

# **DENYA SEGMENTAL PHONOLOGY**

Tanyi Eyong Mbuagbaw

**Cameroon Association for Bible Translation and Literacy (CABTAL)**

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**ABBREVIATIONS AND SYMBOLS**

ADJ	Adjective
AM	Associative Marker
ANT	Anterior
C	Coda
CONS	Consonantal
CONT	Continuant
COR	Coronal
DEL REL	Delayed Release
DET	Determiner
FUT	Future
INF	Infinitive
LAB	Labial
LAT	Lateral
N	Syllabic Nasal
NAS	Nasal
NC	Noun Class
NP	Noun Phrase
O	Onset
P	Past Tense
PI	Present Imperfective
PL	Plural
PP	Present Perfective
R	Rhyme
S	Sentence
SF	Suffix
SG	Singular
STRID	Strident
UF	Underlying Form
V	Vowel
$\checkmark$	Vowel Nasalisation
VP	Verb Phrase
1S	First Person Singular
2S	Second Person Singular
3S	Third Person Singular
1P	First Person Plural
2P	Second Person Plural
3P	Third Person Plural
[ ]	Phonetic data
//	Phonemic data
$\sigma$	Syllable Node
1, 2, 3, etc.	Noun Class (for interlinear morpheme definitions)

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## 1. INTRODUCTION

The present work describes the phonology of Denya, a Southern Bantoid language (see section 1.1) spoken in the South-West Province of Cameroon. The lexical items on which this analysis is based were the bilingual wordlist created by Winnie Grebe and Carol Stanley (1987). This wordlist was transcribed into Denya during my stay in December 1993 at Mukonyong (Small Nyang) in the Takamanda dialect area. The data was again reworked in 1995 for further correction. Although this work cannot pretend to deal with every significant aspect of Denya phonology, it is hoped that the description herein will be useful to linguists interested in Bantoid languages in general and in the Nyang family in particular.

The emphasis of this work is descriptive rather than theoretical. However, it is difficult to describe any work in a theoretical vacuum, since description also involves a certain kind of analysis. This paper will use both the structuralist and generative approach.

The phonological study begins with a description of the vowel and consonant systems in section 2. Constraints on the structure of the syllables are treated in section 3, and phonological processes in section 4.

### 1.1 Language Background

Denya is situated in Manyu Division of the South-West Province in the Republic of Cameroon. The speakers of the language normally call themselves Anyang. Neighbouring tribes such as Banyangi, call them Mekende, while the Ejaghams call them Anyang. The Anyang people number about 16,000 (1994 estimate from the Sub-Delegation of Education). They occupy the forest area of Akwaya Sub-Division, some parts of Upper Banyang Sub-Division and a bit in neighbouring Nigeria. The majority of the speakers settle on the banks of the Manyu River (Cross River) in Mamfe town and westward to the border with Nigeria. There are many speakers of the language living in other areas of the country, as well. Neighbouring languages include: Kenyang, Ejagham, and Kendem to the south-west; Boki to the west; and Asumbo, Amasi and Menka to the north.

Denya has four main dialects: Takamanda, Basho, Bitieku, and Bajwa. Takamanda and Basho are named after villages located in the centre of their respective dialect areas. The other two, Bitieku and Bajwa, receive their names from the clans which speak them. People from the Takamanda and Bitieku dialects usually group Basho and Bajwa together as one and refer to it as Basho or Bajwa. I based my analysis on the Takamanda dialect because it is recognised as the standard dialect. For more details, see Tyhurst and Tyhurst (1983).

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Johnston (1919) classifies Denya as Ekoid, a sub-group of the Cross River languages. Talbot (1926) considers it to be a sub-group of Bayangi, while Westermann and Bryan (1952) classify it as Ekoid Bantu. Jacquot and Richardson (1956) notes that it is very difficult to classify Denya. Consequently they adhere to Guthrie's (1953) classification and regard it as a Bantoid language because it has both Bantu and non-Bantu features.

In 1965, Crabb claimed that Ekoid languages were Bantu because they share some Bantu features in the noun class prefixes. Thus, in Crabb's view, Denya is a Bantu language. Williamson (1971) classifies Denya as Bantu because at that time, it had been proved that both the noun prefixes and concord systems are those of Bantu. She further argued that Guthrie's classification was based on typological and not on genetic considerations. Watters (1989) and Watters and Leroy (1989) classify Denya as Southern Bantoid, one of the members of the (Wide) Bantu family. In my analysis, I adopt the classification of Williamson (1971) who classifies Denya as Bantu.

The first linguistic data of Denya (Anyang) appeared in Mansfield's (1908) comparative word list of six languages. Abangma (1981) described the use of modes in Denya discourse for which he obtained a 'Doctorat de 3e cycle' from the University of Yaounde. His thesis contained an overview of the consonant and vowel systems, and I have borrowed some of his data. Tyhurst (1983) presented a linguistic survey of the Nyang languages, including a brief discussion of the vowel and consonant phonemes of Kenyang, Denya and Kendem, and tone contrasts in the three languages. He also provided a word list in the three languages and their various dialects. Tyhurst and Tyhurst (1983) reported on a sociolinguistic survey conducted for Kenyang and Denya speakers.

The author (1994), proposed a preliminary orthography for Denya and wrote a paper on Denya Tone Orthography. He also proposed an alphabet chart (Mbuagbaw 1995b).

### 1.2 The People

Denya people living in the neighbouring language areas are mostly bilingual. A vast majority speak both their language and Kenyang as a result of the close contact between the two languages through trade and intermarriage. In some cases, 'multilingualism' is the appropriate term since many Denya people also speak Ejagham and Pidgin English. The spread of the Kenyang and Ejagham languages amongst the Denya people stems from a lack of motorable roads in Akwaya Sub-Division. Instead of trekking long distances to reach Akwaya, the Anyangs prefer to go to Mamfe for business, medical services and administrative reasons, and this has brought them into contact with Kenyang (the language of Mamfe) and Ejagham.

Further to the above discussion of bilingualism in the local languages, we should also consider the use of Pidgin English (hereafter, Pidgin) and English. The majority of the people know Pidgin, and those who have undergone formal education, use English as well.

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Pidgin is frequently used as a means of communication when groups get together which have more than one language represented (at the market, in church, or at the bar). English is used in official circles such as: schools and offices, etc. However, in situations where only one language group is represented the people typically use their own language (e.g. neighbours talking, social gatherings in the village, village disputes, etc).

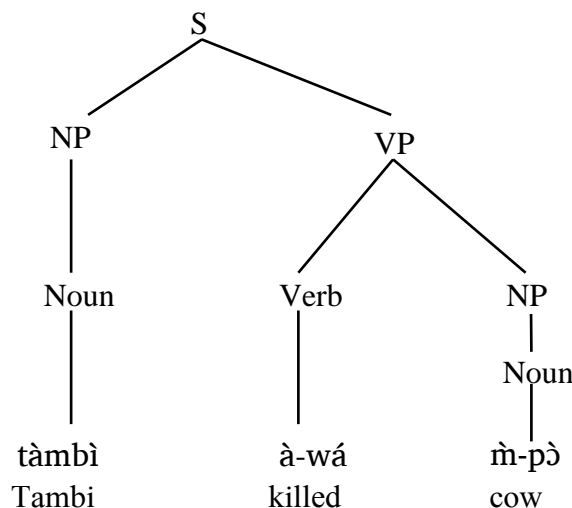
The majority of the people are subsistence farmers. They grow cash crops such as coffee and cocoa, as well as other foodstuffs such as cocoyams, yams, rice, beans, cassava, plantain, melon, and a variety of vegetables such as eru (a type of vegetable harvested in the forest), green vegetables, pumpkin leaves, water leaf, etc. Large quantities of palm oil, vegetables, pineapple, garri, rice, and water fufu are exported to Nigeria via the Manyu River and bush tracks. Some are also exported to other provinces of Cameroon.

### 1.3 Overview of Grammar

Although the focus of the present study is on the phonology of Denya, it is impossible to discuss phonology without referring to various syntactic and morphological structures. In this section, I therefore extend my sketch of Denya to include a brief description of relevant grammatical structures.

#### 1.3.1 Syntactic Structures

Denya is a language with an SVO structure. Simple sentences can be diagrammed as shown below.



‘Tambi killed a cow’

**FIGURE 1:** Simple Sentence Structure



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The noun phrase may consist of a noun, as head, followed by modifiers such as adjectives and/or determiners. Some adjectives (i.e., those which are derived from verbs) are few in number. There are true adjectives (not derived from verbs) that occur in semantic fields such as colours and numbers. Noun phrases may also consist of NP-NP constructions in which the second NP ‘possesses’ the first NP. In Denya, when the two nouns are conjoined, there is often an associative marker (AM) between the two nouns. Typical noun phrases are displayed as follows:

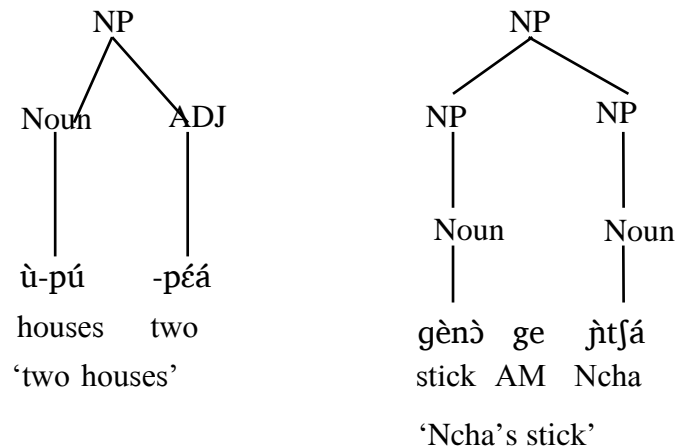


FIGURE 2: Noun Phrases

### 1.3.2 Relative Clause

A relative clause is a series of words including a verb with a subject which serves to modify a noun in the same sentence. Relative clauses follow the noun which they modify in the same sentence in Denya. A sentence containing a relative clause may be considered to be a combination of two separate sentences, with either the same or different subjects, one sentence serving to modify a specific noun in the other sentence. Here are some examples below:

- (1) Mè-ndè àyì á-tʃwò jù-dzù fà à-mè.  
1-man who 3S-come.P 5-yesterday here 3S-sick  
*'The man who came here yesterday is sick.'*
- (2) A-nà m-mè àyà álú kwókwólé nè gè-pú yà.  
3S-bought 5-land which besides near with 7-house my  
*'He bought the plot which is near my house.'*
- (3) M-ǔ èyì mbó ñ-lèré élé mè-jí wà.  
1-person whom P 1S-teach.P is 1-friend my  
*'The person whom I taught is my friend.'*
- (4) Gè-pú èyígé dé-nǔ mà-nă élé gè-pú èyâ.  
7-house which 1S-drink.P 6a-water is 7-house my  
*'The house where I drank water is mine.'*

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### 1.3.3 Adjectives

An adjective consists of a root to which a noun class prefix is adjoined. Concord exists between the adjective and the preceding noun it modifies, and this is indicated by copying the noun class prefix from the noun onto the adjective.

The examples below demonstrate this and also show that vowel coalescence and other processes occur in this environment.

(5)	Noun	Adjective	Noun Phrase	Gloss
	ù-pú 8-house	ú-péá 8-two	[ùpúpéá]	'two houses'
	dè-nò 4-iron	dé-péá 4-two	[dè̀nò̀rípéá]	'two irons'
	à-ntè 2-fathers	á-péá 4-two	[à̀ntè̀ápéá]	'two fathers'

### 1.3.4 Verb Phrase

Simple verb stems consist of a single root which is either monosyllabic or disyllabic. All monosyllabic verb roots have underlying tonal melodies of L, H, or LH. All disyllabic verb roots have the tonal melody HH.

The tense markers consists of:  $-v\varepsilon$ ,  $-\overline{\alpha\varepsilon}$  and  $-\lambda\varepsilon$  which are all non-past markers.

They are all suffixed to the verb stem. The suffix (SF)  $-n\varepsilon$  occurs with L-toned verbs while the suffix  $-g\varepsilon$  occurs with toneless verbs. H-toned verbs do not take any suffix. The suffix  $-l\varepsilon$  has been discovered with only two verbs and also goes with the L-toned verbs. Examples are as follows:

(6)	à-kèlè-gè 3S-want-SF	'S/He is wanting.'
	à-fè-nè 3S-lock-SF	'S/He is locking.'
	à-kè-nè 3S-walk-SF	'S/He is walking.'
	à-gyì-gè 3S ask SF	'S/He is asking.'
	à-sè-lè 3S-lock-SF	'S/He is receiving.'

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à-pè-lè            ‘S/He is looking.’  
3S-look-SF

à-ɲè              ‘S/He is eating.’  
3S-eat

à-kù              ‘S/He is calling.’  
3S-call

The future tense is indicated by the suffix *ɲê* which follows the verb. For example

(7)      ɲ-ɲè-ɲê              ‘I will eat.’  
1S-eat-FUT

ɲ-kè-nè-ɲê              ‘I will walk.’  
1S-walk-FUT

Aspect in Denya is marked by either the tone system or by the suffix *mé* as in the present perfective or *dʒěndégébé* as in the present habitual. They both occur after the verb.

(8)	Present Perfective	à-ɲé-mé 3S-eat-PP	‘S/He has eaten.’
	Present Imperfective	à-ɲé 3S-eat.PI	‘S/He ate.’
	Present Habitual	à-ɲè-dʒěndégébé 3S-eat-HAB	‘S/He (habitually) eats.’
	Present Continuous	à-ɲè 3S-eat	‘S/He is eating’

### 1.3.5 Serial Verb Construction

Serial verb constructions are common in Niger-Congo languages. In a serial verb construction, ‘verbs stand next to each other without being connected’ (Westermann: 1930:126). In some cases, it is noted that serial verbs in a serial verb construction share a common subject in surface forms (Welmers 1973). These two characteristics

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discussed above are common in Denya. Some examples of serial verb construction in Denya are as follows:

(9) Ntǎ́ à-lò mǎŋ<sup>+</sup>-ŋé mè-ŋè.

Ncha 3S-start INF-eat 5-food

'Ncha started to eat food.'

(10) Dǎ̀nì à-bó è-sǎ mǎn-<sup>+</sup>tó.

Danyi 3S-take 3-cutlass INF-clear

'Danyi took the cutlass to clear (grass).'

(11) Akwó à-kèlè-gè mǎn-lò ò-ŋì mǎŋ-wó.

Akwo 3S-want-SF INF-start 5-water INF-swim

'Akwo wants to start swimming.'

The examples have shown that these constructions are genuinely serial because, there is no connector between the first and subsequent verbs.

### 1.4 Nouns

Nouns in Denya consist of a noun stem, which may be simple or compound, to which is adjoined a noun class prefix which may be zero. There are also nominalised verbs which function somewhat like English gerunds.

Denya distinguishes 10 noun classes, (Abangma 1981 and Tyhurst 1983) five of which are used with singular nouns, and five with plural nouns. The numbering for classes follows that of Narrow Bantu, Guthrie, (1953) except for class 6a which corresponds to Wide Bantu classification (Guthrie 1971). Each class conditions agreement on modifiers and corresponding pronouns. The classes are grouped in pairs representing the singular/plural contrasts. These pairs are called genders. Classes 1, 3, 5, 7 and 9 are the singular classes, and classes 2, 13, 6, 8 and 10 the plural classes. Class 6a is for mass nouns. There are seven major gender pairs: 1/2, 3/6, 3/13, 5/6, 5/8, 7/8, 9/10.

#### 1.4.1 Derived Nouns

Derivational processes are limited in Denya and tonally they are always high toned in their output. The formation of a gerund type of a noun from the verb (whether transitive or intransitive) takes the suffix *-ge* for high tones or *-ne* for low tones. Throughout the examples that follow in this section, the tones provided are underlying tones.

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(12)	Tone	Verb	Gloss	Nominal	Gloss
	L	fê	‘to lock’	fê-né	‘locking’
	H	ɲé	‘to eat’	ɲé-gé	‘eating’
	LH	tʃyě	‘to give’	tʃyé-gé	‘giving’
	HH	kélé	‘to find’	kélé-gé	‘finding’

### 1.4.2 Major Genders

In citing a noun gender, the first number refers to the class of the singular form and the second noun refers to the class of the plural form (e.g. 1/2 means class 1 in the singular and class 2 in the plural). A detailed analysis of the noun class system of Denya is forthcoming. I will here represent only one example in each class.

(13) Gender 1/2	SG	Gloss	PL	Gloss
	N-, me-, Ø		a-, ma-	
	Ø-ntè	‘father’	à-ntè	‘fathers’
	m-fwà	‘chief’	mà-fwà	‘chiefs’
	mè-fwé	‘slave’	mà-fwé	‘slaves’

All the nouns in this gender are human. The frequently used noun ‘person’ has an irregular alternation involving the stem, as below:

(14)	SG	Gloss	PL	Gloss
	mũ	‘person’	bǔ	‘persons/people’

(15) Gender 3/13	SG	Gloss	PL	Gloss
	ɛ-		de-	
	è-sǎ	‘cutlass’	dè-sǎ	‘cutlasses’

Referents in this gender are non-human. These include mostly implements and some animals and fishes.

(16) Gender 3/6	SG	Gloss	PL	Gloss
	ɛ-		ma-	
	è-bé	‘law’	mà-bé	‘laws’

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Gender 3/6 includes some physical features, food and abstract nouns.

(17) Gender 5/6	SG	Gloss	PL	Gloss
	me-		ma-	
	mè-kpò	‘head’	mà-kpò	‘heads’

Referents include some body parts, and some physical features.

(18) Gender 6a	ma-	Gloss
	mà-nǎ	‘water’

Class 6a is made up of mass nouns.

(19) Gender 5/8	SG	Gloss	SG	Gloss
	me-		u-	
	mè-kwálâ	‘leopard’	ù-kwálâ	‘leopards’

Gender 5/8 are made up of some animals. These examples are not common.

(20) Gender 7/8	SG	Gloss	SG	Gloss
	ge-		u-, o-	
	gè-bà	‘bag’	ù-bà	‘bags’
	gébwí	‘forest’	óbwí	‘forests’

It includes house hold utensils and smaller animals.,

(21) Gender 9/10	SG	Gloss	PL	Gloss
	me-, N-		me-,N-	
	m̀-p̀	‘cow’	m̀-p̀	‘cows’
	m̀-s̀	‘monkey	m̀-s̀	‘monkeys’

Gender 9/10 is made up of animals. The distinction between singular and plural forms are noted in the pronominal system. This is noted in (21) below because the noun prefixes do not show any singular/plural distinctions.

(22)	m̀-p̀ àyì nâ	‘this cow’
	m̀-p̀ èyí nâ	‘these cows’

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### 1.4.3 Pronouns

Independent pronouns also exist in Denya. These may stand alone. in answer to questions such as ‘what?’ or ‘who?’. The following chart sets these out.

(23)

	SG	PL
1 <sup>st</sup>	ṁmè	èsé
2 <sup>nd</sup>	wò	ènú
3 <sup>rd</sup>	dʒì/gèdʒí	èbwó

In the pronominal system, the pronouns take different classes of the noun. The third person pronoun distinguishes between human and non-human. This concludes our quick overview of certain aspects of Denya grammar.

## 2. VOWEL AND CONSONANT SYSTEMS

### 2.1 Phonetic Vowels

There are seven phonemic vowels in Denya. They are namely: /i, e, ε, u, o, ɔ, a/. They occur in different positions of the morpheme. The phonetic vowels of Denya are now described by these three parameters: tongue height, tongue backness, and lip rounding. The phonetic vowels of Denya are shown in the table below:

i <u>i</u>		ω	u <u>u</u>
e <u>e</u>	ə		o <u>o</u>
ε <u>ε</u>			ɔ <u>ɔ</u>
	a <u>a</u>		

**TABLE 1:** Phonetic Vowels in Denya

The surface vowels of Denya are now described phonetically in the environments in which they occur:

/i/	is realised as:
[ <u>i</u> ]	close front nasalised unrounded vowel after nasal consonants,
[n <u>i</u> ]	‘to fold’
[ɲn <u>i</u> ]	‘stream’
[ i ]	a close front unrounded vowel elsewhere.
[ t <u>i</u> ]	‘to wipe’
[dʒ <u>i</u> ]	‘to twist’



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/e/	is realised as:
[ɛ̃]	half-close front nasalised unrounded vowel after nasal consonants, [nègbò] ‘death’ [mè] ‘swallow’
[e]	close front unrounded vowel elsewhere. [bé] ‘to dance’ [kè] ‘to sink’
/ɛ/	is realised as:
[ə]	half-close central unrounded vowel in closed syllables, [ɲgwə̀] ‘to show’
[ɛ̃]	half-open front nasalised unrounded vowel after nasal consonants, [ɲé] ‘to eat’ [ɲɲmè] ‘year’
[ɛ]	half-open front unrounded vowel elsewhere. [bé] ‘to remain’ [ètè] ‘duiker’
/a/	is realised as :
[ã]	open back nasalised unrounded vowel after nasal consonants, [ɲá] ‘to stretch’ [ɲá] ‘to chew’
[a]	open back unrounded vowel elsewhere. [sá] ‘to write’ [kpà] ‘to carry’
/u/	is realised as:
[ɯ]	close back unrounded vowel between a consonant and the vowel /a/ [m̀fòà] ‘chief’ [b̀wà] ‘mushroom’

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[ɥ]	close back nasalised rounded vowel after nasal consonants, [nɥ] ‘to drink’ [mɥ] ‘to demolish’
	close back rounded vowel elsewhere.
[u]	[bú] ‘to chase’ [kúlé] ‘to move’
/o/	is realised as:
[ɔ̃]	half-close back nasalised rounded vowel after nasal consonants, [nɔ̃] ‘to jump’ [énóǵé] ‘respect’
[o]	half close back rounded vowel elsewhere. [kétò] ‘hut’ [ùtò] ‘power’
/ɔ/	is realised as:
[ɔ̃]	half-open nasalised back rounded vowel after nasal consonants, [nɔ̃] ‘to bite’ [mɔ̃] ‘wine’
[ɔ]	half-open back rounded vowel elsewhere. [m̀p̀ɔ̀] ‘cow’ [dʒ̀ɔ̀] ‘easy’

Certain words and syllable patterns are rare. There are no [ɔ̃] or [ɔ̃] in my data, but each could turn up in a larger corpus.

## 2.2 Vowel Nasalisation

Nasalisation is the superimposition of a nasal resonance on an oral segment. Phonetically, all vowels become slightly nasalised when adjacent to a nasal consonant. This process is generally more salient when the nasal consonant precedes the vowel than when it follows it. Some examples are illustrated below:

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(24)	[mètì]	‘road’	[nèkò]	‘parcel’
	[mànǎ]	‘water’	[nù]	‘to drink’
	[gènǔ]	‘stick’	[màkè]	‘news’
	[mèjà]	‘meat’	[nèntó]	‘pimple’
	[nǎné]	‘to peel’	[nègò]	‘navel cord’
	[mèsà]	‘hunger’	[gèmè]	‘neck’

(25) V → [+nas]/N\_\_

The rule above states that all vowels in Denya (except the schwa [ə] and the high closed back unrounded vowel [ɔ] which are rare and do not occur after a nasal consonant in our data) are phonetically nasalised when they follow a nasal consonant.

[nègwèt̚] ‘school’

## 2.3 Phonetic Consonants

The consonants of Denya are represented at two levels: the phonetic and the phonemic. They are displayed and classified according to the place and manner of articulation as well as the state of the vocal cords. All consonants in Denya are produced with an aggressive air stream mechanism.

The consonant phones are displayed below, vertically according to points articulation and horizontally according to manner of articulation.

Modifications to consonants are symbolised as follows.

ç indicates an interdental/dental consonant phone

ç indicates a velar consonant phone

ç' indicates an unreleased consonant phone

The various abbreviations of the points of articulation are as follows:

BI	Bilabial
LD	Labiodental
DA	Dental Alveolar
AL	Alveolar
AP	Alveopalatal
PA	Palatal
VL	Velar
LV	Labiovelar
GL	Glottal stop

## DENYA SEGMENTAL PHONOLOGY

The consonant chart below displays the phonetic consonants according to their place and manner of articulation.

	BL	LD	DA	AL	AP	PA	VL	LV	GL
Voiceless plosive	p		t̚				k	kp	/
Unreleased plosive			t̚̚						
Voiced plosive	b			d			g	gb	
Nasal	m	ɱ		n		ɲ	ŋ	ŋm	
Voiceless fricative		f		s		ʃ			h
Voiced fricative	β	v					ɣ		
Voiceless affricate						tʃ			
Voiced affricate						dʒ			
Lateral				l					
Flap				r					
Approximant						y		w	

**TABLE 2:** Phonetic Consonant Chart

The phonetic consonants are displayed below with examples showing all their allophonic variations.

/p/		is realised as:
	[β]	voiced bilabial fricative intervocalically,
	[dàβà]	‘bat’
	[géβé]	‘clock’
	[p]	voiceless bilabial plosive elsewhere.
	[pó]	‘to save’
	[pà]	‘to dry’
/b/		is realised as:
	[b]	voiced bilabial plosive elsewhere.
	[bá]	‘to marry’
	[bú]	‘to drive’

## DENYA SEGMENTAL PHONOLOGY

/t/		is realised as:
	[t̚]	voiceless unreleased dental (freely varying to interdental), syllable-finally,
	[ɲgát̚]	‘scorpion’
	[ɲgwè̚t̚]	‘book’
	[t̚]	voiceless dental (freely varying to interdental) plosive elsewhere,
	[t̚i]	‘to erase’
	[t̚é]	‘to crack’
/d/		is realised as:
	[d]	voiced alveolar plosive everywhere.
	[dèn̩]	‘bicycle’
	[dèkpá]	‘scabies’
/k/		is realised as:
	[k]	voiceless velar plosive everywhere.
	[nèkì]	‘long life’
	[kè]	‘to walk’
/g/		is realised as:
	[ɣ]	voiced velar fricative intervocalically in fast speech,
	[sáyáré]	‘to whip’
	[gèyǒ]	‘bone’
	[g]	voiced velar plosive elsewhere.
	[gɔ́]	‘to allow’
	[gyá]	‘to split’
/kp/		is realised as:
	[kp]	voiceless labiovelar plosive everywhere.
	[kpá]	‘to carry’
	[gèkpò]	‘poor’
/gb/		is realised as:
	[gb]	voiced labiovelar plosive everywhere.
	[gbé]	‘to close’
	[gbéré]	‘to sprinkle’

## DENYA SEGMENTAL PHONOLOGY

/f/		is realised as:
	[f]	voiceless labiodental fricative everywhere.
	[fééré]	‘to remove’
	[fê]	‘to lock’
/v/		is realised as:
	[v]	voiced labiodental fricative everywhere.
	[ɛ̃vò]	‘musical instrument’
	[ává]	‘name’
/s/		is realised as:
	[ʃ]	voiceless palatal fricative after high vowels or a glide,
	[ʃyè]	‘to abuse’
	[ʃù]	‘to drag’
	[s]	voiceless alveolar fricative elsewhere.
	[sá]	‘to write’
	[sè]	‘to hire’
/h/		is realised as:
	[h]	voiceless glottal fricative everywhere.
	[hòvyà]	‘leaves’
	[hòŋ̀òŋ̀ó]	‘hollow’
/m/		is realised as:
	[m]	voiced bilabial nasal everywhere.
	[mɛ]	‘to swallow’
	[m̀m̀ì]	‘palm nuts’
/n/		is realised as:
	[n]	voiced alveolar nasal everywhere.
	[ǹì]	‘to fold’
	[néné]	‘to open’
/ɲ/		is realised as:
	[ɲ]	voiced palatal nasal everywhere.
	[ɲé]	‘to eat’
	[ɲó]	‘to jump’

## DENYA SEGMENTAL PHONOLOGY

/ŋ/		is realised as:
	[ŋ]	voiced velar nasal everywhere.
	[ní'dóŋ]	'jigger'
	[ŋámé]	'to squeeze'
/ŋm/		is realised as:
	[ŋm]	voiced labio-velar nasal everywhere.
	[àŋmènè]	'to fidget'
	[ŋmè]	'to shoot'
/tʃ/		is realised as:
	[tʃ]	voiceless palatal affricate everywhere.
	[tʃwó]	'to come'
	[tʃítʃítʃí]	'across'
/dʒ/		is realised as:
	[dʒ]	voiced palatal affricate everywhere.
	[dʒò]	'to weave'
	[gèdʒù]	'to whisper'
/l/		is realised as:
	[l]	voiced alveolar lateral everywhere.
	[li]	'to cry'
	[pélé]	'to watch'
/r/		is realised as:
	[r]	voiced alveolar flap everywhere.
	[ràmbò]	'floor mat'
	[kàré]	'to share'
/y/		is realised as:
	[y]	voiced palatal semi-vowel everywhere.
	[yì]	'this'
	[èyâ]	'my'
/w/		is realised as:
	[w]	voiced labio-velar semi-vowel everywhere.
	[wò]	'you'
	[dáwè]	'towel'

## DENYA SEGMENTAL PHONOLOGY

Glottal stop is not contrastive but is in free variation at the end of a phrase as below:

(26)	∅	~	/	Gloss
	[dàbà]	~	[dàbà/]	‘bat’
	[tʃwá]	~	[tʃwá/]	‘to chew’

### 2.4 Nasal Assimilation

In Denya, as in many African languages, a nasal consonant assimilates to the place of articulation of a following obstruent. Homorganic nasal consonants occur as prefixes to both nouns and verbs (Abangma 1981). The first of these prefixes, symbolised as /N-/, denotes singular for noun class prefixes 1 and 5. This nasal prefix is easily distinguished by the speaker because it is attached to nouns. This is illustrated in (26):

(27)	Underlying Form	Phonetic Representation	Gloss
	/N-pì/	[m̀pì]	‘nail’
	/N-tè/	[ǹ̩tè]	‘father’
	/N-tʃì/	[ǹ̩tʃì]	‘corn’
	/N-gbòŋ/	[ǹ̩gbòŋ]	‘green vegetable’
	/N-fǎ/	[ǹ̩fǎ]	‘moon’
	/N-gò/	[ǹ̩gò]	‘custom’

The second of these prefixes, also symbolised as /N-/, is also very common. It marks the first person singular subject pronoun and it is usually attached to verbs. Like nasal noun class, it also assimilates to the place of articulation to the following consonant (in the case, the verb root). This is illustrated in the examples below:

(28)	Underlying Form	Phonetic Form	Gloss
	/N-kè/	[ǹ̩kè]	‘I walked’
	/N-fè/	[ǹ̩fè]	‘I locked’
	/N-tʃwò/	[ǹ̩tʃwò]	‘I came’
	/N-tò/	[ǹ̩tò]	‘I cleared’





## DENYA SEGMENTAL PHONOLOGY

ŋ		ŋŋmè <i>goat</i>	ŋŋmè <i>year</i>			mèŋmò <i>relative</i>	
f		fé <i>to drive away</i>	fě <i>to praise</i>	fà <i>to share</i>	fɔ̃ <i>to seize</i>		fú <i>to boil</i>
v			dávě <i>personal name</i>	àvà <i>personal name</i>	évóŋmà <i>charm</i>	èvò <i>musical instrument</i>	
s		òsè <i>greed</i>	sè <i>to receive</i>	sá <i>to write</i>	só <i>to cancel</i>	mèsò <i>back</i>	sù <i>to drag</i>
h					hòŋòŋó <i>hollow</i>	hòvyà <i>leaves</i>	
l	lì <i>to cry</i>	pélé <i>to push</i>	léré <i>to train</i>	ùlà <i>to reason</i>	lò <i>to start</i>	lò <i>to mark</i>	gèlù <i>to force</i>
r	rìntè <i>remem- brance</i>	féré <i>to reject</i>	féré <i>to think</i>	ràmbò <i>floor mat</i>			
w		wé <i>to yell</i>	wé <i>to fasten</i>	wá <i>to kill</i>	wò <i>to vomit</i>		wú <i>feelings</i>
y	yì <i>this</i>			gyá <i>to split</i>	yò <i>a response</i>		

I shall sum up the discussion so far by showing charts of distinctive feature matrices which contain arrays of features necessary for the representation of various sounds.

### 2.6 Distinctive Feature Matrix for Vowels.

	i	e	ɛ	a	ɔ	o	u
High	+	-	-	-	-	-	+
Low	-	-	-	+	-	-	-
Back	-	-	-	+	+	+	+
Round	-	-	-	-	+	+	+
Tense	+	+	-	-	-	+	+

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### 2.7 Distinctive Feature Matrix for Sonorants.

	m	n	ɲ	ŋ	ŋm	l	r	j	w
Consonant	+	+	+	+	+	+	+	-	-
Continuant	-	-	-	-	-	+	+	+	+
Nasal	+	+	+	+	+	-	-	-	-
Lateral	-	-	-	-	-	+	-	-	-
Labial	+	-	-	-	+	-	-	-	+
Anterior	+	+	-	-	-	+	+	-	-
Coronal	-	+	-	-	-	+	+	-	-
High	-	-	+	+	+	-	-	+	+
Back	-	-	-	+	+	-	-	-	+

### 2.8 Distinctive Feature Matrix for Obstruents

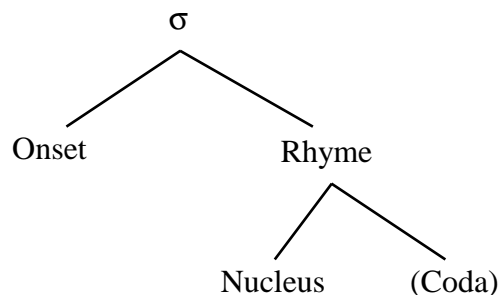
	p	b	t	d	tʃ	dʒ	k	g	kp	gb	f	v	s	h
Voice	-	+	-	+	-	+	-	+	-	+	-	+	-	-
Continuant	-	-	-	-	-	-	-	-	-	-	+	+	+	+
Strident	-	-	-	-	+	+	-	-	-	-	+	+	+	-
Anterior	+	+	+	+	+	+	-	-	-	-	+	+	+	-
Labial	+	+	-	-	-	-	-	-	+	+	+	+	-	-
High	-	-	-	-	+	+	+	+	+	+	-	-	-	-
Low	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Back	-	-	-	-	-	-	+	+	+	+	-	-	-	-
DEL REL	-	-	-	-	+	+	-	-	-	-	-	-	-	-

### 3. THE SYLLABLE

Most phonologists attempt to deal with the syllable as a phonological unit. Each syllable consists of an obligatory nucleus preceded by zero or more consonants (the onset). The nucleus may be a vowel or a syllabic consonant. Thus, we may regard the syllable as the minimum prosodic unit of the word. The syllable is traditionally assumed to be composed of three constituents:

- 1) the onset,
- 2) the peak or nucleus,
- 3) the coda.

For phonological purposes, however, the only relevant division is between the onset and the rhyme consisting of the phonetic peak or nucleus and the coda. The model that is used in the analysis of the syllable structure in this work is the multi-tiered phonological theory as discussed by Kiparsky (1979), Halle and Vergnaud (1980), Steriade (1982) and Harris (1983). The structure of the syllable can be represented as follows:



**FIGURE 3:** Syllable Structure

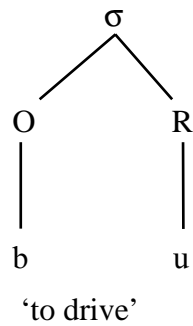
The syllable node ( $\sigma$ ) consists of an optional onset (O) filled by a consonant. The rhyme (R) is made up of a vowel or a syllabic nasal and an optional consonant in the coda position (C).

#### 3.1 Specific Syllable Types

The syllable in Denya is made up of segments such as: consonants (C), vowels (V), syllabic nasals (N), semi-vowels (S) (/y/ and /w/), and tone (H, L, LH and HL). The segmental forms of lexical morphemes are presented below under syllable types. There is a listing of the various syllable types and their skeletal tier representations with an in-depth analysis of the various syllables and tones that completes this section.

## DENYA SEGMENTAL PHONOLOGY

CV



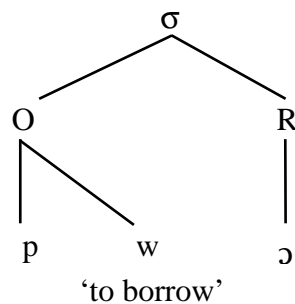
Some examples of this syllable structure are represented as below:

- (29) m̀̀ 'to demolish'  
ǹ̀ 'to bite'  
m̀̀ 'to swallow'  
sá 'to write'  
f̀̀ 'to seal'

CSV is the second most common syllable structure. CSV is distinct from CVV for the following reasons:

- the semi-vowels do not carry a tone of their own,
- the phonetic duration of semi-vowels in this position is not as long as regular short vowels. It is thus heard phonetically as a modification or release of onset consonants.

Semi-vowels are always [+high] in the examples below:



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Further examples are as follows:

- (30)
- |       |              |
|-------|--------------|
| gyá   | ‘to split’   |
| fwí   | ‘to drive’   |
| lyá   | ‘to lean on’ |
| kwé   | ‘to fail’    |
| kwá   | ‘to sing’    |
| tʃwó  | ‘to come’    |
| bwé   | ‘to raise’   |
| bwólé | ‘to trick’   |

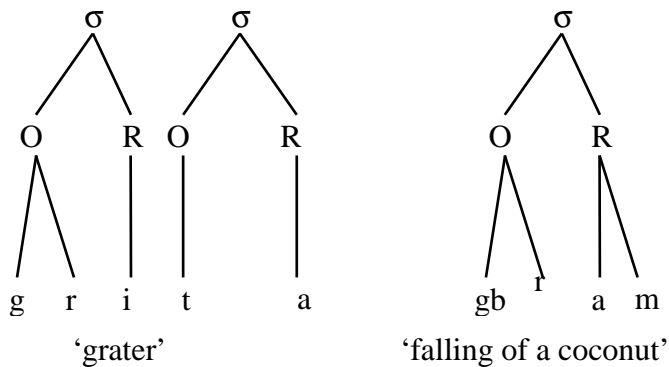
The syllable structure CCV is found only in borrowed words and ideophones. The second consonant of the cluster must be a liquid, as in the following loan words.

- (31)
- |            |                      |
|------------|----------------------|
| /m-frékán/ | ‘rust’ (Efik)        |
| /grítà/    | ‘grater’ (English)   |
| /àkàflá ò/ | ‘greetings’ (Pidgin) |

CCV also occurs in ideophones such as:

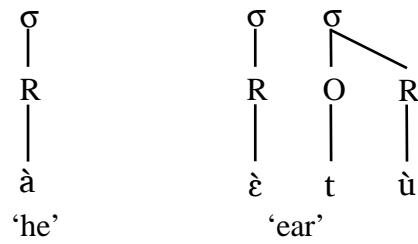
- (32)
- |           |                   |
|-----------|-------------------|
| /grìdìdì/ | ‘to glide’        |
| /gbràm/   | ‘falling coconut’ |

The syllable structure can be represented as follows:



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A single vowel syllable V occurs either as a subject marker on verb or as a noun prefix as shown below:

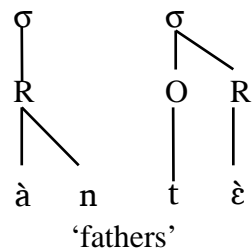


Some examples are shown below:

- (33) ò 'you' (non-emphatic pronoun)  
 á 'they' (non-emphatic pronoun)  
 Ñ 'I' (non-emphatic pronoun)  
 è-bé 'law'  
 ú-bà 'bags'

VN. This syllable structure is not common. It is found in the plural prefix of some nouns.

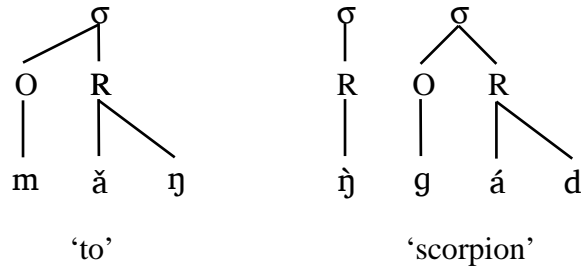
- (34) àntè 'fathers'  
 úṅkò 'ravines'



## DENYA SEGMENTAL PHONOLOGY

CVC. The CVC syllable is not common in Denya. Following are a few examples:

- (35) mǎŋ 'to'  
 ŋ-gád 'scorpion'  
 n-<sup>h</sup>dóŋ 'jigger'  
 ŋ-gbòŋ 'green vegetables'  
 ŋ-gwèd 'school' (or book)



### 3.2 Semi-Vowels

The two semi-vowels /y/ and /w/ occur syllable initially in Denya. In this position, they are analysed as consonant phonemes and are treated at the phoneme level. Some examples are as follows:

- (36) /wà/ 'you'                      /yì/ 'this'  
       /wà/ 'mine'                    /èyâ/ 'my'  
       /yà/ 'a response'            /gèyà/ 'musical instrument'

When the above two semi-vowels occur between a consonant and a vowel, they are interpreted as off glides for the following reasons:

The phonetic duration of semi-vowels in this position is not as long as that of a regular short vowel. It is thus heard phonetically as an off glide of the preceding consonant.

The semi-vowels in this position never carry a contrastive distinctive tone of their own. A study of contour tones shows that they occur on words which do not have semi-vowels. Some examples of semi-vowels as consonant offglides are as follows:

- (37) /kwé/ 'to fail'                    /tyá/ 'scatter'  
       /mékwé/ 'hill'                    /gyá/ 'to ask'  
       /èbwà/ 'hand'                    /mbyà/ 'horn'



## 4. PHONOLOGICAL PROCESSES

### 4.1 Introduction

This section discusses the major phonological processes which apply to vowels when they are in sequence within or across morpheme boundaries in Denya. The pattern of operation of these processes is mainly the interplay of syntactic relations in the application of phonological processes, and rule ordering.

### 4.2 Processes Affecting Vowels

As shown above, Denya has seven vowel phonemes /i, e, ε, a, ɔ, o, u/, with nearly all morphemes ending in vowels. At the same time, many words and morphemes also begin with vowels. The environments where vowels are in contact across morpheme boundaries (especially when these coincide with word boundaries) are therefore plentiful.

When two underlying vowels occur in juxtaposition across a morpheme boundary (V1 + V2), they are realised as a single short vowel (V1) in Denya.

Opinions vary considerably among phonologists as to what happens when two vowels occur in juxtaposition. Faraclas (1982) looked at it from the point of view of 'syllabic strength hierarchy' (i.e. the stronger segment is realized and the weaker one is elided). Donwa-Ifode (1985) and Chumbo (1985) working in Isoko and Ogori respectively, postulated that for elision to take place, assimilation and contraction must be involved. Donwa-Ifode (1985:42) went further to argue that 'those who prefer to account for such changes by elision alone, tacitly assume that it is more economical to do so than postulating assimilation'.

Snider (1985:8) postulated that assimilation and elision are two independent processes. He presents a strong case in Chumburung (Ghana) in which it is the vowel that is not deleted which undergoes assimilation. When two vowels occur in juxtaposition across a word boundary within the same breathgroup, 'the process of coalition yields a homogenous vowel which is the same length as a 'normal' vowel (Snider 1985:9). This situation is similar to that of Faraclas in which either the first vowel, the second vowel or neither vowel is affected depending on the situation. In the case of Denya, when syllabic nuclei are in contact, different phonological processes take place. Some segments are elided while others form a diphthong.

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In the data represented below, when two syllabic nuclei are in juxtaposition, the second vowel is elided. This is a very common phenomenon in Denya. Anderson (1977:5) defines elision as a ‘phonological unit with either a pause or a potential pause characterizing its juncture, and the possibility of elision characterizing its internal juncture.’ Elision never occurs between two words which are separated by a potential pause. One never pauses where elision is possible. Potential elision and potential pause are therefore mutually exclusive. Thus, elision and potential pause are the two determining characteristics of the phonological phrase.

In Denya, the phonological phrase corresponds quite closely to the grammatical phrase. Certain grammatical word classes are highly susceptible to elision. The most common are pronouns and noun class prefixes. They are most common when vowel initial words occur after a noun in an noun phrase. Elision is also common in verbs plus nouns, as well as adjectives plus nouns. This is illustrated below:

(38) /gèkà èdʒì/ → [gèkàdʒì]

hoe his  
‘his hoe’

(39) /sɔ̀ òtò/ → [sɔ̀tò]

burn bush  
‘burn the bush’

(40) /gébà éfímbò/ → [gébàfímbò]

bag mouse  
‘bag of mouse’

(41) /mànǎ èbá/ → [mànǎbá]

water fufu  
‘water of fufu’

(42) /ùpú úpéá/ → [ùpúpéá]

houses two  
‘two houses’

(43) /tá àmò/ → [támò/]

touch mug  
‘touch the mug’

(44) /tó òtò/ → [tótò]

shoot huts  
‘shoot the huts’

(45) /néjéné éfímbò/ → [néjénéfímbò]

teeth mouse  
‘teeth of mouse’



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- (53) /m̀m̀i àŋwâ/ → [m̀m̀yàŋwâ]  
palm nut cat  
'palm nut of the cat'
- (54) /tú àkpàrà/ → [twákpàrà]  
meet prostitute  
'meet the prostitute'
- (55) /ní àgbògbò/ → [nyágbògbò]  
fold towel  
'fold the towel'
- (56) /gèdzùlí ètè/ → [gèdzùlyétè]  
air duiker  
'air of the duiker'
- (57) /èlù émâ/ → [èlwémâ]  
onion one  
'one onion'

### 4.5 Syllabic Nasal Deletion

In Denya, when a syllabic nasal and a nasal consonant are juxtaposed across morpheme or word boundaries, the syllabic nasal is deleted. The syllabic nasal is usually a nominal prefix. This is seen in the following examples:

- (58) /ń'dón m̀p̀d̀/                      [ń'dón.p̀d̀]                      'jigger of cow'  
          /ńk̀d̀m̀ m̀p̀d̀/                      [ńk̀d̀m̀.p̀d̀]                      'vegetable of cow'

This process can be formalised as below:

- (59)
- $$\left[ \begin{array}{c} N \\ +\text{syll} \end{array} \right] \rightarrow \emptyset / \left[ \begin{array}{c} N\# \_C \\ -\text{syll} \_ \end{array} \right]$$

The above rule says that a syllabic nasal is deleted when it follows a nasal consonant.

### 4.6 Desyllabification

When a vowel and a syllabic nasal are in juxtaposition across word or morpheme boundaries, the syllabic nasal is desyllabified, and the nasal consonant associates to the first word or morpheme. This is illustrated in:

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- (60) /ùnó m̀bálè/      [ùnóm.ˈbálè]      ‘stick of wall’  
          /gèpú m̀bè/      [gépúm.bè]      ‘first house’  
          /̀̀kám m̀fwà/      [̀̀kám.fwà]      ‘chief’s money’

This rule can be formalised as below:

- (61) 
$$\left[ \begin{array}{c} \text{N} \\ +\text{syll} \end{array} \right] \rightarrow \left[ \begin{array}{c} \text{ } \\ -\text{syll} \end{array} \right] / \text{V} \_ \_$$

The above rule says that a syllabic nasal becomes a nasal consonant when it follows a vowel.

### 4.7 Consonant Weakening

The process of consonant weakening takes place when oral plosives occur at word boundaries, be it word initially or finally. When this occurs, the voiceless plosives become the voiced fricative /r/. Here are some examples below:

- |      | full form          | elided form       | gloss             |
|------|--------------------|-------------------|-------------------|
| (62) | /̀̀gwèd áyímb̀/    | [̀̀gwèrèyímb̀]    | ‘that book’       |
|      | /b̀ ̀̀gàd éb́ímb̀/ | [b̀ ̀̀gàràb́ímb̀] | ‘these scorpions’ |
|      | /gèpú gèm̀/        | [gèpúyè̀]         | ‘one house’       |
|      | /wá b̀è/           | [wáβè]            | ‘kill the louse’  |
|      | /gèń k̀/           | [gèńỳ]           | ‘small stick’     |

### 4.8 Reduplication

The process of reduplication consists of copying the base morpheme. In Denya, the process is unproductive except in two isolated cases where the word is fully copied to show intensification as shown below.:

- (63) pèrè ‘slow’      pèrè + pèrè = pèrè-pèrè      ‘very slowly’  
          b̀gè ‘tasty’      b̀gè + b̀gè = b̀gè-b̀gè      ‘very tasty’

In addition, there are non-productive fixed forms where the total word is always reduplicated. The root is never used in isolation however.

## DENYA SEGMENTAL PHONOLOGY

- (64) byà + byà = byà-byà 'hairy'  
tʃá + tʃá = tʃa-tʃá 'different'  
gédzǐ + gédzǐ = gédzǐ-gédzǐ 'only'  
kpára + kpàrà = kpára-kpàrà 'ceiling'

There is a case where only the root is reduplicated. The independent root has no meaning of their own. This is in shown (63):

- (65) èŋmènè + èŋmènè = èŋmèn-èŋmènè 'rumour'

Vowel elision, glide formation, diphthongisation, desyllabification, consonant weakening and reduplication are therefore the phonological processes that occur in Denya.

## 5. REFERENCES

- Abangma, S. N .1981. The use of modes in Denya discourse. Doctorat de 3e cycle dissertation. University of Yaounde.
- Anderson, Stephen C. 1977. Phonology of Ngyemboon-Bamileke. S.I.L. Yaounde.
- Chumbo, Beban Sammy. 1985. Contraction and Tone Polarisation in Ogori. JWAL 12. 1: 89-103.
- Crabb, D.W. 1965. Ekoid Bantu languages of Ogoja. West African languages monograph 4. Cambridge University Press, London.
- Donwa-Ifode, Shirley. 1985. Formation, Elision, Assimilation, and Contraction. A Reassessment- Evidence from Isoko. JWAL. 15. 2: 41-55.
- Faraclas, Nicholas. 1982. Elision and other morpheme boundary phenomena in Western Obolo. JWAL X11, 2
- Guthrie, Malcolm. 1953. The Bantu Languages of Western Equatorial Africa. London: Oxford University Press.
- 1967. The classification of Bantu languages. Dawson of Pall Mall, London.
- Halle, M and Vergnaud, J.R. 1980. Three dimensional phonology. Journal of linguistic research. 1
- Harris, J W. 1983. Syllable structure and stress in Spanish. MIT press, Cambridge: Mass.
- Jacquot, A and Richardson. I 1956. Report of the Western Team in Darylforde, (ed.). Linguistic Survey of the Northern Bantu Borderland. Vol. 1. London: Oxford University Press for the International African Institute.

## DENYA SEGMENTAL PHONOLOGY

- Johnston, H. 1919. A comparative study of the Bantu and the Semi-Bantu languages. Vol. 1. The Clarendon Press, Oxford.
- Mansfield, A. 1908. *Urwald-Dokumente* Dietrich Riemer (Ernest Vohsen), Berlin.
- Mbuagbaw, Tanyi Eyong. 1994. Denya Orthography. 8pp. Cameroon Bible Translation Association, (CABTA), Cameroon.
- 1995. Denya Tone Orthography. Cameroon Bible Translation Association, (CABTA), Cameroon.
- 1995. Denya Alphabet Chart. Cameroon Bible Translation Association, (CABTA), Cameroon.
- forthcoming. Denya Lexicon. Cameroon Association. for Bible Translation and literacy (CABTAL), Cameroon.
- Snider, Keith. 1985. Vowel coalescence across word boundaries in Chumburung. *JWAL*. XV.1 3-13
- \_\_\_\_\_ 1990. Studies in Guang phonology. Doctoral Dissertation. University of Leiden.
- Steriade, D. 1982. Greek prosodies and the nature of syllabification. Unpublished doctoral dissertation. MIT, Cambridge, Mass.
- Talbot, P.A. 1926. *The Peoples of Southern Nigeria*. Vol. 4, Linguistics and Statistics. Oxford University Press. Oxford.
- Tyhurst, James. 1983. Linguistic survey of the Nyang languages. S.I.L, Cameroon..
- Tyhurst, I and Janis L Tyhurst. 1983. Sociolinguistic Survey of Kenyang and Denya. S.I.L, Cameroon.
- Watters, J.R. 1983. Bantoid Overview. In Bendor Samuel, *The Niger-Congo languages*. University Press of America. 402-429.
- \_\_\_\_\_ and Jacqueline Leroy. 1989. Southern Bantoid. In Bendor-Samuel. *The Niger-Congo languages*. University Press of America. pp 431-449.
- Welmers, William. 1973. *African language structures*. Berkeley. University of California Press.
- Westermann, Dietrich. 1930. A study of the Ewe languages. (Translated by A.L. Bickford-Smith). Oxford: Oxford University Press.
- Westermann, Dietrich and M.A. Bryan. 1952. Languages of Africa. Part II of *Hand Book of African Languages*. London: Oxford University Press for the International African Institute.
- Williamson, Kay. 1971. The Benue Congo Languages and Ijo. In *Current Trends in Linguistics*. Vol. 7. Linguistics in Sub-Saharan Africa. (ed.) Thomas Sebeok et al. pp 244-306. Mouton Hague.

## 6. APPENDIX

### Wordlist

Below, is a 200 wordlist which is collected from the Denya lexicon. The wordlist is represented phonemically.

The first column shows the data. This is followed by a column representing the class of the noun. The prefix is represented by a hyphen. The gloss comes at the end. The lexicon is represented as seen below.

Word	Class	Gloss
à-dò	2	'flu'
à-gbá	2	'veranda'
à-gbògbò	2	'towel'
à-kpánkpá	2	'pan'
à-kpàrà	2	'prostitution'
à-mô	2	'glass'
à-mwáwè	2	'smoke'
à-ɲmè	2	'age'
àwyà		'to have'
bámé		'to guard'
bé		'to dance'
bélé		'to preserve'
béné		'to praise'



## DENYA SEGMENTAL PHONOLOGY

bómé		‘brown’
tʃwá		‘to chew’
tʃwé		‘to peck’
tʃyá		‘to fry’
dè-bà	4	‘dirt’
dè-fí	4	‘pus’
dè-nò	4	‘bicycle’
dò		‘to hit’
dò nèkà		‘to slap’
è-gbà	3	‘armpit’
è-kàmè	3	‘story’
è-bě	3	‘river’
è-bá	3	‘fufu’
è-bé	3	‘law’
è-fě	3	‘mirror’
è-là	3	‘cap’
è-lù	3	‘onion’
è-má	3	‘glue’
è-ndò	3	‘bat’
è-nò	3	‘centipede’
è-ɲwòné	3	‘bird’
féré		‘to alleviate’
fê		‘to lock’

## DENYA SEGMENTAL PHONOLOGY

féré		‘to think’
fwí		‘to drive’
fwíní		‘to kindle’
fwólé		‘to scald’
fwóré		‘to feel’
fyé		‘to put’
fó		‘to seize’
fómé		‘to blow’
gáré		‘to tell’
gè-bà	7	‘area’
gé-bà	7	‘bag’
gè-bá	7	‘space’
gè-bwè	7	‘waist’
gè-tfù	7	‘word’
gè-fá	7	‘scale’
gè-féré	7	‘temper’
gè-fèrè	7	‘joint’
gè-fwà	7	‘royal’
gè-fwìnì	7	‘fever’
gè-gélè	7	‘red’
gè-gǒ	7	‘bone’
gè-jù	7	‘rumour’
gè-jùlí	7	‘air’

## DENYA SEGMENTAL PHONOLOGY

gè-kwìyà	7	‘cough’
gè-ká	7	‘leg’
gè-kpò	7	‘poverty’
gè-lwó	7	‘throne’
gè-mè	7	‘neck’
gè-mfě	7	‘lock’
gè-mpé	7	‘comb’
gè-ndé	7	‘hat’
gè-nǒ	7	‘stick’
gè-ṣàṣà	7	‘lion’
gè-ṣè	7	‘yam’
gè-ṣkà	7	‘den’
gè-pà	7	‘wound’
gè-pò	7	‘habit’
gè-pú	7	‘house’
gè-pwìṣì	7	‘dove’
gè-pyě	7	‘hole’
gè-sá	7	‘basket’
gè-bé	7	‘time’
gbáré		‘to hold’
gbé		‘to satisfy’
gbé		‘to add’
gbè		‘to pour’

## DENYA SEGMENTAL PHONOLOGY

hòvyà	5	‘leaves’
hòṅòńó	1	‘hollow’
jà		‘to pull’
jì		‘to stir’
jò		‘to weave’
jó		‘to walk’
jò		‘slow’
jwà		‘to laugh’
jwólé		‘to stay’
jyà		‘to select’
kà		‘to try’
ká		‘to know’
kè		‘to sink’
kè		‘to walk’
kélé		‘to look for’
kó		‘to pass’
kò		‘to beg’
kú		‘to call’
kúlé		‘to rise’
kwé		‘to fail’
kwéré		‘to cover’
kwé		‘to arrange’
kwè		‘to create’

## DENYA SEGMENTAL PHONOLOGY

kwó		‘to climb’
kwò		‘to slaughter’
kwólé		‘to follow’
kwóré		‘to change’
kpè		‘to enter’
kpá		‘to carry’
kpéá		‘to urge’
kpó		‘to urge’
láré		‘to lap’
léá		‘to allow’
léré		‘to train’
lì		‘to cry’
lò		‘to start’
lyá		‘to leave’
lyéné		‘to fly’
mà-gílí	6	‘charcoal’
mà-nă	6a	‘water’
mà-nǒ	6a	‘blood’
mă-myè	6	‘dog’
mà-twò	6a	‘ashes’
mà-tyè	6a	‘saliva’
mà-wě	6a	‘oil’
m-bì	1	‘thread’

## DENYA SEGMENTAL PHONOLOGY

mè-gà	5	‘salt’
mè-gò	5	‘palm oil tree’
mè-kì	5	‘gorrilla
mè-kò	5	‘sound’
mè-kó	5	‘wild boa’
mè-kwà	5	‘box’
mè-kwàlé	5	‘box’
mè-kpò	5	‘head’
mè-lì	5	‘vein’
mè-ndè	1	‘man’
mè-ndê	1	‘woman’
mè-nkě	1	‘stranger’
mè-nò	1	‘stranger’
mè-fù	9	‘elephant’
mè-ja	9	‘meat’
mè-nòmè	5	‘grave’
mè-fǔ	9	‘fish’
mè-tì	5	‘path’
mè-wè	9	‘tortoise’
mè-wè	5	‘fire’
m-fó	9	‘buffalo’
m-fwà	1	‘chief’
m-mǎ	1	‘wine’

## DENYA SEGMENTAL PHONOLOGY

m̀- <i>m</i> è	1	‘urine’
m- <i>ũ</i>	1	‘person’
m̀- <i>my</i> ǒ	9	‘porcupine’
m̀- <i>my</i> ḍ	9	‘snake’
ḡ- <i>ḡ</i> mò	1	‘mother’
m̀- <i>p</i> àmpàlè	9	‘grasshopper’
m̀- <i>p</i> ì	1	‘nail’
m̀- <i>p</i> ḍ	9	‘cow’
m̀- <i>p</i> ù	1	‘furrow’
m̀- <i>py</i> ánè	1	‘grandchild’
m̀- <i>p</i> úmpú	1	‘measles’
m̀		‘to push’
málé		‘to aim’
mé- <i>kw</i> ê	5	‘hill’
nà		‘to buy’
néné		‘to open’
né- <i>n</i> ó	5	‘knee’
nó		‘to bite’
ḡ- <i>t</i> ḡì	5	‘corn’
ḡ- <i>t</i> ḡù	5	‘thatching grass’
ḡ- <i>d</i> ě	1	‘clothe’
ḡ- <i>d</i> èrè	5	‘boundary’
nè- <i>k</i> ò	5	‘parcel’

## DENYA SEGMENTAL PHONOLOGY

nè-gbò	5	‘death’
nè-bũ	5	‘sky’
ṛ-gwà	1	‘drum’
ṛ-gád	9	‘scorpion’
ṛ-gà	1	‘knife’
ṛ-gò	1	‘costume’
ṛ-kòm	9	‘green grasshopper’
ṛ-ṛì	5	‘stream’
ṛ-tè	1	‘father’
ṛá		‘to stretch’
ṛú		‘to drink’
ṛwà		‘to wet’
ṛé		‘to eat’
ṛmè		‘to shoot’
ṛà		‘to dry’
ṛè		‘to sow’
ṛwé		‘to fold’
ṛwò		‘to borrow’
ṛá		‘to draw’
ṛè		‘to receive’
ṛó		‘to cut’
ṛyà		‘to deny’



## DENYA SEGMENTAL PHONOLOGY

ʃú		‘to refund’
tà		‘to touch’
tè		‘to remember’
tì		‘to cancel’
tyé		‘to sting’
támé		‘to thank’
ù-bèá	8	‘yaws’
ù-bí	8	‘private’
ù-fà	8	‘twin’
ù-kwó	8	‘bed’
ù-là	8	‘thread’
wá		‘to kill’
wáwá		‘fast’
wò		‘to vomit’

## Appendix B

### Tone in Associative Construction

Below is a table showing the various nouns and the behaviour of tones when they occur in associative construction :

màǎ gèpú	màǎgèpú	‘water of house’
màǎ ìp̀	màǎámp̀	‘water of cow’
màǎ mèkp̀	màǎámèkp̀	‘water of head’
màǎ nèbá	màǎánèbá	‘water of marriage’
nèbá gébwí	nèbánégébwí	‘marriage of forest’
nèbá né gènǎ	nèbánégènǎ	‘marriage of stick’
nèbá né gèpú	nèbánégèpú	‘marriage of house’
nèbá né mǎmyè	nèbánémǎmyè	‘marriage of dog’
mèkp̀ ´ ìp̀	mèkp̀ómp̀	‘head of cow’
mèkp̀ ´ mǎmyè	mèkp̀ómǎmyè	‘head of dog’
mèkp̀ ´ gè̀nà̀nà	mèkp̀ógè̀nà̀nà	‘head of lion’
mèkp̀ ´ mé̀ndz̀ó	mèkp̀ómǎmyè	‘head of thief’
èlǎ ´ ìp̀	èlǎámp̀	‘cap of cow’
èlǎ ´ mǎmyè	èlǎámǎmyè	‘cap of dog’
èlǎ ´ gè̀nà̀nà	èlǎgè̀nà̀nà	‘cap of lion’
èlǎ ´ mé̀dz̀ó	èlǎámé̀dz̀ó	‘cap of thief’
gèpú gé ìp̀	gèpúgémp̀	‘house of cow’
gèpú + mǎmyè	gèpúgémǎmyè	‘house of dog’
gèpú gé gè̀nà̀nà	gèpúgégè̀nà̀nà	‘house of lion’
gèpú gé mé̀ndz̀ó	gèpúgémé̀ndz̀ó	‘house of thief’
èbẁ ´ ìp̀	èbẁómp̀	‘hand of cow’
èbẁ ´ mǎmyè	èbẁómǎmyè	‘hand of dog’
èbẁ ´ gè̀nà̀nà	èbẁógè̀nà̀nà	‘hand of lion’
èbẁ ´ mé̀ndz̀ó	èbẁómé̀dz̀ó	‘hand of thief’

## DENYA SEGMENTAL PHONOLOGY

gébà gé ìnpò	gébàgémpò	‘bag of cow’
gébà gé mǎmyè	gébagémpǎmyè	‘bag of dog’
gébà gé gèṅàṅà	gébàgégèṅàṅà	‘bag of lion’
gébà gé méṅdʒó	gébàgéméṅdʒó	‘bag of thief’
èbě ìnpò	èběmpò	‘river of cow’
èbě mǎmyè	èběmpǎmyè	‘river of dog’
èbě gèṅàṅà	èběgèṅàṅà	‘river of lion’
èbě méṅdʒó	èběméṅdʒó	‘river of thief’
èbá ìnpò	èbámpò	‘fufu of cow’
èbá mǎmyè	èbámpǎmyè	‘fufu of dog’
èbá gèṅàṅà	èbágèṅàṅà	‘fufu of lion’
èbá méṅdʒó	èbáméṅdʒó	‘fufu of thief’
gèṅṅ gé ìnpò	gèṅṅgémpò	‘stick of cow’
gèṅṅ gé mǎmyè	gèṅṅgémpǎmyè	‘stick of dog’
gèṅṅ gé gèṅàṅà	gèṅṅgégèṅàṅà	‘stick of lion’
gèṅṅ gé méṅdʒó	gèṅṅgéméṅdʒó	‘stick of thief’
mèsè ìnpò	mèsèmpò	‘monkey of cow’
mèsè mǎmyè	mèsèmpǎmyè	‘monkey of dog’
mèsè gèṅàṅà	mèsègèṅàṅà	‘monkey of lion’
mèsè méṅdʒó	mèsèméṅdʒó	‘monkey of thief’
ṅtè ìnpò	ṅtèmpò	‘father of cow’
ṅtè mǎmyè	ṅtèmpǎmyè	‘father of dog’
ṅtè gèṅàṅà	ṅtègèṅàṅà	‘father of lion’
ṅtè méṅdʒó	ṅtèméṅdʒó	‘father of thief’
èbé ìnpò	èbémpò	‘law of cow’
èbé mǎmyè	èbémpǎmyè	‘law of dog’
èbé gèṅàṅà	èbégèṅàṅà	‘law of lion’
èbé méṅdʒó	èbéméṅdʒó	‘law of thief’
mèkò éfímbò	mèkòfímbò	‘sound of mouse’
mèkò ètà	mèkòtà	‘sound of jaw’

## DENYA SEGMENTAL PHONOLOGY

mèkò ùkwó	mèkòkwó	‘sound of bridge’
mèkò èbá	mèkòbá	‘sound of fufu’

## Appendix C

### Denya Verb Tone Paradigms

kè	‘walk’
mǎŋ kè	‘to walk’
ìj kè nè	‘I am walking’
ìj kè nè dzě-ndégébé	‘I usually walk’
ìj kè nè nê	‘I will walk’
ǐj kè	‘I should walk’
ìj kàgè kè	‘I might walk’
ìj kè	‘I walked’
ìj kè mé	‘I have walked’
ò kè nè	‘you (sg) are walking’
ò kè nè dzě-ndégébé	‘you (sg) usually walk’
ò kè nè nê	‘you (sg) will walk’
ó kè	‘you (sg) should walk’
ǒ kè	‘you (sg) walked’
ó kè mé	‘you (sg) have walked’
à kè nè	‘he is walking’
à kè nè dzě ndégébé	‘he usually walks’
à kè nè nê	‘he will walk’
á kè	‘he should walk’
à kàgè kè	‘he might walk’
à kè	‘he walked’
à kè mé	‘he has walked’

## DENYA SEGMENTAL PHONOLOGY

èsé dè kè nè	‘we are walking’
dè kè nè dzě ñdégébé	‘we usually walk’
dè kè nè ñê	‘we will walk’
dè kê	‘we should walk’
dè kàgè kê	‘we might walk’
dè kè	‘we walked’
dè kè mé	‘we have walked’
èñú dè kè nè	‘you (pl) are walking’
dè kè nè dzě ñdégébé	‘you (pl) usually walk’
dè kè nè ñê	‘you (pl) will walk’
dé kê	‘you (pl) should walk’
dè kàgè kê	‘you (pl) might walk’
dě kè	‘you (pl) walked’
dě kè mé	‘you have walked’
á kè nè	‘they are walking’
á kè nè dzě-ñdégébé	‘they usually walk’
á kè nè ñê	‘they will walk’
á kê	‘they should walked’
á kágè kê	‘they might walk’
á kè	‘they walked’
á kè mé	‘they have walked’
ñé	‘eat’
măñ ‘ñé	‘to eat’
à ñè	‘he is eating’
à ñê dzě-ñdégébé	‘he usually eats’

## DENYA SEGMENTAL PHONOLOGY

à jê jê	‘he will eat’
á jé	‘he should eat’
à kàgè jé	‘he might eat’
à jé mé	‘he ate’
á jê	‘they are eating’
á jê dzě-ndégébé	‘they usually eat’
á jê jê	‘they will eat’
á jé	‘they should eat’
á kágè jé	‘they might eat’
á ‘jé	‘they ate’
á jé mé	‘they have eaten’
kélé	‘want’
măŋ kélé	‘to want’
à kèlè gè	‘he is wanting’
à kèlè gè dzě-ndégébé	‘he usually wants’
à kèlè gè jê	‘he will want’
á kélé	‘he should want’
à kàgè kélé	‘he might want’
à kélé	‘he wanted’
à kélé mé	‘he has wanted’
á kèlè gè	‘they are wanting’
á kèlè gè dzě-ndégébé	‘they usually want’
á kèlè gè jê	‘they will want’
á kélé	‘They should want’
á kágè kélé	‘They might want’

## DENYA SEGMENTAL PHONOLOGY

á kèlé	‘they wanted’
á kèlé mé	‘they have wanted’
fê	‘lock’
măm fê	‘to lock’
à fê nè	‘he is locking’
à fê nè dʒě-ndégébé	‘he usually locks’
à fê nè jê	‘he will lock’
á fê	‘he should lock’
à kàgè fê	‘he might lock’
à fê	‘he locked’
à fê mé	‘he has locked’
á fê nè	‘they are locking’
á fê nè dʒě-ndégébé	‘they usually lock’
á fé nè jê	‘they will lock’
á fê	‘they should lock’
á kágè fê	‘they might lock’
á fê	‘they locked’
á fê mé	‘they have locked’
kú	‘call’
măŋ ‘kú	‘to call’
à kù	‘he is calling’
à kù dʒě-ndégébé	‘he usually calls’
à kù jê	‘he will call’
á kú	‘he should call’
à kàgè kú	‘he might call’
à kù mé	‘he has called’



## DENYA SEGMENTAL PHONOLOGY

á kú	‘they are calling’
á kú dzě-ndégébé	‘they usually call’
á kú ɲê	‘they will call’
á kú	‘they should call’
á kágè kú	‘they might call’
á kú mé	‘they have called’

tʃyě	‘give!’
mǎɲ tʃyě	‘to give’
à tʃyè gè	‘he is giving’
à tʃyè gè dzě-ndégébé	‘he usually gives’
à tʃyè gè ɲê	‘he will give’
á tʃyé	‘he should give’
à kágè tʃyé	‘he might give’
à tʃyè	‘he gave’
à tʃyè mé	‘he has given’

á tʃyé gè	‘they are giving’
á tʃyé gè dzě-ndégébé	‘they usually give’
á tʃyé gè ɲê	‘they will give’
á tʃyé	‘they should give’
á kágè tʃyé	‘they might give’
á tʃyè	‘they gave’
á tʃyè mé	‘they have given’

## DENYA SEGMENTAL PHONOLOGY

### NEGATION

Negation in Denya is marked by the morpheme /fʃ/ or /wʃ/ at the end of the verb phrase. The various tenses, aspects auxiliary mood are displayed below with their tone melodies. Tone is an aspect of the morphology of the language.

#### Perfective Aspect

ǎ fě fɔ wɔ	‘he has not locked’
ǎ kě fɔ wɔ	‘he has not walked’
ǎ ɲě fɔ wɔ	‘he has not eaten’
ǎ kũ fɔ wɔ	‘he has not called’
ǎ gyĩ fɔ wɔ	‘he has not asked’
ǎ tyě fɔ wɔ	‘he has not cooked’
ǎ kèlè fɔ wɔ	‘he has not wanted’
ǎ kùlè fɔ wɔ	‘he has not risen’

á fě fɔ wɔ	‘they have not locked’
á kě fɔ wɔ	‘they have not walked’
á ɲě fɔ wɔ	‘they have not eaten’
á kũ fɔ wɔ	‘they have not called’
á gyĩ fɔ wɔ	‘they have not asked’
á tyě fɔ wɔ	‘they have not cooked’
á kèlè fɔ wɔ	‘they have not wanted’
á kùlè fɔ wɔ	‘they have not risen’

## DENYA SEGMENTAL PHONOLOGY

### Imperfective Aspect

ǎ 'fê nê fɔ	'he is not locking'
ǎ 'ké nê fɔ	'he is not walking'
ǎ ɲê fɔ	'he is not eating'
ǎ kû fɔ	'he is not rising'
ǎ 'gyí gê fɔ	'he is not calling'
ǎ 'tyé gê fɔ	'he is not asking'
ǎ 'kélé gê fɔ	'he is not cooking'
ǎ 'kúlé gê fɔ	'he is not wanting'

á 'fê nê fɔ	'they are not locking'
á 'ké nê fɔ	'they are not walking'
á ɲê fɔ	'they are not eating'
á kû fɔ	'they are not rising'
á 'gyí gê fɔ	'they are not calling'
á 'tyé gê fɔ	'they are not asking'
á 'kélé gê fɔ	'they are not cooking'
á 'kúlé gê fɔ	'they are not wanting'

### Perfect Tense

ǎ fê mê fɔ wɔ	'he had not locked'
ǎ kè mê fɔ	'he had not walked'
ǎ ɲè mê fɔ wɔ	'he had not eaten'
ǎ kù mê fɔ wɔ	'he had not risen'
ǎ gyì mê fɔ wɔ	'he had not called'
ǎ tyè mê fɔ wɔ	'he had not asked'
ǎ kèlé mê fɔ wɔ	'he had not cooked'
ǎ kùlé mê fɔ wɔ	'he had not wanted'

## DENYA SEGMENTAL PHONOLOGY

á fê mê f́ ẃ	‘they had not locked’
á kè mê f́ ẃ	‘they had not walked’
á ɲè mê f́ ẃ	‘they had not eaten’
á kù mê f́ ẃ	‘they had not called’
á gyì mê f́ ẃ	‘they had not asked’
á tyè mê f́ ẃ	‘they had not cooked’
á kèlé mê f́ ẃ	‘they had not wanted’
á kùlé mê f́ ẃ	‘they had not risen’

### Future Tense

ǎ ‘fè né f́ ɲê f́	‘he will not lock’
ǎ ‘ké né ɲê f́	‘he will not walk’
ǎ ‘ɲé ɲê f́	‘he will not eat’
ǎ ‘kú ɲê f́	‘he will not call’
ǎ ‘gyí gé ɲê f́	‘he will not ask’
ǎ ‘tyé gé ɲê f́	‘he will not cook’
ǎ ‘kèlé gé ɲê f́	‘he will not want’
ǎ ‘kùlé gé ɲê f́	‘he will not rise’

á ‘fè né ɲê f́	‘they will not lock’
á ‘ké né ɲê f́	‘they will not walk’
á ɲê ɲê f́	‘they will not eat’
á kù ɲê f́	‘they will not call’
á ‘gyí gé ɲê f́	‘they will not ask’
á ‘tyé gé ɲê f́	‘they will not cook’
á ‘kèlé gé ɲê f́	‘they will not want’
á ‘kùlé gé ɲê f́	‘they will not rise’

## DENYA SEGMENTAL PHONOLOGY

### Habitual mood

ǎ 'fɛ̃ nê fɔ̃ dzɛ̃-ndégébé	'he does not usually lock'
ǎ 'ké̃ nê fɔ̃ dzɛ̃-ndégébé	'he does not usually walk'
ǎ ɲễ fɔ̃ dzɛ̃-ndégébé	'he does not usually eat'
ǎ kû̃ fɔ̃ dzɛ̃-ndégébé	'he does not usually call'
ǎ 'gyí̃ gễ fɔ̃ dzɛ̃-ndégébé	'he does not usually ask'
ǎ 'tyé̃ gễ fɔ̃ dzɛ̃-ndégébé	'he does not usually cook'
ǎ 'kélé̃ gễ fɔ̃ dzɛ̃-ndégébé	'he does not usually want'
ǎ 'kúlé̃ gễ fɔ̃ dzɛ̃-ndégébé	'he does not usually rise'

á 'fɛ̃ nê fɔ̃ dzɛ̃-ndégébé	'they do not usually lock'
á 'ké̃ nê fɔ̃ dzɛ̃-ndégébé	'they do not usually walk'
á ɲễ fɔ̃ dzɛ̃-ndégébé	'they do not usually eat'
á kû̃ fɔ̃ dzɛ̃-ndégébé	'they do not usually call'
á 'gyí̃ gễ fɔ̃ dzɛ̃-ndégébé	'they do not usually ask'
á 'tyé̃ gễ fɔ̃ dzɛ̃-ndégébé	'they do not usually cook'
á 'kélé̃ gễ fɔ̃ dzɛ̃-ndégébé	'they do not usually want'
á 'kúlé̃ gễ fɔ̃ dzɛ̃-ndégébé	'they do not usually rise'

### Uncertainty

ndòfɔ̃ ǎ 'fɛ̃ nê fɔ̃	'he might not lock'
ndòfɔ̃ ǎ 'ké̃ nê fɔ̃	'he might not walk'
ndòfɔ̃ ǎ ɲễ fɔ̃	'he might not eat'
ndòfɔ̃ ǎ kû̃ fɔ̃	'he might not call'
ndòfɔ̃ ǎ 'gyí̃ gễ fɔ̃	'he might not ask'
ndòfɔ̃ ǎ 'tyé̃ gễ fɔ̃	'he might not cook'
ndòfɔ̃ ǎ 'kélé̃ gễ fɔ̃	'he might not want'
ndòfɔ̃ ǎ 'kúlé̃ gễ fɔ̃	'he might not rise'



## DENYA SEGMENTAL PHONOLOGY

Below, the verb system is presented with nouns in the present, past and future tenses. A cursory study shows that they derive their tone from the morphology.

*ŋméré* 'to press'

present

à ŋmèrè gè mèkwà	'he is pressing a box'
ǎ 'ŋméré gè fí mèkwà	'he is not pressing a box'
ń'nó à ŋmèrè gè mèkwǎ'á	'is he pressing a box?'
ń'nó ǎ ŋméré gè fí mèkwà'á	'is he not pressing a box?'
ébégé ń'nó a ŋmèrè gè mèkwà	'if he is pressing a box'
ébégé ń'nó ǎ ŋméré gè fí mèkwà	'if he not pressing a box'

past

à ŋmèré mèkwà	'he has pressed a box'
ǎ ŋmèré 'fí mèkwà wó	'he has not pressed a box'
ń'nó à ŋmèré mèkwǎ'á	'has he pressed a box?'
ń'nó ǎ ŋmèré 'fí mèkwà wó'ó	'has he not pressed a box?'
ébégé ń'nó à ŋmèré mèkwà	'if he has pressed a box'
ébégé ń'nó ǎ ŋmèré fí mèkwà	'if he has not pressed a box'

## DENYA SEGMENTAL PHONOLOGY

### future

à ηmèrè gè ηê mèkwà	‘he will press a box’
ǎ ‘ηméré gé ηê fí mèkwà	‘he will not press a box’
ń‘nó à ηmèrè gè ηê mèkwǎ‘á	‘will he press a box?’
ń‘nó ǎ ‘ηméré gé ηê fí mèkwǎ‘á	‘will he not press a box?’
ébbègé ń‘nó à ηmèrè gè ηê mèkwà	‘if he will press a box’
ébbègé ń‘nó ǎ ‘ηméré gé ηê fí mèkwà	‘if he will not press a box’

kwó            ‘to ascend’

### present

à kwò mè mèkwê	‘he is ascending a hill’
ǎ ‘kwó mè fí mékwê	‘he is not ascending a hill’
ń‘nó à kwò mè mékwé‘é	‘is he ascending a hill?’
ń‘nó ǎ ‘kwó mè fí mékwê	‘if he is not ascending a hill’
ébbègé ń‘nó à kwò mè mékwê	‘if he is ascending a hill’
ébbègé ń‘nó ǎ ‘kwó mè fí mékwê	‘if he is not ascending a hill’

### past

à kwó mé mékwê	‘he has ascended a hill’
ǎ kwǒ ‘fí mékwé wó	‘he has not ascended a hill’
ń‘nó à kwó mé mékwé‘é	‘has he ascended a hill?’
ń‘nó ǎ kwǒ ‘fí mékwé wó‘ó	‘has he not ascended a hill?’
ébbègé ń‘nó à kwó mé mékwê	‘if he has ascended a hill.’
ébbègé ń‘nó ǎ kwǒ ‘fí mékwé wó	‘if he has not ascended a hill.’



## DENYA SEGMENTAL PHONOLOGY

### future

à kwò mè nê mékwê	‘he will ascend a hill.’
ǎ ‘kwó mé nê fò mékwê	‘he will not ascend a hill.’
ń‘nó à kwò mè nê mékwé’é	‘will he ascend a hill?’
ń‘nó ǎ ‘kwó mé nê fò mékwé’é	‘will he not ascend a hill?’
ébbègé ń‘nó à kwò mè nê mékwê	‘if he will ascend a hill.’
ébbègé ń‘nó ǎ ‘kwó mé nê fò mékwê	‘if he will not ascend a hill.’

### tʃyě

‘to give’

### present

à tʃyè gè gènǎ	‘he is giving a stick’
ǎ ‘tʃyé gé fò gènǎ	‘he is not giving a stick.’
à tʃyè ge gènǎ’ó	‘is he giving a stick’
ébbègé à tʃyè gè gènǎ	‘if he is giving a stick.’
ébbègé ǎ ‘tʃyé gé ‘fò gènǎ	‘if he is not giving a stick.’

### past

à tʃyè mé gènǎ	‘he has given a stick.’
ǎ tʃyě ‘fò gènǎ wó	‘he has not given a stick.’
à tʃyě gènǎ’ó	‘has he given a stick.’
ǎ tʃyě ‘fò gènǎ wó’ó	‘has he not given a stick.’
ébbègé à tʃyě gènǎ	‘if he has given a stick.’
ébbègé ń‘nó ǎ ‘tʃyé fò gènǎ wó	‘if he has not given a stick.’

### future

à tʃyè gè nê gènǎ	‘he will give a stick.’
ǎ tʃyé gé nê fò gènǎ	‘he will not give a stick.’
à tʃyè gè nê gènǎ’ó	‘will he give a stick?’

## DENYA SEGMENTAL PHONOLOGY

ń'no ǎ 'tʃyé gé ɲê fɔ̀ gènǎ'ɔ̀	'will he not give a stick?'
ébègé ń'no à tʃyè gè ɲê gènǎ	'if he will give a stick.'
ébègé ń'no ǎ tʃyé gé ɲê fɔ̀ gènɔ̀	'if he not give a stick.'

kpè 'to enter'

present

à kpè nè ìmmù gèpú	'he is entering a house'
ǎ 'kpé ɲê fɔ̀ ìmmù gèpú	'he is not entering a house.'
ń'no à kpè nè ìmmù gèpú'ú	'is he entering a house.'
ń'no ǎ 'kpé ɲê fɔ̀ ìmmù gèpú'ú	'is he not entering a house?'
ébègé ń'no à kpè nè ìmmù gèpú	'if he is entering a house.'
ébègé ń'no ǎ 'kpé ɲê fɔ̀ ìmmù gèpú'ú	'if he is not entering a house.'

past

à kpè mé ìmmù gèpú	'he has entered a house'
ǎ 'kpé fɔ̀ ìmmù gèpú wɔ̀	'he has not entered a house.'
ń'no à kpè mé ìmmù gèpú'ú	'has he entered the house?'
ń'no ǎ kpě 'fɔ̀ ìmmù gèpú wɔ̀'ɔ̀	'has he not entered a house'
ébègé ń'no à kpè mé ìmmù gèpú	'if he has entered a house.'
ébègé ń'no ǎ 'kpé fɔ̀ ìmmù gèpú wɔ̀	'if he has not entered a house.'

future

à kpè nè ɲê ìmmù gèpú	'he will enter a house'
ǎ 'kpé ɲé ɲê fɔ̀ ìmmù gèpú	'he will not enter a house.'
ń'no à kpè nè ɲê ìmmù gèpú'ú	'will he enter a house?'
ń'no ǎ 'kpé ɲé ɲê fɔ̀ ìmmù gèpú'ú	'will he not enter a house.'
ébègé ń'no à kpè nè ɲê ìmmù gèpú	'if he will enter a house.'
ébègé ń'no ǎ 'kpé ɲé ɲê fɔ̀ ìmmù gèpú	'if he will not enter a house.'

## DENYA SEGMENTAL PHONOLOGY