

TWO VIEWS OF THE PHONOLOGY OF THE Q̄HŪHŪ DIALECT OF IGBO

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In this article we have attempted firstly a phonemic and then a prosodic account of the phonology of the Q̄hūhū dialect of Igbo.¹

I. PHONEMIC

Traditionally, the consonant phonemes of this dialect could be set out in a chart such as the following:

	PALATO-					LABIAL	
	LABIAL	ALVEOLAR	ALVEOLAR	PALATAL	VELAR	VELAR	GLOTTAL
Plosive	p b t d				k g	kp gb ²	
Aspirated Plosive	ph bh th dh				kh gh		
Palatalized Plosive	pj bj						
Pal. Asp. Plosive	pjh bjh						
Labialised Plosive					kw gw		
Lab. Asp. Plosive					kwh gwh		
Fricative	f v s z				ɣ		h
Nasalised Fricative	[~] f ^s [~] v [~] s [~] z						[~] h
Palatalised Fricative							hj
Nas. Pal. Fricative							[~] hj
Nas. Lab. Fricative							[~] hw
Affricate			tʃ dʒ				
Aspirated Affricate			tʃh dʒh				
Nasal	m n			ɲ	ŋ		
Labialised Nasal					ŋw		
Roll		r					
Nasalised Roll		[~] r					
Palatalised Roll		rj					
Lateral		l					
Semi-Vowel	w						

The vowel phonemes are:

i, j, e, a, ɔ, o, ʊ and u⁴

¹ This dialect is described very fully at the grammatical level in M. M. Green and G. E. Igwe, *A DESCRIPTIVE GRAMMAR OF IGBO*, O.U.P. (1963).

² gb is a labial implosive with velarisation (see Peter Ladefoged, *A PHONETIC STUDY OF WEST AFRICAN LANGUAGES*, WEST AFRICAN LANGUAGE MONOGRAPH 1, C.U.P. (1964).

³ Where [~] occurs before a consonant symbol, it indicates that the following consonant is nasalised.

⁴ For a detailed description of the vowels of Igbo, see Ida Ward, *AN INTRODUCTION TO THE IBO LANGUAGE*, Heffer (1936), J. Carnochan, 'Vowel Harmony in Igbo', *AFRICAN LANGUAGE STUDIES* 1 (1960), R. F. G. Adams and Ida C. Ward, 'The Arochuku Dialect of Ibo: Phonetic Analysis and Suggested Orthography', *AFRICA*, VOL. II (1929), (pp. 62-65) and R. F. G. Adams, *A MODERN IBO GRAMMAR*, O.U.P. (1932), (pp. 1-3).

The above consonantal and vocalic units may be exemplified in the following word list:

PHONEMIC	ORTHOGRAPHIC	
1. pā	pa	to carry
2. phā	pa	to squeeze
3. pǎ	pja	to fold/bend
4. pjhā	pja	to whip
5. bā	ba	to be wealthy
6. bhā	ba	to enter
7. bjā	bja	to come
8. bjhā	bja	to press
9. tā	ta	to chew
10. chā	ta	to blame
11. dā	da	to press upon
12. dhā	da	to fall
13. kā	ka	to be more
14. khā	ka	to sharpen to a point
15. kwā	kwa	to spread out (of a mat)
16. kwhā	kwa	to cry
17. gā	ga	to go
18. ghā	ga	to grow up
19. gwā	gwa	to tell
20. gwhū	gwu	to parcel
21. kpā	kpa	to collect
22. gbā	gba	to run/shoot
23. fā	fa	to wedge in
24. fā	fa	to shriek
25. va	va	an insulting gesture
26. vū	vu	to hatch
27. sā	sa	to unfold
28. sā	sa	to wash
29. zā	za	to answer a call
30. zū	zu	to feed
31. yā	gha	to leave out
32. hā	ha	to bud
33. hā	ha	to sprinkle
34. hjā	hja	to prevent
35. hǎ	hja	to hit/beat
36. a~hwā	aha	name
37. tǎ	cha	to cut
38. tjhā	cha	to ripen
39. dǎ	ja	to praise/approve of
40. dǎ	aja	sand
41. mā	ma	to know
42. nā	na	to receive
43. nā	nya	to plaster
44. ŋā	hā	to listen
45. ŋwā	nwa	to tempt

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46. rã	ra	to lick
47. ʋ̃ra	ʋra	sleep
48. rjã	rja	to be ill
49. lã	la	to go home/escape
50. wã	wa	to split
51. jã	ja	to claw

Notes on allophones:

1. /s/ is [ʃ] before i or j except

(a) where reduplication occurs before the verbal base in the formation of the gerund, and that verbal base is either se or sa, then /s/ is phonetically [ʃ] and /s/ is phonetically [ʃ],

- e.g. [òf|ʃ] 'cooking'
 [òf|ʃ] 'saying'
 [òs|sè] 'dragging/pulling'
 [òs|sà] 'answering'

(b) where vowel assimilation occurs of a vowel other than i or j, then /s/ is [s] even though it may now immediately precede (i) i or (ii) j,

- e.g. (i) |sè 'to carry in the hand'
 and |tè 'pot'
 combine as [s|tè] 'to carry a pot in the hand'
 (ii) |sà 'to reply'
 and |kpà 'musical instrument'
 combine as [s|kpà] 'to reply to an address through a musical instrument'⁵

2. /s/ is [ʃ] before i or j except

(a) where reduplication occurs before the verbal base in the formation of the gerund, and that verbal base is 'sa, then /s/ is phonetically [ʃ],

- e.g. [òʃ|ʃ] 'smelling'
 [òʃ|sa] 'washing'

(b) where vowel assimilation occurs of a vowel other than i or j, then /s/ is [s] even though it may now immediately precede (i) i or (ii) j,

- e.g. (i) |sã 'to wash'
 and |tè 'pot'
 combine as [s|tè] 'to wash the pot'
 (ii) |sã 'to wash'
 and |wa 'kind of cassava'
 combine as [s|wa] 'to wash a kind of cassava'⁵

3. /z/ is [z] before l or | except

(a) where reduplication occurs before the verbal base in the formation of the gerund, and that verbal base is either ze or za, then /z/ is phonetically [z] and /z/ is phonetically [z],

- e.g. [òz|z] 'being straight'
 [òz|zè] 'avoiding'
 [òz|za] 'responding'

⁵ The feature described in 1b, 2b, 3b and 4b could perhaps be termed a word or morpheme boundary marker in this dialect of Igbo.

(b) where vowel assimilation occurs of a vowel other than *i* or *j*, then *z* is [z] even though it may now immediately precede (i) *i* or (ii) *j*,

- e.g. (i) *izè* 'to avoid'
and *igwè* 'bicycle'
combine as [izigwè] 'to avoid a bicycle'
(ii) *izè* 'to dance'
and *ikpà* 'a musical instrument'
combine as [iz|kpa] 'to dance to the music of "ikpa"'⁴

4. /'z/ is [ʼz] before *i* or *j* except

(a) where reduplication occurs before the verbal base in the formation of the gerund, and that verbal base is *zè*, then *zi* is phonetically [ʼzi],

- e.g. [òʼziʼzi] 'teaching/showing'
[òʼziʼze] 'collapsing'

(b) where vowel assimilation occurs of a vowel other than *i* or *j*, then /'z/ is [ʼz] even though it may now immediately precede (i) *i* or (ii) *j*,

- e.g. (i) *izò* 'to hide'
and *ivu* 'a load'
combine as [iz|ivu] 'to hide a load'
(ii) *nʼza* 'a kind of bird'
and *ikpā* 'forest'
combine as [nʼz|kpa] 'a kind of bird of the forest'⁵

5. *h*, [h, h], [h] appear to be partially voiced before low tone vowels.

6. /e/ is [e] before *i* and *u* but [ɛ] elsewhere.

II PROSODIC⁷

In the following prosodic account of the syllable in Igbo we will adopt the vowel prosodies given in VOWEL HARMONY IN IGBO by J. Carnochan, except that we will re-label his *y* and *w* prosodies *f* (fronting) and *b* (backing).⁸

Three syllable-initial prosodies will be abstracted:

h: this will signify a period of voicelessness after voiceless stops and affricates; and a period of breathy voice after voiced stops and affricates.

y: a secondary articulation of palatalisation.

⁴ See note 5.

⁵ In this prosodic account we have taken as our starting point the information given in J. Carnochan, 'A Study in the Phonology of an Igbo Speaker', *NSOAS*, VOL. XII, Part 2. We are also indebted to Mr. Carnochan for comments and advice on this article. We also wish to thank Mr. John Kelly for his advice.

⁶ The notation used by Carnochan in 'Vowel Harmony in Igbo' is as follows:

- (i) *I* represents high vowel in a two term system of *I/A*.
(ii) *A* represents low vowel in a two term system of *I/A*.
(iii) *L/R* are mutually exclusive prosodies. *L* represents phonetically more lowering of the tongue for the vowel articulation; *R* more raising.
(iv) *y/w* are mutually exclusive prosodies. *y* represents phonetically front articulation; *w* represents back articulation.

Therefore a generalised formula for the unit VCV will be:

L/R [(A/I)y/w (CA/I)y/w]

e.g. *o sie* R [(A)w (CIA)y]

ɔ zuɔ L [(A)w (CIA)w]

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w: a secondary articulation of labialisation. In the case of stops this means labial articulation and raising of the back of the tongue; in the case of fricatives this means labial articulation only; in the case of R (see no. 31 below) this means raising of the back of the tongue only.

One syllable prosody will be abstracted:

n: a velic opening throughout the consonant and extending over the following vowel.

The consonantal phonematic units will then be:

	LABIAL	ALVEOLAR	VELAR
Plosive	P B	T D	K G
Fricative		S Z	
Roll		R	
Lateral		L	

We will now rewrite prosodically the word list given above. Note that:

1. L[(I)f (CA)f] and L[(I)f (A)f] will be the generalised formulae.
2. A number of systems operate with particular sets of consonantal phonematic units, e.g. the basic phonematic unit P has the possibility of h/h̄ (i.e. h and non-h prosody), y/ȳ (i.e. y and non-y prosody), and w/w̄ (i.e. w and non-w prosody); whereas B has h/h̄, y/ȳ, w/w̄ and n/n̄ (i.e. n and non-n prosody).
3. The exponents of S and Z before I with f prosody are ʃ and ʒ respectively.
4. The following word list is in exactly the same order as that given above.

- | | |
|---------------------------|--------------------------|
| 1. L[(I)f ʔh̄ȳw(PA)f] | 27. L[(I)f ʔw̄n(SA)f] |
| 2. L[(I)f h̄ȳw(PA)f] | 28. L[(I)f ʔwn(SA)f] |
| 3. L[(I)f ʔhȳw(PA)f] | 29. L[(I)f ʔw̄n(ZA)f] |
| 4. L[(I)f hȳw(PA)f] | 30. L[(I)f ʔwn(ZI)b] |
| 5. L[(I)f ʔh̄ȳw̄n(BA)f] | 31. L[(I)f w̄ȳn(RA)f] |
| 6. L[(I)f h̄ȳw̄n(BA)f] | 32. L[(I)f h̄w̄ȳn(A)f] |
| 7. L[(I)f ʔhȳw̄n(BA)f] | 33. L[(I)f h̄w̄ȳn(A)f] |
| 8. L[(I)f hȳw̄n(BA)f] | 34. L[(I)f h̄w̄ȳn(A)f] |
| 9. L[(I)f ʔh̄ȳ(TA)f] | 35. L[(I)f h̄wyn(A)f] |
| 10. L[(I)f h̄ȳ(TA)f] | 36. L[(A)f hw̄ȳn(A)f] |
| 11. L[(I)f ʔh̄ȳn(DA)f] | 37. L[(I)f ʔhȳ(TA)f] |
| 12. L[(I)f h̄ȳn(DA)f] | 38. L[(I)f hȳ(TA)f] |
| 13. L[(I)f ʔh̄w̄(KA)f] | 39. L[(I)f ʔhȳn(DA)f] |
| 14. L[(I)f h̄w̄(KA)f] | 40. L[(A)f hȳn(DA)f] |
| 15. L[(I)f ʔhw̄(KA)f] | 41. L[(I)f ʔh̄ȳwn(BA)f] |
| 16. L[(I)f hw̄(KA)f] | 42. L[(I)f ʔh̄ȳn(DA)f] |
| 17. L[(I)f ʔh̄w̄n(GA)f] | 43. L[(I)f ʔhyn(DA)f] |
| 18. L[(I)f h̄w̄n(GA)f] | 44. L[(I)f ʔh̄wn(GA)f] |
| 19. L[(I)f ʔhw̄n(GA)f] | 45. L[(I)f ʔhwn(GA)f] |
| 20. R[(I)f ʔhw̄n(GI)b] | 46. L[(I)f ʔw̄ȳn(RA)f] |
| 21. L[(I)f ʔh̄ȳw(PA)f] | 47. L[(I)b ʔw̄ȳn(RA)f] |
| 22. L[(I)f ʔh̄ȳw̄n(BA)f] | 48. L[(I)f ʔw̄ȳn(RA)f] |
| 23. L[(I)f w̄n(SA)f] | 49. L[(I)f (LA)f] |
| 24. L[(I)f wn(SA)f] | 50. L[(I)f ʔh̄w̄ȳn(A)f] |
| 25. L[(I)f w̄n(ZA)f] | 51. L[(I)f ʔh̄w̄ȳn(A)f] |
| 26. L[(I)f wn(ZI)b] | |