

Journal of Universal Language 12-2
September 2011, 81-101

Derivational Processes in Igala Numeral System: Some Universal Considerations

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Abstract

This paper investigates derivational processes in the Igala numeral system to provide a detailed description of the system. The study relies on three major sources in gathering data for the descriptive analysis, namely, compilation of relevant list of Igala numerals, the researcher's intuitive knowledge of the language in addition to his training as a linguist, and a search of the relevant literature. In Igala, the complexity of deriving especially non-basic numerals involves addition and multiplication in addition to the grammatical processes: drawing from phonological, morphological, and syntactic processes such as vowel elision, compounding, clipping, blending, reduplication, and sentential expressions that yield several numeral forms in the language. In all, from the available data in this study, Igala could be said to belong to the group of languages that has a vigesimal numeral system. This is because the language employs a numeral structure where counting is done majorly in multiples of ógwú/ògbò

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Received May 6, 2011; Revised July 14, 2011; Accepted August 1, 2011.

‘twenty.’ In all, this report may not be as exhaustive, but it is hoped that the study has achieved its primary aim of providing a detailed description of the derivational processes in Igala numeral system in addition to helping the reader to appreciate the importance of this kind of research as it relates to typological considerations as well as universality of the grammar of numeracy in languages.

Keywords: igala numerals, vigesimal, derivational processes, arithmetic, grammatical

1. Introduction

The Igala language belongs to the West Benue-Congo phylum (formerly part of Kwa) and is one of the ‘Yoruboid’ languages spoken in North Central Nigeria (Akinkugbe 1976, 1978; Omachonu 2000, 2002). It is a minority language spoken by about two million people who live on the eastern part of Kogi state covering nine (9) Local Government Areas of the state. It is under-documented and scantily described judging from the quantity and quality of documented and analysed/described data in it. Although one may argue that Igala is unlikely to be so endangered in the proper sense of the word considering the number of its native speakers and linguistic researches available in the language (Armstrong 1951, 1965; Omachonu 2000, 2002, 2003a, 2003b, 2006, 2007a, 2007b, 2008; Atadoga 2007; Ejeba 2009; Ikani 2010), one of the aspects always identified as being so seriously endangered in the use and study of the language is the numeral system (See Etu 1999, Ocheja 2001). This is because children nowadays rarely know how to count in Igala. Even adults, mix up Igala with Hausa and English when they count money and other objects in the language. A similar scenario was pointed out by Atóyèbí (n.d.) of the numeral system of Oko which he described as the most endangered aspect of the language because the act of counting in Oko, according to him, has

been left to older members of the community with the younger generation preferring to express numerals in the English language instead.

In the opinion of Comrie (2005, 2006), there are many instances of languages that are not particularly endangered, but whose numeral systems are endangered. According to him, language death is the result of social factors and numeral systems or counting generally is particularly susceptible to social factors. He illustrates this further (Comrie 2006: 1):

A community encountering another community with greater numeracy may well borrow the “missing” parts of its system from that other community, but the contact may also involve replacements of parts or all of the existing system, and can also affect languages that come into contact even where there is no great difference in numeracy, but just cultural or commercial superiority of one group over the other.

This, one would agree with Comrie, explains why numeral systems are even more endangered than languages. It has therefore become imperative to document endangered numeral systems before they die out completely. It is to be noted that we are probably where we are today—a situation where so many numeral systems have died out to the point that what remains is only a pale reflection of the “human potential” with respect to numeral systems (Comrie 2006)—due to lack of systematic and careful documentation of the numeral systems of many of our languages. Regrettably, Comrie (2006: 1) concludes that given the present rate of death of languages in the world, “It may well no longer be possible even approximately to determine what the range of possible numeral systems in natural language is or to assess what the relative frequency of different types would be....”

Numeracy is a very important aspect of any linguistic system.

Counting and or numbering is an integral and inseparable part of the grammar of any language because there is hardly any meaningful linguistic discourse in a language that does not make reference to quantity, size, time, distance, and weight in definite numbers or numerals. As language changes following its dynamic nature, so do its contents, systems, and patterns which counting is a part. Against this background, the aim of this study is to document and provide a detailed description of the Igala numeral system with a view to discussing the derivational processes involved and providing explanations for certain changes that have occurred in the system over time.

It is to be noted that in the presentation of data in this work, I make use of the standard Ígàlà orthography (Miachi & Armstrong 1986) as well as IPA symbols especially where a word is rendered in phonetic transcription. Equally, with respect to tone marks, the acute accent [´] on a tone-bearing segment, usually a vowel represents a high tone, all instances where any particular vowel is not tone marked represents the mid tone, and the grave accent [`] on any tone-bearing segment represents a low tone.

2. Counting in Igala

Here, we shall limit our study of the numerical system of the language to counting from one (Ínyé [Ínɛ́]/ókà) to a thousand (íchámù nyí ògwókó [íʃámùɲógwókó]). It appears from all indications that the traditional counting system of Igala did not go beyond the figure one thousand (1000). Besides, for clarity of presentation, we shall equally categorize Igala numerals into two broad groups as far as counting from one to a thousand is concerned. These are the basic numerals and the derivatives (See also Anagbogu 2006). In clear terms, whereas the basics are the primary numerals which are monomorphemic in nature, the derivatives are the secondary or non-basic

numerals whose derivational history is traceable to a combination of the basic numerals through some addition, multiplication or a combination of both processes. Sometimes, these derivations in Igala numerals involving mathematical manipulations could be very complex and cumbersome hence the proposals for modernization by some researchers on Igala numerals (Etu 1999, Ocheja 2001), which we shall also present/review in the course of this discussion.

2.1. The Basic Numerals

In counting from one to a thousand in Igala, the following are considered as the basic numerals because as enunciated earlier above, they are mono-morphemic and they are used for deriving the secondary numerals through some grammatical (phonological, morphological, and syntactic) and or mathematical (addition and multiplication) processes.

(1) a. Basic Numerals 1-10:

ínyé	[Ínɛ́] or ókà [ókà]	‘one’
èjì	[èḑḑì]	‘two’
ètā	[ètā]	‘three’
èlè	[èlè]	‘four’
èlú	[èlú]	‘five’
èfè	[èfā]	‘six’
èbiē	[èbjīē]	‘seven’
èjō	[èḑḑō]	‘eight’
èlá	[èlá]	‘nine’
ègwá	[ègwá]	‘ten’

b. Numerals 20, 50, 200, 400, and 800:

ògwú	[ògwú] or ògbò [ògbò]	‘20’
óójē	[óóǰē]	‘50’
ògwá	[ògwá]	‘200’
úlú	[úlú]	‘400’
íchámù	[íǰámù]	‘800’

2.2. The Secondary or Non-Basic Numerals

As Anagbogu (2006) observed in respect of Koring, membership of this category is potentially uncountable and endless and could run into millions and even billions but what the analyst needs is a deliberate manipulation of the basic figures or numerals to arrive at more complex numerals by derivation and extension. In what follows, we shall present numerals in this group by sub-dividing them into the following sub-sets:

2.2.1. Numerals Derived by Addition of Two Basic Numerals (11-19)

(2) ègwá #	ókà	→	ègwákà	ègwá #	èfà	→	ègwéfà
ten	one		‘eleven’	ten	six		‘sixteen’
ègwá #	èjì	→	ègwéjì	ègwá #	èbiē	→	ègwébiē
ten	two		‘twelve’	ten	seven		‘seventeen’
ègwá #	ètā	→	ègwétā	ègwá #	èjō	→	ègwéjō
ten	three		‘thirteen’	ten	eight		‘eighteen’
ègwá #	èlè	→	ègwélè	ègwá #	èlá	→	ègwélā
ten	four		‘fourteen’	ten	nine		‘nineteen’

ègwá # èlú → ègwélū
 ten five ‘fifteen’

As could be observed from the above, the derivation of 11 to 19 takes only the addition of the cardinal basic numerals 1-9 to base ten. The combination of any two basic numerals to derive another numeral, apart from the arithmetic process of addition, equally subscribes to a phonological process of vowel elision whereby the last vowel of the base numeral ten (*ègwá*) is elided and its tone transferred to the initial vowel of the following cardinal/basic numeral that combines with it except the first example, *ègwá # ókà* → *ègwákà* where the first vowel of the second word got elided instead. This is to be expected because even though the emerging central dialect of Igala prefers this form *ègwákà*, it is realized as *ègwókà* in Ibaji dialect. And this when carefully analyzed in the light of the derivation of the other examples will attest to the fact that the form *ègwókà* in Ibaji should have been the basic alternant of the form for numeral eleven in Igala language. Besides, another striking feature of the numerals in this category is that even though the sense addition is expressed, there is no overt addition morpheme to suggest that we add a basic numeral to another basic numeral to derive a secondary or non-basic form. See the forms in 2.2.2 below for derivations involving the use of overt conjunction or addition morpheme as against the examples in 2.2.1 earlier (above).

2.2.2. Numerals Derived by Addition of Two Basic Numerals (21-29)

(3) ógwú # nyí # òké # kà → ógwúnyíòkékà
 twenty plus SG.figure¹ one ‘21’ [ógwúnjókékà]

¹ SG. is used as an abbreviation for singular.

ógwú	#	nyí	#	òké	#	mēji	→	ógwúnyíòkémēji
twenty		plus		SG.figure		two		‘22’ [ógwúnókēmēdʒi]
ógwú	#	nyí	#	òké	#	mētā	→	ógwúnyíòkémētā
twenty		plus		SG.figure		three		‘23’ [ógwúnókēmētā]
ógwú	#	nyí	#	òké	#	mélè	→	ógwúnyíòkémélè
twenty		plus		SG.figure		four		‘24’ [ógwúnókēmélè]
ógwú	#	nyí	#	òké	#	mélū	→	ógwúnyíòkémélū
twenty		plus		SG.figure		five		‘25’ [ógwúnókémélū]
ógwú	#	nyí	#	òké	#	méfà	→	ógwúnyíòkéméfà
twenty		plus		SG.figure		six		‘26’ [ógwúnókéméfà]
ógwú	#	nyí	#	òké	#	mébiē	→	ógwúnyíòkémébiē
twenty		plus		SG.figure		seven		‘27’ [ógwúnókémébiē]
ógwú	#	nyí	#	òké	#	mējō	→	ógwúnyíòkémējō
twenty		plus		SG.figure		eight		‘28’ [ógwúnókémédʒo]
ógwú	#	nyí	#	òké	#	mēlá	→	ógwúnyíòkémēlá
twenty		plus		SG.figure		nine		‘29’ [ógwúnókémelá]

Note that the full form of the word for plus *nyi* in Igala is *manyu/manyi* which means ‘in addition to.’ It means that in deriving these forms, apart from the phonological process of vowel elision, there is also a morphological process of clipping as it affects the word *manyu/manyi* which gets reduced to *-nyi* with the first syllable chopped off; likewise the reduction of *ókà* to *kà* so as to blend with the other morphemes or words in order to achieve the derivation process involved in arriving at these numerals. In addition, the numerals are actually sentential when rendered in their full forms

e.g., ógwú # nyí # òké # kà = ógwú ki mányí(ú) ókà = ‘Let twenty be added to one.’ It is to be noted that some dialects of Igala particularly Ibaji, uses both *ówó* ‘hand’ and *òké* ‘single figure’ interchangeably for counting in this context as demonstrated in (4) below:

- (4) ógwú # nyí # ówó # kà → ógwúnyíówókà
 twenty plus hand one ‘21’ [ógwúnókèkà]
- ógwú # nyí # ówó # mēji → ógwúnyíówómēji
 twenty plus hand two ‘22’ [ógwúnókēmēji]
- ógwú # nyí # ówó # mētā → ógwúnyíówómētā
 twenty plus hand three ‘23’ [ógwúnókēmētā]
- ógwú # nyí # ówó # mēlẹ́ → ógwúnyíówómēlẹ́
 twenty plus hand four ‘24’ [ógwúnókēmēlẹ́]

2.2.3. Numerals Derived by Multiplication in Multiples of Twenty (40, 60, 80, 100)

In the Igala counting system the word *ógwú* (twenty) is synonymous with *ògbò* as pointed out earlier in (1b) above. Therefore as we go into multiplication to derive higher sums, preference is given to the use of *ògbò* in multiples of twenty to derive 40, 60, and 80, except in 100 where the two forms are used interchangeably. See examples as presented in (5) below:

- (5) Ògbò # mēji → Ògbòmēji
 twenty two (20x2 or twenty in two places) ‘40’
- Ògbò # mētā → Ògbòmētā
 twenty three (20x3 or twenty in three places) ‘60’

Ògbò # mélé → Ògbòmélé
 twenty four (20x4 or twenty in four places) '80'

Ògbò(ógwú) # mēlū → gbòmēlū or ógwúmēlū
 twenty five (20x5 or twenty in five places) '100'

2.2.4. Numerals Derived by Both Multiplication and Addition of Two Basic Numerals (30, 50, 70, 90)

For these, derivation takes both multiplication and addition except for 30 which takes only addition of two basic numerals. See the data below.

(6) ógwú # ègwá → ógwú-ègwá [ógwúègwá]
 twenty ten (20+10) '30'

ètā # ègwá → ètègwá [ètègwá]
 three ten (20x3 + 10) '70'

èlè # ègwá → èlègwá [èlègwá]
 four ten (20x4 + 10) '90'

One may equally want to know what happens to the numeral fifty (50). It should be noted however that the form for fifty (50) in Igala, óójē [óóǰē] has no such derivational history as 30, 70, and 90 above. One unique thing about the numeral fifty in Igala is that it appears completely independent. It is neither derived by any other numeral(s) nor does it contribute to deriving other numerals in the language, and hence the proposal at a point in time to use the word *ólí* to represent a unit of fifty in the Igala counting system (Etu 1999). This however did not gain popularity in the system for two reasons: it is only applicable to non-monetary numeration like

counting heaps and ridges only among the farmers, and secondly, it is only used to designate acceptably 300 (*óli mǐfà* = 50 in six places) and 500 (*óli mǐgwa* = 50 in ten places) respectively in the Igala traditional numerical system (See also Ocheja 2001).

3. The Use of *Ògwókó* (*Ògwá*), *Úlú*, *Íchámù*, and *Íchámùnyògwókó*

Ògwókó (*ògwá*), *úlú*, *íchámù*, and *íchámùnyògwókó* which stand for 200, 400, 800, and 1000 respectively were derived or made popular when cowry was used as money in the Igala society. That is why these forms are closely associated with *ókó* (money) in their derivations.

(7) <i>ògwá</i>	#	<i>ókó</i>	→	<i>Ògwókó</i>		
200		money		'200'		
<i>úlú</i>	#	(<i>ókó</i>)	→	<i>úlú(ókó)</i>		
400		money		'400'		
<i>íchámù</i>			→	<i>íchámù</i>		
800				'800'		
<i>íchámù</i>	#	<i>nyí</i>	#	<i>ògwókó</i>	→	<i>íchámùnyògwókó</i>
800		plus	200			'1000'

From the data above, it could be observed that the numerals 200, 400, and 800; in fact 200, 300, 400, 500, 600, 700, 800, and 900 do not refer to the basic numerals 2-9 as the bases for their derivation. So, it becomes very difficult to predict these forms and interpret them, taking a cue from the basic cardinal numerals 1-9 as it is the case with English and other languages. A further investigation even

reveals that the meanings of these forms: *ògwá*, *úlú*, and *íchámù* are not inherently available in Igala. Again, the word *úlú* (400) is not as closely associated with money except when cowries were counted in bags and one would hear; *úlú àkpúlù*, meaning; four hundred bags of money which in the present dispensation—the era of naira, would mean only eighty thousand naira (N80,000). In Ibaji dialect where yam farming is a major occupation, the bare forms *ògwá* and *úlú* would readily refer to 200 and 400 tubers or seedlings, respectively.

4. Ordinal Numerals

The main function of ordinal numerals in Igala numeration is to indentify ranks within a hierarchy with a view to situating a noun referent in a particular hierarchical position. In Igala, as with other languages (See Stolz & Veselinova 2005, Anagbogu 2006, Atóyèbí n.d.), ordinal numerals are derived from cardinal ones by attaching the prefix *-èkó* ('you are named or answered') to a cardinal number except first *éjódùdu* ('morning eye/sight,' lit.) meaning that which the eye sees first in the morning. Here, Igala like Oko (See Atóyèbí, n.d.) can be categorized under languages in which 'first' is suppletive, derivationally independent of the basic numeral 'one' in the language (See also Stolz & Veselinova 2005). Other numerals from 'two' upwards (ad infinitum) are derived by attaching the prefix *-èkó* to relevant cardinal numerals (with the required vowel elision).

(8) <i>ínyé</i>	[ÍnÉ] or <i>ókà</i> [ókà]	'one'	<i>éjódùdu</i>	'first'
<i>èjì</i>	[èḑḑì]	'two'	<i>èkéjì</i>	'second'
<i>ètā</i>	[ètā]	'three'	<i>èkéta</i>	'third'
<i>èlè</i>	[èlè]	'four'	<i>èkélè</i>	'fourth'
<i>èlú</i>	[èlú]	'five'	<i>èkélu</i>	'fifth'

èfà	[èfà]	‘six’	èkèfà	‘sixth’
èbiē	[èbjīē]	‘seven’	èkèbiē	‘seventh’
èjō	[èdʒɔ]	‘eight’	èkèjō	‘eightieth’
èlá	[èlá]	‘nine’	èkèlá	‘ninth’
ègwá	[ègwá]	‘ten’	èkègwá	‘tenth’
ègwélū	[ègwélū]	‘fifteen’	èkègwélū	‘fifteenth’
ógwú	[ógwú]	‘twenty’	èkógwú	‘twentieth’

5. Distributive Numerals

Distributive numerals in the Igala counting system are derived from cardinal numerals primarily through only total/complete reduplication. This is unlike Anagbogu (2006) and Atóyèbí (n.d.) in Koring and Ọkọ where deriving the distributive forms is achieved through either partial or completely reduplicated forms of the basic numerals. See the examples of distributive numerals in data (9a-b) below:

(9) a.	ókà	‘one’	ókà ókà	‘one each/one by one’
	èjì	‘two’	èjì èjì	‘two-by-two/in twos’
	ètā	‘three’	ètā ètā	‘three-by-three/in threes’
	èlẹ̀	‘four’	èlẹ̀ èlẹ̀	‘four-by-four’
	èlú	‘five’	èlú èlú	‘five-by-five’
	èfà	‘six’	èfà èfà	‘six-by-six’
b.	ògbòmèjì	‘forty’	ògbòmèjì èjì	‘forty-by-forty’
	ògbòmétā	‘sixty’	ògbòmétā ètā	‘sixty-by-sixty’
	ógwúmélū	‘hundred’	ógwúmélū èlú	‘hundred-by-hundred’

From the data above, it is clear that the derivation of distributive numerals goes through complete/total reduplications of the basic

forms. For numeral 1, even though the form used here is ókà → ókà ókà, it does not mean ínỳé cannot be used to derive ínỳé ínỳé as the case may be; it is only that the use of ókà is sometimes preferred in this context due to its melody. It is to be noted also that in (9b) above, though the reduplication appears partial on the surface, it is in the real sense total because the point of emphasis is the figure that is used to effect the multiplication, e.g., èjì èjì, ètā ètā, and so on whereas ógwú or ògbò (twenty) as the base is held constant in the derivation. Besides, there is nothing wrong with the forms: ògbòmējì ògbòmējì, ògbòmētā ògbòmētā, and ógwúmélū ógwúmélū. It is only that for brevity and euphonic melody, preference is, in most cases, given to the forms that reduplicate only the numerals used to multiply the base as presented in (9b) above.

6. Proposals for Modernization of the Igala Numerals

Following the difficulties associated with representing certain clumsy numerals in Igala e.g., íchámùnyògwókó mējì nyí ógwúmélū mējì nyí ògbòmélè-ègwá nyí òké mēlá (2,299) as well as those numerals identified with unclear derivational history, certain proposals for modernization were put forward. At present, I would review two of such proposals by Etu (1999) and Ocheja (2001). These two, even though they are not linguists, are native speakers of Igala who have had been associated with the study of Igala language at one point or the other.

Etu (1999) argues that young people especially Igala youths find it difficult to count in their mother tongue because they do not know the counting system of the language. According to him, people find it difficult to learn the unsystematic relationship between numerals 101-2000 because of its clumsy nature. Recall our earlier discussion on the following numerals: ògwókó (ògwá), úlú, íchámù, and

íchámùnyōgwókó as a point at issue here. As against *ógwúméchi* for 700 and *íchámùnyōgwókó* for 1000, Etu proposed *ógwú-mélū mébiē* and *ólíú* respectively. He argues further to justify the proposal (p. 107): “*Ólíú* is calculated with the concept of *ólí* which is 50 and twenty *olis* is 1000. *Oliu* means *oli ogwu*.” He observed however that the word *oliu* though short and easy to use, is yet to be made popular for acceptability. His conclusion therefore is that, for now, *oliu* can be used alternately with the more popular *íchámùnyōgwókó* for 1000 in Igala.

Another voice in this direction as it relates to proposals for modernizing some numerals in the Igala counting system is that of Ocheja (2001). Apart from coining the word *íchányì* for 1000, the major changes proposed by Ocheja include a departure from the traditional way of counting in multiples of hundreds from 200-1000 to counting in hundreds which translates into the differences between the traditional and the proposed as shown in (10):

(10) OLD	PROPOSED	
ògwókó	ógwú-mélū méjì	‘200’
ólí-méfà	ógwú-mélū mētā	‘300’
úlú (ókó)	ógwú-mélū mēlè	‘400’
ólí-mégwa	ógwú-mélū mēlū	‘500’
úlú ògwá	ógwú-mélū mēfà	‘600’
ógwúméchi	ógwú-mélū mébiē	‘700’
íchámù	ógwú-mélū mējō	‘800’
íchámù nyí ógwú-mélū	ógwú-mélū mēlá	‘900’
íchámùnyōgwókó	íchányì	‘1000’

The word *íchányì*, according to Ocheja, is his own derivation of the numeral 1000 from its traditional full form *íchámùnyōgwókó* taking a cue from the Yoruba *egberun* (1000) derived from *igba marun* which literarily means 200 in five places.

One’s opinion as far as these proposals are concerned is that it is

one thing to come up with such elegant proposals but it is another to sell the ideas successfully to the end users. Therefore in issues like this, one may wish to suggest that we should do more of descriptive analysis of the linguistic systems of the language than being prescriptive, know full well that even our insistence can hardly change the situation. Besides, I do not see anything new about some of the proposals except the newly coined terms for 1000. If not, before now, some of us have been used to counting in hundreds from 200 to 1000 (See the appendix on Igala Numerals attached to this paper). However, one may wish to suggest that in dealing with higher figures or numerals such as million, billion, trillion, and so on, the Igala could simply adopt a transliteration of the terms through borrowing to have *ímílòṣù*, *íbilòṣù*, and so on, respectively.

7. Summary and Conclusions

This paper has presented a detailed description of the derivational processes in Igala numeral system with explanations on the derivational history of certain numerals whose meanings are not very obvious in the language as well as certain changes that have occurred in the system over time. The study limits itself to counting from one (*Ínyé/ókà*) to a thousand (*íchámù nyí ògwókò*) with the claim that the traditional counting system of Igala did not go beyond the figure one thousand (1000). Besides, for clarity of presentation, Igala numerals were categorized into two broad groups: the basic numerals (1-10, 20, 50, 200, 400, and 800) and the derivatives or non-basic whose derivational history is traceable to a combination of the basic numerals through some addition, multiplication or a combination of both processes. It has been observed that the form for fifty (50) in Igala, *óójē* [*óóǎǎē*] is somewhat peculiar because it has no such derivational history as 30, 70, and 90 and it appears completely independent as it is neither derived by any other

numeral(s) nor does it contribute to deriving other numerals in the language.

Even though the orientation of this study is not comparative, a comparison of some of the findings of this study with similar studies would help us to appreciate the importance of this kind of research as it relates to typological considerations as well as universality of the grammar of numeracy in languages. For instance, unlike Yoruba and Ọ̀kọ in which the complexity of deriving especially non-basic numerals involves subtraction in addition to multiplication and addition, in Igala only addition and multiplication are involved in addition to the grammatical processes observed earlier (drawing from phonological, morphological, and syntactic processes that yield several numeral forms). Besides, while in Koring (Anagbogu 2006) the derivation of most secondary numerals involves the use of overt conjunction or addition morpheme (even in deriving numerals 11-19), the derivation of such in Igala does not require the use of such obvious conjunction or addition morpheme. Again, whereas distributive numerals would require either full or partial reduplication in Koring, Yoruba, and Ọ̀kọ (See Anagbogu 2006, Comrie 2006, and Atóyèbí n.d. respectively), such derivations in Igala would require only full reduplication.

In all, from the available data in this study, Igala could be said to belong to the group of languages which have a vigesimal numeral system. This is because the language employs a numeral structure where counting is done majorly in multiples of *ógwú/ògbò* ‘twenty’ (Comrie 2005). As indicated from the outset, the primary objective of this study is to contribute to the documentation and description of this most vulnerable aspect of Igala grammar by providing a detailed description of its numeral system. Though this report may not be as exhaustive, it could be said that the study has achieved its primary aim of providing a detailed description of the derivational processes in Igala numeral system. Finally, it is hoped that subsequent or further research into the numeral system of the language will include

discussions on much more comprehensive descriptive grammar of the Igala numeral system and other related issues including expression of some arithmetic operations such as fractions, addition, subtraction, division, reference to time expressed in hours, days, weeks, months, years, and so on in the numeracy of the language.

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Appendix: Igala Numerals

1. Ínyé [Ínɛ́]	30. ógwú-ègwá [ógwú̀ègwá]
2. èjì [èɖʒi]	40. ógwú-mējì [ógwúmēɖʒi]
3. ètā [ètā]	50. óójē [óóɖʒē]
4. èlè [èlè]	60. ògbòmetā [ògbòmetā]
5. èlò [èlò]	70. ètègwá [ètègwá]
6. èfā [èfā]	80. ògbò-mélè [ògbòméle]
7. èbiē [èbjiē]	90. èlègwá [èlègwá]
8. èjṛ [èɖʒṛ]	100. ógwú-mélū/ògbò-mélū [ógwúmélū/ògbò-mélū]
9. èlá [èlá]	200. ógwú-mélū mējì/ògwá/ògwókó
10. ègwá [ègwá]	300. ógwú-mélū metā [ógwúmélūmetā]
11. ègwákà [ègwákà]	400. ógwú-mélū mélè [ógwúmélūmélè]
12. ègwéjì [ègwéɖʒi]	500. ógwú-mélū mélū [ógwúmélūmélū]
13. ègwétā [ègwétā]	600. ógwú-mélū mēfā [ógwúmélūmēfā]
14. ègwélè [ègwéle]	700. ógwú-mélū mébiē [ógwúmélūmébiē]
15. ègwélū [ègwélū]	800. ógwú-mélū mējṛ [ógwúmélūmēɖʒṛ]
16. ègwéfā [ègwélā]	900. ógwú-mélū mēlá [ógwúmélūmēlá]
17. ègwébiē [ègwébjjiē]	1000. íchámùnyògwókó [ítʃámùnyògwókó]

18. ègwéjḡ [ègwéḡḡ]	2000. íchámùnyḡgwḡkó-mēji [ítǎmùḡḡgwḡkḡmēḡji]
19. ègwéḡā [ègwéḡā]	3000. íchámùnyḡgwḡkó-métā [ítǎmùḡḡgwḡkḡmētā]
20. ógwú [ógwú]	4000. íchámùnyḡgwḡkó-éḡè [ítǎmùḡḡgwḡkḡmēḡè]
21. ógwúnókēkà [ógwúnókēkà]	5000. íchámùnyḡgwḡkó-mélū [ítǎmùḡḡgwḡkḡmélū]
22. ógwúnókēmēji [ógwúnókēmēḡji]	6000. íchámùnyḡgwḡkó-méfā [ítǎmùḡḡgwḡkḡméfā]
23. ógwúnókēmētā [ógwúnókēmētā]	7000. íchámùnyḡgwḡkó-mébiē [ítǎmùḡḡgwḡkḡmébiē]
24. ógwúnókēméḡè [ógwúnókēméḡè]	8000. íchámùnyḡgwḡkó-méjḡ [ítǎmùḡḡgwḡkḡmēḡḡ]
25. ógwúnókēmélū [ógwúnókēmélū]	9000. íchámùnyḡgwḡkó-mēḡlā [ítǎmùḡḡgwḡkḡmēḡlā]
26. ógwúnókēméfā [ógwúnókēméfā]	1,000,000. íchámùnyḡgwḡkó-mégwa [ítǎmùḡḡgwḡkḡmégwa]
27. ógwúnókēmébiē [ógwúnókēmébiē]	2,000,000. íchámùnyḡgwḡkó-mégwa mēji
28. ógwúnókēméjḡ [ógwúnókēmēḡḡ]	3,000,000. íchámùnyḡgwḡkó-mégwa mētā
29. ógwúnókēmēḡlā [ógwúnókēmēḡlā]	4,000,000. íchámùnyḡgwḡkó-mégwa éḡè