UNIVERSITY OF GHANA

DEPARTMENT OF LINGUISTICS

ASPECTS OF JOGO PHONOLOGY

By

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(10207994)

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MPHIL LINGUISTICS DEGREE

July, 2018
DECLARATION

I, Elias Williams, declare that except for the references to works that have been duly cited, this thesis is the result of my original research carried out at the Department of Linguistics, under the close supervision and direction of Dr. George Akanlig-Pare and Dr. Fusheini A. Hudu, and that it has neither in whole nor in part been presented for another degree elsewhere. However, all inaccuracies/errors found in this work are solely mine.

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(CANDIDATE)

.......................................................... ..........................................................
Dr. George Akanlig-Pare                                Date

(SUPERVISOR)

.......................................................... ..........................................................
Dr. Fusheini A. Hudu                                   Date

(SUPERVISOR)
DEDICATION

To my family: my wife Habiba, and our twins Ammara and Ammar, whom I have abandoned to pursue this M. Phil programme,

To my late parents:
Abdul-Hamidu Williams & Nasata Banda,

And

To Dr. Aboudou-Karimou ANDELE of UNICEF, for supporting me and funding greater part of my higher education.
ACKNOWLEDGEMENT

I may not be able to adequately express my deepest gratitude and sense of indebtedness to all those who have directly or indirectly contributed towards the achievement of this academic goal. I would crave the indulgence of all to know I am really thankful, in case I am not able to mention your names.

I would first of all, express my gratitude to the Almighty Allah, for granting me health, guidance, protection and sustenance till the successful completion of this programme. My thanks also go to my family, for the patience and understanding for my long absence from home. Secondly, I would like to thank my dissertation committee members, for their patience, tolerance in reading over my work with eagle eyes, and shaping it to scholarly standard.

For my lead supervisor - Dr. Akanlig-Pare, had it not been for the inspiration from you, I would not have had the courage to ‘tackle’ the phonological aspects of Jogo. I am grateful for the guidance, and many thanks.

To Dr. Hudu, co-supervisor, I am touched by your compassion, before the surgeries, visits to my room after my surgeries, and support in diverse ways in the course of my studentship. Jazaakum Allah bi uluuf al-barakaat wa al-khayraat fi al-dunyah wa al-aakhirah!

On this note, I would like to express my deep appreciation to those who were touched by my condition to come to my aid during the difficult times of surgeries: Many thanks to the Legon Mosque Committee, led by its Chairman Dr. Usman,
Imam Baba, and Dr. Hudu. Thanks also go to Ibrahim Musa and Faruk Williams for accompanying and staying with me at the Hospital during the surgeries.

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Thanks to my course mates for the friendship and moments we shared, not forgetting Richard Lawer, who was my co-presenter in almost all our seminar presentations. Thanks to Richard and Timothy Hadja for their time in reading through part of my drafts for suggestions to improve upon some chapters.

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Finally, and importantly, Dr. Aboudou-Karimou ANDELE (of UNICEF), who has been sponsoring my education even before my first degree, and many other supports, including the surgery. I am very much grateful. May Allah bless you abundantly. You are indeed a blessing to the family. We thank God for your life.
ABSTRACT

Jogo is one of the three Mande languages (Bisa and Wangara/Dyula) spoken in Ghana. Jogo is a dialect of the language commonly known as Ligbi, spoken in Banda and Menji, in the Banda and Tain Districts respectively.

The other dialects of Ligbi are Weila, of Namasa; Ntôle of Kwametenten and Ntôle (also referred to as Numu/Atumfuɔkasa) of Brohani, all of the Tain District of the Brong Ahafo Region of Ghana.

This thesis investigates the sound system, the syllable type, and some phonological processes in Jogo.

Data is mainly from primary sources. The Summer Institute of Linguistics Comparative African WordList (SIL CAWL 2) comprised of 1700 words was used to elicit the data. Recorded conversations on FM programs were obtained, folk tales, proverbs and riddles were recorded with a handheld digital recorder.

A 200-item Swadesh word list was also employed to collect data and compare the dialect continuum of the three (3) main dialects of Ligbi.

The thesis is divided into five main chapters. The first chapter is the introduction, which gives a socio-economic information about the people and language, the objective and methodology. Chapter two is an overview of the literature review and the theoretical framework employed to analyze the data.
Chapter three focuses on the sounds of Jogo. The study employs the linear phonology approach to investigate the phonemic inventory of Jogo. Chapter four investigates some phonological processes such as syllable structure processes which include elision, and epenthesis (including a floating consonant).

Chapter five, which is the final part of the thesis concludes with a summary and recommendation of the study.

Dakubu (1988:161) argues that Jogo has seven (7) vowel system, interestingly the findings in this study show that Jogo has nine (9) oral vowels, and seven (7) nasal counterparts, and finally twenty-seven (27) consonants, including labiovelars.

Other findings show that the syllable types are V, CCV, CV, CV:, CrV, and CVC/ CVN. The study indicates that phonological processes such as nasalization, labialization, palatalization, and homorganic nasal assimilation occur in Jogo.
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<table>
<thead>
<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>1 SG</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Person Singular</td>
</tr>
<tr>
<td>1 PL</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Person Plural</td>
</tr>
<tr>
<td>+ATR</td>
<td>Advanced Tongue Root</td>
</tr>
<tr>
<td>-ATR</td>
<td>Unadvanced Tongue Root</td>
</tr>
<tr>
<td>C</td>
<td>Consonant, Coda</td>
</tr>
<tr>
<td>CCV</td>
<td>Consonant Consonant Vowel</td>
</tr>
<tr>
<td>Cf.</td>
<td>Compare</td>
</tr>
<tr>
<td>CONJ</td>
<td>Conjunction</td>
</tr>
<tr>
<td>Cons</td>
<td>Consonantal</td>
</tr>
<tr>
<td>Cont</td>
<td>Continuant</td>
</tr>
<tr>
<td>CV</td>
<td>Consonant Vowel</td>
</tr>
<tr>
<td>CVC</td>
<td>Consonant Vowel Consonant</td>
</tr>
<tr>
<td>CVN</td>
<td>Consonant Vowel Nasal</td>
</tr>
<tr>
<td>DEF</td>
<td>Definite</td>
</tr>
<tr>
<td>Del Rel</td>
<td>Delayed Release</td>
</tr>
<tr>
<td>e.g.</td>
<td>For example</td>
</tr>
<tr>
<td>etc…</td>
<td>Et cetera, and so on</td>
</tr>
<tr>
<td>Fig.</td>
<td>Figure</td>
</tr>
<tr>
<td>FM</td>
<td>Frequency Modulation</td>
</tr>
<tr>
<td>GILLBT</td>
<td>Ghana Institute of Linguistics, Literacy and Bible Translation</td>
</tr>
<tr>
<td>Ibid</td>
<td>Ibidem</td>
</tr>
<tr>
<td>i.e.</td>
<td>That is, in other words</td>
</tr>
<tr>
<td>IMP</td>
<td>Imperative</td>
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</table>
M.A.  Manner of Articulation
N  Nucleus
O  Onset
P.A.  Place of Articulation
POSS  Possessive
PROG  Progressive
PST  Past
SILCAWL2  Summer Institute of Linguistics Comparative African Word List
Son  Sonorant
SOV  Subject Object Verb
SPE  Sound Pattern of English
Syll  Syllabic
TAM  Tense, Aspect, and Mode
V  Vowel
V:  Long Vowel

SYMBOLS
.
Syllable break
σ
Syllable Symbol
`  Low Tone
`  High Tone
`  Rising Tone (Hacek)
//  Phoneme, Phonological Bracket
[ ]  Phonetic pronunciation, Segment bracket
< > Orthographic Bracket
( ) Round Bracket – optional
{ } Curly Bracket – alternative
→ is realized as, becomes
/ in the environment of
# Word Boundary
Ø Zero, deleted segment
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CHAPTER ONE

GENERAL INTRODUCTION AND METHODOLOGY

1.1 INTRODUCTION

The thesis provides an analysis and description of some phonological aspects of Jogo within the framework of generative phonology developed by Chomsky and Halle (1968), and as described in Kenstowicz (1994).

The purpose of this present chapter is to give a brief description of the socio-linguistic background of the speech community of Jogo, which is a dialect of what is generally referred to as Ligbi.

The chapter begins with background of the study in section 1.2. Subsection 1.2.1 describes the Ligbi language and its people. Subsection 1.2.2 focuses on the origin of the Ligbi. Subsection 1.2.3 is on the Ligbi dialects. Section 1.3 discusses the geographical location of the Ligbi people. Section 1.4 discusses the religious and socio-economic life of the people. Section 1.5 also focuses on the problem the study seeks to address. Section 1.6 states the objectives of the study. Section 1.7 points out the research questions. Section 1.8 states the relevance and significance of the study. Section 1.9 expalins the source of the data. Section 1.10 explains the methodology that will be employed in carrying out the study. Lastly, section 1.11 concludes with an overview of this chapter.

1.2. BACKGROUND OF THE STUDY

According to Vydrin (2017),
Manding is a large language/dialect continuum in Western Sub-Saharan Africa (see Fig. 1). The entire Manding speaking population is close to forty million, placing it among the most important languages of Africa. Manding (in some publications, also stylized as Mandingo) is a generic name for a great number of language varieties, among which the biggest ones are Bamana/Bamanakan (also Bambara) in Mali, Maninka (also Malinké) in Guinea, Mali, Senegal, and Sierra Leone, Mandinka in Gambia, Senegal and Guinea-Bissau, and Jula in Côte d’Ivoire and Burkina Faso. These varieties are usually regarded as individual languages, and separate written norms are emerging in spite of certain harmonization efforts by linguists.

The map below (Fig.1) illustrates the varieties of Manding languages, with the light hatching that covers the areas where Manding varieties are used as lingua franca.
Fig. 1: Map of Major Manding varieties. Source: Vydrin (2017: 110)
Table: 1 Major Manding varieties

<table>
<thead>
<tr>
<th>Local Name</th>
<th>Etymology</th>
<th>French Name</th>
<th>English</th>
<th>Alternative Spellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mândinkakán</td>
<td>Language of the people of Manden</td>
<td>Mandinka</td>
<td>Mandingo</td>
<td></td>
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<tr>
<td>Mâninkakán</td>
<td>Language of the people of Manden</td>
<td>Malinké</td>
<td>Maninka</td>
<td></td>
</tr>
<tr>
<td>Bàmanankán</td>
<td>Language of those who refused Islam</td>
<td>Bambara</td>
<td>Bamanan</td>
<td>Bamana</td>
</tr>
<tr>
<td>Jùlakán</td>
<td>Traders’ language</td>
<td>Dioula</td>
<td>Jula</td>
<td>Dyula, Dyoula, Diula, Dwera, Wangara</td>
</tr>
</tbody>
</table>

Source: Donaldson (2017:178). Modified

The name Ligbi is what is used commonly to refer to all the dialects of the language. There are however dialects such as Jogo, which is the focus of this
study; Ntoleh of Kwametenten, which has affinity to Ntogoleh of Brohani, which is also referred to as Numu; and then Weila or Hwela.

1.2.1 The Ligbi Language and its people

Ligbi is one of the three Mande languages spoken in Ghana, namely Wangara (Dyula) and Bisa. Bissa, an eastern Manding language, is also known as Busanga. According to Gariba (2017:11), sociologist and anthropologist will refer to the given name ‘Busanga’ as an exonym or xenonym, as it is a name used in the language of other people to refer to them, per their place of origin. So the name is external to them. The same exonym applies to Ligbi. Ligbi belongs to the Niger-Congo macrofamily and the Mande family, with specific genetic relation as Western Central/South Western Central, as propounded by Kastenholz (1997) see figure 2.

Fig. 2: Classification of Jogo in Mande Languages

![Figure 2. Mande classification. Source: Vydrin (2009:110)](http://ugspace.ug.edu.gh)
Delafosse (1904), Tauxier (1921:382), Goody (1964:195), all indicate that Ligbi is proto-Dyula. Vydrin (2009) however disagrees with Kastenholz (1997) on his proposed classification, as well as Delafosse (1904), Tauxier (1921), and Goody (1964), due to contemporary research findings.

According to Bodomo et al (2009:361) cited in Yankson (2018:13), Bodomo opined that the status of Mande languages in Ghana is debatable, since the only indigenous languages of Ghana are the Gur and Kwa languages. I disagree with the view advanced on two accounts: In the first place, the Mande people in question, especially Ligbi and Dyula, have been trading in Begho, which has been founded around the 11th century (Goody 1964:210; Meyerowitz 1952:45).

Page (2001:30) has it that the historic trading city of Begho, which was developed as early as around the 11th century, did not begin to prosper as an influential market centre until the 15th century through the late 18th century.

Secondly, the Gur language is also originally from Burkina Faso (Upper Volta). Naden (1973:15) states as follows: “In the Upper Volta the Bisa are the nearest tribe to the capital city apart from the dominant Mossi, and there are a number of highly placed officials in Ouagadougou who originate from the tribe…”

Rattray (1931:42) also considers 80 per cent of Gur languages as ‘Moshi group’. So in my estimation, the notion that the status of some Mande languages (namely Ligbi and Dyula) in Ghana is debatable does not hold.

Ligbi is spoken mainly in towns or villages such as Banda, Bema, Banda-Boasi, Bofie, of the Banda district; Menji, Namasa (Demisa), Kwametenten, Brawhani (or Wulokinan) now Brohani of the Tain district; and Wenchi, of the Wenchi Municipality, all in the Brong-Ahafo Region of Ghana.
There are also other Ligbi speech communities scattered across Ghana: Berekum, Tepa, Jinijini, Taslima, Techiman, Sunyani (Brong Ahafo Region); Wa; Takoradi; Koforidua (Eastern Region); Kumasi; Accra; among many others.

1.2.2 The origins of the Ligbis

My consultant narrated that in course of the journey from the Middle East through Egypt, as they were being pursued by enemies, they came across a river on their way in the evening. They saw something floating on the river, with which they crossed it. They later realized it was a crocodile. Hence, they adopted the name Bamba (crocodile in Dyula) as their patronym and totem. A similar story was narrated in Tauxier (1942:53-55), along the Baoule river. Tauxier (ibid) states that those people rather bear the patronym Kulubali (kulu ‘canoe’, bali ‘without’), as they were able to cross the river, one after the other, on the back of a big fish. Other patronyms, according to Delafosse (1904:170) are the Kari-dyula, Kurubari, among the Ligbi and Nafana of Fughulan or Banda.

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1PC: This aspect of my work was of great interest to late Prof Dakuku, as in her office, after I returned from one of my field trips, she expressed the wish to know ‘the entrance’ of Ligbi into Ghana.

Late Prof Dakubu doubted the origin of Ligbis from the Middle East, as narrated by Alhaji Abu ‘soldier’, since there was no evidence to support it.

2 Alhaji Abu Saeed (popularly known as ‘Abu Soldier’) is one of my consultants, who is a Second World War (WWII) veteran, still alive (2018) at the time of submitting this thesis. He was born around 1914, according to the calculation of his mate, Alhaji Adam Usman (popularly known as ‘Abban’), who told me he was born in 1917, that Alhaji Abu Saeed might be older than him for about 3 years or so.

3 Fughulan, I learnt, means ‘land of snakes’ in Nafaanra. Banda stands for ‘ceiba tree’ (also kapok tree) in Dyula, and ceiba tree is said ‘silégue’ in Nafaanra (Tauxier 1921: 688). An oral history also has it that Banda is derived from Ben da ‘they don’t sleep’ (in Bono), to refer to the indigenes, that whenever enemies try to raid the village, the enemies find them awake. Owusu (1976: 103) states a similar word in Bono: “Ba Nda” - ‘They did not sleep’. Ameyaw (1965:6) also says it is
Goody (1953:45) attributes the penetration of the Mande speaking people into Gold Coast (pre-colonial era) to the trade in gold, slave, kolanuts, cattle and cloth. The trade route led from the Niger bend, down to Begho, in the north-west of present Ghana. The mande people of Begho were dispersed by internal conflict, around 1630 (Meyerowitz 1957: 86), leading to part of its population to move westward, to found Bondoukou, some moving to Banda, and others moving up north, to Bole, Wa and Lawra.

Wilks (1961: 26) states that the ruins of the old town of Begho (which is estimated to have been founded around the 11th century) is an evidence that the Weila (Hwela - sic) must be regarded as autochthones of the area (with Namasa considered as its capital), according to reports by Benquey, Delafosse, Tauxier.

According to Wilks’ (1961: 27) map on the trade route, as indicated in figure 3, the gold trade (which is also linked to Timbuktu) passes through Jenne, Bobo Dioulasso, Kong, and Bondoukou to Begho, and beyond - to the coast.

Lewin’s (1978:13) map indicates the link from Bole to Begho, Nsawkaw, Wenchi, Kumasi, and beyond, to the coast.4

*won nda* (isomnious people), as it is a practice of the Nafanas to keep vigil before a war, as they kept vigil in a war fought for the Ashantis. Stahl (1991:270, note 9) quotes Ferguson’s (1894) conception of Banda as a Ligbi state, which no doubt stemmed from the fact that treaty negotiations were conducted in Wangara through an interpreter under Ferguson’s command (Gimalah 1896). The argument that ‘won nda’ metamorphosed into ‘Banda’ seems strange, in my view. I hypothesize that Banda might have been derived from the ‘ceiba’ tree, to indicate the earlier presence of the Mande people in Banda, who arrived there second after the Dompos (Wilks 2003:150), and therefore named the village after the big tree that was found in the middle of it.

4 See Appendix B
Lapidus’ (2002:412) map, however, indicates the route used by Muslim traders from Walata or Timbuktu to merge at Jenne, Bobo, Buna, Bondoukou, and Begho.  

Fig. 3: Map: The Southern penetration of the Mande. Source: Wilks (1961: 27)

1.2.3 *Dialects of Ligbi*

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5 See Appendix C
A dialect, from the perspective of Crystal (2008:142), is a subdivision of a language, and it is ‘a regionally or socially distinctive variety of language, identified by a particular set of words and grammatical structures’.

Crystal (ibid) explains further that the spoken dialects are usually also associated with a distinctive pronunciation, or accent. I have observed that the accent and some lexical items of Weila and Ntɔlɛh are dissimilar to the Jogo I speak.

According to Bloomfield (1933:321), ‘local dialects preserved one or another ancient feature which no longer existed in the standard language’. He concluded that ‘the standard language was by no means the oldest type, but had arisen, under particular historical conditions, from local dialects’. There are four main dialects of Ligbi in Ghana, which are the Tɔŋ/ Numu (Ntɔɡɔrɛh/Ntɔɡɔlɛh) and Ntɔlɛh, Weila and Jogo, classified in the first three groups below. The dialects and their localities are described as follows:

(1) a. Ton/ Tonjon/ Ntɔɡɔrɛh: spoken by the Numu in Brawhani (now Brohani),

b. Ntɔlɛh: spoken in Kwametenten, and Soko. Contrary to what I was told in Namasa, Delafosse (1904) states that it is rather Weila that is spoken in Soko. The information I received from my informant rather seems to be right. Wilks (1961:29) considers the two dialects in this group as the same Numu.
(2) Weila\(^6\): spoken at Namasa (known as Demissa by locals), Jerni (near Sampa), and Sorobango (north of Bondoukou, in la Côte d’Ivoire). Tauxier (1921) also mentions Jinijini, in the Brong Ahafo Region.

(3) a. Jogo of Menji. The one spoken in Menji is influenced by Akan, lexically
b. Jogo of Banda, widely spoken in Banda, Bofie, Banda-Buasi and Wenchi (Ghana). It is also spoken in Boromba, Gbondo and Tchinta/ Kintia in the District of Bondoukou, and Bouna, as stated by Tauxier (1921:383-384). My consultant, Sallah Abdallah, indicates that there is a large Jogo speech community in Tambi (Côte d’Ivoire), as reported by Tauxier (1921:427-434)\(^7\).

(4) Jeri kuo: it is spoken by the Jeris, at and around Korhogo, North of Côte d’Ivoire, (in 17 villages, including Katala\(^8\)), as stated in Kastenholz (2001). A dialect such as Jéli, according to Kastenholz (1997:70), cited in Tröbs (2013), belongs to the ‘Manding-Jogo’ branch within the Central Mandé languages. As a native speaker, and after comparing the data of Kastenholz (2001) with mine, I have noticed that Jeli and Jogo have a good number of lexical items in common.

(5) Jalkunan\(^9\): spoken by the Blé, at Bélédougou, South-West of Burkina Faso.

In most cases, tribes have meaning for their names. For instance Jeri or Jeli, means leather workers. Numu, in Dyula means blacksmith. The Dyula, according to Tauxier (1921:208), means traders’ language, as stated in table 1.

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\(^6\) (Cf. table 2, on the dialects comparative wordlist). Wela has gwáa ‘tree’, whilst in Jogo, it is gbáa

\(^7\) Sallah Abdallah, one of my consultants, lived and worked in Tambi for close to 20 years.

\(^8\) It seems Katala (in contemporary Côte d’Ivoire) is what is being referred to as ‘Kakala’, in Ameyaw (1965:2-3), cited in Stahl (2001:54, 153), as being the place where the Nafanas said they migrated from.

\(^9\) See Kastenholz on Yalkuna (2001:52 & 54); Prost (1968); Grimes (1992: 166); and Berthelette (1995) also discussed the Blé language. See also Heath (2017).
In table 2 below, I have selected some lexical items shown for dialectal comparisons, from a dialectal survey I conducted.

Table 2. Dialectal Variation in Vocabulary of Ligbi

<table>
<thead>
<tr>
<th></th>
<th>Jogo</th>
<th>Jogo</th>
<th>Wela</th>
<th>Ntɔlɛh</th>
<th>Ntɔgɔlɛh/ Numu</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>gbũõ/gbõŋ</td>
<td>gbũõ</td>
<td>gbwõ</td>
<td>gbɔ̀ɔ</td>
<td>gbɔ̀ɔ</td>
<td>‘big’</td>
</tr>
<tr>
<td>b.</td>
<td>wùlú</td>
<td>wùlú</td>
<td>dásùmã</td>
<td>dɔsiã</td>
<td>dɔsiã</td>
<td>‘dog’</td>
</tr>
<tr>
<td>c.</td>
<td>gbàa</td>
<td>gbà</td>
<td>gwá</td>
<td>gwá</td>
<td>‘tree’</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>yélí</td>
<td>yélí</td>
<td>yélí</td>
<td>légé</td>
<td>lígé</td>
<td>‘bone’</td>
</tr>
<tr>
<td>e.</td>
<td>n índi</td>
<td>nèdì</td>
<td>lélé</td>
<td>nídi</td>
<td>níndi</td>
<td>‘tongue’</td>
</tr>
<tr>
<td>f.</td>
<td>kyié</td>
<td>kyié</td>
<td>ké</td>
<td>kãkãsiŋ</td>
<td>kãkãsiŋ</td>
<td>‘moon’</td>
</tr>
<tr>
<td>g.</td>
<td>lóŋlóŋdì</td>
<td>lólóŋ</td>
<td>lólo</td>
<td>tétëŋkúlá</td>
<td>tétëŋkúlá</td>
<td>‘star’</td>
</tr>
<tr>
<td>h.</td>
<td>ní</td>
<td>dí</td>
<td>ní</td>
<td>nní</td>
<td>ke/ ní</td>
<td>‘if’</td>
</tr>
<tr>
<td>i.</td>
<td>yerifugú</td>
<td>yerifugú</td>
<td>së́</td>
<td>yírɛ́fugú</td>
<td>yírɛ́fugú</td>
<td>‘yellow’</td>
</tr>
<tr>
<td>j.</td>
<td>gbóyò</td>
<td>gbóyò</td>
<td>gbó</td>
<td>gbú</td>
<td>gbú</td>
<td>‘black’</td>
</tr>
</tbody>
</table>

Source: Dialectal Survey conducted by Williams

The table 2 above shows lexical entries that indicate the dialectal comparison of the Ligbi language. Wilks (1961:29) however, considers Hwela (Wela) as a separate or different language from Ligbi.

In Dyula, the verb ‘to trade’ is said diago kɛ́, dyago kɛ́ (Tauxier 1921: 208-209) or jágo kɛ́. Person (1968:108) also states that the middlemen in charge of the kola trade are known as dyago-tigi ‘owner of trade’, also known as dyago-kɛ́-la ‘trader’ or dyago-kɛ́-bagha ‘person doing trade’.

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10 The data was obtained with a 200-item Swadesh wordlist dialectal survey, which I conducted during my fieldtrip in other speech communities such as Menji, Kwametenten, Namasa and Brohani, in September 2017.
The hypothesis therefore drawn is that the word *dyago* has been transformed to ‘Jogo’, since Jogo people are noted mostly as traders.

The table below gives evidence to the reality of example of some words/ names which have been transformed in Jogo (by Jogo people).

Table 3. Transformed Words from other sources to Jogo

<table>
<thead>
<tr>
<th>S/N</th>
<th>Original Word/ Name¹¹</th>
<th>Transformed Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ibrahim</td>
<td>Broma/ Brama</td>
<td>Abraham</td>
</tr>
<tr>
<td>2</td>
<td>Abdullah</td>
<td>Amulei/ Awudu</td>
<td>male name</td>
</tr>
<tr>
<td>3</td>
<td>Maimuna</td>
<td>Nimina</td>
<td>female name</td>
</tr>
<tr>
<td>4</td>
<td>Umar</td>
<td>Mieri/ Moro</td>
<td>male name</td>
</tr>
<tr>
<td>5</td>
<td>Zainab</td>
<td>Jenabu/ Jarimu</td>
<td>female name</td>
</tr>
<tr>
<td>6</td>
<td>Rukaya</td>
<td>Woriata/ Worikia</td>
<td>female name</td>
</tr>
<tr>
<td>7</td>
<td>Yakub</td>
<td>Yakoа</td>
<td>male name</td>
</tr>
<tr>
<td>8</td>
<td>mànɔgo</td>
<td>màlɔgo</td>
<td>cat fish</td>
</tr>
<tr>
<td>9</td>
<td>kɔgo</td>
<td>kùɔ</td>
<td>salt</td>
</tr>
<tr>
<td>10</td>
<td>yɛlenyɛleñnan</td>
<td>yɛyɛrnan/ yɛyɛrnuɛ</td>
<td>ladder</td>
</tr>
</tbody>
</table>

In table 3, there are many other names found which are similar to the case illustrated above. The situation illustrated in the table is to support the hypothesis that it is highly probable that the word *jàgo* has been transformed to ‘Jogo’.

¹¹ The last three entries (8-10) are words from Dyula, and the remainder are Arabic names.
For the purpose of this thesis, henceforth, reference will be made to Jogo [ʤɔ̀ɣɔ́], as the dialect that is the focus of this research.

1.3 Geographical Location of Banda

The Banda District was carved from the Tain District, and forms part of the forty-six (46) new District and Municipalities created in the year 2012, and the District has thirty-five (35) towns/villages, as stated in the Ghana Housing and Population Census, of the Ghana Statistical Service (2014).

Its population was estimated at 45,000 as of 2010, according to the Ghana Statistical Service (2012).

According to the Ghana Statistical Service (2014), the Banda District lies within latitudes 7° and 8° 45’ north and longitudes 2° 52’ and 0 28’ west. In terms of land area, the district covers a total of 2,298.3 square kilometers out of the region’s size of 39,558 square kilometers. The district shares boundaries with the Bole District (Northern Region) to the north, Tain District to the south, La Côte d’Ivoire to the east and Kintampo South District to the west.

The towns of Banda District, among others, are Banda Ahenkro (Samanãkru), Bungasi, Sanŋwa, Makala, Gbau, Kabrono, all mainly inhabited by Nafanas (Nafaanra people); Kankan and Sasi, mainly inhabited by the Jogos, and in other settlements as Biema (Bema) and Bofie; then Dompofie (called Kalanyã by the
Jogos), mainly inhabited by the Dompos\textsuperscript{12}, also known as Kalah by the Jogos, and ‘Kúló’, i.e. secretive, by the Nafanas.

Fig. 4: Map of Banda District. Source: Ghana Statistical Service (2014:3).

\textsuperscript{12} I have had an interview with the current Dompo Chief, Nana Shiembor Agba, who on record (on 20\textsuperscript{th} February 2016) told me they are a subgroup of Gonja, and that they were the first settlers of the Banda land. Blench (2015:1) suspects that Dompo is a subgroup of Gonja, as also stated by Stahl (2001:52). The same statement was also stated to me in an interview I have had with Alhaji Abubakar Saeed (popularly known as ‘Abu Soldier’) earlier, on 31\textsuperscript{st} January 2016, in Wenchi. Dompo is affiliated to Guang (Kwa), as also suggested by Painter (1966:2).
Fig. 5: Language Map of Ghana (Ethnologue: Lewis et al. 2016).
1.4 Religious and socio-economic life of the people

The Jogos are mostly traders and they like engaging in the transport businesses as well. Jogos are Muslims, so they observe Islamic rites such as the five daily prayers, fasting and performing the Hajj (among others), when one can afford it.

At Kwametenten, there are Muslims and Christian Ntôle people.

The 2010 Ghana population census (Ghana Statistical Service, 2012) suggest there are approximately 539, 684 speakers of Mande in Ghana. No detail however is given specifically on Jogo, but Lewis et al (2016) estimated it at 15,000, as at 2003.

According to Persson and Persson (1980a, b), quoted by Dakubu (1988:161), the tonal system of Jogo has two contrastive level tones, High and Low. The tones, according to Dakubu (ibid), are symbolized by acute and grave accents respectfully, as exemplified in (6).

(6) Two contrastive level tones of Jogo

a. High:  \texttt{wúlú wé yá.ré}  

\begin{tabular}{ll}
\text{Lorry DET} & \text{come.PST}  \\
\end{tabular}

‘The lorry has come.’

b. Low:  \texttt{wúlú wé wé yà.rá}  

\begin{tabular}{ll}
\text{Dog DET} & \text{COP} & \text{come.PROG}  \\
\end{tabular}

‘The dog is coming.’
(7)  

a. [ʤəŋ] ‘tail’  
b. [ʤəŋ] ‘leaf’  
c. [gbəŋ] ‘room’  
d. [gbəŋ] ‘refuse’  
e. [tiŋ] ‘jump /hair’  
f. [tiŋ] ‘swallow’  
g. [sāŋ] ‘war/fight’  
h. [sāŋ] ‘buy’

Examples (7a, c, e, g), and (7b, d, f, h) differ in tone, H and L respectively.

Although the tone in Jogo will not be discussed in this study, it has been observed or discovered that Jogo has contour tones - with a rising tone, to be treated in subsequent publication.

Contour tone, according to Yip (2002:42), contrastive level tones may have four features, divided into two: on the one hand, a ‘register’ feature [+/- Upper] divides the pitch range of the voice into two halves. On the other hand, a [+/- high] feature, which is ‘confusingly’ referred to as tone feature, sub-divides each register into two and creating four tones. The contour tone falls in the latter description. In the following lexical items (8a-e), they illustrate contour tone - a rising tone LH, as it has been observed in Jogo.

(8)  

With the exception of the H and L tone which bring some lexical difference in meaning, as wūlú ‘dog’, and wūlú ‘lorry/vehicle’ among others, none, including the contour tone, brings a grammatical change to a sentence or phrase.
1.5 Statement of the problem


Persson and Persson (1980) did work on some aspects of the grammar of Ligbi, which was actually on the Ntɔgɔle dialect of Brohani. They analysed the word class and phrase structure of Ntɔgɔle.

Dakubu (1976) collected some data - a 100 Swadesh wordlist - along Menji, Kwametenten and Namasa villages, in order to build a comparable information to Painter’s larger scale survey of the Banda district. Apart from Kastenholz (1995), not much has been written about the Jogo dialects, let alone its phonology. It is against this backdrop that I wish to conduct this research on some Aspects of Jogo phonology.

1.6 Objective of the study

It is worth noting that to accurately describe a language, its sound system, syllable structure, the tone, phonological processes and distinctive features need to be established.

The study is conducted within the linear approach of generative phonology, which is described in Chomsky and Halle (1968), and Katamba (1989).

1.6.1 General objective

The general objective of the study is to provide a general explanation of some aspects of Jogo phonology.
1.6.2 Specific objectives of the study

The specific objectives of this study are to provide detail accounts of the followings:

1. the phonemes of Jogo
2. the syllable and syllable structure processes of Jogo
3. some phonological processes in Jogo

1.7 Research questions

1. What are the distinctive features of Jogo sounds?
2. What is the syllable type in Jogo?
3. Which phonological processes occur in Jogo?

1.8 Significance of the study

Jogo being a less studied dialect, materials on it were not readily available.

Persson (1980b) did some grammatical analysis of Ntɔgɔleh of Brohani. To the best of my knowledge, a thorough description of Jogo, for that matter a phonological description of Jogo has not yet been done.

It is against this background that I wish to conduct this research, which is descriptive in nature.
This research will be useful for future linguistic researchers, students, and the speech community that could benefit from it as the language could be learnt in schools and thereby preserved.

1.9 Source of data

The data of this work is mainly obtained from primary source, through experienced native consultants and my intuition as a native speaker. Secondary source, however, on the phonological aspect of Jogo is scanty. Secondary source such as Painter (1966), Dakubu (1976, 1988), Kastenholz (1995, 1997, 2001), and related literature such as Vydrin (2009), among others, are duly cited.

Apart from Banda and Wenchi where I conducted my field work using the SIL Comparative African Wordlist (1700 words), I have also been at Menji, Kwametenten, Namasa, and Brohani to collect data with a 200-item Swadesh word list, for a comparative study of the dialects.

Data was collected by recording, with a digital recorder, sentences from well experienced native speakers. In other words, qualitative research method was used.

Ethical as well as human subject issues were taken into consideration, where permission was sought from the Chief of the village or town, who suggested names of individuals who are good consultants. Permission was also sought before recording conversations.

The consultants comprise eight (8) males and six (6) females of varying ages.
1.10 Data collection and methodology

This section explains the mode of data collection and reasons for the choice of such an approach. The data are mainly derived from primary sources. Firstly, I gathered data with the Summer Institute of Linguistics African Word List (SILCAWL2), which comprises 1700 words, as stated earlier. A digital recorder was used for recording my data.

Two native speakers, who are students of the University of Ghana, resident on Legon campus, i.e. Mr. Abubakar Saeed Asiba (Level 300-Econs & Maths), and Mr. Ishaq Hamza (L 400 – Social Work), helped me when I started collecting data with the SIL word list.

Data was also collected by interviewing three women, on how to cook some local dishes, then a group of women, gathered by Chief Massatugu, for some folktales and proverbs, in Banda. Two of my consultants, Nsia Sallah and Mahama (popularly known as ‘man pass man’) also gave me an idea on issues related to planting yam in their farms, for the purpose of collecting texts. In Wenchi, two elderly women helped me with data collection with the word list, as well as three knowledgeable natives, in the persons of Alhaji Abubakr Saeed ‘Soldier’; Alhaji Adam Usman ‘Abban’; and Alhaji Abdulai Zakari (popularly known as ‘Massabutu’), not forgetting Alhaji Salia Mahama (also known as ‘Fiewura’).

13 Alhaji Usman, who was a cattle trader to Mali and former driver of State Housing Corporation, narrated that he used to travel to Mali to buy cows and drive them back on foot to Wenchi.
Then, much earlier, I created a WhatsApp platform, called ‘Jogo Diaspora’, with members who can suggest ideas on the Jogo language, or from whom I can obtain supplementary data. There are two other platforms, namely ‘1st National Banda Community’ and ‘National Banda Alliance’, where conversation is mostly had by sending audios to the platform, on issues under discussion and information related to the community.

Finally, data from recorded FM programmes was also obtained from Alhaji Mahama Idrissu, a regular host of a programme in Jogo on Royal 104.7 FM, which is aired every Sunday evening in Wenchi, in the Brong Ahafo Region.

The data was then transcribed and analyzed by me, as a native speaker. I made sure that any secondary source quoted is fully acknowledged accordingly. I made comparison of data with the one personally obtained from Dean Jordan (S.I.L./GILLBT), who is currently working on a Bible project for Ligbi. The orthography is the same except for <ch>, which I substituted with <ky>, a choice made on the basis that the latter was agreed upon in the 1990 Report of the Ghana Alphabet Committee for Ghanaian languages (Bodomo 1997:36-37).

1.11 Thesis overview

The thesis is divided into five main chapters. A general introduction is given about the thesis, the problem statement, the objective of the study, the significance and organization of the study, the objective of the study, then the source of the data and methodology used.
The literature review and the theoretical framework of the study are explained in Chapter two. Chapter three focuses on the sounds of Jogo.

In Chapter four, the syllable types; syllable structure processes such as elision, epenthesis and reduplication are analyzed; as well as some phonological processes such as nasalization, labialization, palatalization, and Homorganic Nasal Assimilation.

Chapter five which is the final part of the thesis, ends with a conclusion, a summary and recommendations.
CHAPTER TWO

LITERATURE REVIEW & THEORETICAL FRAMEWORK

2.1 Introduction

This chapter contains the literature review, and the theoretical framework adopted to conduct this research.

The first step in the phonological analysis of a language is to identify all of its basic speech sounds and the minimal units that serve to distinguish words from each other (Ladefoged 2003).

As Kenstowicz (1994: 57) puts it, “[w]hen generative linguists study the phonology of a language, they try to discover three kinds of generalizations. They first look for regularities that help to define the language’s inventory of phonological elements, which consist of its vowels, consonants, syllables, and tones. Secondly, they try to determine the pattern of distribution of those elements in the language representations, whether they appear at word-initial, word-medial or word-final positions. And finally, they also investigate alternations in the shapes of morphemes and variant pronunciations of words within a sentence. In the final analysis, the regularities of the study will sum up or be assumed to be the joint product of the principles and parameters of Universal Grammar and the rules and representations that develop through the course of language acquisition”. In other words, to accurately describe the phonology of a language, it is important to know what the segmental structure, the syllable structure and other phonological processes in the language are; how they are organised; and how they behave within and across words.
Therefore, the syllable, the syllable structure and some phonological processes and their nature will be discussed using the syllable as a unit of organisation.

All the basic speech sounds will be identified and put into minimal pairs to establish the phonemic inventory.

2.2 Literature review

2.2.1 The name given to the language

In previous literature, many other names were used to refer to the Jogo language. Some of them are Nigwi, Ligbi, Numu (Ntɔle/ Ntɔgɔle)/Atumfuɔkasa, Huela/Wela, Dwera and Gyogo (Westermann & Bryan 1952: 36).

Westermann and Bryan (1952:36) also state that Ligbi is either referred to as Banda (where they dwell in Ghana), near Bondoukou, or called Ligbi kpíra which is also a dialect spoken north of Séguela at Koradougou, in la Côte d’Ivoire.

It is further stated by Westermann and Bryan (1952:36) that the indigenes call their Ligbi dialects either as ‘Huéla kan’ or ‘Numu Kpera’ (language of blacksmith) in the cercle of Bondoukou.

In Ghana, however, the language has three dialects, and they are referred to as Jogokpra, Weilakã, and Ntɔle or Ntɔgɔle, as the natives prefer to call their respective dialects. Painter (1966: 2), however, lumped all the dialects together as Ligbi, and rather refer to the people as Jogo. Dakubu (1976: 71) also quoted Goody (1964) as having said that all Ligbi speaking groups use the name ‘Gyogo’.
With a Swadesh 100-wordlist, Painter (1966) did a comparative study among languages spoken in Banda. None of the languages are related in terms of sub-classification, though they all belong to the Niger-Congo macro family.

In reference to Painter’s (1966) work, Dakubu (1976: 64) admits that: “… many of the villages speak a language I will call (following Painter) Ligbi, although none of the villages near Hani call it that, and no two of those that speak it use the same name for their own variety of it.”

Unlike Painter (1966:2) who lumped all the dialects together as Ligbi, Wilks (1961:29) and Goody (1964:193-194) have a common view, which is however different from that of Painter: On the one hand, Wilks (ibid) states that “The Hwela were joined by Ligbi and Dyula.” On the other hand, Goody (ibid) sees the Mande language in the area of Banda to consist of Ligbi, Hwela, Numu and Dyula. Tauxier (1921) quoted in Goody (1964:195), states that the Hwela, the Ligbi, and Numu, recognize their affinity by using the term Jogo [ʤɔ̀ɣɔ́] to refer to themselves. As a native speaker of Jogo, having conducted a dialectal survey of the various speech communities, I am of the strong view that Ligbi is an exonym and posit that there are three main dialects of (the so-called) Ligbi language spoken in Ghana, which are the Weila, Jogo, and Ntɔlɛh/Ntɔrɛ (Kwametenten) or Ntɔgɔlɛh (Brohani), the latter being generally referred to as Numu.

Dakubu (1976) gave an historical account of the language, as stated in Delafosse (1904), Tauxier (1921) and Goody (1964). Dakubu (1988:161) stated that Jogo has
seven vowels. A phonemic inventory was not given. It was also indicated in Dakubu (1988) that Jogo has two contrastive level tones.

According to Kastenholz (2001:52), Jeri-kuo is spoken in seventeen villages in and around Korhogo, in the north of la Côte d’Ivoire.

2.2.2 Genetic classification of Ligbi language

Jogo is currently classified as “ISO 639-3 lig” by Ethnologue (S.I.L.), and as “ligb 1244” by Glottolog (Hammarström et al. 2019).

Sigismund Koelle (1854) first made an attempt to come up with the hypothesis of classifying Mande in the Niger-Congo phylum. Since then, the classification has been disputed and undergone modifications. Greenberg’s (1963) classification has been universally supported. Other approaches are explained on the classification:

There are at least four approaches proposed respectively by Pozdniakov (1978), Grégoire & de Halleux (1994), Kastenholz (1997), and Vydrin (2009) of which the latest seems to us the most accurate from the comparative method standpoint. It places the South Western Mande group as a part of a larger Western Mande branch (Babaev 2010:5).

In a field report, Persson and Persson (1980) did a sketch of the grammar of Ligbi. Persson and Persson’s work was on the ‘Word Classes and Phrase Structure of Ligbi’, and specifically a dialect called Ngologle by the natives of Brohani, which was referred to as Numu by Delafosse (1904) and Tauxier (1921).

Kastenholz (1995) wrote on the Tense, Aspect, and Mode (TAM henceforth) of Jogo. Kastenholz (1995:49) was honest in his paper on the TAM-system of Jogo,
as he stated: ‘Nevertheless, far from having carried out research on Jogo grammar properly speaking, my occasional labelling of function of a given TAM element in that language must be regarded as provisional’ (emphasis mine). In Kastenholz’s (ibid) paper, the following table was proposed:

Table 4: phonologically conditioned allomorphs

<table>
<thead>
<tr>
<th>Verb root or stem</th>
<th>Past</th>
<th>Non-past</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVn</td>
<td>-ni</td>
<td>-ŋɔ, -ɔ</td>
</tr>
<tr>
<td>CVCVn</td>
<td>-nɛ</td>
<td>-ŋɔ, -ɔ</td>
</tr>
<tr>
<td>CVI V</td>
<td>CVl-ɛ</td>
<td>-ɔ</td>
</tr>
<tr>
<td>CVr V</td>
<td>CVt-ɛ</td>
<td>-ɔ</td>
</tr>
<tr>
<td>CVg V</td>
<td>-rɛ</td>
<td>CVkɔ</td>
</tr>
<tr>
<td>Other CVCV and CV</td>
<td>-rɛ</td>
<td>-wɔ, -ɔ</td>
</tr>
</tbody>
</table>

I have observed that to a large extent, the above table on the TAM of Jogo to be accurate, except the use of the suffix *ni* to express the past tense in Jogo. The suffix *ni* could be from the other dialects (Weila, Ngoleh or Ntogoleh -Numu), as Kastenholz clearly stated that he ‘collected texts in this language in the course of fieldwork carried out in the frame of a dialectological survey’. In my estimation as a native speaker of Jogo, I would recommend the suffix *nɛ*. 
2.3 Theoretical framework

This section explains the theoretical framework used for this study. Chomsky and Halle’s (1968) linear phonology, or the Distinctive Feature theory of the Sound Pattern of English, replicated in Katamba (1989), will be employed to analyze the phonemes and the syllable of the Jogo dialect.

2.3.1 The linear phonological framework

Linear phonology is a classical generative phonological theory, proposed in Chomsky and Halle (1968)’s Sound Pattern of English (henceforth S.P.E.), in which sounds are represented as underlying units (segments), each defined by a matrix of distinctive features, with each column representing a single segment. The Distinctive Features of the SPE will be discussed further after the section on Phonological Rules. The noun /fəŋ/ ‘dance’ will be represented as follows:

Fig 6: Linear representation of /fəŋ/

\[
\begin{array}{ccc}
/f/ & /ə/ & /ŋ/
\end{array}
\]

\[
\begin{array}{ccc}
+\text{Cons} & -\text{Cons} & +\text{Cons} \\
-\text{son} & -\text{ATR} & +\text{son} \\
-\text{voice} & -\text{high} & -\text{cont} \\
+\text{cont} & +\text{low} & +\text{nas} \\
-\text{nas} & -\text{tense} & +\text{nas} \\
+\text{ant} & & \\
\end{array}
\]
2.3.1.1 Linear phonology and segmental features

The features of the segments above, show that they are ordered linearly and within each segment, the features are not arranged in an orderly way. Linear phonology helps us generalize natural occurring phenomena and to formulate predictions about the behavior of sounds belonging to the same class. Despite the advantages mentioned concerning linear phonology, it has inadequacies when it comes to tone representation.

2.3.1.2 Linear phonology and tone

In the case of linear representation of tone, if the /à/ in /fàŋ/ has a low tone, it will be represented linearly as follows:

Fig. 7: Linear representation of tone

/à/

- cons
+ back
- low
- tense
+ LOW

The feature [+LOW] in Fig. 6 represents tone. The linear phonology may not be able to account for complex sounds that combine different articulatory parameters.
such as labial-velars /ɡb/, /kp/ and the affricate /tʃ/, which is a single sound. As stated earlier, linear phonology is cumbersome in tone representation.

Though the Jogo language was said (Dakubu 1988:161) to have two contrastive level tones, I have discovered that it also has rising tone, for that matter Jogo has a contour tone. The following figure 8, it illustrates tones in Jogo:

Fig 8: Linear representation of tone in Jogo

<table>
<thead>
<tr>
<th></th>
<th>a. à</th>
<th>b. á</th>
<th>c. ā</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-con</td>
<td>- con</td>
<td>- con</td>
</tr>
<tr>
<td></td>
<td>-back</td>
<td>-back</td>
<td>-back</td>
</tr>
<tr>
<td></td>
<td>- rd</td>
<td>- rd</td>
<td>-rd</td>
</tr>
<tr>
<td></td>
<td>-H tone</td>
<td>+ low</td>
<td>+ H tone</td>
</tr>
<tr>
<td></td>
<td>+ low</td>
<td>+ H tone</td>
<td>+ rising</td>
</tr>
</tbody>
</table>

2.4 Levels of phonological representation

For the purpose of this thesis, two levels of phonological representation are used: the phonological or underlying representation, and phonetic or surface representation as illustrated in example (9) below:

(9) Levels of representation of ‘tell’ (English)

a. phonetic representation: [tʰ ɛl]

b. phonological representation: /tel/
The underlying representation of the word ‘tell’ in (9b), is the abstract aspect of /t/, i.e. what the native speaker utters, but the phonetic representation in (9a), guides its pronunciation as [tʰ].

The representation will culminate in the formulation of the following rule:

P-Rule 2: Representation Rule

\[
\begin{align*}
a. & \quad /t/ \rightarrow [t^h] / \# \_\_ \_ [+stress] \\
& \quad [t^h]/\# \_\_ \_ \_ [+stress] \\
& \quad \quad [t]/ \_\_ \_\_ \_ [-stress]
\end{align*}
\]

Rule 2b indicates that each level (phonemic and phonetic) phonotactics state the distribution of the elements that composing [tʰ] occurs at the onset of a stressed syllable, while [t] occurs elsewhere.

2.5 Phonological Rules

In generative phonology, a phonological rule is a set of descriptive statements summarizing one’s observations, as generative rules are predictive, expressing a hypothesis on the relationship between structures which will hold for the language as a whole, and which reflect the native speaker’s competence (Crystal 2008:420).

A formal phonological rule, according to Katamba (1989), consist of the following:
(a) → an input, which states the sound or sounds affected by the rule;

(b) an arrow ‘→’, means 'is realized as 'or 'becomes';

(c) what occurs to the right of the arrow is the output of the rule;

(d) following the output, there is a diagonal line, '/' , to the right of that line is the environment, the line which forms part of the environment shows precisely where the changed segment is located;

(e) brackets around an element like (C), to indicate an element is optional.

The main types of phonological rules are in four parts (types): assimilation, dissimilation, insertion and deletion.

Katamba (1989:120) recommends that the distinctive feature should always be used in the formal statement of rules. On that note, as stated earlier, the next section is going to discuss the distinctive features of the Sound Pattern of English (SPE), propounded by Chomsky and Halle (1968).

2.6. Distinctive Features

Distinctive features, are ‘acoustically-defined phonological features with a set of features that have, in most cases, articulatory correlates’ (Katamba 1989:42).

Distinctive Features is also defined as follows:

It refers to a minimal contrastive unit recognized by some linguists as a means of explaining how the sound system of languages is organized.

Distinctive features may be seen either as part of the definition of phonemes, or as an alternative to the notion of the phoneme, (Crystal 2008:151).

The SPE features are binary, as they are assigned two values, either (+) or (-).
The major features that will be discussed in Chapter Three (3), among others, are:

a) major class feature, b) cavity feature, c) manner feature, d) laryngeal feature.

2.7 Relevance of the framework

For a language that has not been adequately given basic description in phonology, the basic sounds need to be established. The Distinctive Feature is considered as a more vibrant way of describing the sounds of a language. The basis for employing the Distinctive Features is explained as follows:

a) Features establish natural classes

Phonemes are broken into smaller components, represented as feature matrices, and phonological rules can be drawn. The four major features are: syllabic [syll], consonantal [cons], sonorant [son], and continuant [cont].

b) Economy

In Generative Phonology, redundancy is to be eliminated as much as possible, which calls for the writing of rules.

c) Phonotactics

The sequential constraint, where the sequential occurrences of phonemes or distribution of segments within a language is established.

d) Binarity

The binary feature of segments is espoused by Chomsky and Halle’s (1968) SPE, which is to indicate, for instance whether a segment is nasal or not.
The universality of features, or let me say features are universal, however, a given language may determine a subset of features as distinctive. The Distinctive Feature will therefore be employed to describe the sounds of Jogo as explained above, to distinguish different phonemes from each other - the phonemic inventory, the distribution, and the syllable structure, for a better understanding of Jogo.

2.8 Conclusion

This chapter reviewed existing literature, mostly related to Mandé or Manding languages, and a few on Jogo language, and explained the theoretical framework used to analyze the data. It also explained the methodology that is used for the study.

The importance of establishing the distinctive features of a language has been explained, as in Clements and Keyser (1983), and the need by generative linguists to discover three kinds of generalizations that help to define a language’s inventory of phonological elements such as its vowels, consonants, syllables, and tones, among others (Kenstowicz 1994:57).

The essence of phonological rule order has been pointed out, as ‘it offers us a way of constraining the power of the model so that only those operations that are possible in human language are catered for’ (Katamba 1989).
CHAPTER THREE
SOUNDS OF JOGO

3.1 Introduction
This chapter discusses the phonemic inventory, the distribution of phonemes within a word, and the syllable structure of the Jogo language. The chapter is divided as follows: Section 3.1 is the introduction of this chapter. Section 3.2 deals with the contrastive analysis of Jogo sounds. Section 3.3 gives an account of the distribution of Jogo phonemes within a word. Section 3.4 gives details on the feature description of Jogo sounds. Section 3.5 being the last section is dedicated to the conclusion of chapter three.

3.2 Contrastive analysis of Jogo sounds
Durand (1990:4) states that sounds, which we consider as tokens of identical phonemes can really be different according to their position within a word.

The sounds of Jogo are described in the following sections:

3.2.1 The phonemic analysis of Jogo vowels
Vowels are “sounds articulated without a complete closure in the mouth or a degree of narrowing which would produce audible friction; the air escapes evenly over the centre of the tongue. If air escapes solely through the mouth, the vowels are said to be oral; if some air is simultaneously released through the nose, the vowels are nasal.” (Crystal 2008:517).

Abstracting her notes from Persson and Persson’s (1980 a, b) analytical work on Ligbi, Dakubu (1988:161) states that Ligbi has seven vowels: /i, e, o, u, a, ĩ, ɔ/, my analysis, however, posit that there are nine vowels, as it will be discussed later.
As mentioned earlier, Persson’s (1980) work is based on the Ntɔgɔle dialect of Brohani.

3.2.1.1. Minimal pairs

According to Crystal (2008:307), a minimal pair test is a procedure conducted by linguists to determine which sounds belong to the same class, or phoneme, as in English *bin vrs pin, cot vrs cut*; and that ‘a group of words differentiated by each having only one sound different from all others, for instance, *big, pig, rig* is sometimes called minimal set.’

The following minimal pairs of vowels have been observed in Jogo, as illustrated in (10-13).

3.2.1.2. Vowels

“From the phonological point of view, vowels are those units which function at the centre of syllables” Crystal (2008:517).

In brief, vowels are sounds produced without obstruction in the vocal tract.

In Jogo, vowels observed are nine as follows:

/ɪ, ɛ, o, u, a, i, e, ɔ, ʊ/

The vowels are divided into two sets according to the position of the tongue root. The two sets are: either an advanced tongue [+ATR], in that the tongue is pushed forward, or an unadvanced tongue root [-ATR], where the tongue is retracted.

In table 5, the [+ATR] vowels are /i, e, o, u/, and [-ATR] vowels are /ɪ, ɛ, ɔ, ʊ/. 
Table 5: The vowel chart of Jogo

<table>
<thead>
<tr>
<th></th>
<th>FRONT</th>
<th>CENTRAL</th>
<th>BACK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[+ATR]</td>
<td>[-ATR]</td>
<td>[+ATR]</td>
</tr>
<tr>
<td>High</td>
<td>i</td>
<td>ɨ</td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td>ɛ</td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

(10)

/a/                   /u/

a. /ʧɛlɪ/ ‘oath’       /ʧɛh/ ‘husband’

b. /nɪ́/ ‘here’         /nʊ/ ‘if’

c. /dɪ́/ ‘sweet’         /dʊ/ ‘child’

d. /kpiɛ/ ‘god’          /kpiɛ/ ‘white’

e. /fɪɛ́/ ‘forest’       /fuɛ/ ‘calabash’

f. /ʧɪɛ́/ ‘moon’         /ʧɪɛ/ ‘basket’
(11)

/e/

a. /kpié/ ‘god’

b. /fié/ ‘forest’

c. /félú/ ‘oath’

d. /flié/ ‘moon’

/e/

/kpɛ/ ‘white’

/fɛ/ ‘calabash’

/fɛh/ ‘husband’

/fɛ/ ‘basket’

(12)

/u/

a. /túru/ ‘iron’

b. /fúnú/ ‘dust’

c. /túgu/ ‘join’

d. /fútú/ ‘blind’

e. /búlu/ ‘return’

/o/

a. /tùru/ ‘sell’

b. /fùnu/ ‘a bark’

c. /tùgo/ ‘pot’

d. /fùgu/ ‘flour’

e. /bùlù/ ‘hand’

(13)

/o/

a. /fòri/ ‘crocodile’

/fɔɾ/ ‘pinch’
b. /t̥ɔɡɔ/ ‘keep silent’ /tɔɡɔ/ ‘name’

c. /wɔɡɔ/ ‘crab’ /wɔɡɔbu/ ‘rummage’

3.2.1.3 The vowel and phoneme /i/

(14) a. An upper high vowel /i/:

<table>
<thead>
<tr>
<th>SET A</th>
<th>SET B</th>
</tr>
</thead>
<tbody>
<tr>
<td>/i/</td>
<td>/ɻ/</td>
</tr>
</tbody>
</table>

i) /ʧɪini/ ‘male/man’ versus /ʧɪɪn/ ‘nation/country’

ii) /di/ ‘sweet’ versus /dɻ/ ‘child/offspring’

iii) /ʧɪɛ/ ‘millet’ versus /ʧɪɛ/ ‘basket’

iv) /sisi/ ‘chest’ versus /sɻi/ ‘smoke’

b. A lower high vowel phoneme /ɻ /

The vowel is underlined for orthographic representation.

i) /fəlɑɖu/ ‘twins’

ii) /wəlɑɖu/ ‘young man’

iii) /ʧɪndɪɾu/ ‘boy’

iv) /ɲəɖɪɾu/ ‘girl’
3.2.1.4. The phoneme /e/

(15) An upper mid vowel phoneme /e/

The vowel in this case has an acute accent on top of it.

i) /sié/ ‘meat’

ii) /bié/ ‘be sated/ satiated’

iii) /jéli/ ‘bone / egg’

iv) /tíé/ ‘moon’

The contrast of lexical items with the phonemes /e/ and /i/ have not been observed.

3.2.1.5 The vowel phoneme /ɛ/

(16) A lower mid vowel phoneme /ɛ/

i) /bɛɾkɛ/ ‘beatings’

ii) /gbáːre/ ‘dried/fierce/hard’

iii) /jɛgbáɡá/ ‘jaw’

iv) /tɛntɛɾɛŋ/ ‘stumble’

3.2.1.6 The Phoneme /o/

(17) a. /o/ /ʊ/

i) /túɾó/ ‘thirty’ /túɾu/ ‘sell’
b. An upper mid vowel phoneme /o/

The vowel above has an acute accents on top of it for an orthographic representation.

i) /túrɔ/ ‘thirty’

ii) /tɔɾi/ ‘toad/frog’

iii) /fɔɾi/ ‘crocodile’

iv) /gbɔɾ/ ‘knee’

c. A high vowel/phoneme /ʊ/

i) /tʊɾɔ/ ‘sell’

ii) /jʊɾɔ/ ‘maize food’=TZ

iii) /toɾ/ ‘food’

iv) /dùgɔ/ ‘earth/ground’

3.2.1.7. The phoneme /u/

(18) a. /túrɔ/ ‘iron’

b. /bʊɾɔ/ ‘return’

c. /dʒʊɡɔ/ ‘grow’ (weed or hair)

However, the following two observations were made:

a) The phoneme /e/, is rather high and tensed,
b) Two more vowels as follows: /i/ represented as \(<\i>\), and /ʊ/ represented as \(<\ʊ>\).

Table 6: Feature specification for Jogo vowels

<table>
<thead>
<tr>
<th>FEATURE/ VOWEL</th>
<th>i</th>
<th>ɪ</th>
<th>e</th>
<th>ɛ</th>
<th>ɛ̃</th>
<th>a</th>
<th>ə</th>
<th>ɔ</th>
<th>ɔ̃</th>
<th>o</th>
<th>ô</th>
<th>ů</th>
<th>ũ</th>
<th>ũ̃</th>
</tr>
</thead>
<tbody>
<tr>
<td>[nasal]</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>[LABIAL]</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>[CORONAL]</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[DORSAL]</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>[HIGH]</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
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<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>[LOW]</td>
<td>-</td>
<td>+</td>
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<td>-</td>
<td>+</td>
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<td>+</td>
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<tr>
<td>Round</td>
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<tr>
<td>Front</td>
<td>+</td>
<td>+</td>
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<td>+</td>
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<tr>
<td>Back</td>
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<td>+</td>
</tr>
<tr>
<td>[PHARYNGEAL]/</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>[ATR]/ [RADICAL]</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
3.2.1.8. Nasal vowels

Nasal sounds (including nasal vowels) are produced with a lowered velum which allows air to escape through the nose (Chomsky and Halle 1968:316). The nasality is represented with a \( \tilde{\text{~}} \) (tilde sign) on top of the vowel.

Making claims about positional difference between corresponding elements in the oral and nasal vowel systems have been more controversial (Ohala and Jaeger 1986:46). Ohala and Jaeger (1986) explain that the controversy or claims has to do with the diachronic versus the synchronic process of nasalization. The synchronic process is explained with an example in French *finir*/fin – exhibiting an /i/ ~ /\text{\textasciitilde}{\text{a}}/ alternation, which is produced by successive mergers to a lower vowel, first of oral mid front vowels before nasal consonants and later by the merger of high and mid nasal vowels. Ohala and Jaeger (1986) tentatively put the diachronic rule to: VN \( \rightarrow \tilde{\text{\text{\textasciitilde}V}} \).

Ladefoged (1964:23) is of the view that in order to show that there is a distinction in certain languages between oral and nasal vowels, and between the members of the following pairs, it is necessary to find contrasts between at least three out of the phonetic items CV – C\( \tilde{\text{\textasciitilde}V} \) – NV – N\( \tilde{\text{\textasciitilde}V} \).

The following rule 5 illustrates nasalized vowel in Jogo

On another account, Creissels (1989:40) agrees that there is a challenge with nasalization of vowels in some Negro-African languages. He concedes that in
some cases, it happens that a nasal consonant automatically transmits its nasality, in the following cases:

- immediately to the vowel that follows it
- immediately to the vowel that precedes it, in sequence VN, where V and N belongs to the same syllable (as it is the case of Soso language)

Creissels suggest that many West African languages have the following vocalic system:

/i, ê, å, ù/

In Vydrin and Diané (2014a: 4) and Vydrin and Konta (2014b: 24), they posit that ŋ́ (POSS 1SG) takes the place of a vowel. In Jogo, the High tone could also be considered on the non-syllabic velar nasal <ŋ́> ‘1SG’, to make a distinction between a simple consonant and a pronoun, as illustrated in (19).

(19) <ŋwɔ́> ‘my elder brother’

With the above example (19), the lexical item <ŋwɔ́> ‘elder brother’ already starts with a velar nasal, it will therefore be appropriate that the first velar nasal takes a high tone to indicate that it is a pronoun (here POSS).

Nasalized vowels in Jogo are as follows:

/i, ê, å, ů, ù, ŏ/
Vowels become nasalized when they occur in the environment of nasal sounds.

In another case, the vowel may be nasalized but not necessarily in a nasal environment.

Table 7: Nasalised Vowel chart of Jogo

<table>
<thead>
<tr>
<th></th>
<th>FRONT [+ATR]</th>
<th>TYPE</th>
<th>BACK [+ATR]</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>HIGH</em></td>
<td>ü</td>
<td>TYPES</td>
<td>ñh</td>
<td>TYPES</td>
</tr>
<tr>
<td>Mid</td>
<td>ñh</td>
<td>TYPES</td>
<td>ñh</td>
<td>TYPES</td>
</tr>
<tr>
<td>Low</td>
<td>ñh</td>
<td>TYPES</td>
<td>ñh</td>
<td>TYPES</td>
</tr>
</tbody>
</table>

(20) Examples of nasal vowels

**SET A**

a. [gbɔŋ] ‘thief’

b. [súŋ] ‘horse’

c. [kpá:] ‘death’

d. [gbá] ‘elephant’

e. [dán] ‘create (a human)’

**SET B**

[gbɔŋ] ‘stool/seat’

[súŋ] ‘nose’

[kpá:] ‘scar/wound’

[gbá:] ‘tree’

[dá:] ‘mouth’
In examples (20), all examples under Set A illustrate nasal vowels. There is the need to note that all vowels in examples under Set B are in High tone, and under Set A, vowels of examples (b, c, and e) are also in High tone, but the remainder (a and d) are in Low tone.

3.2.1.9 Long vowels

It has been observed that Jogo has long vowels, which bring about difference in meaning. Examples in table 8 show these long vowels.

Table 8: Vowel length contrast in Jogo

<table>
<thead>
<tr>
<th>contrast</th>
<th>Short vowel</th>
<th>Long vowel</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. (a/\ a:)</td>
<td>/gbá/ ‘(to) dry’</td>
<td>/gbá:/ ‘tree’</td>
</tr>
<tr>
<td>b. (i/\ i:)</td>
<td>/fi/ ‘today’</td>
<td>/fi:/ ‘(to) light’</td>
</tr>
<tr>
<td>c. (i/\ i:)</td>
<td>/ni/ ‘here’</td>
<td>/ni:/ ‘soul’</td>
</tr>
<tr>
<td>d. (i/\ i:)</td>
<td>/ʧi/ ‘squirel’</td>
<td>/ʧi:/ ‘folk tales’</td>
</tr>
</tbody>
</table>

In table 8, lexical items with long vowels are of CVV syllable type.

Although tone is not going to be discussed in this thesis, it is worth mentioning its occurrence in Jogo, for further analysis in future works. In the meantime, words in example (21) have been observed, indicating the existence of contour tone in Jogo language.

In Jogo, minimal pairs of consonants observed are in example (22) as follows:

3.2.2 Consonants

(22) a. /pá:nṹ/ ‘bread’ /bá:nṹ/ ‘goats’

b. /tá:/ ‘fire’ /dá:/ ‘mouth’

c. /kā/ ‘mistake’ /gā/ ‘half’

d. /kpā/ ‘build’ /gbāŋ/ ‘room’

e. /fāŋ/ ‘dance’ /sāŋ/ ‘fight/war’

f. /mɔɡɔ/ ‘person’ /nɔɡɔ/ ‘taste’

g. /ŋwɔ/ ‘elder brother’ /mwɔ/ ‘cook’

h. /nàɡá/ ‘nest’ /jàɡá/ ‘sit’

i. /wìɛ/ ‘bath’ /jiɛ/ ‘send someone’

j. /ʃìŋʃă/ ‘confused’ /dʒìndʒă/ ‘spill/spread’

k. /fɔlì/ ‘throat’ /fɔrì/ ‘crocodile’

l. /kɔrì/ ‘dream’ /kỳrì/ ‘house’

m. /mā:/ ‘who?’ /mwā/ ‘grand mother’

14 Dakubu (2012:30) has it that the word is originally from Portuguese, and adopted by other Ghanaian languages, such as Akan and Ga, and I observed that some are also adopted by Jogs.
Table 9: Phoneme chart of Jogo consonants

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Alveolar</th>
<th>Palatoalveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Labiovelar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stop</strong></td>
<td>p</td>
<td>t</td>
<td></td>
<td></td>
<td>k</td>
<td></td>
<td>kp</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>d</td>
<td></td>
<td></td>
<td>g</td>
<td></td>
<td>gb</td>
<td></td>
</tr>
<tr>
<td><strong>Fricative</strong></td>
<td>f</td>
<td>s</td>
<td>j</td>
<td></td>
<td>y</td>
<td></td>
<td>h</td>
<td></td>
</tr>
<tr>
<td><strong>Affricate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nasal</strong></td>
<td>m</td>
<td>n</td>
<td>j</td>
<td>η</td>
<td>ηw</td>
<td>mw</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Glide/semi-vowel</strong></td>
<td></td>
<td></td>
<td>j</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lateral</strong></td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trill</strong></td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.3 Distribution of Jogo consonants

3.3.1 Consonants

The Jogo language has twenty-seven consonants (27). They include stops: /p, b, t, d, g, gb, k, kp/; fricatives: /f, s, z, h, j, ʒ, ɣ/; affricates: /ʧ, ʤ/; then sonorants such as nasals: /m, mw, n, ɲ, η, ηw/; liquids: /l, r/, and glides /w, j/
3.3.1.1 Nasal consonants

Nasals, as shown earlier, are six in Jogo, as follow: /m, n, ŋ, ŋ/, and /mw, ŋw/.

The nasalization as a process will be discussed further in Chapter four, under phonological processes.

3.3.1.2 The stop consonant phonemes

The stop consonants in Jogo are eight (8). As indicated in table 8, the stops are /p, b, t, d, g, k, gb, and kp/ which occur in word initial, medial and final position.

In the examples below, are the distribution of each phoneme mentioned earlier.

3.3.1.2.1 The phoneme /p/

(23) a. Word initial

/prugəŋke/ ‘swim’

b. Word medial

/dapata/ ‘stink bug’ (halyomorpha halys)

c. Word final

/pap/ ‘onomatopoeia’ (of a fleeting object /person)

The voiceless bilabial stop /p/ occurs in full- in all positions.

3.3.1.2.2 The phoneme /b/

(24) a. word initial

/biɛga/ ‘animal’

b. word medial

/bilabila/ ‘firefly’

c. word final -Ø
The voiced bilabial stop /b/ occurs in word initial and word medial only.

3.3.1.2.3 The phoneme /t/

(25) a. word initial

/tɛnke/ ‘to sneeze’

b. word medial

/dʒatɛrɪkɛ/ ‘to think’

c. word final -Ø

The voiceless alveolar stop /t/ occurs at word initial and word medial. It does not occur at word final.

3.3.1.2.4 The phoneme /d/

(26) a. word initial

/dɛliːkɛ/ ‘request’

b. word medial

/ladiri/ ‘advice’

c. word final - Ø

The voiced alveolar stop /d/ occurs at word initial and word medial only. It does not occur at word final.

3.3.1.2.5 The phoneme /ɡ/

(27) a. word initial

/ɡɑː/ ‘ranch/ pen’
b. word medial

/ʤógórí/ ‘younger uncle’

c. word final - Ø

The voiced velar stop occurs at word initial and word medial only.

3.3.1.2.6 The phoneme /gb/

(28) a. word initial

/gbá: gbun/ ‘short wood’

b. word medial

/gbόŋ sigba/ ‘three stools’

c. word final - Ø

The voiced labio-velar stop /g/ occurs at word-initial and word-medial only.

3.3.1.2.7 The phoneme /k/

(29) a. word initial

/kàkáh/ ‘lies’

b. word medial

/ʤàràkàrã/ ‘pains’

c. word final - Ø

The voiceless velar stop occurs at word initial and word medial only.

3.3.1.2.8 The phoneme /kp/
(30) a. word initial

/kpíŋ kpɛ/ ‘white stone’

b. word medial

/màkpíáτɔ/ ‘lazy person’

c. word final -Ø

The voiceless labio-velar stop /kp/ occurs at word initial and word medial only.

3.3.1.3 Fricatives

3.3.1.3.1 The phoneme /f/

(31) a. word initial

/fûno/ ‘bark’ (of tree)

b. word medial

/màfâlá/ ‘seven’

c. word final Ø

The voiceless labio-dental fricative /f/ occurs at word initial and word medial only.

3.3.1.3.2 The phoneme /s/

(32) a. word initial

/sáŋŋ/ ‘fight’

b. word medial

/wâsó/ ‘be proud’
c. word final ∅

The voiceless alveolar fricative /s/ occurs at word-initial and word-medial only.

3.3.1.3.3 The phoneme /z/

(33) a. word initial

/zeinab/ ‘female name’

b. word medial

/hamza/ ‘male name’

c. word final

/aziz/ ‘male name’

The voiced alveolar fricative /z/ occurs in borrowed words only, and occur in full position.

3.3.1.3.4 The phoneme /ʃ/

Words with the voiceless palato-alveolar fricative /ʃ/ is rare in Jogo. Words with such a consonant are loan-words from Arabic, English or other languages, as in the case of /h/.

(34) a. word initial

/ʃeitan/ ‘satan’

b. word medial

/ajʃa/ ‘first name of a female person’

c. word final ∅
The voiceless palato-alveolar fricative /ʃ/ occurs in word initial and word-medial only, and are found in loanwords, as stated earlier.

As observed by Dakubu (1988:161), my data also confirms that the phonemes /h, z, ʃ/ occur in loanwords.

3.3.1.3.5 The phoneme /ɣ/

(35) a. word initial Ø

b. word medial

/kóɣó/ ‘tortoise’

c. word final Ø

The voiced velar fricative /ɣ/ occurs in word-medial only

3.3.1.3.6 The phoneme /h/

(36) a. word initial

hákilá ‘mind’

b. word medial

/muhammed/ ‘male name’

c. word final Ø

The voiceless glottal fricative /h/ occurs in word initial and word medial only.

3.3.1.4 Affricates

3.3.1.4.1 The phoneme /dz/
(37) a. word initial

/ʤá/ ‘tail’

b. word medial Ø

c. word final

/baradʒi/ ‘blessings’

The voiced palato-alveolar affricate /ʤ/ occurs at word initial and word final only.

3.3.1.4.2 The phoneme /ʧ/

(38) a. word initial

/ʧĩ/ ‘fat/ breast’

b. word medial

/kàmáʧǐŋi/ ‘host’

c. word final Ø

The voiceless palato-alveolar affricate /ʧ/ represented as occurs at word-initial and word-medial only.

3.3.1.5 Nasals

Nasals in Jogo are six (6) and are /m, n, mw, ŋ, n, ŋw/

3.3.1.5.1 The phoneme /m/

(39) a. word initial

/móli/ ‘shame’

b. word medial

/wúmàgbáyá/ ‘wickedness’
c. word final $\emptyset$

The bilabial nasal /m/ occurs at word initial and word medial only.

3.3.1.5.2 The phoneme /mw/

(40) a. word initial

/mwá/ ‘grandmother’

b. word medial $\emptyset$

c. word final $\emptyset$

The labio-velar nasal /mw/ occurs at word initial only.

3.3.1.5.3 The phoneme /n/

(41) a. word initial

/nábárá/ ‘deceit’

b. word medial

/kà:náŋ/ ‘back’

c. word final

/gáː/ ‘ranch/ pen’

d. n.nié yá.re

1SG.POSS.mother come.PST

‘My mother has come’
The alveolar nasal /n/ occurs at word initial and word medial positions only. The alveolar nasal at adposition of a lexical item could be a pronoun - 1SG POSS, as illustrated in (41d).

3.3.1.5.4 The palatal nasal phoneme /ɲ/

(42) a. word initial

/ɲádru/ ‘young lady’

b. word medial

/màɲíná/ ‘sadness/pity’

c. word final ∅

The palatal nasal /ɲ/ occurs at word initial and word medial only

3.3.1.5.5 The velar nasal phoneme /ŋ/

(43) a. word initial

/ŋáɲú/ ‘thong/spike’

b. word medial

/lóŋgá/ ‘drum’

c. word final

/gbúŋ/ ‘short’
The velar nasal /ŋ/ can appear in all the positions, word initial, medial and word final. The velar nasal could be syllabic or non-syllabic. In some cases, however, the velar nasal at initial position could be a pronoun (1SG.POSS), as noted in example (44a).

3.3.1.5.6 The phoneme /ŋw/

(44) a. word initial

/ŋwó/ ‘elder brother’ N.B. <ŋwó> ‘my elder brother’

b. word medial ∅

c. word final ∅

The labio-velar nasal /ŋw/ occurs at word initial only

3.3.1.6 Glides

3.3.1.6.1 The phoneme /j/

(45) a. word initial

/jàgá/ ‘sit’

b. word medial

/dájì/ ‘saliva’

c. word final ∅

The palatal semi-vowel occurs in word initial and word medial only.

3.3.1.6.2 The phoneme /w/

(46) a. word initial
/wú/ ‘head’

b. word medial
/wúwùlú/ ‘louse’

c. word final Ø

The voiced labio-velar glide occurs in word initial and word medial only. It does not occur in word final.

3.3.1.6.3 The phoneme /l/

(47) a. word initial

/lááda/ ‘tradition’

b. word medial
/gůlu/ ‘debt’

c. word final
/jel/ ‘hole’

The alveolar lateral /l/ occurs in full position- word initial, medial and word final.

3.3.1.6.4 The phoneme /r/

(48) a. word initial

/re/ ‘say’

b. word medial
/sóri/ ‘squat’

c. word final Ø
The alveolar trill /r/ occurs in word-initial and in word medial positions\textsuperscript{15}. The phoneme does not occur at word-final.

### 3.4 Feature description of Jogo sounds

The segments of Jogo, like those in other languages, may be construed as containers within which different features are contained. In other words, we may consider the phonemes of the language as being made up of basic phonological features referred to as distinctive features. There is a relatively small inventory of phonetic features from which the language selects different combinations to construct its individual phonemes (cf. Katamba 1989).

The phoneme chart of Jogo consonants is illustrated in table 8 below:

The sections below discuss the distinctive features of Jogo segment inventory.

#### 3.4.1 Major class features

According to Katamba, (1989: 43) “the major class features define the major classes of sounds that are relevant in phonological analysis”. These major class feature include sonorants and non-sonorants, syllabics (vocalic) and non-syllabics, and consonantal and non-consonantal.

#### 3.4.1.1 Sonorant/Nonsonorant \([\pm \text{sonorant}]\)

Sounds that are articulated with inherent voicing are sonorants whereas, those that are produced with vocal cavity disposition that hinders spontaneous voicing are non-sonorants (Katamba 1989). \([+\text{Sonorant}]\) sounds in Jogo are /m, n, l, r, j, w/.

\textsuperscript{15}The only word found with the phoneme /r/ at word-initial in my wordlist, which is without the infinitival marker ‘ɛ’. See Serial Number 431 (List ID. 433).
3.4.1.2 Syllabic/Non-syllabic [± Syll]

Jogo Syllabic sounds are those that function as syllable nuclei while non-syllabic sounds occur at periphery of the nucleus. Vowels are syllabic and so are syllabic consonants such as [m] and [n]. Thus, though these nasals are consonants they can occupy the nucleus position of syllables in Jogo, as in íjé /n.dʒel/ ‘my father’.

Another major class feature to be discussed is Sonorant/Non-sonorant [± sonorant].

3.4.1.3 Consonantal/Non-consonantal [± Cons]:

Consonantal [+Cons] sounds are those that are articulated with various strictures. They include /p, b, m, f, t, d, n, s, z, ʧ, dʒ, ɲ, ŋ, k, g, gb, kp, l, w, j, h/.

Non-consonantals [-Cons] are those that are articulated without obstruction of the moving airstream in the oral cavity. Non-consonantal sounds in Jogo are the vowels in the language, /i, ɩ, e, o, ɛ, ɔ, ʊ, u/.

3.4.2 Cavity features

Cavity features constitute those distinctive features that relate to place of articulation. According to Katamba (1989:43), these features specify where in the oral tracts the active and passive articulators modify the airstream. They are the Coronal, the Anterior and Body Tongue features.

3.4.2.1 [Coronal/Non-coronal]

[Coronals] are feature distinguishes between sounds that are articulated with the tip or blade of the tongue raised towards the upper teeth, alveolar ridge or the hard
palate (Katamba 1989). Dental, alveolar, and palato-alveolar consonants are Coronal (Chomsky and Hall 1968:304). Coronal sounds in Jogo include /t, d, s, z/, while non-coronal ones include /p, b, f, v, ŋ, dʒ, k, ɡ, r, j, w/

3.4.3. [Anterior/Non-anterior]

3.4.3.1 [Anterior]

The [Anterior] feature is associated with sounds that are articulated from the palato-alveolar region of the mouth. Labials, dentals, and alveolar are anterior. The [+Anterior] sounds in Jogo are /t, d, s, z, f, p, b, m/.

3.4.3.2. [Non-anterior]

Sounds produced without such an obstruction [Anterior], in that case, are [Non-anterior] (Chomsky and Hall 1968:3014). And the [−Anterior] sounds include /ʧ, dʒ, ŋ, k, ɡ/.

3.4.4 [Labial/Non-labial] Features

Labials describes a sound produced with the involvement of the lips as against those that are articulated without the involvement of the lips. According to Katamba (1989), “a sound is has the feature labial if it is articulated with a stricture that involves the lips.” In Jogo, labial sounds include /p, b, m, f/. Vowel sounds that are produced with lip rounding are also labial sounds. These include /u, o, ɔ, ʊ/. The rest of Jogo phonemes are non-labial. Labial sounds are [Anterior].
3.4.5. Tongue body feature [Pharyngeal]

These features describe sounds based on the height of the tongue, part of the tongue that is used and the tenseness of the tongue in the articulation of the sounds. These features are mostly used to describe vowels.

[+High/-High] feature is used to describe vowels that are produced by raising body of the tongue very high, beyond the neutral position. High vowels in Jogo include /i, ɪ, ʊ, u/. The rest of Jogo vowels are [–High].

[+Low/-Low]: +Low vowels are produced with the tongue lying at a level below that which it occupies when at rest. The vowels /a/ is the only [+Low] vowel in Jogo. The rest of the vowels are [–Low]. The vowels /ɔ, ɛ, e, o/ are [–Low] and [–High].

[+ATR/-ATR]: Sounds that are articulated with the root of the tongue pushing forward are described as [+ATR] (Advanced Tongue Root). These Jogo [+ATR] sounds are /i, e, o, u/. The vowels /ɪ, ɛ, a, ʊ, ɔ/ are [–ATR] (unadvanced Tongue Root).

[+Round/-Round]: [+Round] vowels are those that are articulated with a rounded lip posture. In Jogo, all back vowels are articulated with a rounded lip and therefore have the feature [+Round]. These [+Round] vowels are /ɔ, o, u, ø/. The front vowels on the other hand are produced with a spread lip. These [–Round] vowels in Jogo are /i, i, e, ɛ, a/.

3.4.6. Secondary apertures

3.4.6.1. [Nasal/Non-nasal]
The nasal sounds are produced with a lowered velum which allows the air to escape through the nasal cavity. These Jogo sounds include /m, n, η/. Non-nasal sounds are those that are articulated with the air escaping only through the oral cavity. These Jogo sounds include /p, b, f, t, d, k, ɡ/.

3.4.7. [Lateral/Nonlateral]

The sound /l/ in Jogo is a lateral whiles all other Jogo sounds are nonlateral. The lateral sound is produced with the front of the tongue touching the hard palate and the sides lowered to allow the air to escape through the lowered sides.

3.4.8. Manner feature

Manner of articulation features characterize the way articulators obstruct the airstream during the production of speech sounds. Distinction is made between Continuants and non-continuant sounds [± Cont].

3.4.8.1 [Continuant]

According to Chomsky and Halle (1968:317), continuant sounds are produced when the primary constriction in the vowel tract is not narrowed to the point where the air flow past the constriction is blocked, then in stops, the air flow through the mouth is effectively blocked. Sounds considered as [+Continuant] are plosives, including nasal and oral, the affricates, glottal stops and labiovelars. In a nutshell, the feature describes vocoids.
Vowels such as /i, e, o, a, ɛ, ɪ, ë, ɑ, ɔ, ɨ, ʊ, j, w/ have the feature [+continuant] because the airstream flows without the articulators completely blocking it.

3.4.9 [Released Features]

There are two ways in which a closure in the vocal tract may be released. They are either instantaneous, as far as plosives are concerned, or delayed in the affricates. In other words, those with the feature [+Del Rel] are produced with the stricture of complete closure but the release of the stricture is not spontaneous like observable about stops but rather gradual.

Delay release is another manner of articulation feature that describes certain sounds in Jogo. We can make a distinction between sounds that have the feature [+ Del Rel] and those that are [−Del Rel.]. The sounds /ʧ, ʤ/ have the feature [+Del Rel] while the rest of the sounds have the feature [−Del Rel].

3.4.10 Feature specification for Jogo vowels

The table 9 below shows the feature specification for the vowels in Jogo.

3.5 Conclusion

In this chapter, the phonemic inventory and distribution of Jogo sounds were discussed. The chapter was divided as follows:

Section 3.1 is the introduction of the chapter. In Section 3.2, the contrastive analysis of Jogo sounds was done. In this section, it was established that Jogo has
twenty-seven (27) consonants and nine (9) oral vowels, and seven (7) of these vowels have nasal counterparts.

Section 3.3 focused on the distribution of Jogo sounds. Section 3.4 gave an account of feature description of Jogo sounds. Section 3.5 being the last section is dedicated to the conclusion of this chapter.

The phonetic description of the segmental sounds and their classification are based on the Distinctive Feature theory (Chomsky and Halle 1968). The consonants and vowel phonemes of Jogo have been described under the major class, manner and place features such as [LABIAL], [CORONAL], [DORSAL] and [RADICAL].

The following observations have been made on the distribution of consonant phonemes: the consonant phonemes /p, ɲ, l, and z*/ occur in full position, i.e. word-initial, word-medial and word-final positions. With the exception of /ɣ/ that does not occur at word-initial and word-final positions, the following consonant phonemes occur at word-initial and word-medial position only: /b, t, d, ɡ, k, gb, kp, f, s, j*, h*, dz, ʧ, m, mw, n, ɲ, ɳw, j, w, r/.\(^{16}\)

In the distribution of the vowel phonemes in Jogo, /ɔ/, /u/ and /i/ do not occur at word-initial position. All other vowels occur at word-initial, word-medial, and word-final positions in Jogo.

\(^{16}\) Consonant phonemes with asterix are usually found in loanwords.
CHAPTER FOUR

THE SYLLABLE AND PHONOLOGICAL PROCESSES IN JOGO

4. 1 Introduction

This chapter discusses the syllable and structure processes, and some assimilatory processes in Jogo, such as assimilation, labialization, palatalization, and nasalization are studied.

The chapter is divided into three parts: 4.2 the syllable; 4.3 the syllable structure processes such as elision, and epenthesis; and 4.4 the assimilatory processes such as nasalization, labialization, palatalization, homorganic nasal assimilation.

4.2 The syllable

In explaining what a syllable is, Hockett (1958:64) states that in speech production, ‘the lungs are neither quiescent nor loosely exhaling, but are actively pushing air outwards’, and, ‘the force of the pushing varies rhythmically, in a way which correlates with successive units we call syllables.’

In the study of a language, the understanding of syllable is necessary as the basic unit of sound organization (Ladefoged and Johnson 2001:248). According to Akanlig-Pare (1994:53), syllable structure ‘are often motivated by the need to preserve preferred syllables or to readjust those that are not preferred’. For instance, since CCV is alien to the syllable structure of the Buli language, a vowel insertion is required to break up a CCV cluster into CVCV. A parallel could be
drawn when it comes to Jogo. An Arabic word such as *kurb* ‘be near’, has become *kurubi*.\(^{17}\)

There are divergent views on the syllable which need to be looked at.

### 4.2.1 Views of the syllable

It is the view of Hayes (2009:251) that ‘the basis on which syllabification is derived must be (partly) language specific’, as he gives the following example in Spanish for the numeral ‘four’:

[kwa\(_s\)][tro\(_s\)] while in another language as Ilokano (also known as: Ilocano, Iloko, Samtoy), the same word is syllabified as [kwat\(_s\)][ro\(_s\)].

For the purpose of this work, the two views to be looked at are the sonority and the structural views.

### 4.2.2 The sonority view of syllable

Hayes (2009:77) is of the view that ‘every syllable may be said to have a nucleus, which is the most sonorous segment.’ He explains further that segments forming the nucleus of a syllable will be classified as [+Syllabic], while the remaining segments in the syllables are classified as [-Syllabic].

---

\(^{17}\) Kurubi, is a festival celebrated by some Mande people (mostly females) – the Ligbi, on the 27\(^{th}\) day of Ramadan, as a way to get close to Allah, whilst the males are in the Mosque praying for His blessings; and the Dyula, or Wangara, who celebrate theirs at Kintampo, in the last quarter of every year. But in Wenchi, the date has been changed or rescheduled to the subsequent week after Ramadaan, i.e. after the Eid-ul-Fitr celebration.
From the view expressed above by Hayes (2009:77), the pattern of the sonority should therefore have the sonority hierarchy as follows:

Fig. 9: Sonority hierarchy (adapted from Hayes 2009:75)

Greater Sonority less sonority

---------
Vowels glides liquids nasals obstruents
---------

4.2.3 The structural view of the syllable

Hockett (1958:99) explains that ‘a syllable consists of a single onset consonant, plus a single vowel, or of this followed by a single coda consonant; a single consonant between vowels goes with the following vowel as onset, while two consonants between vowels are divided, the former being a coda for the preceding vowel, the latter an onset for the following vowel.’

In describing the syllable, Hayes (2009) put it as:

The **coda** is the consonant or sequence of consonants at the end of a syllable. The **nucleus** of a syllable is the vowel or diphthong found at the syllable’s core and functioning as its sonority peak (sometimes **peak** is used instead of nucleus). It is obligatory for a syllable to have a nucleus, very common for a syllable to lack a coda, and less common for it to lack an onset

Hayes (2009:251)

The structure in fig 10 illustrates the internal structure of the syllable.
Fig 10: The hierarchical structure of the syllable

\[
\begin{array}{ll}
\text{a) } & \sigma \text{ (simple)} \\
\text{Onset} & \text{Rhyme} \\
\text{Nucleus} & \text{Coda} \\
\text{C} & \text{V} \\
\hline
\text{b) } & \sigma \text{ (complex)} \\
\text{Onset} & \text{Rhyme} \\
\text{Nucleus} & \text{Coda} \\
\text{C} & \text{C} & \text{C} & \text{V} & \text{V} & \text{C} & \text{C}
\end{array}
\]

The above illustrations shows the internal structure of a syllable, as it is explained in Hockett (1958:99).

Onsets, codas, and nucleus, according to Hockett (1958:86), vary a great deal in complexity. He explains that ‘zero’ onsets occur, as in \textit{out, in, end, awful, ooze}; and likewise, zero codas occur, as in \textit{filly, window, soda, bah}, and more rarely, zero interludes occur, as in \textit{idea, reality, naïve} in English.

For the Jogo syllable, the vowels do occur as nucleus, and the consonants in onset and coda positions.

4.2.4 The syllable in Jogo

As shows the literature on Mande languages (Dwyer 1974: 61, Williamson 2000:20, Dwyer 1989:54, Creissels 2013:11-12, Vydrin 2004:1-2, and Vydrin & Konta 2014b:29), the syllable structure are typically: \textit{V, CV, CV\textvisiblespace; CVn, CVn\textvisiblespace; (non-syllabic), and disyllabic CVCV, CVCVn, CVNCV, CVNCVN.}
The section on the syllable in Jogo discusses the V syllable, CV, and CVC syllable.

4.2.5 V syllable

The Nucleus is either a vowel or a nasal consonant. The V syllable are illustrated in example (49):

(49)  
a. <á.mùnù>  ‘we’

b. <è.má>  ‘he/she’

c. <é.má>  ‘you’

d. <m/n/ŋ>  ‘I or my’

In Jogo, the bilabial nasal /m/, the alveolar nasal /n/ and the velar nasal /ŋ/ at onset position, is either 1SG - when in front of a verb, or expressing possession - i.e. 1SG. POSS - when placed in front of a noun, as illustrated in (50).

(50)  
a. [ŋ.gbáře]  ‘I dried it’

b. [n.niɛ]  ‘my mother’

c. [m.béŋ]  ‘my uncle’

d. [m.mvâ]  ‘my grandmother’

e. [m.má]  ‘me/myself’
The use of ɛ in Jogo at the suffix of the verb in (50a), as a past marker is similar with Dagbani (Hudu 2014:13, ex13).

4.2.6 CV syllable

The CV syllable is the most common syllable stem in Jogo, as illustrated in example (51a-i) and (52 a-f) below:

(51)  a. [jí] ‘water’ f. [dʊ́] ‘see’
       b. [sɔ́]18 ‘know’ g. [sá] ‘sleep’
       c. [dì] ‘child’ h. [já] ‘come’
       d. [tù] ‘food’ i. [wú] ‘head’

(52)  a. [fì] ‘today’ d. [kpá] ‘death’
       b. [gò] ‘pimples’ e. [gbá] ‘elephant’
       c. [gà] ‘cloth/ half’ f. [dʒó] ‘slave’

4.2.7 CVC syllable

According to Vydrin (2004:1), in West Mande, syllables are usually of CV or

18 With a High tone [sɔ́] ‘enter’ [IMPER], it will become another verb.
CVN. He posits that though the monosyllabic words are well represented, the disyllabic words outnumber the former.

The CṼŋ is very common in Jogo, with the velar nasal, which is mostly in final position, as illustrated in example (53) below.

(53)  
   a. [sɔ̃ŋ] ‘heart’
   b. [dɛ̃ŋ] ‘bottle’
   c. [tɛŋ] ‘friend’
   d. [gbóŋ] ‘thief’
   e. [sũŋ] ‘horse’
   f. [dɛ̃ŋ] ‘lean against’
   g. [bẽŋ] ‘meeting’
   h. [gbõŋ] ‘big’

In Jogo, however, I have observed two types of CVC: the CVŋ and the CṼŋ stems, with the latter having a nasalized vowel, as in (53), while the CVŋ are in (54).

Examples shown in (53) are rather CVŋ, with the vowel nasalized.

Examples (53 b, f) and (53 d, h) differ in meaning with high and low tone respectively.

(54)  
   a. [gbóŋ] ‘stool/chair’
   b. [ʧɛŋ] ‘spear’
   c. [dũŋ] ‘hunter’
   d. [kpíŋ] ‘stone’
   e. [sɛŋ] ‘bridge’
   f. [sũŋ] ‘nose’

The CVŋ and CVŋ all being the same CVC, the Vs of example (54), however, are not nasalized.
4.3. Syllable structure processes in Jogo

According to Akanlig-Pare (1994:59), the syllable structure is motivated by the need to realize simpler as well as acceptable forms in a language. The processes may lead to the interchange of segments, changes in their class feature, addition or loss of segments (Akanlig-Pare, 1994:59).

4.3.1 Elision

The process known as elision refers to the omission of sounds. The sound omitted could be a vowel or consonant, or in some cases a whole syllable may be omitted or elided. The elision can take several forms: if it occurs at word-initial, it is known as *aphaeresis* or *prosiopesis*, in word-medial position it is known as *syncope*, and in word-final position it is known as *apocope* (Crystal 2008:166).

In Jogo, the elision observed takes the form of syncope. This occurs in compounding - when two verbs, or nouns and verbs are merged to form another verb, therefore, the vowel preceding the second stem, or the last vowel of the first stem is elided. The data of the elision observed have been subdivided in three sets as examples (55), (56), and (57).

(55) Vowel elision

<table>
<thead>
<tr>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Compound Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. /ɛberi/ + /ɛba/</td>
<td>→ [ɛberiba]</td>
<td>‘to hit’ ‘to fall’ ‘to knock down/ blow down’</td>
</tr>
<tr>
<td>b. /ɛbege/ + /ɛbɔŋ/</td>
<td>→ [ɛbegebɔŋ]</td>
<td>‘to cut’ ‘to spill/spread’ ‘cut down’</td>
</tr>
</tbody>
</table>
In the first set (55a-c), the infinitival particle of the second stem is elided.

(56)

a. /ɛdaka/ + /ɛbɔŋ/ → [ɛdakebɔŋ]
   ‘to pour’ + ‘spill’
   ‘throw away’

b. /taɡa/ + /ɛ.ra/ → [taɡɛra]
   ‘go’ + ‘it.COMPL’
   ‘take it away’

c. /ja/ + /ɛ.ra/ → [jɛra]
   ‘come’ + ‘it.COMPL’
   ‘bring it’

In example (56 a-c), it is rather the vowel in suffix of the first verb that is elided.

(57)

a. /sùŋ/ + /ʧiέ/ → [sùŋʧiέ]¹⁹
   ‘fasting’ + ‘moon’
   ‘Ramadaan- 9th month’

b. /mǐ/ + /ʧiέ/ → [mǐŋʧiέ]
   ‘drink’ + ‘moon’
   ‘tenth month of Jogo’

¹⁹ See table 16, in appendix G.
c. /áni/ + /ʧie/ → [áníʧé]

‘IPL.CONJ’ + ‘work’ ‘well done/ thanks’

And finally, in example (57a-c), the front High vowel /i/ is deleted in the second stem when the two stems are joined. The second stems of (57a-b) and that of (57c) are homonyms.

4.3.2 Epenthesis

This term is used in phonology to refer to a type of intrusion, where an extra sound has been inserted in a word; often subclassified into prothesis and anaptyxis (Crystal 2008:171).

Crystal (2008: 394) further defines prothesis as a term used to indicate a situation where an extra sound has been inserted initially in a word. For instance, in case of historical change, a prothetic sound or vowel is illustrated as follows:

Latin ‘spiritus’ → French ‘esprit’.

Then anaptyxis (Crystal 2008: 25-26) is defined as a term in comparative philology, and sometimes in phonology, to refer to a type of intrusion, where an extra vowel has been inserted between two consonants. Anaptyctic vowels are also known as parasite vowels, or Svarabhakti vowels (reflecting its occurrence in Sanskrit). The Oxford online dictionary explains that the insertion of a vowel between two consonants seeks to aid pronunciation.

---

20 Kyié ‘work’ is a loanword from the Dyula/Wangara of Bondoukou, transformed (diachronically) from Bambara Kyí ‘work’ (or ci) into Kyié. I suspect the same phenomenon applies to the 8th month arijinajé (Al-Janna ‘Heaven’ + jié ‘water’, in Dyula) in table 16.
The third phenomenon related to enpenthesis is known as paragoge. The Oxford dictionary defines it as the addition of a letter or syllable to a word in particular context, as language develops. An instance in English is: peasan → peasant.

The Collins dictionary defines paragoge as the addition of a sound or syllable to the end of a word.\(^{21}\)

For the present study of Jogo, two types of insertions have been observed.

Consonant insertion (anaptyctic sound), and vowel insertion (paragogic vowel).

### 4.3.2.1 Consonant insertion

(58) Consonant Insertion

<table>
<thead>
<tr>
<th>Stem 1</th>
<th>Stem 2</th>
<th>Compound Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. tégǘ + ké</td>
<td>→ tégǘnké</td>
<td></td>
</tr>
<tr>
<td>‘cough’</td>
<td>‘do’</td>
<td>‘to cough’</td>
</tr>
<tr>
<td>b. jélé + jí</td>
<td>→ jélënjí</td>
<td></td>
</tr>
<tr>
<td>‘money’</td>
<td>‘get’</td>
<td>‘to be rich’</td>
</tr>
<tr>
<td>c. kũũ + bɔ</td>
<td>→ kũũmbɔ</td>
<td></td>
</tr>
<tr>
<td>‘honey’</td>
<td>‘remove’</td>
<td>‘harvest honey’</td>
</tr>
</tbody>
</table>

P-Rule 5: Consonant Insertion I

<table>
<thead>
<tr>
<th>INPUT</th>
<th>tégǘ kẽ</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-R1</td>
<td>tégǘ Nkẽ</td>
</tr>
</tbody>
</table>

\(^{21}\) www.collinsdictionary.com
P-R2: \( \text{têgê ŋke} \)

OUTPUT: \( \text{têgê ŋke} \)

P-Rule 5, as explained below is ordered, and indicates a feeding rule. The data in (58) shows an insertion of a nasal consonant, either a velar nasal, alveolar nasal or a bilabial nasal depending on the environment the nasal consonant occurs – a case of homorganic nasal assimilation.

It worth noting that in (58), in between the first stem and second stem, where the nasal sound is missing is refer to as vacuous. In the compounding process, a nasal assimilation process takes place. We posit that there is a case of floating consonant in this instance.

\[
P-R. 1: \emptyset \rightarrow [+\text{Nas}]/ \_ \_ \_ \text{Cons}
\]

\[
P-R. 2: [+\text{N}] \rightarrow [\alpha \text{ place}] / \_ \_ \_ \_ [\alpha \text{ place}]
\]

\[P-R 1 \sim P-R 2\]

(59) a. bûrû + kûŋ \( \rightarrow \) bûrûŋkûŋ

‘inheritance’ + ‘eat’ \( \rightarrow \) ‘inherit’

P-R 6: Consonant insertion II

\[
\text{INPUT} \quad \text{bûrû} \quad \text{kûŋ}
\]
P-Rule 7: Vowel insertion

\[ \emptyset \rightarrow [v] / [+Cons] ___ [+Cons] \]

\[ \emptyset \rightarrow [v] / ___ # \]

Vowel insertion in the data above (60) usually occurs in borrowed words either from Arabic, or English, or in any other loanword. In example (60 a - b), both

---

22 Cf. footnote 17.
23 Transcriptions of example (60 b, c) are extracted from the online English Oxford *Living* Dictionary.
24 Sabt is an Arabic word, transformed into Sibiti. See table 17, in Appendix G.
anaptyctic and paragogic sounds are observed. In example (60c), only paragogic vowel is observed.

4.3.3 Reduplication

According to Crystal (2008:407), the term reduplication is a morphological process of repetition whereby the form of a prefix/suffix reflects certain phonological characteristics of the root.

The motivation for a morphological issue such as reduplication to be discussed in phonology has been discussed by Wilbur (1973:15), McCarthy (1979:356), Dolphyne (1988:125-136), Katamba (1989:82), McCarthy and Prince (2001), Carstairs-McCarthy (2001), and Spencer (2001). For instance, Spencer (2001) states that reduplicated has been fruitfully analysed by Marantz (1982), and copying of entire root has been observed in Japanese (Tsujimura 1996:152).

Carstairs-McCarthy (2001) have it that phonology can have a more radical influence on morphology, in that it can determine whether some pieces of morphological materials are combinable at all.

4.3.3.1 Reduplicated Nouns

Reduplicated nouns in Jogo can be grouped into two: Nouns with meaningful base and those without meaningful base. In example (61) the two groups will be illustrated in table 10 and table 11.
Meaningful and non-meaningful bases

Table 10: Reduplicated noun with meaningful base

<table>
<thead>
<tr>
<th>Base</th>
<th>Gloss</th>
<th>Reduplicated form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. kùná</td>
<td>‘bitter’</td>
<td>kùnákùná</td>
<td>‘bile’</td>
</tr>
<tr>
<td>b. wélé</td>
<td>‘call(^{25})’</td>
<td>wéléwélé</td>
<td>‘bell’</td>
</tr>
</tbody>
</table>

In table 10, the two nouns observed with a meaningful base indicate complete reduplication.

Table 11: Reduplicated nouns with no meaningful base

<table>
<thead>
<tr>
<th>Base</th>
<th>Gloss</th>
<th>Reduplicated form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Kã</td>
<td>?</td>
<td>kãŋkã</td>
<td>‘top’</td>
</tr>
<tr>
<td>b. fãgɔ</td>
<td>?</td>
<td>fãgɔfãgɔ</td>
<td>‘lungs’</td>
</tr>
<tr>
<td>c. kàlãŋ</td>
<td>?</td>
<td>kàlãŋkàlãŋ</td>
<td>‘creeper’</td>
</tr>
</tbody>
</table>

\(^{25}\) I suspect the base is borrowed from wéle in Dyula, which means ‘to call’. In Bambara, an additional meaning of wéle ‘to call’ is ‘to invite’. The bell is used to call people’s attention to what is being sold at a market, in the context of people in Ghana.
The nouns reduplicated in table 11 show complete reduplication, but they do not
have any meaningful base (non-motivated reduplication).

4.3.3.2 Reduplicated Verbs

Reduplicated verbs are divided into two groups, table 12 and table 13, illustrating
total and partial reduplication.

Table 12: Total Reduplication of Verb Stems in Jogo

<table>
<thead>
<tr>
<th></th>
<th>Base</th>
<th>Gloss</th>
<th>Reduplicated form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>dɛŋ</td>
<td>‘lean against (e.g. a wall)’</td>
<td>dɛndeŋ</td>
<td>‘spy’</td>
</tr>
<tr>
<td>b.</td>
<td>tíŋ</td>
<td>‘jump’</td>
<td>tintíŋ</td>
<td>‘hop/skip’</td>
</tr>
<tr>
<td>c.</td>
<td>tién</td>
<td>‘make/arrange’</td>
<td>tiéntíén</td>
<td>‘repair’</td>
</tr>
<tr>
<td>d.</td>
<td>fíŋ</td>
<td>‘sprout’</td>
<td>fínfíŋ</td>
<td>‘to sprout severally’</td>
</tr>
<tr>
<td>e.</td>
<td>tãŋ</td>
<td>‘push’</td>
<td>tãntãŋ</td>
<td>‘to roll’</td>
</tr>
<tr>
<td>f.</td>
<td>bêŋ</td>
<td>‘meet/gather’</td>
<td>bëmbëŋ</td>
<td>‘to assemble’</td>
</tr>
<tr>
<td>g.</td>
<td>jéreŋ</td>
<td>‘swell’</td>
<td>jénjéreŋ</td>
<td>‘to swell severally’</td>
</tr>
<tr>
<td>h.</td>
<td>kã</td>
<td>‘spoil’</td>
<td>kãŋkã</td>
<td>‘plunder/destroy’</td>
</tr>
</tbody>
</table>

In the data above in table 12, it is observed that the base is reduplicated in full. The
total examples (a), (b), (c), (d), (e), (f), (g), and (h), show total reduplication. The
reduplicated forms do not show any epenthesis. With the exception of example (h),
the base of the remaining examples which are ended with a velar nasal become an
alveolar nasal as they are reduplicated. Unlike examples (a), (b), (c), (d), (e), and (f) where velar nasal in reduplicants (base) change to become alveolar nasal, example (g) shows a little difference, in that the letters ‘r’ and ‘e’ are omitted in the reduplicated word. The data in table 12 show a motivated reduplication.

In Jogo, the deletion of the infinitival marker may change the meaning of a verb. Some example of verbs in (62) illustrate the phenomenon:

(62)


In example (62), without the infinitival marker e, the lexical items would carry different meaning as: (62a) ‘honey’, (62b) ‘to fall/ goat’, (62c) ‘fight’, (62d) ‘mud’.

Table 13: Partial reduplication of Verb Stems in Jogo

<table>
<thead>
<tr>
<th>Base</th>
<th>Gloss</th>
<th>Reduplicated form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>fílí</td>
<td>fífilí</td>
<td>‘to discard at random’</td>
</tr>
<tr>
<td>b.</td>
<td>bèrí</td>
<td>bèbèrí (ŋáridi)</td>
<td>‘to wink’</td>
</tr>
</tbody>
</table>

In table 13, example (a) and (b) the reduplication is characterized by the repetition of the first syllable of the base.

4.3.3.3 Reduplicated Adjectives
In table 14 below, adjectives which show full reduplication, however, are mostly non-motived or have no meaning.

Table 14: Reduplication of Adjectives

<table>
<thead>
<tr>
<th>Base</th>
<th>Gloss</th>
<th>Reduplicated form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>kpiεŋ</td>
<td>kpiεŋkpiεŋ</td>
<td>‘ancient/olden days’</td>
</tr>
<tr>
<td>b.</td>
<td>bůrů</td>
<td>(sǔmǝgǝ) bůrůbůrů</td>
<td>‘early (in the morning)’</td>
</tr>
<tr>
<td>c.</td>
<td>títì(^{26})</td>
<td>(gbógó) títítítí/tígítígí</td>
<td>‘deep/dark (black)’</td>
</tr>
<tr>
<td>d.</td>
<td>kání</td>
<td>káníkání</td>
<td>‘rough’</td>
</tr>
<tr>
<td>e.</td>
<td>pàrá</td>
<td>(kpiε)pàràpàrà</td>
<td>‘crystal (white)’</td>
</tr>
<tr>
<td>f.</td>
<td>tíŋkóm</td>
<td>tíŋkómtíŋkóm!</td>
<td>Onomatopoeia: Sound of pounding fufu</td>
</tr>
<tr>
<td>g.</td>
<td>pāp!</td>
<td>pāpāp!</td>
<td>Onomatopoeia: ‘a person bolting away’</td>
</tr>
<tr>
<td>h.</td>
<td>kpěrɛ̀</td>
<td>kpěrɛ̀kpěrɛ̀!</td>
<td>Expressing ‘astonishment’</td>
</tr>
</tbody>
</table>

\(^{26}\) Bearth (1971:182-183), cited in Vydrin (2004b), indicates that the adjective tířř is used in about fifteen (15) different adjectives in different languages which have similar forms.
Table 14 shows full reduplication. With the exception of (a), most of the stems do not have a meaning at the base, and the reduplicated forms become an adjective, as illustrated in sentence in (63).

(63)  kyií gbógóré títtítí

    rain black.PST deep

   ‘The weather looks very stormy’

The lexical item títtítí ‘dark/ deep’, which takes a postposition, reinforces the noun, making it an adjective.

The phonological point in this morphological aspect of reduplication lies in the insertion of consonants shown in table 12 (h), copying of CV syllable in tables 10 and 13, and copying of CVCV words in table 14 (b-e).

McCarthy (1981:405) proposes a universal principle of Morphological Rule Constraint as:

\[ \text{MRC: } A \rightarrow B/ X, \text{ where } A \text{ is a single element and } B \text{ and } X \text{ are (possibly null) strings of elements.} \]

4.4 Assimilatory processes

This section discusses the following assimilatory processes: nasalization, palatalization, labialization, and homorganic nasal assimilation.
4.4.1 Assimilation

In phonology, assimilation is a phonological process where one sound changes to become more like some other sound in its environment (Katamba 1989:36). In other words, Katamba (1989:80), puts assimilation as the modification of a sound in order to make it more similar to some other sound in its neighborhood.

Assimilation is bidirectional: either progressive or regressive assimilation.

4.4.2 Nasalization

Nasalization is a process where the velum is lowered to allow the airstream to escape through the nasal cavity. Crystal (2008:320) defines nasals as sounds produced while the soft palate (velum) is lowered to allow an audible escape of air through the nose.

Nasal vowels feature prominently in Jogo. A vowel is nasalized when it precedes a nasal consonant.

4.4.2.1 Regressive Assimilation

The following examples illustrated in (64) demonstrate regressive assimilation.

(64) Regressive assimilation

a. ṃaŋ ‘a dance’, b. sāŋ ‘war/ fight’, c. dônŋ ‘nape of neck’, d. tāŋ ‘ten’

P- Rule 6: Regressive assimilation
/fanŋ/ → Underlining Form

↓

/fāŋ/ → Vowel nasalization

↓

/fāŋ/ → Consonant deletion → Surface Form

P-Rule 7: Vowel nasalization

1. /V/ → [+ nas] / ___ [+ nas]

The data show that the oral vowel precedes nasals, as such, they are nasalized, as illustrated in (64) above. The data can be represented nonlinearly as:

P-Rule 8: Regressive Nasal Assimilation Rule

\[/V/ \rightarrow \tilde{V}/_N\]

\[\begin{array}{c}
V \\
\downarrow \\
[+ \text{nas}]
\end{array}
\]

\[C\]

The phonological rule 7 illustrates the process of vowel nasalization.

4.4.2.2 Progressive Assimilation
P-Rule 9: Progressive Nasal Assimilation Rule

\[
V \to \tilde{V}/N_-
\]

From the above rules 7 and 9, we can conclude that assimilation can either be regressive or progressive, in other words, from right to left or from left to right. The phonological process of nasalization features prominently in the Jogo language.

The progressive nasalization is illustrated in (65).


The data above in example (65), indicates nasalized oral vowels, as they are preceded by nasal sounds.

4.4.3 Palatalization

Palatalization is a term referring to a secondary articulation, involving a movement of the tongue towards the hard palate (Crystal 2008:347). Palatalization in Jogo is regressive, a consonant is palatalized before the [+high] front vowel /i/. It may describe an altered articulation, as illustrated in (66)
The rule of palatalization can be formulated as follows:

P-Rule 10: Palatalization Rule

\[ /+\text{Cons}/ \rightarrow [+\text{Palatal}] / \_ \_ \_ [-\text{Back}] \]
\[ [+\text{High}] \]
\[ [+\text{Cor}] \]

or

\[ /+\text{Cons}/ \rightarrow [j] / \_ \_ \_ \_ \_ \]

4.4.4 Labialization

Labialization is a general term referring to a secondary articulation involving any noticeable lip-rounding, “as in the initial [k] of coop, or sh-[ʃ] of shoe, which are
here labialized, because of the influence of the rounding feature in the following vowel [u]” (Crystal 2008: 263). Labialized consonants in Jogo are illustrated in the example (67) below:

(67)

a. gùó ‘shack’ [gʷuò]
b. kùá ‘sea’ [kʷuà]
c. gbùó ‘knee’ [gbʷùo]
d. sùó ‘concubine’ [sʷùo]
e. dùɔ ‘trample/stamp’ [dʷùɔ]

The rule of the labialization can be formulated in rule 11 as follows:

P-Rule 11: Labialization Rule

C → [Labial]/ _____ [Labial]

4.4.5 Homorganic nasal assimilation

Homorganic is a general term in phonetic classification of speech sounds, referring to sounds which are produced at the same place of articulation, such as [p], [b] and [m] (Crystal 2008:231). He further explains that sounds involving independent articulations may be referred to as heterorganic.

Homorganic nasal assimilation is either anticipatory or regressive.

In some African languages such as Akan (Dolphyne 1988:142), Birfor (Dundaa 2013:93), Dagara (Kuubezelle 2013:98), Waali (2015:99), to mention just a few, homorganic nasal assimilation is an attested phonological process. In Jogo,
Homorganic nasal assimilation operates in word formation process, and a syllable coda must be homorganic with the onset of the following syllable, thus, the two sounds are produced at the same place of articulation.

In sharing the same place of articulation, if for instance a velar nasal consonant occurs or precedes a bilabial, the velar nasal takes the bilabial place of articulation.

The alveolar nasal can have two meaning. In the first place, if it is placed in front of verb, it indicates a pronoun (1SG). Secondly, in case it occurs in front of a noun, it takes the meaning of a possessive adjective (1SG.POSS). In Dagbani, the above description of the nasals, as in (67a-b, & d), are referred to as proclitic nasals in Hudu (2014:13, ex13), which discusses Nasal Place Assimilation.

In example (68c), we are not dealing with a single lexical item as a noun, it is rather a phrase, in which the assimilation occurs for smooth transition.

The following in examples (68) illustrate the phenomenon.

P-Rule 12: Homorganic Nasal Assimilation

\[ [+\text{Nas}] \rightarrow [\alpha \text{ place}]/ _____ [\alpha \text{place}] \]

(68)

a. \( N \rightarrow m/ \_ \) bilabial nasal

\( N + m \rightarrow [mm] \)

\( \mathring{1}\text{SG} \quad + mw\dot{a} \quad \rightarrow \quad m.mw\dot{a} \)

1SG \quad ‘grandmother’ \quad ‘my grandmother’

b. \( N + n \rightarrow [nn] \)

\( \mathring{1}\text{SG} \quad + n\text{iɛ} \quad \rightarrow \quad n.n\text{iɛ} \)

1SG \quad ‘mother’ \quad ‘my mother’

c. \( N + m \rightarrow [mm] \)
The homorganic nasal assimilation rule, as illustrated in P-Rule 12 is ordered. Examples in (68) indicate homorganic nasal assimilation, which are regressive in place of assimilation.

4.5. Summary of the Chapter

In summary, the syllable is viewed from two perspectives. In the first place, it is defined in terms of properties, such as sonority (on account of length, stree, and pitch). Secondly, the syllable is viewed in structural terms, as a unit in the organization and planning of the sound of an utterance (Ladefoged & Johnson 2001: 248).

On another account, Hockett (1958:86) states that syllables in English are determined by the number and location of peaks. Sequences or clusters, however, of two consonants occurring as onsets often have /l, r, w, j/, as second, in examples such as in pride, play, dwell. Hockett (1958:87) adds that, onset clusters of three consonants, which all begin with /s/ and end in /r, l, w, j/, i.e. /spr, str, skr, spl, skl,
skw, spj, skj/, in examples such as spread, stretch, scratch, splash, sclerosis, squelch, spume, skew.

The syllable of Jogo has segmental components. It is composed of the nucleus and pre-nuclear margin. Syllabification of the stem is based on the Sonority Hierarchy as indicated by Hayes’ model, which determines which segment occupies the nucleus position of the rhyme in any given syllable.

It has been observed from this study that Jogo has V, CV, CV:, CVN, CrV and CVC types of syllable. Although the V syllable is somehow rare, it occurs mostly with personal pronouns. Complex onsets with CCV from borrowed words are resolved with epenthesis, specifically vowel insertion.

It been also observed that the sounds /p, l, ñ, z/ occur at word-initial, word-medial and word-final.

Reduplication occurs mostly with verbs, or with adjectives.

Assimilatory processes such as nasalization, palatalization, labialization and homorganic nasal assimilation have been observed in this study. Nasalization features prominently in Jogo.
CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This is the concluding chapter of the study on aspects of Jogo phonology. It presents the main discussions and findings of this study. It draws a conclusion and provides recommendations for further studies.

5.2 Summary of Main Issues

In chapter One, the main Mande family was described. A brief statement was given on Jogo and its speakers with a sketch of dialectal variation in the language. It was indicated that there are three main dialects: Jogo, Weila and Ntôleh; which differ considerably, for now, at the lexical level.

The dialect spoken in Menji is considered almost the same as the one in spoken in Banda. The Ntôleleh or Numu spoken in Brohani is also almost the same as the Ntôleh spoken in Kwametenten.

Chapter two provides an inventory of the sound system, which is composed of twenty-seven (27) consonants and nine (9) oral vowels and seven (7) nasal counterparts. This research found two additional vowels, in addition to the seven (7) posited earlier by Dakubu (1988:161), to make it nine (9). With the exception of the phoneme /ɣ/ that occurs in word-medial only, the following consonants occur at word-initial and word-medial only: /b, t, d, g, k, gb, kp, h, f, s, ʃ, ʧ, m,
mw, n, ŋ, ɲ, j, ʤ, r, w/. The following sounds /p, ɲ, l, z/ are the only phonemes that occur in all the positions, that is word-initial, word-medial, and word-final.

In the distribution of the vowel phonemes in Jogo, /ɔ/, /u/ and /i/ do not occur at word-initial position. All other vowels occur at word-initial, word-medial, and word-final positions in Jogo.

The Distinctive Features were discussed using the linear approach of the Generative phonology, as described in Chomsky and Halle (1968). The Distinctive Features of the consonants and vowels of Jogo were described.

In Chapter Four, the syllable structure was investigated. The CV Phonology, as described in Clement and Keyser (1983) was used for the analysis of vowel epenthesis, and how the onset cluster is broken to satisfy the CV structure. The syllable types found are V, CrV, CV, CV:, CVN, and CVC.

The syllable structure processes observed are vowel elision and consonant insertion, in epenthesis.

The phonological processes observed are labialization, palatalization, nasalization and homorganic nasal assimilation. The discussion demonstrated that rule ordering is an important part of generative phonology, which uses a set of rules to derive phonetic representations from abstract underlying forms, as stated by John McCarthy (1979).

Chapter Five discusses the findings and gives recommendations.
5.3 Limitation and future research

This research work is the first in the study of the phonology of the Jogo language. In such a circumstance, there may be many challenges to be encountered, in terms of time constraints, factors related to data collection, among others.

In the collection of data of Jogo, there were challenges encountered as many persons contacted were found wanting in terms of a good repertoire in the knowledge of lexical items. Many young persons resort to code-switching/ code-mixing to refer to some items. As a result, it was a bit difficult finding minimal pairs, at a point in time, to establish certain phonemes in the language. The older persons were able to know how to say certain things in the language.

It is expected that tone will be treated separately in future publications. There are other aspects or areas that need to be worked on, such as diphthongs, vowel harmony, glide formation, floating consonant, among others.

5.4 Conclusion

The aim of this research was to discuss some aspects of Jogo phonology, in the linear framework of the generative phonology.

The sound system, the syllable structure, syllable structure processes and some assimilatory processes were discussed. As the study was not exhaustive, the syllable structure observed were epenthesis, and vowel elision. The phonological processes discussed were labialization, palatalization, nasalization, and homorganic assimilation.
5.5 Recommendation

The study which is probably the first to discuss the phonology of Jogo to some extent, but not in any case exhaustive. For that matter, there is the need for a wider phonological study of the Jogo language, as suggested.

As I am aware, it is the wish of many natives to see books written in the language to enable the coming generation of Jogo people learn their language, but not forget it due to urbanization and cross-ethnic marriages, among others. I would recommend that funding is made available to students who are willing to conduct further research into the language. I would also like to recommend that after the standardization of the Jogo language, a dictionary is worked on, a curriculum is developed such that the language included in the Ghana Education Services languages taught in schools, especially in the Brong Ahafo Region, and within the catchment areas of Jogo communities.
APPENDIX A

Route to the Volta Basin

Source: Levtzion (1968:2)
APPENDIX B

The Asante Empire in the Early Nineteenth Century

Source: Lewin (1978:13)
APPENDIX C

Trade settlements, and the diffusion of Islam in West Africa: 1500-1900

Source: Lapidus (2002:412)
APPENDIX D

The Distribution of Mande Clans

<table>
<thead>
<tr>
<th>MANDE CLAN NAMES*</th>
<th>Kong</th>
<th>Bouna</th>
<th>Larabanga</th>
<th>Bondoukou</th>
<th>Mango</th>
<th>Salaga</th>
</tr>
</thead>
<tbody>
<tr>
<td>at Bighu (Be'o) (according to IASAR /79)</td>
<td>Saganogo</td>
<td>Kamara</td>
<td>Kamara</td>
<td>Kamakhaté</td>
<td>Jabaghte</td>
<td>Dambélé</td>
</tr>
<tr>
<td></td>
<td>Ouattara</td>
<td>Kante</td>
<td>Timité</td>
<td>Watara</td>
<td>Konaté</td>
<td>Jabaghte</td>
</tr>
<tr>
<td></td>
<td>Traoré</td>
<td>Ouattara</td>
<td>Kamaghaté</td>
<td>Kamata</td>
<td>Konaté</td>
<td>Jabaghte</td>
</tr>
<tr>
<td></td>
<td>Barou</td>
<td>Diabakhaté</td>
<td>Dao</td>
<td>Kouloubali</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Konaté</td>
<td>Dioubaté</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Dandé</td>
<td>Diarra = Traoré</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mande-Bamba</th>
<th>Dao</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Wa (Mandé fr Kong)</th>
<th>Wala-Wale</th>
<th>Mamprousi</th>
<th>Sansanne-Mango</th>
<th>Bole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanu</td>
<td>Sissé</td>
<td>Traoré</td>
<td>Jabaghte</td>
<td>Kamaté</td>
</tr>
<tr>
<td>Dao</td>
<td>Diabakhaté</td>
<td>Diabakhaté</td>
<td>Kamaghate</td>
<td>(fr. Bego)</td>
</tr>
<tr>
<td>Juna</td>
<td>Kamar</td>
<td>Kamara</td>
<td>Wata</td>
<td>Jabaghte</td>
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<tr>
<td>Kunate</td>
<td>Traoré</td>
<td>Kingaran</td>
<td>Timité</td>
<td>(Bouna)</td>
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<tr>
<td>Taraore</td>
<td></td>
<td></td>
<td>Dabo</td>
<td>Bamba</td>
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<td>(Dagomba=Haoussa</td>
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<td></td>
<td>Ouattara</td>
<td>Jabaghte</td>
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<tr>
<td>Mandé</td>
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<td>(fr. Kong)</td>
<td>Dabo</td>
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<tr>
<td>Sissé</td>
<td></td>
<td></td>
<td>Touré</td>
<td>(fr. Kong)</td>
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<tr>
<td>Touré fr. Nord</td>
<td></td>
<td></td>
<td>Couroubare</td>
<td>Gbani</td>
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<tr>
<td>Mandé (before creation of Sansanne)</td>
<td></td>
<td></td>
<td>Traoré</td>
<td></td>
</tr>
</tbody>
</table>

Source: Massing (2000:303)
APPENDIX E

Suggested Orthography

An alphabet, according to Donaldson (2017:180), ‘refers to a writing system that in general tends towards the graphic representation of phonemes’. In other words, Donaldson (2017:184) is also of the view that ‘orthography is not just a set of conventions for using a script to write’, but it is rather ‘a set of conventions for using a script to write an actual language’, for that matter, ‘one’s approach to language and languages is an important part of orthography development.’

In my estimation, the orthography of an unwritten language needs to be carefully planned and developed to adequately capture the phoneme and/or sounds of that language.

As Jogo is a Mandé language, it would be in order to have an alphabet of its own.

Ballenghien (1987) states that in 1966, under the auspices of UNESCO, a conference was organized in Bamako (Mali), which brought together linguists and representatives of West African governments, with the aim of determining and harmonizing the alphabets of six major languages, including Mandé languages.

In addition to the UNESCO (1966) conference on some African languages, Balenghien (1987), Vydrin and Konta (2014b) also worked on the orthography of

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27 The UNESCO conference was held in Bamako, from the 28th February to 5th March 1966. Experts were invited from the U.S.A., France, the USSR, then representatives from Mali, Guinea (Conakry), Sénégal and Upper Volta (Burkina Faso). Six language groups (sessions) were formed, including Manding. There was however a split in the Manding group, as the Guineans wanted to have their own sets of Alphabet for Maninka, different from Bambara.
Bambara of Mali, while Vydrin and Diané (2014a) worked on the orthography of the Maninka of Guinea.

Due to the divergence\(^{28}\) of opinion between Guineans and Malians on a common orthography, another meeting was held in Bamako in 1967, to standardize the alphabets for four Malian local languages: Manding, Fulfulde (Fula), Tamasheq and Songhay.

As much as I have come across primers and samples of chapters on the ongoing project of Bible translation into Jogo, the convention of script or alphabet that GILLBT came up with as far as Jogo is concerned is not yet made official.

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\(^{28}\) The alphabets ‘ó’, among others, proposed by Gérard Galtier was the bone of contention for Guineans, as that alphabet was not available on the AZERTY typewriters of the time, a position which led not only to a loss of economies of scales in terms of printing, but to the irony that mutually intelligible spoken varieties use different orthographies depending on where they are printed (Calvet 1987:220, quoted by Donaldson 2017:187)

Three other conferences were organized after the UNESCO 1966 conference and 1967 meeting in Mali. In 1978, at Niamey, a conference was organized by UNESCO and 58 alphabets were penned down. In November 1979, in Niamey, a meeting organized by CELHTO, arrived at 34 alphabets, referred to as the ‘Manding Alphabets of Reference’.

Finally, in July 1982, in Mali, the ‘Manding Alphabet of Reference was promulgated with a Legislative Instrument No. 159 PG-RM, for the following local languages: Bambara, Bobo, Bozo, Dogon, Fulfulde, Soninke, Songhay, Senoufo-Minianka (Nafaara), and Tamasheq. (Balenghien 1987:16-17)
I agree with Houis’ (1964) opinion, quoted in Donaldson’s (2017:186), that what matters most in the orthography of a language, ‘is to produce the most accurate description possible…’

I would therefore like to propose a set of graphemes for the Jogo language, alongside the alphabet of other Mande languages in the Table below.
Table 15. Comparative Phonemes and alphabets in Mande languages

<table>
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My proposed orthography has taken into consideration the economy principle as stated by Houis (1966:4), in that, the speaker makes a ‘choice’ of phonemes to convey so and so message.

My choice of alphabet, particularly the consonants are <gb>, <ny>, and <ky>, which will be more accommodating compared to <gw>, <ɲ> and <c> of Vydrin and Konta (2014b). Other alphabet I proposed, related to vowels are: /e/, /i/, and /u/, represented as <e>, <i>, and <u> respectively. In that case, it will make it, not only easier for the learners of the Jogo language, but the arbitrariness of the present Jogo alphabets cannot be done away with.
## APPENDIX F

**SIL COMPARATIVE AFRICAN WORD LIST 2 (SILCAWL 2)**

<table>
<thead>
<tr>
<th>S/N.</th>
<th>List ID</th>
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<td>2</td>
<td>2</td>
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<td></td>
<td><strong>Head</strong></td>
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<td>3</td>
<td>3</td>
<td>head</td>
<td>wú</td>
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<tr>
<td>4</td>
<td>4</td>
<td>forehead</td>
<td>kyìgí</td>
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<td>5</td>
<td>face</td>
<td>ñàrì</td>
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<td>6</td>
<td>eye</td>
<td>ñàrdì</td>
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<td>eyebrow</td>
<td>ñàrditùŋbá</td>
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<td>eyelid</td>
<td>ñàrdìkákã</td>
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<td>pupil lash</td>
<td>ñàrditíŋ</td>
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<td>pupil (of eye)</td>
<td>ñàrdigbógó</td>
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<td>11</td>
<td>11</td>
<td>nose</td>
<td>sùŋ</td>
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<tr>
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<td>12</td>
<td>bridge of nose</td>
<td>sùŋgbá</td>
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<tr>
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<td>13</td>
<td>ear</td>
<td>tùlù</td>
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<td>14</td>
<td>cheek</td>
<td>gbèè</td>
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<td>15</td>
<td>mouth</td>
<td>dáá</td>
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<td>lip</td>
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<td>molar tooth</td>
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<td>Ewe</td>
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<td>20.</td>
<td>21</td>
<td>jaw</td>
<td>yegebągá</td>
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<td>22</td>
<td>chin</td>
<td>dáakòrá</td>
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<tr>
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<td>23</td>
<td>neck</td>
<td>fòlí</td>
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<tr>
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<td>24</td>
<td>nape of neck</td>
<td>dònŋ</td>
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<tr>
<td>24.</td>
<td>25</td>
<td>throat</td>
<td>fòlí</td>
</tr>
<tr>
<td>25.</td>
<td>26</td>
<td>larynx (Adam’s apple)</td>
<td>fòlígrégré</td>
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<tr>
<td>26.</td>
<td>27</td>
<td>hair (head)</td>
<td>wútigí</td>
</tr>
<tr>
<td>27.</td>
<td>28</td>
<td>beard</td>
<td>dáátígí</td>
</tr>
<tr>
<td>28.</td>
<td>29</td>
<td>hair (of body)</td>
<td>tíŋ</td>
</tr>
<tr>
<td>29.</td>
<td>30</td>
<td>tuft, lock (of hair)</td>
<td>dònŋkànáwùtígí</td>
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</tbody>
</table>

**Trunk**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>English</th>
<th>Ewe</th>
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</thead>
<tbody>
<tr>
<td>30.</td>
<td>31</td>
<td>shoulder</td>
<td>gbáaŋ</td>
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<tr>
<td>31.</td>
<td>32</td>
<td>shoulder blade</td>
<td>kànáyèlí</td>
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<tr>
<td>32.</td>
<td>33</td>
<td>chest</td>
<td>sísí</td>
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<tr>
<td>33.</td>
<td>34</td>
<td>breast</td>
<td>kyí</td>
</tr>
<tr>
<td>34.</td>
<td>35</td>
<td>side (of body)</td>
<td>jìmá</td>
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<tr>
<td>35.</td>
<td>36</td>
<td>waist</td>
<td>kùó</td>
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<tr>
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<td>37</td>
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<td>38</td>
<td>umbilical cord</td>
<td>njùnidi</td>
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<tr>
<td>38.</td>
<td>39</td>
<td>abdomen (external)</td>
<td>kòŋ</td>
</tr>
<tr>
<td>39.</td>
<td>40</td>
<td>stomach (internal)</td>
<td>nògòdí</td>
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<td>40.</td>
<td>41</td>
<td>womb</td>
<td>kòŋ</td>
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<tr>
<td>41.</td>
<td>42</td>
<td>back</td>
<td>kànànŋ</td>
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<tr>
<td>42.</td>
<td>43</td>
<td>small of back</td>
<td>kùó</td>
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</tbody>
</table>
43. 44   buttock  bărānbōŋ
44. 45   anus     bărānyēlí
45. 46   penis     fحرية
46. 47   testicle  kǒ/ kōdī
47. 48   vagina    kúlōŋ
48. 49   clitoris  kúlōndi/ nyɛrɛrī

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<tr>
<th>Limbs</th>
<th>ɲsəɡɔræ (my limbs)</th>
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<td>49. 50 arm</td>
<td>bùlu</td>
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<tr>
<td>50. 51 armpit</td>
<td>blāŋ</td>
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<tr>
<td>51. 52 upper arm</td>
<td>bùlu*</td>
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<tr>
<td>52. 53 elbow</td>
<td>bùlugbùo</td>
</tr>
<tr>
<td>53. 54 forearm</td>
<td>bùlu*</td>
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<tr>
<td>54. 55 wrist</td>
<td>bùlútugúnŋ</td>
</tr>
<tr>
<td>55. 56 hand</td>
<td>bùlu</td>
</tr>
<tr>
<td>56. 57 fist</td>
<td>bùlumúgú</td>
</tr>
<tr>
<td>57. 58 palm (of hand)</td>
<td>bùlutïgë</td>
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<tr>
<td>58. 59 finger</td>
<td>bùlushi</td>
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<tr>
<td>59. 60 thumb</td>
<td>bùluðìwùgbélɛ</td>
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<tr>
<td>60. 61 knuckle</td>
<td>bùlusföli</td>
</tr>
<tr>
<td>61. 62 fingernail</td>
<td>bùlusñyányi</td>
</tr>
<tr>
<td>62. 63 leg</td>
<td>kpùɔ</td>
</tr>
<tr>
<td>63. 64 hip</td>
<td>jìì</td>
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<tr>
<td>64. 65 thigh</td>
<td>wórəŋ</td>
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<tr>
<td>65. 66 knee</td>
<td>gbùo</td>
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</table>
66. shin | kpùɔnyàrdì
67. calf of leg | kpùɔdēŋ
68. ankle | bùlugbùó
69. foot | kpùɔ
70. heel | kpùɔkànà
71. sole | kpùɔsàbarà
72. toe | kpùɔdì

Internal parts and products

73. bone | yélí
74. bone marrow | sɔmɔ
75. skeleton | kúuyélí
76. skull | wúfiɛ
77. breastbone | sisíyélí
78. spine, backbone | káanayélí
79. rib | jìyélí
80. brain | wúnìgef
81. heart | sοŋ
82. liver | bɔŋɔŋ
83. kidney | wɔlɔl
84. lung | fɔŋfɔŋə
85. intestines | nɔŋɔdī
86. bladder | wòlidēŋ
87. gall bladder | kùnàkùndēŋ
88. muscle | siè buŋ
89. tendon | fégé
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<tr>
<td></td>
<td>blink</td>
<td>wink</td>
<td>blow nose</td>
<td>breathe</td>
<td>yawn</td>
<td>snore</td>
<td>pant</td>
<td>blow (with mouth)</td>
<td>spit</td>
<td>cough (v)</td>
<td>belch</td>
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<td></td>
<td>beberi</td>
<td>beberi</td>
<td>sunfiė</td>
<td>nenekili</td>
<td>tâlêŋ</td>
<td>kurnugu</td>
<td>sunnakili dierendi re</td>
<td>efie (blow it)</td>
<td>día yi bô</td>
<td>tegi ke</td>
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<td>102</td>
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<td>112</td>
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**BODY PROCESSES, FUNCTIONS**

- Blink: beberi
- Wink: beberi
- Blow nose: sunfię
- Breathe: nenekili
- Yawn: tâlêŋ
- Snore: kurnugu
- Pant: sunnakili dierendi re
- Blow (with mouth): efie (blow it)
- Spit: día yi bô
- Cough (v): tegi ke
- Belch: kendégé
<p>| 113. 114 | hiccough (n) | yégéyégé |
| 114. 115 | sneeze (v) | tīāke |
| 115. 116 | groan (with pain) | jārākarawɛmå* |
| 116. 117 | grunt (from effort) | ɲunake* |
| 117. 118 | palpitate (of heart) | sônberi |
| 118. 119 | urinate | wólíkɛ/ yàgá yímå |
| 119. 120 | break wind, fart | tʊŋkɛ |
| 120. 121 | defecate | bukɛ/ tàgá kpùɔmå |
| 121. 122 | shiver, tremble | jejeři |
| 122. 123 | perspire, sweat | kínādiebo |
| 123. 124 | bleed | nyinibø |
| 124. 125 | coagulate, clot | nyiniså? |
| 125. 126 | (be) dizzy | kɔnyå? |
| 126. 127 | faint | kiriŋ |
| 127. 128 | sleep (v) | nyinbå |
| 128. 129 | dream (n) | kóri |
| 129. 130 | wake up (intr) | yèli |
| <strong>Senses</strong> |
| 130. 131 | see | ɛjí |
| 131. 132 | notice (v) | ekɔràsi |
| 132. 133 | look at, watch | efilɛŋ |
| 133. 134 | hear | ɛrà mêmå |
| 134. 135 | listen | ɛmɛŋ |
| 135. 136 | smell (v) | ɛmɛŋ så |
| 136. 138 | touch, feel (active) | màgá |</p>
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<td>137. 139</td>
<td>taste</td>
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<td><strong>Ingestion</strong></td>
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<td>139. 141</td>
<td>bite (v)</td>
<td>ɛnỳìŋ</td>
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<td>crunch</td>
<td>ɛkùó</td>
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<td>ɛdóŋ</td>
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<td>gnaw (ronger)</td>
<td>ɛkpùó</td>
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<td>choke</td>
<td>kyígi</td>
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<td>lick</td>
<td>filɛŋ</td>
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<td>147. 148</td>
<td>suck</td>
<td>mɔsɔ</td>
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<td>148. 149</td>
<td>drink</td>
<td>mɛŋ</td>
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<td><strong>BODY MOVEMENT</strong></td>
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<td>sit</td>
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<td>rise up (intr)</td>
<td>yɛl ɛrá yʊŋ</td>
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<td>151. 152</td>
<td>lie down</td>
<td>sá ɗugumã</td>
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<td>turn around</td>
<td>dābúlú</td>
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<td>tagama</td>
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<td>154. 155</td>
<td>step (v)</td>
<td>kpùɔbɔsí</td>
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<td>155. 156</td>
<td>stumble</td>
<td>tɛntɛrɛŋ</td>
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<td>156. 157</td>
<td>limp</td>
<td>ba ɛjimmã</td>
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<td>157. 158</td>
<td>crawl</td>
<td>ɲùrúmã</td>
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<td>158. 159</td>
<td>run</td>
<td>firi</td>
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<td>159. 160</td>
<td>swim</td>
<td>prúgóŋkɛ</td>
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<td>160. 161</td>
<td>jump (v)</td>
<td>tĩŋ</td>
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</table>
161. 162  kick  bùŋ
162. 163  stamp (with foot)  dùɔ
163. 164  trample  ṃḍùɔ
164. 165  wave (hands) (v)  bùlù bɔ
165. 166  indicate, point (with finger)  Ṗdɔ́lì ᐐbula*
166. 167  clap (hands)  bùlù berì
167. 168  slap (v)  tůlù gbéŋ

Body positions
168. 169  stand  yôŋ
169. 170  straddle  kpùɔfifilí
170. 171  lean against (intr)  dẽŋ
171. 172  bend down, stoop  gbùrúŋ
172. 173  bow (as in greeting)  gbùrúŋ
173. 174  (be) seated  yàgá
174. 175  squat  söři
175. 176  kneel  gbùrá (/gbuó) kpá
176. 177  (be) lying down  sá dugumá

Body conditions
177. 178  (be) hot (of a person)  kprù ìe
178. 179  (be) hungry  kɔgɔ
179. 180  (be) sated  bié
180. 181  (be) thirsty (v)  yíkyéli
181. 182  (be) drunk  eyíkpié mĩne/ ebiére dọlìra
182. 183  (be) tired  kpìi
183. 184  (be) sleepy  nyìí yí sà
<table>
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<th>Page</th>
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<th>Term</th>
<th>Translate</th>
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<td>184</td>
<td>185</td>
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<td>kongsiflé</td>
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<tr>
<td>185</td>
<td>186</td>
<td>(be) awake, alert</td>
<td>ehakiawef*</td>
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<td><strong>IRREGULAR CONDITIONS</strong></td>
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<tr>
<td>186</td>
<td>187</td>
<td>wrinkle (n)</td>
<td>nyote (wrinkled)</td>
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<td>187</td>
<td>188</td>
<td>pimple</td>
<td>go</td>
</tr>
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<td>188</td>
<td>189</td>
<td>hump (of hunchback)</td>
<td>jigá</td>
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<td><strong>Abnormal qualities (adjectival)</strong></td>
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<td>189</td>
<td>190</td>
<td>(be) bald</td>
<td>wu fillene (s/he is bald)</td>
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<tr>
<td>190</td>
<td>191</td>
<td>(be) blind</td>
<td>e fugure (s/he is blind)</td>
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<td>191</td>
<td>192</td>
<td>(be) myopic</td>
<td>kinaji dara*</td>
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<td>192</td>
<td>193</td>
<td>(be) thin</td>
<td>era ma peere/ era yeli</td>
</tr>
<tr>
<td>193</td>
<td>194</td>
<td>(be) impotent</td>
<td>kyiniye</td>
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<td><strong>HANDICAPPED PEOPLE</strong></td>
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<td>194</td>
<td>195</td>
<td>barren woman</td>
<td>gbendé</td>
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<td>196</td>
<td>blind person</td>
<td>fugú</td>
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<td>196</td>
<td>197</td>
<td>deaf person</td>
<td>námú</td>
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<td>197</td>
<td>198</td>
<td>hunchback</td>
<td>kyekyemá</td>
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<tr>
<td>198</td>
<td>199</td>
<td>cripple</td>
<td>furuga</td>
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<td>199</td>
<td>200</td>
<td>dwarf</td>
<td>moyo gbundiri</td>
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<td>200</td>
<td>201</td>
<td>giant</td>
<td>kakkarané</td>
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<td>201</td>
<td>202</td>
<td>stupid person</td>
<td>jugá/ hakilaánte</td>
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<tr>
<td>202</td>
<td>203</td>
<td>senile person</td>
<td>hakilaante*</td>
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<td>203</td>
<td>204</td>
<td>mad person</td>
<td>duguto</td>
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</table>
HEALTH AND DISEASE

204. 205 (be) healthy/well  
kprú diá

205. 206 (be) sick  
kyiriyá

206. 207 hurt oneself  
ediána mádiène (s/he’s hurt
herself/ himself)

207. 208 heal, cure (v)  
gbárá

208. 209 medicine  
bélí

209. 210 get well, recover  
láyäfiá ji

210. 211 revive  
ŋünä

Abnormalities

211. 212 abscess  
búyúnyá

212. 213 swelling  
jérën/ gérën/eyúgúre

213 214 tumour  
jérën

214. 215 bruise (n)  
würärè

215. 216 burn (n)  
táakpáa

216. 217 goiter  
dűgū* fóliyúgú

217. 218 hernia  
kúlá

218. 219 ulcer  
kônkpáá

219. 220 wound, sore  
kpá

220. 221 pus  
búyúnyáyí

221. 222 scar  
kpáá kprà

222. 223 intestinal worm  
kônkon nyɔlɔlɔ

Diseases, malaise

223. 224 illness, disease  
kyiriyá
| No. | English | Ewe (English)
<table>
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<tr>
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<tbody>
<tr>
<td>224.</td>
<td>ringworm</td>
<td>yèrǐnyáyá</td>
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<tr>
<td>225.</td>
<td>leprosy</td>
<td>kókóyó</td>
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<tr>
<td>226.</td>
<td>malaria (fever)</td>
<td>sìè</td>
</tr>
<tr>
<td>227.</td>
<td>fever (not malaria)</td>
<td>kprù dìe</td>
</tr>
<tr>
<td>228.</td>
<td>pain (n)</td>
<td>diéŋ/jàrãŋkàrá</td>
</tr>
<tr>
<td>229.</td>
<td>give pain, hurt</td>
<td>màdięŋ</td>
</tr>
<tr>
<td>230.</td>
<td>throb (with pain)</td>
<td>wólí</td>
</tr>
<tr>
<td>231.</td>
<td>vomit (v)</td>
<td>fuùndù</td>
</tr>
<tr>
<td>232.</td>
<td>stomach ache</td>
<td>kòndiéŋ</td>
</tr>
<tr>
<td>233.</td>
<td>headache</td>
<td>wùdięŋ</td>
</tr>
<tr>
<td>234.</td>
<td>diarrhea</td>
<td>kōŋkàrí</td>
</tr>
<tr>
<td>235.</td>
<td>scabies (the itch)</td>
<td>gbōnmĩŋ</td>
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</table>

**Life and death**

| No. | English | Ewe (English)
<table>
<thead>
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<tbody>
<tr>
<td>236.</td>
<td>life</td>
<td>nyíi</td>
</tr>
<tr>
<td>237.</td>
<td>(be) alive</td>
<td>nyíímã</td>
</tr>
<tr>
<td>238.</td>
<td>menstrual period</td>
<td>lādá</td>
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<tr>
<td>239.</td>
<td>(be) pregnant</td>
<td>kònsōŋ</td>
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<tr>
<td>240.</td>
<td>miscarriage</td>
<td>kònbáa/kòŋkãŋɛ</td>
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<tr>
<td>241.</td>
<td>labour (n), birth pains</td>
<td>bólí jàrãŋkàrá / bólĩmåyá kòndiéŋ</td>
</tr>
<tr>
<td>242.</td>
<td>bear (child), give birth</td>
<td>bólí</td>
</tr>
<tr>
<td>243.</td>
<td>(be) born</td>
<td>bólí</td>
</tr>
<tr>
<td>244.</td>
<td>(be) young</td>
<td>(wúlãdì/ fìnãdì = youth)</td>
</tr>
<tr>
<td>245.</td>
<td>grow up</td>
<td>kôŋj</td>
</tr>
<tr>
<td>246.</td>
<td>(be) old (not young)</td>
<td>kprà</td>
</tr>
</tbody>
</table>
247. 249  
die  
era kpã

248. 250  
death  
kpã

249. 251  
(be) dead  
nñ/ kpã

2  MAN’S NONPHYSICAL BEING

2.1 KNOW, BELIEVE, TEACH

250. 252  
think  
jâtéríkɛ̀/táɣåsi

251. 253  
believe  
límáninyá

252. 254  
hope (v)  
jìgi

253. 255  
know (someone/smth)  
sò

254. 256  
knowledge  
kpùrú /lɔ̀nì
dì
dì

255. 257  
wisdom  
kusɔyá

256. 258  
(be) wise  
kusɔ

257. 259  
(be) intelligent  
kusɔ

258. 260  
(be) stupid  
jùgã/ damboli

259. 261  
(be) confused  
ahákilá ra kyĩnkyãŋ

260. 262  
learn  
 sûŋ lángà

261. 263  
teach  
 sûŋ dɔlì

262. 264  
show  
dìlì
dìlì

263. 265  
remember  
yìriyá

264. 266  
forget  
erá nyínà

EMOTIONS

265. 267  
(be) happy  
ènĩnsɔ rå diá

266. 268  
rejoice  
nĩnsɔdiá
267. laugh  erá jelike
268. smile  nárfúlóŋ
269. (be) sad  e súnná rá bié
270. cry, weep  era díí
271. sorrow  mànyinà
272. shame (n)  móliyá
273. pity (n)  mànyinà
274. fear  gbiãya
275. frighten  gbiãya ba
276. startle, surprise  káákú
277. (be) angry  e bòỳòmà rá kpà
278. calm (oneself)  nyinteliya/ sàwárijí
279. (be) proud  wásó
280. respect (v)  bónyà
281. honour (v)  dàrájá
282. love (v)  kání
283. hate (v)  búnú/ bòỳòmákà
284. despise, disdain  dògyàyà

HUMAN WILL

285. want, desire (v)  lànyìnì
286. decide  è kpà/ èsùyú
287. choose, pick  dóbà, diénbo
288. hesitate  játérikpànere
289. abstain  èdiánàkyíígí
290. 292 allow, permit 
edîè ẹje/ dià
291. 293 forbid 
ebàrì
292. 294 prevent 
bárisí
293. 295 plan (n) 
fåsání
294. 296 try 
bànbà
295. 297 succeed 
erákyi/erányià
296. 298 fail 
egbiere/ egàle
297. 299 pretend 
lielie/ dàwári

**HUMAN CHARACTER**

298. 300 (be) kind 
kôdî
299. 301 “ generous 
èbùlo fùlônɛwè
300. 302 “ selfish 
kókià
301. 303 “ honest 
liekiká
302. 304 “ corrupt 
dàwârîmọọ
303. 305 “ wicked 
wùmágbà
304. 306 “ fierce 
gbáarè
305. 307 “ jealous 
ŋàrdíèŋ
306. 308 “ shy 
móli
307. 309 “ courageous, brave 
bọyọgbàyà
308. 310 coward 
ghiàtò
309. 311 “ curious 
esomnɛwɛ
310. 312 “ eager, zealous 
bábàǹɛwè*
311. 313 “ lazy 
màkpiàtò
312. 314 “ patient 
sàwári/ sàwârîmọọ
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<thead>
<tr>
<th>Number</th>
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<tr>
<td>313.</td>
<td>impatient</td>
<td>sàwárinté</td>
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<tr>
<td>314.</td>
<td>restless, unsettled</td>
<td>wūrāŋ/ hàkiláberi</td>
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<tr>
<td>315.</td>
<td>stubborn</td>
<td>tūlɔfɔrĩ</td>
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<tr>
<td>316.</td>
<td>reputation</td>
<td>tɔyɔ</td>
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<td><strong>DIFFICULTY</strong></td>
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<td>317.</td>
<td>hardship, distress</td>
<td>gbàyá</td>
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<tr>
<td>318.</td>
<td>be difficult</td>
<td>gbáre</td>
</tr>
<tr>
<td>319.</td>
<td>suffer (v)</td>
<td>tɔ: rɔŋ</td>
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<tr>
<td>320.</td>
<td>obstruct (v)</td>
<td>e kpetre</td>
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<tr>
<td>321.</td>
<td>obstruction (stumbling block)</td>
<td>kpetrẹnã</td>
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<tr>
<td>322.</td>
<td>danger</td>
<td>wúmátefi</td>
</tr>
<tr>
<td>323.</td>
<td>problem, trouble</td>
<td>wúóku / báláwú /músibá</td>
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<tr>
<td></td>
<td><strong>PERSONS</strong></td>
<td></td>
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<tr>
<td>324.</td>
<td>human being, person</td>
<td>dansĩŋ/ mɔyɔ</td>
</tr>
<tr>
<td>325.</td>
<td>self</td>
<td>mmá</td>
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<tr>
<td>326.</td>
<td>man (male)</td>
<td>kyíni</td>
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<tr>
<td>327.</td>
<td>woman</td>
<td>nyãa</td>
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<td>328.</td>
<td>white man</td>
<td>násará</td>
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<td><strong>STAGES OF LIFE</strong></td>
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<td>329.</td>
<td>fetus</td>
<td>kõŋ</td>
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<td>330.</td>
<td>baby</td>
<td>dibàyã</td>
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<td>331.</td>
<td>twin</td>
<td>fálândi</td>
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<td>332.</td>
<td>child</td>
<td>dì</td>
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<td>333.</td>
<td>boy</td>
<td>kyíndiri</td>
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334. 336  girl  nyàdìrì
335. 337  adult  kpûrâŋgbɔ̀ŋ
336. 338  young man  wûlâdî/ fînâjìè
337. 339  virgin  kàrîkûrɛŋ (à bɛ̃̃ɛrɛ)/ kàrîdirì
338. 340  old person  kyînkûrâ/ kpûrâgbɔ̀ŋ

BLOOD RELATIONS

339. 341  relative (by blood)  làmɔ̀ɣɔ̀
340. 342  ancestor  fîlîɛn/ fîlînô
341. 343  grandparent  sfà
342. 344  father  jé
343. 345  mother  nìè
344. 346  brother (elder/younger)  ðjwó/ ðòγò
345. 347  sister (elder/younger)  jìà/ ðòγò
346. 348  uncle (paternal)  jèŋgbɔ̀ŋ (elder) / jògòrì (younger)
347. 349  uncle (maternal)  bénj
348. 350  aunt (maternal)  nògbɔ̀ŋ (elder) / nòγòrî (younger)
349. 351  aunt (paternal)  nògbɔ̀ŋ (elder) / nòγòrî (younger)
350. 352  cousin  bénðì kyînimà/nyàmà
351. 353  first born  dì sîŋkpiéŋò
352. 354  descendant  zûriàñò
353. 355  son  dûkyíñì
354. 356  daughter  dùnyá
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<tr>
<td>355. 357</td>
<td>grandchild</td>
<td>mwári</td>
<td></td>
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<tr>
<td>356. 358</td>
<td>nephew</td>
<td>béli</td>
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<tr>
<td>357. 359</td>
<td>name</td>
<td>tóyó</td>
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<td>358. 360</td>
<td>namesake</td>
<td>tóyómã</td>
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**MARRIAGE RELATIONS**

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<tr>
<td>359. 361</td>
<td>in-law</td>
<td>birá</td>
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<tr>
<td>360. 362</td>
<td>husband</td>
<td>kyèlì</td>
<td></td>
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<tr>
<td>361. 363</td>
<td>wife</td>
<td>diá</td>
<td></td>
<td></td>
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<tr>
<td>362. 364</td>
<td>fellow-wife, co-wife</td>
<td>tíná</td>
<td></td>
<td></td>
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<tr>
<td>363. 365</td>
<td>father-in-law</td>
<td>birá</td>
<td></td>
<td></td>
</tr>
<tr>
<td>364. 366</td>
<td>mother-in-law</td>
<td>birá</td>
<td></td>
<td></td>
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<tr>
<td>365. 367</td>
<td>brother-in-law</td>
<td>birá</td>
<td></td>
<td></td>
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<tr>
<td>366. 368</td>
<td>sister-in-law</td>
<td>birá</td>
<td></td>
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<td>367. 369</td>
<td>son-in-law</td>
<td>birá</td>
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<td>368. 370</td>
<td>daughter-in-law</td>
<td>birá</td>
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<td>369. 371</td>
<td>widow</td>
<td>friyátɔ/ friyá nyá</td>
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<td>370. 372</td>
<td>widower</td>
<td>friyá kyini</td>
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<td>371. 373</td>
<td>orphan</td>
<td>fáládi</td>
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<td>372. 374</td>
<td>fiancé</td>
<td>kyèlì</td>
<td></td>
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<td>373. 375</td>
<td>fiancée</td>
<td>diá</td>
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<td>374. 376</td>
<td>bastard</td>
<td>suóyà di</td>
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**3.4 RELATIONS, EXTENDED AND SOCIAL**

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<tr>
<td>375. 377</td>
<td>tribe, ethnic group</td>
<td>síí</td>
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<td>376. 378</td>
<td>clan</td>
<td>kábílá</td>
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<td>377. 379</td>
<td>family</td>
<td>lámɔ̀ɣɔ</td>
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<td>Page</td>
<td>Line</td>
<td>Term</td>
<td>Translation</td>
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<tr>
<td>378.</td>
<td>380</td>
<td>friend</td>
<td>téŋ</td>
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<td>379.</td>
<td>381</td>
<td>neighbor</td>
<td>dànányɔ̀yò</td>
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<td>380.</td>
<td>382</td>
<td>acquaintance</td>
<td>sòyámɔ̀yò</td>
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<td>381.</td>
<td>383</td>
<td>host</td>
<td>kàmãkyíni</td>
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<td>382.</td>
<td>384</td>
<td>guest, visitor</td>
<td>nάŋ, nάŋkyíni / nάnnyά</td>
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<tr>
<td>383.</td>
<td>385</td>
<td>stranger</td>
<td>mɔyɔ̀dó, nάŋkyínidó / nάnnyάdó, nάŋ</td>
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<td>384.</td>
<td>386</td>
<td>enemy</td>
<td>kòli</td>
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<tr>
<td>385.</td>
<td>387</td>
<td>traitor</td>
<td>nàmimá /minάfígi</td>
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<tr>
<td>386.</td>
<td>388</td>
<td>thief</td>
<td>gbόŋ</td>
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<td>387.</td>
<td>389</td>
<td>guide (n)</td>
<td>báádà (also leader)</td>
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<td>388.</td>
<td>390</td>
<td>messenger</td>
<td>kyiérá</td>
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<td>389.</td>
<td>391</td>
<td>crowd</td>
<td>jámá</td>
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<td>390.</td>
<td>392</td>
<td>chief</td>
<td>sά</td>
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<td>391.</td>
<td>393</td>
<td>elder</td>
<td>kpùrágbόŋ/kùntígi/físάnté</td>
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<td>392.</td>
<td>394</td>
<td>master</td>
<td>mάtígi</td>
<td></td>
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<tr>
<td>393.</td>
<td>395</td>
<td>slave</td>
<td>jό</td>
<td></td>
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<td>3.5</td>
<td>PROFESSIONS</td>
<td></td>
<td>yiά nό</td>
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<td>394.</td>
<td>396</td>
<td>farmer</td>
<td>bágàsamɔ̀yò</td>
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<td>395.</td>
<td>397</td>
<td>fisherman</td>
<td>yágàbɔmɔ̀yò</td>
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<tr>
<td>396.</td>
<td>398</td>
<td>hunter</td>
<td>dúŋ /fɛlɛgɛmɔ̀yò</td>
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<td>397.</td>
<td>399</td>
<td>blacksmith</td>
<td>nùmú/túrúbèrìmɔ̀yò</td>
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<td>398.</td>
<td>400</td>
<td>potter</td>
<td>tùgǔtiémmɔ̀yò</td>
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</table>
399. 401  weaver  dëŋgbëli
400. 402  butcher (n)  sìétụrmọ́gã
401. 403  trader  dínsomọ́gã
402. 404  (domestic) servant  táakórdí/ kàrì
403. 405  beggar  délfíkemọ́gã
404. 406  soldier  sójá/ gbúnyíri (police)
405. 407  prostitute  fásiyí
406. 408  midwife  bólidagámágã
407. 409  traditional healer  mógbó gbárámọ́gã
408. 410  fetish priest  kpiémámọ́gã
409. 411  sorcerer (male)  gbáryíni
410. 412  witch (female)  gbárnyá
411. 413  fortune-teller  düýà berímọ́gã / filéŋkemọ́gã

4.0 PERSONAL INTERACTION
4.1 ASSOCIATION OF PERSONS
412. 414  meet, encounter  dàwóŋ
413. 415  accompany  kúrákɛ
414. 416  (be) together  kyàvá
415. 417  assemble, meet together  (wu) bëŋ/ katařó
416. 418  invite  kilike
417. 419  (be) alone  èra tì diáŋ
418. 420  abandon  gbà
419. 421  flee, run away from  firi
420. 422  drive away  kyilí
dr
421. 423  avoid  fárà
422. 424  (be) same  díéŋ
423. 425  (be) different  ewe edórá/fáràfáràsĩŋ
424. 426  resemble  múnú
425. 427  imitate  báabɔ*
426. 428  admire  era diá eŋe
427. 429  befit, suit  edágáre/ kan

4.2 SPEECH, LANGUAGE

428. 430  language  kprá
429. 431  word  kprá di
430. 432  meaning  kɔrɔŋ
431. 433  say  re/ tɔ̀ɣó
432. 434  voice  nĩŋ
433. 435  speak, talk  tọ́ɡó/ kprátɔ̀ɣó
434. 436  whisper (v)  kprátɔ̀ɣ o tulokono/ kprasã
435. 437  shout (v), cry out  wólí
dr
436. 438  chat (v)  báaró bô
437. 439  mumble  kprátɔ̀ɣ o dãakɔrá
438. 440  stutter  mêmêm
439. 441  (be) eloquent  dáadià
dr
440. 442  (be) silent  era tọ́ɡó

4.2.1 Greeting  yelkɛ
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<tbody>
<tr>
<td>441. 443</td>
<td>greet (v)</td>
<td>era yelke</td>
<td></td>
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<tr>
<td>442. 444</td>
<td>call (someone)</td>
<td>era kilke</td>
<td></td>
<td></td>
</tr>
<tr>
<td>443. 445</td>
<td>say goodbye, take leave of</td>
<td>era kyílí délí/ bëmbá</td>
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### 4.2.2 Information and questions

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<tr>
<td>444. 446</td>
<td>announce</td>
<td>ésá jámã ñará</td>
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<tr>
<td>445. 447</td>
<td>announcement</td>
<td>wágólóyá*</td>
<td></td>
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<tr>
<td>446. 448</td>
<td>news</td>
<td>hibárú</td>
<td></td>
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<tr>
<td>447. 449</td>
<td>explain</td>
<td>kɔrɔndɔlì</td>
<td></td>
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<tr>
<td>448. 450</td>
<td>advise</td>
<td>laddrí kɛ/ kawúndí kɛ</td>
<td></td>
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<tr>
<td>449. 451</td>
<td>gossip (v)</td>
<td>minãfigiyá mä*</td>
<td></td>
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<tr>
<td>450. 452</td>
<td>lie (n) (falsehood)</td>
<td>kàkàli</td>
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<tr>
<td>451. 453</td>
<td>ask, request (n)</td>
<td>délìkɛ</td>
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<tr>
<td>452. 454</td>
<td>plead, implore</td>
<td>era délìkɛ</td>
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<tr>
<td>453. 455</td>
<td>request (n)</td>
<td>délìkɛ</td>
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<tr>
<td>454. 456</td>
<td>answer, reply (v)</td>
<td>e dàaabɔ</td>
<td></td>
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<tr>
<td>455. 457</td>
<td>thank</td>
<td>eko ánïkyé ra</td>
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### 4.2.3 Promise

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<tr>
<td>456. 458</td>
<td>promise (n)</td>
<td>làyirí</td>
<td></td>
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<tr>
<td>457. 459</td>
<td>oath</td>
<td>kyéli</td>
<td></td>
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<tr>
<td>458. 460</td>
<td>swear</td>
<td>kyélìkɛ</td>
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### 4.2.4 Strife and praise

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<tr>
<td>459. 461</td>
<td>insult (v)</td>
<td>kùrùŋkɛ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>460. 462</td>
<td>insult (n)</td>
<td>kùrùŋ</td>
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<tr>
<td>461. 463</td>
<td>slander (v)</td>
<td>káanà siëdön</td>
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</tbody>
</table>
462. 464 threaten bàbàyà
463. 465 argue kítíke
464. 466 argument kítí/kɔyɔ
465. 467 grumble, complain kúnàmà
466. 468 contradict èra gbà kpràrá
467. 469 accuse kúsá mɔɔrǎ
468. 470 deny kɔyɔkè
469. 471 admit dàyà èkè
470. 472 agree yòŋ èra
471. 473 agreement kɔrɔmì
472. 474 persuade hàkilásùyù
473. 475 praise (n) màkili/ làkyèlì
474. 476 bless, praise bàrìgi, etēŋ
475. 477 congratulate èkọ àniwálé ra/ anikyé ra
476. 478 boast, brag dáakè

4.2.5 Discourse genres

477. 479 tell, recount (story) kísá tògo
478. 480 story (tale) kyǐi
479. 481 proverb táalénj
480. 483 account, (report) (n) làsélì

4.3 INTERPERSONAL CONTACT

481. 484 embrace, hug (v) è nyáfù sùyù
482. 485 caress (v) srà
483. 486  kiss (v)  
484. 487  copulate  
485. 488  nurse, suckle (baby) (tr)  
486. 489  tickle (v)  
487. 490  spank (child)  
488. 491  whip (n)  

| 489. 492  | help (v)  |
| 490. 493  | protect, defend |
| 491. 494  | look after  |
| 492. 495  | bring up (a child) |

**4.4 HELP AND CARE**

| 492. 495  | help (v)  |
| 493. 496  | rule over, dominate |
| 494. 497  | ord (to do something) |
| 495. 498  | command (n) |
| 496. 499  | duty, obligation |
| 497. 500  | send (one do something) |
| 498. 501  | serve |
| 499. 502  | lead, guide (v) |
| 500. 503  | follow |
| 501. 504  | obey |

**4.5 DOMINION AND CONTROL**

| 496. 499  | duty, obligation  |
| 497. 500  | send (one do something)  |
| 498. 501  | serve  |
| 499. 502  | lead, guide (v)  |
| 500. 503  | follow  |
| 501. 504  | obey  |

**4.6 CONFLICT AND RESOLUTION**

| 502. 505  | please, satisfy (v)  |
| 503. 506  | annoy, disturb  |
504. 507  deceive (v)  nämbará/fiefic
505. 508  quarrel (n)  s̄n̄
506. 509  fight (v)  s̄ŋke
507. 510  stab (v)  esorōŋ
508. 511  kill, murder (v)  ekpā
509. 512  take revenge  gūlūb/ŋɔyōbo
510. 513  resolve, settle (dispute)  tūtíēŋ
511. 514  intercede, mediate  sōkūkōŋ
512. 515  compromise  etūrabēli*
513. 516  appease, pacify  e kūnākē (kūnā)

4.7 CRIME AND JUSTICE  màri we liādirīya
514. 517  steal  egbiā
515. 518  rape  so ewūrā
516. 519  judge (v)  kītí béyē
517. 520  law  mmārā/shāriā
518. 521  (be) fair, just  emā liādirī we
519. 522  (be) guilty  akōr gōlōnn (gōlōŋ)
520. 523  (be) innocent  ekūsōrei/ŋɔkubélī
521. 524  punish  ayi tūlūkyígī
522. 525  penalty, punishment  haddu /tūlūkyígī

5.0 HUMAN CIVILISATION

5.1 SETTLEMENT  yàỳà dirá
523. 526  dwell, inhabit  yàỳà/ wē
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<tr>
<td>524.</td>
<td>527</td>
<td>inhabitant</td>
<td>kámɔɣɔ</td>
</tr>
<tr>
<td>525.</td>
<td>528</td>
<td>bush dweller</td>
<td>bàgãkãmãmɔɣɔ̀</td>
</tr>
<tr>
<td>527.</td>
<td>529</td>
<td>move away, migrate</td>
<td>púyùtí /bɔsì</td>
</tr>
<tr>
<td>528.</td>
<td>530</td>
<td>country</td>
<td>kyïñi/jámàná</td>
</tr>
<tr>
<td>529.</td>
<td>531</td>
<td>frontier (of ethnic area)</td>
<td>bérédáa/lókókɔ̀</td>
</tr>
<tr>
<td>530.</td>
<td>532</td>
<td>town, city</td>
<td>kãŋ</td>
</tr>
<tr>
<td>531.</td>
<td>533</td>
<td>village</td>
<td>báyãkãŋ</td>
</tr>
<tr>
<td>532.</td>
<td>534</td>
<td>camp, encampment</td>
<td>báyãkãmã</td>
</tr>
<tr>
<td>533.</td>
<td>535</td>
<td>market (n)</td>
<td>díŋ</td>
</tr>
</tbody>
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5.2 CLOTHING AND ADORMENT OF BODY

### 5.2.1 Clothing

<p>| | | | |</p>
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<tbody>
<tr>
<td>534.</td>
<td>536</td>
<td>clothes</td>
<td>déréŋgé/ sulɔ</td>
</tr>
<tr>
<td>535.</td>
<td>537</td>
<td>wear clothes</td>
<td>déréŋgésɔ̀</td>
</tr>
<tr>
<td>536.</td>
<td>538</td>
<td>dress (v)</td>
<td>diénáyɛl</td>
</tr>
<tr>
<td>537.</td>
<td>539</td>
<td>undress</td>
<td>era wúrá</td>
</tr>
<tr>
<td>538.</td>
<td>540</td>
<td>(be) naked</td>
<td>wúrá</td>
</tr>
<tr>
<td>539.</td>
<td>541</td>
<td>hat</td>
<td>gbónfilá</td>
</tr>
<tr>
<td>540.</td>
<td>542</td>
<td>shirt</td>
<td>déréŋgé</td>
</tr>
<tr>
<td>541.</td>
<td>543</td>
<td>trousers</td>
<td>kûrûsí</td>
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<tr>
<td>542.</td>
<td>544</td>
<td>loincloth</td>
<td>bilá</td>
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<td>543.</td>
<td>545</td>
<td>robe (man’s gown)</td>
<td>jàlbáb</td>
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<tr>
<td>544.</td>
<td>546</td>
<td>cloth worn by a woman</td>
<td>gá</td>
</tr>
<tr>
<td>545.</td>
<td>547</td>
<td>baby sling</td>
<td>gá</td>
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<tr>
<td>546.</td>
<td>548</td>
<td>shoe, sandal</td>
<td>sàbráŋ</td>
</tr>
</tbody>
</table>
5.2.2 Adornment and accessories

547. bead ŋunusĩŋ/ŋùnù
548. string, thread (beads) (v) ŋunusɔ
549. bracelet bùlásĩŋ/ gbɛ̃́̃ɛŋ
550. necklace fólásĩŋ
551. ankle ring, bangle gbànya
552. ring (finger) gbɛndiri
553. earring túlásĩŋ
554. pierce (ears) ěsɔrɔ
555. labret, lip plug, lip disk dáagbáa
556. plait, braid (hair) ěra wúyírí
557. (facial) incision(s), tattoo (s) lólóyó
558. cane, walking stick kpí

5.2.3 Care for body

559. bathe, wash oneself ěra wié
560. apply (ointment) tìlé srã
561. wipe off (excreta) bàrã tílí/ diénãtiñ̩
562. cut (hair) wútíyí bébéyé
563. shave (v) síŋ
564. razor bílédigbá
565. comb (n) sèrën̩
566. tooth stick, toothbrush dōŋgbá

5.3 FOOD AND DRINK

5.3.1 Food

567. food tù
568. meat  sié
569. fat  kyíí
570. oil  tîlé
571. soup  tàyá
572. pap, mushy food  tükõnɛ
573. bread  pánɔ
574. crust  fârâ
575. flour  fûyû
576. salt  kùɔ
577. breakfast  dârákã
578. evening meal  kôrótù
579. feast  wálímá
580. leftovers (overnight)  tûgbîŋ
581. spoil  erà kã
582. mould  fûn

5.3.2 Drink  mínsî
583. milk  nyïgé
584. curdled milk  nàarâ
585. alcohol  dɔlî
586. beer  dɔlî
587. mead, honey bear  dɔlî
588. palm wine  dɔlî

5.4 FOOD PREPARATION

5.4.1 Kitchen preparation
589. prepare (food to cook)  tîwmɔ/tûmã
590. 592  cut  ebévé
591. 593  cut open  ebévé túlá
592. 594  slice  nyỳnyìgì
593. 595  peel  emáyá
594. 596  mix  ekyáyá
595. 597  stir  emàmàyá
596. 598  strain  egbùó (liquid)/ ẹtènné (flour)
597. 599  pound  etìyì
598. 600  grind  eyévé
599. 601  knead  eséyé
600. 602  pluck (feathers)  tímböse

5.4.2 Cooking

601. 603  cook  ẹmwọ
602. 604  roast  ẹsìrá
603. 605  fry  ejīlā
604. 606  bake  ẹsìrá
605. 607  be smoked  egbàà
606. 608  boil  ẹmwọ
607. 609  ferment (alcohol)  era ɲúŋ

5.5 DOMESTIC UTENSILS AND CONTAINMENT

5.5.1 Kitchen utensils

608. 610  cooking pot  dårìsẹn
609. 611  metal  túrú
| 610. 612 | pot (water)       | tūyū |
| 611. 613 | ladle             | táyákató |
| 612. 614 | cooking stone     | bõŋkpiŋ |
| 613. 615 | grinding stone    | táyáyéyékpíŋ |
| 614. 616 | upper grinding stone | táyáyéyékpíŋdi |
| 615. 617 | lower grinding stone | yèyékpíŋ |
| 616. 618 | pestle            | ñōndi |
| 617. 619 | mortar            | ñōŋ |

### 5.5.2 Eating utensils

<p>| 618. 620 | plate         | kúmtâkpiŋpá |
| 619. 621 | bowl          | tasa/ kúrúwa |
| 620. 622 | cup           | bõŋkáua/ fie |
| 621. 623 | spoon         | báyákató/yeleŋ |
| 622. 624 | bag           | (suluke) bótōŋ |
| 623. 625 | box           | fórógo? |
| 624. 626 | basket        | kyé |
| 625. 627 | bucket        | wiésélgbúŋ/ bókúfú |
| 626. 628 | calabash      | fié |
| 627. 629 | bottle        | dën |
| 628. 630 | stopper       | dáatọsíŋ |
| 629. 631 | handle        | sùyúdîra |
| 630. 632 | pour          | ebōŋ/ esie |
| 631. 633 | spill (liquid) | era dákáboŋ |
| 632. 634 | take out (from container) | ebø |</p>
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<tr>
<td>633. 635</td>
<td>fill</td>
<td>ɛfẹŋ</td>
<td></td>
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<tr>
<td>634. 636</td>
<td>(be) full</td>
<td>ɛra fẹŋ</td>
<td></td>
</tr>
<tr>
<td>635. 637</td>
<td>(be) empty</td>
<td>ɛramà wàŋ</td>
<td></td>
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<tr>
<td>636. 638</td>
<td>(be) open</td>
<td>ɛra lájì</td>
<td></td>
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<tr>
<td>637. 639</td>
<td>open</td>
<td>ɛlájì</td>
<td></td>
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<tr>
<td>638. 640</td>
<td>close, shut</td>
<td>ɛblàŋ</td>
<td></td>
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<td>639. 641</td>
<td>stop up</td>
<td>ɛdáänàrì</td>
<td></td>
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<tr>
<td>640. 642</td>
<td>cover</td>
<td>ɛtɔyọ</td>
<td></td>
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<tr>
<td>641. 643</td>
<td>uncover</td>
<td>ɛ bănggé</td>
<td></td>
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<td>642. 644</td>
<td>store (up)</td>
<td>ɛ tiënsá</td>
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<tr>
<td>643. 645</td>
<td>bundle (n)</td>
<td>ɣiři</td>
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<tr>
<td>644. 646</td>
<td>heap (n)</td>
<td>kùrù</td>
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<tr>
<td>645. 647</td>
<td>heap up</td>
<td>ɛra kùrù</td>
<td></td>
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<tr>
<td>646. 648</td>
<td>wrap up</td>
<td>ɛyìrí</td>
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<td>647. 649</td>
<td>unwrap</td>
<td>fùlọŋ</td>
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<td>648. 650</td>
<td>pack</td>
<td>sógólọŋ</td>
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<td>649. 651</td>
<td>strap (n)</td>
<td>màrājùlú</td>
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<tr>
<td>650. 652</td>
<td>string (n)</td>
<td>jùlúmjì̯/ jèsé</td>
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<tr>
<td>651. 653</td>
<td>rope</td>
<td>jùlú</td>
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<td>652. 654</td>
<td>knot</td>
<td>kò</td>
<td></td>
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<tr>
<td>653. 655</td>
<td>fasten</td>
<td>ɛyìrí/ ɛtùgüŋ</td>
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<tr>
<td>654. 656</td>
<td>tie</td>
<td>ɣiři</td>
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<tr>
<td>655. 657</td>
<td>untie</td>
<td>fùlọŋ</td>
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<tr>
<td>656. 658</td>
<td>tighten</td>
<td>ɛ yìte gbarɛ</td>
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<tr>
<td>657. 659</td>
<td>(be) tight</td>
<td>ɛ yìrí gbáarɛ</td>
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</tr>
</tbody>
</table>
658. 660 loosen ekõŋ lájířε
659. 661 (be) loose, slack ekõŋ lájí

5.6 HABITATION

5.6.1 Parts of a house

660. 662 compound, house kyórí tùõŋ
661. 663 hut biŋbà/biŋkyórí
662. 664 wall kpirí
663. 665 door, doorway cover kónŋ
664. 666 doorway kóŋgbá
665. 667 window tókóró
666. 668 roof briŋ
667. 669 beam, rafter báñábírí
668. 670 floor dúyúmà
669. 671 room gbnŋ
670. 672 bedroom gbnŋkòŋkòŋ
671. 673 kitchen jáadi
672. 674 entrance gbnàdáa
673. 675 courtyard kyóritùõŋ
674. 676 fence (n) kpirí
e kpeterε
675. 677 fence in (v) lasó
676. 678 granary kòlõŋ
677. 679 well (n) jùö
678. 680 bathing place tiyá
680. 682  garbage dump  sùndùyù
681. 683  garden  kàrà
682. 684  shelter  pàtà

5.6.2 Construction
683. 685  build  ɛkpà
684. 686  mark out, peg out  kpáa sá
685. 687  mud block  tórófa
686. 688  thatch (n)  té té
687. 689  plaster  enọqọ
688. 691  paint  pèntì
689. 692  ladder  ye yèrèyìè

5.6.3 Furniture
690. 693  chair  gbóŋ
691. 694  stool  sáyagbóŋ/gbóŋ
692. 695  wickerwork  dēbelígboŋ
693. 696  bed  bámbé
694. 697  mat  nìngeli
695. 698  lamp, torch  fitíná
696. 699  fan (n)  féndé
697. 700  bell  wéléwélé
698. 701  ring (bell)  wéléwéléberi

5.7 PROFESSIONS AND WORK
699. 702  act, do  mà
700. 703  work (n)  yiá
701. 704  mend, repair  etiẹŋ
5.7.1 Smithing

702. 705   forge (n) nùmú/túrúberì
703. 706   hammer túrúberisíŋ
704. 707   anvil kpì
705. 708   bellow fàfúu

5.7.3 Wood work

706. 712   wood gbáa
707. 713   cut down (log) gbáa béyé
708. 714   log gbáa gbélé
709. 716   axe jéndé
710 717   chop into pieces etúlá/ enyìgt
711. 719   saw (v) etúlá
712. 721   knot (in wood) kàlákàlãŋ (liane)
713. 724   nail (n) túrú

5.7.4 Tailoring and weaving

714. 725   sew ekárà
715. 726   needle mìnyìnì
716. 727   thread (n) jésé
717. 729   pocket jùfá
718. 730   (be) torn tì
719. 731   weave kólón mã
720. 732   cloth gà

5.7.5 Domestic work

721. 733   rag kpíndigí
722. 734   broom sàdigí
sweep  efẹ́ŋ
polish  fēnfen (sàbránj)
wash (utensils)  bielẹŋ wię́
draw water  yíkyíɡí
fetch (firewood)  sọyarã sini
dig  sị́n
rubbish  nyànyímá

5.8 AGRICULTURE

5.8.1 Cultivation

cultivate  báyásá
field  báyá /kpéndéyé
boundary (of field)  dάá/ lókọ
fertile soil  dùyúkyímá
(be) barren (of land)  kyérẹŋkyéřé dùyú
clear (land for planting)  kyèsí / sùgabéyé
sow, plant  ēbáa / simába
weed (v)  (see 747)
hoe (v)  wọrọŋ
hoe (n)  kpúó / lóó (for digging hole)
big hoe  kpúógbọŋ
sickle  kótófiów
machete, cutlass  bọrififágbọŋ

5.8.2 Harvest

harvest season  sumọ kyirẹ
744. 757  harvest (maize)  jónjí kyìrɛ
745. 758  harvest yam, dig up (yams)  wùóbɔ
746. 759  pick, pluck (fruits)  lómürúbéyé
747. 760  harvest, collect honey  kũũmbɔ
748. 765  shell (groundnut) (v)  mátígá tié
749. 766  husk (corn) (v)  jónjí fɛlɛgɛ

5.8.3 Animal husbandry

750. 768  herd (cattle, sheep) (n)  yéyékyɔgàlì
751. 769  herd, tend (cattle, sheep) (v)  kũũmbɔ
752. 770  cattle pen  gãã
753. 771  tether (sheep, goats) (v)  ekɔ kyĩná
754. 772  feed (animals)  eko kúmárá
755. 773  milk (cows, goats) (v)  nyigébùŋ
756. 774  castrate  sërɛkõŋ

5.9 HUNTING AND FISHING

5.9.1 Hunting

757. 775  hunt (v)  felmá
758. 776  stalk (v)  tʊŋŋ
759. 777  chase (v)  kpã ërán
760. 778  track (animal) (n)  báyásiɛkpùɔkpá
761. 779  footprint (human)  mɔɔyɔkɔwpùɔkpá
762. 780  bow (hunting)  kàli (kál)
763. 781  arrow  kàlidi
764. 782  poison (on arrow)  báyá (also venom)
765. head of arrow
766. lance (spear) (n)
767. knife
768. club, cudgel
769. hunting net
770. trap (n)
771. set (trap)
772. trap (animal) (v)
773. evade
774. escape (see 773)
775. wound (animal)
776. slaughter, kill
777. skin (animal) (v)

5.9.2 Fishing

778. fish (v)
779. fish dam
780. fish trap
781. fishing net
782. fishing line
783. fishhook
784. bait

5.10 POSSESSIONS AND COMMERCE

5.10.1 Possessions

785. have, possess
786. 807   need (v)    màkɔ
787. 808   get, obtain    jí
788. 809   give    kɔ
789. 810   return, give back    bûlûmà
790. 811   belongings    kàrîjûgô
791 812   owner    màtígì
792. 813   rich man    jelêmâtígì
793. 814   poor man    déyêto
794. 815   (be) rich    jelênjì
795. 816   (be) poor    érama déyêto we

5.10.2 Money exchange, finances

796. 817   money    jelên
797. 818   cowrie, shell    kêkê
798. 819   barter    sûgûnà
799. 820   buy    sàŋ
800. 821   sell    tûrû
801. 822   (be) scarce    kû gbàràwè
802. 823   (be) expensive    sôngò gbàràwè
803. 824   (be) inexpensive    esôngɔdî
804. 825   price    esôngɔ
805. 826   haggle, negotiate a price    etelîmà
806. 827   payment    gûlûbɔ
807. 828   pay (goods and services)    e gûlûbɔ
808. 829   gift    kɔnà / bônyà
809. hire (v) páabere
810. beg (for money) délîke
811. borrow ëdõndõne
812. lend ndõndõre
813. debt gûlú
814. accept, receive ëdágâke
815. refuse gbâ
816. tax (n) sàgálé
817. tribute kônâ
818. inheritance bûrú
819. inherit bûrũŋkô

5.11 TRAVEL AND TRANSPORTATION

820. journey sàfárâkôn
821. travel (v) kyîlî bégé/ pugutí (sase)
822. traveler sàfârábámọ̀ọ̀
823. wander wûráfilí
824. (be) lost ẹra jã
825. path, road kyîlî
826. fork (in path) kyîlifuó
827. crossroad, intersection kyîlifuónáani
828. cross (river) yîbêyé
829. canoe gbáawùlú
830. paddle (n) suŋgbâli
831. paddle (v) yínọ̀ọ̀
832. bale out ẹ wógóbôŋ
833. 855  capsize  etínàrè
834. 856  bring  yá ɛra (yɛra)
835. 857  take, carry away  tàyà ɛrá (táyɛra)
836. 858  send (something to someone)  eyié
837. 859  carry (in arms)  era taya ɛra
838. 860  carry (child) on back  esùnnɛ ɛkana
839. 861  carry on head  esúnnɛ ɛwùó
840. 862  headpad  kpìndígi
841. 863  load, burden  sùlù sùŋ
842. 864  load (v)  jìgí
843. 865  unload  jòɣɔ

5.12 WAR
844. 866  war  sàŋ
845. 867  peace  tùluₜùkùmà
846. 868  army  sàŋkemɔŋɔ
847. 869  spy  mɔgɔdèndɛmɔŋɔ
848. 870  spy (v), spy on  dèndɛ
849. 871  sword  tókòfiòw
850. 872  gun  márìfà
851. 873  shield (n)  kpɛtrenà
852. 874  conquer, defeat  diàkɔŋ
853. 875  (be) defeated  ɛra ɡàl (ɛ)
854. 876  prisoner, captive  gbàŋgbìrì sà ɔmɔŋɔ, jò
855. 877  plunder (a town)  kàmà
5.13 ARTS AND LEISURE

5.13.1 Music and dance

<table>
<thead>
<tr>
<th>Code</th>
<th>Word</th>
<th>Translation</th>
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<tbody>
<tr>
<td>856</td>
<td>music</td>
<td>súgú</td>
</tr>
<tr>
<td>857</td>
<td>song</td>
<td>súgú</td>
</tr>
<tr>
<td>858</td>
<td>sing</td>
<td>súgúsá</td>
</tr>
<tr>
<td>859</td>
<td>hum (v)</td>
<td>ɲùnùnùnà?</td>
</tr>
<tr>
<td>860</td>
<td>whistle (v)</td>
<td>fiéléŋ fié</td>
</tr>
<tr>
<td>861</td>
<td>dance (n)</td>
<td>fāŋ</td>
</tr>
<tr>
<td>862</td>
<td>dance (v)</td>
<td>fāmbà</td>
</tr>
</tbody>
</table>

5.13.2 Musical instruments

<table>
<thead>
<tr>
<th>Code</th>
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<th>Translation</th>
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<tbody>
<tr>
<td>863</td>
<td>big (gest) drum</td>
<td>tūlāgbōŋ</td>
</tr>
<tr>
<td>864</td>
<td>small (est) drum</td>
<td>tūlādìrí</td>
</tr>
<tr>
<td>865</td>
<td>talking drum</td>
<td>lọŋgá</td>
</tr>
<tr>
<td>866</td>
<td>hourglass drum</td>
<td>lọŋgá</td>
</tr>
<tr>
<td>867</td>
<td>flute</td>
<td>gbí / lɛkọ</td>
</tr>
<tr>
<td>868</td>
<td>harp</td>
<td>sūgùberijùlú?</td>
</tr>
<tr>
<td>869</td>
<td>balafon</td>
<td>dāgbéli</td>
</tr>
<tr>
<td>870</td>
<td>horn (musical instrument)</td>
<td>gbé</td>
</tr>
<tr>
<td>871</td>
<td>shell (musical instrument)</td>
<td>dēŋdirí</td>
</tr>
<tr>
<td>872</td>
<td>rattle (musical instrument)</td>
<td>yámbárá</td>
</tr>
<tr>
<td>873</td>
<td>play instrument</td>
<td>bérí</td>
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<tr>
<td>874</td>
<td>blow (horn)</td>
<td>fie</td>
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5.13.3 Arts

<table>
<thead>
<tr>
<th>Code</th>
<th>Word</th>
<th>Translation</th>
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<tbody>
<tr>
<td>875</td>
<td>draw (picture)</td>
<td>elégé</td>
</tr>
</tbody>
</table>
876. 898 decorate ɛmáyírí
877. 899 carve ɛ síé

5.13.4 Leisure

878. 900 play (child) fāmbáà
879. 901 game ɲárwiásĩŋ
880. 902 tobacco pipe tàtùyù
881. 903 tobacco-stem tàtùyùgbá
882. 904 tobacco sàrrí
883. 905 awe, reverence (for God) állágbìà

5.14.1 Supernatural beings

884. 906 God (Supreme being) Allah
885. 907 god (lesser), fetish (fetish) kpíé
886. 908 demon, evil spirit jinní
887. 909 ghost (visible apparition) kú sléŋ
888. 910 soul, spirit (living person) níí
889. 911 spirit (of dead person) kú sléŋ

5.14.2 Religion and witchcraft

890. 912 pray sélí
891. 913 blessing bàràgà
892. 914 divine, prophesy (v) лезгери бери́
893. 915 prophecy (n) kiná jí
894. 916 vision kiná jí
895. 917 omen mińsàli
896. 918 witchcraft gbràyá
897. 919 bewitch, cast spell nyànyíní
<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Translation</th>
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<tbody>
<tr>
<td>898. 920</td>
<td>curse (v)</td>
<td>edăngà</td>
</tr>
<tr>
<td>899. 921</td>
<td>curse (n)</td>
<td>dăngá</td>
</tr>
<tr>
<td>900. 922</td>
<td>poison (n)</td>
<td>kɔrti/báyã</td>
</tr>
<tr>
<td>901. 923</td>
<td>poison (a person) (v)</td>
<td>kɔrtikɛre</td>
</tr>
<tr>
<td>902. 924</td>
<td>amulet, charm, fetish</td>
<td>sri/sèbè</td>
</tr>
<tr>
<td>903. 925</td>
<td>protect by charm</td>
<td>kpɛlnɛ</td>
</tr>
<tr>
<td>904. 926</td>
<td>mask (n)</td>
<td>dibìnã</td>
</tr>
<tr>
<td>905. 927</td>
<td>(be) taboo</td>
<td>tãnã</td>
</tr>
<tr>
<td>906. 928</td>
<td>exorcise</td>
<td>gbɔli</td>
</tr>
<tr>
<td>907. 929</td>
<td>sacrifice</td>
<td>sàrágà</td>
</tr>
<tr>
<td>908. 930</td>
<td>pour libation</td>
<td>dɔlibõŋ</td>
</tr>
<tr>
<td>909. 931</td>
<td>dwelling place of the dead</td>
<td>kúsɔdirá</td>
</tr>
<tr>
<td>5.15.1</td>
<td>Marriage</td>
<td></td>
</tr>
<tr>
<td>910. 932</td>
<td>tradition, custom</td>
<td>lâdá /lásírî</td>
</tr>
<tr>
<td>911. 933</td>
<td>feast (n)</td>
<td>wɔlima/ nîhsõdiáko</td>
</tr>
<tr>
<td>912. 934</td>
<td>naming ceremony (baby)</td>
<td>di wûsîŋ</td>
</tr>
<tr>
<td>913. 935</td>
<td>circumcision (male)</td>
<td>kyiṇkyinîsɔ</td>
</tr>
<tr>
<td>5.15.1</td>
<td>Marriage</td>
<td></td>
</tr>
<tr>
<td>914. 939</td>
<td>marry</td>
<td>fûrû</td>
</tr>
<tr>
<td>915. 940</td>
<td>marriage (state of wedlock)</td>
<td>fûrû</td>
</tr>
<tr>
<td>916. 941</td>
<td>(be) engaged</td>
<td>górôbɔ</td>
</tr>
<tr>
<td>917. 942</td>
<td>brideprice (bride’s family)</td>
<td>fûrû jelêṇ</td>
</tr>
<tr>
<td>918. 943</td>
<td>wedding (ceremony)</td>
<td>kpiàyá</td>
</tr>
<tr>
<td>919. 944</td>
<td>bride</td>
<td>kpià</td>
</tr>
</tbody>
</table>
920. 945  groom  kpiàŋkyêli
921. 947  adultery  gynâyâ
922. 948  divorce (v)  gbân

5.15.2 Funeral
923. 949  funeral  dií
924. 950  mourning  dií
925. 951  wail, ululate  dií/ wólí
926. 952  console, comfort (v)  ekosâwáríra
927. 953  corpse  kù/ filéŋ
928. 954  bury  kuso/sútârâ
929. 955  grave  kábûrú
930. 956  cemetery  kúsökëdirâ

6. Animals  bayasie no
931. 957  animal  báyasie/ biégâ

6. 1 DOMESTIC ANIMALS

6.1.1 Bovines
932. 958  ox, bovine  yeyékúlámã (seregùnë)
933. 959  bull  yeyékyinímã
934. 960  cow (female)  yeyényâmà
935. 961  heifer  yeyékpérën
936. 962  steer  yeyé sîrekõn
937. 963  calf  yeyédi
938. 964  herd (of cattle)  yeyénu
### 6.1.2 Ovines and caprines

<table>
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<tr>
<th>No.</th>
<th>Symbol</th>
<th>English</th>
<th>Igbo</th>
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</thead>
<tbody>
<tr>
<td>939</td>
<td>965</td>
<td>goat</td>
<td>báa</td>
</tr>
<tr>
<td>940</td>
<td>966</td>
<td>he-goat, billy goat</td>
<td>báa kọrọŋ</td>
</tr>
<tr>
<td>941</td>
<td>967</td>
<td>she-goat</td>
<td>báa nyàmá</td>
</tr>
<tr>
<td>942</td>
<td>968</td>
<td>kid</td>
<td>báa dì</td>
</tr>
<tr>
<td>943</td>
<td>969</td>
<td>sheep</td>
<td>tàyà</td>
</tr>
<tr>
<td>944</td>
<td>970</td>
<td>ram</td>
<td>tàyàkyìnímà</td>
</tr>
<tr>
<td>945</td>
<td>971</td>
<td>ewe</td>
<td>tàyẹnyàmà</td>
</tr>
<tr>
<td>946</td>
<td>972</td>
<td>lamb</td>
<td>tàyàdì</td>
</tr>
<tr>
<td>947</td>
<td>973</td>
<td>flock (of sheep, goats)</td>
<td>tàyàno/bàano</td>
</tr>
</tbody>
</table>

### 6.1.3 Poultry

<table>
<thead>
<tr>
<th>No.</th>
<th>Symbol</th>
<th>English</th>
<th>Igbo</th>
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<tbody>
<tr>
<td>948</td>
<td>974</td>
<td>chicken</td>
<td>tọγó</td>
</tr>
<tr>
<td>949</td>
<td>975</td>
<td>rooster (cock)</td>
<td>tọγó kyìnímà</td>
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<tr>
<td>950</td>
<td>976</td>
<td>hen</td>
<td>tọγó nyàmà</td>
</tr>
<tr>
<td>951</td>
<td>977</td>
<td>chick</td>
<td>tọγódì</td>
</tr>
<tr>
<td>952</td>
<td>978</td>
<td>turkey</td>
<td>kókókúló</td>
</tr>
<tr>
<td>953</td>
<td>979</td>
<td>guinea fowl</td>
<td>kámi</td>
</tr>
<tr>
<td>954</td>
<td>980</td>
<td>duck</td>
<td>sùnsù</td>
</tr>
<tr>
<td>955</td>
<td>981</td>
<td>camel</td>
<td>nyoγọmà</td>
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<tr>
<td>956</td>
<td>982</td>
<td>horse</td>
<td>sùŋ</td>
</tr>
<tr>
<td>957</td>
<td>983</td>
<td>stallion</td>
<td>sùŋkyìnímà</td>
</tr>
<tr>
<td>958</td>
<td>984</td>
<td>mare (femal horse)</td>
<td>sùnnyàmà</td>
</tr>
<tr>
<td>959</td>
<td>985</td>
<td>colt</td>
<td>sùndì</td>
</tr>
</tbody>
</table>
6.1.5 Others

960. 986 donkey  fâní

961. 987 pig  pàřikuó/ pàřikó

962. 988 boar (male pig)  pàřikuó kyinímã

963. 989 sow (female pig)  pàřikuó nyãmã

964. 990 piglet  pàřikuó dì

965. 991 dog  wùlú

966. 992 pup  wùlúdì

967. 993 cat  jëŋkúmá

968. 994 kitten  jëŋkúmádì

6.2 Mammals

969. 995 elephant  gbàà

970. 996 hippopotamus  mìní

971. 997 buffalo  sigí

972. 998 rhinoceros  lié

973. 999 giraffe  kõŋgósógóló

974. 1000 warthog  sie

975. 1001 monkey  kûlá

976. 1002 baboon  gbôŋ

977. 1003 hyena  jérémú/ kóló

978. 1004 jackal  gbógbó

979. 1005 antelope  kyilá (kunan-red, jan-white)

980. 1006 zebra  bàyálèŋ

6.2.1 Rodents
<p>| | | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>981.</td>
<td>1009</td>
<td>mouse</td>
<td>tülá</td>
</tr>
<tr>
<td>982.</td>
<td>1010</td>
<td>rat</td>
<td>túttûŋ (salaga tuladi)</td>
</tr>
<tr>
<td>983.</td>
<td>1011</td>
<td>grass cutter/cane rat</td>
<td>nyìnã</td>
</tr>
<tr>
<td>984.</td>
<td>1012</td>
<td>palm rat</td>
<td>pûré</td>
</tr>
<tr>
<td>985.</td>
<td>1013</td>
<td>shrew</td>
<td>gbànákûu</td>
</tr>
<tr>
<td>986.</td>
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<td>mole</td>
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<td>987.</td>
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<td>mongoose</td>
<td>bárábéyé/firîjáágá</td>
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<td>988.</td>
<td>1016</td>
<td>hare</td>
<td>bîŋkôŋ kyîndîrí</td>
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<td>chîn</td>
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<td>992.</td>
<td>1020</td>
<td>fruit bat</td>
<td>kuá</td>
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### 6.2.2 Cats

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<td>1021</td>
<td>wild cat</td>
<td>hâllísûmâ</td>
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<td>civet cat</td>
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<td>996.</td>
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### 6.2.3 Mammal parts

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<td>hide (of animal)</td>
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<td>horn</td>
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<td>hump (of cow)</td>
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<td>1000.</td>
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<td>udder</td>
<td>yégékyî</td>
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<tr>
<td>1001.</td>
<td>1031</td>
<td>tail</td>
<td>já</td>
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<tr>
<td>1002.</td>
<td>1032</td>
<td>hoof</td>
<td>kôkôrá</td>
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<tr>
<td>1003.</td>
<td>1034</td>
<td>elephant’s trunk</td>
<td>gbâ suŋ</td>
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</table>
1004. 1035 elephant’s tusk gbà nyì
1005. 1036 den, lair, hole yéll

6.2.4 Mammal actions
1006. 1037 bark wólí
1007. 1038 bare, show (teeth) nyíŋɔ
1008 1039 growl ńúnu?
1009. 1040 ruminate fùnúdóŋ

6.3 BIRDS
1010. 1041 bird kôŋdiri
1011. 1042 crow kwákúráa
1012. 1043 dove lēŋ/ gbááli (pigeon)
1013. 1044 weaver bird kūá
1014. 1045 parrot àkó / láláá
1015. 1047 cattle egret kúlāŋkpiɛ
1016. 1048 heron yídáará kôŋdiri
1017. 1053 ostrich kônösógóló
1018. 1054 owl gùmàlùgú
1019. 1055 eagle sege
1020. 1056 hawk kóló (sege-small)
1021. 1057 vulture gósó

66.3.1 Birds parts and things
1022. 1058 feather tíŋ
1023. 1059 wing finí
1024. 1060 beak, bill dáa
1025. 1061 crest (of bird) nyáyà
1026. comb (of rooster) jéŋ
1027. crop (of bird) siyá
1028. gizzard kɔsi
1029. claw ŋànyí
1030. egg yélí
1031. eggshell yélí funú
1032. yolk (of egg) tọgọyélí yítárimá
1033. nest kọndiri nyàgá
1034. flock (of birds) kọndirinó

6.3.2 Birds actions

1035. fly (v) era bɔsi
1036. dive bôŋ
1037. soar lìeri
1038. land, alight jọyọ
1039. perch yôṇninámã
1040. flap the wings finĩberī
1041. cackle (as of chicken) yélíkil
1042. crow (as a rooster) (v) dì
1043. peck chóchógó
1044. lay (eggs) yélíbà
1045. incubate, set (on eggs) múyú
1046. hatch yélítíé

6.4 FISH

1047. fish yàyà
6.4.1 Fish parts

1048. 1084 catfish màlɔgɔ

1049. 1087 fish bone yàyá yélí

1050. 1088 fish-scale yàyá fùnú

1051. 1090 fin yàyábùlù

6.4.2 Shellfish and mollusks

1052. 1091 crab wóyó

1053. 1092 shrimp játólélé?

1054. 1093 clam sàrámâtá kérékété

1055. 1094 snail kérékété

6.5 REPTILES

1056. 1095 snake kà

1057. 1096 spitting cobra jéŋkáa

1058. 1097 puff adder yéyébúkáa

1059. 1098 python dùniè

1060. 1099 green mamba jàŋkáa

1061. 1100 lizard kòlgbèŋ

1062. 1101 agama lizard kòlgbèŋwútarama

1063. 1102 chameleon kànàgbórí

1064. 1103 gecko gbànáwùlú

1065. 1104 monitor lizard káañi/ kúrãŋ

1066. 1105 crocodile fòrí

1067. 1106 frog tórí

1068. 1107 toad gberè
1069. 1108 tortoise kóyó
1070. 1109 turtle táawá

6.5.1 Reptile parts
1071. 1110 fang kányì?
1072. 1111 venom bàyå
1073. 1112 shell kóyókànà

6.5.2 Reptile actions
1073. 1113 slither (snake) jùɔ/kyígí
1074. 1114 bite (snake) eñyíŋ
1075. 1115 crawl (lizard) tàyámà
1076. 1116 hiss kàdìi

6.6 INSECTS
1077. 1117 insect dòńgbàyá
1078. 1118 flea kpànyìye/ kpànyèye
1079. 1119 louse wúwùlú
1080. 1120 bedbug sàmàŋkóró/kpàgàlá
1081. 1121 maggot tùmú
1082. 1122 cockroach nyimî
1083. 1123 ant dùńgbàyá
1084. 1124 army ant sílè
1085. 1125 flying ant finna dùńgbàgá
1086. 1126 termite dòŋ
1087. 1127 spider këlîndî
1088. 1128 tarantula dêŋgbêli
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<td>1089</td>
<td>1129</td>
<td>scorpion</td>
<td>yêndâyá</td>
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<td>1090</td>
<td>1130</td>
<td>dung beetle</td>
<td>bugbúlá</td>
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<tr>
<td>1091</td>
<td>1132</td>
<td>grasshopper</td>
<td>gâŋgâ</td>
</tr>
<tr>
<td>1092</td>
<td>1133</td>
<td>cricket</td>
<td>kɛɛrî</td>
</tr>
<tr>
<td>1093</td>
<td>1134</td>
<td>locust</td>
<td>gâŋgâ</td>
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<tr>
<td>1094</td>
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<td>praying mantis</td>
<td>ãllásigógô</td>
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<td>leech</td>
<td>somô</td>
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<td>1137</td>
<td>cartepillar</td>
<td>kánàkpienà tûmû</td>
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<td>1097</td>
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<td>centripede</td>
<td>wênda</td>
</tr>
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<td>1098</td>
<td>1139</td>
<td>millipede</td>
<td>gbànásunnà</td>
</tr>
<tr>
<td>1099</td>
<td>1140</td>
<td>earthworm</td>
<td>nyɔlɔlɔ</td>
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### 6.6.1 Flying insects

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<td>fly (n)</td>
<td>sînŋ</td>
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<tr>
<td>1101</td>
<td>1142</td>
<td>mosquito</td>
<td>sûsôŋ</td>
</tr>
<tr>
<td>1102</td>
<td>1143</td>
<td>bee</td>
<td>kûndi</td>
</tr>
<tr>
<td>1103</td>
<td>1144</td>
<td>mud wasp</td>
<td>deŋgbêli</td>
</tr>
<tr>
<td>1104</td>
<td>1145</td>
<td>dragonfly</td>
<td>yídáarasûsôŋ</td>
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<tr>
<td>1105</td>
<td>1146</td>
<td>butterfly</td>
<td>finfini</td>
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<tr>
<td>1106</td>
<td>1147</td>
<td>moth</td>
<td>kôró finfini</td>
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### 6.6.2 Insect things

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<td>1149</td>
<td>sting</td>
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<tr>
<td>1108</td>
<td>1151</td>
<td>spider web</td>
<td>kêndi nyâyâ</td>
</tr>
<tr>
<td>1109</td>
<td>1152</td>
<td>cocoon</td>
<td>brûgó</td>
</tr>
<tr>
<td>1110</td>
<td>1153</td>
<td>termite hill</td>
<td>dôŋgbâ</td>
</tr>
</tbody>
</table>
111. 1154  beehive  kùnnyàgá
1112. 1155  beeswax, bee-bread  kànyá
1113. 1156  honey  kùŋ
1114. 1157  swarm  kùndìnũ

7. PLANTS

7.1.1 Tree

1115. 1158  tree  gbáa
1116. 1159  ebony tree  kòlbútú
1117. 1160  mahogany tree  gòolèŋ
1118. 1161  teak tree  tiik
1119. 1162  baobab tree  kóyígbá
1120. 1163  silk cotton tree  kólón̩gbá
1121. 1164  shea-butter tree  kòlgbá
1122. 1165  fig tree  yêyêngbá
1123. 1166  thorn-tree  brágbá
1124. 1167  tamarind tree  sàgá gbá
1125. 1168  oil palm tree  tiĩŋ gbá
1126. 1169  coconut palm tree  kúbégbá
1127. 1170  raffia palm  sànyógbó gbá
1128. 1171  date palm  temere
1129. 1172  bush  bíŋ

7.1.2 Grasses

1130. 1173  grass  sàalèŋku
1131. 1174  bamboo  gbìgbèli
1132. 1175  reed  tété
7.2 PLANT PARTS

<table>
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<th>Translation</th>
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<td>1177</td>
<td>leaf</td>
<td>já</td>
</tr>
<tr>
<td>1135</td>
<td>1178</td>
<td>branch</td>
<td>gbáabulu</td>
</tr>
<tr>
<td>1136</td>
<td>1179</td>
<td>trunk</td>
<td>gbáatùo</td>
</tr>
<tr>
<td>1137</td>
<td>1180</td>
<td>bark (tree)</td>
<td>fùnu</td>
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<td>1181</td>
<td>sap</td>
<td>gbáayí</td>
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<td>1182</td>
<td>stump</td>
<td>gbáakuŋ</td>
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<td>1183</td>
<td>root</td>
<td>kúŋ</td>
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<td>1141</td>
<td>1184</td>
<td>bulb, tuber</td>
<td>símã</td>
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<tr>
<td>1142</td>
<td>1185</td>
<td>stem, stalk</td>
<td>túo</td>
</tr>
<tr>
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<td>1186</td>
<td>silk, hair (of maize)</td>
<td>jónjíatigí</td>
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<td>blade (of grass)</td>
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<td>nèŋ</td>
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<td>1190</td>
<td>shoot (new plant)</td>
<td>efinné</td>
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<td>1148</td>
<td>1193</td>
<td>thorn</td>
<td>Ṇañí</td>
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<td>1149</td>
<td>1194</td>
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<td>jëbél</td>
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<td>1150</td>
<td>1196</td>
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7.3 PLANT PRODUCTS

7.3.1 Plant products parts

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<td>1151</td>
<td>1197</td>
<td>juice</td>
<td>(name of fruit+) yí</td>
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<td>1198</td>
<td>stone, pit</td>
<td>(name of fruit+) dì</td>
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<td>1199</td>
<td>bunch (of banana)</td>
<td>súuu</td>
</tr>
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<td>1154</td>
<td>1200</td>
<td>corn cob</td>
<td>jónjígbá</td>
</tr>
<tr>
<td>No.</td>
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<td>--------------</td>
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<td>1201</td>
<td>kernel (of corn)</td>
<td>jónjídirá</td>
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<td>1202</td>
<td>seed</td>
<td>símã</td>
</tr>
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<td>1203</td>
<td>skin (of fruit)</td>
<td>fùnù</td>
</tr>
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<td>1204</td>
<td>shell (of groundnut)</td>
<td>mǎtigáfùnụ</td>
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<td>1159</td>
<td>1205</td>
<td>corn husk</td>
<td>jónjífùnụ</td>
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<tr>
<td>1160</td>
<td>1206</td>
<td>chaff</td>
<td>fòfò/ɲɛɲɛ</td>
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7.3.2 Fruits

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<td>lémùrùmī</td>
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<td>orange</td>
<td>lémùrù</td>
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<td>1213</td>
<td>pawpaw</td>
<td>bɔfìrɛ</td>
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<td>ʔbrɔbɛ</td>
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<td>1215</td>
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<td>ɡɔábɛ</td>
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<td>1216</td>
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<td>1170</td>
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7.3.3 Vegetables

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<td>onion</td>
<td>gáabu</td>
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<td>1173</td>
<td>1221</td>
<td>garlic</td>
<td>gáabúmǐmā</td>
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<tr>
<td>1174</td>
<td>1222</td>
<td>pepper (green)</td>
<td>bɔnyɔgbɛlɛ</td>
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<td>1175</td>
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<td>red pepper</td>
<td>bɔnyɔtảrǎmá</td>
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<td>okra</td>
<td>kpiả</td>
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<td>1177</td>
<td>1225</td>
<td>egg-plant</td>
<td>tóró</td>
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1178. 1226 mushroom fiǹa

7.3.4 Tubers

1179. 1227 cassava gbéndé
e1180. 1228 cocoyam mákáni
1181. 1229 yam wúó
1182. 1230 sweet potato sānyáwúó

7.3.5 Cereals

1183. 1232 maize jónjì
1184. 1233 millet kyiɛ
1185. 1234 sorghum wágà
1186. 1235 guinea corn sógú / gɔlngɔ (for tubani)
1187. 1236 rice málóŋ

7.3.6 Other plant products

1188. 1237 groundnut mātigá
1189. 1238 sesame seed kyiémĩ
1190. 1239 cola nut gòró
1191. 1240 palm nut tɛŋ
1192. 1241 sugar cane ahwidiɛ
1193. 1242 coffee kaffi
1194. 1243 rubber màri
1195. 1244 cotton kólóŋ

7.4 PLANT PROCESSES

1196. 1245 grow (of plant) kọŋ
1197. 1246 sprout ɛwe finna (fiŋfinna)
1198. 1247 (be) ripe ɛra tárá
8. ENVIRONMENT

8.1 NATURE

8.1.1 Areas, region

1205. 1254 world duñiyá
1206. 1255 place lógónj
1207. 1256 desert kpéndéyérá
1208. 1257 grassland (kpéndéyérá) nyãngbàgá
1209. 1258 forest fié
1210. 1259 open place kpéndéyérá /bàrà
1211. 1260 bush, rural area bíŋkɔno/báyákámã

8.1.2 Physical features

1212. 1261 ground, land dúgu
1213. 1262 mountain kóli
1214. 1263 summit wútùõñ/kɔlwúó
1215. 1264 cliff kɔldámã
1216. 1265 valley fõñ
1217. 1266 ditch gólónj
1218. 1267 pit yéll
1219. 1268 hole yéll
1220. 1269 crevice (name) tulârɛ
1221. 1270 cave fâriyéll

8.1.3 Natural things

1222. 1271 rock (large) fâri
1223. 1272 stone kpíŋ
1224. 1273 gravel kpânyì
1225. 1274 sand nyínyàyá
1226. 1275 dust fúnú
1227. 1276 dirt gbîrí
1228. 1277 clay bûŋ
1229. 1278 mud bérì
1230. 1279 iron tûrû
1231. 1280 gold diè
1232. 1281 silver jélkpìè
1233. 1282 copper dànyà
1234. 1283 rust (n) sóŋ

8.1.4 Water related

1235. 1284 water yi
1236. 1285 ocean kuá
1237. 1286 lake dàlá
1238. 1288 waterhole dúŋŋ
1239. 1289 marsh sickɔn
1240. 1290 spring bërególôn
1241. 1292 brook, stream wûjó
1242. 1293 river wûjó (wûjórò=at the river)
1243. 1294 current (river, stream) jùɔfãgà
1244. 1295 riverbed wújókɔrá (also upstream)
1245. 1296 river bank wújódáará/ yídáará
1246. 1297 ford (n) kóŋkóŋdáa
1247. 1298 bridge sén
1248. 1299 island yikóŋkpéndéyé
1249. 1300 beach kuádáará
1250. 1301 wave kuáwúlú
1251. 1303 foam kã̄̃gá
1252. 1304 slime (organic) yínɔgɔrɛ

**8.1.5 Fire related**

1253. 1305 fire táa
1254. 1306 flame táadàɣàrɛ
1255. 1307 spark nyìgì (also= ignite)
1256. 1308 smoke sisí
1257. 1309 fireplace sìŋ
1258. 1310 firewood sɔ̀yóra
1259. 1311 charcoal sùnnyá
1260. 1312 ashes bûyû

**8.1.6 Sky** sãŋgbélé

1261. 1313 sky sãŋgbélé
1262. 1314 air fìá
1263. 1315 cloud sãŋgbélésìsí
1264. 1316 rainbow kãkãtókófì
1265. 1317 sun têli
1266. 1318 moon kyié
1267. 1320 new moon kyiënãŋ
1268. 1321 eclipse (moon) jèŋkúmákyiésùgùrɛ
1269. 1322 star lólóŋ
1270. 1323 Pleiades lólónfiině
1271. 1326 shooting star lólómbose (re)

8.1.7 Other
1272. 1327 noise, sound (n) wólí/ nîŋ/mayakura

8.2 WEATHER
1273. 1330 wind (n) fiá
1274. 1331 harmattan felge
1275. 1332 storm kyiífiá
1276. 1333 thunder kyiífârâñe
1277. 1334 lightning kyiínyígî
1278. 1335 rain kyií
1279. 1336 drizzle kyiífurúfurú (ra)
1280. 1338 dew wómbiri
1281. 1339 flood (n) kyiígbôŋ
1282. 1340 dry up, evaporate kpeł
1283. 1341 drought, famine küyü

8.2.1 Seasons
1284. 1342 season sâyâ
1285. 1343 rainy season fûrûkôŋ
1286. 1344 dry season felge
1287. 1345 hot weather kinādiewāyāti
1288. 1346 cold weather kūmāwāyāti

8.2.2 Ambient conditions

1289. 1347 light kinā
1290. 1348 sunshine telwiärē
1291. 1349 moonlight kyiéförē
1292. 1350 shadow sílēŋ
1293. 1351 darkness dibí

8.3 TIME wāyāti

1294. 1352 time wāyāti
1295. 1353 now sisā
1296. 1354 before suŋkpíényō
1297. 1355 after káramā
1298. 1356 early kyélí
1299. 1357 late kánā
1300. 1358 once kpiáriaŋ
1301. 1359 again tɔrɔ
1302. 1360 sometimes wāyātidómā
1303. 1361 often sāyādómā
1304. 1363 always sāyākómā
1305. 1364 never jirere
1306. 1366 wait lāsíē

8.3.1 Time periods
<table>
<thead>
<tr>
<th>Stroke</th>
<th>Number</th>
<th>Term</th>
<th>Translation</th>
</tr>
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<tbody>
<tr>
<td>1307</td>
<td>1367</td>
<td>day</td>
<td>nyí</td>
</tr>
<tr>
<td>1308</td>
<td>1368</td>
<td>month</td>
<td>kyíé</td>
</tr>
<tr>
<td>1309</td>
<td>1369</td>
<td>year</td>
<td>nyè</td>
</tr>
<tr>
<td>1310</td>
<td>1370</td>
<td>today</td>
<td>fí/ bí</td>
</tr>
<tr>
<td>1311</td>
<td>1371</td>
<td>yesterday</td>
<td>wúlóŋ</td>
</tr>
<tr>
<td>1312</td>
<td>1372</td>
<td>day before yesterday</td>
<td>sɔ́γɔ́rɔŋ</td>
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<tr>
<td>1313</td>
<td>1373</td>
<td>tomorrow</td>
<td>sàmã</td>
</tr>
<tr>
<td>1314</td>
<td>1374</td>
<td>day after tomorrow</td>
<td>sàmàkàanà</td>
</tr>
<tr>
<td>1315</td>
<td>1375</td>
<td>olden times</td>
<td>kpiéŋkpiéŋ</td>
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8.3.2 **Times of the day**

<table>
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<tr>
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<tbody>
<tr>
<td>1316</td>
<td>1376</td>
<td>dawn</td>
<td>fájàrí</td>
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<tr>
<td>1317</td>
<td>1377</td>
<td>sunrise</td>
<td>télbòsàyà</td>
</tr>
<tr>
<td>1318</td>
<td>1378</td>
<td>morning</td>
<td>sùmɔγɔ</td>
</tr>
<tr>
<td>1319</td>
<td>1379</td>
<td>noon</td>
<td>tòlgɔ</td>
</tr>
<tr>
<td>1320</td>
<td>1380</td>
<td>afternoon</td>
<td>tòlgɔ</td>
</tr>
<tr>
<td>1321</td>
<td>1381</td>
<td>sunset</td>
<td>wúlàrá</td>
</tr>
<tr>
<td>1322</td>
<td>1382</td>
<td>dusk</td>
<td>telba</td>
</tr>
<tr>
<td>1323</td>
<td>1383</td>
<td>daytime</td>
<td>tòlgɔ</td>
</tr>
<tr>
<td>1324</td>
<td>1384</td>
<td>night</td>
<td>kóró</td>
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</table>

8.4 **SPACE AND OBJECTS**

<table>
<thead>
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<th>Number</th>
<th>Term</th>
<th>Translation</th>
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<tbody>
<tr>
<td>1325</td>
<td>1385</td>
<td>thing</td>
<td>sìŋ</td>
</tr>
<tr>
<td>1326</td>
<td>1386</td>
<td>piece</td>
<td>gbúŋ</td>
</tr>
<tr>
<td>1327</td>
<td>1387</td>
<td>top</td>
<td>kãŋkã</td>
</tr>
<tr>
<td>1328</td>
<td>1388</td>
<td>bottom</td>
<td>kòrá</td>
</tr>
</tbody>
</table>
1329. 1389  front (of something)  nárá
1330. 1390  back  kánà
1331. 1391  side  jììmà
1332. 1392  middle  tùōŋ
1333. 1393  edge (n)  dáará
1334. 1394  point (n)  dàá
1335. 1395  bump (n)  yúyú
1336. 1396  spot (n)  tótóyó

9  EVENTS AND ACTIONS

9.1  MOVEMENT (MOSTLY INTRANSITIVE)

1337. 1397  move (intr.)  màmàyá/bòsí
1338. 1398  movement  màmàyàkɔn
1339. 1399  come  yá
1340. 1400  go  tàgá
1341. 1401  approach (v)  èra bëŋ
1342. 1402  arrive  èra kyí
1343. 1403  remain, stay  èra yàgá
1344. 1404  leave (place)  èra bò /tàgá
1345. 1405  return, go back  èra bùlú
1346. 1406  go round, detour  èra mínà
1347. 1407  enter, go in  èra sɔ
1348. 1408  come (or go) out, exit (v)  èra bɔ
1349. 1409  ascend, go up  èra së
1350. 1410  descend, go down  èra jɔyɔ
9.2 ACTIONS, EVENTS AFFECTING MATTER

9.2.1 General

1351. 1411 fall (intr.) era báa
1352. 1412 swing (v), go back and forth erataga eyaya
1353. 1413 slide era nógo
1354. 1414 roll era miná/ mināminá
1355. 1415 spread (disease, fire) era jínjá
1356. 1416 burst era tíé
1357. 1417 disappear era tînáŋá
1358. 1418 speed (n) firi
1359. 1419 (be) fast era firi/ ema dienre
1360. 1420 (be) slow emmá / era tágá yeretete
1361. 1421 hasten, hurry era kpuo koróŋ yeři

1362. 1422 take e yeři
1363. 1423 snatch e kyufá
1364. 1424 catch (object in air) e suyu
1365. 1425 pick up see 1422
1366. 1426 hold see 1424
1367. 1427 raise, lift e yeři káká
1368. 1428 lower (tr.) e jóyó
1369. 1429 drop (tr.) era báa duyumá
1370. 1430 throw egbéŋ
1371. 1431 shoot (v) etiē
1372. 1432 knock down eberibá
1373. 1433 turn over (tr.)  era buláyá
1374. 1434 pull  ekyigi
1375. 1435 drag  ekyigi dùýumã/ egbula
1376. 1436 push  etâŋ
1377. 1437 steer (v)  báakudáarâ
1378. 1438 overtake, pass (tr.)  era bélirâ
1379. 1439 surround  era mínã
1380. 1440 twist  etɔrɔmïŋ
1381. 1441 fold (v)  ekákãri
1382. 1442 coil (rope) (v)  see 1439
1383. 1443 hang up  júlúgú
1384. 1444 spread out (maize)  egbáa/ jinjã
1385. 1445 stretch  era ekɔŋkyigi

9.2.2 Percussion

1386. 1446 hit, strike  è bëri
1387. 1447 beat  1446
1388. 1448 bump (v), knock against  era tigĩ
1389. 1449 rub  e sãã
1390. 1450 scrape (v)  ewõrí
1391. 1451 scratch (v)  ënyíŋnyã
1392. 1452 pierce  esɔrɔŋ
1393. 1453 tear (tr.)  etîí
1394. 1454 strip off (bark)  efunõbo
1395. 1455 shake (tr.)  ëmãmâyã
1396. 1456 squeeze  ebɔíŋ
1397. 1457 crush (tr.) etiée 

9.2.3 Creation and destruction dāsīŋ & kàmá

1398. 1458 create, make ᐕdâŋ/ etiéŋ
1399. 1459 alter, change (tr.) ɛsùgú
1400. 1460 break (tr.) ɛkàrì/ etié
1401. 1461 destroy, spoil ɛkãŋ
1402. 1462 (be) ruined era kãŋ

9.2.4 Association of things

1403. 1463 join, put together etúguŋ/ ɛkyàɣá
1404. 1464 accumulate ɛra kuruŋ/koke/ korá láfiŋ
1405. 1465 gather wúbēŋ
1406. 1466 divide, separate ɛra túlá/ ɛra bonyyỹkǒŋ
1407. 1467 scatter (tr.) see 1415 (jinjã)
1408. 1468 throw away, get rid of see 1430 (ɛfilí)

9.2.5 Placement

1409. 1469 put, place, set ɛ sá
1410. 1470 leave (something somewhere) ɛtunú
1411. 1471 keep, save etiénsá (to deposit- ɛsá)
1412. 1472 hide (tr.) ɛduyō
1413. 1473 lose (tr.) ɛra ṃ̀
1414. 1474 look for ɛsini
1415. 1475 find ejí

9.2.6 Action of wind

1416. 1476 blow fiá ra bɛrì
| 1417. | 1477 | blow down | eberibá |
| 1418. | 1478 | blow away (intr) | fiáberi (fiátagarera) |
| 1419. | 1479 | fan (v) | efie |

### 9.2.7 Action with liquids

| 1420. | 1480 | flow | era juɔ |
| 1421. | 1481 | drip | era tótógó |
| 1422. | 1482 | leak (v) | era bo |
| 1423. | 1483 | sprinkle | efajá |
| 1424. | 1484 | smear (tr.) | esaa |
| 1425. | 1485 | dip | edigí kɔŋ |
| 1426. | 1486 | soak | nyɔyɔ |
| 1427. | 1487 | wring out | ebɔiŋ |
| 1428. | 1488 | dry out (clothes) | egbá |
| 1429. | 1489 | float | sa yímã/ yõnfíá kɔŋ |
| 1430. | 1490 | sink (v) | tínã yí kɔŋ |
| 1431. | 1491 | drown (intr.) | yí yele |

### 9.2.8 Action of light

| 1432. | 1492 | shine | fifi |
| 1433. | 1493 | fade | kyésé |
| 1434. | 1494 | (be) bright | enàri rádi |
| 1435. | 1495 | (be) dim | enàri rádienny |

### 9.2.9 Action of heat, fire

| 1436. | 1496 | light (fire) (v) | efii |
| 1437. | 1497 | quench, extinguish | ediéŋ |
| 1438. | 1498 | burn (intr.), blaze | era dóŋ |
1439. 1499  melt (intr.)  ēra yillé
1440. 1500  singe  ēra sráŋ

9.3. ASPECT
1441. 1501  begin  ēra sínní
1442. 1502  beginning  ē síńkóŋ
1443. 1503  continue, resume  tágá
1444. 1504  end (n)  lákpá
1445. 1505  cease, stop  ēra fárá, eyõŋ/etó
1446. 1506  finish, complete (v)  ēra náŋ

10. QUALITY
10.1 DIMENSION, SHAPE
1447. 1507  (be) big  ēra kónyá
1448. 1508  enlarge  ēra kónyá
1449. 1509  (be) small  ēra doyoŋá
1450. 1510  diminish  kúbéyé ēra
1451. 1511  (be) high  ēwe káká
1452. 1512  (be) low  ēwe doŋmá
1453. 1513  (be) long  ē sónwe
1454. 1514  lengthen  ēra sómmáyá
1455. 1515(bei)  short  ē gbúnne
1456. 1516  shorten  ēra gbůŋmáyá
1457. 1517  (be) fat, thick  ē korónwe
1458. 1518  (be) thin  ēwe pereere/ ē yéléwe
1459. 1519  (be) wide  ē tegerewe
1460. 1520  widen  elájírewé
1461. 1521 (be) narrow  fón dóŋó
1462. 1522 (be) deep  edúnnewè
1463. 1523 deepen  era edúnnayá gà
1464. 1524 (be) shallow  edúnneyáre
1465. 1525 (be) flat  etegerewe
1466. 1526 flatten  etegeráyá
1467. 1527 (be) hollow  wógó
1468. 1528 swell (intr.)  era yúgú
1469. 1529 (be) round  era míná
1470. 1530 (be) straight  e térénne
1471. 1531 straighten  e téntéréŋ
1472. 1532 (be) crooked  e gòrônne
1473. 1533 bend, crook, curve (n)  gòrôn
1474. 1534 (be) heavy  e kòrônwe/kpinnewè
1475. 1535 weight  kòrôn/kpinnyá gà
1476. 1536 (be) light (not heavy)  e kòrônfierewe
10.2 FEEL
1477. 1537 (be) sharp  edáadí
1478. 1538 sharpen (knife)  edáasá
1479. 1539 sharpen (arrow)  edáasá
1480. 1540 (be) blunt, dull  edáakpàné
1481. 1541 (be) rough  e kánikánré
1482. 1542 (be) smooth  eŋɔɣɔrewe
1483. 1543 make smooth  eŋɔɣɔ
1484. 1544  (be) hard  Ṣeegbáarewe
1485. 1545  harden  Ṣeegbáýáne
1486. 1546  (be) soft  Ṣeera kɔnyā
1487. 1547  soften  Ṣekɔýáne
1488. 1548  (be) dry  Ṣeegbáare
1489. 1549  (be) wet  Ṣeera nyɔyɔ
1490. 1550  (be) slippery  Ṣeera nɔgɔ (enɔgɔrewe)
1491. 1551  (be) sticky  Ṣeera nanari
1492. 1552  (be) hot  Ṣeera dje (edierε)
1493. 1553  (be) cold  Ṣeera kumā (ekumare)

10.3  COLOUR

1494. 1554  colour  Ṣeŋàresiyá
1495. 1555  (be) white  Ṣekpiε
1496. 1556  (be) black  Ṣegbogó
1497. 1557  (be) red  Ṣetáramā
1498. 1558  (be) blue  Ṣaságblesiyá
1499. 1559  (be) green  Ṣeŋkumā
1500. 1560  (be) brown  Ṣekoɗinjára
1501. 1561  (be) yellow  Ṣeŋerifugù
1502. 1562  (be) dark  Ṣedúnne
1503. 1563  (be) light  Ṣefierewe

10.4  TASTE AND SMELL

1504. 1564  taste (n)  Ṣennɔγɔ
1505. 1565  (be) sweet  Ṣedí
1506. 1566  (be) sour  ɛnùnɛ
1507. 1567  (be) bitter  ɛkwùnàrewɛ
1508. 1568  odour, smell (n)  mìŋ
1509. 1569  stink, smell (bad)  mìímmã

10.5 ABILITY

1510. 1570  (be) able to  ɛrə kyí
1511. 1571  (be) strong (physically)  fãgãmã
1512. 1572  strength  fãgã
1511. 1573  (be) weak  ɛrə kãnyã

10.6 VALUE

1512. 1576  (be) good  ɛnyìɛ
1513. 1577  (be) bad  gbírl/ ɛ nyierɛ
1514. 1578  right, (be) correct  edõdí
1515. 1579  truth  téyé
1516. 1580  (be) perfect  nyiâkãsi
1517. 1581  (be) wrong  edókãnɛ
1518. 1582  (be) beautiful  ɛ nyiã
1519. 1583  (be) ugly  egbítewɛ
1520. 1584  (be) clean  esãdóyàrewɛ
1521. 1585  (be) dirty  egbíte
1522. 1586  (be) important  edégekerewɛ
1523. 1587  (be) amusing, funny  ejelkuwɛ

10.7 MATURITY

1524. 1588  (be) new  nãŋ
1525. 1589  (be) old  kùrã
11. QUANTITY (dì)

11.1 CARDINAL NUMBERS

1526. 1590   one (1)   diéŋ
1527. 1591   two (2)   fàlá
1528. 1592   three (3)   sigbá
1529. 1593   four (4)   náani
1530. 1594   five (5)   sùlù
1531. 1595   six (6)   mùóró
1532. 1596   seven (7)   máfálá
1533. 1597   eight (8)   másígba
1534. 1598   nine (9)   máráani
1535. 1599   ten (10)   tãŋ
1536. 1600   eleven (11)   tándó
1537. 1601   twelve (12)   tânfálá
1538. 1602   thirteen (13)   tãnsígba
1539. 1603   fourteen (14)   tãnnáani
1540. 1604   fifteen (15)   tíyã
1541. 1605   sixteen (16)   tíyãdó
1542. 1606   seventeen (17)   tíyãfálá
1543. 1607   eighteen (18)   tíyãsígba
1544. 1608   nineteen (19)   tíyãnáani
1545. 1609   twenty (20)   kyelimu
1546. 1610   twenty-one (21)   kyelimudó
11.2 ORDINAL NUMBERS

1559. 1623  (be) first  sǐŋkpiéŋõ
1560. 1624  (be) second  fálàŋã
1561. 1625  (be) third  sigbánŋã
1562. 1626  (be) last  lákpã

11.3 ORDER

1563. 1627  add  eláfi/ ekyàgá
1564. 1628  subtract  ebòkòn
1565. 1629  increase  kùkèkò
1566. 1630  decrease  kùbòkò/kùbégèkò
1567. 1631  count (v)  ènàŋ
1568. 1632  arrange  èsógólòŋ
1569. 1633  (be) equal  era báà
11.4 RELATIVE QUANTITY

1570. 1634 (be) abundant  \( \text{era finy\textbar} \)
1571. 1635 enough  \( \text{yu\textbar}r\text{e} \)
1572. 1636 lack (v)  \( \text{era y\textbar}g\textbar\textbar} \)
1573. 1637 (be) used up  \( \text{era k\textbarny\textbar} \)

11.5 QUANTIFIERS AND NEGATION

1574. 1638 all  \( \text{ekp\textbar} \)
1575. 1639 many  \( \text{fi\textbar\textbar} \)
1576. 1640 few  \( \text{d\textbarm\textbard\textbar} \)
1577. 1641 half  \( \text{\textbar\textbar g\textbar} \)
1578. 1642 whole  \( \text{w\textbard\textbari\textbar\textbar} \)
1579. 1643 everybody  \( \text{m\textbarg\textbarkp\textbar} \)
1580. 1644 everything  \( \text{s\textbarkp\textbar} \)
1581. 1645 everywhere  \( \text{l\textbarg\textbarkp\textbar} \)
1582. 1646 nobody  \( \text{m\textbarg\textbard\textbard\textbar} \)
1583. 1647 nothing  \( \text{f\textbar\textbari} \)

12. GRAMMATICAL ITEMS

12.1 PRONOUNS

1584. 1648 I  \( \acute{\text{\textbar y}}/ \text{n}/ \text{m} \)
1585. 1649 you (s)  \( \acute{\text{\textbar e}} (\text{\textbar\textbar e\textbar\textbar\textbar ma}) \)
1586. 1650 he/she  \( \acute{\text{\textbar e}} (\text{\textbar\textbar e\textbar\textbar\textbar ma}) \)
1587. 1651 we  \( \acute{\text{\textbar a}} (\text{\textbar\textbar m\textbar\textbar \textbar n\textbar\textbar n\textbar\textbar u}) \)
1588. 1652 you (pl.)  \( \acute{\text{\textbar n}} (\text{\textbar\textbar n\textbar\textbar m\textbar\textbar n\textbar\textbar n\textbar\textbar u}) \)
1589. 1653 they  \( \acute{\text{\textbar n}} (\text{\textbar\textbar n\textbar\textbar m\textbar\textbar n\textbar\textbar n\textbar\textbar u}) \)
12.2 RELATIONALS

1590. 1654  here  níŋ
1591. 1655  there  núŋ
1592. 1656  far  eföwe
1593. 1657  near  egbúnnewe
1594. 1658  north  nògòlt
1595. 1659  south  tükómá / kuádáará
1596. 1660  east  telbódíra
1597. 1661  west  telbádíra
1598. 1662  up  kàŋká (see 1387)
1599. 1663  down  dûyûmá
1600. 1664  forward  ñará
1601. 1665  backward  kàaná
1602. 1666  right (direction)  bûlù tükómá
1603. 1667  left  bûlugálmá
1604. 1668  over, above  ëmá
1605. 1669  under, below  ekọrà
1606. 1670  in front of, before  ë ñará
1607. 1671  behind  ë kàná
1608. 1672  beside  ë gàdô
1609. 1673  inside  kòn
1610. 1674  outside  síìná
1611. 1675  between  tuôm
1612. 1676  towards  kọọ
1613. 1677 away from bóra
1614. 1678 with wè

12.3 DEMONSTRATIVES, ARTICLES
1615. 1679 this (man) màγá
1616. 1680 that (man) màγáwé
1617. 1681 some (men) dó
1618. 1682 other (men) kpèrè

12.4 QUESTION WORDS
1619. 1683 who? mà
1620. 1684 what? mìsè
1621. 1685 which (one)? nyúndɔ
1622. 1686 where? mindrà
1623. 1687 when? sàγányúndɔ
1624. 1688 why? mìsèi/ mìsètɔwɔ̀rá/ mìsèwúrò
1625. 1689 how? mìnī
1626. 1690 how many? nùwe jòlì (jòlì? ‘how much)

12.5 CONJUNCTIONS, ADVERBIALS, ETC.
1627. 1691 and tɔrò
1628. 1692 if nì
1629. 1693 because sàbú
1630. 1694 perhaps dòkɔn
1631. 1695 really, truly téyé, téyéya
1632. 1696 well (adv) nyìá
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1633. 1697</td>
<td>poorly</td>
<td>jágà</td>
<td></td>
</tr>
<tr>
<td>1634. 1698</td>
<td>only</td>
<td>dà</td>
<td></td>
</tr>
<tr>
<td>1635. 1699</td>
<td>yes</td>
<td>ɔ́hṍ</td>
<td></td>
</tr>
<tr>
<td>1636. 1700</td>
<td>no</td>
<td>ɔ̀hṍ</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX G

Months of the year and Days of the week in Jogo

Table 16: The Months of the year in Jogo

<table>
<thead>
<tr>
<th>Jogo</th>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) jômène</td>
<td>Muharram</td>
<td>January</td>
</tr>
<tr>
<td>2) sáfúrá</td>
<td>Safar</td>
<td>February</td>
</tr>
<tr>
<td>3) dômábá</td>
<td>Rabee al-Awwal</td>
<td>March</td>
</tr>
<tr>
<td>4) kórikó</td>
<td>Rabee ath-Thuwanee</td>
<td>April</td>
</tr>
<tr>
<td>5) kórikófilàná</td>
<td>Jumaada al-Awwal</td>
<td>May</td>
</tr>
<tr>
<td>6) kâmidômà</td>
<td>Jumaada ath-Thuwanee</td>
<td>June</td>
</tr>
<tr>
<td>7) kâmidó</td>
<td>Rajab</td>
<td>July</td>
</tr>
<tr>
<td>8) àrijinájé</td>
<td>Sha’baan</td>
<td>August</td>
</tr>
<tr>
<td>9) súnkyé</td>
<td>Ramadaan</td>
<td>September</td>
</tr>
<tr>
<td>10) mínykyé</td>
<td>Shawwaal</td>
<td>October</td>
</tr>
<tr>
<td>11) dônji</td>
<td>Zhul-Qai’dah</td>
<td>November</td>
</tr>
<tr>
<td>12) dónjí</td>
<td>Zhul-Hijah</td>
<td>December</td>
</tr>
</tbody>
</table>

Table 17: The days of the week in Jogo

<table>
<thead>
<tr>
<th>Jogo</th>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) liëti</td>
<td>Yaumul al-Ahad</td>
<td>Sunday</td>
</tr>
<tr>
<td>2) têñè</td>
<td>Yaumul al-Isnayn</td>
<td>Monday</td>
</tr>
<tr>
<td>3) tâlâtá</td>
<td>Yaumul ath-Thuwanee</td>
<td>Tuesday</td>
</tr>
<tr>
<td>4) ârwá</td>
<td>Yaumul al-Arbaa</td>
<td>Wednesday</td>
</tr>
<tr>
<td>5) làmisã</td>
<td>Yaumul al-Khamees</td>
<td>Thursday</td>
</tr>
<tr>
<td>6) júmmá</td>
<td>Yaumul al-Jumu’ah</td>
<td>Friday</td>
</tr>
<tr>
<td>7) sibittí</td>
<td>Yaumul as-Sabt</td>
<td>Saturday</td>
</tr>
</tbody>
</table>

29 The months in Jogo follow the Arabic lunar calendar (Hijri), but do not necessarily occur concurrently with the Gregorian calendar (in the course of a particular year), as presented in table 16.
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