

Central Delta languages: An overview¹

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Abstract

This paper presents an overview of the phonology, morphology and syntax of Central Delta languages. It also provides information on the geo-linguistic, demographic and sociolinguistic situation of these languages. It notes that Central Delta languages have a 20-vowel system, which divides into two sets of 10 vowels distinguished by pharyngeal size. The consonant systems of these languages range between 22 and 27, showing alternation between some pairs of consonants. Central Delta languages are noted to be rich in nominal and verbal morphologies, showing evidence of prefixal noun classification and morphological marking of nominal and verbal categories. The pronominal systems of these languages make a three-way number-person-case distinction with some of them formally distinguishing between inclusive and exclusive in their first-person plural forms. Common syntactic features observed in these languages include subject–object–verb basic word order and serial verb constructions. The paper highlights the fact that mother-tongue speakers of Central Delta languages also speak one or more other languages and that the daily exposure of Central Delta languages and their speakers to more powerful languages around them makes them endangered. Furthermore, the paper recommends that a survey be undertaken to determine the level of endangerment of Central Delta languages.

Keywords: Nigeria, Central Delta languages, nominal and verbal systems, morphology, language endangerment

1. Introduction

This paper aims at presenting an overview of the phonology, morphology and syntax of Central Delta languages, including some information on the geo-linguistic, demographic and sociolinguistic situation of these languages. It is divided into six sections. Section 1 introduces the aim of the study and presents geo-linguistic and demographic information and the sources of data. In section 2, information on the linguistic classification and sociolinguistic situation of Central Delta languages is provided. The phonological,

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morphological and syntactic overviews of these languages are respectively presented in sections 3 to 5, while the conclusion is presented in section 6.

In general, outside of the pedagogical materials published by the Rivers State Readers Project² in and about some of these languages, there is a dearth of literature in and about Central Delta languages in comparison with neighbouring languages, such as Degema (a Delta Edoid language), Kalabari (an Eastern Ijɔ language) and Izon (a Central Ijɔ language). For a partial listing³ of the literature available in and about Central Delta languages, see Table 1.

The earliest comparative study (mainly lexical comparison) of Central Delta languages is probably Wolff (1959, 1969), in which he lumps Abuan, Odua and Ogbia into what he refers to as “Abuan – Central branch of Niger-Congo”. Adoki (2002) describes the sound system of Abuan, Ezeh (2008, 2016) deals with the nominal and verbal morphology of Abuan, while Woodman (1983) is on affixation in Abuan. Comson (1987) is a detailed description of the phonology of Odua. Alex (1989) is the major unpublished comparative study dealing with the reconstruction of the segmental phonology of Proto-Central Delta. Other studies are Faraclas (1989), which is also comparative in nature but looks at a larger group, namely Cross River,⁴ and highlights some of the features that are common to the group as a whole. Blench (2008) represents a broader attempt to gather the scattered data on the Cross River languages, including Central Delta languages (Blench 2008:iii), even though sections on the phonology, morphology and syntax of Central Delta languages are virtually empty in his documentation.

Although the present study, like Alex (1989), Blench (2008), Faraclas (1989) and Wolff (1959, 1969), is a comparative attempt of some sort, it presents a synchronic analysis of this group of languages, like Adoki (2002), Blench (2008), Comson (1987), Ezeh (2008, 2016), Faraclas (1989), Wolff (1959, 1969) and Woodman (1983).

² The Rivers Readers Project was a project undertaken from the late 1960s to the late 1970s by the Rivers Readers Committee in collaboration with the then Rivers State Government with the aim of designing orthographies, primers and other pedagogical materials for use in schools in the various communities in the old Rivers State, which included communities in the present Bayelsa State of Nigeria. The Rivers Readers Committee was chaired by Professor Ebiegberi J. Alagoa. Other members of the committee were late Professor Kay Williamson and Professor Otonti A. Nduka and members of the various local language committees. The Rivers Readers Project was reintroduced in 2008 as the Rivers State Readers Project by the Rivers State Government with Dr Tony Enyia as the executive secretary/chief executive officer.

³ There may be materials in and/or about these languages that are either inaccessible or unavailable to the researcher.

⁴ The Central Delta languages are classified as a subgroup of Cross River (cf. Faraclas 1989, Williamson 1989b and Williamson and Blench 2000). However, recently Connell, Villa and Nara (2015) and Connell (2016) have posited that these languages do not belong to Cross River but comprise a group that is older than Bantoid Cross and coordinate with Jukunoid, Platoid, etc. within the East Benue-Congo sub-family.

Table 1: A partial listing of literature available on Central Delta languages⁵

| Language name | Available literature |
|----------------------------|---|
| Abua | Adoki (2002); Blench (2008); Ezeh (2008, 2016); Gardner (1973, 1980); Gardner and Gardner (1966, 1971, 1973); Gardner Azugha, Moopho and Ofori (1972); Hargrove (2009); Kari and Joshua (2011); Joshua (2006); Omu (1993); Otto (2000); United Bible Society (1974, 1978); Wolff (1959, 1969); Woodman (1983); Woy (1985) |
| Ođual | Abigo and Gardner (1974); Abigo, Gardner and Gardner (1975); Blench (2008); Comson (1987); Gardner, Gardner and Abigo (1974); Gardner (1975); (Kari (2007a, 2007b, 2009, 2011); Madumere (2006); Wolff (1959, 1969) |
| Kugbø | Blench (2008) |
| Abureni (Mini) | -- ⁶ |
| Ogbia | Blench (2008); Isukul (1986, 2002, 2007); Williamson (1970, 1972); Wolff (1959, 1969) |
| Ogbronuagum | Alex (1987, 1989); Kari (2000) |
| Obulom | Blench (2008); Ngeripaka (2000) |
| Ochichí⁷ | Achonwa (1981) |
| Ogbogolo | Francstan (1995); Olibie (1994) |

The data for the present study were collected from some of the accessible previous works on Central Delta languages. Data were mainly obtained from Alex (1989), Francstan (1995), Gardner et al. (1974), Isukul (2007), Kari (2000, 2007a, 2007b, 2009), Kari and Joshua (2011), Lewis, Simmons and Fennig (2016), Ngeripaka (2000) and Olibie (1994). The Central Delta languages on or about which linguistic research materials were available for this study are Abuan, Ođual (Saka), Ogbia (Ogbinyà), Ogbronuagum (Bukuma), Obulom (Abuloma), and Ogbogolo (Obogolo). Due to a lack of research materials or adequate research materials at the time of writing this paper, Kugbø, Abureni (Mini) and Ochichí are excluded from the discussion in the core areas of linguistics. Also due to a lack of adequate research materials and data, it is not possible to provide illustrative examples from all the languages surveyed to support some of the generalisations that are made in the paper. Needless to say, further data are needed on these languages.

In Table 2, we present the only data available to us on Ochichí from Ndimele (2003:13) in which numerals 1-5 in this moribund language are compared with those of other Central Delta languages.

⁵ See also the Open Language Archives Community (OLAC) at <http://www.language-archives.org/language/>.

⁶ There are no data available on Abureni.

⁷ We are aware of the existence of a manuscript on Ochichí (Achonwa 1981), which no doubt is a valuable research material on this moribund language, but we do not as yet have access to it in part or in whole. The pieces of information and limited data we have on Ochichí in this paper are from secondary sources, Ndimele (personal communication) and Ndimele (2003), which compare numerals 1-5 in Ochichí with those of Echie, Abuan, and Obulom, establishing that Ochichí is genetically related to Central Delta languages rather than to Echie, an Igboid lect (see Table 2). According to Ndimele, personal communication, “Bro Achonwa was the first to report about the existence of Ochichí in Etche. He collected a basic wordlist of 100 items with an introductory note in a manually-typed manuscript. It was in his note that he mentioned the relationship of Ochichí with Echie and Obulom”. Also as Blench (2008:3) remarks, “from the few words collected Ochichí appears to be related to Obulom, a Central Delta language in turn related to Abua”.

Table 2: A comparison of numerals 1-5 in Èchiè, Ọchịchị, Obulom and Abuan⁸

| Èchiè | Ọchịchị | Obulom | Abuan | Gloss |
|------------|---------|--------|-------|---------|
| ótù, mbó | nnén | ùnín | ònúñ | “one” |
| àbòò, mbòò | ìgàl | ìbàl | ìjàl | “two” |
| àtá, tó | ìsàl | ìsàr | ìsààr | “three” |
| ànnó | ìjnán | ìjnà | ìjnà | “four” |
| isé, sé | òò | òòò | òóy | “five” |

(adapted from Ndimele 2003:13)

In Table 3, we present a list of Central Delta languages along with their dialects, locations and approximate number of speakers. A map showing the geographical location of Central Delta languages is given in Figure 1.

Table 3: Central Delta languages, location, population and dialects⁹

| Language name | Location | Number of speakers | Dialects |
|-----------------------|--|---|--|
| Abuan | Rivers State: Abua-Odual Local Government Area (LGA) | 25 000 (Faraclas 1989) | Central Abuan, Emughan, Otapha (Otabha), Okpeden. Central dialect understood by all others. Lexical similarity: 70% with Odual |
| Abureni (Mini) | Bayelsa State: Brass LGA, Agrisaba (Obo-Emeke), 4 towns; Ogbia LGA, Idema; Nembe LGA, Okoroba; Ogbia LGA, Opume; Rivers State: 2 areas | Ethnic population: 4 000 (Lewis et al. 2016) | — |
| Kugbø | Rivers State: Abua-Odual LGA; Bayelsa: north Brass LGA | 2 000 | — |
| Obulom | Rivers State: Port Harcourt LGA, Abuloma town | 3 420 (Lewis et al. 2016) | — |
| Ọchịchị | Rivers State: Etche LGA, towns of Ikwerrengwo and Umuebulu | moribund | — |
| Odual | Rivers State: Abua-Odual LGA; Bayelsa State: Ogbia LGA | 30 000 (Comson 1987) | Arughunya, Adibom. Lexical similarity: 70% with Abuan (most similar) |
| Ogbia | Bayelsa State: Brass and Ogbia LGAs; Rivers State: Abua-Odual LGA | 200 000 (Lewis et al. 2016) | Agholo (Kolo), Oloibiri, Anyama. Dialect cluster but all inherently intelligible |
| Ogbronuagum | Rivers State: Degema LGA, Bukuma village near Buguma | 12 000 (Kari 2000) | — |
| Ogbogolo | Bayelsa State: Yenagoa LGA | 10 000 (Lewis et al. 2016) | — |

⁸ The data in Table 1 are transcribed in International Phonetic Alphabet (IPA) symbols, unlike the orthographic ones used by Ndimele (2003).

⁹ The information in Table 3 is updated from Blench (2008), Comson (1987), Faraclas (1989), Kari (2000), Lewis et al. (2016) and from the present author's knowledge of the socio- and geo-linguistic situation of Nigeria. An en-dash “—” in Table 3 indicates that the language in question has no dialect(s).



Figure 1: Map showing the geographical location of Central Delta languages (Lewis et al. 2016).¹⁰

¹⁰ The locations of Central Delta languages in Figure 1 are assigned the following numbers: Abua (409), Abureni (422), Kugbo (421), Obulom (411), Očichị (not on the map), Ođual (407), Ogbịa (423), Ogbronuagum (419), Ogbogolo (408).

2. Background

The Central Delta languages are a subgroup of East Benue-Congo within the Niger-Congo phylum (cf. Williamson 1989a, Williamson and Blench 2000). They are spoken in the Niger Delta of southern Nigeria in enclaves largely surrounded by speakers of Ijoid languages, such as Kalabari, Kirīké (Okrika) Nembe, Izon and Biseni. Thus, speakers of Central Delta languages speak one or more other languages in addition to their mother tongues. For instance, speakers of Ogbonnagum are bilingual in Ogbonnagum and Kalabari, a neighbouring Eastern Ijɔ language. Obulom speakers are bilingual in Obulom and Okrika, a neighbouring Eastern Ijɔ language. The Kugbó people speak Kugbó and Nembe, an Eastern Ijɔ language, in addition to Odua and Ogbia (Kolo Creek). In addition to the neighbouring languages spoken by mother tongue speakers of Central Delta languages, younger generations of speakers also speak English and Nigerian Pidgin, which has a much wider currency and is a language of preference among young people.

The linguistic situation in the Delta area, where Central Delta languages are spoken, is such that these languages are exposed daily to the influence of politically and economically more powerful Ijɔ and other languages that exert pressure on them, thus putting them on the list of endangered languages. Ochichi, a moribund Central Delta language spoken by the people of Ikwerrengwo and Umuebulu in the Etche Local Government Area of Rivers State and in some parts of Abia State of Nigeria, is a case in point (Ndimele, Kari and Ayuwo 2009:74). Ochichi speakers have been completely swallowed up by the language and culture of the Etche people, who are speakers of Echie, an Igboid lect (cf. Ndimele 2003). This is the fate that awaits smaller Central Delta languages in the foreseeable future. Having said this, it is recommended that a survey be undertaken to assess or determine the degree of endangerment of Central Delta languages.

3. Phonological overview of Central Delta languages

In what follows, we examine aspects of the phonology of Central Delta languages, such as vowels and consonant systems, syllable and morpheme structures, and tonal systems, highlighting the features that are common to these languages.

3.1 Vowels

The Central Delta languages on which data are available for the present study operate a 10 single-vowel /i, ɪ, e, ε, a, ə, ɔ, o, ʊ, u/ and a 10 double-vowel /ii, ɪɪ, eɛ, εɛ, aa, əə, ɔɔ, oo, ʊʊ, uu/ system, totalling 20 vowels (cf. Abuan: Gardner 1980, Kari and Joshua 2011; Obulom: Ngeripaka 2000; Odua: Kari 2009, 2011; Ogbia: Isukul 2007; Ogbogolo: Olibie 1994, Francstan 1995; and Ogbonnagum: Alex 1987, Kari 2000). In these languages, there is a contrast between short and long vowels /i : ii, ɪ : ɪɪ, e : ee, ε : εɛ, a : aa, ə : əə, ɔ : ɔɔ, o : oo, ʊ : ʊʊ, u : uu/. There are also sequences of vowels (identical and non-identical) in these languages. Inherently nasalised vowels are not attested in Central Delta languages. Nasalised vowels are phonetic, as they are only found in the environment of nasal consonants (cf. Faraclas 1989:388). Table 4 shows the contrasts that exist between long and short vowels in the two Central Delta languages of Abuan and Odua.

Table 4: Long and short vowel contrasts in Central Delta languages

| Abuan (Kari and Joshua 2011:5) | | | Odua (Kari 2011:92f) | | |
|--------------------------------|--------|----------------|----------------------|-----------------------|---------------------|
| i and ii | kík | “resemble” | i and ii | ibí | “sequins” |
| | kíiy | “kill” | | iíbi | “good” |
| I and II | mín | “swallow” | I and II | íyór | “saliva” |
| | míín | “see” | | íí ⁺ yó | “grass” |
| e and ee | èkú | “spoon” | e and ee | ègí | “(of things) many” |
| | éékù | “bottle” | | èégì | “knee” |
| ɛ and εε | òòlèm | “Creator” | ɛ and εε | èbá | “bag” |
| | òlèèm | “beard” | | èé ⁺ bá | “hand, foot” |
| ə and əə | jám | “wink” | ə and əə | àlágó | “leaf” |
| | ìŋòèm | “nostalgia” | | àágó | “namesake” |
| a and aa | òkàm | “thatch” | a and aa | álágábá | “flag” |
| | òkààm | “maker” | | àláá ⁺ gbá | “gun” |
| o and oo | òlóy | “law” | o and oo | òló | “is not” |
| | òòlòy | “wave” | | òó ⁺ ló | “berry” |
| ɔ and ɔɔ | òlèèm | “beard” | ɔ and ɔɔ | ògá | “egg” |
| | òòlèm | “Creator” | | òògá | “shrimp” |
| u and uu | òkú | “contribution” | u and uu | úbá | “shade” |
| | òòkùùy | “wind” | | ùù ⁺ tó | “(of weather) cold” |
| ʊ and ʊʊ | ìnón | “birds” | ʊ and ʊʊ | òò ⁺ nó | “water pot” |
| | nòòn | “quickly” | | ònòór | “dry season” |

Vowel harmony is present in all Central Delta languages (see Table 4). The vowel harmony found in these languages is the type known as advanced tongue root [ATR]¹¹, where the size of the pharynx plays a crucial role in distinguishing the vowels. Based on the size of the pharynx, a distinction is made between advanced tongue root [+ATR] vowels (vowels made with the root of the tongue pushed forward with a simultaneous lowering of the larynx) and non-advanced tongue root [-ATR] vowels (vowels made with the root of the tongue pulled backwards with a simultaneous raising of the larynx). The [+ATR] vowels are /i, ii, e, ee, ə, əə, o, oo, u, uu/, while the [-ATR] vowels are /I, II, ɛ, εε, a, aa, ɔ, ɔɔ, ʊ, ʊʊ/. The [±ATR] harmony that occurs in these languages is feature-driven, as the [±ATR] feature of vowels of the base spreads on to prefixes and suffixes that attach to the base, causing them to harmonise with the base. The [±ATR] contrast is carried over to the length contrast in these languages, i.e. short and long vowels show vowel harmony. In most cases, vowels from opposing sets do not co-occur in simple words. Compound and (recently) borrowed words are exceptions to the pervasive vowel harmony rule, as [+ATR] and [-ATR] vowels are found to co-occur in such

¹¹ Abbreviations used in this paper are: 1SG = first-person singular, 2SG = second-person singular, 3SG = third-person singular, 1PL = first-person plural, 2PL = second-person plural, 3PL = third-person plural, 1SGS = first-person singular subject, 3SGS = third-person singular subject, aff = affix(es), ATR = advanced tongue root, C = consonant, CM = concord marker, DEF = definite article, DIST = distal, emph. = emphatic, excl./EXCL = exclusive, FACT = factitive, fut. = future, incep. = inceptive, incl./INCL. = inclusive, IPA = International Phonetic Alphabet, NP = noun phrase, num. = number, O = object, oblig. = obligatory, OFOC = object focus marker, OM = object marker, PAST = past, PERF = perfect, pers. = person, pl = plural, PN = personal name, poten. = potential, pref = prefix, pres/PRES. = present, prog/PROG. = progressive, pron. = pronoun, PROX = proximal, Q = question, SG = singular, SUBJ.PREF. = subject prefix, SVC = serial verb construction, V = vowel, verb.

words. In Ođual, there are a few words (*đlđké* ‘leg’, *óbđéβ* ‘cultivate’), most of which contain the vowel /E/, in which there is co-occurrence of both [+ATR] and [-ATR] vowels so that there is no vowel harmony (Gardner et al. 1974:9; Gardner 1975:15; Kari 2009:5).

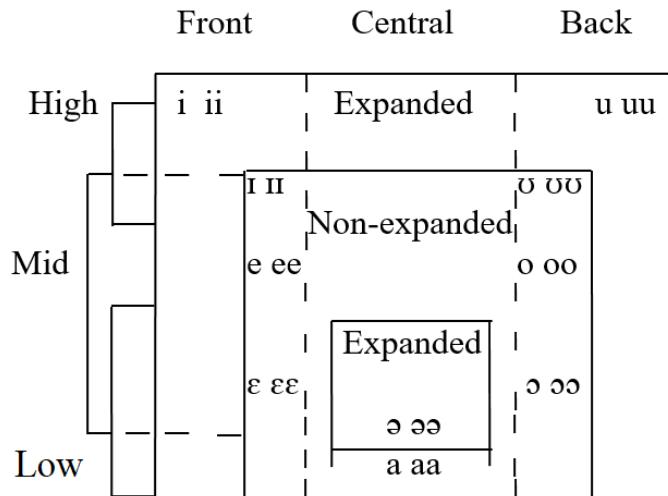


Figure 2: Phonemic vowel inventory of Central Delta languages¹²

3.2 Consonants

The number of consonants in Central Delta languages ranges from 22 in Obulom (Ngeripaka 2000) to 27 in Ogbogolo (Olibie 1994; Francstan 1995). Ođual and Ogbia have 24 consonants each (Gardner et al. 1974; Comson 1987; Isukul 2007), Ogbronagum has 25 (Kari 2000), while Abuan has 26 (Kari and Joshua 2011). The following is an inventory of consonants in the Central Delta languages for which data is available for this study: /m, n, ŋ, ɳ, ɳm, ɳw, p, b, t, d, k, g, kp, gb, ɓ, ɗ, r, dʒ, ɸ, β, f, v, s, z, ʃ, ɣ, h, ڻ, l, j, w/.

Table 5: Phonemic consonant inventory of Central Delta languages

| Place of articulation ⇒ Manner of articulation ↓ | | Bilabial | Labio-dental | Alveolar | Palatal/Velar | Velar | Labial-velar | Labialised-Velar/Glottal |
|---|------------|----------|--------------|----------|---------------|-------|--------------|--------------------------|
| S | Nasal | m | | n | ŋ | ɳ | ɳm | ɳw |
| T | Plosive | p | b | t | d | k | g | kp |
| O | | | | | | | gb | |
| P | Implosive | ɓ | | ɗ | | | | |
| S | Trill/Roll | | | r | | | | |
| | Africate | | | dʒ | | | | |
| FRICATIVE | | ɸ | β | f | v | s | z | ʃ |
| APPROXIMANT | | | | | | l | j | w |

¹² Figure 2, adapted from Kari (2000:3), illustrates the ATR type of vowel harmony in Central Delta languages. The large box represents an expanded pharynx [+ATR], while the small box represents a non-expanded pharynx [-ATR]. The smaller box, which also represents an expanded pharynx [+ATR], is placed inside the small box to show the symmetrical arrangement of the vowels. The vertical broken lines demarcate front, central and back vowels.

From the total number of consonants listed against each of the six languages mentioned above (Abuan, Obulom, Ođual, Ogbia, Ogbogolo and Ogbronuagum), it is obvious that not one of the Central Delta languages has all consonants in the inventory. In this regard, Abuan has all consonants except /ŋʷ,ɸ,z,ʃ,h,ħ/; Obulom has all consonants except /ŋ,ŋm,ŋʷ,ɸ,v,z,ʃ,ɣ,ħ/; Ođual has all consonants except /ŋm,dʒ,ɸ,ʃ,h,ħ/; Ogbia has all consonants except /ŋm,ɸ,ʃ,h,ħ/; Ogbogolo has all consonants except /ŋm,ŋʷ,h,ħ/; and Ogbronuagum has all consonants except /ŋm,ɸ,β,z,ʃ,h/.

An interesting feature of Central Delta languages, as far as consonant systems are concerned, is the alternation between some of the consonants. There are different inventories for stem-initial as opposed to stem-medial/final consonants. Such inventories for stem-initial vs. stem-final consonants are not found in Obulom and Ogbia, at least not in the data obtained from the source materials on these languages. The alternations between some of these consonants are noted in Abuan (Gardner 1980:xf.), Ogbronuagum (Alex 1987:66; Kari 2000:28f.) and in Ođual (Madumere 2006:47ff; Kari 2009:10ff.). In Ogbronuagum and Ođual, alternations are observed to occur in words between the pairs of consonants [t] and [r] and [k] and [V], depending on their position in the words in which they occur. It is observed that the consonants [t] and [k] occur word-initially in imperatives in Ogbronuagum and Ođual. However, when these consonants occur intervocally, i.e. when they are preceded by the infinitive vowel prefix, [t] becomes [r] and [k] becomes [V] in both languages. As in Ogbronuagum and Ođual, alternations are observed to occur in words in Abuan between the following pairs of consonants: [t] and [r] and [k] and [V]. Alternations also occur between [p] and [w] in Ogbronuagum and between [p] and [β] in and Ođual:

(1) **Abuan**

| | | |
|---------------------------------|---|-------------------------------|
| Alternation between [t] and [r] | | |
| àbìdí kò-tú “they will come” | ~ | àbìdí mó-rúù “they have come” |

| | | |
|---------------------------------|---|----------------------------|
| Alternation between [k] and [V] | | |
| jóór kò-kí “we will go” | ~ | jóór mó-Víi “we have gone” |

(2) **Ođual**

| | | |
|---------------------------------|---|------------------|
| Alternation between [p] and [β] | | |
| pùrá “stink” | ~ | óβúrá “to stink” |

| | | |
|---------------------------------|---|----------------------|
| Alternation between [t] and [r] | | |
| tù Véél “return” | ~ | óru Véél “to return” |

| | | |
|---------------------------------|---|---------------------------|
| Alternation between [k] and [V] | | |
| kírèón “turn around” | ~ | ó Vírèón “to turn around” |

(3) **Ogbronuagum**

| | | |
|---------------------------------|---|---------------------|
| Alternation between [p] and [w] | | |
| pàrà “reply” | ~ | àríwáàrà “to reply” |

| | | | |
|---------------------------------|--------|---|----------------------------|
| Alternation between [t] and [r] | | | |
| <i>tèlè</i> | “walk” | ~ | <i>àrírééélè</i> “to walk” |

| | | | |
|---------------------------------|------|---|------------------------|
| Alternation between [k] and [ɣ] | | | |
| <i>kilè</i> | “do” | ~ | <i>àríɣùlè</i> “to do” |

However, exceptions occur between these alternating pairs of consonants in Ođual (Kari 2009:10f) and Ogbronęagum (Kari 2000:28f) respectively. In Ođual, exceptions are found to exist between the pairs [p] and [β], [t] and [r], and [k] and [ɣ], as illustrated in (4), (5) and (6), respectively.

- | | | | | | |
|-----|-----------------|---------------------|---|----------------|------------------------|
| (4) | <i>pùú</i> | “surpass” | ~ | <i>ópú</i> | “to surpass” |
| | <i>pìpiíβ</i> | “lick” | ~ | <i>ópiíβ</i> | “to lick” |
| | <i>pèél</i> | “jump” | ~ | <i>ópéél</i> | “to jump” |
| (5) | <i>tòñnmáán</i> | “follow” | ~ | <i>ótóñmán</i> | “to follow” |
| | <i>tòtvá</i> | “remember” | ~ | <i>ótóvá</i> | “to remember” |
| | <i>tòyá</i> | “learn” | ~ | <i>ótóyá</i> | “to learn” |
| (6) | <i>kùlòón</i> | “touch (with hand)” | ~ | <i>ókùlóón</i> | “to touch (with hand)” |
| | <i>kòó</i> | “pluck (fruit)” | ~ | <i>ókó</i> | “to pluck (fruit)” |
| | <i>kàá</i> | “carve (wood)” | ~ | <i>óká</i> | “to carve (wood)” |
| | <i>kòtòón</i> | “untie” | ~ | <i>ókótón</i> | “to untie” |

Similarly, in Ogbronęagum, exceptions are found between the pairs [t] and [r], [p] and [w], and [k] and [ɣ], as illustrated in (7), (8) and (9), respectively.

- | | | | | | |
|-----|--------------|------------------|---|------------------|---------------------|
| (7) | <i>tòm</i> | “follow” | ~ | <i>àrí-tóóm</i> | “to follow” |
| | <i>tòwá</i> | “learn” | ~ | <i>àrí-tówá</i> | “to learn” |
| (8) | <i>pùúrù</i> | “ask (question)” | ~ | <i>àrí-púúrù</i> | “to ask (question)” |
| | <i>pòóm</i> | “cover (pot)” | ~ | <i>àrí-póóm</i> | “to cover (pot)” |
| (9) | <i>kùtò</i> | “pierce (ear)!” | ~ | <i>àrí-kúútò</i> | “to pierce (ear)!” |
| | <i>kò</i> | “build” | ~ | <i>àrí-kò</i> | “to build” |

3.3 Syllable/morpheme structures

Alex (1989) shows that Central Delta languages have three basic syllable types: V, CV and CVC. A syllable of the type VC is also attested (see Kari 2009). A V syllable type consist of a vowel only, a CV type consists of a consonant and a following vowel, a CVC type consists of two consonants with an intervening vowel, while a VC type consists of a vowel and a following consonant. Syllabic nasals are attested in languages such as Abuan, Ođual and Ogbronęagum. Consonant clusters of the type CCV are attested, but these are surface structures that result from the deletion of an intervening vowel.

Noun prefixes in Central Delta languages predominantly have V(V)-, VC- and VCV(V)-forms. Longer forms, such as VCVmu- and VCVRU-¹³, are also attested in Ođual, but these occur only in the plural (see Table 6). Verbal suffixes are basically -V, -VC, -CV, -VCV and -CVC forms (see Table 17).

Table 6: The structure of noun prefixes in Central Delta languages

| Prefixes | Abuan (Gardner 1980) | Ođual (Kari 2006, 2009) | Ogbronuagum (Kari 2000) |
|----------|---------------------------------------|--|----------------------------|
| V(V)- | ò-wòl “leg” òò-kpò “bone” | ò-dèvà “bees (swarm of)” òò-bòdi “iguana” | è-kpé “he-goat” |
| VCV(V)- | àrú-yó “penises” àriúú-kùm “knees” | àrò-dèvà “bees (swarms of)” àriúú-dùúm “bushes” | àrù-gùnù “bellies” |
| VC- | — ¹⁴ | — | òw-rówri “men” |
| VCVmu- | — | àsòmò-yèél “a kind of basket fish trap” | — |
| VCVRU- | òbùrù-dè “father” | òbòrò-màràní “sisters” | — |

3.4 Tone

Alex (1989:24) remarks that “all Central Delta lects operate a basic two-tone system”. These tones are low tone, which is marked with a grave accent (`), and high tone, which is marked with an acute accent (´). There is also a downstep phenomenon in these languages. The downstep is marked with a small arrow pointing downwards (↘) between two high-toned syllables. Apart from the syllabic nasal, tone in these languages is anchored on vowels. Table 7 shows these tones and downstep as found in Abuan, Ođual and Ogbronuagum.

Table 7: Tones in Central Delta languages

| Abuan (Kari and Joshua 2011:8) | | Ođual (Kari 2009: 9, 12) | | Ogbronuagum (Kari 2000:9) | |
|-----------------------------------|-----------|-----------------------------|----------------|------------------------------|---------|
| òlòm | “husband” | ózú | “to pour” | égu | “fear” |
| òló ⁺ m | “to bite” | òzú | “skin” | ègú | “louse” |
| ólóm | “paddle” | òó ⁺ βó | “bark of tree” | ònì ⁺ ní | “one” |

Like in lexical items, tone can distinguish grammatical constructions in Central Delta languages. In Ođual, for instance, tone is found to distinguish between statements and questions (Kari 2009:12), as shown in (10):

- (10) a. *òdí ná-kòdñ*.
 3SGS 3SG.PRES PROG-sleep
 “He is sleeping.”

¹³ C and V represent underspecified consonant and vowel, respectively.

¹⁴ An en-dash “—” indicates that noun prefixes with the structure in question are not attested in the language.

- (b) *òdí ná-kòdī.*
 3SGS 3SG.PRES PROG.Q-sleep
 “Is he sleeping?”

4. Morphological overview of Central Delta languages

This section discusses the nominal and verbal systems of Central Delta languages. In particular, it looks at noun classification; concordial relationships; case marking; pronominal systems; and verb morphology, especially the marking of grammatical categories and verbal extensions.

4.1 Nominal morphology

Central Delta languages show evidence of noun classification. Nominal morphology in these languages is characterised by the presence of prefixes. Nouns consist of a stem and a prefix, which in most cases agrees with the vowels of the stem in \pm ATR. Plural formation is essentially by a replacement of a singular marking prefix with a plural marking prefix. There are singular, plural and single class-marking prefixes, which do not have any plural counterparts. Single class-marking prefixes are associated with non-count nouns. The prefixes are of different shapes and lengths. They are semantically determined and form the basis for the classification of nouns in these languages into genders. The semantic content of these genders includes human, lower animals, plants/plant parts, artefacts, parts of the body, human relationships and non-count. Nominal prefixes in Ogbia and Ogbogolo are mostly single vowels. It is only what Isukul (2007:141) calls the “generalised plural prefix marker that has the shape **ArA-**. The shape of the generalised plural prefix marker in Ogbia looks more like those of many of the prefixes in other Central Delta languages like Abuan, Obulom, Odual and Ogbronugum, which have canonical V(V) and VCV(V) shapes.

Suffixation is not common in non-derived nouns. Evidence of suffixation is attested in derived forms, such as gerunds, in Ogbogolo and Ogbia (Olibie 1994; Francstan 1995; Isukul 2007), as illustrated in section 4.5. Interfixation is rare but found in derived nouns in Ogbogolo (Francstan 1995) and Ogbia (Isukul 2007). According to Isukul (2007:93), “many of the nominals derived from the interfixation of **-mA-** stand for occupation or profession”, as seen in (11) taken from Isukul (2007:93):

| | | | | | |
|------|--------------|---------------|---|---|-----------------------|
| (11) | <i>ògbèb</i> | <i>édiən</i> | > | <i>ògbèb<small>mà</small>èdiən</i> (sg) | “farmer/cultivator” |
| | to grow | food | | <i>ìgbèb<small>mà</small>èdiən</i> (pl) | “farmers/cultivators” |
| | <i>ɔgbàl</i> | <i>énam</i> | > | <i>ɔgbàlmàènàm</i> (sg) | “shepherd” |
| | to rear | beasts | | <i>ègbàlmàènàm</i> (pl) | “shepherds” |
| | <i>ògù</i> | <i>irérén</i> | > | <i>ògùmàírérén</i> (sg) | “wood cutter” |
| | to cut | trees | | <i>ìgùmàírérén</i> (pl) | “wood cutters” |
| | <i>ògiy</i> | <i>ínə</i> | > | <i>ògiymàinà</i> (sg) | “fisherman” |
| | to kill | fish | | <i>ìgiymàinà</i> (pl) | “fishermen” |

Languages such as Abuan, Odual, Ogbia, Ogbogolo and Ogbronugum show that demonstratives, adjectives, and modifier nominals have number-marking prefixes whereby in many cases the forms **o-/oo-** and **ɔ-/ɔɔ-** and **i-/ii-** and **ɪ-/ɪɪ-**, depending on the \pm ATR of the vowels of the stem, are used to mark singular and plural, respectively. Table 8 shows the

forms of demonstratives, adjectives and nominal modifiers in the Central Delta languages of Ođual and Ogbronuagum.

Table 8a: Demonstratives

| Ogbronuagum (Kari 2000:19) | | Ođual (Kari 2009:28) | |
|-----------------------------------|---------|-----------------------------|---------|
| òdì | “this” | òòþó | “this” |
| èédì | “these” | òpó | “that” |
| òpò | “that” | iiþá | “these” |
| pèédì | “those” | ipá | “those” |

Table 8b: Adjectives and modifier nominals

| Adjectives: Ogbronuagum (Kari 2000:22) | | Modifier nominals: Ođual (Kari 2009:38) | |
|---|---------|--|-------------------------|
| òbilibû/íbilibû | “black” | óbílé/íbílé | “one that is black” |
| òblàbáà/íblàbáà | “white” | óbáál/íbáál | “one that is white” |
| ògbóóná/igbóóná | “big” | ògbàáy/ígbàáy | “one that is big/large” |
| óduúdù/íduúdù | “small” | òbàm/íbàm | “one that is small” |

4.2 Concordial relationship

There are some instances of limited concordial agreement in which number-marking prefixes of demonstratives, adjectives, and modifier nominals have a phonological shape that is similar or identical to noun prefixes in Central Delta languages (see Gardner 1980; Olibie 1994; Kari 2000, 2009; Isukul 2007). This concordial relationship is purely in respect to number-marking and not in terms of noun classes (cf. Swahili, Lyons 1968:285). For example, the form of the demonstrative ódì (“this”) in Ogbronuagum does not vary irrespective of the gender to which the noun it is used with belongs (e.g. áári “woman” + ódì “this” > á⁺-rí ó-dì “this woman” : à-dírí “book” + ó-dì “this” > à-dírí ó-dì “this book”). This is unlike in Bantu languages such as Swahili (Lyons 1968: 285), where in many cases modifiers change their prefixes to reflect the class of the noun (e.g. wa-tu “people” + wa-zuri “beautiful” + wa-le “those” > wa-tu wa-zuri wa-le “those beautiful people”; m-ti “tree” + mi-zuri “beautiful” + i-le “those” > m-ti mi-zuri i-le “those beautiful trees”). In Swahili, the adjective and the demonstrative have the prefix *wa-*, because the noun *wa-tu* (“people”) belongs to the human class, whereas with nouns that belong to the class of trees or plants such as *m-ti* (“tree”), the prefixes of the adjective and demonstrative become *mi-* and *i-*, respectively.

The existence of concordial relationships in Central Delta languages in terms of noun classes, if any, is limited and without general applicability. Table 9 shows the concordial relationship between nouns and modifiers in Ođual and Ogbronuagum

Table 9: Concordial relationship between nouns and modifiers

| Adjectives: Ogbonuagum (Kari 2000:43f) | | | Modifier nominals: Odual (Kari 2009:28) | | |
|---|---------------|---------------|--|-----------------|----------------|
| á ⁺ rí woman | žd̩i this | “this woman” | òtù house | òóβó SG.PROX | “this house” |
| àwá ⁺ rí women | édi these | “these women” | èrùtù houses | iíβə PL.PROX | “these houses” |
| òmóóm new | žl̩àsì bag | “a new bag” | òtù house | ópó SG.PROX | “that house” |
| ògbóóná big | óréñ tree | “a big tree” | èrùtù houses | íp̩á PL.DIST | “those houses” |

4.3 Case marking

Case marking in nouns is not a general feature of Central Delta languages. However, in Odual, nouns are morphologically marked for accusative and locative cases. It is noted that direct object noun phrases are preceded by the accusative case marker **m-**, as in (12a), while those indicating location, as in (12b), are preceded by the locative case marker **t-**. Similarly, in Ogbia, noun phrases functioning as sentential objects are marked for accusative case. The form of the accusative case marker, which precedes the object in Ogbia, is identified as **-m-** in Isukul (1986) and later as **mA-** in Isukul (2007). The form **mA-** harmonises in ±ATR with the vowels of the following object, as in (13):

- (12) a. *ààmì ú-yèá m-òþéréér.*
I 1SG.PAST-buy OM-book
“I bought a book” (Odual: Kari 2009:16)
- b. *ààmì ú-rùú mò-yèèl t-ó⁺tú.*
I 1SG.PAST-want INF-go LOC-house
“I wanted to go home” (Odual: Kari 2009:16)
- (13) a. *nwá nááfél mò-àñáne?*
you look.PRES OM-who
“You’re looking for who?” (Ogbia: Isukul 2007:123)
- b. *nwá nááfél mà-ènìè?*
you want.PRES OM-how many
“You want how many?” (Ogbia: Isukul 2007:123)

4.4 Pronouns

The pronominal systems of Central Delta languages make a three-way distinction in person, number and case. Person distinctions are first, second and third. In terms of number, the languages distinguish between singular and plural. The case distinctions in pronouns are subject, object and possessive. There is no biological or gender distinction in the pronominal systems of these languages, as a look at the personal pronominal systems of Abuan, Odual and Ogbia in Table 10 shows. A noteworthy feature of some Central Delta languages with regard to their pronominal systems is the presence of inclusive and exclusive pronouns. The

inclusive-exclusive distinction is overtly expressed in the forms of the first-person plural personal pronouns. According to Givón (1984:354), this distinction “...pertains to the hearer’s inclusion in or exclusion from, the referential scope of ‘we’. ‘We-INCL’ is thus “we, including you”, and ‘we-EXCL’ is thus “we, excluding you””. The reason for the overt distinction in the forms of the first-person plural pronouns is well expressed by Givón (1984). In his view, “...inclusion/exclusion are not directly predictable from the speaker and hearer, they are potentially ambiguous in the speech situation, and it is thus only natural that they may require overt specification (‘marking’)” (Givón 1984:355).

Central Delta languages that morphologically mark the inclusive-exclusive distinction in the forms of first-person plural personal pronouns are Abuan (Gardner 1980) and Ođual (Kari 2007b, 2009), as seen in Table 10.

Table 10: Personal pronouns in Abuan, Ođual and Qgbia

| Num/ pers. | Subject | | | | Object | | | | Possessive | | | |
|----------------|-------------------|-------|-------|------------|--------|-------|--------|---------------|------------|--------|--------|----------------|
| | Abuan | Ođual | Qgbia | Gloss | Abuan | Ođual | Qgbia | Gloss | Abuan | Ođual | Qgbia | Gloss |
| 1sg | mí | áamí | àmì | “I” | ímì | áamí | mààmì | “me” | àmì | áamí | dáamí | “my” |
| 2sg | ná | á*ná | ànwá | “you” | ínà | á*ná | màànwá | “you” | ànà | ónú*mó | déijóm | “your” |
| 3sg | òdí ¹⁵ | òdí | ènà | “s/he /it” | jòdí | òdí | màènà | “her/him /it” | òdí | òdí | déijó | “her/his /its” |
| 1pl | - ¹⁶ | - | ijàr | “we” | - | - | màijàr | “us” | - | - | déijár | “our” |
| 1pl (incl.) | jírò | èzírò | -- | “we” | jírò | èzírò | -- | “us” | òjírò | ézt'rò | -- | “our” |
| 1pl (excl.) | jóòr | ézáér | -- | “we” | jóòr | ézáér | -- | “us” | òjòòr | ézáér | -- | “our” |
| 2pl | jínà | èèná | ijnìn | “you” | jínà | èèná | mèjnìn | “you” | òjínà | èé*ná | déjnín | “your” |
| 3pl | àbídí | èèdí | òwà | “they” | bídí | èèdí | mèòwà | “them” | àbídí | èédí | déawá | “their” |

4.5 Verbal morphology

Like nominal morphology, Central Delta languages are rich in verbal morphology. Grammatical categories such as person, number, tense, aspect and negation are to a large extent morphologically marked. Faracclas (1989:391) remarks that “verbs in Central Delta languages are inflected primarily via a system of prefixes”. It is interesting to note that some of the inflectional markers in these languages, like Ođual, are not strictly prefixes but discontinuous morphemes. Negative-marking, in some cases, is a combination of prefixes and lexical items (see Kari 2009). The affixes that mark these grammatical categories in most cases harmonise in ±ATR with the vowels of the stem to which they attach. In general, it is observed that segmental (affixes and lexical items) and non-segmental (tone) morphemes combine to express not only person, but also number, tense, aspect, negation and modality.

¹⁵ Third-person singular and plural forms as listed under Abuan in Table 10 are those used to refer to human beings. Gardner (1980:ix) remarks that “a non-human singular pronoun, *edi*, and non-human plural pronoun, *idi*, occur very infrequently”.

¹⁶ A single dash in Table 10 “-” indicates that Abuan and Ođual do not have first-person plural forms of pronouns that do not make inclusive and exclusive distinctions, while double dashes “--” indicate that Qgbia (Isukul 2007) does not make inclusive and exclusive distinctions in first-person plural pronouns.

Verbs consist of a stem to which one or more inflectional affixes can be attached. Phonologically, the verb stem begins with a consonant. Verbal derivation yielding infinitives, imperatives and gerunds is through affixation. In Ođual, Ogbia, Ogbogolo and Ogbonuagum, for instance, infinitives are formed by prefixation. Gerunds are formed by suffixation in Ogbia and Ogbogolo but by circumfixation in Ođual.

Table 11a: Verbal derivatives

| Derivative | Abuan | Ođual | Ogbia |
|-------------------|---|---|---|
| Infinitive | <i>lóm</i> “bite” > <i>ò-ló’ím</i> “to bite” | <i>télé</i> “walk” > <i>ó-rélé</i> “to walk” | <i>gir</i> “work” > <i>ò-gir</i> “to work” |
| Gerund | <i>sá</i> “cook” > <i>ò-sá-yán</i> “cooking” | <i>sáá</i> “cook” > <i>ò-sáá-j</i> “cooking” | <i>ò-mèn</i> “to fall” > <i>ò-mèn-èkù</i> “falling” |
| Imperative | <i>sá</i> (sg) > <i>í-sá-yán</i> “cook! (pl.)” <i>ká-sá</i> “don’t cook! (sg)” ~ <i>kí-sá</i> “don’t cook! (pl.)” ¹⁷ | <i>kéél</i> “go” > <i>i-kéél</i> “go!” <i>ú-yéél-yà</i> “don’t go! (sg)” ~ <i>i-yéél-yà</i> “don’t go! (pl)” | <i>sá</i> “cook!” <i>kò-sá</i> “don’t cook! (sg)” ~ <i>òní-kò-sá</i> “don’t cook! (pl)” |
| Agentives | - ¹⁸ | <i>táám</i> “send” > <i>ó-táám-ájy</i> “sender” <i>báájy</i> “build” > <i>ó-báájy-ájy</i> “builder” <i>kiíl</i> “run” > <i>òkil ikíl</i> “runner” | <i>ò-rúòm</i> “to send” ~ <i>ò-rúòm-àdòm</i> “sender” |

Table 11b: Verbal derivatives

| Derivative | Ogbonuagum | Ogbogolo |
|-------------------|---|--|
| Infinitive | <i>ní</i> “defecate” ~ <i>àrí-níí</i> “to defecate” | <i>rò</i> “dwell” ~ <i>à-ró</i> “to dwell” |
| Gerund | <i>sòwù</i> “cut” ~ <i>àrí-sówù</i> “cutting” | <i>à-róá</i> “to learn” ~ <i>à-róá-ní</i> “learning” ¹⁹ |
| Imperative | <i>ná</i> (sg) ~ <i>í-ná</i> “give! (pl)” | <i>gbé</i> “grind” ~ <i>à-gbéé</i> “grind!” |
| Agentives | <i>sòwù</i> “cut” ~ <i>òméeè rò-sówù</i> “cutter” (lit. cutting person) <i>sòwù</i> “cut” ~ <i>òwéé rò-sówù</i> “cutters” (lit. cutting people) <i>sòwù</i> “cut” ~ <i>ò’lé rò-sówù</i> “cutter” (lit. cutting thing) <i>sòwù</i> “cut” ~ <i>ò’lé rò-sówù</i> “cutter” (lit. cutting things) | <i>á-wòlì</i> “to sell” ~ <i>òní-á-wòlì</i> “seller” |

Two types of imperative constructions exist in Ođual: the positive imperative and negative imperative. In positive imperative constructions involving a singular subject, verbs are in their citation forms. However, in the plural the verb stem is preceded by a high-toned number-person-marking prefix **I-**, which agrees with the stem vowels in ±ATR. In negative imperative constructions, the subjects are clearly marked for number and person by different low-tone prefixes attached to the verb stem. The number-person-marking prefix attached to the verb stem in the negative imperative singular is **Ù-**, while the prefix **I-** is attached to the verb stem in the negative imperative plural (see Kari 2009:61f.), as Table 11a shows.

Negative imperatives in Abuan are marked by two prefixes – a singular marking prefix **kÁ-** and a plural marking prefix **kÍ-**, as shown in Table 11a.

In Ođual, agentives are derived by circumfixation and reduplication. Two forms of the circumfix **I- ... -VVj** and **O- ... -VVj** are used in the derivation. Verb stems that end with a vowel take **I- ... -VVj**, while those that end with a consonant take **O- ... -VVj**, as shown in Table 11a (see also Kari 2009:41f.). Agentive nominals in Ogbonuagum have a verb stem

¹⁷ I am grateful to Pamela Umor, a native speaker of Abuan, for providing relevant data on Abuan.

¹⁸ In Abuan, agentives are not morphologically derived, but are expressed using periphrastic expressions (Pamela Umor, personal communication).

¹⁹ Francstan (1995:41) notes that “in Ogbogolo, the gerund is irregular in its formation. A variety of morphemes are affixed to the root of the verb”.

preceded by an **rV** morpheme, which in turn is preceded by a noun. The noun is *àmée* (“person”) for singular and *àwéé* (“people”) for plural when the agent is human but *ó+lé* (“thing”) for singular and *i+lé* (“things”) for plural when the agent is an instrument (see Kari 2000:30), as shown in Table 11b.

In the following tables, i.e. Tables 12-16, we present forms of affixes attached to verbs to express the inflectional categories of person, number, tense, aspect, negation and modality in Ođual and Ogbronuagum.²⁰

Table 12: Forms of verb affixes marking non-past in positive constructions in Ođual

| Num./pers. | Simple present (with) | | Pres. prog. | Pres. perf. | Fut. | Potential | | Optative | | Conditional | |
|-------------|--------------------------|-------------|----------------|----------------|------|-----------|------------|------------|------------|-------------|------------|
| | dí “be” | other verbs | | | | V1 aff. | V2 aff. | V1 aff. | V2 aff. | V1 aff. | V2 aff. |
| 1sg | Ó- | nÁ-...-VÁ | nÁ- | nÁÀ- | tÁ- | tÁ-...-nÍ | Á- | nÁ- | mÓ- | À- | tÁ-....-nÍ |
| 2sg | Ó- | nÁ-...-VÁ | nÁ- | nÁÀ- | tÁ- | tÁ-...-nÍ | Á- | nÁ- | mÓ- | À- | tÁ-....-nÍ |
| 3sg | Ó- | nÁ-...-VÁ | nÁ- | nÁÀ- | tÁ- | tÁ-...-nÍ | Á- | nÁ- | mÓ- | À- | tÁ-....-nÍ |
| 1pl (incl.) | Ú- | nÓ-...-VÁ | nÓ- | nÓÒ- | tÓ- | tÓ-...-nÍ | Ó- | nÓ- | mÓ- | Ó- | tÓ-....-nÍ |
| 1pl (excl.) | Ú- | nÓ-...-VÁ | nÓ- | nÓÒ- | tÓ- | tÓ-...-nÍ | Ó- | nÓ- | mÓ- | Ó- | tÓ-....-nÍ |
| 2pl | Ì- | nÉ-...-VÁ | nÉ- | nÉÈ- | tÉ- | tÉ-...-nÍ | É- | nÉ- | mÓ- | È- | tÉ-....-nÍ |
| 3pl | Ì- | nÉ-...-VÁ | nÉ- | nÉÈ- | tÉ- | tÉ-...-nÍ | É- | nÉ- | mÓ- | È- | tÉ-....-nÍ |

Table 13: Forms of verb affixes marking past in positive constructions in Ođual

| Num/pers. | Past (with) | Past | | Past prog. | | Potential | | Optative | |
|-------------|-------------------------|---------------|-----------------------|------------|-------------|-----------|-------------|-------------|-------------------|
| | rɔ́l form of dí “be” | Emph pref. | Non- emph pref. | V1 aff. | V2 pref. | V1 aff. | V2 pref. | V1 pref. | V2 pref.+pl |
| 1sg | À-...-VÀ | Ù- | À- | ÚÙ-...-VÀ | mÒ- | kÚ-...-nÍ | À- | Ú- | mò- ²¹ |
| 2sg | À-...-VÀ | Ú- | À- | ÚÙ-...-VÀ | mÒ- | kÚ-...-nÍ | À- | Ú- | mò- |
| 3sg | À-...-VÀ | Á- | À- | ÁÀ-...-VÀ | mÒ- | kÚ-...-nÍ | À- | Á- | mò- |
| 1pl (incl.) | Ó-...-VÀ | Ú- | Ó- | ÚÙ-...-VÀ | mÒ- | kÚ-...-nÍ | À- | Ú- | mò-... ÈVÙ |
| 1pl (excl.) | Ó-...-VÀ | Ù- | Ó- | ÚÙ-...-VÀ | mÒ- | kÚ-...-nÍ | À- | Ú- | mò-... ÈVÙ |
| 2pl | È-...-VÀ | Ì- | È- | ÌÌ-...-VÀ | mÒ- | kÌ-...-nÍ | È- | Ì- | mò-... ÈVÙ |
| 3pl | È-...-VÀ | Ì- | È- | ÌÌ-...-VÀ | mÒ- | kÌ-...-nÍ | È- | Ì- | mò-... ÈVÙ |

Table 14: Forms of negative-marking verb affixes/morphemes in Ođual

| Num/pers. | Present progressive/past/future | | Present perfective | |
|-------------|---------------------------------|--------------------------|--------------------|--------------------------|
| | Prefix | Post-verbal lexical item | Prefix | Post-verbal lexical item |
| 1sg | Ú- | Cìó | dÒ- | Cìó |
| 2sg | Ò- | Cìó | dÒ | Cìó |
| 3sg | Ó- | Cìó | dÒ | Cìó |
| 1pl (incl.) | Ú- | Cìó | dÒ | Cìó |
| 1pl (excl.) | Ú- | Cìó | dÒ | Cìó |
| 2pl | Ì- | Cìó | dÒ | Cìó |
| 3pl | Ì- | Cìó | dÒ | Cìó |

²⁰ A detailed description of the affixes presented in Tables 12-16 can be found in Kari (2000, 2009).

²¹ The form of V2 prefix is actually mò-, not m- as listed by Kari (2009:59).

Table 15: Forms of verb affixes marking non-past in positive constructions in Ogbroñuagum

| Num./pers. | Lexical subject pronoun | Proclitic | Factative (with) | | | | Pres. prog. | Pres. perf. | Fut. | Poten./oblig. | Opt. | Incep. |
|------------|-------------------------|-----------|------------------|--------------|---------------------------|---------------------------|-------------|-------------|------|---------------|------|------------------|
| | | | dí “be” | má “have” | other verbs ²² | other verbs ²³ | | | | | | |
| 1sg | ààmí | N | mÁ- | mÁ- | mÁ~KÁ | jÉÈ- | rÁ- | KÁ- | TÁ- | dÁ- | rÁ- | KÁ ²⁴ |
| 2sg | já | Í | jÁ- | mÁ- | mÁ~KÁ | jÉÈ- | rÁ- | KÁ- | TÁ- | dÁ- | rÁ- | KÁ- |
| 3sg | jó | Ø | Á- | mÁ- | mÁ~KÁ | jÉÈ- | rÁ- | KÁ- | TÁ- | dÁ- | rÁ- | KÁ- |
| 1pl | àjó | Ò | Á- | mÁ- | mÁ~KÁ | jÉÈ- | rÁ- | KÁ- | TÁ- | dÁ- | rÁ- | KÁ- |
| 2pl | èní | È | Á- | mÁ- | mÁ~KÁ | jÉÈ- | rÁ- | KÁ- | TÁ- | dÁ- | rÁ- | KÁ- |
| 3pl | àbá | Ø | Á- | mÁ- | mÁ~KÁ | jÉÈ- | rÁ- | KÁ- | TÁ- | dÁ- | rÁ- | KÁ- |

Table 16: Forms of negative-marking verb affixes/morphemes in Ogbroñuagum

| Num./pers. | Lexical subject pronoun | Proclitic | Factative/prog./perf./fut./poten./oblig./opt. | Pres. prog. | Pres. perf./inceptive |
|------------|-------------------------|-----------|---|-------------|-----------------------|
| 1sg | ààmí | N | N- | N- | N-dÀ- |
| 2sg | já | jÁ | Ø | Ø | N-dÀ- |
| 3sg | jó | Á | Ø | Ø | N-dÀ- |
| 1pl | àjó | ÒjÍ | Ø | Ø | N-dÀ- |
| 2pl | èní | ÈjÍ | Ø | Ø | N-dÀ- |
| 3pl | àbá | Ú | Ø | Ø | N-dÀ- |

4.6 Verb extensions

Verbs in Central Delta languages may also take, in addition to inflectional affixes, one or more extensional suffixes or verbal extensions. In most cases, extensional suffixes harmonise with the vowels of the verb stem in ±ATR. These suffixes do not alter the lexical category of the verbs to which they attach. Instead, they modify the lexical meaning as well as change the valency of such verbs. The variety of meanings expressed by these suffixes include causative, reflexive, reciprocal, iterative, benefactive, associative, initiative, instrumental, accompaniment and directive. These suffixes are attested in Abuan (Gardner 1980), Obulom (Ngeripaka 2000), Ogbia (Isukul 2007) and Ogbogolo (Olibie 1994).

Table 17 shows that no given Central Delta language has all the verb extensions listed herein. For instance, in Abuan, only six (causative, reflexive, benefactive, associative, instrumental and accompaniment) out of the 10 extensions listed above are attested. The iterative, reciprocal, initiative and directive are not attested in Abuan. In Obulom, only two (iterative and associative) extensions are attested; the others are not. Likewise, in Ogbia only two (reciprocal and initiative) extensions are attested; the others are not. Similarly, in Ogbogolo only two (instrumental and directive) extensions are attested; the others are not.

²² These are forms that occur with dynamic verbs without obligatory, lexical/non-clitic forms of subject pronouns.

²³ These are forms that occur with dynamic verbs with obligatory, lexical/non-clitic forms of subject pronouns.

²⁴ See Kari (2000) for a discussion of the underlying forms of these affixes in Ogbroñuagum.

Table 17: Extensional suffixes²⁵

| Meaning | Abuan | Obulom | Ogbia | Ogbogolo |
|----------------------|---|---|---|--|
| Causative | -E ²⁶ : <i>bèèn-é</i> “cause to cross” | – | – | – |
| Reflexive | -A : <i>búr-á</i> “cover oneself” | – | – | – |
| Iterative | – ²⁷ | -(V)jAn : <i>pèm-iján</i> “jump about” | – | – |
| Reciprocal | – | – | -An : <i>òtùl-àn</i> “to love each other” -An : <i>ɔgbàmày-àn</i> “to accuse each other” | – |
| Benefactive | -(v)nAAn : <i>pàm-ànáán</i> “hold for” | – | – | – |
| Associative | -An : <i>tùy-àn</i> “live together” | -(V)jAn : <i>lòm-ijén</i> “bite together” | – | – |
| Initiative | – | – | -kó : <i>dè-kó</i> “eat first” | – |
| Instrumental | -Om : <i>lòy-óm</i> “put with” | – | – | -lu : <i>ikú-lú</i> “touch with hand” |
| Accompaniment | -mOm : <i>tù-móm</i> “come with” | – | – | – |
| Directive | – | – | – | -ni : <i>àgbé-nì</i> “send somebody to do something” |

5. Syntactic overview of Central Delta languages

The discussion in this section focuses on basic word order in simple sentences, the patterns of modification in nominal phrases in these languages, and serial verb constructions (SVCs).

5.1 Word order

Central Delta languages have a subject–verb–object (SVO) basic word order in simple sentences or independent clauses, as exemplified by Odual, Ogbia, Ogbogolo and Ogbonuagum.

| (14) | S | V | O | |
|------|--------------------------|--------------|------------------|-----------------------|
| | <i>èdítóyútù</i> | <i>á-míñ</i> | <i>á' ábádí.</i> | |
| | PN | PAST-see | iguana | |
| | “Edighotu saw an iguana” | | | (Odual: Kari 2009:70) |

²⁵ From what we have in Table 17, Abuan is richer in extensional suffixes than other Central Delta languages.

²⁶ This transcription, rendered in IPA, deviates from Gardner's orthographic transcription.

²⁷ An en-dash in Table 17 indicates that a given verbal extension is not attested in the language under consideration.

- (15) **S** **V** **O** (Ogbia: Isukul 2007:147)
Apuru *ná-á-fèl* *màédiàn.*
 PN SG-SUBJ.PREF-want food
 “Apuru wanted food”
- (16) **S** **V** **O** (Ogbogolo: Olibie 1994:56)
mì *ná-ádē* *édià.*²⁸
 I CM-eat food
 “I am eating food”
- (17) **S** **V** **O** (Ogbronugam: Kari 2000:42)
òlèmáòdì *má-sá* *ámómbò* *à.*
 PN 3SG.FACT-cook soup DEF
 “Olemaadi cooked the soup”

However, there are deviations from the basic SVO word order, as found in cleft constructions in which the logical object is preposed. In such constructions, the verb comes last, as examples from Abuan (18), Odual (19) and Ogbronugam (20) show:

- (18) a. *mí* *à-mììn* *ójà* *βó.*²⁹
 I PAST-see boy the
 “I saw a boy.” (Abuan)
- b. *ójà* *βó* *kèdí* *mí* *à-mììn.*
 boy the CLEFT I PAST-see
 “It was the boy I saw.”
- (19) a. *èdīyótù* *à-míñ* *á*ébádí.*
 PN PAST-see iguana
 “Edighotu saw an iguana.” (Odual)
- b. *á*ébádí* *βó* *èdīyótù* *à-míín.*
 iguana CLEFT PN PAST-see
 “It was an iguana Edighotu saw.”
- (20) a. *èyólú* *á* *ká-ráàlò* *ógú* *á.*
 goat DEF FACT-chew vegetables DEF
 “The goat ate the vegetables.” (Ogbronugam)
- b. *á*wú* *ógú* *á* *nú* *é*yólú* *á* *á-ráàlò.*
 it be vegetables DEF OFOC goat DEF FACT-chew
 “It was the vegetables that the goat ate.”

²⁸ Olibie and Francstan orthographic transcription are rendered in this paper in symbols that have IPA values.

²⁹ I am thankful to Pamela Umor and Isaiah Edighotu for data showing deviations from the basic SVO word order in Abuan and Odual, respectively.

It is observed in these languages that different morphemes feature as markers of cleft constructions. In Abuan, the cleft marker is *kèdí*, in Ođual the morpheme is *βó*, while in Ogborònùagum *᷇́wó* serves as the cleft marker.

In noun phrase (NP) constructions, such as noun + article, noun + possessive, noun + interrogative pronoun, noun + modifier nominal, and noun + demonstrative, word order appears to be uniformly consistent in Central Delta languages. In many cases, modifiers that precede and follow the head noun appear to be the same in these languages. It is observed that the definite article and demonstratives, for instance, follow the noun in Ođual, Ogbia, Ogbogolo³⁰ and Ogborònùagum, while adjectives/modifier nominals, quantifiers, and interrogatives precede the noun in Ođual, Ogbia, Ogbogolo and Ogborònùagum:

- | | |
|------------------------------|-------------------------------|
| (21) énà à | (22) òtù àɸà |
| fish DEF | house the |
| “the fish” | “the house” |
| (Ogborònùagum: Kari 2000:43) | (Ogbogolo: Olibie 1994:17b) |
| (23) òtù òóβó | (24) olòβìrí βá |
| house this | man that |
| “this house” | “the man” |
| (Ođual: Kari 2009:28) | (Ogbia: Isukul 2007:115) |
| (25) òkàrá áàj | (26) ãkáéré érérému |
| which person | which tree |
| “which person” | “which tree?” |
| (Ođual: Kari 2009:32) | (Ogbogolo: Francstan 1995:35) |
| (27) ãgbàrà ãbákò | (28) ògbóóná órèn |
| small chair | big tree |
| “a small chair” | “a big tree” |
| (Ogbia: Isukul 2007:148) | (Ogborònùagum: Kari 2000:23) |
| (29) ònón ótù | (30) ãmáná ãdìdì |
| this house | this rope |
| “this house” | “this rope” |
| (Ogbia: Isukul 2007:147) | (Ogbogolo: Olibie 1994:37) |

5.2 Serial verb constructions

Serial verbs are common in Central Delta languages. These verbs, which are linked without any overt connective morpheme, share a common surface subject and one or more tense, aspect and polarity markers. Among the semantic notions expressed by serial verbs in these languages are sequential (31), locative (32), comparative (33), and benefactive (34) (cf. Olibie 1994:55; Kari 2000:48, 2009:74):

³⁰ Ogbia and Ogbogolo behave differently in respect to the demonstrative-noun relationship. In these languages, the demonstrative precedes the noun.

- (31) ààmì ó-yì ú-Yà m-èná.
 1SGS 1SG.PST-go 1SG.PAST-buy OM-fish
 “I went and bought fish.” (Odual: Kari 2009:74)

(32) ó⁺dó nà ádí ná ágí ològi òtù.
 Odo CM enter CM go inside house
 “Odo entered into the house.” (Ogbogolo: Olibie 1994:55)

(33) àmýn ám á-niè á-tè àmýn wóò.
 child my 1SG.FACT-be beautiful 1SG.FACT-be more than child yours
 “My child is more beautiful than yours.” (Ogbronuagum: Kari 2000:48)

(34) ààmí ÿ-gá-⁺yó dírí à ÿ-gá-ná à.
 I 1SG-PERF-buy book DEF 1SG-PERF-give him/her
 “I bought a book for him/her.” (Ogbronuagum: Kari 2000:48)

SVCs in Central Delta languages belong to the type that Williamson (1989a) calls ‘concordial’ SVC. Each verb refers to the subject by means of a concordial marker or pronoun (Williamson 1989a:30), as seen in the Odual (31), Ogbogolo (32) and Ogbronugum (33) and (34). See also Kari (2003) for a similar discussion.

6. Conclusion

In this paper, we have provided phonological, morphological and syntactic overviews of Central Delta languages, including aspects of the geo- and sociolinguistic situation of these languages. We noted that Central Delta languages have a 20-vowel system, which divides into two sets of 10 vowels distinguished by the size of the pharynx. We also noted that the consonant systems of these languages range between 22 and 27, showing alternation between some pairs of consonants, such as [t] and [r], [k] and [χ], [p] and [w], and [p] and [β], determined by whether such consonants occur word-initially or intervocally in imperatives and infinitives. Furthermore, we noted that Central Delta languages are generally rich in nominal and verbal morphologies, showing evidence of prefixal noun classification, and that the morphological marking of grammatical categories such as person, number, tense, aspect and negation is by means of discontinuous morphemes in some cases. The personal pronominal systems of these languages make a three-way number-person-case distinction, with some of them (Abuan and Odual) formally distinguishing between inclusive and exclusive in their first-person plural forms. Some common syntactic features observed in these languages are subject-object-verb basic word order with similar patterns of modification in nominal and verbal phrases, as well as serial verb constructions. Finally, we highlighted the fact that mother-tongue speakers of Central Delta languages also speak one or more other languages and that the daily exposure of these languages and their speakers to more powerful languages around them makes them endangered. We recommended that a survey be undertaken to assess or determine the degree of endangerment of Central Delta languages.

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