

Journal of African Languages and Linguistics

bari shilluk
nandi pokot iraqw
vai anyi-baule kikuyu songhai ngwo
swahili yoruba alur koalib birom mende
sidamo chaga duala sukuma luba bamileke
agau hadza ga'anda zaghawa twi margi aghem
bambara dan chokwe bemba arabic bariba
tamasheq lingala tera suku kanuri bukusu soninke
shona beja amharic tigre dogon kpelle !ku sara wolof
ewondo tswana krio igala more ijo kotoko dinka chamba
zulu fang balanta zande nuer ron nubian xhosa
kanakuru sandawe hausa sotho rendille yombe
meroitic basaa lendu senufo
oromo haya igbo ga sango
turkana kinga mburn bamum
makonde idoma ngizim
tagali bafut mangbetu
maasai !o!un gbaya tiv
somali talodi efik bole
ganda fula kongo susu
mankon bura ewe masa
nupe lamang jukun
urhobo harari
nyakyusa higi
rwanda shi
nyanja
edo

Mouton de Gruyter

Fortition and reduplication in Leggbo ideophones¹

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Abstract

This article describes ideophones in Leggbo, a Cross River language of Nigeria. It focuses on two processes – fortition and reduplication – in the language and their special relation to ideophones. Fortition involves consonant gemination and lengthening and is used for intensification. Reduplication can be either lexical or grammatical. Ideophones can have an inherent repetitive structure but they can also employ reduplication like other modifiers to signal the plurality of nouns, or the diminutive of verbs. Both fortition and reduplication can occur in the same form, especially in ideophones. It is speculated that fortition could have arisen diachronically in ideophones before spreading to other parts of the language. If this scenario is assumed, it argues for treating ideophones in Leggbo, if not in other languages, as central rather than marginal parts of linguistic systems.

1. Introduction

Ideophones make up a rewarding area of study in African Linguistics. Sometimes they differ in some respects from the normal prosaic language. However, they have features that make them fit well within a particular language structure where they exist. In some languages, they may have features that are non-existent in other word classes synchronically, and/or whose distribution and behavior may be different from the rest of the language system. Changes in the rest of the grammar may not easily affect them as they are generally not subject to regular grammatical rules. But then, they can be useful in the reconstruction of the history of some aspects of a language. For instance, there are additional

1. This paper was first presented at the 33rd Annual Conference on African Linguistics (ACAL), Ohio State University, Athens, in March 2002.

sounds in a language which can be found only in ideophones, and such sounds have been used to fill in gaps in phonological systems (Mithun 1982). The fact that in some languages they are spontaneous creations has raised some doubts about their stability, as in Thonga (Finnegan 1970), and Ibibio (Ekere 1987).

The word 'ideophone' has been defined from several perspectives. Cole (1955) defines it as a word that is "often onomatopoeic, which describes a qualificative, predicative or adverb with respect to sound, color, smell, manner, state, action or intensity". This definition is still suitable for ideophones in most languages.

Ideophones display little morphology according to Childs (1994:185), Schultze-Berndt (2001: 355), and they are a phonosemantic class with expressive and imaginative semantics (Kita 1997). Ameka (2001: 26) describes them as "deictic words with particular semantic function which can fall into different grammatical word classes – nominal, adverb, verb, or adjective etc. in a particular language". Ikoro (1997: 301) cites Kana, a Kergoid Nigerian language whose ideophones fall into three word classes – adjectives, nouns and verbs.

Leggbo² ideophones are more stable because they have a heavy grammatical load, and they are not peripheral. They constitute an important part of the language's grammatical and expressive potential. They modify the grammatical categories that express processes, states and nouns. Since processes and states are expressed by verbs, then Leggbo ideophones are adverbs, and since they also modify nouns, they can also be adjectives. Leggbo ideophones are thus from a grammatical point of view of two types: adverbs and adjectives. They have a peculiar phonological shape, which fall into three forms: CCV, e.g., **ffai** 'white', CCVCC, e.g., **kkang** 'white', Reduplicated, e.g., **wukalawukala** 'rough' (see Section 5 for more details). Morphologically, they have no affixes and in fact they have no inflection at all. The only processes they are sensitive to are reduplication, fortition and the lengthening of the segments.

In this paper, I present a description of Leggbo ideophones with particular references to two copying processes which although independent of each other operate in similar ways. My argument is organized as follows. First, I present in Section 2, the grammatical functions of Leggbo ideophones. Section 3 deals with an overview of the fortition prosody, while Section 4 deals with an overview of the reduplication process in some Leggbo categories. In Section 5, I present a classification of Leggbo ideophones, using the two processes: fortition and reduplication, and Section 6 concludes the paper.

2. The Leggbo language is an Upper Cross language (Faraclas 1989, Grimes 2000), spoken by about 60,000 people in Abi and Yakurr Local Government Areas of Cross River State in south eastern Nigeria. It is an SVO language.

2. Grammatical functions of Leggbo ideophones

Semantically, Leggbo ideophones indicate both intensity and duration in the language. Syntactically, they play an active role in the grammar and they are not just restricted to stories. They can be syntactically reduplicated to mark plurality (they share this property with the pure adjectives and adverbs). They can also be used predicatively, like the adjective, as shown in (1).

- (1) a. **e-de kkang**
it-is hard.IDEO
'It is hard.'
- b. **e-de ffai**
it-is white.IDEO
'It is white.'

They can occur after a corresponding verb.

- (2) a. **e-kakaga kkang**
it-hard hard.IDEO
'It is hard.'
- b. **e-gwene ffai**
it-white white.IDEO
'It is white.'

Ideophones can be used attributively, in place of adjectives as in (3a), and with an adjective as in (3b).

- (3) a. **lettál kkang**
stone hard.IDEO
'hard stone'
- b. **lettál ekakàang kkang**
stone hard.ADJ hard.IDEO
'hard stone'

They can mark plurality like the adjective when used attributively.

- (4) a. **lettál kkang kkang**
stone hard.IDEO Redup
'hard stones'
- b. **esi ffai ffai**
bag white.IDEO Redup
'white bags'

However, the plurality is marked on the ideophone which is reduplicated, if both the adjective and ideophone occur together as shown in (5).

- (5) a. **lettál ekakàaŋ kkaŋŋ kkaŋŋ**
 stone hard.ADJ hard.IDEO Redup
 'hard stones'
- b. **esi egwene ffai ffai**
 bag white.ADJ white.IDEO Redup
 'white bags'

Like the adjective, it can be used without an obvious head noun, as the examples in (6) show.

- (6) a. **kkəŋŋ se**
 hard.IDEO the
 'the hard one'
- b. **ffai se**
 white.IDEO the
 'the white one'

They can modify a verb in the same way that adjectives do, to give an effect of great intensity, as seen in (7c).

- (7) a. **e-kakaŋa**
 it-hard.ADJ
 'It is hard.'
- b. **e-kakaŋa èkakàaŋ**
 it-hard.V hard.ADJ
 'It is hard.'
- c. **e-kakaŋa kkaŋŋ**
 it-hard.ADJ hard-IDEO
 'It is very hard.'

However, ideophones differ in some aspects from adjectives. Unlike the adjectives which have a prefix and are prone to morphological modifications, ideophones can not take any prefix at all, but they can follow an adjective as exemplified in (8).

- (8) a. **e-de èkakàaŋ kkaŋŋ**
 it-is hard.ADJ hard.IDEO
 'It is very hard.'
- b. **e-de egwene ffai**
 it-is white.ADJ white.IDEO
 'It is white.'

The ideophone can have a corresponding verb form, noun form and adjective form. It can occur together with all three forms to give an impression of extreme intensity.

- (9) **e-kakaŋa èkakàaŋ kkaŋŋ**
 it-hard.V hard.ADJ hard.IDEO
 'It is extremely hard.'

3. An overview of fortition in Leggbo

Fortition³ involves certain special articulatory features. Pike (1943) describes fortis articulation as one involving "strong, tense movements relative to a norm assumed for all sounds". Clark and Yallop (1995) describe it as an articulation which is relatively strong and forceful. They attribute this to a combination of sub-glottal and supra glottal air pressure. Several descriptions and names have been given to fortis articulation in the literature. This may be due to the fact that investigations on it are still inadequate. It has been described as 'tense', 'strengthened',⁴ etc. But while we await the acoustic investigations on the Leggbo case, I represent the Leggbo fortis consonants as 'geminate' consonants for want of a better way of representation, but assuming that there is more going on in fortis articulation than duration and glottal pressure. However, my current analysis is a phonological one.

The Leggbo case involves the articulation of consonants with extra compression of the articulators, especially in those consonants whose articulators are visible like bilabials and dentals. There is also obvious consonantal lengthening as they contrast with their normal length counterparts. These features, coupled with some extra puff and release of the air burst give strength in form of tension to the output. The fortis prosody is a feature of the whole syllable as it affects other sounds. The fortis consonants appear long while the vowels following them are short. Fortition contrasts with lenition, which involves a weakening of the consonants. The lenis consonants appear shorter and the vowels following them appear longer than normal.

3.1. Lexical fortition

The data in (10) show the distinction between fortis and lenis consonants in the language. This distinction which involves all the consonants has both lexical and grammatical functions. Lexically its distinctive quality is widespread.

- (10) a. **kpa** 'be strict'
kkpa 'pay'

3. Instrumental work on the phonetic features in Leggbo is on-going with Ian Maddieson and Julie Larson, details of which will be presented at a later date.

4. In Leggbo we have both 'fortition' and 'strengthening' in the progressive in intervocalic positions. See examples in (13c, d).

- | | | |
|----|-------------|------------|
| b. | baa | 'ask' |
| | bba | 'block' |
| c. | duu | 'beat' |
| | ddu | 'whisper' |
| d. | vei | 'boil' |
| | vvei | 'pour out' |

3.2. Grammatical fortition

Grammatically fortition marks the progressive aspect of certain verbs.⁵ Some examples are given in (11).

- | | | | |
|------|----|----------------------------|------------------|
| (11) | a. | e ni | 'he gave' |
| | | e nnii ⁶ | 'he is giving' |
| | b. | e kaami | 'he helped' |
| | | e kkammii | 'he is helping' |
| | c. | e yaali | 'he paddled' |
| | | e yyallii | 'he is paddling' |

This grammatical function produces a number of interesting changes. For instance, it devoices fricative stops as in (12a-d). Notice that the prosody can spread beyond one point of articulation. Thus in (12c-f), the initial and medial consonants are both fortis.

- | | | | |
|------|----|---------------|---------------|
| (12) | a. | ve | 'pick up' |
| | | ffe | 'picking up' |
| | b. | vi | 'reach' |
| | | ffii | 'reaching' |
| | c. | zu | 'live' |
| | | ssukki | 'living' |
| | d. | zo | 'look for' |
| | | ssokki | 'looking for' |
| | e. | fina | 'touch' |
| | | ffinni | 'touching' |
| | f. | yaa | 'paddle' |
| | | yyalli | 'paddling' |

5. This observation was first made by Bendor-Samuel and Sprea (1969).

6. Long vowels after fortis consonants like these can be derived only by concatenation after a geminate in the progressive where CV verbs take -i suffix (Ci → CC-i).

In medial positions of progressives it strengthens laterals to stops as in (13a-b); and fricatives and glides to stops, as in (13c-d). Notice that there is both fortition and strengthening in medial positions as in (13c-d), where a fricative is strengthened to a fortis stop.

- | | | | |
|------|----|----------------|---------------|
| (13) | a. | bila | 'climb' |
| | | biddi | 'climbing' |
| | b. | fila | 'germinate' |
| | | ffiddi | 'germinating' |
| | c. | ppyàgha | 'arrest' |
| | | ppyàkki | 'arresting' |
| | d. | kkuwa | 'kneel' |
| | | kkukki | 'kneeling' |

4. An overview of reduplication in Leggbo

Reduplication is a strategy Leggbo employs very liberally to cope with its grammatical needs. It is used to mark plurality, diminutive, intensity, compounding etc.

Leggbo has some simple nouns and compounds with reduplicated stems, but as a morphological process, it is quite productive. Different word classes can be reduplicated. For instance, nouns, verbs, adjectives, adverbs and ideophones can be reduplicated to achieve different semantic readings.

4.1. Lexical reduplication

Nouns and verbs in Leggbo undergo partial reduplication. Diminutivization is a major productive reduplication process in nouns, while verbs are partially reduplicated to indicate intensity.

4.1.1. Nouns. Generally, the first syllable (C(C)V) of the noun stem is copied along with its tone. In addition to this copy, a diminutive affix **wé** (for singular) and **bé** (for plural) is post-posed to the noun.

- | | | | |
|------|----|-------------------|-------------------|
| (14) | a. | litol | 'ear' |
| | | lito-to-we | 'small ear' |
| | | lito-to-be | 'small ears' |
| | b. | ekaa | 'argument' |
| | | eka-kaa-wé | 'small argument' |
| | | eka-kaa-be | 'small arguments' |

Bisyllabic stems reduplicate their first syllables.

- (15) a. **itobo** 'monkey'
ito-tobo-wé 'small monkey'
ito-tobo-bé 'small monkeys'
 b. **ekkpoma** 'bottle'
ekkpoma-wé 'small bottle'
ekkpoma-bé 'small bottles'

Noun compounds reduplicate their second elements, in addition to the diminutive affix which is added. The compounds in (16) behave like one entity. Note that the second component loses its prefix to the first component, and in fact, it provides the whole compound prefix. This category of compound does not allow any splitting of its components. For instance, **etem** 'heart' + **lebbol** 'pit' becomes **lete-bbol** 'heart'. This kind of compound can be referred to as subordinate compound.

- (16) a. **lete-bbol** 'heart'
lete-bbol-bbo-we 'small heart'
lete-bbol-bbo-be 'small hearts'
 b. **ekkpi-tto** 'umbrella'
ekkpi-tto-tto-we 'small umbrella'
ekkpi-tto-tto-be 'small umbrellas'

On the other hand, reduplication in compounds derived from associative constructions show the integrity of the individuality of the components and phrasal nature of the construction as each component can be reduplicated individually to give a different meaning. We refer to these loosely as coordinate compounds, along the lines of Mohanan's (1982) classification of compounds, and they are generally derived from N1 + N2 constructions. Some examples are given in (17).

- (17) a. **etto-lizol** 'nest'
house-bird
b. **etto-tto-we-lizol** 'small nest'
c. **etto-tto-be-lizol** 'small nests'
d. **etto-lizo-zo-we** 'nest of small bird'
e. **etto-lizo-zo-be** 'nest of small birds'

4.1.2. *Verbs.* Leggbo verbs can also be reduplicated like the nouns. Such reduplications however, can mean a number of things including intensification, or a little bit. Simple verbs can be intensified through reduplication of the CV-syllable as shown in (18).

- (18) a. **du** 'beat'
du-du 'really beat'
 b. **mina** 'lie down'
mi-mina 'really lie down'

The verb compounds which are made up of a verb and noun can also be reduplicated. When the verb component is reduplicated, the semantic result is an intensification as seen in (19b). However, the noun component can also be reduplicated to indicate diminutive with the diminutive affix as seen in (19c). The verb compounds can further be switched to form gerundives from the verb components of the compounds as seen in (19d).

- (19) a. **yei-gekwe** 'rest'
 b. **ye-yei-gekwe** 'really rest'
 c. **yei-gekwe-kwe-e** 'rest a little'
 d. **gekwe-geyei** 'resting'

4.2. Grammatical reduplication

Total reduplication is used to mark plurality. Categories like nouns, verbs and all property terms generally are reduplicated either to mark intensity or plurals.

4.2.1. *Plurality.* In the few nouns that have plural forms, the plural marker **a-** is prefixed to the nouns, most of which are human related (**enon** 'person', **anon** 'persons'). Plurality in the majority of Leggbo nouns is marked in other categories, specifically in the adjectival class, which is rather reduplicated as has been indicated. For instance, the adjectives in (20) are reduplicated to mark their plural forms.

- (20) a. **esi kkpem** **esi kkpem kkpem**
bag black bag black Redup
'black bag' 'black bags'
 b. **lettol ggboi** **Lettol ggboi ggboi**
head long head long Redup
'long head' 'long heads'

Members of the adjectival class are reduplicated both morphologically and syntactically. In the next section, I present reduplication in ideophones.

5. A classification of Leggbo ideophones

I now turn to ideophones and copying processes. To ease the discussion on the copying processes, I classify them into two: fortition and reduplication.

5.1. Fortised ideophones

Fortised ideophones are monosyllabic forms marked with fortition. They have the shapes CCVV.../CC₁VCC₂... The ellipsis indicates some kind of conditional lengthening associated with the feature being described. The length of the segment is determined by either the intensity or the length of the feature being described. The initial consonant sequence is the one that is marked with fortition in both cases. In the CC₁VCC₂ forms, the CC₂ is merely a lengthening of the consonant because it lacks the release which characterizes fortis consonants. Thus there is a difference between the **mm** in **bbemm** 'cold' and **mmaŋŋ** 'sour', because the **mm** in **bbemm** is not released, while the **mm** in **mmaŋŋ** is released with a force characteristic of other fortis consonants. The CCV ideophones are made up of a fortis consonant and a short vowel, while the CCVCC shapes have both which have either M or L tones.

- (21)
- | | | |
|----|-----------|--------------------|
| a. | CCV | |
| | ggè... | 'belch' |
| | ppè... | 'wide' |
| | ttò... | 'red' |
| | ssa... | 'dry' |
| | ppà... | 'stare into space' |
| b. | CCVCC | |
| | bbèmm... | 'cold' |
| | ttùmm... | 'heavy' |
| | ffèmm... | 'hot' |
| | kkàŋŋ... | 'hard' |
| | nnàŋŋ... | 'slow' |
| | kkorŋŋ... | 'big' |
| | kkpèmm... | 'black' |
| c. | CCVCC | |
| | ddorŋŋ... | 'deep' |
| | mmaŋŋ... | 'sour (taste)' |
| | ttsaŋŋ... | 'thin, dry' |

Unlike the other words in fortised syllables, the V of these ideophones can be lengthened, depending again on either the intensity or length of the feature being described by the ideophone.

5.2. Reduplicated ideophones

Ideophones are prone to two kinds of reduplication: morphological reduplication, where the reduplication is part of the stem, and grammatical reduplication, where the reduplication marks a grammatical function like plurality.

5.2.1. *Morphological reduplication.* This category of ideophones have reduplicated forms, and the reduplication is total. This copy does not affect the tones and the number of syllables in the word copied does not matter. There are five shapes in this category, broadly classified into monosyllables, disyllables and multisyllables. The monosyllabic ideophones of this category are either open or closed as seen in (22a–c). Their initial consonants may be either fortis or lenis. The other two patterns have lenis consonants. A plausible explanation for this is that the reduplication process does not allow fortition, which is itself a kind of repetition. Examples (22d–e) illustrate this.

- (22)
- | | | |
|----|------------------|----------------------------------|
| a. | CCV | |
| | gwègwè | 'fast walk' |
| | ṁkkpaŋṁkkpaŋ | 'flat' |
| b. | CVV | |
| | koikoi | 'smooth' |
| c. | CCVC | |
| | ppɔmpɔm | 'stupid' |
| d. | CVCV | |
| | vèlèvèlè | 'light and transparent (fabric)' |
| | mìŋmìŋi | 'sweet (sugary)' |
| | mínímíní | 'drizzle' |
| e. | CVCVCV... | |
| | wukàlàwukàlà | 'rough surface' |
| | gbàgbàgbà | 'spacious' |
| | lesogollesogolol | 'circle' |

This kind of reduplication is morphological as opposed to grammatical reduplication where the word is reduplicated to mark a grammatical category like plurality.

5.2.2. *Grammatical reduplication.* The fortised ideophones can be further reduplicated for different purposes, especially to mark plurality on the nouns that do not have plural forms. When these ideophones are performing such grammatical functions, the closing element of the coda is reduced in length. Even the VV in the CCVV forms are also reduced in length as shown below: