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**A grammar of Mankanya: An Atlantic language of Guinea-Bissau,
Senegal and the Gambia**
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Chapter 2 - Phonology

2.1 Introduction

This chapter gives a sketch of the phonology of Mankanya. It does not aim to be exhaustive, but rather to give a background so as to aid the reader of the later chapters.

Mankanya has 51 phonemes of which 38 are consonants (including 2 semi-vowels and their pre-nasalised equivalents) and 13 vowels. 22 of the 38 consonants are pre-nasalised.

The reasons for considering pre-nasals as consonants, rather than NC consonant clusters will be discussed later.

2.2 Phonemic tables

2.2.1 Consonant phonemes

	Labials	Apicals	Retro-flexes	Palatals	Velars
Voiceless plosives	p	t	ʈ	c	k
Pre-nasalised voiceless plosives	^m p	ⁿ t	ⁿ ʈ		^ŋ k
Voiced plosives	b	d		ɟ	g
Pre-nasalised voiced plosives	^m b	ⁿ d		^{ɟ̠}	^ŋ g
Nasals	m	n		ɲ	ŋ
Vibrants		r			
Pre-nasalised vibrants		ⁿ r			
Fricatives	f	θ	ʂ		h
Pre-nasalised fricatives	^m f	ⁿ θ	ⁿ ʂ		^{h̠}
Sonorants		l		j	w
Pre-nasalised sonorants		ⁿ l		^{ɟ̠}	^ŋ w

Table 2.1: Consonant Phonemes

The phoneme /c/ is very rare in Mankanya. I have found it only in ideophones and in a few others word which are possibly borrowed.

[kɛ'cɛh]	/kɛ'cɛh/	<i>basket</i>
[b ^ɔ 'cɛkwɔl]	/bɔ'cɛkwɔl/	<i>trousers</i>
[ɔ'cɛ:lɔ]	/ɔ'cɛ:lɔ/	<i>sardine</i>
[p ^ɔ 'cɛwrɛn]	/pɔ'cɛwrɛn/	<i>basket</i>

Trifkovič (1969) agrees that /c/ is rare, and lists two other words with this phoneme. However, in my data these words are pronounced differently.

[nɛ'ʝɔ:k]	/nɛ'ʝɔ:k/	<i>poor person</i> (Trif: [nɛ'cɔk])
[kɛ'kit]	/kɛ'kit/	<i>harvest</i> (Trif: [kɛ'kic])

Despite its rarity, there are sufficient contrasts with similar sounds to prove that it is a separate phoneme (see section 2.3.3).

I have only found /s/ in borrowed words, so don't consider it a phoneme.

[s'kɔ:lɛ]	/s'kɔ:lɛ/	<i>school</i>
[ŋ ^ɔ 'ri:sijɛ]	/ŋɔ'ri:sijɛ/	<i>church</i>

It's noticeable that some Mankanya, for example those born in Dakar, have a tendency to replace the sound [θ] with the sound [s]. This substitution may partly be explained by the influence of French and Wolof where the sound [θ] does not exist.

[mɛʝ kɛ'supɛ]	instead of:	[mɛʝ kɛ'θupɛ]	<i>maize</i>
[nɛ'se:k]	instead of:	[nɛ'θe:k]	<i>the first</i>

Trifkovič (1969) doesn't mention this sound in her study, maybe because she was exposed to fewer French or Wolof speaking Mankanya.

It is noteworthy that all the consonants except /c/ (and of course the nasals themselves) have a corresponding pre-nasal form. The reasons for considering these as unit phonemes, rather than a NC sequence are considered below in section 2.5.2.1. Trifkovič (1969, p. 19) says that /c/ can also be preceded by a nasal, but I have not found any examples, and so therefore have left that blank in the chart.

Trifkovič (1969) has the phonemes /tɕ/ (alveo-palatal voiceless affricate) and /ɕ/ (alveo-palatal voiceless affricate) where I have /t/ (retroflex voiceless plosive) and /ɟ/ (retroflex voiceless fricative). These sounds are phonetically close. Note also that the phoneme /t/ has a tendency to be realised as the affricate [tɕ] at the end of a word. (See section 2.4 Allophones and their distribution).

Note that the apical plosives /t/ and /d/ are realised as dentals – [t̪] and [d̪], whereas the other apical consonants, /n/, /l/ and /r/, are alveolar.

2.2.2 Vowel Phonemes

	Front	Central	Back
High	i i:		ɯ ɯ: u u:
Mid	e e:	ə	o o:
Low		ɐ ɐ:	

Table 2.2: Vowel Phonemes

Trifkovič (1969, p. 22), considers that /e/ has two allophones [e] and [ɛ], the first in word final positions, and in the interior of monosyllabic roots, the second in all other positions. I did not find examples that showed this distribution, but rather found that the phoneme was realised somewhere between the two cardinal positions.

Trifkovič (1969) also found two allophones of /o/ - [o] and [ɔ]. She found [o] in closed monosyllables, and [ɔ] elsewhere. As with [e] and [ɛ] above my data suggest that there is just one sound somewhere between the two.

I have decided to use the closed symbols to represent the two phonemes, that is /e/ and /o/.

On the other hand Trifkovič (1969) doesn't recognise the existence of the phoneme /ʊ/ or its long version /ʊ:/. However, I have found words which contrast these sounds. See section 2.3.5.

Some speakers of Mankanya claim that there is similar distinction with front vowels presumably including /ɪ/. I have not had the opportunity to gather any data that might prove this.

There is no vowel harmony in Mankanya, like the other members of the Manjaku family, but unlike the Jola languages which make up most of the rest of the BAK family.

2.2.3 The mid central vowel /ə/ and [Pʔ] prefixes

In Mankanya, nouns and verbs often have prefixes of the form [Pʔ] (where 'P' is a stop or a nasal). The [ʔ] is not very perceptible and Trifkovič describes it as a pause (Trifkovič, 1969, p. 34). In addition it is not clear whether this short sound always has the same quality as the vowel [ə]. Trifkovič considers it as an indeterminate vowel (Trifkovič, 1969, p. 34).

[p ^ə kəməl]	<i>central pillar of a house</i>
[m ^ə 'jɪk]	<i>it's hot</i>
[b ^ə 'tæk]	<i>mortar</i>
[ɪ ^ə 'di]	<i>we eat</i>
[d ^ə 'gi]	<i>I'm going</i>

It is difficult to find true contrasts between [P^ə] and [Pə], because [P^ə] is normally found at the beginning of words and unstressed. [Pə] can be found initially in some inflected words, but it is then also stem initial and stressed.

['pə.nən]	<i>take out!</i>
['bə.bən]	<i>wrap!</i>
['kə.bən]	<i>enter!</i>

[Pə] can also be found in some non-initial non-stressed contexts:

[ka'nθi:.nta.məs]	<i>folk story</i>
[p ^ə 'nde.mənt]	<i>tongue</i>
[e'bə.rəs]	<i>he grinds</i>

Note that an unstressed [ə] can sometimes be deleted and a word resyllabified, for example through derivation.

[e.'ʒə.məs]	<i>he extinguishes (e.g. the fire)</i>
[be.'ʒəm.ʃə]	<i>(e.g. the fire) extinguishes itself</i>

The minimal vowel sound in [P^ə] can also be deleted where the plosive is nasal, and the initial consonant of the root is homorganic

[^ə ko]	<i>animals</i> [ɪ ^ə] + [ko]
[^m boʃ]	<i>ground</i> [m ^ə] + [boʃ]

I will therefore interpret [P^ə] as a preaccentual realisation of /ə/.

Though in this chapter I have written this realisation of /ə/ this is not the orthographic convention used in other chapters, where it is omitted.

2.3 Contrasts

The following sections give illustrative contrasts for the above phonemes.

A common contrast for the prenasal is found in the form of the verb found in relative clauses, where the initial consonant of the root is prenasalised. Where possible I have tried to find other contrasts.

2.3.1 Labials and Dentals

/p/

- /b/

<p>/pɛ'wo/ <i>it (C4S) is</i></p> <p>/pə'pɔk/ <i>to refuse</i></p> <p>/e'jɪp/ <i>he dug</i></p>	<p>/bɛ'wo/ <i>they (C1P) are</i></p> <p>/pə'bɔk/ <i>to climb a palm</i></p> <p>/e'kɪb/ <i>he cut</i></p>
--	---
- /m/

<p>/pə'pɔt/ <i>to rot</i></p> <p>/pə'tɛp/ <i>to bite</i></p>	<p>/pə'mɔt/ <i>cotton</i></p> <p>/pə'tɛm/ <i>to be hard</i></p>
--	---
- /f/

<p>/pə'pən/ <i>to go out</i></p> <p>/u'lɛ:p/ <i>hoe</i></p>	<p>/pə'fən/ <i>to count</i></p> <p>/u'le:f/ <i>body</i></p>
---	---
- /w/

<p>/pɔl/ <i>C4s object pronoun</i></p> <p>/pə'pɛt/ <i>to paddle</i></p> <p>/bə'kɔp/ <i>shelter</i></p>	<p>/wɔl/ <i>C2s object pronoun</i></p> <p>/pə'wɛt/ <i>to let drop</i></p> <p>/bə'kɔw/ <i>head</i></p>
---	--
- /^mp/

<p>/pə'lep/ <i>ear lobe</i></p> <p>/e'pɔlɔŋ/ <i>which he pulled</i></p>	<p>/ɔ'le^mp/ <i>work</i></p> <p>/e'^mpɔlɔŋ/ <i>he who worked</i></p>
---	--

/^mp/

- /p/ - see /p/ above
- /m/

<p>/pə'le^mp/ <i>to work</i></p> <p>/kɛ'^mpɔb/ <i>chickenpox</i></p>	<p>/pə'lem/ <i>to sit on an egg</i></p> <p>/nɛ'mɔb/ <i>sponsor</i></p>
--	--

/b/

- /^mb/

<p>/pə'bɛn/ <i>to touch</i></p> <p>/e'bɛnɔŋ/ <i>which he touched</i></p>	<p>/pə'^mbɛn/ <i>soap</i></p> <p>/e'^mbɛnɔŋ/ <i>he who touched</i></p>
--	--
- /p/ - see /p/ above
- /f/

<p>/ɔ'be:rɔ/ <i>butterfly</i></p> <p>/pə'məb/ <i>to carry</i></p>	<p>/ɔ'fe:rɔ/ <i>market</i></p> <p>/pə'məf/ <i>to wake early</i></p>
---	---

- /w/
/bi/ c5s genitive /wi/ c2s genitive
/nɛ'kɒb/ drummer /nɛ'kɔw/ clairvoyant

/^mb/

- /b/ - see /b/ above
- /m/
/kɛ'mbɔŋ/ nape of neck /kɛ'mɔl/ firewood

2.3.2 Alveolars and Retroflexes

/θ/

- /ⁿθ/
/ɛ'θe:nɔŋ/ which he plays /ɛ'ⁿθe:nɔŋ/ he who plays
/bɛ'dəθ/ they close /bɛ'dəⁿθ/ they brush
- /t/
/pə'dəθ/ to close /pə'dət/ to snatch
/pə'tɒm/ to sharpen /pə'θɒm/ to be many
- /t/
/pə'keθ/ to dig up /pə'ket/ to die
/ʊ'tɛŋ/ female goat /ʊ'tɛŋ/ nickname
- /d/
/pə'θe:m/ to answer /pə'de:m/ to catch
/ʊ'kəθ/ bird /ʊ'ʒəd/ wound
- /n/
/ɛ'θe:m/ he answers /ɛ'ne:m/ he is lost
/pə'dəθ/ to close /pə'dən/ to be dense
- /r/
/pə'gəθ/ to vomit /pə'gɛr/ to destroy
- /ʃ/
/pə'θo:ʃ/ to question the dead /pə'ʃo:ʃ/ to judge
/pə'fe:θ/ to be white /pə'fe:ʃ/ to divide
- /l/
/pə'θɒh/ to cough /pə'lɒh/ to carry on the side
/pə'fe:θ/ to be white /pə'fe:l/ to slit the throat

/ⁿθ/

- /θ/ - see /θ/ above

- /n/

/pə ⁿ θɒk/ crowd	/ʊ ⁿ ɒk / flu
/bə ^j ə ⁿ θ/ chest	/ne ^j ən/ human
/u ^t te ⁿ θ/ sorrel seed	/bə ^t en/ appearance
- /t/
- /ⁿt/

/e ⁿ təpʊŋ/ who he shoots	/e ⁿ təpʊŋ/ the one who shoots
/pə ^l gʊt/ to mark out	/pə ^l gʊ ⁿ t/ to fight
- /θ/ - see /θ/ above
- /t/

/pə ^t uħ/ to close	/pə ^t uħ/ to be blunt
/pə ^f tət/ to peel	/pə ^f tət/ to dwell
- /d/

/pə ^f et/ to boil	/pə ^f ed/ to whip
/ne ^t e/ you (pl) hear	/ne ^d e/ you (pl) eat
- /n/

/pə ^t i:mə/ to wear	/pə ⁿ i:mə/ to marry
/pə ^d ət/ uproot	/pə ^d ən/ to be dense
- /r/

/pə ^f ət/ to peel	/pə ^f ər/ to spend the night
------------------------------	---
- /ʒ/

/pə ^t ɒn/ to urinate	/pə ^ʒ ɒn/ to grind
/pə ^ʒ ɒt/ to fall	/pə ^ʒ ɒʃ/ to select
- /l/

/pə ^f et/ to boil	/pə ^f el/ to cut
/pə ^t iħ/ to groan	/pə ^l iħ/ to roar
- /ⁿt/
- /t/ see /t/ above
- /n/

/pə ^l pə ⁿ t/ take a detour	/pə ^l bən/ to touch
/ne ⁿ tɒhi/ (an) elder	/ne ⁿ nɒħ/ friend
- /t/
- /ⁿt/

/e ⁿ təŋkʊŋ/ who he helped	/e ⁿ təŋkʊŋ/ he who helped
---------------------------------------	---------------------------------------
- /θ/ - see /θ/ above
- /t/ - see /t/ above

- /d/
/pə'tu/ to put
/bɛ'ti/ they run
- /n/
/'tɛnən/ offer!
- /r/
/pə'kɒtən/ to galvanise (someone)
/pə'fæt/ to cover
- /ʒ/
/'mɒt/ fruit (sense: children)
/bə'ʒo:t/ malice
- /l/
/pə'fɛt/ fill to the brim
/pə'ti/ run
- /ʌ/
/pə'fɛl/ cut
/pə'li/ moon
- /t/ - see /t/ above
- /n/
/ʊ'ʒɒn/ duration
/pə'nɛk/ daytime
- /d/
/kə'dʊŋ/ altar
/bɛ'nɒŋ/ piece of bread
- /θ/ - see /θ/ above
- /t/ - see /t/ above
- /t/ - see /t/ above
- /n/
/pə'dʊŋ/ to make a noise
/pə'bɛd/ to be low
- /r/
/pə'buʊd/ to punch hard
/pə'buʊr/ to escape
- /ʒ/
/pə'led/ to be completely full
/pə'leʒ/ to remember
- /l/
/pə'dəməŋ/ to praise
/pə'ləməŋ/ door
- /pə'du/ to call
/bɛ'di/ they accept
- /'nɛnən/ give!
- /pə'kɒrən/ commission
/pə'fær/ to pass the night
- /'mɒbɒʒ/ ground
/pə'ʒo:ʒ/ ember

/ⁿd/

- /d/ - see /d/ above

- /n/

/iⁿdʊk/ *stick for hitting*

/iⁿʊk/ *you (sg) touch with the head*

/n/

- /θ/ - see /θ/ above

- /t/ - see /t/ above

- /t̪/ - see /t̪/ above

- /d/ - see /d/ above

- /r/

/pə¹tɛn/ *to attach*

/pə¹tɛr/ *to spread*

/ʊ¹nɛb/ *flycatcher (bird)*

/ʊ¹rɛb/ *Arabic (language)*

- /ʃ/

/^mbʊn/ *thinness*

/^mbʊʃ/ *ground*

- /l/

/pə¹ni:m/ *to marry*

/pə¹li:m/ *to be lost*

/kə¹mi:n/ *burial place*

/kə¹mi:l/ *liquid*

/r/

- /ⁿr/

/e¹rɛtɛnʊŋ/ *that he scattered*

/e¹ⁿrɛtɛnʊŋ/ *he who scattered*

- /θ/ - see /θ/ above

- /t/ - see /t/ above

- /t̪/ - see /t̪/ above

- /d/ - see /d/ above

- /n/ - see /n/ above

- /ʃ/

/pə¹rɛb/ *to search*

/pə¹ʃʊb/ *to rain*

- /l/

/pə¹rɛtɛn/ *to spill*

/pə¹lɛtɛn/ *to reheat*

/ʊ¹fɔ:r/ *gun powder*

/ʊ¹fɔ:l/ *hedgehog*

/ⁿr/

- /r/ - see /r/ above

- /n/
- /e^hretenu/ *he who scattered* /e^hneʔenu/ *that he raised*
- /ʒ/
- /ⁿʒ/
- /e^hʒenu/ *that he thought* /e^hneʒenu/ *he who thought*
- /θ/ - see /θ/ above
- /t/ - see /t/ above
- /ʈ/ - see /ʈ/ above
- /d/ - see /d/ above
- /n/ - see /n/ above
- /r/ - see /r/ above
- /l/
- /ⁿʒ/
- /ʒ/ - see /ʒ/ above
- /n/
- /e^hno:ru/ *he who hated* /e^hno:ru/ *(one) who he wears*
- /l/
- /ⁿl/
- /e^hletenu/ *that he reheats* /e^hnetenu/ *he who reheats*
- /θ/ - see /θ/ above
- /t/ - see /t/ above
- /ʈ/ - see /ʈ/ above
- /d/ - see /d/ above
- /n/ - see /n/ above
- /r/ - see /r/ above
- /ʒ/ - see /ʒ/ above
- /ⁿl/
- /l/ - see /l/ above
- /n/
- /e^hnetenu/ *he who reheats* /e^hneʔenu/ *that he raised*

2.3.3 Palatals

/c/

Remember that this phoneme is very rare. Therefore these contrasts are only analogous ones.

- /ʃ/

/kɛ¹cɛh/ <i>basket</i>	/ʊ¹jɛnel/ <i>window</i>
------------------------	-------------------------
- /ɲ/

/kɛ¹cɛh/ <i>basket</i>	/nɛ¹ɲɛbəs/ <i>you (pl) eat breakfast</i>
------------------------	--
- /j/

/kɛ¹cɛh/ <i>basket</i>	/nɛ¹jɛŋ/ <i>you (pl) watch over</i>
------------------------	-------------------------------------

/ʃ/

- /c/ - see /c/ above
- /ɲʃ/

/ɛ¹jɛbʊŋ/ <i>who he healed</i>	/ɛ¹ɲjɛbʊŋ/ <i>he who healed</i>
--------------------------------	---------------------------------
- /ɲ/

/¹jʊtɛn/ <i>be naughty!</i>	/¹ɲʊtɛn/ <i>bring!</i>
-----------------------------	------------------------
- /j/

/¹jʊkɛn/ <i>learn!</i>	/¹jʊkɛn/ <i>be beautiful!</i>
------------------------	-------------------------------

/ɲʃ/

- /ʃ/ - see /ʃ/ above
- /ɲ/

/mɛ¹ɲjɛl/ <i>darkest night</i>	/kɛ¹ɲɛn/ <i>hand</i>
--------------------------------	----------------------

/j/

- /c/ - see /c/ above
- /ʃ/ - see /ʃ/ above
- /ɲ/

/nɛ¹jɛŋ/ <i>you (pl) watch over</i>	/kɛ¹ɲɛn/ <i>hand</i>
-------------------------------------	----------------------
- /ɲj/

/ɛ¹jilʊŋ/ <i>who he sent</i>	/ɛ¹ɲjilʊŋ/ <i>he who sent</i>
------------------------------	-------------------------------

/ɲj/

- /j/ - see /j/ above

- /ɲ/
- | | | | |
|-------------------------|--------------------------|-----------|-------------|
| /e: ^h ɲebi/ | <i>he's not got well</i> | /ke'ɲen/ | <i>hand</i> |
| /e: ^h ɲe:hi/ | <i>he didn't sing</i> | /ke'ɲe:n/ | <i>five</i> |

/ɲ/

- /c/ - see /c/ above
- /ʃ/ - see /ʃ/ above
- /j/- see /j/ above

2.3.4 Velars

/g/

- /^hg/
- | | | | |
|------------|-------------------------|------------------------------------|-------------------------|
| /e'go:tuŋ/ | <i>who he scratched</i> | / ^h gu: ^h t/ | <i>he who scratched</i> |
|------------|-------------------------|------------------------------------|-------------------------|
- /k/
- | | | | |
|-----------------------|-------------------------|-----------------------|----------------------------------|
| / ^h guten/ | <i>fight!</i> | / ^h kuten/ | <i>uproot!</i> |
| /i'dug/ | <i>you make a noise</i> | /i'dok/ | <i>you(sg) leave (something)</i> |
- /ŋ/
- | | | | |
|----------|------------------|-----------|--------------------|
| /e'gut/ | <i>he fights</i> | /e'ŋuɔp/ | <i>he grumbles</i> |
| /be'nug/ | <i>they buy</i> | /be'nunŋ/ | <i>they guess</i> |
- /h/
- | | | | |
|------------------------|----------------|------------------------|--------------------|
| / ^h go:ten/ | <i>scrape!</i> | / ^h ho:ten/ | <i>hollow out!</i> |
|------------------------|----------------|------------------------|--------------------|

/^hg/

- /g/ - see /g/ above
 - /ŋ/
- | | | | |
|-------------------------|-----------------|-------------|-------------------------------|
| /ke' ^h guri/ | <i>bracelet</i> | /pə'ŋuɔben/ | <i>to mock with a gesture</i> |
|-------------------------|-----------------|-------------|-------------------------------|

/k/

- /^hk/
- | | | | |
|------------|------------------------|--------------------------|-----------------------|
| /pə'jo:k/ | <i>to blow (wind)</i> | /pə'jo: ^h k/ | <i>to wait</i> |
| /e'kəkunŋ/ | <i>that he returns</i> | /e' ^h kakunŋ/ | <i>he who returns</i> |
- /g/ - see /g/ above
 - /ŋ/
- | | | | |
|----------|-----------------|----------|--------------------------|
| /e'nuk/ | <i>he hunts</i> | /e'nunŋ/ | <i>he guesses</i> |
| /pə'kew/ | <i>to reap</i> | /pə'ŋew/ | <i>to begin to ripen</i> |
- /h/
- | | | | |
|----------|--------------------|----------|------------------------|
| /u'kub/ | <i>crab</i> | /u'hub/ | <i>bundle of straw</i> |
| /ne'yok/ | <i>rich person</i> | /ne'yok/ | <i>victor</i> |

/^ɹk/

- /k/ - see /k/ above
- /ŋ/

/pə¹ni:^ɹk/ *to look everywhere*
/pə¹rɛ:^ɹk/ *to be bitter*

/pə¹ni:ŋ/ *tooth*
/pə¹dɛŋ/ *to stir*

/ŋ/

- /g/ - see /g/ above
- /k/ - see /k/ above

• /h/

/pə¹ŋɛ:b/ *to steer*

/pə¹hɛ:b/ *to open one's mouth*

/h/

- /g/ - see /g/ above
- /k/ - see /k/ above
- /ŋ/ - see /ŋ/ above

• /^ɹh/

/e¹hʊ:rʊŋ/ *that he cries loudly*

/e¹^ɹhʊ:rʊŋ/ *he who cries loudly*

/^ɹh/

- /h/ - see /h/ above

• /n/

/e¹^ɹhʊ:rʊŋ/ *he who cries loudly*

/e¹nɔ:rʊŋ/ *(one) who he wears*

2.3.5 Vowels

/i/

- /i:/

/pə¹tɪb/ *to cut*

/pə¹ti:m/ *horn*

/pə¹tɪb/ *to cut*

/pə¹ni:m/ *to marry*

- /e/

/pə¹ʃɪŋ/ *to bend over*

/pə¹ʃɛŋ/ *to be bow-legged*

/ʊ¹lɪl/ *good (adj)*

/ʊ¹leɪ/ *yellow (adj)*

- /ə/

/pə¹di.nən/ *to agree*

/pə¹də.nən/ *to make watertight*

- /u/

/pə¹ti/ *to run*

/pə¹tʊ/ *to put*

- /ʊ/

<ul style="list-style-type: none"> /i'ko/ <i>things</i> /pə'ʃiŋ/ <i>to bend over</i> 	<ul style="list-style-type: none"> /ʊ'ko/ <i>thing</i> /pə'ʃuŋ/ <i>to cook</i>
--	--

- /e/
 - /e:/

<ul style="list-style-type: none"> /kə'neɪ/ <i>hand</i> /pə'det/ <i>to hold</i> /bɛ'ten/ <i>they look</i> 	<ul style="list-style-type: none"> /kɛ'neɪ/ <i>five</i> /pə'teɪ/ <i>foyer</i> /bɛ'teɪ/ <i>they understand each other</i>
--	---
 - /i/ - see □i/□above
 - /ə/

<ul style="list-style-type: none"> /pə'det/ <i>to hold</i> /pə'dem/ <i>to capture</i> 	<ul style="list-style-type: none"> /pə'dət/ <i>to uproot</i> /pə'dəm/ <i>to grow</i>
---	--
 - /ɛ/

<ul style="list-style-type: none"> /pə'det/ <i>to hold</i> /pə'ten/ <i>to look at</i> 	<ul style="list-style-type: none"> /pə'det/ <i>to choose</i> /pə'ten/ <i>to delay</i>
---	---

- /ɛ/
 - /ɛ:/

<ul style="list-style-type: none"> /pə'dɛŋ/ <i>to disturb</i> /pə'nɛm/ <i>to flee</i> 	<ul style="list-style-type: none"> /pə'dɛ:ŋ/ <i>to be smooth</i> /pə'nɛ:m/ <i>to resemble</i>
---	---
 - /ə/

<ul style="list-style-type: none"> /pə'det/ <i>to choose</i> /i'tel/ <i>ropes</i> 	<ul style="list-style-type: none"> /pə'dət/ <i>to uproot</i> /i'təl/ <i>hides</i>
---	---
 - /e/ - see □e/□above
 - /o/

<ul style="list-style-type: none"> /pə'kab/ <i>shelter</i> /ʊ'ban/ <i>arrival</i> 	<ul style="list-style-type: none"> /pə'kob/ <i>to hit</i> /ʊ'bon/ <i>famine</i>
---	---

- /o/
 - /o:/

<ul style="list-style-type: none"> /e'bot/ <i>he then did</i> /pə'yok/ <i>to be rich</i> 	<ul style="list-style-type: none"> /e'bo:t/ <i>he sucks</i> /pə'yook/ <i>to blow (wind)</i>
--	---
 - /ə/

<ul style="list-style-type: none"> /pə'mob/ <i>to catch</i> /pə'jom/ <i>to stink</i> 	<ul style="list-style-type: none"> /pə'məb/ <i>to attach</i> /pə'jəm/ <i>to cool down</i>
--	---
 - /ɛ/ - see /ɛ/ above
 - /u/

<ul style="list-style-type: none"> /pə'ʃok/ <i>to become engaged</i> 	<ul style="list-style-type: none"> /pə'ʃuk/ <i>forehead</i>
---	--

- /ʊ/
/pə'dɒm/ to attach /pə'dɒm/ to bite
/pə'do/ to do /pə'du/ to call
- /u/
- /uː/
/pə'juːt/ to bend down /pə'puːt/ to spit
/pə'juːt/ to bend down /pə'juːʒ/ to show
- /o/ - see /o/ above
- /ʊ/
/pə'juːk/ forehead /pə'juːk/ to teach
- /i/ - see /i/ above
- /ə/
/pə'tʃuːp/ speak /pə'tʃəp/ to pass
- /ʊ/
- /uː/
/pə'juːk/ to teach /pə'juːk/ poverty
- /o/ - see /o/ above
- /u/ - see /u/ above
- /i/ - see /i/ above
- /ə/
/pə'luːt/ to jump /pə'lət/ to sew
- /ə/
- /e/ - see /e/ above
- /ɛ/ - see /ɛ/ above
- /o/ - see /o/ above
- /iː/
- /i/ - see /i/ above
- /uː/
/pə'fiːt/ to illuminate /pə'fuːt/ to blow
- /uː/
/pə'diːk/ to refuse to respond /pə'juːk/ poverty
- /eː/
- /e/ - see /e/ above

- /i:/
/pə'le:k/ forest /pə'li:k/ well
/pə'me:r/ to get to know someone /pə'mi:r/ to resign oneself

- /e:/
/pə'ne:m/ to be lost /pə'nɛ:m/ to resemble
/ʊ'θe:k/ first /ʊ'θe:k/ country

/ɛ:/

- /ɛ/ - see /e/ above
- /e:/ - see /e:/ above

- /o:/
/pə'mɛ:k/ to be ill /pə'mo:k/ to embrace
/kə'pɛ:m/ ignorance /kə'po:m/ bread

/ɔ:/

- /o/ - see /o/ above
- /ɛ:/ - see /e:/ above

- /u:/
/pə'go:t/ to peel /pə'pu:t/ to spit
/pə'ho:t/ to shrug /pə'pu:t/ to spit

- /ʊ:/
/'gɔ:tən/ scratch! /'gʊ:t/ biceps
/'bʊ:t/ evilness /pə'ʊ:k/ poverty

/u:/

- /u/ - see /u/ above
- /o:/ - see /o:/ above
- /ʊ:/

As these two phonemes are rare it's difficult to find contrasts.

- /i:/ - see /i:/ above

/ʊ:/

- /ʊ/ - see /ʊ/ above
- /o:/ - see /o:/ above
- /u:/ - see /u:/ above
- /i:/ - see /i:/ above

As noted above the vowel /ə/ is unique in several ways. Firstly it has no long counterpart, but it has a preaccentual realisation of [ə̃]. It is also susceptible to deletion in unstressed positions. This is particularly noticeable with the addition of successive suffixes. For example:

/pbərəʃ/ + /ə/ → /pbərəʃə/

/phɛ:bəʃ/ + /ə/ → /phɛ:bəʃə/

It is also susceptible to assimilation:

/ɛjə / + /ə̃t/ → /ɛjə̃:t/

2.4 Allophones and their distribution

I have in my data the sound [ɜ] which I analyse as an allophone of /ɛ/ because it is only found in closed syllables, either in penultimate or final position. It is always in free variation with [ɛ]. [ɛ] is found in all positions.

[ʊ^hkə^hkələɜ] [ʊ^hkə^hkələɛ] /ʊ^hkə^hkələɛ/ *worm*

[^htʊpɜn] [^htʊpɛn] /^htʊpɛn/ *speak!*

Note that I have decided to consider the sound [s] as an allophone of the phoneme [θ] (see the discussion in section 2.2.1). It is in free variation with [θ] for Mankanya speakers who are fluent in major European languages (e.g. French, English or Portuguese).

The phoneme /t/ has two allophones. At the end of a word it is often pronounced as an affricate [tʃ]:

[p^hlɛmə̃tʃ] /p^hlɛmə̃t/ *to swim*

[nɛ^hpoʃtʃ] /nɛ^hpoʃt/ *child*

whilst in every other position it's realised as /t/:

[^htʃi:ni] /^htʃi:ni/ *run!*

[u^htəb] /u^htəb/ *fish*

Note that stops are normally unreleased before a pause.

2.5 Interpretation

2.5.1 Interpretation between vowels and consonants

The consonants /j/ and /w/ appear intervocalically as well as at the beginning of a word or stem, preceding a vowel, or word finally following vowel. The corresponding vowels /i/, /u/ and /ʊ/ appear in every other position:

[ˈjoŋkən]	[/ˈjo.ŋkən/]	CV.CVC	<i>wait!</i>
[kəˈje:h]	[/kəˈje:h/]	CV.CVC	<i>song</i>
[dəˈje]	[/dəˈje/]	C.CV	<i>I'm going</i>
[ʊˈpi]	[/ʊˈpi/]	V.CV	<i>goat</i>

2.5.2 Interpretation between units and sequences

2.5.2.1 Prenasals

As was stated above, all the consonants in Mankanya can be prenasalised. These could be interpreted as units, which would give 16 extra phonemes, or as sequences that would lead to the introduction of 3 new syllable patterns – NCV, NCVC, and CVNC.

Each prenasal can be found at the beginning of a word, and there are many examples where a prenasal crosses a morphological boundary:

[^ŋ ko]	<i>animals</i>	vs.	[ʊˈko]	<i>animal</i>
[^ŋ ki]	<i>that I dance</i>	vs.	[eˈki]	<i>he dances</i>
[ⁿ de]	<i>that I eat</i>	vs.	[iˈde]	<i>you eat</i>

The construction used in the last two examples can be found with almost all verbs. A nasal prefix is assimilated into the stem initial consonant to become a pre-nasal.

Not all prenasals can be found at the end of words - only prenasalised unvoiced oral stops /^mp, ^ŋk, ⁿt, ⁿʈ/ and the prenasalised unvoiced interdental fricative /ⁿʈ/.

/ʊˈle^mp/ *work*
/iˈni:^ŋk/ *you're searching everywhere*

However, there is no restriction on simple consonants, e.g. /b/ or /g/

/eˈjeb/ *he's getting better*
/kəˈbi:g/ *fence*

It should be noted that there is a difference between the nasal prefix N- which results in a prenasal consonant, and the [ŋ^ə] prefix. For example

[^ŋ ki]	<i>that I dance</i>	vs.
[ŋ ^ə ki]	<i>we dance</i>	

(There is sometimes assimilation of the [ŋ^ə] prefix for some common words or in fast speech e.g. [ŋ^əˈko] → [ˈko] *animals*)

I will treat prenasals as units, e.g. [ᵐp] as the single consonant phoneme /ᵐp/ which is written as “mp” in the orthography.

2.5.2.2 Long vowels

There are never VV sequences where the two vowels are different, so I will treat all long vowels as units:

/ˈbʷeɪ/	[bʷe:t]	CVC	<i>women</i>
/ˈgootɛn/	[ˈgo:tɛn]	CV.CVC	<i>scratch!</i>
/ˈtiini/	[ˈti:ni]	CV.CV	<i>run!</i>
/ɛˈbii/	[ɛˈbi:]	V.CV	<i>he came</i>

Some long vowels are the result of the addition of vowel suffixes to vowel final roots:

[ɛˈbi]	<i>he's coming</i>	[ɛˈbii]	<i>he came</i>
[ɛˈjɛ]	<i>he's going</i>	[ɛˈjɛɛ]	<i>he's gone</i>

2.5.3 Glottal stop

The glottal stop is not phonemic, but occasionally appears when there is a short vowel before a pause. There is one word where the glottal stop is found and that is the negative interjection:

[ɛʔɛʔ]	<i>no!</i>
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2.6 Syllables

Syllables in Mankanya usually contain a vowel nucleus, though as shown above the preaccentual realisation of /ə/ is very short. The exception is the nominal prefix “m-”. Often it can first be analysed as part of the first phoneme in the stem:

“m-boʃ”	/ᵐboʃ/	CVC	<i>ground</i>
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However, there is an allomorph “mn-”, where I analyse it as a separate syllable.

“mn-tow”	/ᵐntow/	C.CVC	<i>milk</i>
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Open syllables are the most frequent. Syllables that contain only a vowel are often found at the beginning of the word. Closed syllables are normally found at the end of the word. Syllabic consonants are only found at the beginning of the word.

Long vowels are attested in CV and CVC in all positions.

	Mono-syllabic words	Polysyllabic words		
Syllabic schema		First syllable	Mid-word	Last syllable
CV	Yes	Yes	Yes	Yes
CVC	Yes	Rare	Yes	Normal
V	Yes	Frequent position	No	No
C	No	Yes – followed by morpheme boundary	No	No
VC	Yes	Very rare	Very rare	Very rare

2.7 Word schemas

The phonological word is composed of one or more syllables. However, monosyllabic words are mostly grammatical function words. The syllables CV, CVC and VC can appear in any position. Syllabic C (/m/) only appears in word initial position, and syllable V normally appears word initially, and can be a monosyllabic word.

2.8 Occurrences and co-occurrence restrictions

All the consonants, including the prenasalised ones, but excluding /c/ and /^pc/ (which are very rare) are attested word-initially. However, /c/ is attested root-initially. This implies that there is probably no restriction on word initial consonants.

All consonants are found word finally except /mb, nd, c, nc, nf, ng, nh, nj, nl, nr, nʃ, nw, ny/. As noted in section 2.5.2.1 the only prenasalised consonants found at the end of words are prenasalised unvoiced oral stops /mp, nk, nt, nɾ/ and the prenasalised unvoiced interdental /nɾ/.

Vowels only occur word initially as prefixes or as monosyllabic words. The vowels /e, u, i/ occur in this position as noun prefixes or affirmative verbal prefixes. Their long equivalents /e:, u:, i:/ occur in negative verbal prefixes. The vowel /o/ is sometimes found as a monosyllabic disjunctive particle. /e/ and /ə/ are never found word initially.

All the short vowels except /ə/ are found word finally. /ɐ, ʊ, i, o, e/ are found word-finally in monosyllabic roots and words. /ɐ, ʊ, i/ are found word finally as the result of suffixation. The long vowels /e:, ɔ:, i:, o:, e:/ are found in monosyllabic words as the result of the addition of the suffix /-i/.

Vowels are never found noun or verb root initially.

	i	e	ɐ	ə	o	ʊ	u	i:	e:	ɛ:	o:	ɔ:	u:
Monosyllabic Word Initial	x		x		x								
Monosyllabic Word Final	x	x	x		x	x		x	x	x	x	x	
Polysyllabic Word Initial	x		x			x		x		x		x	
Polysyllabic Word Final	x		x			x							
Lexical Root Initial													
Grammatical Root Initial	x		x			x							

2.9 Interpretation

Unambiguous syllable schemas are CVC, CV, V, and VC:

ʊ'ʂɛl	<i>thought</i>	V.CVC
kək	<i>again</i>	CVC
kɛ'toh	<i>house</i>	CV.CVC
nɛ'me	<i>clairvoyant</i>	CV.CV
ʊ'ko	<i>animal</i>	V.CV
ʊn	<i>1p independent pronoun</i>	VC
ni	<i>my mother</i>	CV
i	<i>genitive particle</i>	V

2.10 Accent

Normally the accent is placed on the first syllable of the root.

2.11 Tone

Mankanya is not a tonal language. Some informants say that there is a grammatical difference in some sentences which are segmentally identical, which they say is tonal. However, my limited data on this does not corroborate this claim.

