# Comparative Nupoid Phonology

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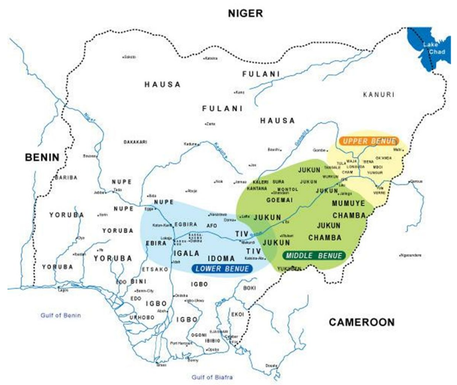
**Focus Question**: What phonological properties characterize Nupoid languages relative to each other, but also to other Benue-Congo languages? Do Nupoid languages provide evidence for typologically and/or cross-linguistically well attested phonological patterns?

## ABOUT NUPOID LANGUAGES

- A macro-group of ~11 varieties spoken in West-Central Nigeria belonging to the larger Benue-Congo phylum (985 lgs) of Niger-Congo (1,552 lgs) – the largest language family in the world (22% of the world's lgs)

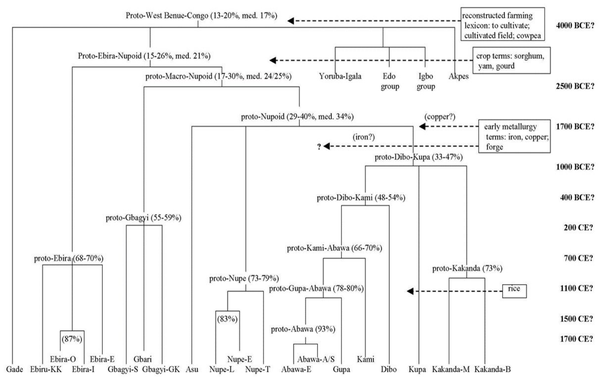
| | |
|---|---|
| **Asu** | **Dibo** |
| **Gupa** | **Kakanda** |
| **Kami** | **Kupa** |
| **Nupe** | **Ebira** |
| **Gade** | **Gbagyi** |
| **Gbari** | |

- Nigeria itself is home to well over 500 unique languages, making it the 3rd most linguistically diverse country in the world
- Nupoid languages vary in size from > 5,000 → < 1,000,000 speakers
- Nupoid languages are highly internally divergent, with some sharing as little as 35% cognacy with one another (Blench 1989)
- There are reasonably comprehensive linguistic materials available only for one of these languages – overall, they remain under-described and under-documented




## CLASSIFICATION

- Nupoid languages are believed to have split from their closest relatives between 2,500 and 4,000 years BCE
- At this time depth, internal classification, as well as group membership more broadly has been questioned
- Linguistic evidence provides a valuable proxy for historiography and cultural studies in regions where written records are scarce or unavailable




## NUPOID PHONOLOGY

Consonants (Pulmonic)

| | Labial | | | Coronal | | | | | | Dorsal | | | | Laryngeal | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bilabial | | Labiodental | Interdental | | Alveolar | | Postalveolar | Retroflex | Palatal | Velar | | Uvular | Pharyngeal | Glottal | |
| Plosive | p | b | | | | t | d | | | <c> | k | g | | | ʔ | |
| Nasal | | m | <ɱ> | | | | n | | <ɳ> | ɲ | | ŋ | | | | |
| Tap, flap | | | | | | | ɾ | | | | | | | | | |
| Trill | | | | | | | r | | | | | | | | | |
| Fricative | <ɸ> | <β> | f | v | θ* | | s | z | ʃ | ʒ | | | χ* | | | h |
| Approximant | | | | | | | ɹ | | | j | | | | | | |
| Lateral fricative | | | | | | | | | | | | | | | | |
| Lateral approximat | | | | | | | l | | | <ʎ> | | | | | | |

Front / Central / Back

High: i <y> <ɨ> ʉ* u <ʊ> ɪ
Mid: e ə <ɤ> o ɛ <ʌ> ɔ
Low: a

| | |
|---|---|
| w | voiced labial-velar approximant |
| <ɥ> | voiced labial-palatal approximant |

| Affricates | |
|---|---|
| ʧ | ts |
| ʤ | dz |

| Consonants (Co-articulated) | | |
|---|---|---|
| kp | gb | |

Others

Implosives: ɓ, ɗ, ᶑ, ɠ, ƙ
*Gbagyi (10), Gwari (11)*

Ejectives: fʼ
*Asu Papa Dan (1)*

Aspiration: tʰ, pʰ, kʰ
*Asu Papa Dan (1), Kakanda (4), Nupe (7)*

*Notes:*
- sounds in brackets <*x*> appear in fewer than six languages
- sounds marked with an asterisk *x** appear only in one language and fewer than three times

**Typological Implications: Aspects of Nupoid Phonology Common to the World's Languages**

- Most languages exhibit a three-way place contrast in stops: bilabial, alveolar, velar
- Voiced-voiceless pairs: [p, b], [s, z] [ʧ, ʤ], etc.
- Alveolar sounds have the most diverse manners of articulation
- Most languages exhibit a symmetric five-vowel system with additional lax mid vowels
- All languages have the labial-velar stops that are characteristic of West and Central Africa: [kp]. [gb]

## WORDS & SYLLABLES

- **Common Syllable Shapes**
  - V
  - CV
- **Common Word Shapes**
  - V.CV
  - CV.CV
  - V.CV.CV

**Other Characteristics:**
- Words largely end in vowels—consonant endings are rare
- Longer words appear to be either compound (as in larger numbers) or polymorphemic.
- Syllable V does not appear on its own, comparing to CV syllable that does appear.
- CCV syllable is not very common in these languages.

| | Asu Papa Dan | Dibo | Gupa | Kakanda | Kami | Kupa | Nupex | Ebira |
|---|---|---|---|---|---|---|---|---|
| SHOULDER | ekpa | abwa | abwa | akpa | akpá | akpa | ekpa | ɪ́zà |
| DREAM | ɹãwrʊ | ara | arja | aɾa | aɾa | bjara | nãnã | ʊ́rá |

| Gade | Gbagyi | Gwari |
|---|---|---|
| abwa | bwapà | bwapà |
| arja | onã | ona |

**Typological Implications**

- **Cognates:** cognates are characteristic of languages from the same group – hence, the Nupoid languages exhibit frequent cognates. that pattern together more than others include Gbagyi and Gwari, as well as Gade and Gupa. TheLanguages Gbagyi/Gwari similarities are explained by the Nupoid family tree, while the Gade/Gupa similarities demonstrate the need for the development of a new family tree based on a more thorough analysis of the Nupoid languages.
- **Ideophones:** the Nupoid language have many ideophone words, especially for bodily processes like "sneeze" [ìtsisi] [etʃitʃi] [tʃètʃi] and distinct nouns like "breathed air" [ɪfe] [efi] [ɪsè]

## METHODS AND MATERIALS

- Student groups analyzed "core vocabulary" wordlists collected remotely in Nigeria; 100 words transcribed phonetically
- Consonant inventory, vowel inventory, tone inventory, syllable shapes and distribution, word shapes
- Identification of "minimal pairs" to illustrated sound contrast
  - ex. [ãŋga] "tooth" and [ãmbaje] "tuft of hair"
- Identification of contextual sound variants → predictable sound alternations
  - ex. /N/ → [ŋ] / ___ [k / g]
- Form hypotheses about the languages' phonologies based on typological and cross-linguistic patterns witnessed in other languages of the world
- After mid-semester, expansion of inquiry to wordlist with 1,700 items
  - Refine comparisons
  - Test hypotheses
  - Identify active phonological processes, as well as variation

## FINDINGS AND OBSERVATIONS

**VOWELS:**
- Nasalization, tone, and length appear to be contrastive across Nupoid languages.
- Ebira exhibits ATR vowel harmony, with lax vowels [ɪ, ʊ, ɛ, ɔ] usually appearing together. Other languages may do the same, though not as strongly as Ebira.

**NASALS:**
- Nasals regressively assimilate to the place of a following obstruent.
- Obstruents generally become voiced when the appear after a nasal – clusters like [mp] appear characteristic of loanwords: e.g., [akõmpani] *accompany*, Dibo
- k → b /m__ Gupa, Gbagyi, and Gwari do not expedite the assimilatory process. e.g. /mkaza/ → [mbaza] *young man*, Asu Papa Dan. It's minimally paired with [ĩkaza] *girl*.

**OTHER PROCESSES:**
- /i/ becomes [j] when it is at onset position of syllable. Glide [j] is contrastive #___V, V__V, but is non-contrastive C_V in onset position: j_CV or between C and V.
- In four languages, /ts/ → [ʧ] when followed by high vowels. e.g. /bitsiti/ → [bitʃiti] *heel*, Asu Papa Dan.

**REDUPLICATION**
- Many languages exhibit emphatic reduplication in adjectives or verbs:
  *hiccup (v):* [èhìgéhìge] Ebira, [sèbi sèbi] Gwari
  *(be) dark colored:* [guragura] Dibo, [ódʒòdʒzì] Ebira

## NEXT STEPS

- Assess complete datasets for each language – 100 → 1,000 → 1,700
  - Update generalizations and hypotheses about processes
  - Use these findings to inform classification via the Comparative Method
  - Align cognates and map same vs. different sounds
  - Propose reconstruction of Proto-Nupoid
- Employ phylogenetic methods to assess group-internal similarities, as well as external classification relative to other Benue-Congo languages