

NOTES ON THE PHONOLOGY OF MBE¹

AYỌ BAMGBOŞE

1. SYLLABLE STRUCTURE

There are three possible structures for the syllable: CV, V, CVC. Consonants occur at C, vowels and the syllabic nasal occur at V.

2. CONSONANT SYSTEM

(a) CLASSIFICATION

The consonants may be classified into five series: Labial, Alveolar, Palatal, Velar, and Labio-Velar.

	Plosive		Fricative	Affricate		Nasal	Lateral	Trill	Semi-vowel	
	vl.	vd.		vl.	vd.				Oral	Nas.
Labial	p	b	f			m				
Alveolar	t	d	s	ts	dz	n	l	r		
Palatal			ʃ	c	j				y	ȳ
Velar (Simple)	k	g	h			ŋ				
(Labialised)	kw								w	ṽ
Labio-Velar	kp	gb								

p is a voiceless bilabial plosive. When it is preceded by a syllabic nasal and followed by the vowel *u* or any diphthong beginning with this vowel, **p** is realised as a bilabial affricate [pɕ]. Examples:

pòm 'talk', pàl 'count', pùal 'untie', òpù 'feather', òpùel 'goat'.

b has two allophones: a voiced bilabial plosive in syllable-initial position, and a devoiced bilabial plosive [b̥] in syllable-final position. Examples:

bí 'hide', bú 'grow', bé 'abscond', ébàm 'bag', táb 'accompany', bób 'ask'.

f is a voiceless labio-dental fricative. Examples: fé 'dress', fél 'wipe off dirt', fùo 'blow (wind)', léfù 'fla', áfál 'sky'.

m is a bilabial nasal. Examples: mòm 'wine', mòm 'person', èmèl 'neck', kàmía 'salt', mùal 'farm'.

t is a voiceless alveolar plosive. Examples: tà 'touch', té 'shoot', tén 'circumcise', bùtál 'stone', kítém 'axe'.

d is a voiced alveolar plosive. Examples: dám 'be foolish', dórí 'faint', dùo 'be soft', èdém 'armour'.

s is a voiceless alveolar fricative (with a sharp friction). Examples: sɔ 'laugh', sá 'annoy', sèn 'bend', késé 'market', sóró 'come down'.

ts is a voiceless alveolar affricate. Examples: tsém 'dig', tsáb 'be long', tsórí 'hover around', ètsé 'baboon', bètsùo 'elephant'.

dz is a voiced alveolar affricate. Examples: dzárl 'tear', dzàg 'take', dzèm 'sew', dzòm 'stab'.

¹ Mbe is a Bantu-Congo language in Ogoja Province, Eastern Nigeria.

- n** is an alveolar nasal. Examples: *náb* 'be good', *n5* 'scare', *nómní* 'whisper', *kénén* 'bird'.
- l** is a 'clear' voiced alveolar lateral (slightly less clear in syllable-final position). Examples: *lie* 'eat', *lám* 'cook', *búlùs* 'rope', *lál* 'sleep', *kél* 'look'.
- r** is an alveolar flap [ɾ] when it occurs in an inter-vocalic position. In all other contexts, it is a trill [r]. In syllable-initial position, *r* has a voiced allophone; but in syllable-final position, its allophone is devoiced, i.e. [ɾ̥]. Examples: *rù* 'pull', *réb* 'shut', *èrì* 'beard', *tsór* 'carry', *yùor* 'sit'.
- sh** is a voiceless palato-alveolar fricative [ʃ]. Examples: *shí* 'rub', *shíe* 'resemble', *shír* 'sneeze', *bùshú* 'face', *bìshì* 'ground'.
- c** is a voiceless palato-alveolar affricate [tʃ]. Examples: *cú* 'come', *cí* 'build', *bùcì* 'head', *ècúab* 'hyena'.
- j** is a voiced palato-alveolar affricate [dʒ]. Examples: *jú* 'hit', *jíe* 'cut into pieces', *jùe* 'adjourn', *èjì* 'place'.
- y** is a palatal semi-vowel [j]. Examples: *yúo* 'hear', *yíem* 'sing', *yúel* 'kill', *yí* 'refuse', *èyíɔŋ* 'guinea fowl'.
- ÿ** is phonologically a nasalised palatal semi-vowel, but phonetically a palatal nasal [ɲ]. Examples: *ÿúe* 'drink', *ÿùo* 'shake', *ÿíem* 'be stingy', *bùÿù* 'mouth'.
- k** is a voiceless palatalised velar plosive, slightly fronted immediately before front vowels. Examples: *kél* 'look', *kì* 'give', *èkó* 'anus', *òkàrá* 'white man', *kàn* 'try', *kúkúe* 'cut'.
- kw** is a voiceless labialised velar plosive. Examples: *kwè* 'fall', *kwèl* 'enter', *èkwór* 'cocoyam', *kìkwù* 'place of sacrifice'. When there is a falling or a rising tone on the syllable, *kw* is realised phonetically as [ku*] e.g. *kwál* [ku*al] 'cough', *bùkwè* [buku*e] 'slave'.
- g** is a voiced velar plosive, with slight labialisation [gʷ] before a word-final *u*. Examples: *gán* 'fly', *géb* 'pack', *ègá* 'cactus', *ògè* 'sword', *égú* 'company', *gúgúel* 'knock'.
- h** is a voiceless glottal fricative. Examples: *hè* 'that' (linking word), *hò* 'no!'
- ŋ** is a velar nasal. Examples: *tùɔŋ* 'show', *táŋ* 'teach', *òkùoŋ* 'iron', *èpòŋ* 'rainy season'.
- w** is phonetically a labio-velar semi-vowel. Examples: *wè* 'pluck', *wú* 'die', *wél* 'drive away', *h̄wúom* 'shirt', *èwár* 'comb'.
- ŵ** is phonologically a nasalised, labialised velar semi-vowel but phonetically a labialised velar nasal [ŋʷ]. Examples: *h̄ŵùɔŋ* 'a bet', *áŵúwúɔŋ* 'ankle bangle'.
- kp** is a voiceless labio-velar plosive. Examples: *kpé* 'find', *kpér* 'begin', *kpàr* 'peel', *kpó* 'be daring', *èkpú* 'deceitfulness'.
- gb** is a voiced labio-velar plosive. Examples: *gbé* 'tie', *gbál* 'run', *gbár* 'plaster', *gbòr* 'grate', *gbó* 'shake'.

NOTE: (1) Plosives are aspirated before *i*, and, unless as otherwise indicated above, before *u*.

(2) So far *ŵ* is attested only in about four words, and *h* in three.

- (3) The glottal stop [ʔ] occurs in syllable-initial position in some particles, but always in free variation with the corresponding syllable without a glottal onset, e.g. [lál ʔò] or [lál ò] 'sleep!' i.e. 'good night'. It is therefore considered unnecessary to give it phonemic status.

(b) DISTRIBUTION

There are two sets of consonants: (i) Syllable-Initial and (ii) Syllable-Final.

- (i) Syllable-Initial: All consonants except the velar nasal ŋ occur in syllable-initial position.

EXAMPLES OF MINIMAL PAIRS

pòm	'talk'	shí	'rub'
bòm	'persons'	cí	'build'
kúo	'call'	cú	'come'
gúo	'ripen'	jú	'hit'
ké	'tie up (bundle)'	tsâŋ	'understand'
kwè	'fall'	dzâŋ	'raise'
kpé	'find'	yíem	'sing'
gbé	'tie'	ỹíem	'be stingy'
fèn	'be black'	nùo	'punish'
sèn	'wipe anus'	ỹùo	'shake'

NOTE: Palatal consonants can only occur before close vowel phonemes (i.e. i and u) and diphthongs.

- (ii) Syllable-final: The three nasal consonants (i.e. m, n and ŋ, the lateral l, the trill r and the labial plosive b occur in syllable-final position. The last two of these consonants are always devoiced in this position.

EXAMPLES OF MINIMAL PAIRS

tém	'bury'	táb	'accompany'
tén	'push'	táŋ	'give in marriage'
gbál	'run'	sàm	'pray'
gbár	'plaster'	sâŋ	'decrease'
tséb	'bear (pain)'	sén	'shock'
tsém	'dig'	sâŋ	'decrease'
hpan	'side'		
hpal	'counting'		

NOTE: (1) A few words ending in r have variants ending in t or d e.g. gbár, gbád, gbát 'plaster', kpér, kpét 'cut'. In these cases, the plosives are considered allophones of r.

- (2) The nasals *n* and *ŋ* appear to be contrastive only when immediately preceded by the vowel *a* or a diphthong ending in this vowel. Otherwise, *n* occurs only after front vowels and *ŋ* after back vowels, e.g. *kɛn* 'march', *bɛn* 'dance', *súnŋ* 'shine', *òkùonŋ* 'iron'.

3. VOWEL SYSTEM

There are two types of vowels: (a) Simple Vowels and (b) Diphthongs.

(a) SIMPLE VOWELS

These are seven in number:

i	u
e	o
ɛ	ɔ
a	

- i** [i] is a little lower and retracted from Cardinal Vowel 1. Examples: *bí* 'hide', *lí* 'eye', *rí* 'join together', *shí* 'rub', *čí* 'build', *yí* 'refuse'.

- e** has two allophones: (i) a peripherally central close unrounded vowel much lower than, and advanced from, Cardinal Vowel [i].

This allophone occurs in closed syllables, and in the initial open syllable resulting from the addition of a suffix to a closed syllable. The allophone also occurs in the initial open syllable of reduplicated verbs.

Examples: *fér* [fír] 'fold', *òfèrò* [ofíro] 'to fold', *fèri* [fírí] 'fold (plural)', *fèfèr* [fífír].

(ii) a half-open front unrounded vowel [e] slightly retracted from Cardinal Vowel 2. This allophone occurs in all open syllables other than those specified above.

Examples: *bé* 'abscond', *té* 'shoot', *éfé* 'lung', *lèkè* 'load', *èkpè* 'hat', *òbè* 'hand', *gbé* 'tic'.

- ɛ** about the same position as Cardinal Vowel 3. Examples: *lé* 'where?', *sèn* 'bend', *èbè* 'ant-hill', *kél* 'look', *kɛsɛ* 'market'.

- a** a centralised open vowel [a] retracted from Cardinal Vowel 4. Examples: *tà* 'touch', *táb* 'accompany', *kàn* 'try', *gbál* 'run', *sá* 'annoy'.

- ɔ** a half-open back rounded vowel slightly lower than Cardinal Vowel 6. Examples: *só* 'laugh', *bób* 'tell a lie', *dzó* 'be tired', *ló* 'love', *tsór* 'carry'.

- o** has two allophones: (i) a half-close back rounded vowel [o] slightly higher than Cardinal Vowel 7 in all positions except after nasals. Examples: *bób* 'ask', *òbòbò* 'to ask', *bórò* 'keep', *kòr* 'rub', *gbó* 'pluck (unripe fruits)'.

(ii) a raised, slightly centralised and nasalised form of the first allophone [õ] after nasals. Examples: *pénõ* 'make red', *lúomõ* 'smell', *òpómõ* 'to talk', *òlámõ* 'to cook', *òkèné* 'to walk'.

- u** has two allophones: (i) a close front rounded vowel, lower and retracted from Cardinal Vowel [y]. This allophone occurs after *l* and, in the pronunciation of some people, after the affricate *j* also. Examples: *lèlù* 'knee', *jù* 'hit', *èjù* 'cult'.

(ii) a close back rounded vowel [u] slightly lower than Cardinal Vowel 8. This allophone occurs in all other positions. Examples: *bú* 'grow', *hùfù* 'castnet', *rù* 'pull', *cù* 'come', *bùshù* 'face', *wù* 'die'.

- NOTE: (1) All vowels are slightly centralised when they occur in closed syllables.
- (2) All vowels, including the initial element of a diphthong, are nasalised when immediately preceded by a nasal or a nasalised consonant. There is also a slight nasalisation of vowels (including the second element of a diphthong) before the velar nasal.
- (3) The close vowels *i* and *u* do not occur in closed syllables, except in a verbal reduplication involving a harmonizing nasal prefix e.g. *túom, túntúom* 'send'; *shíem, shínshíem* 'be sweet'.

EXAMPLES OF MINIMAL CONTRASTS OF SIMPLE VOWELS

bí	'hide'	èbé	'placenta'
bé	'abscond'	èbé	'ant hill'
bú	'grow'		
gbé	'tie'	lèkè	'load'
gbó	'pluck (unripe fruits)'	lèki	'egg'
gbó	'shake'		
pàl	'count'	hpl	'road'
pèl	'plant'	hpù	'feather'
tén	'push'	lèkò	'elephant grass'
tén	'circumcise'	lèkò	'tooth'
		mòm	'wine'
		mòm	'person'

(b) DIPHTHONGS

Diphthongs begin in a close vowel and end in any of the other vowels. Hence there are two sets of diphthongs:

(i) Front Set

These are diphthongs beginning in a front close vowel, i.e. *ie, ie, ia, io, io*.

Examples: *yám* 'be sick', *yíem* 'sing', *plé* 'do', *blém* 'believe', *bíani* 'embrace', *glór* 'surround, mince', *líe* 'eat', *shíor* 'sneeze'.

(ii) Back Set

These are diphthongs beginning in a back close vowel i.e. *ue, ue, ua, uo, uo*

When preceded by labials and palatals, the initial element of this set of diphthongs has the allophone [u] (i.e. the same as for the simple vowel). But when preceded by other consonants, the allophone of the initial element is a much lowered, and advanced [u] somewhat like a centralised rounded half-close vowel [ɔ].

Examples: *pàl* 'be rotten', *búb* 'think', *fúo* 'blow', *shúe* 'suck (bones)', *yùe* 'roast', *yúe* 'drink', *cúor* 'be straight'.

túom 'send (a message)', *dúo* 'be tired', *kúe* 'cut', *gúom* 'watch', *rúe* 'say', *lúel* 'cry', *súal* 'sweep', *dúob* 'be fat', *wúob* 'drain (water)'.

- NOTE: (1) When *e* is the second element of a diphthong, its two allophones [i] and [e] are conditioned in the same way as for the simple vowel *e*.

- (2) Diphthongs do not occur immediately after labio-velar plosives and the labialised velar plosive.
- (3) Diphthongs of the front set do not occur immediately after alveolar consonants other than l.

EXAMPLES OF CONTRASTS BETWEEN SIMPLE VOWELS AND DIPHTHONGS

pél	'plant'	pàl	'count'
piel	'arrest'	pùal	'be rotten'
bání	'divide'	kè	'tie up (bundle)'
bíani	'embrace'	kùe	'cut'
		cf. (kwè	'fall')
bé	'abscond'	lè	'feed'
bíe	'shine'	lùe	'surpass'
só	'laugh'	kó	'check up'
súo	'fix (in ground)'	kúo	'grind'
bób	'tell a lie'	kòr	'rub'
búob	'think'	kùor	'last'
dzó	'be tired'	òsò	'to break'
dzúo	'be fat'	òsũo	'to shiver'
tsóri	'hover'		
tsúorí	'be wet'		

NOTE: The contrast between o and uo appears to be very rare. In addition, it is not very easy to recognise especially after non-labial consonants. However, in the case of verbs, the test of reduplication should show which of the two vowels is present. For example in the imperative, kòr 'rub' is reduplicated kòkòr or kèkòr but kùor 'buy' can only be reduplicated kùkùor. Similarly, although the contrast between o and uo is relatively easier to recognise, the same reduplication test may be applied in the case of a class of verbs. For example, the imperative reduplication of tsóri 'hover' is tsètsóri whereas that of tsúorí 'be wet' is tsùtsúorí.

4. THE SYLLABIC NASAL

The syllabic nasal n (always tone-bearing to distinguish it from the consonant) occurs in a syllable of structure V. It is homorganic with a following consonant i.e. it has the allophones:

[ŋ]	before f
[m]	„ other labials
[ɲ]	„ y and ʝ
[n]	„ other palatals and all alveolars
[ŋ]	„ velars
[ŋm]	„ labio-velars

Examples: ñpó 'kidney', ñbíel 'generation', ñtèn 'time', ñdùel 'bush cow', ñsán 'thunder', ñkém 'forest', ñkwè 'soup', ñwú 'death', ñkpòŋ 'ram', ñgbé 'cloth'.

NOTE: When a syllable-final nasal consonant is immediately followed by a consonant-initial syllable (other than a suffix), the nasal consonant is also homorganic with the following consonant.

5. TONE SYSTEM

If an overall tone system were to be established for the language, five tonemes may have to be set up: High, Low, Rising, Falling and Downstep. It seems, however, that the tonal structure of the language would best be handled polysystemically. This, of course, cannot be done within the scope of this paper.

EXAMPLES OF TONAL CONTRASTS

ñpí	'grey hair'	lám	'cook'
ñpi	'road'	lãm	'settle (a quarrel)'
cí	'build'	òtǎŋ	'to give in marriage'
cí	'help'	òtǎŋ	'to teach'
pùal	'be rotten'	múor	'increase'
pũal	'untie'	mũor	'snail'
míel	'wife'	kánkǎŋ	'every'
míel	'woman'	kánkán	'try'