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Derivational Morphology and Compounding: a descriptive study towards enhancing the learning and teaching of Gugbe

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Abstract

This study examines the morphological processes involved in word formation in Gugbe, a language spoken in West Africa, with particular focus on Nigeria and Benin. Unlike previous research, which has primarily explored Gugbe syntax (Aboh, 2017; 2007; 2005; 1999; 1998), this study shifts focus to morphology, addressing the gap in understanding of word-formation processes in the language. Building on Adjibi's (2020) work on Gugbe names and words associated with 'ogú' (the god of iron), the objectives here are to outline key Gugbe word-formation mechanisms and compare them to English morphological structures. Methodologically, the study analyzes words, phrases, and sentences from everyday speech and native songs, assessing morphological markers. Results show that Gugbe employs diverse processes: prefixation (e.g., otò, 'country'), suffixation (mítòn, 'our'), compounding (Gbé-kanlin, 'wild animal'), reduplication (dagbedagbe, 'very good'), calquing (Sɛnami, 'God gave it to me'), clipping under calquing (Mijoşedo), and borrowing (blèdi, 'bread'). Notably, while most compound words in Gugbe are right-headed (e.g., gbékanlin, 'wild animal'), some are left-headed or non-headed. This investigation expands understanding of Gugbe morphology, enriching linguistic resources for Gugbe learners and prompting further research into Gugbe lexical innovation.

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Morphological Abbreviations

N	Noun
V	Verb
ADJ.	Adjective
POSS.	Possessive
SG	Singular
PL.	Plural
CONJ.	Conjunction
IMP.	Imperative
IMPERF	Imperfect aspect
PRO.	Pronoun
PROG.	Progressive aspect
PERS.	Person
GEN.	Genitive case
ACCS.	Accusative case
VCV	Vowel Consonant Vowel
HAB.	Habit

1. Introduction and Background of the study

In linguistics, ‘morphology is the study of word formation’ (Justice, 2004:91). While it was part of syntax, morphology became a branch on its own after Chomsky’s (1970) Lexicalist Hypothesis (the independence of syntax and word structure) which states that syntactic structure cannot explain word-internal structure, (Anderson, 1982). This research examines the different procedures through which words are formed in Gugbe in order to contribute to the learning and teaching of Gugbe. The morphological description employs both the analytical and the synthetic approaches (Awobuluyi 2001; Agbeyangi, et al., 2016; Fabb, 2017). To achieve this objective, the research work answers questions relating to the formation of words in Gugbe and examines headedness in Gugbe compounding. The study supports the fact that understanding the morphological process of a language helps speakers to increase their lexical capacity as they will be able to coin new words in their daily use of the language (Dominguez, 1991).

Why this study? Recently, I remembered a scenario that occurred between me and my parents many years ago, and something that my dad said, which I did not understand until many years later. I lied to both my parents about something and my dad looked at me and said in Gugbe “*loyano*”. Until recently, in a morphology class, I began to break down what my dad said and I discovered that my dad coined the word *loyano* after borrowing the word *loya* from the English word “lawyer” + the morpheme *no*. The understanding is that lawyers can even go the extent of lying to support their clients. Therefore, my dad was calling me ‘a liar’ and he had to employ a morphological procedure called borrowing because of his contact with the English language words even though he never went to school. This discovery is part of my motivations for embarking on this descriptive study.

Gugbe, also known as, *Gungbe*, the *Ogu* language or *Egun*, is a member of the *Gbe* and *Gur* language families, (Capo, 1986). Among them are *Fongbe*, *Ayizo*, *Aja*, *Eve*, *Gengbe*, and *Xwla*. *Gugbe* is spoken mainly in the southern part of Republic of Benin and Nigeria, two borderline countries in West Africa. In the Republic of Benin, it is the major language spoken in *Hogbonou* (Porto-Novo, the administrative capital city) and in both *Badagry* (Lagos State) and *Ipokia* (Ogun State) local governments in Nigeria. Even though we may consider it as one of the endangered in West Africa, *Gugbe* is still spoken by nearly one million people, and efforts are being made to see that the language is preserved.

In Nigeria, more than 500 languages are spoken by different ethnic groups, (Oyetayo, 2006). However, only three of them (Yoruba, Hausa, and Igbo) are adopted by the Nigerian federal government to be taught in schools. While Yoruba is spoken in the southwest region of Nigeria and taught in schools, *Gugbe* is also spoken in the same region, but not part of the educational system. In terms of codification, the most common literature in *Gugbe* is *Biblu Wiwe Lọ* (‘The Holy Bible’). However, there are some sociolinguistic factors affecting the total codification of *Gugbe* in Nigeria.

2. Literature Review

The English language has both prefixation and suffixation as morphological processes (Lieber 2010). In the same vein, languages such as Yoruba (spoken mainly in Nigeria and Benin where Gugbe is also spoken) has the morphemic prefixation and infixation in its word formation such as fẹ́ / i - fẹ́, (Adebileje 2013). It also forms compound words through processes such as reduplication, borrowing, calquing and clipping (Adebileje 2013; Arokoyo 2013; and Awobuluyi 2016). Before going further, it important to take a look at the importance morphology in language acquisition and language learning.

2.1 The role of Morphology in Language Acquisition and Language Learning

Even though morphology also plays a key role in language learning, especially in second language acquisition, vocabulary acquisition has been for a long time a neglected part of language learning. Research in applied linguists has focused more on solving issues pertaining to syntax development than on vocabulary learning (Levenston 1979). Aside from not being favored, the few studies done on vocabulary have shown the limited vocabulary level of children. The recommendations are always made for teachers to start teaching children below their level of competence (Seashore 1948).

When it comes to learning languages, vocabulary size has been considered to be “probably the best single index for the prediction of achievement in nearly all of the other language skills.” (Seashore 1948 :138). One of the major questions raised by Levenston (1979), cited in Meara (1980 :19), is whether the acquisition of new words is affected by such consideration such as the morphological structure of L2 words, or their phonetic structure. If preserved, Gugbe will become a second language or a heritage language for Gunus who desire to learn their language, but living in environments where it is not spoken.

Second language learners are considered to have a low level of vocabulary richness compared to native speakers. Hawkins & Lozano (2006 :3) asserts that “L1 influences the representation of derivational morphology in early L2 development, but this influence disappears with proficiency”. This implies that there will not be much complication in L2 if a learner’s L1 and L2 share the same morphological processes. Other studies such as Marton (1977) also report that idioms are the major challenges learners face in either oral or written comprehension. Hence, there is the need to learn and know how to coin new words in their language (Dominguez 1991). When learners have the understanding of what the components of a word are (prefix, roots, and suffixes) and how they are positioned internally, it therefore becomes easier for the learners to dissect new words they come across (Nagy et al. 1993; Zhang 2022).

Even though morphology can be acquired implicitly through language acquisition, explicit derivational morphology training has been considered as one of the best means to measure “morphological awareness and transfer effects on spelling and reading”, (Ardanouy et al. 2023). Morphology has also played an important role in literacy. The capacity to decode words morphologically helps learners and speakers to read complex derived words (Rastle 2018 and Levesque & Deacon 2022 cited in Ardanouy et al. 2023).

If syntactic rules help us in forming phrases, simple and complex sentences, which are chains of words, then it is important to also learn how those words are formed as they move from one grammatical category to another or from one meaning to another. Syntax has proved that that human beings employ signs (words in written languages) to express ideas and

thoughts. Therefore, every language has a repertoire (a “vocabulary bank” or a sort of internal dictionary), even though it is not arranged alphabetically, which may be lesser or robust. Flower (1989), cited in Dominguez (1991 :43), holds that vocabulary leaning is important when learning English. Learners can make syntactical mistakes; however, learners are usually understood if they can, at least, employ the exact vocabulary. It is frustrating if one knows the syntax but lacks the words to insert in the structure model. Hence, “the lack of lexical items when we need them makes speaker’s communication painful even for himself” (Dominguez 1991 :44).

A study in the Escuela Oficial de Idiomas de Barcelona (Dominguez 1991) where he asked students learning English (ages 17 to 44, with 25 participants secretaries and clerks) questions on “the linguistic aspects that they considered more important in order to reach their goal” of speaking English fluently. The result showed that 44% lacked vocabulary, 20% syntax and vocabulary, 12% syntax, 8% listening comprehension, 8% lack everything, and 4% lack vocabulary, syntax, and comprehension. Even though the number of participants was small, it is a clear indication that vocabulary plays an important role in language learning and its acquisition.

Politzer (1978) reported lexical errors from students of other languages learning German as the most disruptive aspect in their communication, and Meara (1984) noticed that lexical errors considerably outnumbered grammatical errors in students ‘communication of Utrecht University (Dominguez 1991).

After analyzing cases such as Lees (1963) whose daughter, not knowing the word for ‘stretcher’ coined the word *carry-bed* using a standard formation pattern in English, Croft’s (1964) three-year-old daughter coined *spanking ruler* to refer to the ruler used by her father to punish her, Gleitman’s (1970) two-year-old son called the map they were using during a vacation trip *vacation paper*, Dominguez (1991:45) concludes that “it seems, then, that children are very early to incorporate the rules of word formation to their grammatical competence”.

It is therefore necessary that each living language used by speakers undergo studies such as morphological description with a view to presenting the outcome for its use in education or in language preservation efforts. Gugbe, a language that is still being spoken by a good number of people, should also undergo linguistic description for survival.

2.2 Gugbe linguistics

Compared with languages it is in contact with in Nigeria (see Adebileje 2013; Arokoyo 2013; and Awobuluyi, 2016), not so much has been written on Gugbe linguistics. Most of the research work on Gugbe morphosyntax from which this paper sourced are the analytical studies done by Enoch Aboh on the syntax of Gugbe between 1997 and 2017. Generally, some of the Niger-Congo languages, the language family to which Gugbe belongs, have very rich systems of noun inflection while some do not, and among the latter is Gugbe. For instance, in Tswana, a language spoken in Botswana, a stem is shared by other bound morphemes to form a word while the stem alone cannot constitute a word. ‘The stem -tłhàrì is shared by lı̀- tłhàrì pl. mà- tłhàrì (gender 5/6) ‘leaf’ and sì- tłhàrì pl. dì- tłhàrì (gender 7/8) ‘tree’, but -tłhàrì alone cannot constitute a word’, (Creissels, 2019:2). However, languages such as Gugbe (*atin* ‘tree’ and *ama* ‘leaf’) and Baule (*waka* ‘tree’ and *nnya* ‘leaf’) have no nominal inflection. This

explains that in those two languages (Gugbe and Baule) monomorphemic words cannot be segmented. In Congo-Niger languages, prefix and suffix are not used to derive nouns as Creissels (2019) maintains that, most of the time, there is the combination of two distinct morphemes to form a word.

Relating to morphology, in his syntactic studies, Aboh (2005) made mention of the OVV (object and verb doubling) sequence which shows that there is object shift because generally, Gugbe has a Subject-Verb- Object (SVO) structure. Examples below explain his point of view.

1. Wa azon. —————> azonwiwa
Do (verb) work (object —————> work- do-do
Working (the act of working)

However, Adjibi (2020) conducted a lexicological study on words derived from ‘‘Gu’’ the god of iron in African mythology. His work revealed that stems in Gugbe can be combined with other words to form new words. However, the position of the stem changes based on the word it is being combined with and the meaning involved. This shows that Gugbe lends itself to compounding and we will look into that more in detail in section 3.

2. Gu —————> god of iron /iron

Du	+	gu		N		N		V		N
eat		gu		Gu		zan		Du		gu
3. Dugu —————> inherit

Gu	+	zán
Gu		day
Guzan	—————>	Tuesday

While Aboh’s (2005) research is established on a purely syntactic investigation, it can also be viewed from a morphological angle where the shifted object (placed before the verb) and the reduplicated one come together to form a compound noun.

From Adjibi (2020)’s study on words derived from the god ‘‘GU’’ which confirms that compounding is possible in Gugbe, the expectation is that the language target of this research also lends itself to other morphology rules found in Yoruba. The reason is that Yoruba is the second local language popularly spoken by the Gunus (native speakers of Gugbe), and it also belongs to the Congo-Niger languages family just as Gugbe does. Therefore, one would assume that the two languages do share many features in common; as some romance languages (French, Spanish) do.

Lieber (2010:46) affirmed that “in compounds, the head is the element that serves to determine both the part of speech and the semantic kind denoted by the compound as a whole”. And it is based on that assertion that English and Yoruba are found to be right-headed and left-headed respectively. This study will help us to discover if compound nouns in Gugbe are either right or left -headed and more data will help us in confirming either of the two.

3. Research Questions

This descriptive research sets to examine the different procedures through which words are coined in Gugbe for their application in the pedagogy of Gugbe. Hence, the study answers the following questions.

- 1- To which morphological derivational processes does Gugbe lend itself?
- 2- Are Gugbe compound nouns left-headed or right-headed?

4. Derivation and Compounding in Gugbe

Most of the words used in this research are from songs and day-to-day discussions in the target language. This choice is important because learning about a language is easily made by getting in touch with the native speakers which I am myself and also using available resources, and listening to local songs such as the ones of the late Beninese legend Yedenou Adjahoui.

4.1 Affixation

Affixes are components that can be found on the left side of the base/stem of complex words. In a word like ‘unconsciously’ we can have components such as **un**, **conscious**, and **ly**. While ‘conscious’ is the base, **un** is the prefix and **ly**, suffix. Infixes are found in-between a root. Examples are ‘o’ in speedometer (English), ‘ke’ in *Ẹgbẹkẹgbẹ* (Yoruba); and ‘um’ in *fumikas* (Philippines).

4.1.1 Prefixation in Gugbe

4. (a)	o	+	tò	=	otò
	o	+	to arrange	=	Country
(b)	o	+	xọ	=	oxọ
	o	+	to buy	=	House
(c)	a	+	zé	=	azé
	a	+	to carry	=	witchcraft

The examples in 4 (a-c) show ‘o’ or ‘a’ as the prefix. However, ‘o’ or ‘a’ on its own has no meaning in Gugbe. Also, it is important to mention that the base before the prefix ‘o’ must have a different meaning. This is because, in Gugbe, most of the mono-morphemic words have

VCV (vowel-consonant-vowel) structure where V can sometimes be removed from CV without changing its meaning. Eg. E do oló becomes ...

(d) E	do	ló
Pro.3rd-Pers-Sing.	plant-PERFECT	proverb
He spoke in parable/proverb		
(e) Zosú	ɖɔ	xó (oxó)
Zosú	say-PERFECT	word
Zosú spoke		

The changes noticed above are results of some phonological processes whereby the 'o' before both ló and xó had an elision with the 'o' and 'ɔ' of *do* and *ɖɔ* respectively and this phenomenon is better shown in example 4 (e). Another thing to take note of is that ló and xó do not have a different meaning from *oló* and *oxó*. While 'tò' is different from 'otò'.

4.1.2 Suffixation in Gugbe

Gugbe has Strong forms and weak forms of subject pronouns (Aboh 2005). Hence, the addition of the bound morpheme *ton* turns a the subject pronoun into a possessive adjective. *ton*, having no meaning on its own can therefore be considered as an inflectional morpheme in Gugbe.

1sg	Yɛn/Un	I	Yɛntɔn	*ʃie/ʃe	My
2sg	Hiɛ/A	You (sing. Informal)	Hiɛtɔn	*Towe/Twe	Your
3sg	Ewɔ/E	He/She/It	Etɔn		His/her/its
1pl	Milɛ/Mí	We	Mítɔn		Our
2pl	Milɛ/Mi	You (Plu. Formal)	Mítɔn		Your
3pl	Yélɛ/Yé	They	Yétɔn		Their

5. (a) **Yɛn/ Un** ɖɔ asu.
Pro-1SG have-Imperfect husband
I have a husband.
- (b) Asu **yɛntɔn/ʃe**
Husband Poss.
My husband

- *tɔ* and *nɔ*

These are two major morphemes used in Gugbe for word-formation. In the beginning, the two suffixes seem to be a short form of both *otɔ* (father) and *onɔ* (mother). However, their different meanings while attached to the base can lead to what Lieber (2010) calls ‘Affixal polysemy’.

- tɔ

6. (a) Xwé + tɔ = Xwétɔ
House + tɔ = Landlord
(b) Azé + tɔ = Azétɔ
Witchcraft + tɔ = Witch/Wizard

In 6(a), *tɔ* has the meaning of ownership (Xwétɔ: he who owns a house) while in 6(b) it makes the derivation ‘someone that practices the ‘base’: Azétɔ, he who practices witchcraft.

In Gugbe syntax, in some continuous tenses, the direct object comes before the verb. So, Object + *V* + *tɔ* = **Doer of V** and *tɔ* has the function of Noun Agent.

7. (a) E sa whevi
Pro-3rd-Sing. Sell-PERFECT fish
He/She/It sold fish
(b) A nɔ sa whevi
Pro-2nd-Sing. Hab. sell fish
You (usually) sell fish
(c) Un to **whevi** **sa.**
Pro-1SG Prog. fish sell
I am selling fish.
So, whevi + sa + tɔ = Whevisatɔ
Fish sell . N. Agent = Fish seller

Other examples are:

- (d) Nu + da + tɔ = Nudatɔ
Thing cook N.Agent = Cook
(e) Gbe se + tɔ = Gbesetɔ
Language hear N. Agent = Interpreter

-nɔ

When added to a noun, **nɔ** can add the meaning of ownership, a seller, and can also be an adjective maker.

8. (a)	Whevi	+	nɔ	=	Whevinɔ
	Fish	+	nɔ	=	Fish seller/ Fish owner
(b)	Kɛkɛ	+	nɔ	=	Kɛkɛnɔ
	Motorcycle	+	nɔ	=	Motorcycle owner/driver
(c)	Whanpɛ	+	nɔ	=	Whanpɛnɔ
	Beauty	+	nɔ	=	beautiful/handsome
(d)	Sinsɛn	+	nɔ	=	Sinsɛnnɔ
	Fruit	+	nɔ	=	fruitful

“**nɔ**” in 7(d) has an approximate meaning of “*having the quality of something*”

5. Compounding

Apart from derivation languages also form words through another means called compounding. In this case derived words are composed of two or many morphemes such as bases, roots, or stems. Below are the possible compound noun formations in Gugbe.

Forming nouns

	Noun	+	Noun	=	Noun
9. (a)	Gbé	+	Kanlin	=	Gbékanlin
	Bush	+	Animal	=	Wild animal

	N	+	V	+	N	=	N
(b)	Xo	+	ɟla	+	wema	=	Xoɟlawema
	Word		announce		paper	=	Newspaper

In some cases, there is the deletion of the possessive marker linking the two words.

(b)	Ovi	sin	otɔ	= (o) Vito
	Child	Poss.	Father	= Father
(c)	Asu	sin	otɔ	= Asutɔ
	Husband	Poss.	father	= Father-in-law

Here, (sin) which is the possessive marker, and the vowel (o) which is the first syllable of the second word are deleted while the vowel of the first one is optional.

	Noun	+	Adjective	=	Noun
(e)	Omẹ	+	daxo	=	Omẹdaxo / Mẹdaxo
	Person	+	big	=	Elder bother/sister

	Noun + Poss.	+	Noun	+	Noun + Poss.	+	Noun	=	Noun
(f)	Otọ	sin	ovi	+	onọ	sin	ovi	=	Tọvinọvi
	Father	Poss.	child		mother	Poss.	child	=	Sibling

To arrive at the derived word, the same procedures in 9 (b) and (c) are adopted. Hence, the possessive adjective (sin) was deleted as well as the vowel representing the first syllable of the second word.

Forming Verbs

	V	+	N	=	V
10. (a)	fọn	+	gú	=	Fọngú
	wake	+	iron	=	to revolt
(b)	se	+	gbe	=	Segbe
	Hear	+	voice	=	to interpret

From the examples above, in Gugbe, compounding occurs in the derivation of nouns, verbs, and adjectives. A combination of nouns gives birth to another noun, a noun and a verb can form a new verb while two adjectives can form another adjective.

6. Reduplication

This is a morphological pattern in which the base as a whole or part of it is repeated to form a new word.

	Adj.	+	Adj.	=	Adj.
11. (a)	dagbe	+	dagbe	=	dagbedagbe
	good	+	good	=	very good
(b)	alopa	+	alopa	=	alopalopa
	different	+	different.	=	different type

Object shift in Gugbe syntax as seen in Aboh (2005) can also be found in reduplication as noted in the derivational process with the morpheme *tɔ*. My argument involving the data shows in morphology what we have is ‘compounding-reduplication’. The process involves the coming together of a verb and its object (Verb + noun) during which the monomorphemic verb is reduplicated depending on the vowel sounds it carries. The second reduplicated part of the verb is placed between the noun and the verb and the derived word mainly means ‘the act of doing’ just as showing in the examples below.

12.	(a)	Hu	omɛ	omehu hu
		Kill	human	human-kill-kill
		Killing (the act of killing		
	(b)	Du	onú	onú-du-du
		Eat	thing	thing-eat-eat
		Food		

It is with examples such as (8 a & b) that Aboh explained the OVV (Object-Verb-Verb) sequences. However, in cases where there are phonological changes, the verb doesn’t replicate itself exactly as it was. Below are some examples.

(c)	Da	owhɛ	owhɛ/di/da	
	Judge	matter	matter-di-judge	judgment
(d)	Sa	onu	onu/si/sa	
	Sell	thing	thing-si-sell	sale
(e)	Dɔn	onú	onú/di/dɔn	
	Drag	thing	thing-di-drag	argument
(f)	Fɔn	ogú	ogúfinfɔn	
	Wake	Iron	Iron/fin/wake	revolt
(g)	Se	ogbe	Ogbesise	
	Listen	voice/language	voice/si/listen	interpretation
(h)	De	afɔ	afɔ/di/de	
	Choose	a leg	leg/di/choose	step (taking)
(i)	Flín	onú	Onú/flin/flin	
	Remember	thing	thing/flin/remember	recollection
(j)	Si	omɛ	omɛ/si/si	
	Respect	human	human/si/respect	respect

From examples (12 c-j), it is observed that in this procedure of forming words from a verb and a noun (object), in the course of the reduplication vowels *i* and *u* do not change (hu=huhu, si=sisi). However, *a*, *o*, and *e*, change to *i* in the first morpheme of the reduplication (sa=sisa, fon=finfon, se=sise).

<i>i</i> → <i>i-i</i>	<i>a</i> → <i>i-a</i>	<i>e</i> → <i>i-e</i>
<i>u</i> → <i>u-u</i>	<i>o</i> → <i>i-o</i>	<i>o</i> → <i>i-o</i>

7. Calquing

Sometimes, a noun phrase or a whole sentence can be compressed to make proper names. And as compound nouns, the derived names contain every part of the sentence (subject, verb, and object).

13. (a) Sę na mi → Sęnami

God give-Perfect Pro-Ist-Pers -Acus

God gave me

(b) Mî jo şe do → Mijoşedo

Pro-2nd-Pers-Pl. leave my leave

You should leave mine

This occurs mostly in agglutinative languages. In Youba, for instance, we have examples such as **Ade wa si ile** which becomes Adewale.

(c) Ade wa si ile = Ade wa le

Ade come-Perfect Prep. House = Ade come-Perfect house

The preposition **si** is deleted and also the vowel (**i**) starting ile.

8. Clipping in Calquing

Through clipping new words are created by shortening already existing words. In Gugbe, this is noticeable with names. The name Mijoşedo is shortened form of Mijoşedobodoṃiṭon.

(14) Mî jo şe do bo dṓ mṓṭon

Pro leave-Present my leave Conj. say Pro-2nd-Pers- Pl- Gen

The complex sentence is divided into two: *Mijoşedo* and *Miḍomiton*, and each of them is a proper name, the bearer being aware that it is the shortened form. Also people bearing Sɛnami are mostly called *Sɛna* and in Yoruba *Adewale* can be either called *Ade* or *Wale*.

9. Borrowing

Gugbe just like many other languages also formed new words through borrowing.

	Gugbe	English
15.	(a) Blɛdi	Bread
	(b) Tɛli	Television
	(c) Mɔfimu	Morpheme
	(d) Fonu	Phone
	(e) Fimu	Film
	(f) Kɔnputa	Computer
	(g) Şeti	Shirt
	(h) Maşinu	Machine

In Gugbe spoken in Benin where the official language is French borrowing goes with the official language.

	Gugbe	French
16.	(a) Bagɛti	Bagette
	(b) Tele	Télé
	(c) Oɖinateɖ	Ordinateur

Every word in Gugbe ends with an open syllable (syllables ending with a vowel) and contrasting sounds in foreign languages such as French and English are replaced with the nearest sound in Gugbe. For instance, *bread* becomes *blɛdi*. The first thing to be noticed is the change of /r/ to /l/ because the /r/ sound does not naturally exist in Gugbe even though today, the *Gunus* in Nigeria use it because they get it from English and Yoruba, likewise, do the *Gunus* in the Republic of Benin because /r/ is in French which is the official language in that country. Also, /æ/ becomes /ɛ/ and the stop /d/ receives /i/ and turned to /di/. Generally, it is noticed that the choice of the vowel that ends the closed syllable depends on the vowel before that syllable.

Phone	fonu	/o/	/u/
Film	fimu	/i/	/u/
Shirt	şeti	/ɛ/	/i/

10. Conversion

Conversion takes place when a word changes its grammatical class without undergoing any change. ‘This means of word formation is often referred to as conversion or functional shift’ (Lieber, 2010:49). The author gave examples such as nouns becoming verbs, verbs becoming nouns, and adjectives becoming verbs.

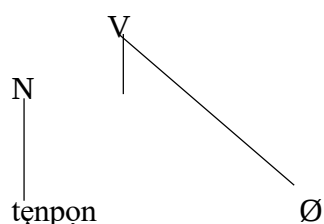
- | | | | |
|-----|-----|----------|---------------|
| 17. | (a) | table | to table |
| | (b) | fish | to fish |
| | (c) | bread | to bread |
| | (d) | to throw | a throw |
| | (e) | to kick | a kick |
| | (f) | to fix | a (quick) fix |

- | | | |
|-----|--------|-----------|
| (g) | Cool | to cool |
| | Yellow | to yellow |

In Gugbe the word ‘tɛnpɔn’ can be used as a noun (exam or test) and as a verb (to make effort or to test).

- | | | | | | |
|-----|--------------------|------------|--------|-------|---------|
| (h) | Mí | dó | tɛnpɔn | to | afɔnnu |
| | Pro-1st-Pers-Plur. | Have-Perf. | exam | Prep. | Morning |
- We have an exam in the morning.

- | | | | |
|-----|---------------|-------|---------------|
| (i) | Tɛnpɔn | bo | dunú |
| | Imp-2nd-Pers. | Conj. | Imp-2nd-Pers. |
| | Make effort | and | eat |



The syntactic tree above shows zero-affixation to the noun ‘tɛnpɔn’ as it becomes a verb used in the imperative mode of verb conjugation. If used in an indicative mode, sometimes, the verb becomes transitive and takes the direct object in between it. In that vein, ‘tɛnpɔn’ has the meaning of ‘test **something** and see’.

- | | | |
|-----|------|----------|
| (j) | Tɛn | pɔn |
| | Test | see/look |

(k)	E	tẹn	yé	pon
	3rd-Pers-Sin.	Perf.	Accus.3rd-Pers-Plur.	Perf.
	He	tried	them	see/look
	He tested them.			

In that example, the direct object (yé) comes in between the two morphemes of the verb ‘tẹnpon’. In that context, the presence of the direct object deforms the verb which at the end does not take the exact form of the noun from which it is derived.

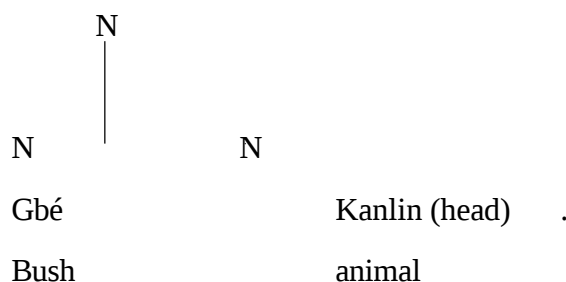
11. Headedness

The question of headedness is a very important one when it comes to morphology. For William (1981), the head of a complex word in English is found on the right-hand side. However, it became a matter of parameter setting in the sense that the position of the head could be either right or left depending on the language (Lieber, 1981; Selkirk, 1982). Therefore, languages such as French and English are found to be left-headed and right-headed respectively. Citing Hoeksemasema (1992) and Ceccagno and Basciano (2007), Arcodia (2012) revealed that the parametric assumption was no longer tenable as languages like Vietnamese and Mandarin are both right-headed and left-headed. He then went on to make a partial representation of Bauer (1990)’s characteristics of a head. According to Arcodia,

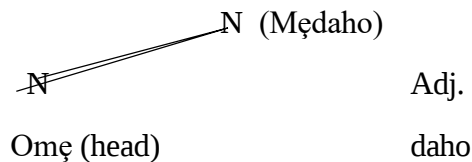
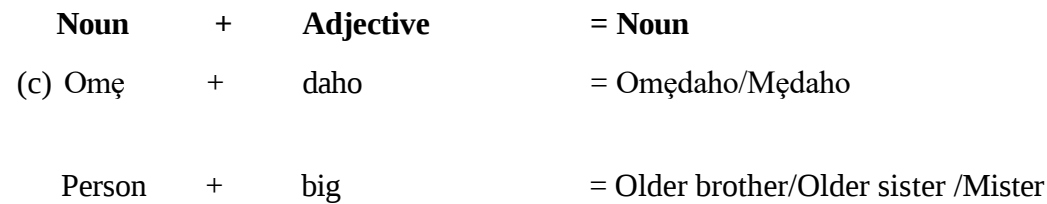
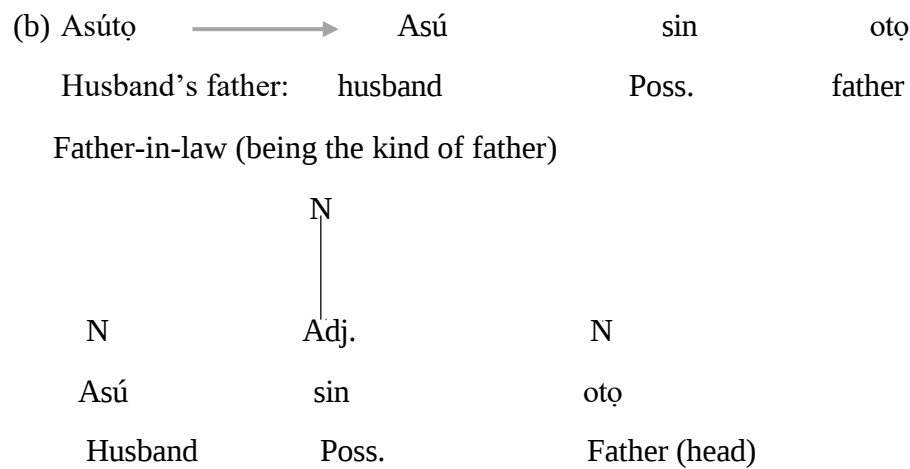
“(a) A phrase is a hyponym of its head; (b) The head is the subcategorizing, ‘the item which is subcategorized for the occurrence of other elements in the phrase’; (c) The head is the ‘morphosyntactic locus’; (d) The head is the governor; (e) The head is the distributional equivalent of the whole phrase; (f) The head is an (the?) obligatory constituent in the phrase; (g) The head is lexical (rather than phrasal).”(Arcadia 2012:4)

From the parameters above, I hypothesize that compound nouns in Gugbe can either be right-headed or left-headed and the examples below will lead us to a conclusion.

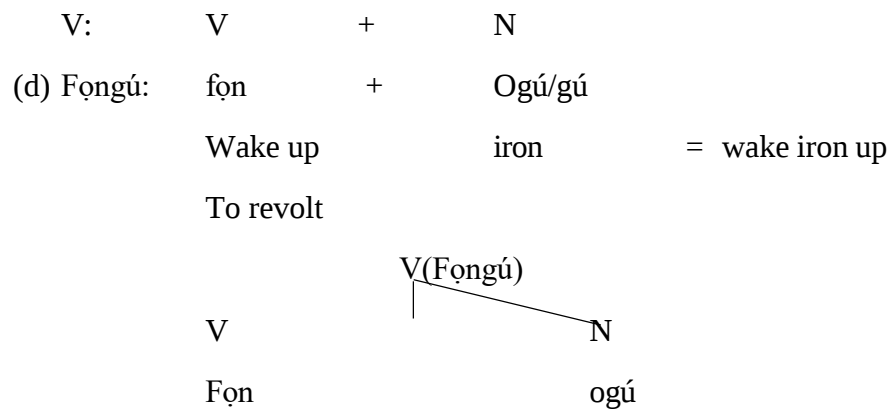
18. (a) Gbékanlin: Gbé + Kanlin
Wild animal: bush animal



Here gbékanlin is a kind of kanlin (I mean as a wild animal is a kind of animal). And that’s an attributive endocentric compound.



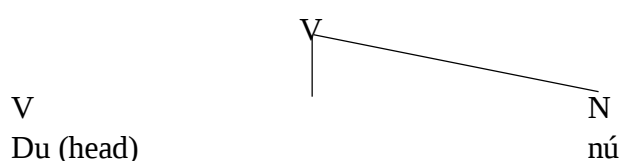
Mẹdahọ which is semantically endocentric and exocentric has its head on the left side as shown on the syntactic tree above. When it means older brother or older sister, it is just the type of brother or sister, and that makes it attributive. However, when it is used to mean ‘mister’, the meaning is related to none of the two words that form it, and, in that case, there is not head.



In this new derived word which is a verb, neither *fɔn* nor *gú* is dominating and the meaning is subordinative (to wake up an iron where ‘iron’ is the direct object) and exocentric. The head can be found on the left ‘Fɔn’ which is the major action because in some other contexts, Fɔn’ could mean ‘stand up’.

(e) Dunú = to eat / to eat something

Du + onú/nú
Eat + a thing (here the direct object is inherent but can be replaced with a concrete noun because ‘onú’ is an abstract noun when not being generalized). For instance, ‘du whévi’ means to eat fish.



Taking into consideration the characteristics proposed by Bauer as partially presented by Arcadia, it is clear that *kanlin*, *oto* and *Ome/Mę* are the heads of the three first compound nouns in the examples above. While the first two heads are found on the right side of the compound nouns they are formed with, the last one is on the left. However, the examples (iv and v) with ‘fɔngú’ and ‘Dunú’ show their heads on the left side which makes them left-headed. Semantically, ‘fɔngú’ is exocentric as no part of the compound verb is dominating while ‘Dunú’ is endocentric. The morpheme ‘Du’ is the dominant part of the derived verb ‘Dunú’. From that analysis, it can be said that compound nouns in Gungbe can either be right-handed or left-handed, or having no head at all, while compound verbs are mainly left-headed.

19. Discussions & Conclusion

With the data sets presented herewith, this research has been able to demonstrate that Gungbe yields itself to morphological processes such as prefixation, suffixation, compounding, reduplication, calquing, clipping, and conversion. However, prefixation in Gungbe seems to be very limited in the sense that only the vowels ‘o’ and ‘a’ can precede a very few number of verbs with CV syllables as their pattern and the CV syllables must have a meaning on their own which are different from the derived VCV syllables. In ‘otò’, ‘o’ has no meaning but ‘tò’ (to arrange) is different from ‘otò’ (country). That explanation is important because as already explained in detail above, some VCV syllables might lose their first V in morpho- syntactic processes and the remaining VC will have exactly the same meaning as a complete VCV. That doesn’t mean that such a VCV syllable is a derived word. Also, the question of tone is important here even if it is not the major target of this research. Otó is different from otò, the first one means ‘an ear’ while the second one ‘a country’. When ‘o’ is removed from the first one, the remaining (tó) has no other meaning from that of ‘otó’ while (tò) does from that of ‘otò’.

Suffixation in Gugbe is made by adding three different morphemes (ton, to, and no). From our study, it is noted that *ton* is only used with four of the six subject personal pronouns to derive a possessive adjective. The 1st and 2nd persons singular are the ones that do not follow this rule and can be considered irregular. It is also noted that those derivations are made from the weak pronouns and not the strong ones because Gugbe has both. Additionally, ‘to’ and ‘no’ seem to be very productive and have different meanings such as ‘claiming ownership’, doer of an action, someone who practices something, etc. While I assume there are social factors attached to such productivity, further research is needed to uncover the nature of words that take the morphemes ‘to’ and ‘no’ and when and why they do.

Compounding is another key factor of word formation in Gugbe and could be regarded as the one with the easiest word-formation pattern. It is mostly made up of adjectives and nouns, nouns and nouns, and verbs and nouns. The processes sometimes require some processes such as the deletion of the possessive marker and that of some vowels in order to arrive at the desired derived words.

Lastly, reduplication, calquing, clipping, borrowing, and conversion are also other means of new word formation in Gugbe. Reduplication in Gugbe is like in any other language whereby it is either partly or completely repeated. Mostly, verbs are repeated to form a noun or an act of doing what is expressed by the verb. This occurs in cases where a syntactic process causes an object shift (object placed before the verb) and this goes together with the reduplicated verb. Calquing is basically used for names (mostly proper names) which when broken down represent a noun phrase or a whole sentence that has been compressed. This is because most African names are message bearers. Clipping is also a feature of proper names in Gugbe where a shortened name is derived from an already existing one. Borrowing also plays an important role in word formation in Gugbe. Objects and ideas that have no direct equivalence in Gugbe are borrowed but then go through some changes. While conversion is also one of the means to derive new words in Gugbe, the option is very limited. From our examples (viii & ix), it was discovered that the process is only possible between some specific nouns which are converted to verbs.

And it is also discovered that compound words in Gugbe can either be right-handed or left-handed or have no head. Based on the data examined in this paper, the left-handed compound words are derived from Noun + Adjective to form a noun and are endocentric in nature. The right-handed nouns are Noun + Noun to derive another noun. The ones with no head are Verbs + Nouns to form another Verb with an exocentric meaning.

In conclusion, this paper aimed to examine word formation in Gugbe with the view to identify the morphological processes in derivation and compounding. From the data I studied, it is clear that words can be formed in Gugbe through prefixation which is very limited, suffixation, compounding, reduplication, calquing, and borrowing. Most of those processes require sometimes some phonotactic procedures. However, considering this study as a preliminary work, further research still needs to be conducted deeply into the morphological system of Gugbe with more data.

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