

REDUPLICATION IN FULFULDE

BY

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**BEING A DISSERTATION SUBMITTED TO THE DEPARTMENT
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Declaration

I hereby declare that this work is the product of my research efforts undertaken under the supervision of **Professor Hafizu Miko Yakasai** and it has not been presented anywhere for the award of a degree or certificate. All sources have been duly acknowledged.

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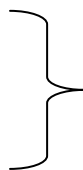
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Key to Abbreviation

A – Active
M – Middle
P – Passive



voices

AUG – Augmentative

DIM – Diminutive

ICA – Initial Consonant alternation

PEJ - Pejorative

PROG – Progressive

VAP – Voice Aspect Polarity

Abstract

This dissertation presents a morphological analysis of reduplication in Fulfulde. The study aims at investigating reduplication in Fulfulde with the aim of identifying how reduplication system operates in Fulfulde. A qualitative research method was employed in collecting data. The findings revealed that, Fulfulde has both complete and partial type of reduplication, which is further subdivided into regular full and modified full and modified partial. Complete reduplication is more productive than partial reduplication in the language, where complete occurs in all the grammatical categories of the language, while partial reduplication occurs in few places, i.e. verbs and numerals which are considered less productive. Initial consonant alternation and nominal classes are features of the language and with regards to reduplication, the features go along with the reduplication, but do not distract the arrangement of the reduplication, as such words are reduplicated independently. The model of approach used in this research is morpho – semantic process by Kiyomi (1993).

CHAPTER ONE

GENERAL INTRODUCTION

1.0 Introduction

This dissertation is an investigation of reduplication in Fulfulde, a Language classified under the Niger – Congo phylum (Greenberg, 1963). Reduplication has always attracted the attention of linguists because reduplication is a universal phenomenon which operates different systems in languages. Reduplication has distinctions in languages, right from the operational patterns, productivity and functions. From the operational patterns some languages have only complete or partial type of reduplication and restricted to few grammatical categories, e.g. Tiv language has only complete reduplication which occurs in adjectives and adverbs (Maduagwu, 2012). Other languages have larger reduplicative pattern with complete, partial and with some typological sub divisions, such as Hausa. According to Yakasai(2006) Hausa has full and partial with subdivisions, whereby partial and complete reduplication has regular full and modified full. The modification is an attachment of a radical extension, such as *-tir*, *-n*, *-t* and suffixes such as *-ji* and *-jo* which serve as one of the modification elements in Fulfulde. It is impressive that; Fulfulde actively uses reduplication in its grammatical formation. Fulfulde exhibits active and frozen type of reduplication

and this research work will focus on active type of reduplication. According to Newman (2000:508), “active reduplication refers to word formation rules in which reduplication functions as synchronically recognizable derivational or inflectional process.” Active reduplication is a kind of reduplication that has a recognized simple lexical stem from which the form has been derived or inflected. As for frozen reduplication, Newman (2000:509) states that, “words that phonologically have reduplicated structure, but which from synchronic point of view constitute essentially unanalyzable simple lexical stems. Yakasai (2006) states that, Frozen reduplication refers to the items that appear as reduplicated forms, but lack recognizable lexical stem.

In fact, reduplication in Fulfulde is a broad subject which requires investigation, as priority was not given to it in the language despite its significant role in the grammatical and lexical formation in the language. Arnott (1970) and McLaughlin (2006) indicates the presence of the phenomenon in Fulfulde, but not fully explained due to the fact that, their focus was not directly on reduplication. Most of the works done in the language were geared towards history, phonology, morphology and syntax such as Arnott (1970), McIntosh (1984), Stenning(1994) and Iya - Ahmed(2011). Other works include Girei(2009) and McLaughlin (2006).

1.1 Brief History of Fulve

Fulve people are very large in number; they spread all over West African countries down to Central and Eastern parts of the continent. They called themselves Fulve (plural), Pullo (singular) and they called their language Fulfulde. Although they are called differently by various people in the world, e.g. in Africa around Senegal and Gambia their language is Pulaar and Pular, in Nigeria and Niger they are called Fulani by Hausa people, Fullata by Kanuri, while in Europe, i.e. French people called them Peul, Germans called them Ful, etc. Fulve played an active role in the history of the great savannah area south of the Sahara. The population of Fulve was roughly estimated as about 10 – 15 million speakers (Leger, 2002).

The Fulve people are divided into two distinct groups, which are united by their common language and common history. The two groups are distinct from their cultural occupation, the first group is known as pastoralist nomads and the second group is known as sedentary agriculturalist. The first group preserves their cultural heritage of nomadism and mostly do not accept religion and dwell in the bush and they are called by their counterpart brothers as Fulve *laddem* meaning ‘bush Fulani’. The second group who embraced Islam and have splashed into businesses such as trading, farming and dwell in towns, cities and can also have some animal rearing

besides, this group were called by their counterpart, the bush Fulani as *Fulve wuro* meaning ‘town Fulani’ (Leger, 2002).

There were so many hypothesis about the origin of Fulve, some seek the home land in Egypt, India, Syria, Hebrew, Romans, Arabs and Berbers(Leger, 2002) cited inKrause(1884:10), Taylo (1953), and Kirk(1958:22).The most probable assumption, however, is that they have been living in at then what was called ‘green Sahara’ from where they were forced to move southwards to the Senegambia region due to progressing desertification around the 4th to 2nd millennium B.C.This has also driven the interest of many scholars and came out with different theories about the origin of Fulve and equally motivated the feelings of the language and attracted the attention of linguists (Leger, 2002).

Presently, Fulfulde is classified under the Atlantic family of Niger –Congo phylum and is one of the most highly developed class languages in Africa. It is clear that such a widespread people must have developed on and during their migrations a number of dialects of which those in Senegal, Gambia, Futa Jalon, Upper and Middle Niger, Upper Burkina Faso, Nigeria, Adamawahigh lands in Cameroon and Bangirmi in Chad are the main ones (Leger, 2002).The Fulve people have unique attribute which distinct them from other communities, apart from their two distinct groups, they have what is called*pulaaku* which is common feature and attribute of Fulve. This *pulaaku* specifies the actual rules or guidelines for appropriate

behavior and presentation of self as well as the series of virtues and personal attributes which may be viewed as rewards for behaving like ‘Pullo; Leger (2002) in VerEecke(1986:98). Many authors have commented on the flexibility, refinement and comparative richness of Fulfulde which might be also due to these circumstances (Leger, 2002). According to Leger (2002), *Pulaaku* is a Fulani exclusive marker.’ It comprises apart from language itself, other components such as ‘*semteede*’, i.e. modesty and reserve, ‘*munyal*’ patience and fortitude, ‘*enxam*’ compassion and kindness, ‘*ngorgu*’ manliness and bravery, ‘*hakkiilo*’ care and forethought and above all ‘*nexxaaku*’ dignity or self-respect (Leger, 2002). All these important values and virtues of *Pulaaku* are always in one or the other way connected with their attitudes towards cattle and livestock (Leger, 2002).

1.2 Background of the Study

Reduplication is one of the morphological processes that have attracted researchers in linguistics. Reduplication is a universal phenomenon that is found in a wide range of languages, especially African languages and Fulfulde belongs to them. Reduplication displays different patterns in languages which trigger the interest of linguist from different parts of the world who felt so inclined to put their contribution in defining and analyzing the phenomenon. The distinctive patterns of reduplication have been studied in different perspectives by many scholars like Wilbur (1973), Moravcsik (1978), Marantz (1982), Botha (1984,1988), Kiyomi

(1993) McCarthy and Prince (1995), Inkelas and Zoll (2000), Newman (2000), Jaggar (2001), Abubakar (2001), Inkelas (2006) and Yakasai (2006). Generally, it is accepted that, reduplication is of two main divisions, namely: full reduplication and partial reduplication. The sense of full reduplication is that all of the word form is repeated or doubled, and partial reduplication means that, part of the word form is repeated or doubled (Yakasai, 2006). Full reduplication has two divisions namely; (regular) full(also termed as complete/total elsewhere) and modified full. He cited examples from different languages including Fulfulde such as *jota* ‘now’ *jota-jotta* ‘just now,’ *ndiyam* ‘water’ *ndiyam – ndiyam* ‘watery’. The modified full is seen as full reduplication with some modifications within the root.

Fulfulde has also gained a little consideration on its reduplication (Arnott, 1970). McLaughlin (2006) examines the feature of reduplication in Pulaar, Wolof and Seerer which are related languages to Fulfulde and differ in two parameters with regards to reduplication. First, the shape of the reduplicant and second in the case of Pulaar patronymic reduplication, whereas all the three languages have initial consonant mutation. The work of McLaughlin (2006) and Arnott (1970) indicate the presence of reduplication in Fulfulde, although the two works on reduplication in the language have not fully explained the phenomenon, because their focus was not directly on reduplication in the language. This study aims at investigating the morpho – semantic process of reduplication in Fulfulde, as it unveils out the

reduplicated forms and meaning in the process of full and partial reduplication in the language.

1.2.1 Word Formation in Fulfulde

Word formation means a process which an individual morpheme combine to form words. Linguistically languages have different system in forming their words which may be attributed to the system or pattern on how the language operates. Fulfulde is a language that conveys its message largely through its verbs than nouns (Daudu, 2001) in (Mukoshy, 1997). The great deal of its nouns is secondary and derived from verbs. Therefore, the derivational system of the language is one of the most productive systems in African languages (Daudu, 2001) and (Abu-Manga, 1991). However, word formation has to do with morphology of language, Thus, definitions were posit by different authors, the most appropriate definition for this study is Abubakar (1994) that, it is a study of word formation and inflection. Daudu (2001) in (Mathews, 1974) made distinction between lexical and inflectional morphology. He states that, the simplest definition of morphology is the scientific study of morphemes. A word and a morpheme are central to the study of morphology. Word is defined as the smallest form and occurs in isolation, it is not fixed completely in respect of neighboring categories. Individual words have an integral structure consisting of small units. The most important component of a word is the morpheme, which is the smallest unit of language that carries

information about meaning or function (Daudu, 2001). Words are classified in to simple and complex. A simple word that is made up of one morpheme and give meaning is regarded as free morpheme, e.g. *War* 'come', *diw* jump'. The complex word is made up of two or more morphemes and do not give meaning unless is attach to other morpheme before it gives meaning, e.g. *dogg+u>doggu* 'run', *dogg+u+du>doggudu* 'running', e.g. these morphemes are regarded as bound morphemes. Daudu (2001) in Abubakar (1994), states that, the words (simple) are called free morphemes, while bound morphemes are the grammatical elements, e.g. Affixes, but is specific to some languages. He further posits that, a free morpheme in one language may not be the same in another language due to the difference in the operational systems of the languages. For example, run in English is a free morpheme, but Fulfulde has bound morpheme *dogg* as run which require attachment of other morphemes before it can give meaning, i.e. *dogg+u>doggu* 'run'. However, morphemes in Fulfulde do not have an invariant form, e.g. allomorphs. The language uses root and affix. A root is said to belong to lexical categories as against an affix that is simply bound morpheme. The root morpheme is defined as constituting the very heart of the word (Daudu, 2001) in (Abubakar, 1994), or it is the core of the word that carries the major component of its meaning (Daudu, 2001) in (O' Grady and Dobrovoslsky, 1999). Daudu (2001) observes that, in Fulfulde, root morphemes apply to especially verbs, adjectives

and secondary nouns. As for primary nouns, the term stem is used to describe the base form (Arnott, 1970).

Affixes are attachment roots of the words. There are three types of affixes used in various languages of the World e.g. prefix, infix and suffix. However, the affixes are used differently by different languages, e.g. some languages have all the three affixes, e. g. Hausa language and some may have one or two. For example, Fulfulde has only one that is suffixes and post base morphemes (Mukoshy, 1991). For instance, the word *tam-s-irnde* > *tamsirnde*, *tam* is the root, *s* is an associative stem, *ir* is a radical extension, while *nde* is the class indicating one container, that is the class/number marker. Therefore, words are deriving through the addition of an affix, which in the case of Fulfulde is suffixation. A suffix is added to verb or a noun root, e.g. *dogg+u* > *dogg* 'run' *nag +e* > *nagge* 'cow', both examples have *u* and *e* VAP suffixes.

1.2.1.1 Nouns Derived from Basic nouns

According to Daudu (2001), a basic noun is made up of a stem and suffix. The stem has no meaning of its own. It would only have meaning if it has suffix of a particular marker. Here are some examples in the following stems; *Muny*, *baa*, *ree*, *hoo*; they take suffixes such as; *al*, *wo*, *du*, and *re* which can be attach to stems to give meaning.

<u>Word Form</u>	<u>Meaning</u>
1.a. Munyal	patience
b. baawo	back
c. reedu	belly
d. hoo	head

The above words, each consists of two morphemes; the stem and the suffix. However, from these words we can still derive some words when adds another suffix on the word, meaning the whole word stands as our base, e.g.

<u>Base Form</u>	<u>Derived Form</u>	<u>New Meaning</u>
2. a. munyal	munyoowo	a patience person
Baawo	baawoojo	one from behind
reedu	reeduujo	pregnant women
hoore	hooreha	topic

The above examples exhibit some phonological features where the intervening vowels are lengthening in the derived forms.

1.2.1.2 Nouns Derived from Verbs

Daudu (2001) explained that, two types of nouns can readily be derived from verbs, common and abstract nouns. The verb root is unlike the noun stem is meaningful; the derived form takes the meaning of the root. The derivational process is the suffixation of any class marker to the verb root. In this case the suffix affixed is one of the allomorphs of the nominal class marker. For examples:

<u>Verb Root</u>	<u>Derived Form</u>	<u>Meaning</u>
3. a. Wum-	bum-xo	be blind
b. fer-	per-xo	be wise
c. hev-	keb-xo	one who get

The above examples are all common nouns derived from verb roots. The *do* suffix is a variant of *-jo*. Each occurs in different environments. The later is suffixed to verb and adjective roots and the former to noun roots, the derived forms are common nouns ([Daudu, 2001). To derived abstract noun from the above roots, simple requires the affixation of *-ndam* suffix. For examples;

<u>Root Form</u>	<u>Derived Form</u>	<u>Meaning</u>
4.a.Wum-	mbum-ndam	blindness
b.fer -	per-ndam	civilization
c.hev-	keb-ndam	source

The above examples are alternating consonants therefore has alternate from roots w, f, h to mb, p and k.

Other way in which nouns are derived from verbs is through affixation, e.g. Verbo-nominals which exhibit tense/voice markers in their derived forms, as indicated by (Daudu, 2001). For examples:

	<u>Root</u>	<u>tense/voicemarker</u>	<u>Derived Form</u>	<u>Glos</u>
5. a.	jog-	- ii	jogiixo	one holding something
b.	huw-	- oo	kuwoowo	worker
c.	hev-	- ay	kebayxo	one who may get
d.	jal-	- u	jaluxo	one who laugh

The meaning of the above examples of verbo- nominal are determine by the tense/voice marker; *ii*, *-ay* and *-u* marks past and future meaning, while *-oo* means a regular action, e.g. (person who works).

1.2.1.3 Nouns Derived as Secondary Nouns of Instrument

The derived form has two suffixes to the verb root, the hyphen marks morpheme boundary (Daudu, 200). For example:

	<u>Verb root</u>	<u>derived form</u>	<u>gloss</u>
6. a.	sab-	sab-or-go	axe
b.	was-	gas ir-gal	digging hool
c.	nam-	nam-ir-de	grinding stone
d.	un-	un-or-du	mortar

The class marker which is the last morpheme indicate instrument such as, axe, grinding stone and mortar. From the examples above there are two types of stems following the root, i.e. *ir* and *or*. These reflect the voice of the verb root (whether active or middle), whereas the meaning of the derived form denote instrument (Daudu, 2001).

1.2.1.4 Deriving Infinitives from Verbs

According to Daudu (2001) that there are three infinitives in Fulfulde. Two of these have nominal class markers. Thus, a pronoun can stand in place of the two. The two infinitives end in - *ol* and - *ki* suffixes. The third suffix is the one that ends with - *go* suffix. Each verb can take the three forms of the infinitives as follows:

Verb root	Derived Form	Gloss
7. a. nanng-	nanng – u-go	catch
	Nanng-ol	
	Nanng – u-ki	
b. war-	war – u-go	come
	gar-ol	
	war – u-ki	

The forms that end with *ki* and *go* class suffixes are preceded by tense/voice marker that can be optional as in *wargo* ‘coming’. As for the suffix in *nanng-ol* or

gar-ol, it marks *ngol* nominal class. However, this kind of noun does not take plural suffix.

1.2.1.5 Deriving Verbs from Adjectives

The verbs are the most productive element in Fulfulde (Daudu, 2001) in (Mukoshy, 1991). Apart from deriving a number of nouns from it, it can also be derived from adjectives. For example;

<u>Adjectival root</u>	<u>Derived verb</u>	<u>Gloss</u>
8. a. <i>hiix-</i>	<i>hiid- a</i>	old
b. <i>juut-</i>	<i>juut- a</i>	long
c. <i>wooj-</i>	<i>wooj-a</i>	red

The derived meaning denotes to become old, to be long and to be red (Daudu, 2001: 28-30). However, Mukoshy (1991), examines morphemes in Fulfulde as follows:

1.2.2 Fulfulde Morphemes

The morphemes in Fulfulde are called ‘root’ in the case of verbs and ‘stem’ in the case of nouns; post- base; or suffix morphemes, as they are called by Arnott (1970). The first is any morpheme of verbs, nouns, pronouns, adjectives, adverbs, or particles. The second is the post- base morpheme and actually most of them are

extensions and the affix that marks tense, voice, class or number or a combination of more than one as is the case with voice and tense in the case of verbs. The third type is the class and number morpheme and the concord morpheme (Mukoshy, 1991).

1.2.2.1 Base Morphemes

According to Mukoshy (1991), base morphemes in Fulfulde are divided into two: Free morphemes and Bound morphemes.

1.2.2.2 Free Morphemes

Free morphemes in Fulfulde are limited generally to the closed sets such as pronouns other than possessives, e.g. (*maa* + class/number, such as in *maa* + *ko* = *maak* meaning ‘his’, *maa* is the possessive marker, while *ko* is the class/number indicating one person and independent pronoun, e.g. (*han* + class/number, such as in *han* + *ko* = *hanko* meaning ‘he’, *han* is the independent pronoun, while *ko* is the class/number indicating one person; both are bound; others are adverbs and few particles. The rest of the pronouns, whether in the nominative, accusative or genitive case are free, as identified by (Mukoshy, 1991). For example:

- | | | | | | |
|----|----|--------|------|------|-----|
| 9. | Mi | yam/am | ngel | ngum | kon |
| | A | ma | nga | ko | - |

O	mo	nde	ndi	ndu	
En	en	nga/mba	nge	ngu	
Min	min	ngal	ngo	ngol	ka
On	on	kal	ki	kokol	
Ve	ve	xam	xe	xixum	

1.2.2.3 Adverb

Adverbs of time and place if they are not specific are generally free. However, the names of places and times can function as adverbs but being nouns they belong to classes. Therefore, they must carry a class/number affix. For examples; there is a difference between '*ton*', '*kenya*', '*luumo*' and '*jummaare*' in the following sentences:

1a. *ton* o dilli 'it was there he went,' 1b. o dillii *ton* 'he went there,'

1c. *luumo* o dilli 'it was Market he went,' 1d. o dillii *luumo* 'he went to the Market.'

2a. *kenya* o warti 'it was yesterday he return', 2b. o wartii *kenya* 'he returned yesterday, 2c. *jummaare* o warti 'it was Friday that he returned', 2d. o wartii *jummaare* 'he returned on Friday.'

The above sentences in (1c) *luumo* and (2c) *jummaare* belong to *ngo* and *nde* classes respectively, which also indicate singular form number and at the same time *ton* and *kenya* do not belong to any class (Mukoshy, 1991).

1.2.2.4Particles

Particles in Fulfulde are not many and generally used for padding emphasis or focusing. The following are examples of particles as generally used in Fulfulde ‘fa’ ‘maa’ ‘boo’ ‘haa’ ‘ay’ ‘to’ ‘ba; ‘ba; ‘bano; ‘ko; ‘fuu; ‘aabi and toni (Mukoshy, 1991:24).

1.2.2.5Bound morphemes

Bound morphemes in Fulfulde are recursive and can be followed by other morphemes such as affixes and they are found in the category of verbs, nouns, some pronouns, adjectives and ordinal numbers, (Mukoshy, 1991:25).

1.2.2.6Bound Base Morpheme of Nouns

Fulfulde is one of the languages that use class system which functions in the language like gender in other languages, i.e. Hausa language. A noun in Fulfulde with the exception of propernouns and some abstract nouns, must not only belongs to a class but also has to mark quantity (Mukoshy, 1991). He states that, a thing in the language is either ordinary/normal, large, small or tiny. For instance the word ‘*gor*’ for male, if it is human is either *gor + ko – gorko* ‘meaning nomal male person’, *ngor + ga – ngorga* ‘meaning big/huge person’ (aug), *gor + gel–gorgel* ‘meaning small person’ (pej) and *gor + gum – gorgum* ‘meaning tiny person’

(dim), where the *ko*, *ga*, *gel*, - *orgum* mark the class, number also marks quantity. Therefore, nouns in Fulfulde with the exceptions of the proper nouns are all bound morphemes because it has carry alone the class markers as indicated in the above examples. However, initial consonant alternation (ICT) play a role in the grammatical system of the language whereby some phonemes undergo some phonological changes, e.g. the first consonant change to another feature when pluralized or in the case of Augmentatives, Pejoratives and diminutive.

1.2.2.7 Bound – Base morpheme of verbs

Verbs in Fulfulde mark tense and voice, therefore, they are not free since tense and voice are marked by a separate morpheme. Mukoshy (1991) cited Arnott(1970: 179) that, Gombe dialect has 42 different tenses and it is possible to get 42 voices, since the morpheme that marks tense is the same with morpheme that marks the voice. However, three aspects can be regarded as tenses and voices. For example:

10. Past	present/continuous	Future
Active loo – ii	xon loot – a	loot – an / ay / at
Middle loo – ake / ike	xon loo- oo	loot – oto
Passive loot – aama	xon loo–ee	loot – ete

In Fulfulde any verb must mark the tense and the voice, in most cases the tense and the voice are marked by one morpheme which is regarded as a tense/ voice morpheme. However, suffix morphemes in Fulfulde co-occur in most cases with

verbs and nominals. The verbs take the tense/voice or mood morphemes as their suffix (Mukoshy, 1991: 29) in Arnott (1970:411).

ng > g, etc. Gombe dialect has 25 classes, where as some dialects have 24 or 28 classes (Arnott, 1970).

However, from my observation verbs in Fulfulde have both free and bound morphemes in verbs, e. g. *few* 'lie', *diw* 'jump' both are free morphemes because they can stand on their own and give meaning, while words like *tokk*, *mahare* both bound base morphemes they require additional suffix morphemes before they can give meaning, e. g. *tokk* + *a* > *tokka* 'follow', *mah* + *u* > *mahu* 'build', etc.

1.2.2.8 Bound Base Morpheme Pronouns:

Pronouns that have bound - base morphemes and an affix are the independent and possessive pronouns, i.e. *han* as the base - morpheme and any class/ number morphemes as its suffix and *maa* as its base - morpheme and any class / number morpheme as its suffix, (Mukoshy, 1991 : 26). For example:

Independent Pronouns Possessives Pronouns

11. *han* + *ko* 'he' *maa* + *ko* 'his' (person)
- han* + *nge* 'it' *maa* + *nge* 'its' (Cow)
- han* + *ngu* 'it' *maa* + *ngu* 'its' (Horse)
- han* + *ngol* 'it' *maa* + *ngol* 'its' (rope)

han + jam 'it' maa + jam 'its'(water)

han + ji 'it' maa + ji 'its'(Sheep or ropes)

1.2.2.9 Adjectives

Adjectives in Fulfulde must have concord to relate them to the noun they qualify or modify. Every noun in the language belongs to a class, the adjectives which qualify or modify a noun must carry a marker of the class of the noun it qualifies, (Mukoshy, 1991). For example:

Hence gorko boxeejo worve woxe'en mbabba mboxeewa
 -ko -jo -ve -en - ba - wa

As can be seen in the above examples the concord is always affixed to the qualifier and it is not a class/number marker as it is the case with nouns.

Nouns in Fulfulde do not change their class but their quality. But, adjectives change their concord in accordance with the noun they qualify or modify.

However, Fulfulde been a class language, forms its words through adding suffixes to the base form in the bound morphemes, while the free morphemes stand on their own and have meaning. Therefore, verbs have both free and bound morphemes, e. g. the words *war* 'means come', *huw* 'do work' both are verbs and free morphemes, while the words *dogg* ,*dill*, both are base morphemes they require additional suffixes before they give meaning, e. g. *dogg* + *u* > *doggu* 'run', *dill* + *u* > *dillu* 'go'.

1.2.2.10 Ordinal numbers

Fulfulde ordinal numbers behave just like adjective. They do not have classes but show concord similar to those of adjectives. From ‘first’ to ‘tenth’ the concord is marked on the ordinal number. After that, it is the last number that carries the concord. For example:

Gorko aran - o, worve aran’en, mbabba aran - a, gorko sappo e go’o - jo, worve sappo go’o – en, mbabba sappo go’o –wa.

1.2.2.11 Post – Base morphemes

Post – base morphemes are those morphemes that come or follow the base morpheme before the last suffix. It can be a single morpheme or a sequence of morphemes. In some cases they occur finally and mostly followed by final suffixes, like tense/voice suffixes. For example:

kawtindirii > meet with one another

sappootirii> pointed at one another

The *ndir*, and *tir* are all post – base morphemes that come before voice, aspect and polarity (VAP) suffixes. Arnott (1970:334), refers to the post base morphemes as Radical extensions as in the following examples:

Ext	form	meaning
I	-t- -it/ut-	Reversive
Ii	-t- -it/ut-	Repetitive (middle)
Iii	-t- -it-	Reflexive middle 1 object
Iv	-t- -it-	Retaliative middle
V	-it- -it-/ut-	Intensive
VI	-d- $\left\{ \begin{array}{l} \text{-id-/-ud-} \\ \text{-od-} \end{array} \right\}$	Associative
VII	-d- $\left\{ \begin{array}{l} \text{-id-/-ud-} \\ \text{-id-/od-} \end{array} \right\}$	Comprehensive
VIII	-n- -ni-	Causative active + 1 object + p
IX	-r- $\left\{ \begin{array}{l} \text{-ir-} \\ \text{-or- ir} \end{array} \right\}$ (-d-)	Modal - (+ 1 object)

X	-r- (-d-)	$\left. \begin{array}{l} \text{-ir-} \\ \text{-or-} \end{array} \right\}$	Locative
XI	-an-		Dative + 1 object
Xii	-law- ilaw-		Celerative
XIII	-oy-		Distantive
XIV	-kin - ikin -		Simulative middle
XV	-indir-		Reciprocal active – 1 object + p
XVI	-ootir-		Reciprocal active – 1 object
XVII	2R+-i+ -n- t		Iterative
XVIII	2R + - tir- t		Iterative reciprocal
XIX	-x- ix/- ux-		Demonstrative active

Some of these radical extensions involve reduplication, as shown in sections (4.1.2 and 4.8) i.e. in the above table (iii) *-t* reflexive, in (iv) *-t - it* retaliative middle, in (viii) *-n* causative active, in (xvii) *'-n'* iterative and (xviii) *'tir'* iterative reciprocal.

1.3 The Fulfulde Nominal Classes

Fulfulde is among the languages that uses classes instead of gender and is the richest in the system especially in the African languages. The language exhibits more than twenty classes with slight differences of the number of classes used by any dialect. The Central dialect of Gombe has 25 classes (Arnott, 1970). The classes are distinguished according to their function. For example, a thing in Fulfulde is either ordinary/normal, large, small or tiny. The classes function in distinguishing the above features, e.g. the word *gor* for male, if it is human is

either *gorko* meaning normal male person; *ngorgame* meaning big/huge person (aug) *gorgel* meaning small person (pej) and *gorgum* meaning tiny person (dim).

In this respect, *ko* stands for normal, *ga* stands for augmentative, *gel* stands for pejorative and *gum* stands for diminutive form.

1.3.1 The Division of the Nominal Classes

Nominal Classes are divided into three, based on their functions as follows:

1. Personal classes; has only two examples, e.g. *O* singular and *be* plural forms.
2. The non- personal classes is larger and contained all the rest of classes with the exception of personal and modifying classes, it includes two plural forms, e.g. *di* and *de*.
3. Modifying classes are also divided into augmentative which show bigness of a thing, pejorative which shows smallness of a thing and diminutive which shows how tiny a thing is, they have plural, e.g. *Ko* for the augmentative *kon* for the pejorative and diminutive form (Girei, 2018).

1.3.2 Fulfulde Nominal Classes Table

Table 1:

	Basic classes	Singular	Plural
1.	Personal	O	V
2.	Non-personal	Nde, ngo, ngal, ka, ki, ko	Xe

		Xam-(for liquid) Xum-(forNuetral) Ndi, ndu, ngel, ngu, ngol, kon, ka	Xi
		Kal - (for uncountable nouns).	Nill
3.	Modifying Classes	Nga - (augmentative)	Ko
		Ngel - (pejorative) Ngum - (diminutive)	

1.4Statement of the Problem

A number of linguistic researches have been conducted on different linguistic levels of Fulfulde. Most of the previous and present studies deal with the history and culture of the people (Stenning, 1994 and Leger, 2002) among others. Others who have worked on phonology, morphology, syntax or morpho-syntax and dialectology are Arnott (1970), McIntosh (1984), Mukoshy (1991), Daudu (2005) and Iya Ahmed (2011). These studies have not put much of their attention towards reduplication with the exception of Arnott (1970) and McLaughlin (2006). The work of Arnott (1970) and that of McLaughlin (2006) are the first studies on reduplication in Fulfulde although the two works were not a full pledge of the study of reduplication in particular.

1.5 Aim and Objectives

The aim of this research is to study reduplication in Fulfulde with the objectives as follows:

- i. To identify how reduplication system operates in Fulfulde.
- ii. To identify the reduplicative morphemes in Fulfulde morphology
- iii. To identify the semantics of reduplication in Fulfulde

1.6 Research Questions

This study attempts to answer the following questions:

- i. How does reduplication system operate in Fulfulde?
- ii. What are the reduplicative morphemes in Fulfulde grammar?
- iii. What is the semantics of reduplication in Fulfulde?

1.7 Significance of the Study

The study will fill the linguistic gap that exists in the contextual material on Fulfulde reduplication. The study will significantly enrich our understanding of reduplication as a morphological process. Indeed, scholars working on Fulfulde linguistics will find it useful. The study will be relevant to scholars who may wish to explore or argue relating to reduplication in Fulfulde.

1.8 Scope and Limitation

The study examines reduplication in Fulfulde. The area of the study is on Gombesub-dialect as spoken in Akko Local Government Area of Gombe State. The research examines active reduplication. Thus, frozen reduplication is out of the scope of this research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter deals with the review of related literature from various authors on reduplication in Fulfulde and other languages. The chapter is divided into two: the review of works on reduplication in Fulfulde and other languages which directly relate to the present study and the review of works on reduplication in other languages which indirectly relate to the present study. Although works done on reduplication in Fulfulde were not many as such, the available works found in Fulfulde of Arnott (1970) and McLaughlin (2006).

2.1 Review of Literature on Reduplication in Fulfulde

Arnott (1970:360-362) discusses some reduplicative features in iterative verbs extension in Fulfulde. The work reveals that an extended radical of this type consists of basic radical + -i- and basic radical + -in as in *som* + *i* + *som* + *in* → *somi somin* ‘keep on getting tired’; thus the extension involves reduplication of a nucleus consisting of basic radical plus – i followed by –n. The linking vowel –i- occurs regularly even with basic radicals of type 3 (such as *somi* → *shomi-shomi*), with which the preminary vowel normally occurs only as a free variant. He also states that consonant alternation, where appropriate, occurs in both parts of the reduplication. For examples, this extension indicates the repetition of an action a

number of times (whereas extension ii does not necessarily imply more than one repetition); the object if any, may be either singular or plural as shown below:

1. a. A. 'o – somisominii ve – comicominii they kept on getting tired of them
'o – noddinoddinii – ma he kept on calling you

b. M. 'o – ummi umminto he will keep on getting up

c. P. 'a -noddinoddinaa ma you have been called again and again

'o – winndiwindinii 'inxé mavvéhe wrote their names down one
after another

'o – hollihollinii – minpelle xuuxxe he (took us round and) showed
us many different places etc.

Arnott (1970:361) also exemplifies iterative –reciprocal in radical extension, radical(2R+*tir*). This extension involves reduplication of the basic radical and the addition of – *tir*. Consonant alternation, where appropriate, occurs in both parts of the reduplication. The extension indicates repeated action, especially with a plurality of actors; there is often reciprocal meaning as well, e.g.

ve-yām yāmtire (yāma,) they keep on asking each other question (relpast)

ve - ndaarndaartira (ndaara) they kept on looking at each other

vexon nannantira (nana) they kept on hearing each other

vexon piipiitira (fiya) they keep on hitting each other

The difference between this study and Arnott (1970) is on the focus of the study.

Arnott (1970) focused on general Ffulde morphology including discussion on Ffulde reduplication, while the current study focuses mainly on nature of

reduplication in Fulfulde. This shows that in Arnott 1970 there have been gaps to fill in on Fulfulde reduplication.

McLaughlin (2006) studies reduplication in three related Northern Atlantic Niger-Congo languages: Pulaar, Wolof and Seereer-Siin. She states that, the Northern Atlantic languages present a range of reduplicant shapes that are constrained by either prosodic or morphological factors or both. In Pulaar there are two different types of reduplicative morphemes, one of which is defined morphologically as a stem, while the other must be both a stem and bimoraic syllable; if the stem is not a bimoraic syllable, the form fails to reduplicate. In Wolof there are no special prosodic constraints on the shape of the reduplicant; the reduplicant is defined morphologically as a stem, resulting in total reduplication. In Seereer-siin, the reduplicant is defined prosodically as a bimoraic syllable without regard to morphological make-up. For example:

2. a. 'arde 'to come' ngar – 'arde 'volunteer plant'
- b. hul – de 'to fear' kul – hul – I 'frightening things'
- c. ceex -u 'dry season' ceex – seexu 'approach to dry season'

McLaughlin (2006) views that, reduplication in Pulaar is rather limited and generally unproductive process; nevertheless, some idiomatic lexical items involving noun – to noun and verb – to – noun derivation, such examples above involve one of the two systematic patterns of reduplication found in the language.

In her analysis on reduplication in Pulaar the study indicates that Pulaar has prefixal reduplication in its verbs. Another thing she mention is the productivity, according to her Pulaar reduplication is unproductive process. These are two existing gaps that the present study attempts to fill in, because Pulaar is a dialect of Fulfulde spoken in Senegal and Fulfulde is spoken in Nigeria may be because of the distance some different features have developed. Therefore, the work of McLaughlin (2006) will greatly guide the present study on the analysis of reduplication in Fulfulde because she paved way for further investigation and treatment of the phenomenon. However, the reviewed literature of McLaughlin (2006) will assist the present study to see whether some items found in Pulaar may be the same in Fulfulde spoken in Nigeria, as Pulaar exhibits prefixation as the data shows, whether the same may occur in Fulfulde even in a rear cases as well as comparing the productivity of reduplication in Fulfulde, because she states that Pulaar reduplication is unproductive. It will help in investigation of these items particularly on reduplication.

2.2 Review of Literature on Reduplication in other Languages

McLaughlin (2006) examines reduplication in Wolof and Seereer-Siin, she states that, reduplication in Wolof is found in nominal and verbal derivation. Productive

types of reduplication include verb-to-noun derivation and noun-to-noun derivation as in the below examples:

3. a. gis ‘see’ gis-gis ‘view point’
 b. xam ‘know’ xam-xam ‘knowledge’
 c. gakk ‘be stained’ gakk-gakk ‘stain’
 d. waalo ‘region’ baal-waalo ‘person from waalo’
 e. moodu ‘male name’ moodu-moodu ‘trader’

the above examples in (3a-c) indicate verb-to-noun derivation which indicate complete reduplication, examples in (3d and e) indicate complete reduplication of noun-to-noun derivation. Reduplication in Seereer-Siin is prosodically defined (McLaughlin, 2006). Seereer-Siin reduplication is used in noun to noun and verb to noun derivation. According to her, a place name is reduplicated to create a stem meaning an individual associated with that place. For example:

- | | Place | class 1 | class 2 |
|-------|---------------------|--------------|------------|
| 4. a. | ‘Fatick’ fatik | o-paa- fatik | faa-fatik |
| b. | ‘Diakhao’ jaxaaw | o-caa-jaxaaw | jaa-jaxaaw |
-
- | | verb | class 1 | class 2 |
|-------|-------------------|------------|----------|
| 5. a. | ‘Write’ bind | o-pii-bind | bii-bind |
| b. | ‘work’ jal | o-caa-jal | jaa-jal |

The above examples in (4 and b) involve noun to noun derivation where a place name is use to create a stem meaning in an individual associated with that place. The study reveals that the language with respect to the above examples operates partial reduplication through prefixes. In (5a and b) it indicates partial reduplication of verb to noun derivation involving prefixes.

The above reviewed Fulfulde literature of McLaughlin (2006) is relevant to Fulfulde reduplication especially that of the complete reduplication in Wolof, therefore, it will help the present study in investigating the phenomenon in Fulfulde.

Sabine and Anne (2000:36) studied Jibe of Kona. Reduplication in the morphology of that language is very minimal. They observed four patterns of reduplicated nouns as follows:

- a. cvcv səmpəpə ‘rice’
- cv1v2cv1v2beibei ‘shinbone’
- cvc.cvc wårwår “intestine”
- clc2vc1c2vågrigri ‘cock’

Reduplication in the language is restricted to only full reduplication within only four patterns as in the above. The reduplicated forms have the following cvcv, cvvcvvcvcvc and ccvccv syllable structure. The above reviewed

literature indicates that, reduplication in Jibe of Kona is very minimal in the morphology of the language and restricted to nouns. This indicates that, there are differences between the reduplication of Jibe of Kona and Fulfulde due to the restriction. The distinguishing pattern of reduplication in Jibe is a great contribution to this study, because it indicates that, reduplication can be flexible or inflexible depending on system of the particular language.

Tak (2000) examines how three languages i.e. Chichewa, Sesotho and Agta comply with three cross-linguistic tendencies in reduplication, e.g. shape invariance, unmarkedness, and identity. Chichewa is characterized as total. i.e. stem reduplication, Sesotho as bisyllabic reduplication and Agta as closed syllable reduplication. The study reveals that, in Bantu languages the constraint that all the words are realized as bimoraic, monosyllabic words cannot be surface as they are. As a result, they are segmented by (i) in Chichewa then reduplicated, which means that all elements of verb stems are reduplicated. In Sesotho, the monosyllabic verb stems are reduplicated with an infixing vowel (e) in order to satisfy the bisyllabic template in reduplication and the bisyllabic are totally reduplicated with the polysyllabic verbs having more than two syllables, and only the first two syllables are reduplicated. In Agta reduplicants cannot be defined as string of segments such as plus a vowel (cvorcvv). This indicates that, in Agta the reduplicants are first three segments, i.e. cvc. This study identifies three distinct patterns of

reduplication that exist in the three languages. The study suggests that three cross-linguistic tendencies act together as a group in the process of reduplication, a language facilitates its own mechanism to get the right tendency preference mechanism to fit into its phone tactic or morphological constraints. Example, any language whose reduplication patterns are characterized as stem (total) reduplication like Chichewa, starts to move and overrides unmarkedness. According to Tak(2000), in language that has bisyllabic reduplication like Sesotho, unmarkedness, is prepared to identity. And a language like Agta runs the tendency of preference mechanism such as shape invariance, unmarkedness and identity. Chechewa is characterized as total, i.e. stem reduplication.

Complete reduplication in Chechewa exhibits modified full reduplication and regular full reduplication, where all monosyllabic structures exhibit modified full reduplication, while bisyllabic and trisyllabic structures exhibit regular full reduplication. For example:

Stem	Reduplicated form	Gloss
5. a. dya	idya + idya	‘eat’
b.mwa	imwa + imwa	‘drink’
6. a. lamba	lamba + lamba	‘write’
b. gula	gula + gula	‘buy’
7. a. lambala	lambala + lambala	‘write to /for’
b. gulidwa	gulidwa + gulidwa	‘be bought’

The examples in (5a and b) are monosyllabic words, while the ones in (6a and b) are bisyllabic words and the ones in (7a and b) are words composed of trisyllabic. The above examples have illustrated reduplication in Chichewa as complete and all elements of verb stems are reduplicated. However, the example indicate that, in(4a and b) the reduplicated form carries prefix (i) which is added to the beginning of each base form when reduplicated in monosyllabic structure. In (5a,b,6aand b), the whole word form is completely reduplicated without any alteration in bisyllabic and trisyllabic words. Therefore, reduplication in Chechewa as indicated in the above examples has two patterns, e.g. all monosyllabic words in the language go alone with prefix (i) as a fixed segment when reduplicated, as can be seen in the above in (4a and b),while bisyllbic and trisyllabic words have complete reduplication of the whole word form as indicated in the above data in (4b and c), (Tak, 2000).

2.2.1Sesotho Complete Reduplication

The language exhibits similar pattern to that of Chechewa where all monosyllabic form exhibit modified full reduplication, while bisyllabic and trisyllabic forms exhibit regular full reduplication. For example:

Stem	reduplicated form		Gloss
8. a.	ja	jae + ja	‘eat’

b.	fa	fae + fa	‘give’
9. a.	ba	aba + aba	‘divide’
b.	ila	ila + ila	‘abstain’
10. a.	robala	robal + robala	‘sleep’
b.	qutela	qute + qutela	‘finish’

complete reduplication in Sesotho indicates that, all monosyllabic forms take additional *e* at the medial position, meaning in the reduplication process the first syllable takes *e* until it is reduplicated as indicated in the above examples in (8a and b), i.e. *ja* → *ja + e + ja* → *jaeja* ‘eat’, *fa* → *fa + e + fa* → *faefa* ‘give’, in (9a and b) it indicate complete reduplication of the whole word form, in bisyllabic structure i.e. *aba* → *aba+aba* → *aba aba* ‘divide’, *ila* → *ila+ila* → *ila ila* ‘abstain’, while in (10a and b) which is a trisyllabic structure drops the last syllable of the base form at the reduplication process, i.e. *robala* → *roba + robala* ‘sleep’, *qutela* → *qute + qutela* ‘finish’ e.g.

Agta language exhibits partial reduplication, where the language drops the suffix of the initial base form at the reduplication process. For example:

Stem	Reduplicated form	Gloss
11. a. bari	bar – bari	‘body’
b. wakaywak	wakaywak – wakay	‘things lost’
c. ulu	ul – ulu	‘head’

In the above examples (11a – c) indicate partial reduplication, where the suffix of the initial base form at the reduplication process is dropped, i.e. *bari* → *bar-bari* ‘body’, *wakay* → *wak-wakiy* ‘things lost’ and *ulu* → *ul - ulu* ‘head’

Example from Chechewa, Sesotho and Agta, exhibit regular full reduplication, modified full reduplication and partial reduplication. Thus the data reveal that, reduplication in these languages is similar to the reduplication in Fulfulde. The above analysis of the three languages have given the possible approach to the present study, since some features in Bantu languages may be similar or even the same with the present study such as the syllabification, complete reduplication with regular full and modified full plus partial reduplication. The review shows that prefixes and infixes are found in Chechewa and Sesotho which does not occur in Fulfulde or its presents is not yet confirm by linguist in the previous studies.

Abubakar (2001:5). Points out that, reduplication can be partial or complete. A reduplicated form is said to be partial when only one part of the base form is repeated for instance; the verb form *Zauna* ‘to sit’ has a reduplicated form *Zazzauna* meaning ‘keep on sitting’. He reveals that, the morphological category which generally undergoes this process in Hausa are the verbs, also called as pluractionals. In the case of complete reduplication, the base is totally repeated, i.e. the word *farii* ‘white’ becomes *fari-fari* meaning ‘whitish’, some categories of words can undergo both complete and partial reduplication process such as

adjectives, adverbs of place and adverbs of time whereby the meaning may be different, for example, *sanyii* ‘cold’ *sassanya* ‘very cold’ but *sanyisanyi* ‘somewhat cold or bit cold.’ The analysis of Hausa reduplication by Abubakar (2001) is a righteous guide to this study especially where a word can undergo different categories of functions, which can act as a partial and complete with different semantics. There is also a difference in the reduplication of the two languages especially through prefixation in the reduplication of Hausa which does not exist in Fulfulde. Therefore, the reviewed literature of Abubakar (2001) is a guide to the present study on reduplication.

Jaggar (2001:84 – 5) presents “repetitive– frequentative” formations, denoting events and objects, which are reduplicated plurals formed via the imposition of an independent tone – integrating suffix – $e)^{LH}$ on a verbal base (repetitive – frequentatives display the same derivational morphology as deverbal statives). The output is then copied in its entirety, e.g. using the lexical verbs *ginaa* ‘to build’ and *tambayaa* ‘to ask’, gets the following class 14 plurals: $(gina)^{HL + e)^{LH} X2}$ *gine - gine* ‘buildings’ and $(tambaya)^{LHL + e)^{LH} X2}$ *tambaye tambaye* ‘questions’. The study further explains that a few repetitive frequentative plurals are built directly on source common nouns (simple and derivative), and some function synchronically as the plurals of cognate deverbal nouns. Examples:

12.a. camfi m./camfe camfe ‘superstitions’

b. habaici m./ habaice habaice ‘innuendo, hint’

c. iri m./ ire – ire ‘kind, sort, type’.

The above reviewed literature on repetitive – frequentative in the Hausa language adequately guide the present study on how to treat the feature of frequentatives in Fulfude as the language exhibits the feature in its reduplicative formation.’ The contribution of Jaggar (2001) on Hausa reduplication adds to my understanding on how to examine Fulfude reduplication especially in analyzing the semantics of reduplication in Fulfulde.

Aronoff and Fudeman (2005), present an Indonesian reduplication, explaining that, the speakers of that language have option of using the unreduplicated form to refer to either singular or plural. Therefore, the plural is not obligatory in that language, e.g. the word ‘*kuda*’ means ‘horse’ or ‘horses’; *rumah* can refer to ‘one house or more than one’ and so on. They are with the view that, the plural is to be used when the number of the noun is not clear from the context. Therefore, the language uses reduplication in verifying or figuring a noun in an unclear context or help in identifying the right option of noun to be used in a particular context.

The reviewed literature on Indonesian reduplication in fact is different from the background of reduplication in Fulfulde, in the sense that unreduplicated form can

refer to either singular or plural, this does not occur in Fulfulde grammatical and reduplicative system. But, apart from the contextual meaning, the reviewed literature indicates some similarities with the present study especially in complete reduplication where both languages have regular full reduplication. This essentially made it relevant and important guide to the present study of Fulfulde reduplication. Yakasai (2006) classified complete and partial reduplication in to regular full and modified full, regular partial and modified partial. The modification in partial come through prefixes, infixes and suffixes. Here are some examples:

- | | | | | |
|--------|---------|---------------|---------------|----------------------|
| 13. a. | gàrii | ‘town’ | gàrii gàrii | ‘town to town’ |
| b. | kusa | ‘near’ | kusa kusa | ‘very near’ |
| c. | tàfiyaa | ‘journey’ | tàfiye tàfiye | ‘journeys’ |
| d. | kaamàa | ‘catch’ | kakkàamaa | ‘catch repeatedly’ |
| e. | yankàa | ‘cut’ | yayyànkaa | ‘cut repeatedly’ |
| f. | rugùzaa | ‘destroy’ | rugurgùzaa | ‘destroy repeatedly’ |
| g. | jàkaa | ‘bag’ | jakunkunàa | ‘bags’ |
| h. | baqii | ‘black’ | baqaaqee | ‘black’ pl |
| i. | Bintu | ‘proper name’ | Bintuutu | ‘little Bintu’ |

The above examples in (13 a and b) indicate regular full reduplication, example (13c) indicates modified full reduplication, while in examples (13d –i) is partial reduplication, examples (13d and e) exhibit prifixal reduplication, examples (13f

and g) exhibit infixal reduplication and in examples (13h and i) exhibit suffixal reduplication in Hausa language. Yakasai (2006) further examines Hausa reduplication in the process of grammaticalization and lexicalization. The study reveals that, Hausa language has active and frozen pattern of reduplication, but the two features are distinguished on their basic lexical stems, where the active reduplication have basic lexical stems, while the Frozen lack the basic lexical stem. Complete and partial are regarded as active type of reduplication because they have basic lexical stem as the study indicates, while Frozen reduplication lack basic lexical stem. The above examples (13a-i) reflect the active type of reduplication, while the below examples reflect the Frozen type of reduplication in Hausa language. For example:

14. a. *buxu buxu* ‘having poor sight’
- b. *jinaa jinàa* ‘bloody’
- c. *wujigaa wujigàa* ‘disheveled state’
- d. *kwata kwata* ‘completely’

The above examples in (14-d) indicate Frozen type of reduplication in Hausa. All the forms lack basic lexical stems, i.e. in Hausa language no single meaningful word like *buxu*, *jinaa*, *wujigaa* and *kwata*. All these words have to undergo the process of reduplication before they can give meaning. Thus, this type of reduplication is termed as frozen reduplication by (Newman, 2000).

Therefore, the reviewed literature on active and frozenreduplication of Hausa by (Yakasai, 2006), is a guide to this study for investigating the phenomenon in Fulfulde. Even though the two languages came from different genetic background but the study reveals some common features in their reduplicative formation with Fulfulde.

Lieber (2009) presents reduplication patterns in some languages including Hausa. He explains that, reduplication in Hausa is full and partial in which an entire base is repeated in the case of total and is used to form what is called attenuation, which means ‘sort of’ or ‘a little bit’. In Samoan language full reduplication is used to form nouns from verbs e.g. *apa* ‘beat, lash’ → *apa apa* ‘wing’, *solo* ‘dry’ → *solosolo* ‘handkerchief’. The language has partial reduplication in which only part of the base is repeated where the first consonant and vowel of the base are repeated and the process derives verbs from nouns e.g. *lafo* ‘plot of land’ → *lalafo* ‘clear land’, *lago* ‘pillow/bolster’ → *lalago* ‘rest, keep steady’. He further highlighted that in some languages partial reduplication can occur in the final syllable of the base e.g. in Dakota dialect, *wa* + *kasa* ‘cut with sawing motion’ → *wa* + *ksaksa* ‘slice up’. The above reviewed literature has indicated that the first syllable of the base is reduplicated in partial reduplication of the Samoan language, and the study also indicates that in some languages partial reduplication occurs in the final syllable of the base. The reduplication in the present study has some similarity with

the reviewed literature in terms of their reduplicative formation especially in complete reduplication where the languages exhibit regular full reduplication.

The study guides the present study in identifying the features in Fulfulde reduplication.

O’Grady, Archibald and Katamba (2011) illustrate full reduplication in Turkish and Indonesian languages, in contrast where partial reduplication copies only part of the base. It indicates that, In Tagalog reduplication affects only the first consonant-vowel sequence, i.e. *Takbe* ‘run’ becomes *tatakbo* ‘will run’. This study has highlighted the patterns of reduplication in Turkish and Indonesian languages which has no derivational system as is found in some languages such as Hausa and Fulfulde. The above reviewed literature has unveiled out some features of reduplication found in Fulfulde; as such it will be a guide on the investigation of the phenomenon in the language.

Maduagwu (2012) reveals that reduplication in Tiv is a derivational morphological process restricted to nouns and adjectives. The language has only complete reduplication. When adjectives are reduplicated the derivand are adverbs, on the other hand when nouns are reduplicated the derivand are adjectives. For example;

	Root word (Adj.)	New word (adv.)	Gloss
15.a.	fele	fele fele	‘quickly’
b.	bem	bem bem	‘peacefully’
c.	keng	keng keng	‘necessarily’

d. kimbir kimbir kimbir ‘repeatedly’

Examples (15a-d), indicate full reduplication of adjectives in Tiv language and when reduplicated become adverbs.

Root word (noun)	New word	Gloss
16. a. vue	vue vue	‘powdery’
b. kon	kon kon	‘full of wood/wooden’
c. toho	toho toho	‘full of grass’
d. atihi	atihi atini	‘heaps by heaps’

The finding of Maduagwu (2012) guides the present study to see whether restricted reduplication and the flexible reduplication share common features such as adjective to adverb and so on. Also the languages differ in the reduplicative formation because of the restriction to nouns and adjectives in Tiv, etc. They have also some common features, i.e. full reduplication in nouns and adjectives with slight difference as Fulfulde has more different features in the reduplication that occurs in nouns and adjectives. This is a different gap that indirectly distinguishes the two languages.

Zubairu and Ahmed (2012) examine nominal reduplication process in Hausa and Yoruba. The study reveals that complete and partial types of reduplication occur in both languages, the process changes one of the grammatical form to another, e.g. changing adjectives, adverb, verb, noun, to another nominal form. The reduplication process of these languages either complete or partial normally

change grammatical category of a word or reduce the intensity in function of that word class among the two languages. There are situations where singular is changed to plural or stratify gender and number in the process. Accordingly, they explained that, in nominal process the verb reduplication in Hausa language effect changes in the word forms, from singular to plural form, and there are changes also taking place in the vowels of the singular forms to that of plural forms. The study examines nominal reduplication process in Hausa and Yoruba languages. The study reveals that, both Hausa and Yoruba have complete and partial types of reduplication, he come up with the following examples in Yoruba complete reduplication as follows:

17.a.Omo ‘child’omo omo ‘grandchild’

b. Iya ‘Mother’ iya iya‘grandmother’

In this process, the original noun forms either change to another noun with entirely different meaning, or completely change the word class (Zubairu,2012).

Other examples in Verbcomplete reduplication inthe Yoruba language:

18. a. pana ‘to quench fire’pana pana ‘fire service/ fire brigade’

b. peja ‘to catch fish’peja peja ‘fish man’

c. fuke ‘soft’fuke fuke‘softness’

d. rudu ‘confuse’rudu rudu ‘confusion’

The above reviewed literature from Zubairu (2012) has shown how complete reduplication in Yoruba operates. The study indicates that in Yoruba complete reduplication occurs in nouns, adjectives and verbs. This indicates that, Yoruba and Fulfulde have the same application in nouns and adjectives as well as in verbs, but, with some morphological and phonological differences such as the tones in Yoruba which are not found in Fulfulde and initial consonant alternation (ICA) and nominal classes in Fulfulde, which are not found in Yoruba. The study is a guide to the present study to investigate how the pattern of complete reduplication in Fulfulde operates.

Yakasai (2014:1574-167) shows that, partial and full reduplications are very productive in Hausa through prefixes, infixes and suffixes reduplication. Consequently, reduplicative patterns have various meanings and functions within different lexical categories as in the following examples:

- | | | | |
|----------------|-------------|-------------------|----------------------|
| 19. a. kàamaa | ‘catch’ | kakkàamaa | ‘catch repeatedly’ |
| b. yankaa | ‘cut’ | yayyankaa | ‘cut repeatedly’ |
| 20. a. rugùzaa | destroy | rugurgùzaa | ‘destroy repeatedly’ |
| b. jakàa | ‘bag’ | jakunkùna | ‘bags’ |
| 21. a. gidaa | ‘house’ | gidaajee | ‘houses’ |
| b. Bintù | proper name | bintuutu | ‘little Bintù. |

The above reviewed literature from yakasai (2014) indicates that, reduplication in Hausa has prefisal, infixal and suffixal processes of reduplication whereby Fulfulde has suffixal process as a confirmed and the other processes such as prefixal and infixal are on course, which means that, the two languages differ in prefixal reduplication, while sharing common feature in suffixal reduplication. As such, the reviewed literature is an essential guide to the present study for the investigation of reduplication.

Musa and Altakhaineh (2015) Showsthe phonological interactions that occur within the morphological process of reduplication using optimality theory. She states that, structures like CVCC are not permitted in reduplication because they are not permissible forms in Hausa syllable structures. The study reveals that, in total reduplication, the reduplication is usually disyllabic foot, whereas partial reduplication is a monosyllable foot. For example the Hausa syllables structure by Jaggar (2001) views that, Hausa syllables structure are consonant initial having the following, structures:

CV mace [matsfe] ‘woman,’

CVC rumfar [rumfar] ‘the stall,’ hasken [has.ken] ‘the light’

CVV Yaa.roo [ja:ro:] ‘boy,’ ai.kii [‘ai.ki] ‘work’

Jaggar (2001:24) identifies the interaction of syllable weight and morphological process indicating that the weight of the syllable determines the choice of the affix (i.e. either the prefix or suffix). Short vowels are characterized by one mora, long vowels are characterized by two moras. Mora represents a well-known contrast

between light (monomoraic), while CVV syllable are considered heavy (bimoraic) and as for CVC syllables, the weight depends whether its code: consonant is moraic or not. Caron (2013:4) views that Hausa syllable structures according to their weight are as follows:

CV - Light

CVV – Heavy

CVC – Heavy

The above reviewed literature on Hausa syllable structure, has the focus on the process of word formation with reference to the time and functions of reduplication in Hausa spoken in Kano. The focus of Musa and Altakhineh (2015) and the present study have differences in their focus, but the study indirectly guides the present study to look at other issues relating to Fulfulde reduplication.

Arokoyo (2016) presents a comparative analysis of reduplicative constructions in standard Yoruba and Hausa. He examines types and structures of reduplication in both languages by examining the linguistic features and functions of the phenomenon which performs both inflectional and derivational functions. The study indicates that, in Hausa the reduplicated form could be affixed at either prefixal or suffixal positions while in Yoruba it could only be affixed at the prefixal position. Total reduplication could be divided into two in Hausa: the form that occurs without any change in the segment, e.g. *maza* ‘quick’ becomes *-maza-*

maza ‘quickly’ and the group that occurs with change in the tonal segments and final vowel as in *tura* to have *ture - ture* of the reduplicated. In Yoruba reduplicated segments are only copied word initial, i.e. to the left of the root such as in *ta* ‘to sell’ becomes *tita* ‘act of telling’. Tones play an important role in both languages. The comparative analysis of reduplication in these languages highlighted different operational patterns of reduplication that exist within languages with the same linguistic background and beyond. For example complete reduplication in Hausa group which occurs without change in segment (Arokoyo, 2016) can be seen below:

22. a. maza	maza + maza	maza maza
quick	quick quick	quickly
b. nawa	nawa + nawa	nawa nawa
how	how how	how much
c. kullum	kullum + kullum	everyday
daily	daily daily	

Group that occurs with change in the tonal segment and final vowel of the reduplicated segments:

23. a. tura	tura + tura	ture ture
to push	push push	pushing
b. bugu	bugu + bugu	buge buge
to hit	to hit to hit	hitting etc.

Thus, the study will greatly contribute to the present study on examining structures and types of reduplication in the focus language. As indicated in the reviewed literature of Hausa, Arokoyo (2016) shows some differences and common features of reduplication in Hausa, i.e. in Hausa the vowel change shows plurality in the reduplicated form; this does not happen in Fulfulde reduplication. But in the case of complete reduplication it is the same with Fulfulde. This reviewed literature will guide the present study to investigate the phenomenon in Fulfulde.

Lieber (2009) presents a reduplication patterns in some languages including Hausa. He explains that, reduplication in Hausa is full and partial in which an entire base is repeated in the case of total and it is used to form what is called alternative, which is a form meaning sort of or a little bit. In Samoan language full reduplication is used to form nouns from verbs e.g. *apa* 'beat/ lash' → *apa apa*, 'wing' and *au* 'flow/role on' → *au au* 'current' and the language has partial reduplication in which only part of the base is repeated where the first consonant and vowel of the base are repeated and the process derives verbs from nouns e.g. *lafo* 'plot of land' → *lalafo* 'clear land', *lago* 'pillow/bolster' → *lalago* 'rest, steady'. The above reviewed literature has indicated that the first syllable of the base is reduplicated in partial reduplication of the Samoan language, and the study also indicates that in some languages partial reduplication occurs in the final syllable of the base. The reduplication in the present study is distinct greatly with the reviewed literature in terms of their reduplicative formation. But, the study

indirectly guides the present study in identifying the features in Fulfulde reduplication.

CHAPTER THREE

METHODOLOGY AND THEORETICAL FRAMEWORK

3.0 INTRODUCTION

This chapter contains two sections, methodology and theoretical framework of the study. The methodology is subdivided into area of the study, data collection procedure and data collection techniques. The last section presents the theoretical framework of the study.

3.1 METHODOLOGY

This research is a qualitative research design. It is qualitative in the sense that the research is conducted in a natural setting, whereby the researcher works actively and maintains close distance with the subject under study. The goal is to discover patterns that help in explaining the phenomenon as well as determining the accuracy involves in verifying the information with informants or information obtained from different sources. The research instruments are observation and interview.

3.1.1 AREA OF STUDY

This research work is limited to six villages KobininIsah, Maarewo, Garko, WuroBiriji, WuroCi'e, HammaduKafi and Barunnde. All are within Garko ward area of Akko Local Government Area of Gombe State.

3.1.2 DATA COLLECTION PROCEDURE

Being a native speaker of Fulfulde, the researcher uses participant observation which functions as one of the procedures of data collection. While text materials served as secondary source of data. The data of the study has come up from random verbal speech collected from Fulbe native speakers which served as primary source of data. The researcher participated and observes in conversation among the Fulbe people in a natural setting and list down the reduplicative forms uttered in the communication. An unstructured interview under the key informant interview was use to allow them explain their views freely to help the researcher to authenticate the collected material for linguistic analysis.

3.3 METHOD OF DATA ANALYSIS

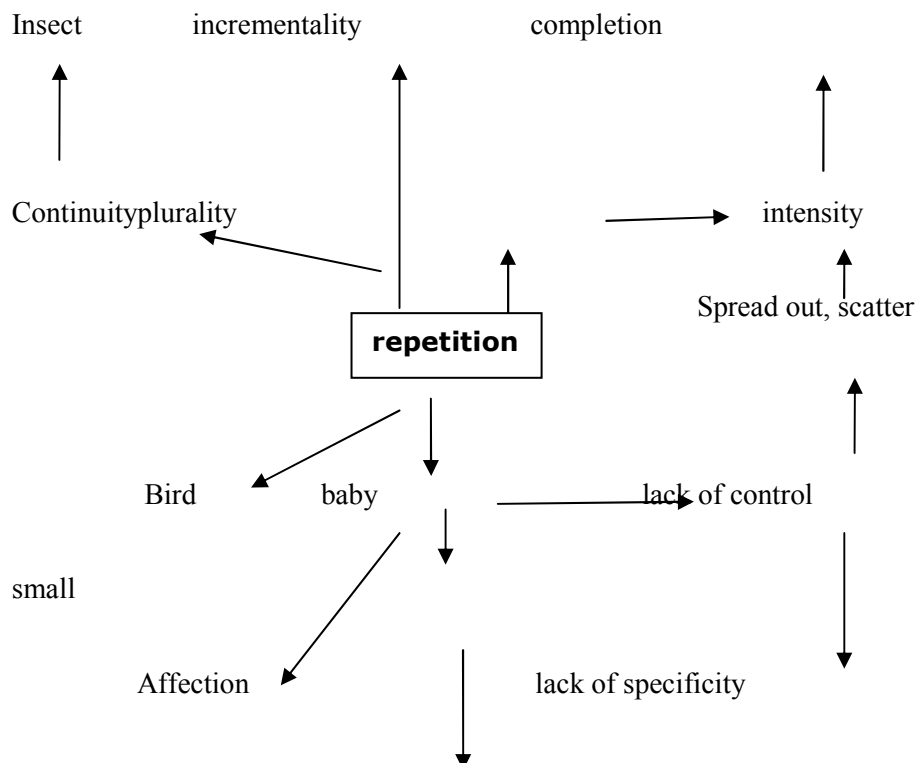
Data analysis involves methodology used in analyzing the data for a research from the participants. According to Donald and Tromp (2013: 118) that, any research study has its consistent method that corresponds to the purpose of the intended study that will be employed. Thus, this study employed descriptive method in analysis in analyzing the reduplicative phenomena in Fulfulde.

3.4 THEORETICAL FRAMEWORK

The model of approach used in this research is reduplication as morpho – semantic process. Reduplication as morphological process is by large used to create meanings. This idea of reduplication as a morpho - sematic process has been fully expressed in Kiyomi (1993). The study views that semantics of reduplication has shown the dominance of cognitive approach in the treatment of reduplication and indicated that a number of possible meanings are brought by reduplication. Thus, reduplication adds diverse meanings to the original meaning of the base, such as intensity, attenuation distribution, plurality, reciprocity, repeated action, frequentitative, augmentative, emphasis, diminution, multiplicity duration, continuative, resemblance and so forth. It is clear that certain meanings are identified with certain lexical categories, which means that there are some reduplicative meanings that have been associated only with certain lexical categories. And of course, there are meanings that can be found in more than one category. With verbs (and adjectives), reduplication may be used to denote a number of things such as (plurality, distribution, collectivity), distribution of an argument; aspect (continued or repeated occurrence; tense; aspect (continued or repeated occurrence; completion; inchoativity), attenuation, intensity, transivity (valence, object de focusing), conditionality, reciprocity, pretence etc. (Kiyomi, 1993). Reduplication within lexical category of noun expresses meanings such as diminution, imitation goodness, only ordinary, similarity, emphasis, intensity,

distribution, numerousness, plural, totality, variety, concrete, reciprocity, continuation, specific, use, vagueness and vendor. This idea of one lexical category having a number of meanings may vary from one language to another, language differentiate these meanings, and of course, a lexical category of adjective with full reduplication in language X may have the meaning as intensity, while in language Y may have the meaning as attenuation, (Yakasai, 2006).

Yakasai (2006) (in Regier, 1994) “presents universal semantic components of reduplication, which are presented as a radial category of concept. The radial category shows a kind of motivations for the links between various meaning brought by reduplication. The following figure is the radial category for the semantics of reduplication as presented in Regier (1994:3)”.



“This radial category may be interpreted as indicating not only synchronic relations between the various senses of reduplication, but also a possible historical trace of semantic extension from the central sense of repetition out to senses whose motivation is less obvious. Importantly, it is not the case that each language must have each sense shown in the graph: however, the graph does predict which senses enable extension to which other (Regier 1994:14). This, therefore, indicates that certain senses of reduplication are more widely used than others. Indeed, synchronic relations and semantic extension between various senses give the idea that reduplicative meaning operates on certain classes. Furthermore, radial category for the semantics of reduplication expresses the idea of diachronic and synchronic relation in the study of reduplication”.

Following Yakasai (2006) in the study of morpho – semantics of reduplication we cannot predict the meanings. We have to study how the semantics of reduplication operates in each language indeed; there is no universal relation, as reduplication process is a language specific phenomenon.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.0 INTRODUCTION

This section of the study deals with the analysis of the collected data on reduplication in Fulfulde. The chapter is divided into two parts. The first part examines the data and the second part deals with data analysis.

4.1 Reduplication in Fulfulde

Reduplication in Fulfulde has the characteristics of regular full and modified full, as identified by this study. Partial reduplication is restricted to verbs and numerals. From the data collected, Fulfulde exhibits active and frozen reduplication. This presentation focuses on active reduplication, where the base reduplicates or the whole word form reduplicates. Our analysis starts with regular full reduplication.

4.1.1 Regular Full Reduplication

The study presents nouns, adjectives, adverbs and numerals as examples of regular full reduplication. Consider example (1a-f) below:

Word Form	Reduplicated Form	Gloss
1. a. wuro	‘Village’, wurowuro	‘from village to village’
b. ngesa	‘farm’ ngesa ngesa	‘from farm to farm’
c. gelle	‘Town’ gellegelle	‘from town to town’

- d. fellere ‘place’ fellerefellere ‘each place’
- e. kaaxxum ‘bitter’ kaaxxumkaaxxum ‘bitter like’
- f. belxum ‘sweet’ belxumbelxum ‘sweet like’
- g. keccum ‘green’ keccum keccum ‘green like’

In the above examples (1a – d) regular full reduplication indicates the whole word form is reduplicated. This form of reduplication involves nouns, while example (1e –g) indicate regular full reduplication involving adjectives. The noun regular full reduplication in the above examples (1a-d) denotes each in its semantic meaning, while examples in (1e-g) denote like in its semantic meaning.

Other examples of regular full reduplication involve adverbs and numerals as exemplified in 2 below:

Word form		Reduplicated form		Gloss
2.a .	jooni ‘now’	jooni jooni		‘just now’
b.	hannde ‘today’	hannde hannde		‘just today’
c.	keenya ‘yesterday’	keenya keenya		‘just yesterday’
d.	go’o ‘one’	go’o go’o		‘one each’
e.	xixi ‘two’	xixi xixi		‘two each’
f.	tati ‘three’	tati tati		‘three each’

The above examples in (2a-c) are regular full reduplication of adverbs of time. The semantic meaning of regular full reduplication of adverbs denote just, while the examples in (2d-f) are full reduplication of numerals in Fulfulde. The

semantic meanings of regular full reduplication in these forms denote each as in (2a-d) in the above.

4.1.2 Modified Full Reduplication

Modified full reduplication in Fulfulde denote addition of a CV (v) syllable as in the examples below:

	Word Form		Reduplication form	Gloss
3.a.	Wuro ‘village’		wurowuro <u>oo</u> ji	‘village like’
b.	Gelle ‘towns’		gellegelle <u>ee</u> ji	‘towns like’
c.	Gimxo ‘person’		gimxogimx <u>oo</u> jo	‘person like’

The above examples in (3a – c) are modified full reduplication of nouns indicating class suffixes *ji* and *jo*, *ji* is the suffix class of *wuro* ‘village’ and *gure* ‘town’, while *jo* is the suffix class of *gimxo* ‘person’. Another modification apart from the suffix classes of *ji* and *jo*, there is vowel change in the reduplicated form that is, the base form takes short vowel *o* and *e* as in *wuro* ‘village’ and *gure* ‘town’ and take long vowel *oo* and *ee* in the reduplicated form as in *wuro wurooji* ‘village like’, *gelle gelleeji* ‘town like’.

4. a. haaxii ‘became bitter’ haaxihaaxini ‘became bitter continuously’
 b. sewii ‘become thin’ sewisewini ‘became thin continuously’

Example (4a and b) are adjectives modified full reduplication, the modified full reduplicated forms in adjectives show radical extension, i.e. *n* plus vowel *i* in the

reduplicated forms and there is also vowel change that is, the base form takes long vowel *ii* and when reduplicated takes short vowel *i* as in *haaxii* ‘became bitter’ → *haaxihaaxinI* ‘became bitter continuously’, *sewii* ‘became thin’ → *sewisewini* ‘became thin continuously’, etc. the modified full reduplication in adjective denote continuously.

5. a. Wara ‘to come’ warawarana ‘come continuously’
 b. diwii ‘jump’ diwidiwini ‘jump continuously’
 c. hoocii ‘took’ hoocihoocini ‘took continuously’

Examples (5a-c) are modified full reduplication of verbs, they have also radical extensions *n* plus *a* in (5a) *n* plus *i*, in (5b and c) as there modification elements. The modified full reduplication in verbs also denote continuously as it is in (4a, b and 5a) as in the above. These are the modification elements which distinguished regular full and modified full reduplication in Fulfulde.

4.2 Partial Reduplication

Fulfulde exhibits CV, CVCV and CVCVCV suffixal reduplication. The second and third forms, i.e. CVCV and CVCVCV respectively are here referred to as hyper reduplicant. However, the CV reduplicate is more productive than the CVCV and CVCVCV reduplicates in Fulfulde. Because the CV reduplicates contains the meaning in CVCV and CVCVCV reduplicants, meaning that the other two form (CVCV and CVCVCV) are in the process of becoming lexicalized in the language. Examples:

Word Form	Reduplicated form	Gloss
6. a. fiitoo ‘beat self’	fiititotoo	‘beating oneself’ (reflexive)
	Fiititototoo	‘beating oneself again’
	fiititototoo	‘beating oneself again and again’
b. femmboo ‘shave’	femmbitoo	‘shave himself’ (reflexive)
	fembititotoo	‘reshave himself again’
	femmbititototoo	‘shave himself again and again’
c. mara ‘possess’	marta ‘repossess’	
	martata	‘repossessing’
	martatata	‘repossessing again’
	martatatata	‘repossessing again and again’
d. loccita ‘dislodge’	loccitata	‘redislodge’
	loccitatata	‘redislodge again’
	loccitatatata	‘redislodge again and again’
f. favvi ‘a day after’	favviti	‘two days after yesterday’
	jaangoyesterday’	jaango
	favvitititii	‘three days after’
	jaango	‘yesterday’
	favvitititii	‘three days after’
	jaango	‘yesterday’
	favvititititi	‘four days after’
	jaango	‘yesterday’
g. heeciti ‘two days after’	heecititi	‘three days after’
	keenya	‘yesterday’
	heecitititi	‘four days after’
	keenya	‘yesterday’
	heecititititi	‘five days after yesterday’

The above example of verb partial reduplication indicates suffixal reduplication as in (6a –h) which indicates CV, CVCV and CVCVCV syllable structure in the

reduplicant. The second forms, CVCV and CVCVCV are referred to as hyperreduplicant. However, the CV reduplicants contains the meaning in CVCV and CVCVCV reduplicants, meaning that the other two forms CVCV and CVCVCV are in the process of becoming lexicalized in the language

4.3 Prefixal and Full Reduplication

Reduplication in Fulfulde displays different patterns; numerals for instance can undergo both partial and complete reduplication as exemplified below.

	Word form		Partial	Full	Gloss.
7. a.	xixi	‘two’	<u>xix</u> xixi	xixi xixi	‘two each’
b.	tati	‘three’	<u>tatt</u> tati	tatitati	‘three each’
c.	joweexixi	‘seven’	joweex <u>ixx</u> xixi	joweexixixixi	‘seven each’
d.	joweetati	‘eight’	joweet <u>tatt</u> tati	joweetatitati	‘eight each’

From the above items of numerals, Fulfulde has both partial and complete reduplication. The semantic meaning of both forms denotes **each**. However, apart from the ones that undergo both full and partial reduplication, other forms undergo only full reduplication, as in these examples below:

Word form	Reduplicated form	Gloss
8. a.go'o	go'o <u>go'o</u>	'one each'
b.nayi	nayi <u>nayi</u>	'four each'
c.joyi	joyi <u>joyi</u>	'five each'
d.joweego'o	joweego'o <u>joweego'o</u>	'six each'
e.joweenayi	joweenayi <u>joweenayi</u>	'nine each'
f.sappo	sappo <u>sappo</u>	'ten each'

In the above examples, (8d and e) are pronounced as *joweego'o*, *joweenayi* in some sub-dialects within the central dialect. But, in Gombe dialect which is also the sub-dialect of the central dialect, is pronounce as *joyi* 'five', *jeyeego'o* 'six', *jeyeenayi* 'nine' as in the examples (8d and e) above. The first example in (8c) has /y/ in Gombe dialect, while it has /w/ in other dialects meaning there is consonant change of /y/ in Gombe dialect which becomes /w/ in other dialects. In example (8d and e) there is vowel change, whereas /e/ in Gombe dialect becomes /o/ in other dialects, all within the central dialect. The other examples in (8a and b) have no distinction in their pronunciation in all the dialects.

4.4 Typology of Reduplication in Fulfulde:

The typology of reduplication in Fulfulde is complete and partial. Complete reduplication is further sub-divided into regular full and modified full reduplication. The table below illustrates the typology:

Table 2:

Regular full Reduplication	Category	Examples
Base x 2	Noun	Wuro wuro ngesa ngesa (wuro ‘village’) (ngesa ‘farm’)
_____	Adjective	Kaaxxum kaaxxum belxum belxum (kaxxum ‘bitter’) (belxum ‘sweet’)
_____	Adverb	Jooni jooni, hannde hannde (jooni ‘now’) (hannde ‘today’)
_____	Numeral	go’o go’o, xixi xixi (go’o ‘one’) (xixi ‘two’)
Modified full Reduplication		
Base x 2 + long vowel + suffix Class in nouns, base x 2 + radical extension <i>n</i> in adjectives, verbs and adverbs	Noun	Wuro wurooji, gelle gelleji (wuro ‘village’) (gelle ‘town’)
	Adjective	Haaxi haaxini sewi sewini (haaxi ‘become bitter’), (sewi ‘became thin’)
_____	Verb	Wara warana, diwi diwi (wara ‘come for (diwii ‘jumped’) continuously,)
_____	Adverb	jooni jooni hannde hannde (jooni ‘now’) (hannde ‘today’)
Partial Reduplication		
Prefixal Reduplication	Numeral CVC Reduplicant	Xixxixi, tattati (xixi ‘two’) (tati ‘three’)
Suffixal Reduplication	Verbs CV,CVCV and CVCVCV Reduplicant	Fiitototo, fiitotototo, fiitototototo, (Fiitoto ‘beat oneself’) (fiitotototo ‘beat oneself continuously’)

The above typology of reduplication in Fulfulde indicates that, full is divided into regular full and modified full. The table shows that, regular full involves noun, adjectives, adverbs and numerals. Modifiedfull reduplication involves nouns,

adjectives, verbs and adverbs. Partial reduplication indicates prefixal reduplication with CVC reduplicant and suffixal reduplication with CV, CVCV and CVCVCVC reduplicant.

4.5 Semantics of Reduplication:

Reduplication as a morpho – semantic process is recognized as having two typologically defined morphemes; full reduplication and partial reduplication, (Yakasai, 2006). Fulfulde displays full, modified full and partial reduplication. Typologically, the morphological structure of the grammatical categories, i.e. nouns, adjectives, verbs, numerals nominal classes and adverbs display the same reduplicative lexical formation, which has regular full and modified full reduplication, other hand verbs and numerals have partial reduplication.

4.5.1 Semantic properties of full reduplication in Fulfulde

Fulfulde reduplication which functions in active formation is connected in expressing meaning as follows:

4.5.1.1 Attenuation

Attenuation is a semantic property of Fulfulde reduplicative forms. For example:

Word form		Reduplicated form	Gloss
9. a. mannda	‘salt’	mannda mannda	‘salt like’
b. conndi	‘powder’	conndi conndi	‘powdery’

c.	gove	‘lump’	gove gove	‘lumpy’
d.	kaaxxum	‘bitter’	kaaxxum kaaxxum	‘somewhat bitter’
e.	lammuxum	‘sour’	lammuxum lammuxum	‘sourish’
f.	juuxdum	‘tall’	juuxxum juuxxum	‘medium height’
g.	dammuxum	‘short’	dammuxum dammuxum	‘bit short’
h.	tekkuxum	‘thick’	tekkuxumtekkuxum	‘slightly thick’
i.	keccum	‘green’	keccumkeccum	‘greenish’

The above example of the fully reduplicated forms given in (8a- i) have the property of semantic attenuation; all the reduplicated forms have weakened the stem meaning thereby reducing the semantic content of the word forms. Examples in (8a-c) belong to class of nouns, while examples in (8d and e) belong to adjectives of sensory quality, example (8f - i) belongs to the simple adjectives.

4.5.1.2 Reciprocity

Reciprocity is semantically related to the frequentatitives meaning but it is an independent notion. It refers to some full – reduplicated nouns (listed among frequentitatives) having the meaning ‘each other’ the sense of reciprocity between two syntactic arguments is that if one of the arguments does a specific action, the other necessarily does it too (Yakasai, 2006). This semantic property is contained in Fulfulde reciprocal reduplicative forms as in the examplesbelow:

10.a. Bello e Ali xon kuxkuxtira

Bello and Ali are– (prog) abusing each other

‘Bello and Ali are abusing each other’

b. Bello e Alixon nyaamnyaamtira

Bello and Ali are eat(prog) each other

‘Bello and Ali are fightingeach other

c. Bello e Ali xon ndaarndaartira

Bello and Ali are look(prog) each other

‘Bello and Ali are lookingeach other

The above frequentitatives exemplified in (9a- c) have notion of each other where a radical extension *tir* is used to link the two agents in the sentence. Without the radical extension such as *tir*, the meaning will be incomplete; therefore, the radical extension is a compulsory attachment in the frequentitative full – reduplication in Fulfulde.

4.5.1.3 Emphasis

Fulfulde full – reduplicated form emphasize the meaning of the base form. This is found in the category of the adverbs as in the following examples in (9a- d):

	Word form		Reduplicated form	Gloss
11. a.	jooni	‘now’	joonijooni	‘just now’
	b. hannde	‘today’	hanndehannde	‘just today’

- c. keenya ‘yesterday’ keenyakeenya ‘just yesterday’
- d. hikka ‘this year’ hikkahikka ‘just this year’

The above examples in (10a –d) indicate regular full reduplication of adverbs that denote emphasis.

4.5.1.4 Distribution

Fully reduplicated forms carry, the meaning ‘every’ each or from x to x in a sentence. This notion of distribution is found in the category of nouns and numerals (Yakasai, 2006). As indicated in the above notion, Fulfulde exhibits such distribution in its fully reduplicated forms, as can be seen in the following examples:

	Word		reduplicated form	Gloss
12. a.	wuro ‘village’		wurowuro	‘village to village’
b.	gure ‘villages’		guregure	‘villages to villages’
c.	gelle ‘towns’		gellegelle	‘towns to towns’
d.	fellere ‘place’		fellerefellere	‘place to place’
e.	gimxo ‘person’		gimxogimxo	‘person to person’

As for the distribution in numerals, Fulfulde has the following examples:

	Word form		Reduplicated form	Gloss
3. a.	go’o ‘one’		go’,o go’o	‘one each’
b.	xixi ‘two’		xixixixi	‘two each’

- | | | | | |
|----|------|---------|----------|--------------|
| c. | tati | ‘three’ | tatitati | ‘three each’ |
| d. | nayi | ‘four’ | nayinayi | ‘four each’ |
| e. | xixi | ‘two’ | xixxixi | ‘two each’ |
| f. | Tati | ‘three’ | tattati | ‘three each’ |

The above examples in (11a - f) indicate the meaning of distribution. In Fulfulde, all the forms whether full or partial indicate the same distributive meaning and full reduplication is more productive than partial in the language.

4.6 Semantics of partial Reduplication in Fulfulde

Partial reduplication in Fulfulde has been identified with cvc prefixal reduplication and cv, cvcv and cvevcv suffixal reduplication.

4.6.1 Semantics of Prefixal cvc Reduplication

The prefixal cvc reduplication has the meaning distribution, i.e. *xixi* ‘two’ becomes *xix xixi*, ‘two each’, *tati* ‘three’ *tattati* ‘three each’. This distribution in numerals has the notion of ‘each’ as exemplified in (11b and c).

4.6.2 Semantics of Suffixal Reduplication in Fulfulde

The suffixal cv, cvcv and cvevcv reduplicant has the meaning of continuity or continuous process.

Table 3: Semantic of Reduplication in Fulfulde

Word Class	Regular Full Reduplication	Modified Full Reduplication	Partial Reduplication
Nouns	Attenuation, distribution	Multiples	_____
Adjectives	Emphasis	Continuity	_____
Adverbs	Emphasis	_____	_____
Verbs	_____	Frequentative, continuity, and reciprocity	Continuity (CV, CVCV and CVCVCV) Suffixal reduplication
Nominal Class	_____	Emphasis	_____
Numerals	Distribution	_____	Distribution

The above table illustrates the semantic of reduplication in Fulfulde, i.e. in the first column nouns under regular full reduplication have attenuation and distribution, nouns under modified full reduplication have multiples. The second columns which are adjectives regular full reduplication have emphasis, while adjectives under modified full reduplication have continuity. The third column is adverbs regular full reduplication which has emphasis and under adverbs modified full reduplication have intensification. The fourth column is verbs modified full reduplication have frequentatives, continuity and reciprocity and in partial

reduplication CV CVCV and CVCVCV syllable structure have continuity. The fifth column is numerals regular full reduplication which have distribution in both regular full and modified full reduplication. The last column are nominal classes under modified full reduplication have emphasis.

4.8 Conclusion

This section of the study presents the research findings on reduplication in Fulfulde. Therefore, the research reveals the following results:

Reduplication in Fulfulde is complete and partial. Complete reduplication is further divided into regular full and modified full reduplication. Partial reduplication has no division in Fulfulde. The study identified that complete and partial reduplication are considered active reduplication, because they have basic lexical stem in their reduplicative forms. The study identified that some forms in Fulfulde reduplication undergo both complete and partial reduplication, i.e. numerals. Other forms have only complete reduplication and are more productive than those which have partial. The study argues that Fulfulde have prefixal and suffixal reduplication. Prefixal reduplication is found in numerals with cvc structure, while suffixal reduplication is found in verbs with cv,cvcv and cvcvcv structure. The study identifies full reduplication is more active than partial

reduplication, because it occurs in almost all the grammatical categories of the language, while partial occurs in a few places, i.e. verbs and numerals.

The study further identifies the meaning brought by reduplication in Fulfulde. Thus, regular full in nouns have the semantic meaning of attenuation and distribution. In adjectives and adverbs, it has emphasis and in numerals it has distribution. Modified full reduplication in nouns has the meaning multiples, in adjectives it has continuity, in verbs it has frequentative, continuity and reciprocity. Partial reduplication has continuity in verbs and has distribution in numerals. These are the major findings of reduplication in Fulfulde.

CHAPTER FIVE

Summary and Conclusion

5.0 Introduction

This chapter consists of the summary of the entire work and conclusion that entails the paraphrase of the entire study with conclusion of the analysis of reduplication in Fulfulde.

5.1 Summary of findings

In chapter one of the study, there is general introduction of reduplication, background of the study, statement of the problem, aim and objectives of the study, research questions, significance of the study, and scope and limitation. Chapter two is review of related literature on reduplication from various languages. Chapter three is methodology and theoretical framework. The methodology contains area of study, Data collection procedure, data collection techniques, method of data analysis and theoretical Framework. Chapter four deals with data presentation and analysis.

5.2 Conclusion

This research analyzed reduplication in Fulfulde. The study revealed that, reduplication as a morpho – semantic process in Fulfulde has two typological divisions, namely: full and partial reduplication. Complete reduplication is further

sub divided into regular full and modified full. Modified full denotes that some elements are added on the reduplicated form or deleted. Partial reduplication has no further classification. Full reduplication is more active than partial reduplication, because it occurs in almost all the grammatical categories of the language, while partial occurs in a few lexical categories, i.e. verbs, and numerals. The study also identified that some words in Fulfulde undergo both full and partial type of reduplication, numerals.

The study also identified that Fulfulde exhibits active and frozen type of reduplication. The active reduplication refers to the reduplicated forms which have basic lexical stems, while frozen are those reduplicated forms which lack the basic lexical stems, but have phonological reduplicative feature. The language has what is called initial consonant alternation (ICA) which is a phonological feature in Fulfulde and goes along with the reduplication, but each alternated form is reduplicated independently without distraction or modification of the reduplication. Another feature which goes along with reduplication in the language is nominal class as every object in Fulfulde belongs to a certain class. This also goes along with reduplication in the language but does not distract the arrangement of the reduplicated forms, no obstructions due to the change in the two phonological and morphological features. The semantic effects of reduplication in nouns denote distribution especially in common nouns in singular form, Adjectives

denote emphasis when modified, and verbs denote frequentative, reciprocity, pretending and continuity. Adverbs on the other hand denote emphasis when modified, but denote emphasis when fully reduplicated.

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