PHONOLOGY OF MMEN
ESQUISSE PHONOLOGIQUE
DU MMEN

BY
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(B.A. French/English)

A dissertation submitted as partial fulfilment for the award of the post-graduate diploma (Maitrise) in Linguistics.

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Academic Year 1986-87

Yaounde, September 1987
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DEDICATION

To My Beloved Mother,
Mrs. H. E. AGHA
And my Sister S.U. AGHA,
whose attitude and silence
towards suffering and provocation
had always inspired me
during hard times.

To my loving father and
Children whose respective
deaths have been the hardest
blows I had and have to
accept.
Late SIMON AGHA (+ 1983)
Late KUDI ASAH (+ 1985)
Late UTIA ASAH (+ 1987)

May they find here
a sign of gratitude for
what they have always done and meant
and for what they shall ever mean to me.
ACKNOWLEDGEMENTS

A study of this nature would never had been realized without help.

I wish to express my deep felt gratitude to my supervisor
- Mrs ROSE ZOE OBIANGA for her constant help and encouragement despite other commitments.
- Miss ELLEN JACKSON, SIL, Yaounde for her disponibility and pieces of advice whenever she could.
- All those who taught me.
- My uncle, ECHU SAMUEL, for all what he did during this school year and previous years
- The families DJOMBI and NOUMOSSIE for the moral and material support they could provide.
- Lieutenant AGHA ROBINSON and ECHU HENRY are not forgotten.
- The informants who sacrificed time and energy to see that this research work be a reality.
- Mr. VENSU Alfred CHIN, Mr. MENDI VITALIS, JOSEPH UTIA and Mr. MBONO BEKOLO should find here a sign of gratitude for their sleepless nights.
- Friends and relatives whose names have been explicitly omitted are not left aside.
LIST OF ABBREVIATIONS AND SYMBOLS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Consonant</td>
</tr>
<tr>
<td>N</td>
<td>Nasal</td>
</tr>
<tr>
<td>V</td>
<td>Vowel</td>
</tr>
<tr>
<td>S</td>
<td>Semi-vowel</td>
</tr>
<tr>
<td>Nn</td>
<td>Noun</td>
</tr>
<tr>
<td>Vb</td>
<td>Verb</td>
</tr>
<tr>
<td>Adj</td>
<td>Adjective</td>
</tr>
<tr>
<td>Adv.</td>
<td>Adverb</td>
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<tr>
<td>Sg</td>
<td>Singular</td>
</tr>
<tr>
<td>Pl</td>
<td>Plural</td>
</tr>
<tr>
<td>i.e.</td>
<td>That is</td>
</tr>
<tr>
<td>e.g.</td>
<td>For example</td>
</tr>
<tr>
<td>[.....]</td>
<td>Phonetic data</td>
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<td>/---/</td>
<td>Phonemic data</td>
</tr>
<tr>
<td>'--'</td>
<td>English gloss</td>
</tr>
<tr>
<td>ã</td>
<td>is actualized as nasalized</td>
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TONES

<table>
<thead>
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<th>Symbol</th>
<th>Description</th>
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<tbody>
<tr>
<td>/ or H</td>
<td>High tone</td>
</tr>
<tr>
<td>- or M</td>
<td>Mid tone</td>
</tr>
<tr>
<td># or L</td>
<td>Low tone</td>
</tr>
<tr>
<td>V or LH</td>
<td>Rising tone</td>
</tr>
<tr>
<td>* or HL</td>
<td>Falling tone</td>
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CHAPTER 00

INTRODUCTION

In this piece of work, we attempt a phonological study of Mmen, a language spoken in Menchum Division, North West Province of the Republic of Cameroon.

The speakers call themselves Mmen. Although neighbours call them as well as their language Bafmen and Administration know them by Bafmeng, Mmen population accept with less or no resentment the two appellations i.e. Mmen and Bafmeng or even Bafumeng.

It should be noted that Mmen or Bafmeng is most of the time referred to one of the villages where Mmen language is spoken, while it is spoken in Mmen, Cha? Nyos, Kuk and Kung villages. The language found in the above mentioned villages is the same, spoken with no modifications. Mmen presents no dialects.

The language and its speakers are little known out of the division. But after the famous but dreadful Nyos disaster some natives and a group of preachers among whom Manje Gabriel and Sister Anne Woods attempted in Nyos disaster and Crie-Die at Bafmeng for Lake Nyos victims, 1986, respectively to make know and understand the various difficulties that the people face. However, this was purely based on the history of the area as they wished to draw government's attention on the intimate relationship that has always existed between Nyos elements and their neighbouring relatives.

It should also be noted that the Fons or Chiefs of these villages are said to be cousins.
0.1. Geographical Situation

The villages of Mmen, Cha?, Nyos, Kuk and Kung where Mmen language is spoken are located in the South East of Aghem (Wum), capital of Menchum Division.

It is quite difficult to get to these villages due to the bad condition of the road. Sister Woods in Cry-die at Bafmeng for Lake Nyos victims, 1986 notes that it takes twelve minutes by air but three hours by road for one to get to Mmen village from Wum.

Mmen has about sixty thousand speakers who live along side with non-Mmen elements namely the Fulanis and Hausas. Most of the people are farmers producing primarily corn, ground-nuts, rice, beans for subsistance. They also produce some cash crop: Coffee. They live in widely scattered compounds with each compound containing a single family unit which is often related to the families of neighbouring compounds. Their houses are built with mud bricks and roofed with thatching grass as most traditionally built houses in the northwestern region of Cameroon.

A fairly large segment of the population has undergone a rapid social change as a result of their recent migration to the neighbouring towns. An increasing number of the young men are tending to move away (at least temporarily) to the larger cities of Bamenda, Buea, Douala and Yaounde in search of "education" and work.

Mmen elements live to agree with their other members of neighbouring villages as they attend periodical markets together namely in the North, the Mekaf, the Kom in the South, the Aghem (Wum) in the West and the Same in the East.
fically, Mmen villages are found on the way to Fundong. (map 1 locates Mmen villages in Cameroon).

0.2. Historical Background

Nkwi and Warnier in Elements for History of the Western grassfields, 1982 classify Mmen villages under the Chap group. They assert that they arrived the region as part of the migration movements that brought the Kom (they present a similar pattern of society: the matrilineal pattern), Isu and Bafut to the Western grassfields. Their traditions seem to reflect political alliances and mutual exchange of institutions. They claim they travelled south through Oku and Achain and finally settled definitively south of Gum. They further believe that they settled with Isu and Bafut at Ndewum near Nyos. The founder of Mmen and Fungom and his followers are said to have been the first to break off; Bafut would have followed next, then came Nyos, Kuk and the rest. The exact order of dispersal from Ndewum is uncertain. The Chap came from the direction of Nso, crossed Kom and settled at Ndewum. It is from there that the different groups left in search of more suitable settlements.

0.3. Purpose and Method of Study

0.3.1. Purpose: Phonology, as a part of linguistics, presents its own importance as it deals with the sound systems of languages. Through a phonological study, one can give the structure of any given language. It is only through a phonological study of a language that one can possibly determine pertinent sounds or distinctive sounds.
Since no linguistic work has so far been done in Mmen, this attempt of the phonology of Mmen will hopefully provide a wider area for more studies in the language. This can also serve as a foundation for the development of the writing system of the language thus providing Cameroon with a written language added to its then existing list of written languages.

0.3.2. Methodology: This work is basically divided into three parts namely the syllable structures, the sound system and the tone system of Mmen language. This study will then focus on the various segmented and pitch phonemes, the possible combination of sounds into syllables and the structure of syllable; the study of phonemes, phonemes seen as they contrast with other phonemes or seen as being made of allophones with particularities imposed on them by a given environment.

0.4. Mmen the language: its classification and previous linguistic work.

According to Atlas Linguistique du Cameroun, (ALCAM), 1983, Mmen is classified as one of the languages that make up the Ring sub-group of the Western grassfields languages under the Bantoid subgroup of Benue-Congo Language. (Grap 1 locates Mmen in grassfields languages).
Although MmEn is classified and accepted as a distinct language from Aghem and Kom, their respective speakers believe and agree that there is a degree of intelligibility between the three and sometimes even go as far as remarking that they are surely related.

No linguistic comparison has so far been done between the three but as time goes some might be needed. ALCAM notes that although the three languages (Aghem, Kom and MmEn) are parts of the Ring languages, Aghem is considered a Ring West Language, while MmEn and Kom are distinct Ring central languages.

However, no linguistic study has been carried out on MmEn yet. (Map 2 locates MmEn among the grassfields Bantu languages of Cameroon).
Bantu Languages of Cameroon

Source: Aghem Grammatical Structure by Hyman

Areas: Southern California Occasional papers in linguistics 7.
0.5. The data and organization of the work

From a corpus of a given number of words, we could with the help of informants make up a data and organize our linguistic study.

0.5.1. The data sources: This work is based on a corpus of about a thousand words collected through the help of the following four informants:

- Mrs. Ndong Baba Grace, a native of Mmèn resident in Wum,
- Mr. Pong Thomas, a nurse in the Provincial Hospital Bamenda, native of Mmèn and resident in Bamenda,
- Mr. Jam Michael Tang, teacher in the Catholic School, New Town Mmèn, native of Mmèn and resident in Mmèn.
- Mr. Manje Gabriel, worker in the Presidency of Yaounde, Department of Linguistic Services, native of Mmèn and resident in Yaounde.

0.5.2. Organization of the work:

Chapter I is based on Segmental Phonology i.e. here we study the sounds and phonemes of Mmèn,

Chapter II deals with supra-segmental phonology i.e. basically the various tones of the language,

Chapter III takes account of the syllable structure and problems of Interpretation and finally the last part deals with the conclusion.
In this chapter, first, the consonants will be discussed and then the vowels. Both sections will exhibit:

a) - a chart of the phonetic entities actually heard;

b) - evidence for declaring certain of these entities to be in phonemic contrast or allophonic variation;

c) - a chart of the final phonemes;

d) - a technical descriptive statement of each phoneme and its variants and

e) - a frequency statement of the phonemes as they occur in words.

All these points will jointly be discussed as we progress in our analysis.

II.1. Consonants

II.1.1 Phonetic realization: The larger number of apparent 'consonant clusters' which have already been analyzed as basic single consonant plus the prosodies of pre-nasalization, labialization and palatalization will not be considered further. Instead, the remaining set of what could appear to be 'basic consonants' will be described i.e., 'the full set of consonants distinguished from each other by the parameters of voicing, manner and point of articulation.'

The following chart exhibits their phonetic characteristics. The phones are grouped into:

- vertical columns according to point of articulation (bilabial, labio-dental, alveolar, pre-palatal, palatal, velar glottal and labio-velar.)
II.1.2. **Phonemic contrasts:** The consonant phonemes on the chart to follow have been obtained through given analysis. An analysis that requires that sounds which could be said to be allophones be contrasted in words (initial, intervocalic and final positions if possible). Each sound is hereby given its due phonemic status on the basis of its contrasts with other sounds. Throughout the analysis, we might make use of near minimal pairs and words from different grammatical classes whenever need be.

The phoneme //p//

/p// is realized as the voiceless oral bilabial plosive stop in most environments. It appears in Wmen only word initially and intervocally and never closes a syllable. It owes its phonemic status to the following contrasts. //p// can be labialized [p̪w] or palatalized [p̩]. (see I.2).

<table>
<thead>
<tr>
<th>p/b</th>
<th>/spòsè/ [spòsè]</th>
<th>prep.</th>
<th>'against'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/spàsè/ [spàsè]</td>
<td>N</td>
<td>'soup'</td>
</tr>
<tr>
<td></td>
<td>/tøpòŋ/ [tøpòŋ]</td>
<td>N</td>
<td>'jaws'</td>
</tr>
<tr>
<td></td>
<td>/tøbàŋ/ [tøbàŋ]</td>
<td>N</td>
<td>'tobacco'</td>
</tr>
<tr>
<td>p/m</td>
<td>/sòpè/ [sòpè]</td>
<td>Vb</td>
<td>'to mend'</td>
</tr>
<tr>
<td></td>
<td>/sàmà/ [sàmà]</td>
<td>Vb</td>
<td>'to swim'</td>
</tr>
<tr>
<td></td>
<td>/ipò/ [ipò]</td>
<td>N</td>
<td>'squash'</td>
</tr>
<tr>
<td></td>
<td>/imà/ [imà]</td>
<td>N</td>
<td>'visit'</td>
</tr>
<tr>
<td>p/w</td>
<td>/pùà/ [pùà]</td>
<td>N</td>
<td>'father'</td>
</tr>
<tr>
<td></td>
<td>/wùà/ [wùà]</td>
<td>N</td>
<td>'cup'</td>
</tr>
</tbody>
</table>
The phoneme /b/

/b/ is actualized as the voiced oral bilabial plosive stop in all environments and attested in the language word initially and word intervocally. Although rare, it is a phoneme due to these contrasts. We have taken into consideration the sound that follows the said phonemes in some examples.

\( b/p \) see \( p/b \)

\( b/mb \)

/ébas/ \[ébas\] N 'jama-jama soup'

/úbas/ \[úbas\] N 'kind of soup'

The phoneme /mb/

/mb/ is realized as the voiced pre-nasalized bilabial stop \[mb\]. It is actualized as a single sound segment and due to the following contrasts, it is a phoneme. It is labialized at word initial position before [u, ø, a], in single closed syllabic words ending with the lateral [l] or in single open syllabic words ending with the low unround oral central vowel [a], before the mid round oral back vowel [o] in disyllabic words.

\( mb/p \) see \( p/mb \)

\( mb/b \) see \( b/mb \)

\( mb/m \)

/mbà/ \[mbà\] N 'shoulder'

/ma/ \[ma\] Vb 'wear'

\( mb/ny \)

/mbàm/ \[mbàm\] N 'snake'

/nyàm/ \[nyàm\] N 'beast'
The phoneme /m/

/m/ remains the voiced bilabial nasal stop in all environments i.e. initial, intervocalic and final positions in words or in syllables. It can be syllabic (mostly at word initial position before given consonants as already discussed under Chapter I) as well as non syllabic. It is always voiced and contrasts with other bilabial sounds as well as its nasal counterparts.

\[
\begin{align*}
\text{mb/w} & \quad /\text{mbəm}/ \quad [\text{mbəm}] \quad \text{N} \quad \text{'snake'} \\
\text{nd/w} & \quad /\text{wəm}/ \quad [\text{wəm}] \quad \text{Vb} \quad \text{'lie'} \\
\text{mb/nd} & \quad /\text{mbəm}/ \quad [\text{mbəm}] \quad \text{N} \quad \text{'snake'} \\
\text{nd/nd} & \quad /\text{ndəm}/ \quad [\text{ndəm}] \quad \text{N} \quad \text{'life'} \\
\end{align*}
\]

The phoneme /m/

\[
\begin{align*}
\text{m/p} & \quad \text{see} \quad \text{p/m} \\
\text{m/b} & \quad \text{see} \quad \text{b/m} \\
\text{m/mb} & \quad \text{see} \quad \text{mb/m} \\
\text{m/n} & \quad /\text{mə}/ \quad [\text{mə}] \quad \text{Vb} \quad \text{'wear'} \\
\text{n/nd} & \quad /\text{nə}/ \quad [\text{nə}] \quad \text{N} \quad \text{'iron'} \\
\text{s/m} & \quad /\text{səjəm}/ \quad [\text{sənəjəm}] \quad \text{Vb} \quad \text{'to sing'} \\
\text{s/nd} & \quad /\text{səjən}/ \quad [\text{sənəjən}] \quad \text{N} \quad \text{'shirt'} \\
\text{m/nx} & \quad /\text{ipəm}/ \quad [\text{ipəm}] \quad \text{prep} \quad \text{'behind'} \\
\text{n/nd} & \quad /\text{ipən}/ \quad [\text{ipən}] \quad \text{N} \quad \text{'hate'} \\
\text{b/m} & \quad /\text{ápəm}/ \quad [\text{ápəm}] \quad \text{N} \quad \text{'testis'} \\
\text{b/nd} & \quad /\text{ápən}/ \quad [\text{ápən}] \quad \text{N} \quad \text{'fufu corn'} \\
\text{p/m} & \quad /\text{gəm}/ \quad [\text{gəm}] \quad \text{N} \quad \text{'week'} \\
\text{p/nx} & \quad /\text{gən}/ \quad [\text{gən}] \quad \text{N} \quad \text{'proverb'} \\
\end{align*}
\]
The Phoneme /f/

/f/ is actualized as the voiceless labio-dental fricative in most environments. It is found in word initial intervocalic and final positions. It is articulated with the tip of the tongue behind the lower teeth. It contrasts with his other fricative counterparts as well as other sounds as follows. It is sometimes palatalized (see Chap. 1.2.3).

/f/ṃ

/məsəs/ [məsəs] N 'head louses'
/məsə/ [məsə] N 'shadows'
/məŋəpə/ [məŋəpə] N 'twins'
/məməcə/ [məməcə] N 'elephant'

/f/ʷ

/mǔ/ [mǔ] N 'water'
/mǔ/ [mǔ] N 'peelings'

/f/v

/ifs/ [ifs] N 'cutlass'
/iveŋ/ [iveŋ] N 'witches'

/f/pf

/ifs/ [ifs] N 'cutlass'
/ipvfə/ [ipvfə] vb 'faint'
/fəwəm/ [fəwəm] vb 'mat'
/pfəwə̰/ [pfəwə̰] vb 'excrete'

/f/s

/əfəs/ [əfəs] N 'gas'
/əsəs/ [əsəs] N 'broom'
The phoneme /v/

/v/ is the voiced oral labio-dental fricative in all environments. It contrasts with fricatives and other sounds. It is a phoneme rarely attested in Mmcn. It is found at initial and intervocalic positions and is never attested at word final position.

\[ v/\] see \[ f/v \]

\[ v/s \]
/\[ŋəvə/ [ŋəvə] N \ 'hen' /
/\[ŋəsə/ [ŋəsə] N \ 'shadows' /

\[ v/z \]
/\[vá/ [vá] N \ 'child of' /
/\[zá/ [zá] \ Vb \ 'allow' /

\[ v/w \]
/\[vá/ [vá] N \ 'child of' /
/\[wám/ [wám] \ Vb \ 'lie' /

The phoneme /t/

/t/ is realized as the voiceless oral alveolar plosive stop in most environments. It is realized [tw] before the front oral unrounded high vowel [i] at intervocalic position or at word final syllable. It is attested at initial position (where it is pre-nasalized before [ɛ] [nt]) and at intervocalic position. It is due to its contrasts with other sounds that it is considered a phoneme.
The phoneme \(/d/\)

\(/d/\) is the voiced oral alveolar plosive stop. It can be labialized or pre-nasalized at given environments (see Chap. 1.2). It contrasts with its pre-nasalized counterparts as well as other phonemes. Attested word initially and intervocally, it is never found at final syllabic position.
The phoneme /a/

/a/ is realized as the voiceless oral alveolar fricative in all environments i.e. initial, intervocalic and final positions. It is a phoneme due to the following contrasts:

/to taste/  
/to try, to touch/  
/to rule/  
/to chew/  
/scatter/  
/smoke/  
'gizzard'  
'play'  
'slaughter'  
'grave'  
'eye'  
'game'

The phoneme /z/

/z/ is realized as the voiced oral alveolar fricative. It is relatively rare at initial position and is never attested.
at word final position. Mostly found at intervocalic position it is a phoneme due to the following contrasts. It is labialized when attested in last syllable of words before [i].

/z/ see s/z

/z/zh /zitɛ/ [zitɛ] Vb 'rest'

/zhitɛ/ [zhitɛ] Vb 'scratch'

/z/zh /ázo/ [ázo] Adj. 'cold'

/idzoŋ/ [idzoŋ] Adj. 'dry'

/izô/ [izô] Adj. 'clean'

/idzô/ [idzô] N 'noise.'

/z/zh /zú/ [zú] Vb 'warm up'

/zhú/ [zhú] Vb 'plant'

/zotɛ/ [zotɛ] Vb 'listen'

/zhotɛ/ [zhotɛ] Vb 'begin'

The phoneme /n/

/n/ is realized as the voiced alveolar nasal stop. It occurs in word at initial, intervocalic and final positions. It can be palatalized at given environment (see I.2.4). It is a phoneme on the basis of its contrasts with other nasal or alveolar sounds.

/n/m see m/n

/n/ny

/zánɛ/ [zánɛ] Vb 'smoke'

/sányɛ/ [sányɛ] Vb 'discuss'
The phoneme /l/

It is actualized as the oral voiced alveolar lateral in all environments i.e. initial, intervocalic and final positions. It is known to contrast with other sounds. It is labialized at word initial position in a single open syllabic word before [i].

\[ l/a \] see \[ d/l \]
\[ l/n \] see \[ n/l \]

The phoneme /sh/

/sh/ is realized as the voiceless oral pre-palatal fricative. It is attested in Mmen at word initial and intervocalic positions and never finally. Although relatively rare, it is a phoneme due to the following contrasts.

\[ sh/a \] see \[ s/sh \]
\[ Sh/z \] see \[ z/sh \]

\[ sh/zh \]
\[ /ışhi/ \] [ışhi] N 'game'
\[ /izhi/ \] [izhi] N 'gain'
\[ /səshhi/ \] [səshhi] Vb 'to play'
\[ /səzhi/ \] [səzhi] Vb 'to celebrate'
The phoneme /zh/

/zh/ is actualized as the voiced oral pre-palatal fricative. It is attested at word initial and intervocalic positions. It is relatively rare and contrasts with its labialized counterpart as well as other sounds.

\[
\begin{align*}
zh/zh^w & \quad /zh/ \quad [zh\dot{h}] \quad Vb \quad 'to \ win, \ to \ eat' \\
zh^w/zh & \quad /zh^w/ \quad [zh\dot{w}] \quad N \quad 'wife' \\
zh/zh & \quad see \quad sh/zh \\
zh/z & \quad see \quad z/zh \\
\end{align*}
\]

The phoneme /zh^w/

It is /zh/ labialized. It is a phoneme due to the following contrasts.

\[
\begin{align*}
zh^w/zh & \quad see \quad zh/zh^w \\
zh^w/s & \quad /zh^w/ \quad [zh\dot{w}] \quad N \quad 'wife' \\
/s/ & \quad [s] \quad N \quad 'gizzard' \\
zh^w/o & \quad /zh^w/ \quad [zh\dot{w}] \quad N \quad 'wife' \\
/o/ & \quad [o] \quad Vb \quad 'pour' \\
zh^w/c & \quad /zh^w/ \quad [zh\dot{w}] \quad N \quad 'wife' \\
c/ & \quad [c] \quad Vb \quad 'open' \\
zh^w/j & \quad /zh^w/ \quad [zh\dot{w}] \quad N \quad 'wife' \\
j/ & \quad [j] \quad N \quad 'courtyard' \\
\end{align*}
\]

The phoneme /ny/

/ny/ is articulated as the voiced nasal palatal stop in all environments. It is attested word initially, intervoca-
etically and finally. It is known to contrast with other nasals or pre-nasalized sounds. To these contrasts, it owes its phonemic status. /ny/ is relatively rare in Mmen.

ny/m see m/ny
ny/n see n/ny
ny/mb see mb/ny

ny/y /nyi/ [nyi] N 'mother'
/yin/ [yin] Vb 'run'

The phoneme /y/

Actualized as the oral voiced palatal glide or semi-vowel, /y/ contrasts with other sounds. It is attested at word initial position and mostly at word intervocalic position and in some few cases at word final position. Quite rare in Mmen, it derives its phonemic status from the following contrasts.

y/ny see ny/y

y/w /iya/ [iya] N 'root'
/iws/ [iws] N 'grass'

In this example, the vowel /i/ preceding the sounds has been taken into consideration.

The phoneme /k/

It is articulated as the voiceless oral plosive velar stop. It can be palatalized (1.2) in given environment or labialized. It contrasts with its labialized counterpart as well as other sounds.
The phoneme /kw/

/kw/ is /k/ labialized. Though rare, it is attested word initially and intervocally. It owes its phonemic status to the following contrasts.

### /kw/ See /k/kw

### /kW/ See /kW/kw

<table>
<thead>
<tr>
<th>/kw/</th>
<th>/kən/</th>
<th>lako</th>
<th>N</th>
<th>'lie'</th>
</tr>
</thead>
<tbody>
<tr>
<td>/kwaŋ/</td>
<td>[kwaŋ]</td>
<td>N</td>
<td>'boundary'</td>
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</tr>
<tr>
<td>/ike/</td>
<td>[ike]</td>
<td>N</td>
<td>'money'</td>
<td></td>
</tr>
<tr>
<td>/ikwe/</td>
<td>[ikwe]</td>
<td>N</td>
<td>'arms'</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/k/</th>
<th>/ákè/</th>
<th>[ákè]</th>
<th>N</th>
<th>'gorilla'</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ágè/</td>
<td>[ágè]</td>
<td>N</td>
<td>'antelope'</td>
<td></td>
</tr>
<tr>
<td>/akó/</td>
<td>[akó]</td>
<td>N</td>
<td>'forest'</td>
<td></td>
</tr>
<tr>
<td>/ago/</td>
<td>lago</td>
<td>N</td>
<td>'idiot'</td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<th>/śkó/</th>
<th>[śkó]</th>
<th>N</th>
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<tbody>
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<td>[śxó]</td>
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<td>'people'</td>
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<table>
<thead>
<tr>
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<th>/ikú/</th>
<th>[ikú]</th>
<th>N</th>
<th>'death'</th>
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<tbody>
<tr>
<td>/iwú/</td>
<td>[iwú]</td>
<td>N</td>
<td>'peelings'</td>
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<tr>
<td>/ikús/</td>
<td>[ikús]</td>
<td>N</td>
<td>'maggot'</td>
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<tr>
<td>/iwás/</td>
<td>[iwás]</td>
<td>N</td>
<td>'fire, gun'</td>
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</tr>
<tr>
<td>/ikin/</td>
<td>[ikin]</td>
<td>Adj.</td>
<td>'closed'</td>
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<tr>
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<td>[iwin]</td>
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<table>
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<tr>
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<th>/ikwæ/</th>
<th>[ikwæ]</th>
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<th>'arms'</th>
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</thead>
<tbody>
<tr>
<td>/iwɛ/</td>
<td>[iwɛ]</td>
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</tbody>
</table>
### /g/ Phoneme

The phoneme /g/ is actualized as the voiced oral velar plosive stop. It is relatively rare and attested both at initial and inter-vocalic positions. Its contrasts with other sounds prove it is a phoneme.

- It is prenasalized at word initial position before
  - [a] at single syllabic closed words
  - [e] attested before the bilabial nasal /m/
- It is pre-nasalized and labialized before
  - [a].

<table>
<thead>
<tr>
<th>/g/</th>
<th>See</th>
<th>/k/g</th>
</tr>
</thead>
<tbody>
<tr>
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<td>see</td>
<td>/k/</td>
</tr>
<tr>
<td>/g/</td>
<td>see</td>
<td>/kw/</td>
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<table>
<thead>
<tr>
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<th>/k/g</th>
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<tbody>
<tr>
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<td>/g/</td>
<td>See</td>
<td>/kw/</td>
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<table>
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<th>See</th>
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<tbody>
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<td>/g/</td>
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<tr>
<td>/gh/</td>
<td>/g/</td>
<td>See</td>
<td>/kw/</td>
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<th>/k/g</th>
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<td>See</td>
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<tr>
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<td>/g/</td>
<td>See</td>
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</tr>
<tr>
<td>/mb/</td>
<td>/g/</td>
<td>See</td>
<td>/kw/</td>
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<table>
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<td>See</td>
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<tr>
<td>/g/</td>
<td>/g/</td>
<td>See</td>
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</tbody>
</table>
The phoneme /x/

/x/ is factalized as the voiceless oral velar fricative. It is attested word initially and intervocally. It is palatalized at given environment (see 1.2.3). It owes its phonemic status to the following contrasts.

\[ /x/ \text{ see } /k/ \]

\[ /x/ \text{ see } /\text{e}x\text{e}/ [\text{e}x\text{e}] \text{ N } '\text{people}' \]

\[ /x/ \text{ see } /\text{e}z\text{e}/ [\text{e}z\text{e}] \text{ N } '\text{bee}' \]

The phoneme /gh/

/gh/ is articulated as the voiced oral velar fricative. It is attested only at word intervocalic position and is quite rare in Mr. It contrasts with its velar or fricative counterparts to prove its phonemic identity. It is mostly attested before the oral central unrounded low vowel [a].

\[ /gh/ \text{ see } /k/ \text{ see } /gh/ \]

\[ /gh/ \text{ see } /g/ \text{ see } /gh/ \]

\[ /gh/ \text{ see } /kw/ \text{ see } /kw/ \text{ see } /gh/ \]

\[ /gh/ \text{ see } /\text{ághà}/ [\text{ághà}] \text{ N } '\text{stools}' \]

\[ /gh/ \text{ see } /\text{ázà}/ [\text{ázà}] \text{ N } '\text{mushroom}' \]

The phoneme /ŋ/

/ŋ/ is articulated as the voiced nasal velar stop. It is relatively rare in Mr. It is attested at word initial, intervocalic and final positions. Its phonemic status is obtained from its contrasts with other nasal or pre-nasalized sounds. At given environment, the sound is palatalized (see 1.2.3).
The phoneme /\n/

The phoneme is actualized as the voiceless oral glottal stop. It is never found at initial position of a word. It is either attested word intervocally or finally. Relatively rare in Mmen, its contrasts with other sounds make it a phoneme.

'/s
/átà'/ [átà'] N 'snail'
/átàs/ [átás] N 'spoon'

'/n
/átà'/ [átà'] N 'snail'
/átàn/ [átàn] N 'snare'

The phoneme /w/

/w/ is actualized as the voiced oral labio-velar sound or as a semi-vowel. It is attested mostly at word initial or intervocalic positions and never word finally. It is mostly found preceeding round back vowels. It owes its phonemic status to the following contrasts.

/w/m see m/w
/w(mb see mb/w
/w/p see p/w
/w/k see k/w
The phoneme /nd/

/nd/ is articulated as the pre-nasalized voiced alveolar stop. Though relatively rare, it is found word initially and intervocalically. It contrasts with its oral counterpart and other phonemes to prove its phonemic status.

\[\begin{array}{ll}
\text{nd} & /d/ \\
\text{nd/mb} & /mb/ \\
\text{nd/g} & /g/ \\
\text{nd/ny} & /ny/
\end{array}\]

The phoneme /pf/

It is actualized as the voiceless oral labio-dental affricate. Although attested word initially and intervocalically, it is a phoneme due to the following contrasts. It is realized \[\text{[bv]}\], i.e. voiced at initial position of closed single syllabic word.

\[\begin{array}{ll}
\text{pf/f} & /f/ \\
\text{pf/i} & /ipi/ \quad \text{Vb} \quad 'faint' \\
\text{pf/i} & /ij/ \quad \text{N} \quad 'nails' \\
\text{pf/f} & /apf/ \quad \text{N} \quad 'fainting fits' \\
\text{pf/f} & /aji/ \quad \text{N} \quad 'nail'
\end{array}\]

The phoneme /ts/

/\text{ts}/ is realized as the voiceless oral alveolar affricate. It is attested only at word initial and intervocalic positions. It owes its phonemic status to the following contrasts.
It is actualized as the voiced oral alveolar affricate and attested only at two word positions initial or inter-vocalic. Chances of meeting it in words are quite slim. It is also pre-nasalized at word initial position in closed, single syllabic words. The following contrasts render its phonemic status.

\[
\begin{align*}
ts/t & \text{ see } t/ts \\
ts/dz & \text{ see } [ts] \text{ Vb } \text{ 'pass'} \\
/dzɛm/ & [ndzɛm] \text{ Vb } \text{ 'sneeze'} \\
ts/c & \text{ see } [tsɛmtɛ] \text{ N } \text{ 'savior'} \\
/cɛmtɛ/ & [cɛmtɛ] \text{ N } \text{ 'help'} \\
/åtsi/ & [åtsi] \text{ N } \text{ 'round'} \\
/åci/ & [åci] \text{ N } \text{ 'stones'} \\
/sɔtsi/ & [sɔtsi] \text{ Adv. } \text{ 'plenty'} \\
/sɔcɪ/ & [sɔcɪ] \text{ N } \text{ 'leprosy'}
\end{align*}
\]

The phoneme /dz/
The phoneme /c/

/c/ is actualized as the voiceless oral pre-palatal affricate. Though relatively rare, it occurs word initially and intervocally only. It is due to the following contrasts that it is a phoneme.

\[
\begin{align*}
/c/ & \rightarrow /\text{ci}/ \quad \text{Vb} \quad 'spill, pour' \\
/c\text{w}/ & \rightarrow /\text{ci}\text{w}/ \quad \text{Vb} \quad 'open' \\
/c/ & \rightarrow \text{t/c} \\
/c/ & \rightarrow \text{dz/c} \\
/c/ & \rightarrow /\text{ci}/ \quad \text{Vb} \quad 'groan' \\
/\text{i}i/ & \rightarrow /\text{i}\text{i}\text{w}/ \quad \text{N} \quad 'a courtyard' \\
/c\text{e}/ & \rightarrow /\text{ce}/ \quad \text{Vb} \quad 'grind' \\
/j/ & \rightarrow /\text{n}\text{j}/ \quad \text{Vb} \quad 'sing' \\
/\text{i}c\text{u}/ & \rightarrow /\text{i}\text{c}\text{u}/ \quad \text{N} \quad 'mouth' \\
/\text{i}\text{j}/ & \rightarrow /\text{i}\text{j}/ \quad \text{N} \quad 'sun'
\end{align*}
\]

The phoneme /cw/

It is /c/ labialized. It is a phoneme because not only does it contrast with its non-labialized counterpart but also with other sounds.

\[
\begin{align*}
cw/c & \rightarrow \text{see} \quad c/\text{cw} \\
cw/\text{zh}/ & \rightarrow \text{see} \quad \text{zh}/cw
\end{align*}
\]
The phoneme /i/

It is factualized as the voiced pre-palatal oral affricate. It is realized word initially and intervocalically never finally. It is labialized when following and preceding [i] that carries a high tone.

Its phonemic status is a reality due to the following contrasts. It is pre-nasalized at word initial position in closed single syllabic words.

\[
\begin{align*}
\text{\textit{i/c}  & \text{ see } \textit{c/i}} \\
\text{\textit{i/dz} & \text{ see } \textit{dz/i}} \\
\text{\textit{i/pf} & \text{ see } \textit{pf/i}}
\end{align*}
\]
Mmen exhibits thirty-two consonant phonemes namely
- twenty seven basic consonant phonemes
- two pre-nasalized consonant phonemes
- three labialized consonant phonemes.

Phonemic chart.

There are consonant phonemes grouped into stops, nasals, fricatives, affricates, laterals and glides. Consonant contrast in Mmen functions mainly at word initial position and some few occasions at intervocalic position.

Although the language is not quite multisyllabic, it is sometimes difficult to find minimal pairs, clear indicators of phoneme so we have from time to time made use of available near minimal pairs whenever need be.
<table>
<thead>
<tr>
<th>Place of articulation</th>
<th>BILABIALS</th>
<th>LABIODENTALS</th>
<th>ALVEOLARS</th>
<th>PREPALATALS</th>
<th>PALATALS</th>
<th>VELARS</th>
<th>GLOTTALS</th>
<th>LABIOVELARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral stops</td>
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<td>p</td>
<td>t</td>
<td></td>
<td>k</td>
<td></td>
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<tr>
<td></td>
<td>vd</td>
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<td>n</td>
<td></td>
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<td>p</td>
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<td>Pre-nasalized stops</td>
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<td>nd</td>
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<td>zh</td>
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<td>c</td>
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</table>

Note: vl: voiceless
      vd: voiced.

Table 6.
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<tr>
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<th>Bilabials</th>
<th>Labiodentals</th>
<th>Alveolars</th>
<th>Pre-palatals</th>
<th>Palatals</th>
<th>Velars</th>
<th>Glottals</th>
<th>Labiovelars</th>
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<tr>
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<td>z</td>
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<td>x</td>
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<td></td>
<td></td>
<td>gh</td>
</tr>
<tr>
<td>Affricates</td>
<td>vl</td>
<td>pf</td>
<td>ts</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>vd</td>
<td>bv</td>
<td>dz</td>
<td></td>
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<tr>
<td>Lateral</td>
<td>vl</td>
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<tr>
<td></td>
<td>vd</td>
<td>l</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glides</td>
<td>vd</td>
<td></td>
<td></td>
<td>stop Fricative</td>
<td>Fricative</td>
<td>y</td>
<td></td>
<td>w</td>
</tr>
<tr>
<td>Labialized Sounds</td>
<td>vl</td>
<td>p&lt;sub&gt;W&lt;/sub&gt;</td>
<td>t&lt;sub&gt;W&lt;/sub&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vd</td>
<td></td>
<td>d&lt;sub&gt;W&lt;/sub&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-nasalized Sounds</td>
<td>vl</td>
<td>m&lt;sub&gt;p&lt;/sub&gt;</td>
<td>nt affricate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vd</td>
<td>mb</td>
<td>nd ndz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labialized and pre-nasalized Sounds</td>
<td>vl</td>
<td>m&lt;sub&gt;pW&lt;/sub&gt;</td>
<td>nd ndz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vd</td>
<td>m&lt;sub&gt;bW&lt;/sub&gt;</td>
<td>nd ndz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palatalized Sounds</td>
<td>vl</td>
<td>p&lt;sub&gt;Y&lt;/sub&gt;</td>
<td>f&lt;sub&gt;Y&lt;/sub&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vd</td>
<td></td>
<td>ny</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1.2. Vowels

Unlike consonants, vowels are produced without a constriction and are described according to position of tongue and lips and height of tongue.

Mmen exhibits vowels that are contrastive. These vowels could be oral, nasalized, they could be short.

1.2.1. Phonetic realization: The vowels do not have a restricted distribution in word of Mmen although most of them occur in prefixes and some in roots. Vowels like /i, u, e/ are frequently attested in the language.

Some vowels are nasalized in the environment of nasal. Otherwise most of them are oral.

The oral vowels are:

1. The following short vowels
   - The front unrounded high, mid, low short vowels
     [i, e, e] respectively
   - The central unrounded mid and low short vowels
     [e, a] respectively
   - The back rounded high, mid and low short vowels
     [u, o, o] respectively.
The nasalized vowels are:

- the high unrounded front vowel [í]
- the low unrounded front vowel [ë]
- the low unrounded central vowel [ã]
- the mid rounded back vowel [ɔ]
- the low rounded back vowel [ɔ]

No diphthong is nasalized.

Here follows the phonetic vowel chart of basic vowels sounds. They are classified according to:

1- The vertical columns the height of the tongue
   - High
   - Mid
   - Low

2- The horizontal columns; the position of tongue and lips
   - Front unrounded
   - Central unrounded
   - Back rounded.
**Phonetic basic vowels chart**

Mmen exhibits height (8) basic vowel sounds.

<table>
<thead>
<tr>
<th>POSITION OF TONGUE AND LIPS</th>
<th>FRONT UNRounded</th>
<th>CENTRAL UNRounded</th>
<th>BACK UNRounded</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEIGHT OF TONGUE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>MID</td>
<td>e</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>LOW</td>
<td>z</td>
<td>a</td>
<td>o</td>
</tr>
</tbody>
</table>

**Note:** All vowels here are voiced.

Table 7.

II.2.2. **Phonemic contrasts:** Through minimal pairs or near minimal pairs some vowels will be declared phonemes.

The phoneme /i/

/ɪ/ is actualized as the high oral front unrounded vowel in most environments and nasalized when preceding a nasal (the voiced velar stop mostly or the voiced alveolar stop). This is attested word initially, intervocally and finally contrasts with other vowels.

\[ /i/\]

/ɪ/ /ɪmbəs/ [ɪmbəs] soup'

/ébəs/ [ébəs] 'jama-jama soup'
The phoneme /e/
It is realized as the mid front oral unrounded vowel.
It is a phoneme on the basis of its contrasts with other vowels.
It is attested word initially, intervocally and finally.

/e/i  see  i/e

/e/c
/tē/ [tē]  Vb  'refuse'
/tē/ [tē]  Adj.  'expensive'
/lēsē/ [lēsē]  Vb  'forget'
/lēsē/ [lēsē]  Vb  'lie'

/e/a
/kēsē/ [kēsē]  Vb  'cough'
/kē'sē/ [kēsē]  Vb  'erase, cancel'
The phoneme /e/

It is realized as the mid front unrounded vowel. It is relatively rare at word initial position but very frequently attested at word intervocalic and final positions. Due to the following contrasts, it is a phoneme. It is nasalized when preceding a nasal.

\[\begin{array}{lll}
e/a & /\text{dē} \ [\text{dē}] & \text{N} & \text{'house'} \\
& /\text{dā} \ [\text{dā}] & \text{N} & \text{'village'} \\
& /\text{ādē} \ [\text{ādē}] & \text{N} & \text{'family'} \\
& /\text{ādā} \ [\text{ādā}] & \text{N} & \text{'scar'} \\
e/e & \text{see } e/c \\
e/o & /\text{ifē} \ [\text{ifē}] & \text{N} & \text{'cutlass'} \\
& /\text{ifō} \ [\text{ifō}] & \text{N} & \text{'gift'}
\end{array}\]

The phoneme /a/

/a/ is factualized as the low, central unrounded vowel. It occurs word initially, intervocally and finally. It is nasalized when preceding a nasal. It contrasts with its central counterpart and other sounds as such.

\[\begin{array}{lll}
a/e & /\text{āfā} \ [\text{āfā}] & \text{N} & \text{'lock'} \\
& /\text{āfō} \ [\text{āfō}] & \text{N} & \text{'skin'} \\
& /\text{āgē} \ [\text{āgē}] & \text{N} & \text{'antelope'} \\
& /\text{ōgē} \ [\text{ōgē}] & \text{N} & \text{'danger'} \\
\text{see } e/a \\
a/o & /\text{āzā} \ [\text{āzā}] & \text{N} & \text{'mushroom'} \\
& /\text{āzō} \ [\text{āzō}] & \text{Adj} & \text{'cold'}
\end{array}\]
The phoneme /ə/

It is considered as a phoneme because it contrasts with other vowels. It is actualized as the mid central oral unrounded vowel and is attested in all word positions. It is sometimes nasalized when preceding a nasal.

\[
\begin{align*}
\text{e/ə} & \quad \text{see} \quad \text{ə/ə} \\
\text{e/ɛ} & \quad \text{see} \quad \text{ɛ/ɛ}
\end{align*}
\]

The phoneme /u/

This phoneme is realized as the oral rounded high back vowel. It occurs at intervocalic and final positions, and is never attested at initial position. Due to the following contrasts, we conclude that it is a phoneme.

\[
\begin{align*}
\text{u/o} & \\
\text{/u/} & \quad \text{see} \quad \text{u/ u}
\end{align*}
\]

\[
\begin{align*}
/w/ & \\
\text{/ɪp̪u/} & \quad \text{[ɪp̪u]} \quad \text{N} \quad \text{'parcel'} \\
\text{/ɪp̪o/} & \quad \text{[ɪp̪o]} \quad \text{Adj.} \quad \text{'tired'} \\
\text{/ɪl̥u/} & \quad \text{[ɪl̥u]} \quad \text{N} \quad \text{'place'} \\
\text{/ɪl̥ɔ/} & \quad \text{[ɪl̥ɔ]} \quad \text{N} \quad \text{'curse'} \\
\text{u/ɔ} & \quad \text{see} \quad \text{u/ u}
\end{align*}
\]

\[
\begin{align*}
/w/ & \\
\text{/ɪf̪u/} & \quad \text{[ɪf̪u]} \quad \text{N} \quad \text{'basket'} \\
\text{/ɪf̪o/} & \quad \text{[ɪf̪o]} \quad \text{N} \quad \text{'gift'} \\
\text{/ɪk̪u/} & \quad \text{[ɪk̪u]} \quad \text{N} \quad \text{'death'} \\
\text{/ɪk̪o/} & \quad \text{[ɪk̪o]} \quad \text{N} \quad \text{'worth'} \\
\text{/ɪp̪u/} & \quad \text{[ɪp̪u]} \quad \text{N} \quad \text{'parcel'} \\
\text{/ɪp̪o'/} & \quad \text{[ɪk̪o]} \quad \text{N} \quad \text{'squash'}
\end{align*}
\]
The phoneme /o/

/o/ is realized as the mid back rounded vowel in most environments. It occupies the intervocalic and final positions and is never attested at initial position. It owes its phonemic status to the following contrasts. It is nasalized when preceding nasals.

\[
\begin{align*}
/\text{o}/ & \quad /\text{o}/ \\
\&/\text{i}\text{gō}/ \quad [\text{ɪgō}] & \quad \text{Adj.} & \quad \text{'dull'} \\
\&/\text{i}\text{gō}/ \quad [\text{ɪgō}] & \quad \text{Adj.} & \quad \text{'foolish'} \\
/\text{i}\text{pō}'/ \quad [\text{i}\text{pō}'] & \quad \text{N} & \quad \text{'squash'} \\
/\text{i}\text{pō}/ & \quad [\text{i}\text{pō}] & \quad \text{Adj.} & \quad \text{'weak, soft'}
\end{align*}
\]

\[
\begin{align*}
/\text{o}/ & \quad /\text{e}/ \\
\&/\text{u}/ & \quad \text{see} & \quad /\text{u}/ & \quad /\text{o}/
\end{align*}
\]

The phoneme /ə/ 

This phoneme is actualized as the oral low rounded back vowel. It is considered a phoneme on the basis of the following contrasts. It is attested word intervocalically and word finally and not at word initial position. It is nasalized when preceding a nasal.

\[
\begin{align*}
/\text{ə}/ & \quad /\text{u}/ & \quad \text{see} & \quad /\text{u}/ & \quad /\text{ə}/ \\
/\text{ə}/ & \quad /\text{o}/ & \quad \text{see} & \quad /\text{o}/ & \quad /\text{o}/
\end{align*}
\]

The phoneme /aː/
The General Phonetic Chart

Mcen has an inventory of thirteen vowel sounds namely:
- Eight 'basic' oral vowels
- Five nasalized vowels

<table>
<thead>
<tr>
<th>Position of Tongue and lips</th>
<th>FRONT UNROUND</th>
<th>CENTRAL UNROUND</th>
<th>BACK ROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height of Tongue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>MID</td>
<td>e</td>
<td>a</td>
<td>o</td>
</tr>
<tr>
<td>LOW</td>
<td>e</td>
<td>a</td>
<td>o</td>
</tr>
<tr>
<td>NASALIZED VOWELS</td>
<td>H</td>
<td>i</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>å</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: H = HIGH, M = MID, L = LOW
THE PHONETIC CHART

The language exhibits fourteen vowel phonemes namely:
- eight oral vowels

<table>
<thead>
<tr>
<th>POSITION OF TONGUE AND LIPS</th>
<th>FRONT UNROUND</th>
<th>CENTRAL UNROUND</th>
<th>BACK ROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEIGHT OF TONGUE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>MID</td>
<td>e</td>
<td>e</td>
<td>o</td>
</tr>
<tr>
<td>LOW</td>
<td>e</td>
<td>a</td>
<td>o</td>
</tr>
</tbody>
</table>

Note: see table 8.

Table 9.

From the above charts and analysis, we conclude that Mmen presents eight vowels but thirteen vowel sounds and eight vowel phonemes. Nasalized vowels are only attested as sounds.
1.3. Phoneme distribution in 'syllables'

There are eight syllable structures as has already been mentioned and discussed in Chapter One. They are:

- $V$
- $CV$
- $CCV$
- $CSV$
- $CVC$
- $CVV$
- $CVN$ where $N = \eta, m$
- $CSVC$

From the structure listed above, it has been observed that there is a maximum of two consonant positions in the syllable. It can also be observed that, but for, the $CVN$ structure and $CVC$ pattern, all the syllables are open.

The $V$ syllable constitutes prefixes mostly and the only vowels noticeable to possibly stand alone as syllables are the following: /i, e, å, ø, a/.

The $CV$ syllable structure is the most predominant. It is found attested in prefixes as well as in words.

It has already been noted that only closed syllable are $CVN$ and $C_{1}VC_{2}$ where $N = \eta, m$

where $C_{2} = m, n, ny, \nu, l, f, s, y, 'g$.

The $CVN$ structure is found either at morpheme final position or where there is a consonant cluster comprising a nasal velar or bilabial nasal stop and which is not homorganic with the following consonant. Here are some examples:

- **CVC structure**

<table>
<thead>
<tr>
<th>Examples</th>
<th>$N$</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/mbäm/</td>
<td>N</td>
<td>'snake'</td>
</tr>
<tr>
<td>/ndōm/</td>
<td>N</td>
<td>'husband'</td>
</tr>
<tr>
<td>/mbnuul/</td>
<td>N</td>
<td>'oil'</td>
</tr>
</tbody>
</table>
The CCV syllable pattern is one with a restricted distributional pattern. C₁ position can only be occupied by the following two consonants /t/ and /m/ while the C₂ position could be occupied by /d/, /z/, /ts/, /j/, /c/, /l/. We noted that these sounds were either alveolar or pre-palatal.

The only vowels which are found to occupy the vowel peak position are /i, e, a/. The following are examples:

- /átà́/ N 'snail'
- /nɔ́g/ Vb 'suck'
- /átsiá/ N 'stones used as fireside'
- /ípà́ny/ N 'hate'
- /ílù́ñ/ N 'bamboo'
- /ápà́y/ N 'pap'
- /átàn/ N 'snare'

- CVN structure

- /kàmnè/ Vb 'stir'
- /pìmǘ/ Vb 'roll'
- /tùnì/ N 'ear'
- /sànnè/ Vb 'discuss'

The following are examples:

- /àlin/ N 'stars'
- /àćí/ N 'soil'
- /mlé/ N 'wine'
- /tzèm/ Vb 'sniff'
- /mìjì́n/ N 'urine'
- /àtsí́l/ N 'pus'
- /àdè̀n/ N 'blood'
It should be noted that /z/ is only attested after /t/ as seen above.

- The CSV pattern is limited in occurrence. The position of the semi-vowel can be occupied by either /w/ or /y/.

/y/ appears in a comparatively restricted environment than /w/.

1. The semi-vowel /y/

From our data, it has been noticed that /y/ is attested at second position after the following phonemes
- the alveolar nasal stop /n/
- the velar nasal stop /ŋ/
- the voiceless bilabial plosive stop /p/
- the voiceless labio-dental fricative /f/
- the voiceless velar plosive stop /k/
- the voiceless velar fricative /x/
- the low unround oral central vowel /a/.

2. The semi-vowel /w/

It is more frequent than its palatal counterpart /y/. Although the CSV pattern is predictable as well as not predictable (see Chap. I case of labialization) /w/ has been occurring after
- oral stops
- fricatives
- lateral
- pre-nasalized stops.

In Mmen, the only sounds that are not labialized are nasals. There are indications that the front oral high unround vowel /i/ follows most labialized sounds but for the following three:
where we have either [a] or [e].

<table>
<thead>
<tr>
<th>Examples</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/zhw/ N</td>
<td>'wife'</td>
</tr>
<tr>
<td>/lwN/ Adj</td>
<td>'full'</td>
</tr>
<tr>
<td>/lwN/ Adj</td>
<td>'old'</td>
</tr>
<tr>
<td>/cN/ Vb</td>
<td>'open'</td>
</tr>
<tr>
<td>/gNlwN/ Vb</td>
<td>'twist'</td>
</tr>
<tr>
<td>/mbuzwN/ N</td>
<td>'nose'</td>
</tr>
<tr>
<td>/gnN/ N</td>
<td>'salt'</td>
</tr>
<tr>
<td>/mbw/ N</td>
<td>'shoulder'</td>
</tr>
<tr>
<td>/mbwN/ Adj</td>
<td>'oily'</td>
</tr>
<tr>
<td>/mpwN/ Vb</td>
<td>'reconcile'.</td>
</tr>
</tbody>
</table>

The following tables show the possible combinations of single consonants in syllable onset and vowels in syllable peak.

'Table 10' shows that the most regular vowels which follow almost all the consonants are [i, u, e, a]. We can therefore deduce that from what we have, attested, in table 11, the consonants which can combine with vowels to form CV prefixes are restricted. The following seven consonants are attested in prefixes.

<table>
<thead>
<tr>
<th>Consonants</th>
<th>Examples</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>/pété/ N</td>
<td>'male owner'</td>
</tr>
<tr>
<td>/m/</td>
<td>/móssN/ N</td>
<td>'head louses'</td>
</tr>
<tr>
<td>/w/</td>
<td>/wúpé/ N</td>
<td>'builder'</td>
</tr>
<tr>
<td>/ti/</td>
<td>/títéom/ N</td>
<td>'brain'</td>
</tr>
</tbody>
</table>
Consonants          Examples          gloss
/k/               /kǝwǝg/ Adj 'childish'
/f/               /fǝtsǝmǝ/ N 'pipe'
/v/               /vǝpǝ/ N 'orphan'
/s/               /sǝtsǝs/ Vb 'to punch'
/ny/              /nyǝdǝ/ N 'female host'

Given some coincidence between tables 10 and 11, some combinations are attested in roots as well as prefixes. These combinations are as below stated:

<table>
<thead>
<tr>
<th>Combinations</th>
<th>Examples</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/pe-/</td>
<td>/pǝtǝ/ N</td>
<td>'male owner'</td>
</tr>
<tr>
<td></td>
<td>/pǝdǝ/ N</td>
<td>'male host'</td>
</tr>
<tr>
<td>/mo-/</td>
<td>/mosǝs/ N</td>
<td>'head louses'</td>
</tr>
<tr>
<td></td>
<td>/mǝkǝny/ N</td>
<td>'gun powder'</td>
</tr>
<tr>
<td>/wu-/</td>
<td>/wupǝnǝ/ N</td>
<td>'dancer'</td>
</tr>
<tr>
<td></td>
<td>/wupǝ/ N</td>
<td>'builder'</td>
</tr>
<tr>
<td>/te-/</td>
<td>/tǝyǝm/ N</td>
<td>'furrow'</td>
</tr>
<tr>
<td></td>
<td>/tǝbǝg/ N</td>
<td>'tobacco'</td>
</tr>
<tr>
<td>/ko-/</td>
<td>/kǝwǝg/ Adj 'childish'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/kǝvaxǝ/ Adj 'ignorant, innocent'</td>
<td></td>
</tr>
<tr>
<td>/be-/</td>
<td>/bǝzǝǝg/ Adj 'sad'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/bǝmǝnǝ/ N 'sorrow'</td>
<td></td>
</tr>
<tr>
<td>/fe-/</td>
<td>/fǝtǝmǝ/ N 'bush cat'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/fǝsǝs/ N 'head louse'</td>
<td></td>
</tr>
<tr>
<td>/va-/</td>
<td>/vǝvainy/ N 'grand child'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/vǝtǝ/ N 'prince'</td>
<td></td>
</tr>
<tr>
<td>/si-</td>
<td>/sifatè/</td>
<td>Vb</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>----</td>
</tr>
<tr>
<td>/sikwàntè/</td>
<td>Vb</td>
<td>'to pull groundnuts'</td>
</tr>
<tr>
<td>/se-</td>
<td>/selzhlm/</td>
<td>Vb</td>
</tr>
<tr>
<td>/sà-</td>
<td>/sàssà/</td>
<td>Vb</td>
</tr>
<tr>
<td>/sèkàñ/</td>
<td>Vb</td>
<td>'to fry'</td>
</tr>
<tr>
<td>/nyè/</td>
<td>/nyètè/</td>
<td>N</td>
</tr>
<tr>
<td>/nyèdè/</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

The following are tables 10 and 11 respectively where 'basic sounds (phones)' are considered not phonemes (although all but for [b]v are phonemes).
<table>
<thead>
<tr>
<th>Roots</th>
<th>i</th>
<th>e</th>
<th>a</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
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<td>+</td>
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<td>+</td>
</tr>
<tr>
<td>b</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>t</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
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<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>k</td>
<td>+</td>
<td>+</td>
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<td>+</td>
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</tr>
<tr>
<td>g</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>m</td>
<td>+</td>
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<td>+</td>
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</tr>
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</tr>
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<td>+</td>
<td>-</td>
</tr>
<tr>
<td>nŋ</td>
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<td>-</td>
<td>+</td>
<td>+</td>
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<td>+</td>
</tr>
<tr>
<td>v</td>
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<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>s</td>
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<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>z</td>
<td>+</td>
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<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>sh</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>zh</td>
<td>+</td>
<td>-</td>
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</tr>
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<td>x</td>
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<td>-</td>
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<td>gh</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>pf</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>bv</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ts</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>dz</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>c</td>
<td>+</td>
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<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>j</td>
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<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>l</td>
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<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>y</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>w</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

**Vowels in syllable**

**Peak**

**Note:** ' + ' indicates an attested combination.

' - ' indicates lack of such a combination.

Table 10.
### Table 11.

<table>
<thead>
<tr>
<th>i</th>
<th>e</th>
<th>ε</th>
<th>θ</th>
<th>a</th>
<th>o</th>
<th>u</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>w</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>m</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>t</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>k</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>f</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>v</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>s</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ny</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:** see 'table 10'

**Vowels in syllable peak.**
SYLLABLE STRUCTURE AND PROBLEMS
OF INTERPRETATION

Use has been made in this piece of work of the General
Alphabet of Cameroon languages for the phonetic transcription.

The Mmen sound system is characterized by consonants and
vowels (mostly short ones) and a number of diphthongs. It
should be noted that some consonants could be voiced or voice-
less, oral or nasal and the vowels could be oral, nasalized
or long. The above mentioned segments which will be described
in later sections of this study combine to form a number of
syllable types.

Although the most predominant syllable pattern in the
language (as is the case in most languages of the Western
Grassfields Bantu) is the CV pattern, Mmen presents all toge-
ther a number of syllable patterns.

I.1. Syllable structure

There are basically eight syllable patterns in Mmen lan-
guage. The following transcriptions illustrate the various
patterns.
<table>
<thead>
<tr>
<th>Syllable patterns</th>
<th>Examples</th>
<th>Gloss</th>
<th>Word patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>/f-f̥/ N</td>
<td>'medicine'</td>
<td>V. CV</td>
</tr>
<tr>
<td></td>
<td>/a-pf̥/ N</td>
<td>'fainting fits'</td>
<td>V. CV</td>
</tr>
<tr>
<td>CV</td>
<td>/wa-pé/ N</td>
<td>'builder'</td>
<td>CV. CV</td>
</tr>
<tr>
<td></td>
<td>/nyámë/ N</td>
<td>'meat'</td>
<td>CV. CV</td>
</tr>
<tr>
<td>CCV</td>
<td>/mímë/ N</td>
<td>'wine'</td>
<td>CCV</td>
</tr>
<tr>
<td></td>
<td>/m mó/ N</td>
<td>'female antelope'</td>
<td>CCV</td>
</tr>
<tr>
<td>CVC</td>
<td>/nyúng/ N</td>
<td>'hair'</td>
<td>CVC</td>
</tr>
<tr>
<td></td>
<td>/n dóm/ N</td>
<td>'husband'</td>
<td>CVC</td>
</tr>
<tr>
<td>CVN</td>
<td>/piúñí/ N</td>
<td>'roll'</td>
<td>CVN. CV</td>
</tr>
<tr>
<td></td>
<td>/túñí/ N</td>
<td>'ear'</td>
<td>CVN. CV</td>
</tr>
<tr>
<td>CSV</td>
<td>/ðgúlí/ Vb</td>
<td>'twist'</td>
<td>CSV. CV</td>
</tr>
<tr>
<td></td>
<td>/mbwókō/ N</td>
<td>'chimpanzees'</td>
<td>CSV. CV</td>
</tr>
<tr>
<td></td>
<td>/ńyá/ N</td>
<td>'iron'</td>
<td>CSV</td>
</tr>
<tr>
<td>CSVC</td>
<td>/mbwúl/ N</td>
<td>'oil'</td>
<td>CSV. VC</td>
</tr>
<tr>
<td></td>
<td>/mbwúl/ Adj.</td>
<td>'oily'</td>
<td>CSV. VC</td>
</tr>
<tr>
<td>CVV</td>
<td>/pūà/ N</td>
<td>'father'</td>
<td>CVV</td>
</tr>
<tr>
<td></td>
<td>/wìà/ N</td>
<td>'cup'</td>
<td>CVV</td>
</tr>
</tbody>
</table>

The final consonant in a closed syllable can either be

a) the nasals i.e.
   - the bilabial stop [m],
   - the alveolar stop [n],
   - the palatal stop [ńy],
   - the velar stop [ń]

b) the following oral stops
   - the glottal [ʔ]
   - the voiced velar [g]

It should be noted that these oral stops are rare in
Mmen and rarely do they occur at word final position.

C) the following fricatives:
- the oral voiceless alveolar \[s\] fricative

d) the below mentioned lateral:
- the oral alveolar lateral \[l\]

e) the following glide:
- the oral palatal glide \[y\]

The glide is however rare in word final position. The following are examples to illustrate the above assertion.

<table>
<thead>
<tr>
<th>The nasals</th>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/m/</td>
<td>[mb̥m]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>[ʌkɔm]</td>
<td>N</td>
</tr>
<tr>
<td>/ŋ/</td>
<td>[ʌŋ̥ŋ]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>[ɛvŋ̥ŋ]</td>
<td>N</td>
</tr>
<tr>
<td>/n/</td>
<td>[ikwín]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>[ɕcin]</td>
<td>N</td>
</tr>
<tr>
<td>/ɲ/</td>
<td>[kɔny]</td>
<td>Vb</td>
</tr>
<tr>
<td></td>
<td>[uŋ̥ŋ̥ny]</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The fricatives</th>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ʃ/</td>
<td>[ip̥ʃ]</td>
<td>Adj.</td>
</tr>
<tr>
<td></td>
<td>[k̥f]</td>
<td>N.</td>
</tr>
<tr>
<td>/s/</td>
<td>[ag̥s]</td>
<td>N.</td>
</tr>
<tr>
<td></td>
<td>[ik̥s]</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The oral stops</th>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/t/</td>
<td>[idɔ́]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>[id̥ɔ́]</td>
<td>N</td>
</tr>
<tr>
<td>/g/</td>
<td>[ŋɔg̊]</td>
<td>Vb</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The lateral</th>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/l/</td>
<td>[ʌpɔ̃l]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>[kʊl]</td>
<td>N</td>
</tr>
<tr>
<td>The glide</td>
<td>Examples</td>
<td>Gloss</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>/y/</td>
<td>[şp̟̃j]</td>
<td>'pap'</td>
</tr>
<tr>
<td></td>
<td>[s̟̃şj]</td>
<td>'to nail'</td>
</tr>
</tbody>
</table>

The CSV pattern results from labialization or palatalization that is not predictable in some cases. This is due to the presence of the semi-vowel [w] or [y] after oral stops, pre-nasalized stops, fricatives or laterals i.e.

a) after /p, t, d, k, g/

<table>
<thead>
<tr>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>[mp̟̃wš]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>'pimples'</td>
</tr>
<tr>
<td>[pwitə]</td>
<td>N or Vb</td>
</tr>
<tr>
<td></td>
<td>'caress'</td>
</tr>
<tr>
<td>[pys]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>'delivery'</td>
</tr>
<tr>
<td></td>
<td>'rude'</td>
</tr>
<tr>
<td>[t̟̃wi]</td>
<td>Adj.</td>
</tr>
<tr>
<td></td>
<td>'old'</td>
</tr>
<tr>
<td>[dwišə]</td>
<td>Adj.</td>
</tr>
<tr>
<td></td>
<td>'awaken'</td>
</tr>
<tr>
<td>[t̟̃añ̟d̟̃wi]</td>
<td>Adv.</td>
</tr>
<tr>
<td></td>
<td>'suddenly'</td>
</tr>
<tr>
<td>[kw̟̃mb̟̃]</td>
<td>Vb</td>
</tr>
<tr>
<td></td>
<td>'wonder'</td>
</tr>
<tr>
<td>[skys]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>'voice'</td>
</tr>
<tr>
<td>[kw̟̃atə]</td>
<td>Vb</td>
</tr>
<tr>
<td></td>
<td>'think'</td>
</tr>
<tr>
<td>[s̟̃g̟̃w̟̃]</td>
<td>Vb</td>
</tr>
<tr>
<td></td>
<td>'salty'</td>
</tr>
</tbody>
</table>

b) after pre-nasalized voiced stop /b, g/ 

<table>
<thead>
<tr>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>[mbw̟̃]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>'shoulder'</td>
</tr>
<tr>
<td>[mbw̟̃l]</td>
<td>adj.</td>
</tr>
<tr>
<td></td>
<td>'oily'</td>
</tr>
<tr>
<td>[ngw̟̃l]</td>
<td>Vb</td>
</tr>
<tr>
<td></td>
<td>'twist'</td>
</tr>
</tbody>
</table>

c) after the fricative /zh, x/ 

<table>
<thead>
<tr>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>[zhwi]</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>'wife'</td>
</tr>
</tbody>
</table>
[zhwísë] Vb 'breathe'
[6xv̚ë] N 'people, crowd'

d) after the affricates /c, j/
[lc̢w̚i] Vb 'men'
[lɪ̊jw̚i] N 'courtyard'

e) after the lateral
[lw̚iŋ] Adv. 'full'

The CSV pattern can also result from labialization that is predictable. This is due to the presence of the semi-vowel [w] after some stops but before the high oral round and back vowel [u]. This type of labialization is much more rare than the non-predictable one in the language.

Some examples of predictable labialization

<table>
<thead>
<tr>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>[lidw̚uŋ] N</td>
<td>'stomach'</td>
</tr>
<tr>
<td>[pũnye] Adj.</td>
<td>'cheap'</td>
</tr>
<tr>
<td>[w̚ukwáj] N</td>
<td>'traveller'</td>
</tr>
<tr>
<td>[mũb̚úl] N</td>
<td>'oil'</td>
</tr>
</tbody>
</table>

In Mmän, a syllable can be short and open (/t̚e/ Adj. 'expensive' - /f̚e/ Adv. 'there'), long and open (/lũ̚o/ N 'bridge' - /dũ̚o/ Vb 'go'), or closed (/mb̚am/ N 'snake' - /ŋãm/ N 'week').

- Av₁ V₂ sequence in Mmän can consist of

  1- two like vowels:

  e.g. /z̚aŋ/ Vb 'allow' (or záŋ)
  /z̚₆̌/ Vb 'quarrel' (or z₆ì)

  in which case we speak of a long vowel or of
2- two unlike vowels

e.g. /pə̂a/ Adj. 'loud'
    /cuə̂/ N 'sample'
    /pə̂̄a/ N 'say'

in which case we speak of a diphthong. Both cases are treated below.

It should be noted that there are rarely syllables consisting of a \(V_1 V_2\) sequence followed by a consonant. Here are some rare exceptions.

/á̂tə̂n/ N. 'pan'
/ítə̂f/ Adj. 'poor'
/átə̂f/ N. 'belch'

- The CVC pattern

The CVC pattern is quite limited in occurrence. The \(C_1\) position can only be occupied by oral stops or pre-nasalized stops. The only vowels which have been found to occupy the vowel peak position are the central vowels /a, e/ or the high vowels /i, u/.

e.g. /gə̂m/ N 'week'
     /ndə̂m/ N 'life'
     /tə̂m/ Vb 'dig or shoot'
     /pə̂u/ Vb or N 'slap'

It should be noted that this syllable pattern is very frequent in a single syllabic word and this word is usually a closed syllabic type.

There does exist a syllabic nasal in the language i.e. /m/. It is different from the other nasals in that it is syllabic and thus carries a tone. In Mmcn the tone is either
low or mid. This syllabic nasal appears mostly in nouns and in rare occasions in verbs.

e.g.

/stat/ N 'pus'
/stat/ Vb 'tear'
/stat/ N 'soil'
/stat/ N 'wine'

The syllabic nasal /m/ is found in closed syllabic words as well as in open syllabic words. It is attested only at word initial position and is realized before either the following alveolars or pre-palatals.

1. Alveolars
   - voiceless oral alveolar affricate [ts]
     /st/ N 'pus'
   - voiceless oral alveolar fricative [s]
     /st/ Vb 'tear'
   - voiced oral lateral [l]
     /sl/ N 'wine'

2. Pre-palatals
   - voiceless oral pre-palatal affricate [c]
     /st/ N 'female antelope'
   - voiced oral pre-palatal affricate [j]
     /sj/ N 'urine'

It should be remarked that while the syllabic nasal /m/ carries a mid or low tone, the syllable next to it carries a high tone.
However, the cases of us finding syllabic nasals are quite slim. They are not as frequent in words and syllables as the non-syllabic nasals.

In light of the above interpretations, the basic CV syllable pattern is maintained as the norm.

Abstracting the features of labialization, palatalization and pre-nasalization as prosodies of the syllable greatly simplifies the overall analysis and reduces to a relatively simple form what would otherwise be a large number of complex consonant clusters (Roger Mohrlang in Studies in Nigerian Languages No. 2, 1972).

II.2. Interpretation problems

There do exist also two sound segments occurring in a word which could be broken down into two parts and each part conveying a meaning as attested below.

\[\text{e.g. } \text{Lágiúdumù} \quad \text{N} \quad \text{elder brother} \]
\[\text{[lági]} \quad \text{‘brother’} \]
\[\text{[dumù]} \quad \text{might mean ‘grown’} \]
\[\text{[ú]} \quad \text{might mean ‘who’} \]

In a word-to-word translation the above word might stand for ‘brother who is grown’. This word [áglúdumù], broken into two with every separate part a meaning, portrays the fact that [liu] is just the combination of separate sound segments with each representing a distinct entity i.e. [i] different from [u].

In another instance, two vowels could occur together as the result of the reduplication of morphemes in certain words.
There are some situations of vowels occurring together which do not fit into the above mentioned illustrations.

Each of the two vowels carry tone and the tones are different in as much as one is low and the other one high or vice-versa.

The feeling we derive is that each of them may belong to a different syllable and it is therefore not far from the point if one concludes that there existed a consonant on the second syllable that has been omitted probably in rapid speech.

The consonant which is likely to fit at this position is the palatal glide [\v].

In this case, the words could be represented as such:

\[
\begin{align*}
&\text{[siti\text{\textdia}}] \quad \text{Adv} \quad \text{\textquotesingle low\textquotesingle} \\
&\text{[\textsi\text{\textdia}}] \quad \text{Adv} \quad \text{\textquotesingle far\textquotesingle} \\
&\text{[p\text{\textdia}\text{\textdia\textdia}] \quad \text{Vb} \quad \text{\textquotesingle pack\textquotesingle}
\end{align*}
\]

This is another proof confirming the predominance of CV syllable pattern over the other patterns in M'mn language.

I.2.4. Labialization: It is represented by the labio-velar glide [\w]. Labialization prosody in M'mn is at the same time a distinctive and a non-distinctive feature.

a) Labialization as a distinctive feature: We have noticed a few cases where labialization can be considered as a distinctive feature and thus rendering the labialized as well as the non-labialized sounds the status of separate
phonemes from each other. In this case, labialized consonants and their non-labialized counterparts form minimal pairs.

Here are some examples to illustrate the above mentioned assertion.

<table>
<thead>
<tr>
<th>C</th>
<th>Cw</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ci/</td>
<td>Vb</td>
</tr>
<tr>
<td>/cw/</td>
<td>Vb</td>
</tr>
</tbody>
</table>

zh / zhw
- [zh] Vb 'eat, win'
- [zhw] N 'wife'

k / kw
- [kā] N 'lie'
- [kwā] N 'boundary'
- [ikē] N 'money'
- [ikwē] N 'arms'

Apart from these rare cases of labialization as a distinctive feature, labialization is also (and most of the time when attested in Mmen) a non distinctive feature.

b) Labialization as non distinctive

1. but predictable feature

It is a non distinctive feature for, labialized consonants are in complementary distribution with their non-labialized counterparts.

It is not a common phenomenon in our language of study and so far few consonants could be labialized as already mentioned under CSV syllable pattern (1.1). The following consonants are labialized in syllables when followed especially by the oral back high and round vowel [u] / p, d, k/. These sounds are oral stops.

/p/ --> [pw] /__u
- e.g. [p'wē] Vb 'sleep'

/d/ --> [dw] /__u
There has been noticed a case of predictable labialized pre-nasalized stop.

\( /\text{mb}/ \rightarrow [\text{mbwb}] /_u\)

\(e.g. \quad [\text{mbwul}] \quad N \quad 'oil'\)

These consonants are non-distinctive and quite predictable because found before \([u]\). They are \([\text{pw}, \text{dw}, \text{kw}, \text{mbw}]\).

The rule of predictable labialization is only applicable to \(/p, k, d, mb/\). A general rule could be derived whereby the four sounds would be included.

It should be noted that \(/p, mb, d, k/\) are found labialized in the cases above mentioned and remain non-labialized elsewhere even if for the case of \([p, d, k]\) found in front of \([u]\) as is the case in

\(\text{Lapùj} \quad N \quad 'hole'\)

\(\text{Ldùš} \quad Vb \quad 'go'\)

\(\text{Ląřúdũmà} \quad N \quad 'elder brother'\)

\(\text{Łuł} \quad N \quad 'rope'\)

2. Non Distinctive and non predictable feature

There is a case of labialization that is non predictable (and non distinctive) as is the case above mentioned. This has been already noted under syllable structure as CSV pattern with no much details. This type of labialization is mostly found

- at word initial syllables when followed by \(/i, e, ø, a/\) which are either central or front vowels but all unrounded vowels. Here are the following affected consonants:
The following rules could respectively be derived.

1. /k/ \(\rightarrow\) \([k\text{w}]\) / --\([\varepsilon, a]\)

2. /\(\varepsilon/\) \(\rightarrow\) \([g\text{w}]\) / --\([\varepsilon]\)

3. /mb/ \(\rightarrow\) \([mb\text{w}]\) / --\([a, e]\)

4. /dg/ \(\rightarrow\) \([dg\text{w}]\) / --\([i]\)

5. /d/ \(\rightarrow\) \([d\text{w}]\) / --\([i]\)

6. /z/ \(\rightarrow\) \([z\text{w}]\) / --\([i]\)

7. /l/ \(\rightarrow\) \([l\text{w}]\) / --\([i]\)

- at word intervocalic position when followed by /\(\varepsilon, i/\.

The consonants that are affected by the secondary articulation are /p, t, zh/.

<table>
<thead>
<tr>
<th>Examples</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>([f\text{ep\text{w}\varepsilon}])</td>
<td>'pimple'</td>
</tr>
<tr>
<td>([l\text{it\text{w}i\varepsilon}])</td>
<td>'old'</td>
</tr>
<tr>
<td>([\text{aw}&quot;\text{aw}\text{w}\varepsilon])</td>
<td>'widow'</td>
</tr>
</tbody>
</table>
One could derive the following rule.

1. /p/ \(\rightarrow\) \([p^w]\) /e -- a
2. /t/ \(\rightarrow\) \([t^w]\) /i -- i
3. /zh/ \(\rightarrow\) \([zh^w]\) /a -- i

We notice that all these vowels are either high /i/, mid /ə/ or low /a/ but that all the three are unround.

Examples | Gloss
---|---
2. \([basik^w]\) N | 'jama jama soup'
\([ik^w]\) N | 'gorillas'

Rule.
3. \([tanad^w]\) Adv | 'suddenly'

Rule.
4. \([mbuz^w]\) N | 'nose'

Rule.

II.2.2. Palatalization: Like labialization (in some cases), palatalization is a non-distinctive prosody. It presents a phonetic status in Mmm and is quite rare. When a sound is palatalized, \([y]\) that marks the second articulation is articulated simultaneously with the consonant as an integral part of the phoneme itself.

Palatalized consonants (though rare) are in complementary distribution with their non-palatalized counterparts. The following six consonants undergo the said conditioning /p, k, n, y, f, x/. It should be noted that all these sounds are found at root initial position.
However one is tempted to say that /f/ and /v/ form a minimal pair but that is not the case as the tone of the second vowel posed a problem i.e. in one case it is low while in the other it is high.

\[
\begin{align*}
\text{[s+t]} & \quad \text{N} \quad \text{'hoe'} \\
\text{[s+y]} & \quad \text{N} \quad \text{‘hill’}
\end{align*}
\]

The following examples portray palatalization in Mmen language.

<table>
<thead>
<tr>
<th>Examples</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/l’pYe/</td>
<td>N ‘delivery’</td>
</tr>
<tr>
<td>/l’kYQ/</td>
<td>N ‘voice’</td>
</tr>
<tr>
<td>/nY&amp;/</td>
<td>N ‘iron’</td>
</tr>
<tr>
<td>/nYänë/</td>
<td>Vb ‘crawl’</td>
</tr>
<tr>
<td>/sIfYë/</td>
<td>N ‘hill’</td>
</tr>
<tr>
<td>/sxyë/</td>
<td>N ‘people’</td>
</tr>
</tbody>
</table>

The tone of the syllable that is affected by palatalization carries a high tone as noticed above. The words above are nouns but for one that is a verb. Put aside the nasals [n, r] all the other sounds namely the stops [p, k], the fricatives [f, x] are voiceless.

Not only consonants undergo palatalization. The following low central oral unround vowel [a] undergoes the conditioning

- at \( V_1 \) position between alveolar nasal stop [n] at \( C_1 \) and \( C_2 \) positions.
- at \( V_1 \) position between alveolar nasal stop [n] and alveolar oral voiceless stop [t] at \( C_1 \) and \( C_2 \) positions respectively.
e.g. [naɪn] vb 'look'
[naɪtəm] N 'queen'

It should be noted that [ŋ] and [t̪] are alveolar sounds so one could conclude that [a] is palatalized between alveolar sounds.

We noticed however that the vowels that follow the palatalized consonants are either [e] or [æ] which are respectively the mid, oral, unround central vowel and the low, oral unround central vowel. These are the only central vowels found in our language of analysis as will be proven in later sections.

One could conclude that
1- palatalized consonants are all followed by unround central vowels.
2- palatalized oral consonants are followed by [æ].
3- palatalized nasals are followed by [æ].
4- Only alveolar and velar nasal stops [n, ɳ], labial voiceless [p, f] or voiceless velar [k, x] could be palatalized at root initial position.
5- The palatalized vowel [aɪ] is attested at intervocalic position between alveolar sounds [t̪, n].

The following rules could be derived.
1. /p, k, f, x/ --- [pɪ, kɪ, fɪ, xɪ] / —w  respectively
2. /n, ɳ/ --- [nɪ, ɳɪ] /—a  respectively
3. /a/ --- [aɪ] / [n] — [t̪, n]
II.2.3. **Pre-nasalization:** A pre-nasalized consonant is a sequence of a nasal plus another stop. It is necessary to determine whether the said sound constitutes a single sound or two sound segments.

There is more evidence for considering the pre-nasalized consonants we have here as single sound segments. In Mmen one finds only one syllabic nasal [m] that carries either a high or mid tone (as mentioned in I.1). Though analysed under segmental phonology here are the pre-nasalized consonants.

It should be noted that some of these prenasalized consonants could be labialized. The two prosodies attested on the same sound segment could be predictable or not predictable.

<table>
<thead>
<tr>
<th>sounds</th>
<th>examples</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>[mp]</td>
<td>[mpwaŋ]</td>
<td>N</td>
</tr>
<tr>
<td>[mb]</td>
<td>[mbaŋ]</td>
<td>N</td>
</tr>
<tr>
<td>[nt]</td>
<td>[ntɛnsi]</td>
<td>Vb</td>
</tr>
<tr>
<td>[nd]</td>
<td>[ndàiŋ]</td>
<td>Adv</td>
</tr>
<tr>
<td>[ndz]</td>
<td>[ndzeŋ]</td>
<td>Vb</td>
</tr>
<tr>
<td>[nj]</td>
<td>[njɛm]</td>
<td>Vb</td>
</tr>
<tr>
<td>[ŋg]</td>
<td>[ŋgáŋy]</td>
<td>N</td>
</tr>
</tbody>
</table>

The following chart shows the occurrence of pre-nasalization prosody with the basic consonants. It should be noted however that the language presents

- **five pre-nasalized stops namely**
- the two bilabial stops (both voiceless and voiced [p, b])
- the two alveolar stops (both voiceless and voiced [t, d])
- the voiced velar stop [ŋ]
- the voiced alveolar affricate [dz]
- the voiced pre-palatal affricate [j]

All together Mmen presents a list of seven pre-nasalized sounds.

It should be noted that only some stops and affricates are affected by the given prosody.

**Pre-nasalized consonants chart.**

The following chart portrays the distribution of pre-nasalization prosody with the basic consonants at their various points of articulation when pre-nasalized namely bilabial, alveolar, pre-palatal and velar.

1.2.5. **Affricates**: /pf, bv, ts, dz, c, j/ are the six affricates found in Mmen. They are interpreted as functioning as single phonemic units rather than as sequences of two units of consonants on the following basis:

a)- no cases of reverse sequences fp, vb, st, zd, sht, zh occur.

b)- analyzing these affricates as single segments fitting the CV pattern analysis simplifies the description of the syllable although there exists a CCV syllable pattern in the language.

It should be noted that [c] and [j] are the combination of alveolar stop [t] and the pre-palatal fricative [sh] on the one hand and the alveolar stop [d] and the pre-palatal fricative [zh] on the other hand.

Detailed analysis of the affricates will be seen while treating segmental phonology.

The following are examples with affricates.
<table>
<thead>
<tr>
<th>sounds</th>
<th>examples</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/pf/</td>
<td>[ápfɛ]</td>
<td>'fainting fits'</td>
</tr>
<tr>
<td>/bv/</td>
<td>[b vrɛ]</td>
<td>'ask'</td>
</tr>
<tr>
<td>/ts/</td>
<td>[tsitɛ]</td>
<td>'praise'</td>
</tr>
<tr>
<td>/dz/</td>
<td>[d zɔ ]</td>
<td>'noise'</td>
</tr>
<tr>
<td>/c/</td>
<td>[ci]</td>
<td>'pour, spill'</td>
</tr>
<tr>
<td>/j/</td>
<td>[ glym ]</td>
<td>'axe'</td>
</tr>
</tbody>
</table>

There is a possibility in Mnêm to have pre-nasalized consonants labialized. This is not predictable but worthy of noting. They are found at word initial position. There are [mpw, mbw, ngw].

It should be remarked that although affricates could either be labialized or pre-nasalized only the two bilabial stops [p, b] could be labialized as well as the voiced velar stop [g].

Although they do not contrast with their labialized or pre-nasalized counterparts, they could be considered (while still to be treated in later sections) not as separate phonemes but as being in complementary distribution with the latter.
CHAPTER THREE

SUPRASEGMENTAL PHONOLOGY

Some important features like vowel length and tone will be examined in this chapter.

Mmen like Aghem or many other Western grassfields languages is a tone language. It is a language in which both segmental and pitch phonemes, otherwise known as tones, go into the composition of words.

It is known that in tone languages, words could either be distinguished on the basis of segments or/and tones; Mmen is no exception.

The tones attested in the language are in some cases contrastive.

III.1. Vowel length.

Vowel length in Mmen has a phonetic status and a phonological status in some cases.

III.2. Tones

There are principally five tones in Mmen namely

- the high tone [\] 
- the mid tone [\] 
- the low tone [\] 
- the rising tone [\] 
- the falling tone [\]
### Tones

<table>
<thead>
<tr>
<th>Tones</th>
<th>Examples</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (H)</td>
<td>/ká'/</td>
<td>Vb 'hatch'</td>
</tr>
<tr>
<td></td>
<td>/gê/</td>
<td>Vb 'coil'</td>
</tr>
<tr>
<td>Mid (M)</td>
<td>/piê/</td>
<td>N 'say'</td>
</tr>
<tr>
<td></td>
<td>/pêa/</td>
<td>Adj. 'loud'</td>
</tr>
<tr>
<td>Low (L)</td>
<td>/pûs/</td>
<td>Vb or N 'slap'</td>
</tr>
<tr>
<td></td>
<td>/mbêm/</td>
<td>N 'snake'</td>
</tr>
<tr>
<td>Rising (LH)</td>
<td>/kê/</td>
<td>Vb 'cut'</td>
</tr>
<tr>
<td></td>
<td>/teê/</td>
<td>Vb 'pass'</td>
</tr>
<tr>
<td>Falling (HL)</td>
<td>/kê/</td>
<td>N 'shell'</td>
</tr>
<tr>
<td></td>
<td>/gê/</td>
<td>N 'burden'</td>
</tr>
</tbody>
</table>

### III.2.1. Phonemic tone contrast

Each syllable carries one of the five contrastive tones above mentioned occurring in the language. The falling and the rising tones occur less frequently than either of the other three tones while the high and low are much more attested than all.

If one could count the frequency of occurrence, one might say these two tones (the rising and the falling tones) are attested in barely one per cent of the total vocabulary.

Although rare, they can convey different meaning when attested in a syllable.

The following tone contrasts are attested in the given minimal pairs.

**High/Low**

<table>
<thead>
<tr>
<th></th>
<th>Vb</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>/pêy/</td>
<td></td>
<td>'appear'</td>
</tr>
<tr>
<td>/pêy/</td>
<td>N</td>
<td>'pap'</td>
</tr>
<tr>
<td>Phoneme</td>
<td>Part of Speech</td>
<td>Gloss</td>
</tr>
<tr>
<td>----------</td>
<td>----------------</td>
<td>---------</td>
</tr>
<tr>
<td>/ɪʃ/</td>
<td>Vb</td>
<td>'groan'</td>
</tr>
<tr>
<td>/ɪʃ/</td>
<td>N</td>
<td>'stone'</td>
</tr>
<tr>
<td>/ɪkɑ/</td>
<td>N</td>
<td>'death'</td>
</tr>
<tr>
<td>/ɪkɑ/</td>
<td>Vb</td>
<td>'arrest'</td>
</tr>
</tbody>
</table>

**Falling/high**

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Part of Speech</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɪmʊl/</td>
<td>Vb</td>
<td>'swell'</td>
</tr>
<tr>
<td>/ɪmʊl/</td>
<td>N</td>
<td>'swelling'</td>
</tr>
<tr>
<td>/kɑ/</td>
<td>N</td>
<td>'shell'</td>
</tr>
<tr>
<td>/kɑ/</td>
<td>Vb</td>
<td>'hatch'</td>
</tr>
</tbody>
</table>

**Falling/low**

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Part of Speech</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɑɬɛ/</td>
<td>Adj</td>
<td>'poor'</td>
</tr>
<tr>
<td>/ɑɬɛ/</td>
<td>N</td>
<td>'poverty'</td>
</tr>
</tbody>
</table>

**Falling/rising**

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Part of Speech</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/kɑ/</td>
<td>N</td>
<td>'shell'</td>
</tr>
<tr>
<td>/kɑ/</td>
<td>Vb</td>
<td>'cut'</td>
</tr>
</tbody>
</table>

**Rising/high**

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Part of Speech</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ɑpɑ/</td>
<td>N</td>
<td>'umbrella'</td>
</tr>
<tr>
<td>/ɑpɑ/ [lɑpɑ]</td>
<td>N</td>
<td>'leftovers'</td>
</tr>
</tbody>
</table>

There are cases of the rising tone being not contrastive and this is very frequently attested when the said tone does occur.

<table>
<thead>
<tr>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/mbwɑ/</td>
<td>'shoulder'</td>
</tr>
<tr>
<td>/ɪxɑlɛ/</td>
<td>'teach'</td>
</tr>
<tr>
<td>/ɪxɑlɛ/</td>
<td>'rib'</td>
</tr>
<tr>
<td>/ɪmɑ/</td>
<td>'swee'</td>
</tr>
</tbody>
</table>
With the following near minimal pairs, there seem to exist such combinations whereby two different tones could be attested on separate syllables of the same word and be contrastive.

<table>
<thead>
<tr>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/tīm/</td>
<td>Vb</td>
</tr>
<tr>
<td>/tīś/</td>
<td>Adj.</td>
</tr>
<tr>
<td>/ātī́/</td>
<td>N</td>
</tr>
<tr>
<td>/ītī́́f/</td>
<td>Adj.</td>
</tr>
</tbody>
</table>

This analysis of the existing tones of Mmen not only confirms the language as a tone language but renders the fact that tones pertinence and distinctiveness is a reality.

The mid tone which has not been attested as distinctive mostly occurs in prefixes.

### III.2.2. Lexical tone

Lexical tone is found on single lexical items i.e. words out of context.

All the five tones as shown in the following examples are attested on lexical items.

Verbs which are either imperative or infinitive carry all the tones.

It should be noted that closed single syllabic words carry mostly the low tone while the open syllabic words carry mostly the high tone or the other tones. The following are examples.

<table>
<thead>
<tr>
<th>Examples</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/kā'/</td>
<td>Vb</td>
</tr>
<tr>
<td>/cā'/</td>
<td>N</td>
</tr>
<tr>
<td>/pēa/</td>
<td>Adj.</td>
</tr>
<tr>
<td>/v̑/</td>
<td>Vb</td>
</tr>
<tr>
<td>/mbwā/</td>
<td>N</td>
</tr>
</tbody>
</table>
It has been noticed from the following examples that one could assert that there exists a grammatical tone in Mmen, which is different from the lexical tone.

Although much has not been done in this paper on that the following examples are meant to show that a word could possibly change tone as it changes grammatical class i.e.

1) from verb to noun.
The syllables here are open ones. The verbs carry the high tone or the rising one while the nouns carry the low.

2) from adjective to noun.

Here the adjective carries the falling tone while the noun carries the low one.

<table>
<thead>
<tr>
<th>Examples</th>
<th>classes</th>
<th>gloss</th>
<th>Examples</th>
<th>class</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/pùs/</td>
<td>N or Vb</td>
<td>'slap'</td>
<td>/nyàà/</td>
<td>N</td>
<td>'beast'</td>
</tr>
<tr>
<td>/mbàà/</td>
<td>N</td>
<td>'snake'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

So one could say that a lexical tone is different from a grammatical tone and there is a possibility that a tone be at the same time lexical and grammatical.
III.2.3. Monosyllabic noun roots

Tone combinations

The possible combinations of tones on prefixes and roots of nouns are restricted. The following are attested.

a) Low tone prefix

- Low tone root (quite rare)

  e.g. /wùggâny/ N 'traditional doctor'

  Though not marked the tone on the second syllable is low.

- Falling tone root (it is as rare as the low tone root).

  e.g. /fânyâ/ N 'fortune telling'

- Mid tone root

  e.g. /tèfêm/ N 'brain'

- High tone root (this is much more attested than the first three above.)

  e.g. /fendo/ N 'smoke'

  /tâsâ/ N 'injection'

While a high tone prefix (which is much more attested) could command the following root tones.

b) High tone prefix

- Low tone root

  e.g. /idzo/ N 'noise'

  /xùpù'/ N 'stranger'

- Mid tone root

  e.g. /káva'ny/ N 'grandchild'

  /ápôl/ N 'dust'
- **Falling tone root**
  e.g. /váts/ N 'prince'
  /ánvá/ N 'egg plant'

- **Rising tone root** (more attested than falling tone root)
  e.g. /ágo/ N 'idiot'
  /ápá/ N 'umbrella'

- **High tone root** (far more attested than all other tone roots).
  e.g. /mápé/ N 'builder'
  /átsí/ N 'wound'

While a mid tone prefix could command the following root tones.

c)- **Mid tone prefix**

- **Low tone root** (more attested than the mid tone root).
  e.g. /ópáy/ N 'pap'
  /mósás/ N 'head louses'

- **Mid tone root**
  e.g. /imín/ N 'name of village, a language and speakers in Cameroon'

- **High tone root** (more attested than the two above mentioned.)
  e.g. /ókúl/ N 'material for tying'
  /ágúś/ N 'corner'

Monosyllabic noun roots with high tone prefixes are more attested in this language than the others. Notice should be
made too of the fact that the combinations high tone prefix
and high tone root are far more attested.

Comparatively, the high tone prefix presents more possible
combinations than the low tone prefix or the mid tone prefix
(which is the least attested of the three) be it attested in
nouns, adjectives or verbs.

III.2.4. Verb tones

One might think that the distribution of tones on verbs
seems more regular and somehow systematic than on nouns. From
the tone on the prefix syllable one could determine the one on
the root syllable. Although all the tones are found on verb
root syllables (but for the mid tone).

i.e. High

\[\text{e.g.} /ká'/ Vb 'hatch'\]
\[/shí/ Vb 'play'\]

Mid

\[\text{e.g.} /bąg/ Vb 'suck'\]

'It should be noted that some pronounce it
with the low tone but most speakers with the
mid tone).

Low

\[\text{e.g.} /pùs/ Vb 'slop'\]
\[/ndžěm/ Vb 'sneeze'\]

HL.

\[\text{e.g.} /čà/ Vb 'wear'\]
\[/kā/ Vb 'lie'\]

LH.

\[\text{e.g.} /ká/ Vb 'cut'\]
\[/tsě/ Vb 'pass'\]
They seem predictable from that of the prefixes. However, the two tones that are mostly found are either the high or the low tones on prefixes as well as on the roots.

On monosyllabic verbs as shown on the above examples, the high, the low, the falling and rising tones occur.

It has been noticed that most verbs in a single closed syllabic word carry a low tone (but for /j3g/ which sometimes depending on the speaker carries the mid tone) and while the prefix also carry the low tone.

\[
\begin{align*}
\text{e.g. } /səndəs/ & \quad \text{Vb} \quad \text{to slap} \\
/səndən/ & \quad \text{Vb} \quad \text{to sneeze} \\
/sənə/ & \quad \text{Vb} \quad \text{to taste}
\end{align*}
\]

In disyllabic verbs in Mien we noticed the following combinations.

a) - Low tone prefix

- High-Low tone root (more attested than the following two).

\[
\begin{align*}
\text{e.g. } /səndənə/ & \quad \text{Vb} \quad \text{to grow} \\
/səzənə/ & \quad \text{Vb} \quad \text{to spread}
\end{align*}
\]

- Low-Low tone root (quite rare)

\[
\begin{align*}
\text{e.g. } /səpənə/ & \quad \text{Vb} \quad \text{to bury} \\
/səsənə/ & \quad \text{Vb} \quad \text{to compare}
\end{align*}
\]

- Rising-Low tone root (rare)

\[
\begin{align*}
\text{e.g. } /səkwətə/ & \quad \text{Vb} \quad \text{to hope, to think}
\end{align*}
\]

b) - High tone prefix

- Low-High tone root

\[
\begin{align*}
\text{e.g. } /sənələ/ & \quad \text{Vb} \quad \text{to sink} \\
/shəxətə/ & \quad \text{Vb} \quad \text{to sob}
\end{align*}
\]
- **Rising-High tone root**
  
  e.g. /izālɛ/    Vb    'to teach'

- **High-High tone root**
  
  e.g. /sēkēsē/    Vb    'to cough'
  /sētsēlɛ/    Vb    'to praise'

- **Rising-Low tone root**
  
  e.g. /sēfētɛ/    Vb    'to repair'
  /sēpāsɛ/    Vb    'to add'

Mān is not a multisyllabic language as such although few multisyllabic words may be attested in the language.

  e.g. /ndəmədɛl/    N    'custom'

The majority of these words are compound ones.

  e.g. /pāmətwi/    N    'nape of the neck'
  /dēwɔlɛ/    N    'school'
  /wɔwɔwusɛ/    N    'bullet'
  /fɔmɔvɔ/    N    'beak'

This confirms the CV syllabic structure pattern as the norm. The language presents also two tones namely

- H (High)
- L (Low)

to be the basic level tones attested on prefixes as well as on the roots. While the HL (falling tone ' ' ) and the LH (rising tone ' ' ) are not attested on prefixes.
CONCLUSION

Throughout this study, we have attempted to describe Kmen language, a language which, though near Aghem and Kom presents some differences. Attention has been focussed principally on the sound system of the language. The distribution of sounds have been described as well as the prosody.

It has been attested that thirty-two consonant phonemes including three diphthongs and three long vowels make up the sound system.

Five suprasegmental phonemes (tones), three of which are level and two contour come up to confirm Kmen as a tone language.

Although most linguists view Kmen as an entire language, different from Aghem and Kom, some comparative study of the three could bring to light more similarities than differences.

One could even from the language study the Kmen society pattern i.e. the matrilineal pattern as the speaker attested that there does exist a word for 'maternal uncles' but no word for 'paternal uncles'. This might mean that whenever a Kmen says 'uncles' he thinks not of his father's brother first but of his mother's brother. This proposed study falls under socio-linguistics.

So far, we have purely dealt with structural phonology (phonemics) and much is still to be done as far as phonology is concerned (e.g. generative phonology).

Some important areas based on morphology, syntax and even grammatical tone seem worthy of study.

Some consonant alternations though noticed had not been taken account of. One could postulate:
1) deletion of a nasal consonant at given environments.

\[ \text{[vainy]} \quad N \quad \text{'child'} \]
but \[ \text{[vápù]} \quad N \quad \text{'orphan'} \]

\[ \text{[vápù]} \] in a word-to-word translation means 'child of death'

Here it should be noticed that the vowel had also undergone some conditioning i.e. the palatalization is lost.

2) \[ \text{[\text{y}]} \] becomes \[ \text{[\text{w}]} \] at given environments

\[ \text{[vainy]} \quad N \quad \text{'child'} \]
\[ \text{[púsiwalny]} \] sentence 'whip the child'

There might exist many more alternations which could be worthy of interest.

We are aware of the fact that much remains to be done thus attesting our shortcomings. We humbly believe however that this analysis could serve as a foundation for any further investigation in Xhosa.
BIBLIOGRAPHY

Volume 1, L'Enquête de terrain et l'analyse grammaticale, p. 21-110.
Volume 2, Approche Linguistique, p. 275-293.


NKWI, F.N. and WARDER, J.P. - 1982, Elements for a History of the Western Grassfields, Yaoundé, Department of Sociology, University of Yaoundé.

DISSERTATION


FOINTEIL, J.N. - 1986, Phonology of Bamilé, Yaoundé, Department of African Languages and Linguistics, Faculty of Letters and Social Sciences, University of Yaoundé. Dissertation submitted for a Post-graduate Diploma in Linguistics.

LECTURE

CHUKBOW, S. - 1987, Syllable Structure Processes, Yaoundé, Department of African Languages and Linguistics, University of Yaoundé.
OCCASIONAL PAPERS

HYMAN, L.M. - 1979 (ed.) *Aphem Grammatical Structure*, Los Angeles, Department of Linguistics, SCOPIL No. 7, University of Southern California.

--------, - 1980 (ed.) *Noun classes in the grassfields Bantu Borderland*, Los Angeles, Department of Linguistics, SCOPIL No. 8, University of Southern California.

KANKE, G. - 1986, *Nyos disaster* (still to be published).


