhere.

In the following we will present material which seems to contradict this conditioning:

[o:] preceding /n/, /d/ and pause

[hõ:T]	'bee'		
[h̃jõ:n]	'line'		
[h̃gõ:n]	'centipede'		
[h̃lõ:n]	'handsome'		
[h̃mbõ:n]	'it was good for'		
[sõ:n]	'purge!'	[s̃n]	'acquire someone's crop by magic!'
[cõ:T]	'make survive!'	[c̃:T]	'make vomit!'
[h̃õ:T]	'make disappear!'		
[s̃õ:T]	'make to spear!'	[s̃õ:T]	'make flow!'
[bõ:]	'look after!'	[b̃:]	'divorce!'
[sõ:]	'father'	[s̃:]	'we two'
[h̃sõ:]	'I speared'	[h̃s̃:]	'ululation'
[at̃hõ:]	'he counted'		

[a:] preceding /n/, /d/, /l/ and pause

[p̃h̃a:n]	'(knife)'		
[l̃a:n]	'read in X language!'		
[h̃a:n]	'tie with!'		
[h̃ṽa:T]	'burn off!'	[k̃h̃a:T]	'judge!'
[m̃ṽa:T]	'suckle!'	[m̃m̃ṽa:T]	'woman'
[h̃a:T]	'long time ago'		
[s̃ṽa:T]	'soldier ant'	[d̃ṽa:T]	'town'
[c̃ṽal]	'(leaf)'	[k̃h̃al]	'something woven'
[b̃a:]	'sew!'	[b̃ṽa:]	'hold (child)!'
[l̃a:]	'tell!'	[l̃a:]	'chew!'
[h̃a:]	'lick!'	[h̃a:]	'tear!'
[at̃h̃a:]	'buttocks'	[al̃a:]	'stone'

The two charts above show that [o] precedes /n/, /d/ and pause and [a] precedes /n/, /d/, /l/ and pause, thus contradicting the earlier evidence for complementary distribution.

There are even some minimal pairs and near minimal pairs exhibiting a contrast between [o] and [ɤ] as well as [a] and [a̠]. Does this mean that there are ten rather than eight vowel phonemes?

There are a number of factors which need pointing out.

1. The [o] and [a̠] vowels are all long, except in [c<sup>w</sup>al] (cf. preceding chart). This can be related at least in part to a lost velar consonant as will be seen in the following. So we could say that the apparent contrast is limited to long vowels in a limited environment: before alveolar consonants and pause but not before bilabials. (In addition, [a] never appears before velars.)

2. As already indicated velar consonants can be said to have been lost. It is the lost, replaced or latent [g] and [ŋ] which explain the above material.

Compare the following synchronic evidence (other dialects) for

[hō:T]	'bee'	[hōŋèT]	(Nyale, Mbwogmut)
[p <sup>h</sup> â:n]	'(knife)'	[p <sup>h</sup> âgân]	(source not recorded)
[s <sup>y</sup> â:T]	'soldier ant'	[s <sup>y</sup> â:K]	(Nkiko, Ninong)
[c <sup>w</sup> al]	'(leaf)'	[c <sup>w</sup> âgèl]	(Bakolle, Mwetug)
[ât <sup>h</sup> â:]	'buttocks'	[ât <sup>h</sup> âgè]	(Bangone, Mwetug)

From these examples it is clear that the particular vowel is the result of a lost or replaced velar. The same is assumed to be the case with the nouns listed in the preceding charts for which no examples of alternative pronunciation have yet been found.

3. For verbs the case is similar. There is evidence from another dialect which shows a velar nasal in some verbs:

[sō:n]	'purge!'	[sōŋén]	'purge!'	(Ngonmin, Mwetan)
[cō:T]	'make survive!'	[cōŋéT]	'make survive!'	(Ngonmin, Mwetan)

4. The verb system as a whole gives clues for an understanding of the problem. Here we present just a sample:

[bō:n]	'be good for!'	[âbōŋné]	'it is good for'
[sō:n]	'purge!'	[ânsōŋné]	'be purged'
[cō:T]	'make survive!'	[âcōŋt <sup>h</sup> é]	'he made to survive'



[hố:T]	'make disappear!'	[ãhốnt <sup>h</sup> é]	'he made to disappear'
[số:T]	'make to spear!'	[ãsốnt <sup>h</sup> é]	'he made to spear'
[bố:]	'look after something!'	[ãbốngé]	'he looked after something'
[hố:]	'I speared'	[số]	'spear!'
[àt <sup>h</sup> ố:]	'he counted'	[t <sup>h</sup> ố]	'count!'
[cố:T]	'make vomit!'	[àcố:t <sup>h</sup> é]	'he made to vomit'
[số:T]	'make to flow!'	[ãsố:t <sup>h</sup> é]	'he made to flow'
[bố:]	'divorce!'	[ãbố:рэ]	'he divorced'
[hã:n]	'tie with!'	[ãhãnné]	'he tied with'
[h <sup>y</sup> ấ:T]	'burn (something)!'	[ãh <sup>y</sup> ấnt <sup>h</sup> é]	'he burnt (something)'
[m <sup>w</sup> ấ:T]	'suckle!'	[ãm <sup>w</sup> ấnt <sup>h</sup> é]	'she suckled'
[bấ:]	'sew!'	[ãbầngá:]	'she was sewing'
[lấ:]	'tell!'	[àlầngé]	'he told'
[nấ:]	'lick!'	[ãnầngé]	'he licked'
[k <sup>h</sup> ấ:T]	'judge!'	[àk <sup>h</sup> ấ:t <sup>h</sup> é]	'he judged'
[b <sup>w</sup> ấ:]	'hold (child)!'	[ãb <sup>w</sup> ấ:]	'he held (child)'
[lấ:]	'chew!'	[àlấ:рэ]	'he chewed'
[nấ:]	'tear!'	[ãnấ:рэ]	'he tore'

These examples show the following: the [o] and [a] sounds occur only in verb forms which have a velar nasal after these vowels in at least some of the tense/aspect forms; [ɤ] and [a] occur in verbs without velar nasals.

Preceding a velar nasal the vowels are always short compared with the vowel in the same verb without the nasal. Length may therefore be due, at least in part, to the lost nasal.

5. There is evidence that in at least one dialect (Ngonmin, Mwetan) the [o] - [ɤ] and [a] - [ã] distinction is not made:

[lấ:]	'tell!'	[lấ:]	'chew!'
[số:]	'father!'	[số:]	'we two'

Conclusion: First we presented evidence leading us to an eight vowel system. Then a list of nouns and verbs was given challenging the first analysis, raising the question whether there is a ten vowel system. After that, material from other dialects and from the verb system was given to show that the



environment (velar consonant) responsible for [o] and [a] has been lost, replaced or is latent. We further noted that in one dialect there is no [o] - [ɤ] or [a] - [a] distinction. With all these factors in view we prefer the first analysis: eight vowel phonemes.

It of course remains to be seen whether two new contrasts have developed or are developing and, if this is the case, whether they will be maintained in the future.

#### 6.2.4 Chart of vowel phonemes

	front	central	back
high	i		u
mid	e	ə	o
low	ɛ	a	ɔ

#### 6.2.5 Descriptive statement of the vowel phonemes

According to the analysis presented, there are eight vowel phonemes in àkòsé. All the vowels are voiced and produced with lung air. They can be grouped as front, central and back vowels.

##### The front vowels

The front vowels are all spread. They contrast as to high, mid and low. Both the /e/ and /ɛ/ phonemes tend to be centralized in the nvP-word in postnuclear final position.

/i/ [àhín] /àhín/ 'bush'  
 [mí:] /mí:/ 'intestines'  
 /e/ [èbèl] /èbèl/ 'stop' [èyàl>è] /èyàlè/ 'word'  
 [àhéP] /àhéP/ 'fever' [àbà:ng>é] /àbà:ngé/ 'cocoyam'  
 /ɛ/ [p<sup>h</sup>èT] /pèd/ 'side' [àzàng>è] /àzàngè/ 'crayfish'  
 [è'k<sup>h</sup>é] /èhké/ 'fence' [bél>é] /bélé/ '(dance)'

##### The central vowels

There are two contrasting central vowels: mid and low. The low central vowel has two allophones, a back one occurring in the environment preceding velar stops and nasals and a more fronted one occurring elsewhere.

/ə/ [p<sup>h</sup>ák] /pég/ 'kidney'  
 [ñě] /ñě/ 'snake'  
 [lè:] /lè:/ 'thing'  
 /a/ [p<sup>h</sup>á:] /pá:/ 'cutlass' [àk<sup>h</sup>àn] /àkàn/ 'scabies'  
 [àm<sup>w</sup>á:T] /àm<sup>w</sup>á:d/ 'woman' [àk<sup>h</sup>àK] /àkàg/ 'promise'

### The back vowels

There are three contrasting back vowels, high, mid and low. The mid back vowel has two allophones, a rounded one occurring before velar stops and nasals and before /l/, and a spread, more centralized allophone occurring elsewhere.

/u/	[ɯbú:]	/ʌbú:/	'rain'			
	[tʰúmbé]	/túmbé/	'extended family'			
/o/	[ɔdón]	/ʌdón/	'pepper'	[pɛ]	/pó/	'mouse'
	[mól]	/mól/	'oil'	[ɬtʰg:P]	/ʌtɔ:b/	'six'
/o/	[ɔzɔm]	/ʌzɔm/	'reason'			
	[ɔdɔ:P]	/ʌdɔ:b/	'floor'			



## 7. Tone

Akô:sé has a two tone terraced level system.

It can be analysed as consisting basically of high and low tones, and the following features:

- 1) automatic downdrift
- 2) downstep
- 3) upstep

There are three tone glides analysed as combinations of two separate level tones:  $\wedge$  or HL,  $\sim$  or LH,  $\hat{\sim}$  or H!H (cf. section 5.7). The first two are the most common glides. Under elision features are grouped: loss of low tones, tone glide reduction and low tone replacement (see chapter 2).

### 7.1 Tone contrasts

/ˊ/ vs. /ˋ/

/píd/	'thirst'	/píd/	'small calabash'
/ká!l/	'reclaim!'	/kâl/	'something woven'
/kún/	'sleep!'	/kûn/	'secret'
/sóm/	'sell!'	/sòm/	'chimpanzee'
/tón/	'prong'	/tôn/	'room'
/Abón/	'witness'	/Abôn/	'particles in water'
/ámʷé/	'drink'	/ámʷê/	'entrance'
/áhéb/	'fever'	/áhêb/	'side'
/Adòndé/	'pupil of eye'	/Adòndê/	'needle'
/èbòngé/	'bridge'	/èbòngê/	'thread'

/ˊ/ vs. /ˋ/

/pém/	'carry!'	/pêm/	'(fruit)'
/ká:/	'judge!'	/kâ:/	'or'
/sí:/	'grate!'	/sî:/	'termite'
/átén/	'drip'	/âtên/	'raffia branch'
/Abón/	'witness'	/Abôn/	'hornbill'
/Abíd/	'back'	/Abîd/	'raw, unripe'
/Abód/	'goat'	/Abôd/	'(rope)'
/ètú:/	'plot of land'	/êtû:/	'ear'

/ʰ/ vs. /ŋ/

/m <sup>w</sup> é/	'drink!'	/m <sup>w</sup> ě/	'year'
/béb/	'spoil!'	/běb/	'tie!'
/cán/	'how'	/căn/	'tomorrow'
/d <sup>y</sup> é/	'eat!'	/d <sup>y</sup> ě/	'sit!'
/ʔbõñ/	'witness'	/ʔbõñ/	'(medicine)'
/ʔm <sup>w</sup> é/	'drink'	/ʔm <sup>w</sup> ě/	'dew'
/kál/	'reclaim!'	/kăl/	'tell!'
/pím/	'jump!'	/pĩm/	'throw away!'

/ʔ/ vs. /ʔ/

/kôd/	'squirrel'	/kôd/	'age group'
/sî:/	'wound'	/sî:/	'termite'
/ʔbõñ/	'particles in water'	/ʔbõñ/	'hornbill'
/ʔbî:/	'colanut'	/ʔbî:/	'breast'
/ʔsûd/	'back of hen'	/ʔsûd/	'fireplace stone'
/ʔtân/	'shelf'	/ʔtân/	'slave'
/ʔgên/	'branch'	/ʔgên/	'without cause'
/ʔbîd/	'wild colanut'	/ʔbîd/	'unripe, uncooked'

/ʔ/ vs. /ŋ/

/kûd/	'parrot'	/kûd/	'knock down!'
/h <sup>y</sup> õ:b/	'native pepper'	/h <sup>y</sup> õ:b/	'hawk'
/bõ:b/	'now'	/bõ:b/	'long ago'
/cěd/	'small, little'	/cěd/	'chin'
/pěn/	'alone'	/pěn/	'shine!'
/sõñ/	'grave'	/sõñ/	'spear!'
/ʔbõñ/	'particles in water'	/ʔbõñ/	'(medicine)'
/ʔm <sup>w</sup> ě/	'entrance'	/ʔm <sup>w</sup> ě/	'dew'

/˘/ vs. /ˇ/

/sô:/	'we two'	/sô:/	'flow!'
/dû:/	'teats'	/dû:/	'fireplace'
/dʏôm/	'ten'	/dʏôm/	'bundle'
/kî:/	'(medicine)'	/kî:/	'abstain!'
/Abôñ/	'hornbill'	/Abôñ/	'(medicine)'
/kêñ/	'chief'	/kêñ/	'shave!'
/sû:/	'fish'	/sû:/	'pass out bad air!'

## 7.2 Tonal Features

### 7.2.1 Automatic downdrift

Downdrift is the automatic lowering of a high tone after a low. In other words a high tone following a low tone is lower than a high preceding the low: / ˘ ˘ ˘ / > [ ˘ ˘ ˘ ]. This lowering does not just involve a specific tone but is rather a lowering of the key i.e. the tone range of high and low tones. Thus high tones after the lowered high are at the same level as the lowered tone unless, of course, they are also preceded by a low tone or a downstep / ˘ ˘ ˘ ˘ / > [ ˘ ˘ ˘ ˘ ],

Downdrift can also be seen operating on glides. The low-high range between rising and falling tones is different: / ˘ ˇ / > [ ˘ ˘ ]. A rising tone does not rise to the height of the beginning of the preceding falling tone.

Downdrift does not function across breath group boundaries.

### 7.2.2 Downstep /!/

Downstep is a lowering of the key (pitch range of low and high tone) after high tones, so that any high tone(s) following downstep are lower than the high preceding the downstep: / ˘ ˘ ˘ ˘ / > [ ˘ ˘ ˘ ˘ ]. Since its identity is an influence of lowering the pitch range, downstep could be classified as a phoneme of process.

Downstep can in many cases be related to a lost low tone. Low tones are lost either through elision of syllables or



through the reduction of tone glides to high tones (cf. sections 2.3.3.1 and 2). When a low tone is lost in the appropriate context (i.e. between two high tones) then a downstep appears in its place.

/àtédé	Aló/	[àtéré <sup>h</sup> ní <sup>h</sup> ]	'he took the head'
/àtédé	mól/	[àtéré <sup>h</sup> mól]	'he took the oil'

These two examples show that some downsteps can be shown to derive from lost low tones.

For material like the following it seems better to say that the downstep is the result of a replaced low tone<sup>1</sup>.

[éí <sup>h</sup> ót]	'slug'	[ñhámé <sup>h</sup> ]	'(bitter leaf)'
[éśú <sup>h</sup> bák]	'fufu'	[ñśísá <sup>h</sup> k]	'dragonfly'
[ék <sup>h</sup> ónk <sup>h</sup> ít]	'fly'	[mésólé <sup>h</sup> ]	'(mushroom)'

Cf. the following synchronic evidence:

[ñsét] 'sunbird' is [ñsét] in another dialect (Upper Bakossi).

On analogy with the above cases one can argue that all downstep is derived from an underlying low. For this paper we have chosen to analyse downstep as a separate phoneme, because the sequence (L)HLH contrasts with (L)H!H in some contexts as illustrated by the following:

[ǎk <sup>h</sup> ál]	'he will reclaim'
[ǎk <sup>h</sup> ǎl]	'he will tell'
[bésú:t <sup>h</sup> é]	'they will not give back'
[bésú:t <sup>h</sup> éʔ]	'let them not give back!' or 'they give back'

In one context, however, downstep is in complementary distribution with low. In the following verb forms LH occurs on a long vowel and !H on a short one:

[ñcámé:]	'(where) I usually cook'
[mbák <sup>h</sup> é]	'(where) I usually am'

---

1 It should be noted that a replaced low tone here is different in effect from the replacement of low tones as described in chapter 2 (Elision group). Here a downstep results from the replaced low tone, whereas there, no downstep occurs.

The distribution of downstep: inherent downstep phonemes occur usually in the middle of words. In the following two items downstep comes at the beginning: [ǎén] 'this (cl.1 and 9)' and at the end: [ǎ́] 'locative marker'. Downstep in these cases is of course only realised if preceded or followed by high.

### 7.2.3 Upstep ↑

Upstep could be viewed as the reverse of a downstep. It is however limited in its occurrence to very specific contexts: it has only been found before the verb in some dependent clauses and in some verb forms on the root, and it comes only after a downstepped high tone (!H or H!H):

[bâyégét<sup>h</sup>é] [béyégét<sup>h</sup>é] 'they will not teach'  
[nê áduélé] [nê!duélé] 'as they drew...'

From the first example it can be seen that the form with downstep is an alternative realisation of [ ^ ^ ^ ] which could be said to be the basic pattern. Although the sequence [ ^ ^ ^ ] in other contexts may be realised as [ ^ ^ ^ ], here it is only either [ ^ ^ ^ ] or the basic pattern.

When the syllable carrying the downstepped high tone has a long vowel or is closed by a nasal, then the !H becomes an upward glide [ -! - ]:

[bêh<sup>y</sup>ómét<sup>h</sup>é] ~ [bêh<sup>y</sup>ómét<sup>h</sup>é] 'they will not turn round'  
[sêlá:dá:] ~ [sêlá:dá:] 'we were chewing'

### 7.3 The falling to "mid" tone /˥˥/

This tone is a complex tone falling from a high to a downstepped high tone. The second tone cannot really be called a mid tone because

- a) there are no mid tones in ákó:sé and
- b) a high tone following /˥˥/ is always at the same level as where the fall ends unless the high is preceded by a downstep:

/˥˥˥˥/ > [ ˥˥ - ] cf. /˥˥˥˥/ > [ ˥˥ - ]



This tone is very limited in its distribution. There are only three nouns where it has been found so far:

- /àkò:sé/ 'Bakossi language' (also with à-, è-, and bè- prefixes)  
 /àkú:sé/ 'white ant'  
 /m<sup>w</sup>é/ 'friend'

In the verb it occurs on the first and second person plural prefixes in some of the tense/aspect forms.

- /sékàbǎ:/ 'we were not sharing'  
 /nísétéh/ 'don't ask (pl.)!'

For more details see 5.7.

#### 7.4 Functions of tone

Tone in àkò:sé has both lexical and grammatical function.

##### 7.4.1 Lexical function of tone

Tone on the noun makes only lexical distinctions. The majority of noun prefixes have a low tone, and so tone on the root is usually responsible for differentiating the meaning of minimal pairs. One example only has been found where tone on the prefix distinguishes two meanings:

álèm '(witchcraft)', álèm 'shoot of cocoyam'. About 18% of the nouns form minimal pairs distinguished only by tone:

[dú]	'teats'	[ṁbôn]	'hornbill'
[dǔ]	'fireplace'	[ṁbón]	'witness'
[à <sup>h</sup> én]	'raffia branch'	[ṁbôn]	'small particles in water'
[à <sup>h</sup> én]	'drip'	[ṁbón]	'(medicine)'
[h <sup>y</sup> ò:P]	'native pepper'	[ṁm <sup>w</sup> é]	'dew'
[h <sup>y</sup> ò:P]	'hawk'	[ṁm <sup>w</sup> é]	'drink'
[àhéP]	'fever, cold'	[ṁm <sup>w</sup> é]	'entrance'
[àhèP]	'side'		
[ṁdòndè]	'needle'	[èbóngé]	'thread'
[ṁdòndé]	'pupil of eye'	[èbóngé]	'bridge'



In the verb, tone has both grammatical and lexical function. Each verb has either a high or a low lexical tone on the root initial syllable. On that basis the verbs can be grouped into two tone classes. About 10% of the verbs are distinguished by tone only.

[k <sup>h</sup> ǎl]	'tell!'	[àk <sup>h</sup> ǎlèʔ]	'he is telling'
[k <sup>h</sup> ǎl]	'reclaim!'	[àk <sup>h</sup> ǎlèʔ]	'he is reclaiming'
[běP]	'tie!'	[àbèbé]	'he tied'
[béP]	'spoil!'	[àbèbé]	'it is spoilt'
[yègÉT]	'make ripe!'	[béyègt <sup>h</sup> èʔ]	'they are making ripe'
[yégÉT]	'teach!'	[béyégt <sup>h</sup> èʔ]	'they are teaching'
[cágÉT]	'entertain!'		
[càgÉT]	'order!'		

Usually this high-low distinction is maintained, but in some verb forms low tones become high so that certain lexical contrasts are not made any more:

[bèbébé]	'they tied'	< [běP]	'tie!'
[bèbébé]	'they spoilt'	< [béP]	'spoil!'

There is a very interesting feature of lexical tone distinction where pairs of words are associated semantically, as we see from the following examples:

[èdɪP]	'stream'	[è <sup>h</sup> óm]	'support for plantain'
[èdɪP]	'lake, pond'	[è <sup>h</sup> òm]	'plantain'
[bò:P]	'now'	[èk <sup>w</sup> án]	'ground cocoyam cooked in small bundles'
[bǒ:P]	'long ago'	[èk <sup>w</sup> àn]	'ground cocoyam cooked in large bundles'
[èʔcò]	'vomit'		
[èʔcò]	'bitterness'		
[mɪ:]	'swallow!'	[mèsén]	'rain water in puddles'
[mɪ:]	'intestines'	[mèsèn]	'urine'

#### 7.4.2 Grammatical function of tone

In this paper only a few observations will be made, leaving a more detailed description for a later paper.

Tone distinctions are relevant in the noun class - concord system and in the verb system.

Concording elements of classes 1 and 9 have a low tone; all the other classes have a high tone.

See the following table:

<u>Noun Class</u>	<u>Verb Prefix</u>	<u>Associative Marker</u>	<u>Poss. and Rel. Pronoun</u>	<u>Demonstrative Pronoun</u>
1	à-	à	àw-	àn-
2	bé-	bé	áb-	áb-
3	ń-	ń	ńm-	ńm-
4	ń-	ń	ńm-	ńm-
5	á-	á	ád-	ád-
6/6a	mé-	mé	ńm-	ńm-
7	é-	é	éc-	éc-
8	éʔ-	éʔ	áb-	áb-
9	è-	è	èc-	èn-
10	é-	é	éc-	éc-
13	á-	á	ád-	ád-
14	éʔ-	éʔ	áb-	áb-
19	éʔ-	éʔ	áb-	áb-

Nouns of gender 9/10 are not distinguished for singular/plural by noun prefixes. This distinction is made by the high-low distinction in the concord set, as in the following example:

/kúb	èdè/	'there is a fowl'
fowl	it-is	
/kúb	édè/	'there are fowls'
fowl	they-are	

In the verb, tone is used also to mark such categories as tense, aspect, mood, polarity, etc. No detailed analysis of the verb system has yet been made, therefore we will give here only a sample of verb forms minimally distinguished by tone. It will be seen that no one specific tone is associated exclusively with one particular grammatical category.

The verbs used in the following chart are:

/dīb/	'close or find.'	/túb/	'pierce!'
/dībē/	'open!'	/túbē/	'stitch!'
[èdībē]	'you closed/found'	[è <sup>h</sup> túbē]	'you pierced'
[ědíbé (...dībén)]	'closing at once'	[ě <sup>h</sup> túbē (...t <sup>h</sup> úbén)]	'piercing at once'
[òdībē?] 'you are closing'		[è <sup>h</sup> túbē?] 'you are piercing'	
[édībē?] 'you close (regularly)'		[é <sup>h</sup> túbē?] 'you pierce (regularly)'	
[êdībē:] 'he will not open'		[ê <sup>h</sup> túbē:] 'he will not stitch'	
[ědíbé:] 'he is not closing'		[è <sup>h</sup> túbē:] 'he is not piercing'	
[ědībě:] 'he has not closed'		[è <sup>h</sup> túbě:] 'he hasn't pierced'	
[édībě:] 'as he didn't close'		[é <sup>h</sup> túbě:] 'as he didn't pierce'	
[èdībá:] 'you were closing'		[è <sup>h</sup> túbá:] 'you were piercing'	
[ědībā:] 'he was not closing'		[è <sup>h</sup> túbā:] 'he wasn't piercing'	



## 8. TEXT

The following text was spoken onto tape by Mr. Martin E. Mesumba of Nyasoso.

It is presented here with

a) phonetic transcription

Note: // = pause with intake of breath

/ = small pause

b) phonemic transcription

Note: hyphens are used to join minor P-words to other P-words

c) word-for-word translation

Note: .. = the meaning has not been identified

: = speech introducer for 3rd pers. sg.

voc = vocative

d) free translation given at the end.

àsíném<sup>w</sup>é      nèbšt<sup>h</sup>éngùl>è  
àsón á àb<sup>w</sup>é      nè èbóténgùlè  
friendship of dog and lizard

//mb<sup>w</sup>é / nèbšt<sup>h</sup>éngùl>è / bébéré / ?àsíném<sup>w</sup>ál>èmbál>è //  
àb<sup>w</sup>é nè èbóté é-àgùlè      bébéré      àsón á-àbálèmbálè  
dog and lizard      they-were      friend of-true-true

hé<sup>h</sup>é / ?èbšt<sup>h</sup>éngùlè: / ?élāngě: mb<sup>w</sup>éné<sup>h</sup>é: / ?ām<sup>w</sup>é //  
hé-hé      èbóté é-àgùlè-é      élāngě: àb<sup>w</sup>é nèn-ā      ā-m<sup>w</sup>é  
there      lizard -..      he-told dog this-:      voc-friend

?éd<sup>h</sup>ákmp<sup>h</sup>òk<sup>h</sup>è / ?éd<sup>h</sup>ákmp<sup>h</sup>òk<sup>h</sup>è / ?ě:sèhák<sup>w</sup>é //  
ā-éd<sup>h</sup>ág mēpòkè      éd<sup>h</sup>ág mēpòkè      ā-èsèhág mé  
:-you-eat fine-food, you-eat fine-food      :-you-not-give him.

hé:mb<sup>w</sup>é?élāngě:mé / ?ām<sup>w</sup>é / ?āk<sup>h</sup>énè: éñéně:  
hé àb<sup>w</sup>é-nè élāngě: mé      ā-ā-m<sup>w</sup>é      ā-kén-è: éñéně:  
there dog-too he-tells him      :-voc-friend      :-even-as you-see

mēmp<sup>h</sup>òk<sup>h</sup>énè? / mēbósánbēh<sup>w</sup>éně:né /  
ámé mēpòkè né      ámé bós sán bēh<sup>w</sup>éně: né  
that fine-food that      which he-and father they-bring-back like-  
that.

ʔák<sup>h</sup>ènwógébánmép<sup>h</sup>ák<sup>h</sup>méánsə̀lè  
 ʔákèn èwógé bán mēpāg mé á-àsəl-è  
 whether you-heard that it-reach him in-mouth-?  
 ʔák<sup>h</sup>éméd<sup>h</sup>ák<sup>h</sup>ǎ: // ʔəbət<sup>h</sup>éngūlèǎk<sup>h</sup>ám //  
 ǎ-ké mēd<sup>h</sup>ák<sup>h</sup>é-ǎ: ʔəbóté é-ǎgūlè ǎ-kám.  
 :-even he he-doesn't-eat-.. lizard :-no.  
 ʔǎwəd<sup>h</sup>ág>è / ʔǎnèk<sup>h</sup>úréñāmécéw<sup>h</sup>é<sup>h</sup>éné: //  
 ǎ-wəd<sup>h</sup>ágè ǎ-nè əkūd é-ñām écè éw<sup>h</sup>éhé nē-è  
 :-you-don't-eat? :-with many of-animals which you-kill like-  
 that?  
 ʔám<sup>h</sup>ék<sup>h</sup>émōwéñé<sup>h</sup>ʔnép<sup>h</sup>ūnèhógè /  
 ǎ-ǎ-m<sup>h</sup>é ké ǎmōñ wēñéhné ʔpūn-èhóg-è  
 :-voc-friend even yourself you-will-see day one-?  
 ʔəcép<sup>h</sup>ū<sup>h</sup>ǎ: / bék<sup>h</sup>íá<sup>h</sup>ín // bəwú:ñām / hín //  
 écè ʔpūn-hǎ: békí: á-á<sup>h</sup>ín bəwú: ñām hín  
 that day-then they-went to-bush. They-killed animals many.  
 ʔám<sup>h</sup>é / wék<sup>h</sup>ák<sup>h</sup>ènjāpnèrè // ʔəbèlè:ǎ /  
 ǎ-ǎ-m<sup>h</sup>é wék<sup>h</sup>ák<sup>h</sup>è ǎcābnèdè ǎ-əbèlè:-hǎ  
 :-voc-friend don't-go far-away :-you-are-able-..  
 ʔésírébèmbèn / wēwéñéné: /  
 ǎ-èsidé bèmbèn wē wéñéné:  
 :-you-come near where you-will-see  
 ʔəbət<sup>h</sup>éngūlè:mém<sup>h</sup>énmēñé<sup>h</sup>né // p<sup>h</sup>éndép<sup>h</sup>ǎrá: /  
 ʔəbóté é-ǎgūlè-ǎ mé m<sup>h</sup>én mēñén-hǎ pónđé ʔpèdè-hǎ:  
 lizard-: he himself he-will-see-too. time it-came-then  
 p<sup>h</sup>éndé:bék<sup>h</sup>ábè:ñām / ǎb<sup>h</sup>é:sít<sup>h</sup>è? / bék<sup>h</sup>ábèñām /  
 pónđé-é: békábè: ñām ǎb<sup>h</sup>é ʔsítèh békábè ñām  
 time-when they-share meat. dog he-goes-near. they-share meat.  
 ǎb<sup>h</sup>é ʔsítèh / mēbánsəléndò:théné /  
 ǎb<sup>h</sup>é ʔsítèh mēbán ǎsəl á-ǎdò:b-té nèn-ǎ  
 dog he-goes-near. he-will-put mouth to-ground-in that-:



mét<sup>h</sup>éřčātúēnāmēhók / ʔáməd<sup>h</sup>ák // nēmōřēhōgáhúřébo:....  
 mét<sup>h</sup>édēh átú: á-nām āhōg ā-mēd<sup>h</sup>āg nē mōd āhōg āhúde ēbōn  
 he-takes part of-meat one :he-eats. then one man he-removed  
 log

...b<sup>w</sup>ēlnēbōmēʔā:m<sup>w</sup>ēnēn t<sup>h</sup>ē: //  
 ē-b<sup>w</sup>ēl nē ābōmē-hā āb<sup>w</sup>ē nēn tō: //  
 of-wood that he-beat-too dog that (ideophone).

m<sup>w</sup>ēbōt<sup>h</sup>ēthēhōbēt<sup>h</sup>ē wā: wā: wā: wā: //  
 āb<sup>w</sup>ē ēbō:tēd-hē āhōb ātē wān wān wān wān  
 dog he-started to-talk into (ideophone).

ʔālómēʔā:mīřēmīnnēn / ʔāmōñēnēbōt<sup>h</sup>ēngūl>ē / ʔēbōt<sup>h</sup>ēngūl>ē  
 ālómē-hā mīd āmīn nēn ā-mōñēn ēbōtē ē-āgūlē ēbōtē ē-āgūlē  
 he-sent-... eyes up that :he-sees lizard lizard

ʔēbōt<sup>h</sup>mēnlēnēn / ʔām<sup>w</sup>ēd<sup>h</sup>āmē:wēñhōp<sup>h</sup>ē: /  
 ēbōm-hē ālō nēn ā-ā-m<sup>w</sup>ē d<sup>h</sup>ām-ē: wēñhōpē  
 he-nodded-... head that :voc-friend thing-which you-said

ʔāmōm<sup>w</sup>ēn mēñēnnēmōbō:mīt // hēñēñē:cī: /  
 ā-mē m<sup>w</sup>ēn mēñēnnē ābōñ ē-mīd hē: ēñēñē: cī:  
 :he himself he-saw witness of-eyes. there you-see today

ʔēbōt<sup>h</sup>ēngūl>ēnzéd<sup>h</sup>ēnnōñdāp // ʔābōm>ēnlē /  
 ēbōtē ē-āgūlē āzē ēd<sup>h</sup>ē ā-āñōñ ā-ādāb ābōmē ālō  
 lizard when he-sits on-roof of-house he-nods head

ʔālūmētneñē:dēk<sup>h</sup>āk / ʔāde mēñhōp<sup>h</sup>ēmē: /  
 ālūmēd nēn-ā āde ākag āde mēñhōpē mē:  
 to-show that-: this promise which he-said that

m<sup>w</sup>ēāh<sup>w</sup>ē: d<sup>h</sup>āk / bō:sēd<sup>h</sup>āk // hēlūmt<sup>h</sup>ēñēmbān /  
 m<sup>w</sup>ē āb<sup>w</sup>ē-ē ād<sup>h</sup>āg bōñ āsēd<sup>h</sup>āk hē ālūmtē nēn bān  
 friend dog-.. he-eat but he-not-eat. so it-shows this that

ʔāñhōp / ʔāʔē: / ʔācōmē:mb<sup>w</sup>ēñhōp<sup>h</sup>ē / ʔēdēmbāl>ē //  
 āñhōb ā-ē: ā-cōm-ē: āb<sup>w</sup>ē ēñhōpē ā-ēde ābālē  
 he-said :yes :thing-which dog he-said :it-is-true



nê / tmmê / mên<sup>ya</sup> mên<sup>so</sup>bě:

nê amê mên<sup>ya</sup> mên<sup>so</sup>bě:

so this story it-says.

Free translation

The friendship between the dog and the lizard.

The dog and the lizard were true friends. One day the lizard said to the dog: "Friend, you eat really fine food, but you don't give me any." Then the dog replied: "Friend, you can see the fine food which I and the master bring back, but have you ever seen me eat any of it?" The lizard said: "No. Do you really not eat any of the many animals you kill?" The dog said: "Friend, you will see for yourself one day."

The same day they went to the bush and killed many animals. The dog said to the lizard: "Friend, don't go away: stay and see what happens." The lizard said that he would come.

The time came when they distributed the meat. The dog goes closer. He puts his mouth down in order to take a bit of meat to eat. Then a man takes a log and beats the dog. The dog starts to cry. He looks up to the lizard. The lizard nods his head saying: "What you said I have seen with my own eyes." That is why you can see the lizard today, as it sits on the roof, it nods its head. This is to show that what his friend dog had said about not eating is true. This is the moral of the story.

## 9. Wordlists

The following wordlists are based on the SWADESH "First 100" Diagnostic WORD LIST. Above each list is given the name of the village and clan of the speaker. Aspiration [<sup>h</sup>] has not been marked.

	Nyasoso/ Mwetug	Eboko Bajog/ Mbwogmut	Ngonmin/ Mwetan
1. I	mě	mə	mə
2. thou	wě	wə	wə
3. we	sé	sé	sé
4. this	ănə (cl.1)		ănén
5. that	ănén (cl.1)		ăníní
6. who	h̄zé	h̄zé	h̄zé
7. what	cě		c <sup>h</sup> ě
8. not	sàkě		sàkě
9. all	-s <sup>h</sup> əl	-s <sup>h</sup> əl	-s <sup>h</sup> əl
10. many	hī:n	h̄b <sup>h</sup> əl̄	hīn
11. one	-hók	-hók	-hók
12. two	-bē	-bē	-bē
13. big	-kəl/mbá: (n.)	-kəl	-kəl
14. long	-càP	-càP	-càP
15. small	m <sup>h</sup> at̄i:T	m <sup>h</sup> at̄i:T	m <sup>h</sup> at̄i:T
16. woman	h̄m <sup>h</sup> á:T	h̄m <sup>h</sup> á:T	h̄m <sup>h</sup> á:T
17. man	m <sup>h</sup> ənjəm	m <sup>h</sup> əncəm	m <sup>h</sup> əncóm
18. person	m̄T	m̄T	m̄T
19. fish	sū:	sū:	sū:
20. bird	əʔn̄n	əʔn̄n	əʔn̄n
21. dog	h̄b <sup>h</sup> é	h̄b <sup>h</sup> é	h̄b <sup>h</sup> é
22. louse	t̄iT	t̄iT	t̄iT
23. tree	b <sup>h</sup> əl	b <sup>h</sup> əl	b <sup>h</sup> əl
24. seed	h̄b̄um/mbəl	h̄b̄um	h̄b̄əl
25. leaf	c <sup>h</sup> á:	c <sup>h</sup> é	c <sup>h</sup> á
26. root	h̄k̄an	h̄k̄an	h̄k̄an
27. bark	ək̄ók	ək̄ók	ək̄ók
28. skin	h̄ḡəP/ək̄əP	h̄ḡəP	h̄ḡəP
29. flesh	h̄am	h̄am	h̄am
30. blood	m̄k̄i:	m̄k̄i:	m̄k̄i:

	Nkaok/ Ninong	Nkikoh/ Elung	Elambeng/ Bajoh	Ngol/ Manehas
1.	mə	mə	mə	mə
2.	wə	wə	wə	wə
3.	sé	sé	sé	
4.	écén (cl.10)	ănă	ănə	ănén
5.	écíní (cl.10)	ăníní	ănén	ăníní
6.	h̥zɛ:	h̥zɛ:	h̥zɛ:	h̥zɛ
7.	ɔʏɛ:	jɛ	cɪ:	jɛ:
8.			sɛ:	
9.	-sʏən	-sɪ:n	-sɪ: ~ -sɪ:	-sʏɛ:n
10.	yín	h̥a:ɔ́í	mbʷɛlɛ	h̥dùl
11.	-h̥ɔ:	-h̥ɔ?	-h̥ɔ?	-h̥ɔK
12.	-bɛ	-bɛ	-bɛ	-bɛ
13.	mbá:	-kɛl	mbɛ:	-kɛl
14.	-cáP	-jæ:	-cá:	-jəP
15.	mʷatɪ:T	mótɪ:d	mʷatɪ:T	mʷatɪ:T
16.	h̥mʷæ:T	h̥mʷæ?	h̥mʷa:T	h̥mʷɛT
17.	m̥ɔ:nc̥m	mʷɛnjɛ	mʷɛnc̥m	mʷɛnjóm
18.	m̥ɔK	m̥ɔ?	m̥ɔT	m̥ɔT
19.	sú:	sú	sú	sú:
20.	əʔn̥n	món̥n?	n̥n	əʔn̥n
21.	mbʷɛ	mbʷɛ	mbʷɛ	mbʷɛ
22.	tɪK	tɛd	tɛ?	tɛT
23.	bʷɛl	bʷɛl	bʷɛl	bʷɛl
24.	mbɛlɛb̥	mbɛl	mbum	mbum
25.	cʏæ:	jʏɛ:	jʏɛ	jʏɛ
26.	h̥k̥aŋ	h̥k̥a	h̥k̥aŋ	h̥k̥aŋ
27.	ɛkʷɔm	ɛk̥ɔg	ɛk̥u?	ɛk̥ɔK
28.	h̥ɛɔP	h̥ɛɔ?	h̥ɛɔ?	ɛk̥ɔP
29.	h̥æm	h̥æ	h̥æ	h̥æm
30.	m̥ɛkɪ:	ɔkɪ:	m̥ɛkɪ:	m̥ɛkɪ:



	Nyasoso/ Mwetug	Eboko Bajog/ Mwogmut	Ngonmin/ Mwetan
31. bone	əhɪT	əhɛT	əhɛT
32. grease	əhónŋ	əhónŋ	əhónŋ
33. egg	əkɪ:	əkɪ:	əkɪ:
34. horn	əsɛP	əsɛP	əsɛP
35. tail	ŋkɔ̃n	ŋkɔ̃n	ŋkɔ̃n
36. feather	ətɔ̃K	ətɔ̃K	ətɔ̃K
37. hair	əsɪT	hɔ̃n	əsɛT
38. head	hɪɟ	hɪɟ	hɪɬ
39. ear	ətũ:	ətũ:	ətũ:
40. eye	dɪT	dɛT	dɛT
41. nose	dũ:	dũ:	dũ:
42. mouth	hsəɪ	hsəɪ	hsəɪ
43. tooth	əsɔ̃ŋ	əsɔ̃ŋ	əsɔ̃ŋ
44. tongue	ɛcém	ɛcɪm	ɛcém
45. claw	hǎn	hǎn	hǎn
46. foot	əkũ:	əkũ:	əkũ:
47. knee	əbúbónŋ	əbúbónŋ	əbúbónŋ
48. hand	əká:	əkɛ	əká:
49. belly	əbúm	əbúm	əbúm
50. neck	ŋkɔ̃ŋ/əbɔ̃ɪ	əbɔ̃ɪ	ŋkɔ̃ŋ
51. breast	ábɪ:	əbɪ:	əbɪ:
52. heart	hɪlém	hɪlɪm	hɪlém
53. liver	əbà:	əbɛ	əbɛ
54. drink	-m <sup>w</sup> ɛ/-m <sup>w</sup> ák	-m <sup>w</sup> ɛ/-m <sup>w</sup> ák	-m <sup>w</sup> ɛ/-m <sup>w</sup> ák
55. eat	-d <sup>y</sup> ɛ/-d <sup>y</sup> ák	-d <sup>y</sup> ɛ/-d <sup>y</sup> ák	-d <sup>y</sup> ɛ/-d <sup>y</sup> ák
56. bite	-k <sup>w</sup> ägɛɪ	-k <sup>w</sup> ǎɪ	-k <sup>w</sup> ǎ:ɪ
57. see	-hén/-nɔ̃n	-hén	-nɔ̃n
58. hear	-wók	-wók	-wók?
59. know	-bí:	-bí:	-bí:
60. sleep	-kún	-kún	-kún
61. die	-wɛ	-wɛ	-wɛ
62. kill	-wú:	-wú:	-wú:
63. swim	-hǎɪ	-hǎɪ	-hǎɪ
64. fly	-pùmɛ	-kán	-pùmɛ
65. walk	-kǎK	-kǎK	-kǎK

	Nkack/ Ninong	Nkikoh/ Elung	Elambeng/ Bajoh	Ngol/ Manehas
31.	èhì?	èhèg	èhè?	èhèT
32.	àhón	òhó	àhón	àhón
33.	àkì:	àkì:	àkì	àkì:
34.	àsíP	àsé?	àsí?	àséP
35.	èkùn	èkè	èkèn	èkèn
36.	ètò?	ètòg	ètò?	ètòK
37.	hàn	hòn	ègè	èsèT
38.	ìlè	ìlè	hìlè	hìlè
39.	ètû:	ètû:	ètû	ètû:
40.	dĩ?	dóg	dè?	dèl?
41.	dû:	dû:	dû	dû:
42.	h̃səl	h̃sɛ	h̃s'ə ~ h̃s'ə	h̃səl
43.	àsò	àsò	àsò	àsò
44.	ècóm	èjɛ	àjɛ	èjém
45.	h̃æn	h̃æn	h̃æ	h̃æn
46.	èkù:	èkù:	èkù:	èkù:
47.	àbúbón	àbó:	àbón	àkò:/àbúbón
48.	èké:	èké	èké	èké:
49.	àbùm	àbùm	àbùm	àbùm
50.	èkón	àb'ɔ̃	àbò?	èkón
51.	àbî:	àbî:	àbî:	àbî:
52.	ìlém	ìlè	hìlè	hìlém
53.	àbè:	àbè	àbè:	àbè <sup>a</sup> :
54.	-m <sup>w</sup> é/-m <sup>w</sup> ák	-m <sup>w</sup> é/-m <sup>w</sup> ág	-m <sup>w</sup> é/-m <sup>w</sup> á?	-m <sup>w</sup> ák
55.	-d <sup>y</sup> é/-d <sup>y</sup> ák	-d <sup>y</sup> é/-d <sup>y</sup> ág	-d <sup>y</sup> é/-d <sup>y</sup> á?	-d <sup>y</sup> ák
56.	-k <sup>w</sup> á:l	-k <sup>w</sup> á:l	-k <sup>w</sup> á:	
57.	-nén	-h̃i	-nón	-h̃én
58.	-wó?	-wóg	-wú?	-wók
59.	-bí:	-bí:	-bí:	-bí:
60.	-k <sup>w</sup> án	-kón	-kón	-kún
61.	-wé	-wé	-wé	-wé
62.	-hú:	-wú:	-wú:	-wú:
63.	-h̃æl	-h̃æl	-h̃æl	-h̃æl
64.	-pùmé	-pùmm <sup>w</sup> é	-pùmé?	-pùmé
65.	-kě	-kě?	-kě?	-kăK

	Nyasoso/ Mwetug	Eboko Bajog/ Mbwogmt	Ngonmin/ Mwetan
66. come	-h <sup>y</sup> ák	-h <sup>y</sup> ák	-yák
67. lie	-ná:	-ná:	-ná:
68. sit	-d <sup>y</sup> é	-d <sup>y</sup> é	-d <sup>y</sup> é
69. stand	-t <sup>y</sup> ém	-tímé	-t <sup>y</sup> ém
70. give	-bě/-bák	-bă?	-bě
71. say	-hóP	-hóP	-hóP
72. sun	ěñēn/ětāndē:	ěñēn	ěñēn
73. moon	ŋgōn	ŋgōn	ŋgōn
74. star	tintinē	tēntēn	tintinē
75. water	mēndíP	mēndéP	mēndéP
76. rain	mbú:	mbú:	mbú:
77. stone	álá:	álé	álá:
78. sand	hsí:	hsí:	hsí:
79. earth	ādō:P	ādō:P	ādō:P
80. cloud	mbāk	mběmbā:K	mběmbāk
81. smoke	m <sup>w</sup> ěntūt	mūntūt	mōntūt
82. fire	mū:	mū:	mū:
83. ash	mbūmbū	mbūmbū	mbūmbū
84. burn	-h <sup>y</sup> á:T		-h <sup>y</sup> á:T
85. path	hzi:	hzi:	hzi:
86. mountain	ěkōnē/ělá:	ěkōnē	ěkōnē
87. red	-yěK	-yěK	-yěK
88. green	-	-	-
89. yellow	-	-	-
90. white	-púP	-púP	-púP
91. black	-hín	-hén	-hén
92. night	ŋkū:	ŋkū:	ŋkū:
93. hot	-h <sup>y</sup> é/-h <sup>y</sup> ák	-h <sup>y</sup> é	-h <sup>y</sup> é
94. cold	-hó:/āhéP (n.)	āhéP	-hó:
95. full	-lēn	-lēn	-lōn
96. new	ěkō:lé	ěkō:lé	ěkō:lé
97. good	-bōŋ	-bōŋ	kōsē
98. round	kě:lāngē:	āh <sup>y</sup> ōmnéré	kělēngē
99. dry	-kín	-kē:	-kén
100. name	dīn	dēn	dēn



	Nkack/ Ninong	Nkikoh/ Elung	Elambeng/ Bajoh	Ngol/ Manehas
66.	-yá:ʔ	-h <sup>y</sup> áʔ	-h <sup>y</sup> áʔ	-h <sup>y</sup> áK
67.	-ná	-ná	-ná:	
68.	-d <sup>y</sup> é	-d <sup>y</sup> é	-dí:	-d <sup>y</sup> é
69.	-t <sup>y</sup> ém	-tíbá	-t <sup>y</sup> é	-t <sup>y</sup> ém
70.	-bá	-bǎ	-bǎʔ	-bá
71.	-hóP	-h <sup>w</sup> áʔ	-hóʔ	-hóP
72.	ěñěñ/ětěndě	ěñě	ěñě	ěñěñ
73.	ngǝn	ng <sup>w</sup> ǝ	ngǝn	ngǝn
74.	tintĩnǝ	ñǝlǝʔ	těntě	těntěñ <sup>y</sup> ě
75.	mǝndǝP	ǝrǝb	mǝndíP	mǝdíP
76.	mbú:	mb <sup>w</sup> í	mbú:	mbú:
77.	ǎlá:	ǎlǎ	ǎlá:	ǎl <sup>é</sup> ǎ:
78.	hsí:	hsí:	hsí:/b <sup>w</sup> ǎ:ʔ	hsí:
79.	ǎdǝ:P	ǎdǝʔ	ǎdǝ:ʔ	ǎdǝ <sup>a</sup> :P
80.	mbǝmbǎK	mbǝʔ	mbǝmbǎʔ	mbǎK
81.	m <sup>o</sup> átǝT	mbǝrǎg	ǎdúʔ	mǝtǝT
82.	mǔ:	mǔ:	mǔ:	mǔ:
83.	mbǔmbǔ	mbǔmm <sup>w</sup>	mbǔmbǝ/mbǔmbú	mbǔmbú
84.	-yǎ:ʔ	-h <sup>y</sup> ǎ:	-h <sup>y</sup> ǎ:ʔ	
85.	ǎzi:	ǎzi:	ǎzi:	ǎzi:
86.	ěkǎnǝ	ěkǎd	ěl <sup>o</sup> ǎ:	ěkǝnǝ
87.	-yǔǎʔ	-s <sup>o</sup> ǎ:	-yǎ:	-yǎK
88.	-	-	-	-
89.	-	-	-	-
90.	-púP	-púP	-pú:	-púP
91.	-hǝn	-lǎm	-hǝn	-hín
92.	ngǝ:	ngǝy	ngǝ:	ngǝ:
93.	-wǎné	-hǝn <sup>y</sup> é	-hǝné	-h <sup>y</sup> é
94.	ǎhǝP	ǎhǝb/-h <sup>w</sup> éʔ	ǎhǝP/-hǝ	ǎhǝP
95.	-lǎn	-lǎd	-lǎn	-lǎn
96.	ěkǝ:lǎ	k <sup>w</sup> ǝlǝ	ěkǝlǎ:	ěkǝ:lǎ
97.	mbǝn (n.)	-bǝ:	-bǝ:	-bǝ
98.	kǝǎlǝngǝ:		yǝngǝlǝn	lǝngǝ:
99.	-kín	-kǝn	-kǝ	-kǝ <sup>l</sup>
100.	dǎn	dǎn	dǎ <sup>l</sup>	dǎ <sup>l</sup>

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