

A RECONSTRUCTION OF THE PHONOLOGY OF PROTO-IGBOID

NB. Section numbers reflect the fact that this is a chapter of a book on Igboid

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TABLE OF CONTENTS

6. Reconstructing Igboid phonology	1
6.1 Proto- and pre-Proto-Igboid	1
6.2 The Proto-Igboid consonant system	4
6.2.1 Labial consonants	6
6.2.1.1 *p.....	6
6.2.1.2 *b.....	7
6.2.1.3 The proposal for implosive *ɓ	8
6.2.1.4 The fricatives *f and v.....	9
6.2.1.5 Evidence for contrast in labial consonants.....	11
6.2.1.6 *m.....	12
6.2.2 Labial-velar consonants.....	13
6.2.2.1 Overview	13
6.2.2.2 *kp.....	13
6.2.2.3 *gb.....	14
6.2.2.4 *ŋm.....	15
6.2.3 Alveolar consonants	16
6.2.3.1 *s	16
6.2.3.2 *ʃ.....	17
6.2.3.3 *ts.....	17
6.2.3.4 *z.....	19
6.2.3.5 *dʒ.....	19
6.2.3.6 *t.....	20
6.2.3.7 *d and *nd.....	20
6.2.3.8 *n.....	21
6.2.3.9 *l.....	22
6.2.3.10 *r.....	23
6.2.4 Palatal consonants	23
6.2.4.1 *ʃ.....	23
6.2.4.2 *ɲ.....	24
6.2.5 Velar consonants	25
6.2.5.1 Overview	25
6.2.5.2 *k.....	25
6.2.5.3 *g.....	25
6.2.5.4 *ɣ.....	26
6.2.5.5 *ŋ.....	26
6.2.6 Labialised velar consonants.....	28
6.2.6.1 Overview	28
6.2.6.2 *k ^w	28
6.2.6.3 *g ^w	29
6.2.6.4 *ŋ ^w	29
6.2.7 Glottal consonants	30
6.2.7.1 Overview	30
6.2.7.2 *h ~ h ^y	30
6.2.8 Approximants	31
6.2.8.1 Overview	31
6.2.8.2 *w.....	31
6.2.8.3 *y.....	32
6.3 Vowels	33
6.3.1 Overview	33
6.3.2 *i.....	33
6.3.3 *ɪ.....	34
6.3.4 *u.....	35

6.3.5 *ɔ/ǝ.....	35
6.3.6 *e/ɛ.....	37
6.3.7 *o ~ *ǝ.....	38
6.3.8 *ɔ.....	39
6.3.9 *a ~ ǎ.....	39
6.4 Tones.....	41
6.4.1 Overview.....	41
6.4.2 High tone.....	41
6.4.3 Low tone.....	42
6.4.4 Was there a rising tone?.....	42
6.4.5 Was there a falling tone?.....	43
6.4.6 Downstep.....	44
6.5 Conclusion.....	44
References.....	44

TABLES

Table 1. Ika singular and plural alternations.....	3
Table 2. Nominal formation in Ika.....	3
Table 3. Nominal prefixes and tone.....	4
Table 4. Lexical change in Ika.....	4
Table 5. Consonants reconstructed for Proto-Igboid -KW.....	5
Table 6. Consonants reconstructed for Proto-Igboid -RMB.....	5
Table 7. Evidence for proto-Igboid *p.....	6
Table 8. Evidence for proto-Igboid *pʷ.....	6
Table 9. Evidence for proto-Igboid *b.....	7
Table 10. Evidence for proto-Igboid *mb.....	8
Table 11. Reflexes of *b according to KW.....	8
Table 12. Weakening of *p and *b to f and v.....	9
Table 13. Evidence for proto-Igboid *fʷ.....	10
Table 14. Probable evidence for proto-Igboid *v.....	10
Table 15. Contrasts between *fiya and *piya.....	11
Table 16. Contrasts between *p and *b.....	12
Table 17. Aspiration developing before nasalised vowels.....	12
Table 18. Retention of *m.....	13
Table 19. Evidence for proto-Igboid *kp.....	14
Table 20. Evidence for proto-Igboid *gb.....	14
Table 21. Evidence for proto-Igboid *ɲmgb.....	15
Table 22. Examples of *ɲm.....	15
Table 23. Ika singular and plural alternations.....	16
Table 24. Reflexes of Proto-Igboid *s.....	16
Table 25. Reflexes of Proto-Igboid *ʃ.....	17
Table 26. Reflexes of Proto-Igboid *nʃ.....	17
Table 27. Reflexes of Proto-Igboid *ts ¹ yielding /t/.....	18
Table 28. Reflexes of Proto-Igboid *ts ² yielding /s/.....	18
Table 29. Reflexes of Proto-Igboid *z.....	19
Table 30. Reflexes of Proto-Igboid *dʒ.....	19
Table 31. Reflexes of Proto-Igboid *t.....	20
Table 32. Reflexes of the Proto-Igboid sequence *da.....	20
Table 33. Reflexes of the Proto-Igboid sequence *dɔ.....	21
Table 34. Reflexes of Proto-Igboid *nda.....	21
Table 35. Reflexes of Proto-Igboid *n.....	22
Table 36. Evidence for *l in Proto-Igboid.....	22
Table 37. Possible evidence for *r in Proto-Igboid.....	23
Table 38. Reflexes of Proto-Igboid *ʃ.....	24
Table 39. Reflexes of Proto-Igboid *ɲ.....	24

Table 40. Reflexes of Proto-Igboid *k	25
Table 41. Reflexes of Proto-Igboid *g	26
Table 42. Reflexes of Proto-Igboid *ɣ	26
Table 43. Probable reflexes of Proto-Igboid *ŋ	27
Table 44. The reconstructible sequence *ŋa	27
Table 45. Reflexes of Proto-Igboid homorganic *ŋ-	28
Table 46. Evidence for proto-Igboid *k ^w	28
Table 47. Evidence for proto-Igboid *g ^w	29
Table 48. Evidence for proto-Igboid *ŋ ^w	30
Table 49. Evidence for proto-Igboid *h	31
Table 50. Evidence for proto-Igboid *w	32
Table 51. Evidence for proto-Igboid *y	32
Table 52. Typical Igboid vowels	33
Table 53. Proto-Igboid nasalised vowels	33
Table 54. Evidence for proto-Igboid *i	34
Table 55. Evidence for proto-Igboid *ɪ	34
Table 56. Evidence for proto-Igboid *u	35
Table 57. Evidence for proto-Igboid *ʊ	36
Table 58. Evidence for proto-Igboid *ö	36
Table 59. Evidence for proto-Igboid *e	37
Table 60. Evidence for proto-Igboid *ɛ- prefix	37
Table 61. Evidence for proto-Igboid *o	38
Table 62. Evidence for proto-Igboid *ö	39
Table 63. Evidence for proto-Igboid *ɔ	39
Table 64. Evidence for proto-Igboid *a	40
Table 65. Evidence for proto-Igboid *ã	41
Table 66. Conservation of high tone in Igboid	42
Table 67. Conservation of low tone in Igboid	42
Table 68. Possible evidence for a rising tone in proto-Igboid	43
Table 69. Possible evidence for a falling tone in proto-Igboid	43
Table 70. Evidence for downstep in proto-Igboid	44
Table 71. Proto-Igboid broad phonetic consonants with distinctive features	47

6. Reconstructing Igboid phonology

6.1 Proto- and pre-Proto-Igboid

The data presented in this book is drawn from synchronic lects of Igboid, and the reconstruction of proto-Igboid is based on their testimony. The results from a strict inspection of this data can be called proto-Igboid. However, the Igbo languages did not exist in a genetic vacuum, but were related to other large groupings in the immediate area, most notably Yoruboid and Edoid. The most comprehensive investigation of this relationship has unfortunately never been published (Ohiri-Aniche 1999). Other languages neighbouring Igboid, including Cross River and Ijoid, while Niger-Congo, are less closely affiliated. The striking feature of Edoid and Yoruboid (along with Gbe, Idomoid and Nupoid) is that they have undergone analogous reductions from CVCV roots with nominal affix systems and concordial prefixes to predominantly monosyllabic languages. Edoid preserves some traces of longer forms in nouns, especially in Oloma (Elugbe & Schubert 1976) but Yoruboid and Gbe seem to completely eliminated evidence for their former morphology. Widespread cognates in the Benue-Congo languages, which retain such systems, allow us to see the likely morphology of these languages prior to this process of compression. This reduction is extremely comparable to the evolution of Sinitic languages (Chinese and its relatives) where languages which are part of the same phylum (Sino-Tibetan) have long, complex forms showing agreement with minimal tone systems (e.g. Qiangic and Kiranti) have been reduced to the monosyllabism now characteristic of Sinitic.

The key question is at what stage this process of reduction occurred in Volta-Niger (VN) languages. If we assume that proto-Igboid was a well-formed noun-class language and roots were typically disyllabic, then the process of reduction would have to occur independently in all neighbouring languages, which include not only Yoruboid and Edoid, but Gbe, Nupoid, Idomoid, Uwu-Ahan, Akokoid and Akpes. This seems inherently rather unlikely and it is far more plausible to assume that the process of reduction began much further back in the evolution of this language family, prior to the emergence of Igboid as a distinct family. In other words, if proto-Igboid looks as it is was monosyllabic, then it was. However, it may have retained many fragmentary indicators of the earlier state of this branch of Niger-Congo. I believe that Kay Williamson's proposals for Igboid proto-forms reflect a state of the evolution of the language implicitly based on knowledge of neighbouring languages. In other words they represent an earlier stage in the reduction of CV.CVCV roots prior to the ancestor of actual Igboid languages spoken today. Using a terminology found elsewhere in African language studies, this can be called 'pre-proto-Igboid'. In this phonology I have chosen to distinguish this type of highly speculative reconstruction from a rather less ornate proposal which derives proto-phonemes from synchronic data and is here called proto-Igboid.

There is another aspect of KW's reconstruction of the consonants which has not been preserved. The reconstructions of proto-phonemes are based on strict neogrammarian principles which try to account for all synchronic forms and to produce regular series of in terms of manner of articulation. In this, I believe she was influenced by the work of John Stewart who in his later papers began reconstructing phonemes which account for this proposed system but which were never attested in Niger-Congo languages. This effectively means reconstructing consonants not attested in any living language, and indeed consonants that are rare or non-existent in Niger-Congo. It also means that the reconstructed phonemes no longer match those in the same position, even in transparent cognates in neighbouring languages. Some of these, such as implosive /ɛ/, are attested in a single Igboid lect and rather than trying to account for this in the proto-phonemes, it is treated as free variation (which is widely attested for the other implosives in Niger-Congo). Igboid also attests bilabial trills in labial-velar consonants, similar to those in Mangbetu, but these are not proposed as proto-phonemes. Again my approach has been to reconstruct these on the balance of probability based on data from living languages. The text for consonants is thus entirely due to RB, but a key section of the text left by KW is giving in Appendix 1. KW made no proposals for the reconstruction of vowels and tones, so the text here is entirely due to RB.

Map 1 shows the locations of the Igboid languages. They are all relatively closely related; except for Ekpeye, they would probably come out at around 90% cognacy if lexicostatistic counts were conducted.

The reconstruction of morphology in Igboid also has implications for the phonology. Igboid languages had more widespread nominal prefix alternations in the recent past. Maho (1998) and Onyeche (2001) give examples of the residual system in Ika, an Igboid outlier, which still has both *ɔ/i* and *ɲm/ɲw* alternating prefixes in a small number of nouns, all to do with persons (Table 1). Interestingly, in the nouns with nasal prefixes, the stem vowels also alternate. This underlines a defect of word collection in families where most words have no number marking; the researcher rapidly stops asking for plurals and so misses them, even when they do occur. As a result, no Ika plurals were originally marked in the wordlist. Stem-vowel alternation was also probably more widespread and may well explain some of the apparently idiosyncratic vowel shifts in synchronic forms.

Table 1. Ika singular and plural alternations

Gloss	sg.	pl.
man	ó-kéɲe	i-kéɲe
woman	ɔ-kpòhɔ	i-kpòhɔ
stranger	ɔ-tumúɲye	i-tumúɲye
child, infant	ɲ ^w áɲdu	ɲmúɲdú
child	ɲ ^w àta	ɲmwéka
sibling	ɲ ^w ɛɛ	ɲmune

The Ika data has two important consequences for Igboid reconstruction. If such systems were more common in the recent past, then speakers clearly analyse lexemes as prefix + stem and can replace, or flip prefixes according to changing lexical norms. As a consequence, prefix vowels may not show the same correspondences as stem vowels *or indeed any correspondence at all*. This means that proposing a reconstruction for the prefix in some glosses is simply inappropriate.

In some lects, prefixes on derived nouns definitely do not show regular correspondences. Ika (again) has numerous nouns derived from CV verb stems (Maho 1998), some examples of which are given in Table 2.

Table 2. Nominal formation in Ika

Verb	Gloss	Noun	Gloss
kpé	pray	ikpere	prayer
mú	laugh	emu	laughter
bú	sing	ebu	song
hɔ	be	éhu	body
zá	sweep	èziza	broom
rú	work v.	órú	work n.

Table 3 illustrates the individual nominalising prefixes carry a specific tone and retain it when creating nouns. /ɛ/ is always high tone and /a/ low tone. It is therefore impossible to specify the vowel and tone of the prefix in proto-Igboid, since the prefixing process clearly postdates this hypothetical state of the language.

Table 3. Nominal prefixes and tone

	wealth
P-Igboid	*V-kò
Èkpèyè	{é-zè}
Ndele	ékò
Ọgbakịrị	ékò
Ọgba	àkò
Owere	àk ^h ò
Ọhụhụ	àk ^h ò
Èbịrịba	ékò
Èhụgbo	ékò
Ezaa	ékò
Izii	ékò N
Udi	ékò
Ọnicha	àkò
Ụkwụani	àkò
Ika	
Ọkọcha	àkà/élú
Lengwe	ékò

The rule for deriving the V- noun prefixes is not obvious and this is probably because a more complex system of alternations has become simplified, leaving fossil forms (including their tones) on nouns. Since many the nouns are in the basic lexicon, this suggests that finding regular correspondences between the V- of prefixes will not be possible.

Igboid languages are also subject to quite rapid lexical change, including nominal prefixes. This has rarely been studied, but Onyeché (2001) explores some of the changes which have occurred in Ika. Since the first publications on Ika in the 1950s, some words have gone out of use, the senses of others have merged and crucially, nominal prefixes have been ‘flipped’. Some examples are given in Table 4;

Table 4. Lexical change in Ika

Gloss	1950s	early 2000s
bad thought	onuma	edziroro
forest	egboko	ofia
toilet	mkpú	azūolo
bedbug	εε	ʃintʃin
calabash dish	ogbā	ɔkpā/afere
king	ogiso	eze, obi, dein

These are by means marginal words or recent borrowings. However, they do illustrate the spread of Central Igbo, especially in words like ‘king’, ‘bedbug’ or ‘toilet’ where Ika is being relexified from more prestigious lects.

6.2 The Proto-Igboid consonant system

Kay Williamson tentatively reconstructed the consonants of Proto-Igboid as in Table 5;

Table 5. Consonants reconstructed for Proto-Igboid -KW

Manner	labial-velar	labial	alveolar	palatal	velar	labialised velar	
Fricative		f	s				
Plosive		p	b	t	d	c ɟ	k g k ^w g ^w
Double stop	kp gb						
Trill			r				
Implosive		ɓ	ɗ	ɗ̥	ɟ̥		
Nasal(ised)	ŋm	m	n		ɲ	ŋ~ɲ̃ ɲ ^w	
Approximant	w		l		y	ɥ	

The whole implosive line is extremely marginal to all modern lects and is mostly attested in Ekpeye. For reasons given below, I have omitted this whole series. KW began to describe the labialised consonants but her analysis was unfinished. I have therefore begun this topic from scratch.

The neogrammarian approach is problematic in terms of the broader reconstruction of Niger-Congo. As a consequence, an alternative is to posit more obvious reconstructions, i.e. to reconstruct the phoneme actually attested in living languages. Table 6 shows the proto-phonemes of Igboid, based on attested sounds in living languages.

Table 6. Consonants reconstructed for Proto-Igboid -RMB

Manner	labial	alveolar	palatal	velar	labial-velar	labialised velar	glottal
plosive	p, p ^v b	t d		k g		k ^w g ^w	
double stop					kp gb		
nasal(ized)		m n		ɲ	ŋ	ŋm	ɲ ^w
trill		r					
fricative	[f], f ^v [v]	s z					h
affricate		[ts]	ʃ ɟʒ				
approximant		l	y			w	

Bracket sounds are those where the evidence is open to multiple interpretations. Contrastive consonant modification in Igboid is restricted to labialisation and palatalisation, as indicated on the chart. Labialised S (s ~ ʃ ~ ɕ) is recorded as an alternation of *fy* sequences (Table 13) but there is no reason to construct this to proto-Igboid.

/r/ and /l/ are always attested in the comparable datasets and may not have been contrastive in proto-Igboid, but perhaps in free variation at that stage.

Palatalisation. Only the bilabial /p/ has unequivocal contrastive palatalisation. The word ‘heart’ (Table 9) has a stem-vowel alternation of /i/ and /u/ which suggests an original palatalised consonant but this is not attested synchronically. There might be evidence for an original velar or labial-palatal approximant, as KW’s reconstruction suggests, but I hesitate to propose this with no synchronic attestations.

Homorganic prenasalisation of stops and nasals is common, but the nasal consonant is usually tone-bearing and can be treated as a separate segment. Aspiration is recorded in several lects, but always occurring with a nasalised vowel, or reflecting a nasalised vowel in cognate forms elsewhere.

In the text which follows, each proposed proto-phoneme is followed by a table of evidence, drawn from the very large set of data tables available online¹. All the original evidence is given, including non-cognate forms. Blanks indicate the data was not collected, but the original 14 lects sampled are always listed together supplementary more fragmentary data.

¹ <http://rogerblench.info/Language/Niger-Congo/VN/Igboid/Comparative%20Igboid%20complete.pdf>

6.2.1 Labial consonants

Four labial consonants are reconstructed: *p, *b, *f and *m with some evidence for *v. The implosives /ɓ/ and /ɸ/ and the bilabial /β/ are attested in some lects but there is no reason to attribute them to proto-Igboid.

6.2.1.1 *p

The evidence for *p is presented in Table 7 and evidence for the contrast with *f is given in Table 15.

Table 7. Evidence for proto-Igboid *p

	squeeze	carry	horn (music)
P-Igboid	*-pĩ	*-pá	*ò-pì
Èkpeye	pĩ	{bútú}	òpì
Ndele	fì	pá	òpyò
Ọgbakiri	pĩ		òpì
Ọgba	pì	{bù}	òpì/òfì
Owere	pì	pá	òpì
Ọhụhụ	pì	pá	òpì
Èbiriba	pì	pá-rí	òpù
Èhụgbo	pì	pá-rí	òpì
Èzaa			òpù
Izii		pá	òpù
Udi	pì (<i>orange</i>)	pá	òpè
Ọnicha	pì (<i>e.g. seeds</i>)	pá	òpì
Ụkwuani	pĩ	pá-lí	òpì
Ịka		pá-lí	
Ọkọcha	pì		
Mbieri	pì	{kù}	òpì
Ọkt	pè		òpù

*p also has a palatalised counterpart, *pʲ, which is reconstructible to proto-Igboid (Table 8). It can only precede -a or -ã but is contrastive with the non-palatal form, as ‘carry’ in Table 7 shows.

Table 8. Evidence for proto-Igboid *pʲ

	smashed (be)	hornbill
P-Igboid	*-pyá	*á-`-píyá
Èkpeye	kópyá	ápyá
Ndele	-fyá	
Ọgbakiri	pyá T? imp?	í kôpyà
Ọgba	{kókópó}	áfí nà
Owere	pyá	àp ^h yá
Ọhụhụ	pyá <i>squash</i>	àp ^h yá
Èbiriba		
Èhụgbo	kópyá	àpyá
Èzaa		
Izii	pyá <i>break, peel (groundnuts)</i>	ápyá
Udi	kópyà	àpyá
Ọnicha	pyá	ápyá
Ụkwuani	{tíkópó}	ápí á
Ịka		
Ọkọcha		ápyá
Mbieri	pyá	àp ^h yá

Notes: A similar lexeme for ‘hornbill’ occurs in Ijoid, so borrowing is a possibility, although if borrowed into Igboid it must be at the level of the proto-language, as all expected sound-shifts occur.

6.2.1.2 *b

The evidence for *b is presented in Table 9 and evidence for the contrast with *f is given in Table 15.

Table 9. Evidence for proto-Igboid *b

	increase	pear	heart, chest
P-Igboid	*-bá`	*ù-bé	*ó-biù
Ekpeye	{bóǰí, bǰí}	ùbê	óbù N
Ndele			óvù
Ọgbakiri	bâ N	ibé	{ǰmkpómà}
Ọgba	bá	ùbé	óbù
Owere	bá	ùb ^h é	óbì
Ọhuhu	bá	ùb ^h é	óbì
Èbiriba			óbù
Èhugbo	bá	ùbé	óbù
Èzaa	bá	ùbé	óbù
Izii	bá N	ùbé	óbù
Udi	bá	ùbé	óbè
Ọnichá	bá	ùbé	óbì
Ụkwuani	báǰégó	ùbé	óbì
Ịka	bá	ùbé	óbì
<i>Ok</i>			óbù
<i>Ihm</i>		ùβé	

Notes: ‘pear’ is now applied to the avocado pear, a New World introduction but was originally *Dacryodes edulis*, hence an old word. However, similar forms occur in many neighbouring languages, e.g. Ibibio *ébên*, so some sort of borrowing may be taking place.

Notes: The unusual alternation of front and back vowel in ‘heart’ suggests an original palatal, for example *ó-byù. However, this would be very atypical for Igboid.

*b has a prenasalised counterpart *mb which is consistently retained in Ekpeye and therefore can be reconstructed to proto-Igboid (Table 10)

Table 10. Evidence for proto-Igboid *mb

	nation, tribe	tortoise	nail, claw
P-Igboid	*m-bà	*mbè	*mbò
Èkpèyè	òbà	námè N	óbó é+ká
Ndele	{ògbò}	éṅwèré vèkù N	mívó ékà
Ogbakiri	mbà	{àním}	
Ogba	mbà	m̀vèkí, mbèkí	mbò
Owere	mbà N	mbè {k ^w ù}	mbó/mívó
Ohuhu	mbà N	mbè {k ^w ú}	mívó
Èbiriba	mbà	mbè	mbwó
Èhugbo	mbâ	mbé	mívó é+ká
Ezaa	mbà	mbèpfù	mívó
Izii		mbèpfù	mívó
Udi	mbà	mbè	mívó
Oñicha	mbà	mbèk ^w ù	mbó
Ukwuani	m ⁺ bà ànì	mbèkù N	mbó
Ika		mbèkù	mbó
Amg	mbà	mbè	mbó

6.2.1.3 The proposal for implosive *b

*b was reconstructed by KW on the basis of sporadic attestations in Ekpeye. It does not occur synchronically in any other lects except where it is the second component of the co-articulated stop /gb/. In the light of the extensive influence of Ijoid on Ekpeye, it seems more likely this is a local sound-shift, not a reflection of a proto-phoneme. Table 11 shows the few cases where Ekpeye has b, corresponding to w, b, v in other lects.

Table 11. Reflexes of *b according to KW

	they	hate + hatred	food	firewood
P-Igboid-KW	*-bé	*-bé í-`-béè	*bí-`-?í	*bé-ĩ -kóĩ N
Èkpèyè	bé ⁺ é	béni égbà	bí ⁺ ?í	{ótá ⁺ ní }
Ndele	vé	wé í ⁺ wé	wíri	vékó
Ogbakiri	bé	wé í ⁺ wé	wíri	{ísísi} ⁺ bék ^(w) ó
Ogba	wó	wé	{írí }	ńkí
Owere	ṅṅ ^w ó, {há }	wé íwé	{ńrí/rí }	ńkó
Ohuhu	{há }	wé íwé	{rí }	ńkó
Èbiriba	wá		{ériméí}	ńkó
Èhugbo	wó	wé	{ńrí}	ńkó
Ezaa	{h ^w é}		{ńrí}	ńkó
Izii	{èfè}	íwé	{ńrí}	ńkó
Udi		wé		ńká
Oñicha		wé íwé	{ńni}	ńkó
Ukwuani	wá/wé	wé íwé	{ńlí}	ńkó
Ika			{ńni}	ńkó
Okocha	{kwé}	wé	{ńdí} Igw	ńkáObf
Lengwe	{há }	wé	{ńdí} Osm	ńkáOkocha

Ohiri-Aniche (1999) notes that Igboid *w corresponds to labial stops in related languages, so synchronic /w/ may have originated in a labial stop at a stage prior to the present spoken languages.

6.2.1.4 The fricatives *f and v

Igboid appears to have two distinct sources of the fricatives /f/ and /v/. *p and *b tend to weaken to f and v respectively (Table 12). This change typically occurs before U.

Table 12. Weakening of *p and *b to f and v

	germinate, sprout	go/come out	carry (on head)	hatch
P-Igboid	*-pú	*-pǔ	*-bú	*-bǔ
Ekpeye	{mé émé}	{kádí}	bú	bǔ
Ndele	fú	h ^w ògá	vúzó	
Ọgbakiri	fú	h ^w ògá	vúrí	{tòwá}
Ọgba	pú/fú	fò	bú	{tòkpó èk ^w á}
Owere	fú	fò	bú	vò
Ọhụhụ	fú	fò	vú	vò
Èbiriba	pú	pò	bú	
Èhụgbo	fú-té	fò	vùté	vò
Èzaa			vùtá	vò
Izii	fú-tá	fò	vú	
Udi	fú	fò	vú	vò
Ọnicha	pú	pò	bú	bò
Ụkwụani	pú	pǔ	búlú	{tòkpó}
Ịka		pò	bú	bò
Ọkọcha	fú	fòtá	vú	
Mbieri	pú	pò		b ^h ò

However, a separate series provides evidence for *f^v (Table 13) but there is no corresponding set for *v. Note that while these two sets are entirely regular across the various lects, the context of *f is restricted to the formula *f(w/y)a. Since /f/ is always palatalised in front of a central vowel, there is no evidence for an f/f^v contrast in proto-Igboid.

Table 13. Evidence for proto-Igboid *fʷ

	bush	market (n.)
P-Igboid	*ɔ-fʷá	*á-fʷá
Èkpèyè	óyá	áyá
Ndele	óhyá	áhyá
Ọgbakiri	óhyá	áhyá
Ọgba	óhyá	áhyá
Owere	óhyá	áhyá
Ọhụhụ	óhyá	áhyá
Èbiriba	ófyá	áfyá
Èhụgbo	óhyá	áhyá
Èzaa	ófwá	áfwa
Izii	óswá	áswá
Udi	ófwá	áfwa
Ọnicha	ófyá	áfyá/ávyá
Ụkwụani	ófyá, {úgbókò}	áfyá
Ịka	ófyá	áfyá
Ọkọcha	óçwá	áčwá
Lengwe	óvyá, {idù}	ávyá
Nrobo		áfya
Mbieri	ózyá/óhyá	áhyá
Ekw	ófyá	áfya
<i>Oba</i>	ófyá/ófyá	áfyá/áfya
Agbani	ófyá	áfya/áčwá/áfya

The evidence for *v is equivocal, since b ~ v are in free variation in some lects. However, as Table 14 shows, /v/ is dominant in some lexemes and moreover corresponds to *v in external cognates.

Table 14. Probable evidence for proto-Igboid *v

	uproot, harvest	scramble for
P-Igboid	*-vò	*-vó
Èkpèyè	{gbàdí} N	{dódí}
Ndele		
Ọgbakiri	vò	{vó see d}
Ọgba	bò/vò	bó/vó
Owere	vò	b ^h ó/vó
Ọhụhụ	vò	vó N
Èbiriba		
Èhụgbo	vò	vó
Èzaa	vòtá	vó
Izii	{bvútá}	vó N
Udi	vò	vó
Ọnicha	bò	bó
Ụkwụani	{k ^w òlú, gúlú}	{zó}
Ịka		

Notes: Proto-Edoid has *vuN for ‘to uproot’ which argues that proto-Igboid *v is plausible.

6.2.1.5 Evidence for contrast in labial consonants

6.3.5.1 *f and *p

The clearest contrast between *f and *p occurs in the template *fya as opposed to *pya (Table 15). There is only one recorded case of *pya, but provided it is not onomatopoeic or a loan (similar forms occur in Ijo), the shaded lects show a contrast between the reflexes of *f and *p.

Table 15. Contrasts between *fya and *pya

	bush	market (n.)	grass/weed	hornbill
P-Igboid	*ó-fyá	*á-fyá	*é-fífyá	*á-pyá
Ekpeye	óyá	áyá	{é ⁺ wé ?}	ápyá
Ndele	óhyá	áhyá	ró ⁺ hyará, {àǰàrà}	
Ọgbakiri	óhyá	áhyá	rí ⁺ hyará, {àǰàrà}	í kôpyà ??
Ogba	óhyá	áhyá	é ⁺ hyá	áfí nà
Owere	óhyá	áhyá	áhyíhyá	àp ^h yá
Ọhụhụ	óhyá	áhyá	áhyíhyá	àp ^h yá
Ebiriba	ófyá	áfya	éfífyá	
Ehugbo	óhyá	áhyá	éhíhyá	àpyá
Ezaa	ófwá	áfswá	{èwù}	
Izii	óswá	áswá	éswá	ápyá
Udi	ófwá	áfswá	éfwófwá	àpyá
Onicha	ófyá	áfya/ávyá	áfífyá	ápyá
Ukwuani	ófyá, {úgbókò}	áfya	éfífyá	ápí á
Ika	ófyá	áfya	{àǰàrà}	
Ọkọcha	óçwá	áčwá	{èwò}	ápyá
Lengwe	óvyá, {idù}	ávyá	évívyá	
Nrobo		áfya	ééfyá	
Mbieri	ózyá/óhyá	áhyá	áhyíhyá	àp ^h yá
Ekw	ófyá	áfya	áfífyá	
Oba	ófyá/ófyá	áfya/áfya	áfífyá/áfíjya	
Agbani	ófyá	áfya/áčwá/áfya		
Nimo			áuívyá	

There are no clear contrasts between *f and *p in any other environment. If ‘hornbill’ is an early borrowing this could explain why /p/ has been retained rather than weakening to /f/.

6.3.5.2 *p and *b

Clear contrasts can be established between *p and *b (Table 16).

Table 16. Contrasts between *p and *b

	carry (in hand)	increase	horn (music)	heart, chest
P-Igboid	*-pá	*-bá`	*ò-` - pì	*ó-biù
Èkpèyè	{bútú}	{bófí, bófí }	òpì	óbù N
Ndele	pá		òpyò	óvù
Ọgbakịrị		bâ N	òpì	{ńmkpómà}
Ọgba	{bù}	bá	òpì/òfì	óbù
Owere	pá	bá	òpì	óbì
Ọhụhụ	pá	bá	òpì	óbì
Èbirịba	pá-rí		òpù	óbù
Èhụgbo	pá-rí	bá	òpì	óbù
Èzaa		bá	òpù	óbù
Izii	pá	bá N	òpù	óbù
Udi	pá	bá	òp̣	óḅ
Ọnịcha	pá	bá	òpì	óbì
Ụkwụani	pá-lí <i>carry child at side</i>	báḍzégó	òpì	óbì
Ịka	pá-lí <i>carry child at side</i>	bá		óbì
Ọkt	{káté}		òpù	óbù
Mbieri			òpì	

When preceding nasalised vowels, *p and *b become aspirated in lects such as Owere and Mbieri. In Ọhụhụ, the aspiration remains although the nasalisation has been lost.

Table 17 Aspiration developing before nasalised vowels

	squeeze out (liquid)	carve, sharpen (to a point)	slice (v.)	enter
P-Igboid	*-pǎ	*-pyí (ǎ)	*-bĩyě	*-bǎǎ
Èkpèyè	{pĩ}	pí ó N	kébyé N	{kpúǎú}
Ndele	{híé}	-fyǎ N		fǎ
Ọgbakịrị		pyǎ N	bé	bǎ
Ọgba		pí, fí	bé/vé	bǎ/vǎ
Owere	p ^h ǎ	p ^h ĩ	b ^h é	b ^h ǎ
Ọhụhụ	p ^h ǎ	p ^h í í, p ^h yí í N	b ^h é	b ^h ǎ
Èbirịba		pĩ		
Èhụgbo	{pĩ }	pí	bérísìè N	gábàá
Èzaa			bé	bàtá
Izii		pyí	bé	bàtá, bàhó
Udi	pə (<i>palmfruit</i>)	pí	bèé	bà
Ọnịcha	pà (<i>e.g. fruit</i>)	pí	béǎǎ	bà
Ụkwụani	{pĩ, sǎ}	pí	bíé	bàyé
Ịka		pĩ		bàné
Ọkọcha	{pĩ}	pí		
Mbieri	p ^h ǎ			

6.2.1.6 *m

*m is always retained as m as shown in Table 18. m- can also be a tone-bearing homorganic prefix as shown in ‘I, me’ below and in Table 10.

Table 18 Retention of *m

	nose	suck (v.)	I, me	do, act, make
P-Igbooid	*é-`-mí	*-mì	*m̃-mí	*-mé T?
Èkpeye	émî	mì ó	mê	mé
Ndele	é [↓] mî	mí	mé	mé
Ọgbakiri	í [↓] mî	myǒ	mé	mé
Ọgba	ímî	mì		mé
Owere	ímí	mì	mó, m̃mó	mé
Ọhuhu	ímí	mì	mí	mé
Èbirịba	ímí	mì	mó	mé
Èhugbo	ímí	mì - tá	mó [↓] ní	mé
Èzaa	ímí	mì	mó	mé
Izii	ímí	mì - tá	mó	mé
Udi	ímí	mì	m̃	mé
Onicha	ímí	mì	mó	mé
Ụkwuani	ímí	m̃	m̃mé	mé
Ịka	ímí			mé
Amg		mì	m̃mí	mé
Ọhaọzara	ímí	mì	mó	mé

6.2.2 Labial-velar consonants

6.2.2.1 Overview

Igbooid has three reconstructible labial-velar stops: *kp, *gb and *ŋm. *ŋ^w can also be considered part of this set. The labial-velar stops transcribed *kp and *gb vary in their realization (Connell 199x). They tend to lose their velar contact in many lects; the notation kβ, gβ indicates weak velar contact. The end of this process is that they weaken to the implosives β and ɓ, although they usually retain velarisation. In a few lects they weaken instead to plosives, especially before nasalised vowels, in which case they merge with p and b and develop aspiration before the nasalised vowels. Occasionally, the labial element weakens instead of the velar one, resulting in k^w and g^w, the first of which can affricate to kf. A unique correspondence occurs in Ozh, where the labial element of both stops is trilled before -u. The IPA symbol for a voiced bilabial trill is ʙ; this has therefore been combined with g to yield gβ for the voiced labial-velar stop. By analogy, the voiceless counterpart is transcribed kP.

6.2.2.2 *kp

Table 19 provides evidence for reconstructing *kp in proto-Igbooid. /kp/ occurs in variation with kβ, β, p^w, kf, kP. /kp/ can be followed by -a, ã and -o.

Table 19. Evidence for proto-Igboid *kp

	eldest son	mould, forge	weave, plait	bag
Èkpeye	ákpá ^h ná/ókpólá	kpó ^h zú	kpá	ékpà
Ndele	ékḃárá/ó-	kḃú	kpá N	rékḃà
Ọgbakiri	ókḃárá	kḃú	kḃà	érékḃà
Ọgba	ókprá	kḃú	kḃà	ékpà
Owere	óp ^h árá	ḃú	ḃà	àḃà
Ọhụhụ	óp ^h ará	ḃú	ḃà	àḃà
Èbiriba	ókḃárá	kpó	kpà	ékpà
Èhụgbo	ókpará	kpó	kpà	ékpà
Èzaa		kpó	kpà	ékpà
Izii	ókpará	kpó	kpà	ékpà
Udi	óḃálá	ḃó	ḃà {ó ^h dá} =(e.g. basket)	éḃà
Ọnicha	óḃálá	ḃú	ḃà	àḃà
Ụkwụani	ókpálá	kpó	kpà	ékpà
Ika		kpó	kpà	ékpà
Ọkọcha			kpà	ékpà
Arc	ók ^w ará	pó lect?		
Emh				(é)rékḃà
Ọhaọzara		kPó	kpà	ékpà
Oba	óḃálá/óʔálá			àḃà=āà
Mbieri	ók ^w árá/óp ^h árá			

6.2.2.3 *gb

Table 20 gives evidence for *gb in proto-Igboid, which can only precede central and back vowels. A homorganic nasal prefix can also be reconstructed for some words (Table 21).

Table 20. Evidence for proto-Igboid *gb

	jaw	canoe, boat	bark, shout at	kill
P-Igboid	*à-`-gbà	*ó-`-gbóò	*-gbóò	*-gbú
Èkpeye	àgbà	ógbò	gbó {ídĕ}	gbú
Ndele	àgbà	ó ^h gbò	gbó	gbú
Ọgbakiri	àbà	ó ^h gbò	gbò	gbú
Ọgba	àgbà	ógbò	gbó	gbú
Owere	àg ^{wh} à/àb ^h à	óbó	bó + {òdʒà}	bú
Ọhụhụ	àbà/àb ^h à	óbó	bó	bú
Èbiriba	àgbà	ógbó	gbó	gbú
Èhụgbo	àgbà	ógbó	gbó	gbú
Ezaa	àgbà	ógbó	gbó	gbú
Izii	àgbà	ógbó	gbó + {òdʒà}	gbú
Udi	àbà	óbó	bó	bú
Ọnicha	àbà	óbó	bó	bú
Ụkwụani	àgbà	ógbó	bó N	gbú
Ika	àgbà	ógbó		gbú
Echie	àg ^{wh} à			
Ọkọcha		ógbó	gbó {òdʒà}	gbú
Ell	àbà			
Ọhaọzara	àgbà	ógbó	gbó	gBú

Notes: ‘jaw’ and ‘bark’ are widely attested outside Igboid with /gb/, confirming its status as a phoneme. Table 21 shows a single case where the homorganic nasal prefix can be reconstructed together with /gb/.

Table 21. Evidence for proto-Igboid *ɲmgb

	time
Èkpeye	ùbè
Ndele	ɲmgbè, {óǵè}
Ọgbakiri	ɲmgbè
Ọgba	ɲmgbè
Owere	m̀bè/m̀mà N
Ọhụhụ	m̀bè
Èbiriba	
Èhụgbo	ɲmgbè
Ezaa	
Izii	
Udi	m̀bè
Ọnicha	m̀bè
Ụkwuani	{óǵè}
Ika	
Ọkocha	ɲmgbè
Ọhaọzara	ɲmgbè

6.2.2.4 *ɲm

The labial-velar nasal occurs as a homorganic nasal prefix (e.g. Table 21), but as C₁ of the root in only a few lects, and even in those few it appears to occur in some words and not in others. It can only precede -a and -o and has merged with /m/ in most lects. Table 22 gives examples of its occurrence.

Table 22. Examples of *ɲm

	beat (of rain, sun)	caught in a trap (be)	learn	sharpen (knife)
P-Igboid	*-ɲmá	*-ɲmá	*-ɲmò	*ɲmóǵĩ
Èkpeye	{de, m̃ (sun)}	{súli éǵĩ}	m̀ò	m̀óǵĩ
Ndele	{dé (rain)}	{gbú}	m̀ó	m̀o(sì)
Ọgbakiri	má	má	m̃	m̀ó
Ọgba			m̀ò	
Owere	má	má	m̀ò	m̀ó
Ọhụhụ	má	má	m̀ò	m̀ó
Èbiriba	ɲmá	ɲmá	m̀ò	ɲm̀ó
Èhụgbo	má	mári	m̀ò	m̀ó
Ezaa	ɲmá	ɲmá	m̀ò	
Izii	ɲmá	ɲmátá	ɲ ^w ò	
Udi	má	má óyà	m̀ə́tá	m̀é
Ọnicha	má	má	m̀ò	m̀ó
Ụkwuani	má	má {ǹòǵà}	m̃	m̀ó
Ika			m̀ò	
Ọkocha	ɲmá	ɲmá	ɲm̀ò	
Amg	ɲmá		ɲm̀ò	ɲm̀ó
Ọhaọzara	ɲmá	ɲmá		m̀ó
Bnd	ɲmá	ɲmá		ɲm̀ó

Within these restricted contexts, *ɲm should be reconstructed to Proto-Igboid.

Maho (1998) notes that ɲm- was a prefix in a now almost lost singular/plural noun -class prefix alternation in Ika. He gives the following examples (Table 23);

Table 23. Ika singular and plural alternations

Gloss	sg.	pl.
child, infant	ɲ ^w ádu	ɲmúndú
child	ɲ ^w àta	ɲmwéka
sibling	ɲ ^w éne	ɲmune

The evidence for both *ɲm- and *ɲ^w in proto-Igboid (Table 22, Table 48) in combination with these alternations in Ika, point to their being originally far more widespread.

6.2.3 Alveolar consonants

The alveolar consonants reconstructed are: *s, *t, *d, *n, *l.

6.2.3.1 *s

An ‘old’ *s is reconstructed for Proto-Igboid, and contrasts with a ‘new’ s. The old *s has undergone considerable changes in the modern lects. It is, however, invariably retained in Ụkwụani, with palatalisation before I, and merges with the new *s. In Ogidi it rhotacises to ʃ, and in Ono ʃ voices to r; l in Ekpeye is perhaps a further development from r. In other lects it becomes h or h^v. These reflexes contrast with those from the ‘new’ *s. Table 24 gives examples of the reflexes of Proto-Igboid *s.

Table 24. Reflexes of Proto-Igboid *s

P-Igboid	theft	slave	crowd, community	*s		
	ḡú-ò-sí	*ó-`-sù	*ò-`-sǎ	/--I	/--U	/--A
Ekpeye	{ògbò}	úlú	òlà N	l	l	l
Ndele	vú+sú	{óhì}	òhǎ	s/z	h	h ^v /h
Ọgbakiri	ósí	óh ^w ù, {óhì}	òhǎ	s/z	h ^w /f/h	h ^v /h
Ọgba	ó+sí	óhù	òhǎ	s/z	h	h
Owere	ó+ʃí/ó+hyí	óhù/óh ^w ù	òhǎ	hy/ʃ	h/h ^w	h/h ^v
Ọhụhụ	óhyí	óhù	òhǎ	hy/ʃ	h/h ^w	h
Ebiriba	ó+sí			s	h	h
Ehugbo	óhí		òhà	h	h	h/hy
Ezaa	ófí	óhù	òhà	ʃ	s/h/ϕ	h
Izii		óhù	òhà	ʃ	h/ϕ	h
Udi	ó+ʃí	óh ^w ù	òhà	ʃ	h ^w /h/ϕ	h/ϕ
Ọnicha	ó+rí	órù	òrà	r	r	r
Ụkwụani	ófí	ósù	{òsá òbòdò ?}	ʃ	s	s
Ika	ó+hí	{ìgbǎ}	{ìhí ǎ}	h	h/hy	h
Ogidi	ó+ʃí	óḡù	òḡà	ʃ	ʃ	ʃ
Lengwe		óhù		ʒ	h	h
Ezinifite	ó+hí	óhù		h/hy	h	h
Nrobo		ófù		ʃ	f	f/ʃ
Ọkọcha	ó+ʃí	óhè	òhà	ʃ	h	h

The ‘new’ /s/ develops from Proto-Igboid *ts (Table 28). In most lects it is simply s, often palatalizing to ʃ before I, and looking only at these lects one would be tempted to reconstruct *s. In Ogidi, however, the reflex is invariably ts, which is also found in Ezaa and Izi before U, and in Aku and Nrobo it is tf before U. These affricates give the clue; it is implausible for affricates to develop from fricatives, while the reverse is common; ts develops to s and tf to f, as in Ọgbakiri before U. The source of the affricates in turn must be *t, for alveolar affrication (t > ts) and labial affrication (t > tf) can be viewed as partial assimilations to the following vowel.

6.2.3.2 *tʃ

The palato-alveolar affricates *tʃ and *dʒ corresponding to the plain fricatives *s and *z must also be reconstructed (Table 25, Table 30). The can precede any vowel quality.

Table 25. Reflexes of Proto-Igboid *tʃ

	trim (hair)	wait for,	suckle	look for	drive away
Ekpeye	tʃáʃà N	sédzì	nèʃì é'má	{wúdígá, bágá}	tʃì
Ndele	tʃáímé	sètè	tʃì {ré'má}		tʃímé
Ogbakiri	tʃǎ	sé	tʃì	tʃó	tʃihálà
Ogba	tʃà	tʃé	tʃúbé	tʃó	tʃó
Owere	tʃà	tʃé	tʃì <i>put drink to s.o's lips</i>	tʃó	tʃó
Ohuhu	tʃà	tʃé	tʃì <i>put drink to s.o's lips</i>	tʃó	tʃó
Ebiriba				tʃó	
Ehugbo	tʃà	tʃérí	tʃèbé	tʃó	tʃó
Ezaa	tʃà	tʃé	tʃé	tʃó	tʃì ósó
Izii	tʃà	tʃé n̄tʃé	tʃé {é'rá}	tʃó	tʃì ósó
Udi	tʃà	tʃé	tʃé vowel? {é'lá}	tʃó	tʃó
Onicha	tʃà	tʃé	tʃì S?	tʃó	tʃó
Ukwuani	tʃǎbè	tʃé n̄tʃé	{yé é'lá} <i>give breast</i>	tʃó	tʃó
Ika	{dʒà}	tʃé	{yé é'rá} <i>give breast</i>	tʃó	tʃó ósó
Okocha			tʃébé		
Nrobo		tʃé		có	tʃó
Lengwe				tʃó	
Obl				tʃó	

A prenasalised form, /ntʃ/, must also be reconstructed (Table 26);

Table 26. Reflexes of Proto-Igboid *ntʃ

	soap	cane-rat
Ekpeye	ítʃà/ítʃià	*bù-ì-kì N
Ndele	ntʃà	bùtʃì
Ogbakiri	ntʃǎ	{é'vì}, n̄tʃì
Ogba	ntʃà	n̄tʃì
Owere	ntʃà	n̄tʃì
Ohuhu	ntʃà	n̄tʃì
Ebiriba		n̄tʃì
Ehugbo	ntʃà	
Ezaa	ntʃà	n̄tʃì
Izii	ntʃà	n̄tʃì
Udi	ntʃà	n̄tʃì
Onicha	ntʃà	n̄tʃì
Ukwuani	ntʃà	n̄tʃì
Ika	ntʃà	n̄tʃì
Ohaozara	ntʃà	n̄tʃì
Ogw		n̄tʃì
Okocha		n̄tʃì

6.2.3.3 *ts

There are several words where the alveolar sibilant affricate seems the most credible proto-phoneme. These fall into two sets *ts¹ (Table 27) where it reduces to /t/ and *ts² (Table 28) where it yields /s/.

Table 27. Reflexes of Proto-Igboid *ts¹ yielding /t/

	bush-cow, buffalo
P-Igboid	*á-tsǒ
Èkpeye	ótó'yá
Ndele	átǒ ó ^h hyá
Ogbakiri	átǒ ó ^h hyá <i>expected</i> áfǒ ó ^h hyá
Ogba	átǒ
Owere	át ^h ǒ
Ọhụhụ	át ^h ó
Èbiriba	át ^h ǒ
Èhụgbo	átó
Ezaa	
Izii	atsó
Udi	átǒ <i>expected</i> átǒ
Ọnicha	átó
Ụkwụani	átó
Ika	
Echie	át ^h ó
Ọkọcha	átsó
Ogidi	
Nrobo	átfǒ
<i>Aku</i>	átfǒ

The following words have a similar pattern of reflexes in respect of weakening of ts → tf, but where ‘buffalo’ has /t/, ‘follow’ and ‘millipede’ have /s/ (Table 28).

Table 28. Reflexes of Proto-Igboid *ts² yielding /s/

	follow, accompany	millipede	set on fire
P-Igboid	*-tsǒ	*é-`-tũ N	*-tsú N
Èkpeye	sòzé	{ó ^h gbó ^h gbô}	{bíjǐ é ^h ǐǐ}
Ndele	tǒgũ	ó ^h sũ	{gǒá é ^h kǒ}
Ogbakiri	fǒrú	ó ^h fũ	{fǒsǐ}
Ogba	sǒ	èsũ	súfǐ
Owere	s ^h ǒ	{árǐrǐ}	sú
Ọhụhụ	sǒ	ésú	sú
Èbiriba	sǒ	ésú	
Èhụgbo	sò	ésú	sú
Ezaa	tsò		
Izii	tsò	étsú	{tsó ókó} N
Udi	sò	ésǒ	sú
Ọnicha	sò	ésú	sú
Ụkwụani	sǒ	{álǐlǐ}	dósùmé
Ika	sǒmǐ		
Ọkọcha	tsò		
Ogidi	tsò	étsú	tsú
Nrobo	tfò	étfú	tfú
<i>Igt</i>		éfyó	
<i>Aku</i>			tfú

6.2.3.4 *z

*z is probably the best reconstruction for the fricative series, but it varies in context with /z/ and /dz/. It can only precede high vowels. However, /z/ stays unchanged in ‘make noise’ and is conserved in Ekepye in ‘steal’ which argues for *z (Table 29).

Table 29. Reflexes of Proto-Igboid *z

	make + noise	steal + theft	truth, goodness	blow (nose)
Ekpeye		zútú	{ífúkà} N	zĩ {émí}
Ndele	zǒ + àzǒ	sú + vú ⁺ sú	ézíó ⁺ k ^w ú	ǰĩ
Ọgbakiri	òvǒvǒ	vú	ézíó ⁺ k ^w ú	zĩ
Ọgba	òzǒ	zú	ézúk ^w ú	zĩ
Owere	òzǒ	zú + {ó ⁺ ǰĩ}	ézí, ézĩ {ók ^w ú}	z ^h ĩ, hyĩ
Ọhụhụ	zǒ òzǒ	zú + {ó ⁺ hyĩ}	ézí	{má í ⁺ mí}
Èbiriba	òzǒ	zú	ézí {ó ⁺ k ^w ú}	z ^h ĩ
Èhụgbo	òzò	zú + {óhí}	ézí {ó ⁺ k ^w ú}	zĩ
Èzaa	òzò	zìé + {ófè} (<i>imp</i>)		zĩ
Izii	òzò	zĩ{tá}	{eviya}	zĩ
Udi	òzǒ	zú	ézí {ó ⁺ k ^w ú}	zúó {ímí}
Ọnicha	òzò	zú + {ó ⁺ rí}	ézí {ó ⁺ k ^w ú}	zĩ
Ụkwụani	zǒ òzò N	zú + {ófí}	ézí {ókù}	zĩ {ímí}
Ịka	òzǒ	zú	ézí {ókù}	zĩ
Ọkọcha	òzò	zĩ +		
Nrobo		zú + {ófí}		zĩ
Ogidi		dzú + {órí}		dzi
Lengwe			ézí {ók ^w ú}	zĩ

6.2.3.5 *dz

/dz/ does not occur in variation with /z/ and the contrast of ‘steal’ (Table 29) with ‘be full’ (Table 30) shows that it must be reconstructed to proto-Igboid.

Table 30. Reflexes of Proto-Igboid *dz

	full (be), fill	refuse v.
P-Igboid	*-dzúyì	*-dzó
Ekpeye	yúlú	{g ^w é}
Ndele	dzí/dzì	dzó, {òk ^w éè} N
Ọgbakiri	dzì	{òk ^w éè} N
Ọgba	dzú	dzó
Owere	dzú	dzó
Ọhụhụ	dzú	dzó
Èbiriba	dzú	dzó
Èhụgbo	dzú	n.c.
Èzaa		dzíká
Izii	dzí	dzíká
Udi	dzú	dzó
Ọnicha	dzú	dzó; òdzódzó ?
Ụkwụani	dzú	dzó
Ịka	dzúú	dzó
Lengwe	dyú/ǰú /dzú	dyóká/dzóká
Nrobo	ǰú	
Igt	dzú	
Ọhaọzara	ǰú	

6.2.3.6 *t

Evidence for *t in proto-Igboid is shown in Table 36 and it can precede all vowel qualities. The implosive /ɓ/ is found as an occasional variant but not in a consistent fashion.

Table 31. Reflexes of Proto-Igboid *t

	dry up (of liquid)	rub on, scrub	crouch, squat
Ekpeye	tá	té	tùkpú N
Ndele	tá/tâ	té	túkù N
Ọgbakiri	tâ	té	tókùòró N
Ọgba	tá	té	túkùú N
Owere	fá	té	túk ^w ù
Ọhuhu	tá	té	túk ^{wh} ù
Èbiriba	tá	té	túkfù
Èhugbo	táhi	té	túk ^w ùrù
Èzaa		té	
Izii	tahó	té	túpfù
Udi	tá	té	túk ^w ù
Ọnichá	tá	té	túk ^w ù
Ụkwuani	tá	té	tú ^h k ^w ùlú
Ịka		té	
Mbieri			fúk ^w ù
Lengwe	tá	té	tsúk ^w ùrù
Ogidi		té	

6.2.3.7 *d and *nd

*d and *nd can both be reconstructed to proto-Igboid (Table 32, Table 33, Table 34). Aspiration in Owere, Ohuhu and related lects is quite regular where the vowel is nasalised. However, where d- followed by a high back vowel, the reflexes yields are more various, including dv, dz and dʒ (Table 33).

Table 32. Reflexes of the Proto-Igboid sequence *da

	sound v.	fall (v.)
P-Igboid	*-dǎ	*-dǎ
Ekpeye	{h ^w ǎ òh ^w ǎ}	dǎ éda
Ndele	dǎ	dǎ
Ọgbakiri	dǎ	dǎ
Ọgba	dǎ	dǎ
Owere	d ^h ǎ	d ^h ǎ
Ọhuhu	d ^h ǎ	d ^h ǎ
Èbiriba	d ^h ǎ	d ^h ǎ
Èhugbo	dà ódâ	dà
Èzaa	dà	dà
Izii	dà ódâ	dà
Udi	dà	dà
Ọnichá	dà òdâ	dà
Ụkwuani	{k ^w é ónû}	dǎ
Ịka		dǎ

Table 33 shows reflexes of the Proto-Igboid sequence *dɔ. ‘bottom’ and ‘tail’ are polysemous in many Igboid lects, but Ekepye preserves *dɔ* only in ‘bottom’ which confirms the status of **dɔ* as proto-Igboid.

Table 33. Reflexes of the Proto-Igboid sequence *dɔ

	bottom	tail
P-Igboid	*ódò	*ódò
Èkpeye	ódò	{éwòlò}
Ndele	ódò	ódò
Ogbakiri	ódò	ódò
Ogba	ódò	ódò
Owere		ód ^h ò(d ^h ò)
Qhuhu		ód ^h ò
Èbiriba		ód ^h ò
Èhugbo		ódódò
Èzaa		ódzò
Izii		ódzò
Udi		ódz̩
Onicha	órú n̄sí	ódò
Ukwuani		ódódò/ndódò
Ika		ódódò
Okocha		ódzò
Nrobo		ódvò
Ogidi	ógó	
Aku		ódvò
Qhaozara		ódzò

*nd

The prenasalised form /nd/ must be reconstructed for at least one word (Table 34).

Table 34. Reflexes of Proto-Igboid *nda

	small black ant
P-Igboid-	* ndánda
Èkpeye	{éyí} N
Ndele	nda N
Ogbakiri	nda
Ogba	nda N
Owere	nd ^h ánda ^h
Qhuhu	nd ^h ánda ^h
Èbiriba	nd ^h ánda ^h
Èhugbo	nda
Èzaa	nda ^h
Izii	ndada
Udi	nda ^h
Onicha	nda ^h
Ukwuani	nda
Ika	

6.2.3.8 *n

*n can be reconstructed to proto-Igboid, both as a tone-bearing homorganic nasal prefix and as a stem consonant (where is it always followed by -U) (Table 35).

Table 35. Reflexes of Proto-Igboid *n

	salt	you (pl.)
P-Igboid	*ń-nú	*á-nò
Èkpeye	{á'đá}	{yó'ó}
Ndele	{ára}	ánò
Ọgbakiri	{ára}	á'nò
Ọgba	ńnú	ónò
Owere	ńnú	ńnò/ónò
Ọhụhụ	ńnú	únù
Èbiriba	ńnú	ónò
Èhụgbo	únú	ónò
Èzaa	únú	ónò
Izii	únú	ùnú
Udi	úné	únù
Ọnicha	ńnú	ónò
Ụkwuani	ńnú/ńnúóyò	ónó
Ịka	ńnú	ónò
Lengwe	úlú	úlù
<i>Egm</i>	ńnú	
Ọhaozara	únú	

External cognates include PLC *ú-nùŋ and CB *-nyò, which confirm the status of *n.

6.2.3.9 *l

*l can be reconstructed for Proto-Igboid, as it is retained virtually throughout (Table 36). Where it precedes - a three lects have n-, and before -i there are regular changes to y- in Udi, n- in Ọnicha and ɲ- in Lengwe. In different lexical sets it occurs in variation with /r/ (Table 37) and is probably a subsequent development.

Table 36. Evidence for *l in Proto-Igboid

	heal (of wound)	bury	grave	tether (e.g. goat)
Èkpeye		lĩ	ĩli	{kwàfĩ}
Ndele	lálé	lí	lĩli	{òkpósi}
Ọgbakiri	lâ	lĩ	ĩli	{òkpósi}
Ọgba	lá	lì	ĩli	{kétá}
Owere	lá	lì	ĩli/ĩlilì	lí
Ọhụhụ	lá	lì	ĩli	lí
Èbiriba		lì		
Èhụgbo	lá	lì	ĩli	lí
Èzaa		lì	ílù	
Izii	lá	lì	ílù	lí
Udi	ná	yì	íyì	yí
Ọnicha	ná	nì	ínì	ní
Ụkwuani	ná	ɲĩ	íɲì	ɲímé
Ịka		lì	ĩli	
Ọkọcha		lì		
Lengwe	lá	ɲì	íɲì	lìwé
Ọhaozara		nìbè	ínì	níbé

Notes: The alternation between front and back vowels in ‘grave’ (which must be a nominalisation of ‘bury’) argues that the proto-form had a labialised /l/, i.e. lʷ, which is supported by the reflex in Ụkwuani. However, /lʷ/ does not occur synchronically in any Igbo lect.

Table 38. Reflexes of Proto-Igboid *j

	weaver-bird	faeces, dung	stinging black ant
Èkpeye	{ìgùlùbyà}	ìjĩ	{éyì} N
Ndele	éhyà	ìfí	àgbísì
Ọgbakìrì	éhyà	ńsǐ	àgbísì
Ọgba		ì sǐ	àgbáfì
Owere	áfà	ńjǐ	áp ^h ǒ , ábífì
Ọhùhù	áhyà	sǐ	ábísì
Èbìrìba		ńjǐ	
Èhùgbo		{ńsǐ ókòkò}	égbísì
Èzaa	ésà	ńjǐ	àgbífì
Izii	éfà	ńjǐ	agbofì
Udi	éfà	jǐ	éǒó ífì
Ọnìcha		ńsǐ	ábísì / áǒó sì
Ụkwuani	éfà		ákpífì
Ìka	éhyé	ńsǐ	
Ọkọcha	éfà		ábòfì
Ọhaọzara	éhà		àgbófì
Obolo Afọ			ákpífì
Nrobo		ńsǐ	
Ogidi		ńtsǐ	
Obs		ńjǐ	

6.2.4.2 *ɲ

The palatal nasal occurs in Igboid only where it precedes i/I as in Table 39.

Table 39. Reflexes of Proto-Igboid *ɲ

	heavy (be)	charcoal	friend
P-Igboid	*-ɲi	*úɲiri	* éɲi
Èkpeye	ńí +éɲi	áńíjǐlè	{ɲ ^w ódzè}
Ndele	ńí, {ródǎ}		éɲi
Ọgbakìrì	ńǐ		éɲi
Ọgba		íɲirò	
Owere	ńí áǒó	úɲi/úɲirǐ	éɲi
Ọhùhù	ńí áǒó	úɲi	éɲi
Èbìrìba		úɲiri	éɲi
Èhùgbo	ńi	íɲiri	éɲi
Èzaa			éɲi
Izii	ńi	úɲi	{óɲà}
Udi	yì {éííó}	úyù	éyì, {òyì }
Ọnìcha	ńi	úɲi	éɲi, {òyì }
Ụkwuani	ńǐ	úɲi	{òyì }
Ìka		úɲi	
Lengwe	ńi {eró}	úɲiri	éɲi
Ọhaọzar		úɲi	

a

Notes: ‘charcoal’ has external cognates Ife (Togo) *eɲi* and Edo *eɲi* which confirms the plausibility of *ɲ for proto-Igboid.

6.2.5 Velar consonants

6.2.5.1 Overview

The velar consonants which can be reconstructed for proto-Igboid: *k, *g, *ɣ and *ŋ. All except ɣ have contrastive labialised counterparts.

6.2.5.2 *k

*k can be reconstructed for proto-Igboid (Table 40) as well as its labialised counterpart k^w (Table 46). It can only be followed by the central and back vowels.

Table 40. Reflexes of Proto-Igboid *k

	hand, arm	crab	wing	sow, plant (seed)
P-Igboid-KW	*é-ká	* ð(≈ŋ)-ʃó ⁺ kóló	*ŋ-kù	*-kó
Èkpèyè	ékâ	ékóló	{éyì }	{kpáǻǻ}
Ndele	á ⁺ kâ	òkó ⁺ ró	ákáŋk ^w ù N	{kpásì }
Ogbakiri	á ⁺ kâ	ó ⁺ kóró	ákáŋk ^w ù N	{kpásì }
Ogba	éká	ńsí ⁺ kó	ŋk ^w ù	{kpáǻǻ}
Owere	áká	ńǻ ⁺ kó	ŋkù	k ^h ó
Oñuñu	áká	ńsí ⁺ kó	ŋkù	k ^h ó
Èbiriba	éká	ŋkó ⁺ kó	ŋkù	kó
Èhugbo	éká	ŋhó ⁺ kó	ŋkù	kó
Èzaa	éká	ŋh ^w ó ⁺ kó	n.c.	kó
Izii	éká	ŋhó ⁺ kó	ŋkù	kó
Udi	éká	ńǻ ⁺ kó	ŋká	kó
Oñicha	áká	ńrí ⁺ kó	ŋkù	kó
Ukwuani	éká	òʃó ⁺ kóló	ŋk ^w ò N	kó
Ika	éká	ńsí ⁺ kó	ŋkù	kó
Okocha	éká Okocha áká <i>Obl</i>	ŋk ^w ó ⁺ kó		kó
Ogidi		ńǻ ⁺ kó		
Lengwe			ŋkù	kó

Notes: for ‘sow’ compare Bantu *-kún- *plant*

6.2.5.3 *g

/g/ is surprisingly rare in Igboid, compared with /gb/, /g^w/ and /ɣ/. However, Table 41 presents some examples where it is the most probable reconstruction. The occasional labialised forms before a high back vowel are treated as phonetic variants rather than original *g^w (Table 47).

Table 41. Reflexes of Proto-Igboid *g

	fight, war n.	listen	guinea-fowl	money	buy
P-Igboid	*ḡ-gḡ	*-gḡ	*ḡgàzì	é ⁺ gḡ	*-gḡ
Èkpèyè	{ólò}	gḡ étè	{òkòlòwò}	{ówáí}	gḡ
Ndele	ḡg ^w ḡ	gḡété	ḡgàzì	{áwáí}	gḡ
Ọgbakìrì	ḡgḡ	gḡě	ḡgàzì	{íwáí}	gḡ
Ọgba	ḡg ^w ḡ	gḡò	ḡgràzì	égḡ	
Owere	ḡg ^h ḡ	g ^h ḡ	ḡgàzì	é ⁺ g ^h ḡ	
Ọhụhụ	ḡg ^h ḡ	g ^h ḡ	ḡgàzì	ég ^h ḡ	g ^h ḡ
Èbirìba	ḡgḡ	gḡébé	ḡgàzì		
Èhugbo	ḡgḡ	gḡébé	ḡgàzì	{òkpòyò}	{zḡ}
Ezaa	ḡgḡ	n.c.	ḡgàzì	é ⁺ gḡ	
Izii	ḡgḡ	{ḡá ḡfì }	ḡgàzì	é ⁺ gḡ	gḡtá
Udi	ḡgḡ	gḡ {ḡtì }	ḡgàzì	é ⁺ gḡ	gḡtḡ
Ọnìcha	ḡgḡ	gḡ	ḡgàzì	é ⁺ gḡ	gḡ
Ụkwụanị	ḡgḡ	gḡ	ḡgézù	égḡ	gḡlú
Ìka	ḡgḡ	gḡ	égézù	éyḡ	ḡrì N {ḡḡ}
Ọkọcha	ḡgḡ	gḡ ḡfì	ḡgàzì	é ⁺ gḡ	gḡtá
Anịocha			ḡgàzì		

6.2.5.4 *y

*y can be reconstructed to proto-Igboid as in Table 42;

Table 42. Reflexes of Proto-Igboid *y

	leave, let off	pluck (as fruit)
P-Igboid	*-yà	*-yḡ
Èkpèyè	{sábété}	wótó
Ndele	ḡyá	yḡ
Ọgbakìrì	yá	yḡ/wḡ
Ọgba	{hàsì}	yḡ
Owere	yà	yḡ
Ọhụhụ	yà	yḡ
Èbirìba		yḡsá
Èhugbo	gàrí	gḡtá
Ezaa		wḡ
Izii	{ha}	wḡ
Udi	yálí	yḡtá IMP?
Ọnìcha	yà	yḡ/wḡ
Ụkwụanị	yàlí	yḡ(ló)
Ìka	yàrí	yḡ
Obolo Afọ		wḡtá

6.2.5.5 *ŋ

Both labialised and non-labialised /ŋ/ can be probably reconstructed to proto-Igboid (Table 43, Table 44, Table 48). Where ŋ is followed by a back vowel, as in Table 43, sporadic labialisation is probably phonetic, since it is not recorded where ŋ is followed by a central vowel.

Table 43. Probable reflexes of Proto-Igboid *ŋ
drink (v.) happy, glad (be) + happiness

	drink (v.)	happy, glad (be) + happiness
P-Igboid	*-ŋó	*-ŋò[rí]
Èkpeye	ŋó	{òtò óbù}
Ndele	ŋ ^w ó	ŋ ^w òrĩ
Ọgbakiri	ŋ ^w ó	ŋ ^w ò
Ọgba		{óŋà}
Owere	ŋó	ŋò óŋò
Ọhụhụ	ŋó	ŋò
Èbiriba	ŋó	
Èhụgbo	ŋó	ŋò óŋò
Ezaa	ŋó	ŋò
Izii	ŋó	{swa eswa}
Udi	ɣó	ɣòlí
Ọnichá	ŋó/ŋ ^w ó	ŋò óŋò
Ụkwụani		ŋò
Ika		ŋò
Nrobo	ŋ ^w ó	
Ọhaozara	ŋ ^w ó	ŋ ^w ò óŋ ^w ò
Agwa	ŋó	
Obolo Afọ		{yò òyò}

Notes: External cognates for ‘drink’ includes Bantu *-ŋó and PLC *ŋ^wóŋ, confirming the plausibility of this reconstruction.

Table 44 shows that a sequence *ŋa must be reconstructed to proto-Igboid and that this is contrastive with *ŋ^wa in, for example, ‘moon’ (Table 48).

Table 44. The reconstructible sequence *ŋa
place over flame

	place over flame
Èkpeye	ŋ ^w átá/ŋ ^w ájĩ
Ndele	ŋá
Ọgbakiri	ŋâ
Ọgba	ŋá
Owere	ŋá
Ọhụhụ	ŋá
Èbiriba	
Èhụgbo	ŋàbá
Ezaa	ŋá
Izii	ŋa
Udi	ɣà
Ọnichá	ŋá
Ụkwụani	ŋá
Ika	ŋá/ŋá
Obolo Afọ	ŋá

/ŋ/ can also be a tone-bearing homorganic prefix to a velar as in Table 45;

**Table 45. Reflexes of Proto-Igboid homorganic *ŋ-
tools, materials**

P-Igboid	*ŋ-g ^{wá}
Èkpeye	{àh ^w òlò ó'zò}
Ndele	ŋg ^{wá}
Ogbakiri	ŋg ^{wá}
Ogba	ŋg ^{wá}
Owere	ŋg ^{whá}
Ọhụhụ	ŋg ^{whá}
Èbiriba	
Èhụgbo	ŋg ^{wá}
Èzaa	ŋg ^{wá}
Izii	ŋg ^{wá}
Udi	ŋg ^{wá}
Onicha	ŋg ^{wá} ó'ló
Ukwani	ŋk ^{wá} k ^{wá}
Ika	
Okocha	ŋg ^{wá}

6.2.6 Labialised velar consonants

6.2.6.1 Overview

At least three labialised velar consonants can be reconstructed for proto-Igboid, k^w, g^w and ŋ^w.

6.2.6.2 *k^w

*k^w is widely attested in Igboid and occurs before all classes of vowels, as shown in Table 46. In the case of 'weave' the co-occurrence with /kp/ which is followed by a central vowel, suggests the possibility that this is a separate root.

Table 46. Evidence for proto-Igboid *k^w

	sew	bargain, 'price'	weave (cloth)	foot, leg
P-Igboid	*-k ^{wá}	*-k ^{wê}	*-k ^{wě}	*ók ^{wó}
Èkpeye	{ kéfí } N	h ^{wé}		úkó
Ndele		k ^{wé} {ó'nó}		
Ogbakiri	{dô}	k ^{wé} {k ^{wé} ó'nó}		
Ogba	k ^{wá}	k ^{wé}	{kpá òkrã}	ók ^{wó}
Owere	{d ^h ó}	k ^{wé}	k ^{whé}	ók ^{wó}
Ọhụhụ		k ^{wé} {ónó} N	k ^{whé} N	ók ^{wó}
Èbiriba		k ^{wúó} N	kfó	
Èhụgbo		k ^{wé}	k ^{wé}	
Èzaa	k ^{wá}	k ^{wé}	k ^{wé}	
Izii	k ^{wá}	k ^{wé} {ónó} N	k ^{wé}	óp ^{fó} N
Udi	k ^{wá}	k ^{wé}	k ^{wé}	ók ^{wó}
Onicha	k ^{wá} , k ^{wáfí}	k ^{wé}	k ^{wé}	ók ^{wó}
Ukwani	k ^{wá}		{kpá + òkò}	úkó
Ika			k ^{wé}	ók ^{wó}
Okocha		k ^{fé}		
Lengwe		k ^{wé}		
Echie			k ^{whé}	
Afọ Ugiri			p ^{fó}	
Obolo Afọ	k ^{wá}			

6.2.6.3 *g^w

*g^w is either stable preceding front and central vowels or weakens to w-, but can undergo significantly more shifts before a high back vowel (Table 47). ‘take, choose’ is one of the few verbs where there is evidence for a second syllable, with a continuant in C₂ position. The post-nasal release in Ekpeye is very unusual for Igboid.

Table 47. Evidence for proto-Igboid *g^w

	tell	take, choose	crowd, large number	stab
P-Igboid	*-g ^w á	*-g ^w è[ru]	*i-g ^w è	*-g ^w ú
Ekpeye		g ^w ně	ìg ^w èni ^w è	g ^w ú
Ndele		g ^w è, g ^w èzó	{òtítóró}	g ^w ú
Ogbakiri		g ^w èrú	{òdòkú ⁺ bádò}	g ^w ú
Ogba		g ^w è, {wùré} ??	{ìkpó}	{tí}
Owere	g ^w á	wè	ìg ^w è, imèrímè	g ^w ú
Ohuhu	g ^w á	wè	ìg ^w è	{má rí ^w mà}
Ebiriba		g ^w ò		g ^w ú
Ehugbo		wèrí, {vòtá}	ìg ^w è	{má rí ^w mà}
Ezaa		wò(tá)	ìg ^w è	
Izii		g ^w ètá, wò ??	ìg ^w è(rí ^w g ^w è)	bvú
Udi	g ^w á	wólú	ìg ^w è	g ^w ú
Onicha	g ^w á	wè	ìg ^w è	{má rí ^w mà}
Ukwuani	g ^w á	wè(lí)	ìg ^w è	gú, {dó}
Ika	g ^w á	wè	{ìg ^w ú}	gú
Okocha			ìg ^w è	bvú
Lengwe			ìg ^w è	
Ohaozara		wè	ìg ^w è	gvú
Item		g ^w òró		
Ngwa		gwèré		

6.2.6.4 *ŋ^w

*ŋ^w only occurs before -e, -u and -a (Table 48). It contrasts with unmodified /ŋ/ (Table 44).

Table 48. Evidence for proto-Igboid *ɲʷ

	moon/month	have, obtain	monkey	die + death
Èkpeye	{àdí ⁺ g ^{wé} , íwó ⁺ lú}	ɲé/ɲ ^{wé}	èɲè/èɲ ^{wè}	ɲ ^{wó} éɲó, éɲ ^{wó}
Ndele	é ⁺ ɲ ^{wâ}	ɲ ^{wé} (rú)	èɲ ^{wè}	ɲ ^{wó} é ⁺ ɲ ^{wó}
Ọgbakiri	é ⁺ ɲ ^{wâ}	ɲ ^{wé}	èɲ ^{wè}	ɲ ^{wó} é ⁺ ɲ ^{wó}
Ọgba	óɲ ^{wâ}	ɲ ^{wó}	èɲ ^{wò}	ɲ ^{wó} óɲ ^{wó}
Owere	óɲ ^{wá}	ɲ ^{wé}	èɲ ^{wè}	ɲ ^{wó} óɲ ^{wó}
Ọhụhụ	óɲ ^{wá}	ɲ ^{wé}	èɲ ^{wò}	ɲ ^{wó} óɲ ^{wó}
Èbirịba	óɲ ^{wá}	ɲ ^{wò} sá IMP?	èɲ ^{wò}	ɲ ^{wó} óɲ ^{wó}
Èhụgbo	óɲ ^{wá}	ɲ ^{wé} té	èɲ ^{wò}	ɲ ^{wó} (hó) óɲ ^{wó}
Èzaa	óɲ ^{wá}	ɲ ^{wé} tá	èɲ ^{wè}	ɲ ^{wó}
Izii	óɲ ^{wá}	ɲ ^{wé} rú	èɲ ^{wè}	ɲ ^{wó} hó óɲ ^{wó}
Udi	ówá	wó	èwè	wó ówó
Ọnịcha	óɲ ^{wá}	ɲ ^{wé}	èɲ ^{wè}	ɲ ^{wó} óɲ ^{wó}
Ụkwụanị	óɲ ^{wá}	ɲ ^{wé} (sé)/wé(lí)	èɲ ^{wè}	ɲ ^{wó} só óɲ ^{wó}
Ika	{ifè}	ɲ ^{wé}	èɲ ^{wè}	
Agwa				ɲó
Ugw		ɲétá		
Item		g ^{wò} sá?		

ɲ^{w-} is a number marking prefix in Ika (Table 23) and may have been more widespread in other Igboid lects as a plural marker.

6.2.7 Glottal consonants

6.2.7.1 Overview

Only one glottal consonant can be reconstructed for proto-Igboid, *h. Uncharacteristically, it has a palatalised counterpart.

6.2.7.2 *h ~ h^y

Proto-Igboid *h appears to have two distinct sets of reflexes, *h¹ as in ‘roast’ (Table 49) where it is followed by ʊ and corresponds to a labialised form h^w but is otherwise stable. In *h² where it is followed by -u it is less consistent across all lects, and is usually in variation with /r/, /r̥/, /l/ and /s/. Table 13 shows that h^y is the common initial in some glosses, but is unlikely to be a proto-phoneme, as it is more likely to be a reflex of f̥.

Table 49. Evidence for proto-Igboid *h

	roast (e.g. yam)	slave	flow (as river)	pour
Èkpeye	*-h ^ó	úlù`	{gbá ó ¹ gbólí}	
Ndele		{óhì}	{lálà}	
Ọgbakiri	h ^ó	óh ^w ù, {óhì}	{èh ^w ně}	
Ọgba	h ^w ó	óhù		
Owere	h ^ó ba	óhù/óh ^w ù	hù	hújé
Ọhùhù	h ^w ó	óhù	hù <i>ooze liquid</i>	
Èbiriba	h ^w ó, h ^ó			
Èhùgbo			{tó ákpàrà}	
Èzaa	h ^ó , h ^ó wa	óhù		
Izii	h ^ó	óhù		
Udi	h ^ó bé	óh ^w ù	hù	
Ọnicha	h ^ó / ɸ ^ó	órù	rù	rú
Ụkwụani		ósù	sù	súyé
Ịka	sómé	{ì gb ^ó }	hù	húyé
Ọkọcha	h ^ó ma T?	óhè		
Lengwe	h ^ó	óhù	{s ^ó }	
Nrobo	h ^ó	ófù		
Ezinifite	fóyí	óhù		
Ọhaozara	h ^ó	óh ^ù		
Ogidi	{h ^ó }	óḡù		ḡújé
Aniọcha				rújé

6.2.8 Approximants

6.2.8.1 Overview

Two approximants can be reconstructed with certainty for proto-Igboid, /w/ and /y/ [IPA /j/]. The alternation between -w and -y in consonant modification led KW to also propose *w. However, this is not attested synchronically in any lect, and although it may have existed as a temporary stage in reductions of CVCV forms, there is no requirement to attribute it to the proto-language.

6.2.8.2 *w

Evidence for stem-initial *w is presented in Table 50. /w/ can only precede /a/ and back vowels.

Table 50. Evidence for proto-Igboid *w

	world, fate	grey hair	pour	law
P-Igboid	*ò-wà	*V-wò	*-wó	*ì-wú
Èkpeye	òwà, élùwà	ó ⁺ wó	wóǐ, wó <i>pour in</i>	{óló ⁺ kó}
Ndele	òwà	rówò	wó(sì)	ìwù
Ọgbakiri	òwà	rówó	wô, wó(sì)	ìwù
Ọgba	òwà	éyò, éh ^{wó} ?	wósi	ìwù/iwù
Owere	òwà/élùwà	áwó	wó	ìwù
Ọhụhụ	òwà	áwó	wó	ìwù
Èbiriba	òwà	éwó	wó	ìwù
Èhụgbo	òwà	égó	wó(yé)	ìwù
Ezaa	òwà	éwó	{wùyé}	ìwù
Izii	òwà	éwó	wó	ìwù
Udi	òwà	éwó	wó	ìwù
Ọnichá	òwà	áwó	wó	ìwù
Ụkwụani	òwà	éwò		ìwù
Ika	òwà	éwó		
Ọhaọzara	òwà		wó	ìwù
Obolo Afọ		éwó		

6.2.8.3 *y

Apart from palatalisation (*f̥, *l̥) *y can be reconstructed as a consonant in C₁ position, always preceding -i (Table 51).

Table 51. Evidence for proto-Igboid *y

	spring, stream	oath	cold(ness) (n.)
P-Igboid	*í-`-yĩ	*í-`-yV̄Cí	*ó-`-yV̄Cí
Èkpeye	{òwò}	{dyítú ó ⁺ wò}	{óká ⁺ yí}
Ndele	{míní ígbógó}	{rèŋ ^{wó} }	ú ⁺ yí
Ọgbakiri	{míní ígbógó}	{rèŋ ^{wó} }	í ⁺ yí
Ọgba			ó ⁺ yí
Owere	í ⁺ yí		ó ⁺ yí
Ọhụhụ	íyí	íyí	óyí
Èbiriba	í ⁺ yí		óyí
Èhụgbo	í ⁺ yí	í ⁺ yí	ó ⁺ yí
Ezaa	í ⁺ yí		óyí
Izii	{ŋgele}	{nte, aŋu, eŋ ^{wá} }	óyí
Udi	{m̄vé ⁺ né}	í ⁺ yí	ó ⁺ yí
Ọnichá	í ⁺ yí	í ⁺ yí	ó ⁺ yí
Ụkwụani	(ím)iyì	íyì	óyí
Ika	í ⁺ yí		óyí
Ọhaọzara	í ⁺ yí	íyí	óyí

6.3 Vowels

6.3.1 Overview

Most Igboid lects have seven to nine phonemic vowels (Table 52);

Table 52. Typical Igboid vowels

	Front	Central	Back
Close	i		u
Near-close	ɪ		ʊ
Close-Mid	e		o
Open-mid		[ɛ]	[ɔ]
Open		a	

Languages like Ika have nine vowels and this type of vowel system has to be attributed to proto-Igboid. However, most languages have lost the open-mid vowel distinction, so the distinctions can no longer be made in proto-Igboid forms with certainty. The phonological system of prefixes and stems appears to be different, as *e/ɛ* is retained in prefixes but lost in stems.

Igboid vowels typically form harmony sets and can be arranged as follows using the Nigerian orthographic convention of subdots;

+ATR	-ATR
u	ɹ
i	ɨ
e	ɛ̣
o	ɔ̣
a	

Igboid shows no evidence for underlying long vowels, although in a few glosses, mostly in relation to persons, *ŨŨ* sequences are recorded, which are probably partial merger of old compounds.

Vowel nasalisation is the result of loss of a continuant in *C*₂ position in CVCV structures. Many glosses show fragmentary evidence for CVCV root, where *C*₂ is l, r or n. When *V*₂ was lost, *C*₂ triggered vowel nasalisation. The following nasalised vowels are reconstructible to proto-Igboid (Table 53).

Table 53. Proto-Igboid nasalised vowels

	Front	Central	Back
Near-close			õ
Close-Mid			õ̃
Open		ã	

The puzzle is why there are so few nasalised vowels, since the process by which they arise would have applied to most of the existing vowels. Extensive merger must have occurred in the recent past.

6.3.2 *i

*i can be reconstructed for proto-Igboid, both as a prefix and stem-vowel (Table 54). There is no evidence for its nasalised counterpart.

Table 54. Evidence for proto-Igboid *i

	castrated goat	rope	cook v.
P-Igboid- <i>KW</i>	*ò-kèi-dì N	*è-dí-'-dí	*-tí N
Èkpèyè	òkìlì	é ⁺ dyí	ʃí
Ndele	{ùʃí}	èrí ⁺ rí	ʃí/ʃí
Ọgbakìrì	òkìrì	é ⁺ rí ⁺ rí	sí
Ọgba	òkrì	é ⁺ rí	sí
Owere	òkìrì	é ⁺ rí	ʃí
Ọhụhụ	ikìrì	é ⁺ rí	sí
Èbìrìbà		é ⁺ rí	ʃí
Èhụgbo	òkìrì	é ⁺ rí	sí
Èzàa	òkìrì	é ⁺ rí	tsó
Izii	òkìrì	é ⁺ rí	ʃí
Udi	òkìrì	é ⁺ lílì	ʃí
Ọnìcha		é ⁺ lílì	sí
Ụkwụanị	{òwàlì }	{àpàrì }	ʃí
Ịka		é ⁺ rí	té
Ọkọcha	òkìrì Ọkọcha		ʃí Ọkọcha só Lengwe

6.3.3 *i

*i can be reconstructed as a stem vowel in proto-Igboid, but it has no nasalised counterpart (Table 55).

Table 55. Evidence for proto-Igboid *i

	dry (fish, meat)	scorpion	crawl, creep
P-Igboid	*-ɲmí	*á-'-kpì	*-díCí
Èkpèyè	méʃí (ó ⁺ kpá)	{ìgbèlìgbè}	lí é ⁺ lí N
Ndele	mí mì {ókpá}	ákβì	rí, {gbó} N
Ọgbakìrì	mí mǐ	ákβì	rí, {gbô} N
Ọgba	mí	ákβì	
Owere	mí	ápì	rí
Ọhụhụ	mí	ápì	rí, {bé}
Èbìrìbà	ɲmí	ákβì	
Èhụgbo	mí	ákβì	rí
Èzàa	mí		
Izii	mí	ákβì	rí
Udi	mí	ápì	lí
Ọnìcha	mí	ápì	lí
Ụkwụanị	mí	ókβì N	lǐ
Ịka			
Ọkọcha	mí	ákβì	
Obolo Afọ		ápì	
Ọhàọzàrà		ákβì	
Alu			rí
Agbanị			ylí/rí/rí
<i>Amg</i>	mí		
<i>Bnd</i>	ɲmí		

6.3.4 *u

*u can be reconstructed as a stem vowel in proto-Igboid, but it has no nasalised counterpart (Table 56).

Table 56. Evidence for proto-Igboid *u

	germinate, sprout	carry (on head)	goat
P-Igboid	*-pú	*-bú	*é-`-wû
Ekpeye	{mé émè}	bú	{àkpàlá'ná'má}
Ndele	fú	vúzó	ó'wû
Ogbakiri	fú	vúrí	ó'wû
Ogba	pú/fú	bú	éwú
Owere	fú	bú	éwú/éyú
Ọhụhụ	fú	vú	éyú
Èbirịba	pú	bú	éwú
Ehugbo	fú-té	vùté	éwú
Ezaa		vùtá	éyú
Izii	fú-tá	vú	éyú
Udi	fú	vú	éyú
Ọnicha	pú	bú	éwú
Ụkwuani	pú	búlú	éwú
Ịka		bú	éwú
Ọkọcha	fú	vú	éyú
Mbieri	pú		
Ọhaọzara			éwú

6.3.5 *o/õ

Both *o and its nasalised counterpart *õ can be reconstructed for proto-Igboid. Table 57 Evidence for proto-Igboid *o

Table 57. Evidence for proto-Igboid *ʊ

	bat n.	learn	blow (with mouth)
P-Igboid	*ú-`-twó	*-ɲmò	*-pwǒ
Èkpèyè	úˀsó	mò	wǒ
Ndele	úsó	mó	hʷó
Ọgbakịrị	əfó	mǒ	hʷǒ
Ọgba	ɲmgbòròsú	mò	hʷòfí
Owere	úsó	mò	fò
Ọhụhụ	úsó	mò	fò
Èbịrịba	úswó	mò	hʷò N
Èhụgbo	úsó	mò	hò
Èzaa	útsó	mò	φò
Izii	útsó	ɲʷò	φò
Udi	úsó	mətá	hʷò
Ọnịcha	úsó	mò	fò/vò
Ụkwụanị	úsó	mǒ	fǒ
Ịka	úsó	mò	fò
Ọkọcha		ɲmò	kʷò
Lengwe			vô
Ekw			hʷó
Mbieri			fò
Amg		ɲmò	
Ogidi	útsó		
Akụ	útfú		

Table 58 provides evidence for proto-Igboid *ũ.

Table 58. Evidence for proto-Igboid *ũ

P-Igboid	fight, war n.	leopard	hatch	roast (e.g. yam)
	*ɔ-gǔ	*á-ɔgǔ	*-bǔ	*-hǔ
Èkpèyè	{ólô}	áˀgʷó N	bǔ	
Ndele	əgʷǔ	áˀgʷó N		hǔ
Ọgbakịrị	əgǔ	áˀgǔ	{tòwâ}	hʷǔ
Ọgba	əgʷǔ	áˀgǔ	{tókpó èkʷá}	hǔba
Owere	əgʰǔ	áˀgʰǔ	vǔ	hʷǔ
Ọhụhụ	əgʰǔ	áˀgʰǔ	vǔ	hʷǔ, hǔ
Èbịrịba	əgǔ	áˀgǔ		
Èhụgbo	əgǔ	áˀgǔ	vǔ	hǔ, hǔwa
Èzaa	əgǔ	áˀgǔ	vǔ	hǔ
Izii	əgǔ	áˀgǔ		hǔbé
Udi	əgǔ	áˀgǔ	vǔ	hǔ / φǔ
Ọnịcha	əgǔ	áˀgǔ	bǔ	
Ụkwụanị	əgǔ	áˀgǔ	{tòkpó}	sómé
Ịka	əgǔ	áˀgǔ	bǔ	hǔma T?
Ọkọcha	əgǔ			hǔ
Mbieri			bʰǔ	
Lengwe				hǔ
Nrobo				fǔyí
Ezinifite				hǔ
Ọhaọzara				{hǔ}

6.3.6 *e/ε

/e/ is regularly conserved across Igboid lects and must be reconstructed as both prefix and stem-vowel (Table 59). /ε/ by contrast is only found in a few prefixes (Table 60) and presumably merged with /e/ in the stems. No examples of nasalised /e/ or /ε/ have been found.

Table 59. Evidence for proto-Igboid *e

	black kite	cook (soup)	cooked (be)
P-Igboid-KW	*é-gbé	*-té	*-wé
Èkpèyè	é ⁺ gbé	wé	{déké ⁺ déké}
Ndele	égbé	{fí + míní ⁺ wírí}	yélé
Ogbakírì	é ⁺ gbé	{sî + míní ⁺ wírí}	yé
Ogba	égbê	té {óh ^{wé} }	yé
Owere	ébé	{fí}	yé/yé
Ọhụhụ	ébé	té {ófé}	yé
Èbirìba	égbé	tó {ófó}	
Èhụgbo	égbé	té	gégwó
Èzaa	égbé		
Izii	égbé	té {ófé}	yé
Udi	ébé	té	yé
Ọnìcha	ébé	té {ófé}	yè
Ụkwụanị	{ékòdì}	té {ófé}	{η ^{wó} }
Ìka	égbé	yé	
Ọhaozara	égbé		
Obolo Afọ		yé	

Notes: Putting together ‘cook’ and ‘be cooked’ illustrates the problem of trying to account for false cognates. Under ‘cook’ wé, yé and yé have simply shifted valence and should be included in the column for ‘be cooked’ and there do not have to be accounted for when reconstructing ‘cook’.

/ε/ no longer occurs consistently as a stem vowel in any gloss. However, it is still preserved as a prefix in three words (Table 60). The irregular correspondences across lects argue that prefix substitution is occurring rather than phonological shift.

Table 60. Evidence for proto-Igboid *ε- prefix

	god of madness	madness	weight, heaviness
P-Igboid-KW	*é-g ^w ò	*é-dá	*é-`-díwà ?/d ^ò yã
Èkpèyè	{í ⁺ dã}	í ⁺ dá	ónâ
Ndele		í ⁺ dá	ródà
Ogbakírì	ág ^w ò	érá	rí ⁺ hâ
Ogba		érá	érò
Owere	ág ^{wh} ò	ára	árò
Ọhụhụ	ág ^{wh} ò	ára	árò
Èbirìba	égvò	{ífé}	{ìgbidjí}
Èhụgbo	égwón ⁺ sí	{ínsí}	éró
Èzaa		érá	érwá
Izii	ɔbvɔ T?	ena <i>animal madness</i>	érwá
Udi	égvò	élá	élíó
Ọnìcha	ág ^w ò	álá	áló
Ụkwụanị		élá	élóá
Ìka		élá	éróá
Afọ Ugiri	ágvò		
Ọhaozara	égvò		érwá

6.3.7 *o ~ *õ

Examples of glosses where non-nasalised /o/ is reconstructible as a stem-vowel are rare (Table 61). Examples are given in The words ‘town’ and ‘gong’ are found in other regional languages and are thus possibly borrowings. However, /o-/ is regularly conserved as a prefix, and contrasts with /ɔ/ (Table 63). Otherwise *õ must always be reconstructed.

Table 61. Evidence for proto-Igboid *o

	town	metal gong	swallow
P-Igboid	*ò-bò-dò	*ò-gé-lè	*ɲo [ʔ]
Èkpeye	òbòdò N	òkélè	
Ndele		ùgélè	
Ogbakiri	{òhá/éli}	ìgélè	
Ogba	òbùdò N	ùkélà	
Owere	òbòdò	ògélè	yò/lò
Ohuhu	òbòdò	ògélè	yó
Èbiriba		ògélè	lwó
Èhugbo		ògélè	ló
Èzaa			
Izii	òbòdò	ogena T?	
Udi	òbòdò	ògéné	yò
Onicha	òbòdò	ògéné	nó
Ukwuanj	òbòdò		
Ika			
Okocha		ògèlè	
Obs			ɲó
Ork			ɲ ^w ò

Table 62 presents evidence for proto-Igboid *õ. The rarity of /o/ as a stem-vowel makes demonstrating contrast impossible.

Table 62. Evidence for proto-Igboid *õ

	follow, accompany	hide (v.) (self/thing)	bellows
P-Igboid	*-tsõ	*-dzõ	*é-kõ
Èkpèyè	sòzé	{wólí}	ík ^w ò
Ndele	tògû	{túg ^w ã}	ékò
Ogbakiri	fòrú	{túg ^w ã} (self)	ékò
Ogba	sò	zúbé	ékò
Owere	shò	zhò, zúfã	ék ^h ò
Ọhụhụ	sò	zó	ék ^h ò
Èbiriba	sò	zwó	
Èhugbo	sò	zó	ékò
Èzaa	tsò	dzó/zó	ékò
Izii	tsò	dómi	ékò
Udi	sò	zó	ékò
Ọnicha	sò	zó	ékò
Ụkwụani	sò	zúomé	ékò
Ịka	sòmé	zómé	ékò
Ọkọcha	tsò	dómi	ékò
Lengwe			ékò
Nrobo	tfò	dó	
Ogidi	tsò	dzó	
Ọhaọzara		dó	

6.3.8 *ɔ

Proto-Igboid had *ɔ but there is no evidence for its nasalised counterpart (Table 63);

Table 63. Evidence for proto-Igboid *ɔ

	again	nail, claw	cut up, eviscerate
Proto-Igboid	*òzɔ	*mbó	*-bòɔ
1 Èkpèyè	òdò	óbó é ⁺ ká	bǎ
2 Ndele	{vé ⁺ m}	m ^v ó ékà	vò
3 Ogbakiri	{béréré}		bǎ
4 Ogba	òzò	m ^b ò	bò
5 Owere	òzɔ	m ^b ó/m ^v ó	bò/vò
6 Ọhụhụ	òdzɔ	m ^v ó	bò
7 Èbiriba	òdwó	m ^b wó	bò
8 Èhugbo	òzɔ	m ^v ó é ⁺ ká	bò
9 Èzaa	òdó	m ^v ó	bò
Iziii	ɔzɔ	m ^v ó	bò
Udi	òdyó	m ^v ó	vò N
12 Ọnicha	òzɔ	m ^b ó	bò
13 Ụkwụani	òzɔ	m ^b ó	bǎ
14 Ịka	òzɔ	m ^b ó	bò
Ogidi	òdzɔ		
Amg		m ^b ó	

6.3.9 *a ~ ã

Both *a and ã can be reconstructed for proto-Igboid.

Table 64. Evidence for proto-Igboid *a

	trim (with scissors)	lick	drink (v.)	sling/hang
P-Igboid- <i>KW</i>	*- ʈà	*-rá	*-rá	*-ɲǎ
Èkpeye	ʈáʈà N	ɗǎ'ɗǎ	{ɲ'ó}	ɲàɗí
Ndele	ʈáimé	rá	rá	ɲá
Ọgbakiri	ʈǎ	rá	rá	ɲá
Ọgba	ʈà		rá	ɲà
Owere	ʈà	rá	{ɲ'ó}	ɲà
Ọhụhụ	ʈà	rá		ɲà
Èbiriba		rá		
Èhugbo	ʈà	rá	{ɲ'ó}	ɲà
Ezaa	ʈà	{mì}		
Izii	ʈà	ríʈà	{ɲ'ó}	ɲà
Udi	ʈà	láʈà	{ɲ'ó}	yà
Ọnicha	ʈà	lá	lá	ɲà <i>bend</i>
Ụkwụani	ʈǎbě	lá	lá	ɲàlí
Ịka	{ɗǎ}	rá	rá	ɲàrí
Agbani?	cà			
Lengwe	fì à			
Ọkocha	{kpà m̀kpà}			
Ugwuta			rá	

Notes: Isolated nasal vowel in Ọgbakiri is treated as a local development.

Nasalisation (ã) is regularly lost in lects 1, 6-14 but must be reconstructed for proto-Igboid (Table 65).

Table 65. Evidence for proto-Igboid *ã

	eldest son	jaw	name (n.)
P-Igboid	*ó-kpá-rá	*à-gbà	*V-kpã
Èkpeye	ákpá ^h ná/ókpolá	àgbà	éwà
Ndele	ékβárá/ó-	àgbà	réh ^w à
Ọgbakiri	ókβárá	àbà	réh ^w à
Ọgba	ókprá	àgbà	éh ^w à
Owere	óp ^h árá	àg ^{wh} à/àb ^h à	áh ^w à
Ọhụhụ	óp ^h ará	àdà/àb ^h à	áh ^w à
Èbirịba	ókfárá	àgbà	éfà
Èhụgbo	ókpará	àgbà	éhà
Ezaa		àgbà	éφà
Izii	ókpará	àgbà	éφà
Udi	óbálá	àdà	éφà
Ọnicha	óbálá	àdà	áfà/ávà
Ụkwuani	ókpálá	àgbà	éfà
Ika		àgbà	éfà
Ọkocha			ék ^w à
Lengwe			évà
Nrobo			éhà
Echie		àg ^{wh} à	
Mbieri	ók ^w árá/óp ^h árá		áh ^w à
<i>Arc</i>	ók ^w ará		
Ọhaọzara		àgbà	éh ^w à
<i>Oba</i>	óbálá/óʔálá		
<i>Ell</i>		àbà	
Ọka			áβà

6.4 Tones

6.4.1 Overview

Almost all Igboid lects have High, Low and Downstep as their basic tonal system. Tones are often highly conservative across the entire family. Rising and Falling tones occur sporadically across different lects. A few glosses, where High corresponds to Low or vice versa, suggests either the occasional presence of Rising and Falling in proto-Igboid, or else the differential reduction of CVCV roots with HL and LH patterns.

6.4.2 High tone

Table 66 illustrates the conservation of high tone;

Table 66. Conservation of high tone in Igboid

	do, act, make	mould, forge	kill
P-Igboid	*-mé T?	*-kpó	*-gbú
Èkpeye	mé	kpó+zó	gbú
Ndele	mé	kβó	gbú
Ọgbakiri	mé	kβó	gbú
Ọgba	mé	kβó	gbú
Owere	mé	βó	ńú
Ọhụhụ	mé	βó	ńú
Èbiriba	mé	kpó	gbú
Èhụgbo	mé	kpó	gbú
Èzaa	mé	kpó	gbú
Izii	mé	kpó	gbú
Udi	mé	β́	ńú
Ọnicha	mé	βó	ńú
Ụkwuani	mé	kpó	gbú
Ịka	mé	kpó	gbú
Arc	mé	pó	
Ọkọcha			gbú
Ọhaozara	mé	kPó	gBú

6.4.3 Low tone

Table 67 illustrates the conservation of high tone;

Table 67. Conservation of low tone in Igboid

	crowd, community	pot	duiker
P-Igboid	*ò-hǎ	*itè	*ɲm-gbà-dǎ
Èkpeye	òlà N	itè	{osáli } T?
Ndele	òhǎ	itè	ɲmgbàdǎ
Ọgbakiri	òhǎ	itè	ɲmgbàdǎ
Ọgba	òhǎ	itè	ɲmgbì dà
Owere	òhǎ	itè	m̀bàd̀hà
Ọhụhụ	òhǎ	itè	m̀bàd̀hà
Èbiriba		itè	ɲmgbàdǎ
Èhụgbo	òhà	itè	ɲmgbàdǎ
Èzaa	òhà	itè	ɲmgbàdǎ
Izii	òhà	itè	ɲmgbàdǎ
Udi	òhà	itè	m̀bàdà
Ọnicha	òrà	itè	m̀bàdà
Ụkwuani	{òsá òbòdò ?}	itè	ɲmgbàdǎ
Ịka	{i hǎ ǎ}	itè	
Ọkọcha	òhà	itè	ɲmgbàdǎ
Mbieri		ifè	
Ogidi	òrǎ		
Ọhaozara			ɲmgbàdǎ
Amg			ɲmgbàdǎ

6.4.4 Was there a rising tone?

KW reconstructed a rising tone for proto-Igboid based on words such as ‘bring up’ (Table 68). The forms with non-nasalised vowels have a uniform low tone whereas those with a nasal vowel have a high or rising tone. If the proto-form had a rising tone this might have been realised as high in some languages and low in

others. However, an alternative solution is that the original form was CòCV̄, where C₂ was a continuant, perhaps /n/ or /r~l/. The loss of V₂ led to the nasalisation of the vowel. Different pathways of reduction led to high, low or rising tones on V₁. It is unlikely that proto-Igboid had a stable rising tone.

Table 68. Possible evidence for a rising tone in proto-Igboid

	bring up	jump	listen
P-Igboid	*zòCó	*-wòCú	*-gòné
Èkpèyè	{òkpǎ kpà}	wó	gò étè
Ndele	zǒ	wó òwò, {fè}	gètè
Ọgbakiri	vǒ	{gbó éh ^w òrò}	gě
Ọgba	zǒpi à	wò	gò
Owere	zǒ	wò/mò	g ^h è
Ọhụhụ	zǒ	wò/mò	g ^h è
Èbiriba	zò	wò	gèbé
Èhụgbo	zò	{hébúgè}	gèbé
Èzaa	zò		n.c.
Izii	zò	wó {kɔ}	{ńá ńfĩ }
Udi	zò	wò	gè {ńti }
Ọnicha	zò	wò	gè
Ụkwuani	zǒ	ɲ ^w òjĩ	gǒ
Ịka	zǒ	wò	gǒ
Ọkọcha	zò		gè ńfĩ
Ogidi	dzò		

6.4.5 Was there a falling tone?

Similar evidence is found in the word for ‘egg’ but with the tones arranged in exactly the reverse pattern, arguing for a falling tone in the proto-language (Table 69). Where the stem tones are low in Table 68 they are high in Table 69. For the same reasons, falling tone is rejected as part of the phoneme inventory for proto-Igboid.

Table 69. Possible evidence for a falling tone in proto-Igboid

	egg
P-Igboid	*é-kpǎ
Èkpèyè	òk ^w á
Ndele	ék ^w ǎ
Ọgbakiri	ék ^w ǎ
Ọgba	ék ^w ǎ
Owere	àk ^{wh} á
Ọhụhụ	àk ^{wh} á
Èbiriba	ék ^f ǎ
Èhụgbo	ék ^w á
Èzaa	ék ^w á
Izii	ék ^w á
Udi	ék ^w á
Ọnicha	àk ^w á
Ụkwuani	ék ^w á
Ịka	ék ^w á
Afọ Ugiri	àpfá
Ọkọcha	épfá

6.4.6 Downstep

Downstep has a scattered presence across Igboid, but occurs consistently in only a few lexical items. However, as illustrated in Table 70, it must have been present in proto-Igboid. In each case it occurs between the main stem and the prefix, suggesting, as KW argued, the former presence of an original prefix, now deleted, leaving only the tone. However, this was far from universal in Igboid, as the rarity of these downsteps suggests.

Table 70. Evidence for downstep in proto-Igboid

	leopard	tooth	sand, soil	darkness
P-Igboid	*á- ^l g ^{wó}	í'zé	*V- ^l ɖʒá	*òǰí'ǰírí
Èkpeye	ó ^l g ^{wó} N	í'zé	ó'zá	{igèlèni }
Ndele	ó ^l g ^{wó} N	í'zé	ró'sá	{itiri }
Ọgbakiri	á ^l g ^ó	é'zé	rí'zá	òǰí'ǰírí
Ogba	á ^l g ^í	é'zé	é'ɖʒá	òǰí'ǰírí N
Owere	á ^l g ^{hó}	é'zé	á'ɖʒhá	òǰí'ǰírí
Ọhụhụ	á ^l g ^ó	é'zé	á'ɖʒhá	òǰí'ǰírí
Èbiriba	á ^l g ^ó	é'zé	é'ɖʒhá	{itiri }
Èhugbo	á ^l g ^ó	é'zé	é'ɖʒhá	òǰí'ǰírí
Èzaa	á ^l g ^ó	é'zé	é'ɖʒá	ó'ǰí
Izii	á ^l g ^ó	é'zé	é'ɖʒá	ó'ǰí
Udi	á ^l g ^ó	é'zé	é'ɖʒá	òǰí'ǰírí
Ọnicha	á ^l g ^ó	é'zé N	á'ɖʒá	òǰí'ǰírí
Ụkwuani	á ^l g ^ó	é'zé	é'ɖʒá	òǰí'ǰírí
Ịka	á ^l g ^ó	é'zé	é'ɖʒá	òkíkí
Ọkocha			(m ^l vó)í'ɖʒá	
Lengwe			é'ǰá	òǰí'ǰírí
Nrobo		é'ɖʒé		
Ogidi		í'zé		
Ulu			á'z ^h á	
Isu			á'ǰá	
Ọhaozara			é'ǰá	
Agbani				òǰí'ǰírí
Obolo Afọ				òǰí'ǰírí

6.5 Conclusion

The consonant inventories of Igbo languages are phonologically highly diverse, with bilabial trills, implosive /f/ and contrastive aspiration. However, these appear to be local developments which cannot be reconstructed to proto-Igboid. The sound system, as reconstructible, is relatively simple and also typical of the region. However, many features of individual Igboid languages point to more complex systems in what may be called pre-proto-Igboid. For example, the synchronic evidence suggests there were nine vowels with pervasive ATR harmony, as in Ika and neighbouring languages like Igede. The strong phonotactic restrictions found on almost every C₁ suggest this descends from a period when vowel harmony was more strictly applied. The merger of e/ɛ almost everywhere makes this distinction difficult to reconstruct with accuracy. Pre-proto-Igboid probably has three level tones like Edoid and Yoruboid, and the downstep is a reflection of this period in its evolution.

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Appendix: KW's commentary on the proposed phonology of proto-Igboid

Table 5 indicates that Proto-Igboid had six contrasting places of articulation; that the obstruents consisted of one voiceless fricative, ten plosives, and two labial-velar stops with both pulmonic and glottalic airstreams probably involved; that there were three voiced and two unvoiced implosive stops, classed as sonorants (Clements 2000:133); that there were six nasals or nasalised approximants, four of which were probably allophones in a nasalised environment of the approximants; and that there were three central and one lateral oral approximants.

Table 71 presents the same segments, slightly re-arranged, in terms of distinctive features. Some features have been renamed so that assimilatory changes can be specified as a change from [-F] to [+F] and weakening (simplifying) changes from [+F] to [-F], where F is any feature. Fricatives, plosives and doubly-articulated stops are specified as [+obstruent]; other consonants are [-obstruent]. Plosives, doubly-articulated stops, implosives, laterals and nasals are specified as [+stop]; others are [-stop]. Doubly-articulated stops and voiced implosives are specified as [+constricted]; others are [-constricted]. The lateral is specified as [+lateral]; others are [-lateral]. The nasals and nasalised approximants are specified as [+nasal]; others are [-nasal]. The central approximants are minus all the above manner features and hence are the least marked consonants.

Table 71. Proto-Igboid broad phonetic consonants with distinctive features

	[+ -high]	[+labial]	[+coronal]	[+high]	[+high]	[+ -high]
	[+ -back]			[+palatal]	[+back]	[+ back]
	[- +labial]					[- +labial]
[+obst]		f				
[+obst]		p b	t	c ʃ	k g	k ^w g ^w
[+stop]						
			d			
[+obst]	kp gb					
[+stop]						
[+cnstr]						
[+stop]		ɸ	d̥	c̥ ʃ̥		
[+cnstr]						
[+stop]	ŋm	m	n	ɲ	ŋ	ŋw
[+nas]						
[+nas]				~ ỹ	~ uĩ	~ ỹ̃
				y	ɥ	w
[+stop]			l			
[+lat]						

Labial-velars, palatals and velars are specified as [+high]; other consonants are [-high]. Labial-velars and velars are specified as [+back]; others are [-back]. Labials, labial-velars and labialized velars are specified as [+labial]; others are [-labial]. Alveolars are specified as [+coronal]; others are [-coronal]. Palatals are specified as [+palatal]; others are [-palatal].