COMPOUNDING IN EWE

BY

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DECLARATION

I Anthony Kofi Agbadah, declared that this thesis is the result of my own personal effort and I have not already submitted in part or whole for a degree anywhere. I also certify that except for references to works that have been duly cited, this thesis is the result of my original research under the supervision of Dr. Seth Antwi Ofori and Dr. Clement K. I. Appah.

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DEDICATION

To

God Almighty! He has been my source of inspiration, wisdom, knowledge and understanding. He has always been my shield. He is ever faithful.

To

Margaret Abra Enyonam Pongo Agbadah, my wife for her encouragement.

To

Elorm, Kafui and Yayra, my adorable children, who have been affected in every way possible by my quest to accomplish this task.

To

The rest of my family for being there.

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ABSTRACT

Compounding is a very productive word formation process in Ewe. Works in Ewe grammar (Ofori 2002; Duthie 1996) only referenced it as one of the word formation processes in the language and have not done an in-depth morphological and phonological study on the phenomenon such as pursued in the current thesis. The purpose of this study is to investigate compounding with the view of providing a broad description of the empirical facts of compounds in Ewe. The study examines: the types of compounds in Ewe, the semantic relation between the constituents and the phonological processes involved in compounding. Data for this study is drawn from both primary and secondary sources. The data is based on interactions with native speakers, Ewe novels and course books and my knowledge of the language as a native speaker. The study showed that derived Ewe compounds are not only nouns but also adjectives, and that they are formed from two or more free forms, namely N-N, N-A, N-V, V-V, V-N and N-V-N. Ewe compounds are also attributive, subordinate and coordinate based on the relationship that exists between the constituents. These compounds may have endocentric and exocentric subtypes and the endocentric subtypes may be right-headed, left-headed or dual-headed. In terms of Phonology, the study shows that Ewe does not allow vowel segment sequence. For numeral compounds, the low vowel is always preserved regardless of whether it is a V_1 or V_2. The low vowel always compensates for the deletion of a non-low vowel. For non-numeral compounds, V_2 is always deleted and there is no vowel lengthening to compensate for the vowel loss, and this leads to syllable loss.

LIST OF ABBRAVIATIONS

A	Adjective
A-N	Adjective-Noun compounds
CTV	Canonical Transitive Verb
Endo	Endocentric
Exo	Exocentric
H	High
ICV	Inherent Complement Verb
INT	Intensifier
L	Low Vowel
M	Mid Vowel
N	Noun
N-A	Noun-Adjective
NEG	Negative
NUM	Numerals
N-N	Noun-Noun Compounds
N-P	Noun Phrase
N-V	Noun-Verb Compound
PL	Plural
POSS	Possessive
PROG	Progressive
PS	Person
RED	Reduplication

SUBJ	Subject
SVC	Serial Verb Construction
SVO	SubjectVerb Object
V	Verb
V1	Vowel 1 at morpheme boundary
V2	Vowel 2 at morpheme boundary
V-N	Vern-Noun compound

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction

This thesis is a study of compounding in Ewe. It provides a comprehensive description of the linguistic phenomenon of compounding in Ewe. It analyses compounding in Ewe both morpho-syntactically and phonologically.

Compounding is one area of grammar that has held the attention of grammarians and linguists, such as Sanskrit grammarians, structuralist linguists, transformational generative grammarians and the subsequent transition to lexicalist approaches for a long time. Primarily, compounding is a word formation process by which two or more free lexemes come together to form another word (i.e. the compound word).

Booij (2007) observed that compounds are very common in languages due to their semantic transparency and versatility. According to Dressler (2006) and Libben (2006), compounding is a language universal. In other words, there is no known language without compounds (Bauer 1988). According to Aikhenvald (2007: 24), "compounding is found in languages of any type, but is dominant in isolating languages". However, Štekauer, Valera and Körtvélyessy (2012) have indicated that there are languages such as West Greenlandic (Eskimo-Aleut, North America/Greenland), Diola Fogny (Niger-Congo) that do not have compounds.

Many linguists consider compounding as a morphosyntactic process of word formation. Bauer (2006) posits that in individual languages, things may be called compounds that would not normally be so termed in other languages. Compounding is a very productive word-formation process in Ewe, a language spoken in Ghana. Ofori (2002) observes that nominalization is pervasive in Ewe and that it involves processes such as compounding, reduplication, permutation, affixation and combination of these processes which are both morphological and phonological.

This thesis examines the structure and the morphophonological processes involved in the formation of compounds in Ewe. The rest of the chapter is organised as follow. Section 1.2 is a brief history of the Ewe people and the Ewe language. Section 1.3 is statement of the problem, section 1.4 is the objectives of the study, 1.5 is devoted to the research questions, 1.6 is the methodology, 1.7 is the significance of the study, 1.8 is devoted to the organization of the thesis and section 1.9 concludes the chapter.

1.2 The Ewe People and Language

Ewe refers to both the language and the speakers. This section discusses the history of the Ewe people and where they migrated from to their present settlement in Ghana. It also covers the Ewe language and its dialects. These are discussed in sections 1.2.1 and 1.2.2 respectively.

1.2.1 A Brief History of the Ewe People

According to Westermann (1930), the Ewes are believed to have migrated from Adzotome (Sumeria) to the Delta of the river Nile (presently known as Egypt). From Egypt they moved through Ketu (Sudan) to Ile-Ife in Nigeria. When they left Ile-Ife, they divided into three groups. One group established at the bank of the Mono River also known as Tado, another set settled near the Mono and the Haho River also known as Notsie in the Republic of Togo while the third group settled in Adele, and created the Dogbonyigbo Kingdom which is Dahome, presently known as the Republic of Benin. The Ewe group in the Republic of Benin then moved to join their brothers in Notsie

In Notsie they started quarrelling among themselves on issues concerning throne accession. Tɔgbi Wenya enthrones his nephew Sri as the King of Dogbonyigbo. Sri's accession to the throne invoked anger and envy in Tɔgbe Agɔkɔli the King of Notsie. Tɔgbe Agɔkɔli made life difficult for the Ewe people. He forced them to work hard for him and ordered them to build a very thick wall around his Kingdom using clay mixed with thorns and broken bottles. Tɔgbe Agɔkɔli also tasked the Ewes to make a rope for him using clay. Looking at the difficulties and

the unbearable situations they were going through, the various Ewe chiefs came together and took a decision on how to escape from the leadership of the wicked King of Notsie. They therefore asked their women to throw waste water against the thick wall of Notsie to soften it so that they can push it down.

On the appointed night, the men pushed against the wall until it fell. They left Notsie walking backwards with the women and children in the lead followed by the men. They walked backwards because they did not want their footsteps to be traced knowing very well that the King will send his warriors after them when he discovers their escape the next morning.

After they left Notsie they settled in various parts of Ghana. Some groups settled on the Dayi plains and on the mountains. Others moved towards Adaklu and the northern part of the plains. The rest led by Tɔgbi Wenya moved towards the sea and they founded the Aŋlɔ states.

1.2.2 The Ewe Language

Ewe belongs to the Kwa language family of Sudanic languages. It is categorised as a 'Gbe' language, a group of interrelated languages like Fon in Benin and Gengbe in Togo Westermann (1930). Kwa languages are a sub-family of the Niger-Congo family of the Congo-Kordofanian language family of Africa

Ewe is spoken in the following coastal and inland parts in the Volta Region of Ghana namely: Ho. Kpando, Peki, Gbi, Adaklu, Wli, Aŋfɔɛ, Avenor, Ve, etc, Duthie (1996:2).

Ewe shares boundary with Ga-Dangme and Akan to the West, and to the North they share boundary with the Ghana-Togo-Mountain languages, for example, Siwu, Siya, Likpe, Kwa languages, and some Gur languages such as Kabiye. Gbe dialects – Gen, Aja and Xwla are to the east of Ewe. All the languages have different levels of intelligibility with Ewe.

Ewe is studied in schools in Ghana and Togo as a subject at all stages of education up to the tertiary level. There is always a debate about the population of all Ewe speaking people. Several uncoordinated census show that, the number of Ewes may range between two and five million. However, According to Ghana Statistical Service 2010 census, there are about 2.7 million Ewes in Ghana.

The map below shows where Ewe (in yellow) and the rest of Gbe languages are spoken in Ghana, Togo, Benin, and Nigeria.

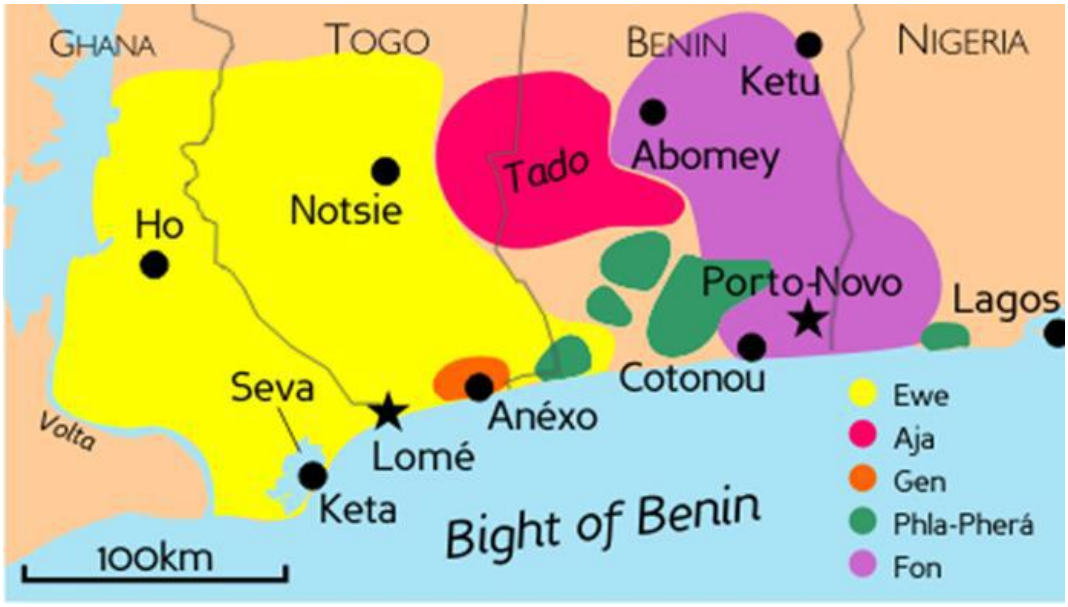


Figure 1. http://www.let.leidenuniv.nl/verba-africana/ewe/c-ewe-language.htm

1.3 Statement of the Problem

Compounding has received much attention in Germanic languages such as English (cf. Benczes 2010, Booij 2005, Harley 2009, Jackendoff 2009). Akan has also received much attention in the subject as far as Ghanaian languages are concerned (cf. Dolphyne 1988, Abakah 2006, Appah 2013b, 2013a 20016c and Ofori 2008). So far there has not been any detailed study into compounding in Ewe. This thesis will look at the structure and the formation of compound in the language.

1.4 Objectives of the Study

The objectives of this study are as follow:

- to identify the types of compounds in Ewe.
- to identify the semantic and grammatical relations between the constituents.
- to examine the phonological processes involved in compounding.

1.5 Research Questions

The questions that I attempt to answer are:

- What are the types of compounds in Ewe?
- What are the semantic and the grammatical relations between constituent units in compounding?
- What are the phonological processes involved in compounding in Ewe?

1.6 Methodology

Data for this study are drawn from both primary and secondary sources. Examples that have been used in the thesis are records of data collected from native speakers going about their normal duties. A few other examples were taken from linguistic works and Ewe language course book, including Ameka (1991) and, Ofori (2002). The rest are novels in Ewe, books, and journal articles.

1.7 Significance of the Study

Compounding is a very productive word-formation process in Ewe. A study of this kind will serve as a record for persons interested in the subject. It will also contribute to the existing literature on the topic as well as serve as a foundation for future research in this area.

1.8 Organization of the Thesis

The research is divided into five chapters. Chapter one is a general introduction of the study. In this chapter I have given a general introduction to issues concerning compounding. I have also presented an overview of the background of the Ewe people as well as their language. The objective of the study, research questions, methodology and the significance of the study are also featured in this chapter. In chapter two I review literatures that are relevant to this research and also recant or lay out principles of autosegmental phonology that are of relevance to the current study. Chapter three offers a morhosyntactic analysis of Ewe compounds. Chapter four features an analysis of the phonological processes at play in compounding in Ewe. Research findings and recommendations conclude the study in chapter five.

1.9 Conclusion

In this introductory chapter, I have discussed the general introduction of the study. I have given a general introduction to issues concerning compounding. I have also presented an overview of the background of the Ewe people as well as their language. The objective of the study, research questions, methodology and the significance of the study are also presented in this chapter.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

The study of compounds has attracted attention from various fields of scholarship. The linguistics literature is fully equipped with studies on compounds. Some are theoretical, some are cross-linguistic, and the rest place emphasis on the study of compounds in specific languages. Grammarians and linguists have devoted their attention on the study of compounding over the years. In this chapter, I discuss various works on the general issues in the study of compounding. The rest of the chapter is organized as follow. Section 2.2 looks at the general issues confronting compounding. Section 2.3 is on studies on various definitions of compounding. Section 2.4 features the studies on classification. Studies on differences between compounds and phrases are discussed in 2.5 followed by headedness in compounding in section 2.6. Studies on phonological structures of Ewe and phonological processes are reviewed in sections 2.7. Section 2.8 is devoted to some morphological and semantic issues. The theoretical frameworks and conclusion end the chapter in sections 2.9 and 2.10 respectively.

2.2 General issues of compounding

The study of compounding has attracted attention of researchers for various reasons. Some of the specific studies on compounds as a subject are: Benczes (2005, 2006a, 2006b, 2010), Heyvaert (2009), Pepper (2010), Booij (2007, 2009a, and 2010a), Jackendoff (2009a) Harly (2009) and Appah (2016c, 2013b)

Many researchers admit that compounds are very common in the languages of the world due to their semantic transparency and flexibility. Booij (2007), Dessler (2006) and Libben (2006) suggested that compounding is a language universal. This agrees with Bauer (1988:33), who argues that "it seems that no known language is without compounds". Likewise, Aikhenvald (2007) observed that "compounding is *found in languages of any type*, but is dominant in isolating languages". Dressler (2006:24) also argued that "compounds are present in *all* languages of the world". But, Štekauer, Valera, and Körtvélyessy (2012) have shown that some languages do not have compounding. These languages include *West Greenlandic* (Eskimo-Aleut, North America/Greenland), *Diola Fogny* (Niger-Congo). Many exciting issues arise in the study of compounding. These issues include definition, headedness, classification of compounds phonological processes as well as the distinction between compounds and phrases. These issues have attracted scholarly attention and provoked lively debates.

2.3 Definition of compounding

According to Fabb (1998:66) a "compound is a word which consists of two or more words." This definition characterises the simplest notion of a compound. For example Malay compound *meta-hari* 'sun' comprises two words: *meta* 'eye' and *hari* 'day'. This example is very common in the literature on word formation. Booij (2007:75) defines compounding as "the combination of lexemes into larger words. This means that, compounding consists of the combination of two words, in which one word modifies the meaning of the other, the head." Lieber (2004:46)

defines root compounds as consisting of "two stems combined as one, with the compound as a whole bearing the category of the right-hand stem." Bauer (1988:38) defines compounding as "the formation of a new lexeme by adjoining two or more lexemes". According to Katamba (1993) "a prototypical compound is a word made up of at least two bases which can occur elsewhere as independent words." Spencer (1991: 305) defines compounds as "a concatenation of words to form other words." Haspeelmath (2002: 85) sees compounds as "two lexemes that are joined together (called compound elements)." Bauer (2003: 40) defines a compound as "the formation of new lexemes by adjoining two or more lexemes."

It is interesting to note that all the definitions present compounding as a word formation processes. The definitions above are not without problems. Most of them look more language-specific rather than cross-linguistic. This clearly suggests that there are hardly any universally accepted criteria for determining what a compound is in spite of extensive research into compounds and the compounding processes.

Lieber and Štekauer (2009) group the problems that the straightforward characterization of compounding poses into two, namely the "micro question" and the "macro question". The macro question has to do with the difficulty, sometimes, in making a clean distinction between compounds on the one hand and derived words or phrases on the other whilst the micro question has to do with the status of the compound members: whether they are free-standing words or not. Montermini (2010) suggests that though everybody, linguists and non-linguists,

appears to have a naive, pre-theoretic notion of what a compound is, this conception is hard to formalize, without defining the type of units involved first. Compound constituents in some languages are not free-standing words, but rather stems or roots, as some of the definitions show. However, terms like *stem*, *root*, *word*, etc. are not well-delineated concepts either at the language-specific level or at the cross-linguistic level. For example the definitions that suggest that compounding is the combination of only two free forms to form a new word cannot hold for all Ewe compounds. Compounding in Ewe can consist of combination of two or more free forms. Ewe speakers can put together two bases and more than two bases to form a noun compound as shown in the examples in Tables (1) and (2) below:

Table 1. Ewe Compounds Consisting of Only Two Bases

BASE 1	GLOSS	BASE 2	GLOSS	COMPOUND	MEANING
àbólo	bread	kpó	hill	àbólokpó	oven
gbé	bush	àvu	dog	gbèvú	ruffian
àbɔ̀bì	anchovies	àtádí	stew	àbɔ̀bìtádí	anchovy stew
kú	death	èɡà	money	kúga	funeral donation
àba	bed	hó	money	àbàhó	coffin fine
àbà	mat	àtí	wood	àbàtí	bed
blí	corn	àvà	barn	blíva	corn barn
àɡbà	load	afɔ	leg	àɡbàfɔ̀	ladder
fetrí	okro	àɡblè	farm	fetrígble	okro farm

Table 2. Ewe Compounds Consisting of Three Bases

BASE 1	GLOSS	BASE 2	GLOSS	BASE 3	GLOSS	COMP.	GLOSS
ame	human	kɔ́	take	mɔ	machine	amekɔ́mɔ	lift
anyí	down	mlɔ́	sleep	awu	dress	anyímlɔ́wu	pajamas
aŋutí	orange	fiá	squeeze	emɔ	machine	aŋutífiámɔ	juicer
àtíke	medicine	xɔ	take	àgbàle	book	àtíkexɔgbale	prescription
bɔl	ball	*f*o	play	há	group	bɔl*f*oha	football team

Donalies (2004) tries to supply conclusive criteria of compoundhood as shown in example (1).

1. *Putative list of defining properties of compounds.* They

i. are formed without word-formation affixes.

ii. are spelled together.

iii. have a specific stress pattern

iv. include linking elements.

v. are right-headed.

vi. are inflected as a whole.

vii. are syntactically inseparable.

viii. are syntactico-semantic islands.

ix. are conceptual units.

Appah (2013b) describes Donalies (ibid) criteria as too language-specific to be cross-linguistically relevant. The criteria are based on generalizations that have

been found not to hold. For example, Donalie's (2004) suggestion that compounds are right-headed cannot hold in Ewe since Ewe compounds may be right-headed, left-headed or dual-headed.

Lieber and Štekauer (2009) believe that the way forward is to accept that there is "a cline of more compound-like and less compound-like complexes, with no clear categorical distinct". According to Aikhenvald (2007) compounds should be defined on language-specific basis. According to Appah (2013b), this approach could potentially result in little or no structure and would not advance the cause of developing a general theory of language.

Appah (2013b) prefers a definition of compounding that stresses the lexemic status of the constituents of compounds. That is the combination of Katamba (1993) and Booij (2007) definitions. He therefore defines compounding as " the process by which a new lexeme is formed by combining two or more bases each of which potentially occurs alone elsewhere in the grammar as free forms" (Appah 2013: 152b). Ewe compounds can fit well into this definition. The examples and the discussions in (2) explain this point further.

2		BASE1	BASEE 2	COMPOUND
	a.	àgbèlì	àtí	àgbèlìtí
		cassava	stick	cassava stick
	b.	àsí	awu	àsíwu
		hand	dress	glove

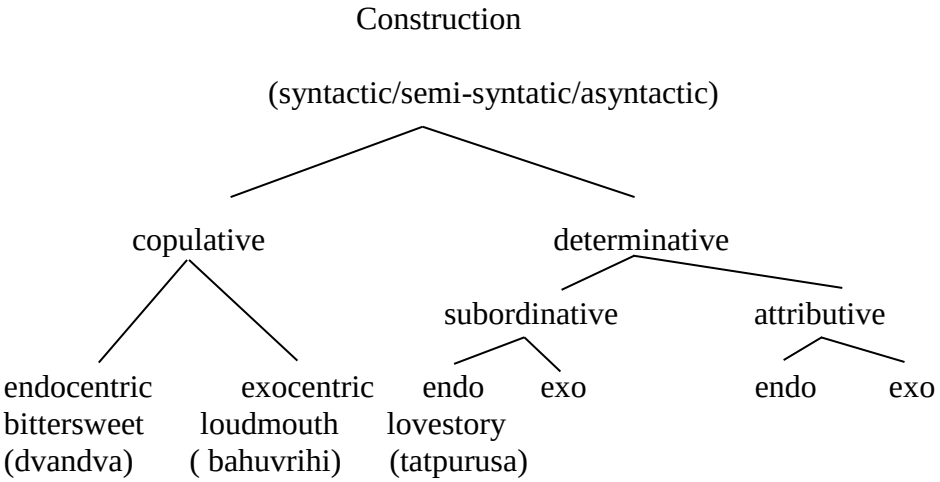
In (2a) above, *àgbèlìtí* is a new lexeme formed by combining two related bases *àgbèlì* and *àtí*. The same applies to (2b). The compound *dɔ̀nɔ̀kpɔ́xɔ* 'ward' is the combination of three free forms *dɔ̀nɔ̀* 'patient' kpɔ́ 'see' and exɔ 'room'. Ewe compounds are spelled together, they can be right-headed, left-headed and dual-headed, and they are inflected as a whole and are syntactically or structurally inseparable. I define Ewe compounds as the combination of two or more related bases which occur alone as free forms to form a new lexeme.

2.4 Classification of Compounds

The classification of compounds has been a central issue in the linguistic literature. Almost every scholar dealing with the study of compounding has proposed his or her own view. According to Appah (2013) one simple way to classify compounds is to use the form-class of the constituents, yielding N-N, N-A, N-V, etc., or that of the output category of the compound, yielding verbal, nominal, adjectival, etc. compounds. According to Bloomfield (1933) the presence and position of a head element, distinguishing between compounds which are hyponyms of their head and those which are not, yielding endocentric vs. exocentric compound respectively is another way of classifying compounds. A final approach uses the grammatical and semantic relation between the constituents. (cf. Appah 2013). In reality, it is clear that most classifications involve more than one of the above parameters, so it is not rare to discover terms like endocentric N+N coordinates and V+V endocentric compounds (cf. Lieber 2009 359).

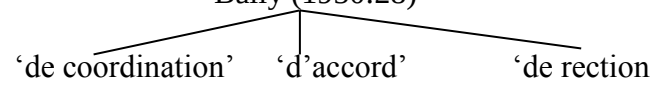
Some of the classifications proposed in research works on compounds, are illustrated below from (3) to (10).

3. **(**Bloomfield 1933:128)



Bloomfield used constantly the notions of «subordinate» and «coordinate»; however, the construction of his classification ignores the fact that both subordinate and coordinate compounds can be exocentric (Scalise and Bisetto 2005).

4. Bally (1950:28)

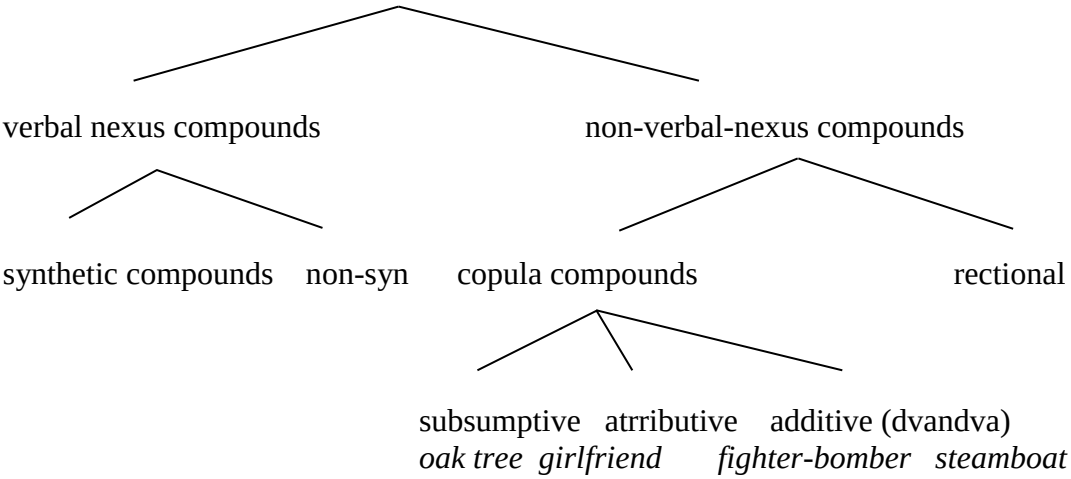


sourd-muet chaleur solaire maison de champagne

Bally’s classification is based on a unique principle that is the grammatical relations between head and non-head constituents: ‘de coordination’, ‘d’accord’ and ‘de rection’. This suggestion is consistent because it is founded on a single

criterion but, unfortunately, it lacks the notion head. (cf. Scalise and Bisetto 2005/2009).

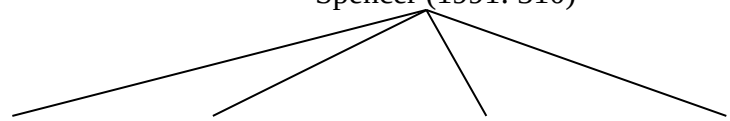
5. Marchand (1969)



Marchand's proposal is applicable only to endocentric compounds. He presents another view saying compounds do not exist as a separate sort of word formation. He maintains that what is known in the literature as exocentric compounds are to be analysed as containing some sort of (categorizing) zero suffix and, as such, they are formations not pertaining to the compounding domain but to derivation (cf. Scalise and Bisetto 2005/2009).

Spencer (1991) proposes that compounds are classed into 3 groups: (a) endocentric head–modifier constructions compounds; (b) exocentric (bahuvrihi) predicate-argument formations and (c) dvandva compounds including appositional constructions.

6. Spencer (1991: 310)



Endocentric	exocentric (bahuvrihi)	dvandva	appositional
Haead-modifier	predicate-argument	mother-child	learner-driver

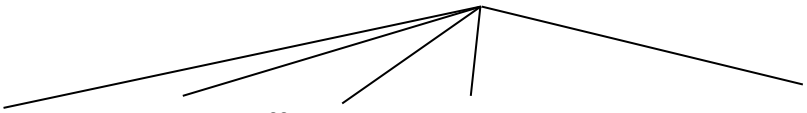
Fabb's classification makes use of a single criterion number of heads.

7. Fabb (1998)

no head	one head	two heads
exocentric	endocentric	co-ordinate/apoositional/dvandva

Haspelmath groups compounds into (endocentric, exocentric, coordinate, appositive and affixed compounds) to suggest that both affixed and coordinate (additive) compounds of the type adult-child are exocentric while appositional ones are endocentric

8. Haspemalth(2002: 88)

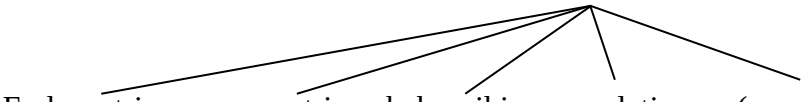


Endocentric	exocentric	affix comp.	coord. (additive)	appositional
lipstick	*lavapiatti*	*green-eyed*	*elun-ai* (Korean) ‘adult and child’	*poeta-pintor*

.

Booij's organization splits dvandva compounds of the Sanskrit type (with dual or plural inflection) from copulatives (which have singular number). He also separates endocentric and exocentric compounds from bahuvrihis and copulatives.

9. Booij (2005: 79)



Endocentric	exocentric	bahuvrihi	capulative	(appositive)
travel office	*lavapiatti*	Kahlkopf	dvandva	Furstbischof

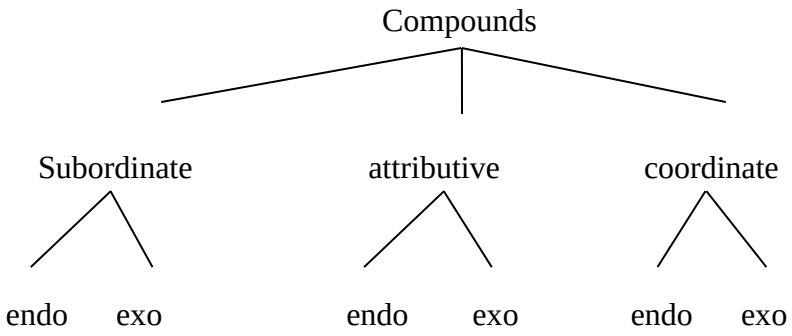
Scalise and Bisetto (2009) identify three problems with existing systems of classification (Bloomfied 1930; Booij 2005; Bally 1950; Bauer 2001; Spencer 1991; Olensen 2001; Marchand 1969 and Haspelmath 2002). Their criticisms include the following:

a. the terms applied are often too languages-specific to be cross-linguistically appropriate.
b. many studies privilege compounds formed by certain lexical categories (mostly N-N compounds) leaving many other classes unrepresented; and
c. the use of unpredictable criteria, making it difficult to compare the various classes posited.

Bisetto and Scalise (2005) categorize compounds based on hierarchy. Their classification considers the grammatical relations between the constituents. The first level produces three macro types – *attributive* compounds, *subordinate*

compounds and *coordinative* compounds. Each one is divided again at the second level centred on the presence or absence of a head element in the compound. This gives rise to *endocentric* and *exocentric* as illustrated in the tree diagram in (10) below:

10.



(Bissetto and Scalise 2005)

Scalise and Bisetto (2009) argue that the three-way classification confirms the manner in which the head selects the non-head in each of the three groups. Scalise and Bisetto (2009) classificatory system is relevant to this current studies.

Appah (2013) discusses types of Akan compounds. He identifies five main classes: Noun-Noun, Noun-Adjective, Verb-verb, Verb-Object (V-N) and Object-Verb (N-V) of compounds. He also shows that, the so-called A-N compounds do not exist in Akan and that the compounds that are put in this class by Dolphyne (1988) and others are N-N compounds. His position is that in the so-called A-N compounds the prefixes nominalize the adjectives which then occur as left-hand nominal components in N-N compounds which are mainly right-headed in Akan. Appah (2013b) again argues that, the semantic properties, phonological properties and

morphosyntactic properties provide strong evidence for accepting a constructional view of grammar. According Appah (2015), the noun constituent in Akan verb-noun compounds may possibly be the internal argument of the verb mostly, but also be the external argument or an adjunct, usually identifying the location of the action. He posits that the noun constituent may bear a semantic role of the action/event chosen by the verb, while the denotatum of the compound may be agent, theme instrument, location or condition. These findings are relevant to the current study.

Appah (2017) suggests that, all five Akan compound types Noun-Noun, Noun-Adjective, Verb-verb, Verb-Object (V-N) and Object-Verb (N-V) have exocentric subtypes. The current study will examine the compound types in Ewe. The analysis is couched within the approaches adopted by Bisetto and Scalise (2005), and Appah (2013a).

2.5 Compounds versus Phrases.

Appah (2013) noted that compounds have a lot in common with phrases, including having lexemic constituents which pattern linearly like phrases. Thus, the issue of how to draw a line between compounds (morphology) and phrases (syntax) is an important one that must be dealt with.

Dixon and Aikhenvald (2002) have put forward a number of formal criteria for identifying grammatical words. In their model, a unit is a grammatical word:

(i) if the elements of the unit occur together rather than scattered over the clause in which it occurs (cohesiveness or internal immutability),

(ii) if all elements occur in a fixed order and can be moved as a unit (syntagmatic mobility), and

(iii) if, as a unit, it has a conventionalized meaning.

According to Appah (2013b), the criteria for distinguishing between compounds and phrases in Akan may be orthographic, phonological, morphological, syntactic, or semantic. In terms of semantics, the traditional approach has been to look for semantic specialization and exocentricity. That is, phrases are by definition compositional. So if a word group is non-compositional (whether exocentric or has institutionalized meaning) or partially compositional then it probably is a compound and not a phrase. For the purpose of distinguishing between compounds and phrases Appah reckons a unit to be a compound if it meets the criteria for grammatical words as set out in Dixon & Aikhenvald (2002). He also considers a unit as a compound on purely morphological grounds, that is, if, as a unit, it can inflect for number or can undergo further derivation. Appah also employs constituent order and the tonal pattern of constructions to tell the compoundhood of a unit in Akan.

This is relevant to this study as well. The reasons are that, Ewe compounds can meet the criteria for grammatical words. They are free forms that can inflect for number and can undergo further derivations. Also the constituent order and tonal pattern of construction can be used as a test for compoundhood in Ewe.

2.6 Headedness in compounding

One of the main criteria for classifying compounds in the literature is the presence of the head component. Katamba (1993) looks at the head as the most important aspect in the classification of compounds. Booij (2007) posits that headedness of a compound is important for two reasons; first for its formal properties, and second for its semantic interpretation. Andreou (2014: 12) argues that the head of a complex construction is "the most important in the structure and it dominates the whole complex word." According to Appah (2016b), the head of a morphological structure defines the dominant and privileged constituent in an asymmetrical relation which defines the properties of the whole. This suggests that, in a compound of two constituents, only one of them succeeds to assume the role of the head. According to Selkirk (1982) the concept of "head" is vital in characterizing the semantics of compounds. Selkirt sees the head of the compound as the constituent that defines the meaning of the compound. That is, the head defines most properties of the compound. If the meaning of the compound is in the head element, then it is easy to identify the head element. This implies that, the class of elements denoted by the compound is usually a subset of the class of elements that is denoted by the head of the compound. For example, *table mat*, is a hyponym of *mat*, the head. Hence, *mat* can occur where *tablemat* is expected to occur without a drastic change in the meaning of the construction, but the same cannot be said of the non-head constituents *table* occurring alone where *tablemat* is expected (Appah 2013). Again *mat* is the head because *tablemat* is a type of *mat* not a type of *table.*

Scholars suggested that the position of the head is a parameter that has to be set for each language, so that the morphology of a language is either left-headed or right headed, depending on the language. Williams (1981: 248) suggests the right-hand head rule (RHR) by stating that the right-hand elements of complex words are the heads of such words. Selkirk (1982: 20) maintains that "the right-hand head rule (RHR) is not adequate to characterize the headedness of English word structure, if verb- particle sequences are left-headed components and if the head of an inflected word is not the inflectional affix, which in English is on the right". Táíwò (2009) also confirms most morphologically complex words in Yoruba have their left-hand constituents as heads. Again Appah (2013b) observes that although most of the endocentric N-N compounds in Akan are right-headed, there are also left-headed ones. Many studies on headedness of compounds (Andreou 2014; Booij 2007; Scalise & Fábregas 2010) conclude that many languages have both left-headed and right-headed compounds and may have different types of heads, characterized by different constituents. This discussion is also relevant because Ewe compounds can be right-headed, left-headed and dual-headed. The current study will classify compounds based on the various criteria.

2.7 Background on Ewe Phonology

It is important to introduce aspects of Ewe phonology of relevance to the current study. This section presents the reviews of works on Ewe vowels, consonants, syllable types and some phonological processes.

2.7.1 Ewe Vowels

According to Duthie (1996: 12), there are seven oral and five nasal vowels in Ewe Table (3) below is the vowel chart of Ewe.

Table 3. Ewe Vowel Chart

	Oral		**Nasal**	
	Front	**Back**	**Front**	**Back**
Close	i	u	ĩ	ũ
Close-mid	e	o		
Mid	ɛ	ɔ	ɛ̃	ɔ̃
Open	ɑ		ɑ̃	

(Duthie 1996: 12)

2.7.2 Ewe Consonants

The consonant structure of Ewe is made up of co-articulated /kp/ and /gb/, bilabial and labiodental fricatives, e.g., /ƒ/ versus /f/ and /ʋ/ versus /v/, and alveolar and retroflex stops, e.g., /d/ versus /ɖ/. /m/ and /n/ may be syllabic and bear tones. (cf. Duthie 1996).

The table below shows the distributions of Ewe consonants.

Table 4. Ewe Consonant Chart

		bilabial	Labio-Dental	alveolar	retroflex	palatal	velar	Labio-velar	Glottal
Stops	-voice	p		t			k	kp	
	+voice	b		d	ɖ		g	gb	
Fricatives	-voice	*f*	f	s					x
	+voice	ʋ	v	z			ɣ		h
Affricates	-voice			ts					
	+voice			dz					
Nasals		m				ɲ	ŋ		
Lateral					l				
Flap					r				
Semi vowel		w				j			

Duthie (1996: 12)

2.7.3 Ewe Syllable Types

According to Duthie (1996: 26), there are three basic syllable types and all of these types necessarily have their accompanying tones.

Syllable type 1

- Tone and nucleus only for example, é "he/she/it", è "you-SG", ò "not"

Syllable type 2

- One margin, tone and nucleus for example, tó "pound", fì "steal", gbɔ̃ "goat"

Syllable type 3

- Two margins, tone and nucleus for example blè "deceive", dzrá "sell", *ƒ*lè "buy", gblɔ̀ "say"

According to Agbedor (2002), the Ewe syllable is obligatorily composed of a nucleus and a tone. The onset and the coda are optional, and most syllables in Ewe have no codas (i.e., they are open syllables). The syllable types found in Ewe are illustrated below in (8)

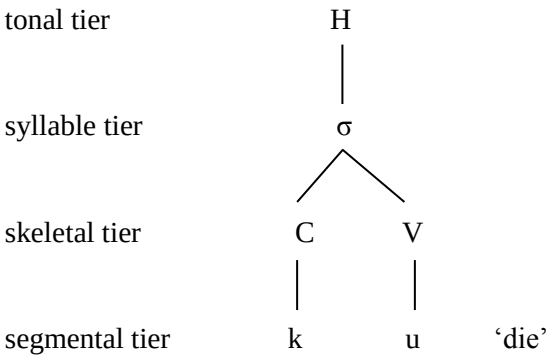
In the current study the mid tone is not marked. The high tones and the low tones are duly marked.

8. Ewe syllable types

- V^T: as in <u>à</u>-tí (tree)
- C^T: as in 'ŋ-kú' (eye)

- CV^{T}: as in ‘va’ (come)
- CCV^{T}: as in ‘bla’ (tie)
- $CV^{1}V^{2T}$: as in ‘bia’(ask)
- CVV^{T}: as in’dzaa’ (stealthily)
- CVC^{T}: as in ‘goŋ’ (firm) (Agbedor, 2002)

12. Representation of Ewe syllable structure



2.7.4 Phonological Processes

As noted earlier, during compound formation in Ewe, various phonological processes take place. These include vowel deletion, resyllabification, simplification of vowel sequence at morpheme boundaries, assimilation, effects of tone, and cluster reduction. There is the need to review some works that touch on phonological processes. Ofori (2008) discusses morphological and phonological processes that take place in Twi numeral compounds. He posits that Twi basic numerals from one to nine go into compounding with the root of ten *du* and of hundred *ha* that yield numbers like aduonu 20, aduasa 30, ahaanu 200, and ahaasa 300. He points out that, the Numeral-Numeral compounds create vowel segment

sequences at morpheme boundaries which are not permissible in the language. He argues that the only permissible vowel sequence is /ue/. He states that Akan uses deletion to solve the problems impermissible vowel sequence at morpheme boundaries create by deleting V2. He identifies deletion, compensatory lengthening and tone harmony as some of the phonological processes involve in numeral compounds. These revelations are very relevant to the current study because vowel segment sequences at morpheme boundaries are not permissible in Ewe. Ofori 2008 uses autosegmental theory in his paper which is also relevant to this study. Autosegmental theory will help this study to draw a line between segments and their features.

Agbedor (2002) discusses the role of tone in reduplication in Ewe. He suggests that reduplication in Ewe is found to have both lexical and grammatical functions; it turns a verb into either a gerund or an adjective. He again suggests that the reduplication template, which represents the copied part of the reduplication, has been found to have different tonal patterns depending on the function of the reduplicated form. In gerunds, there is a default low tone on the reduplicative template. This is relevant to this study since most V-V compounds are derived from reduplication. When two verbs are combined, the verbs undergo reduplication process sometimes. The first verb is reduplicated and compounded with the following verb which always retains its original tone. When the verb (CV stem) is a high tone, the counter changes its high tone to a low tone while the root retains the high tone. When both the counter verb and the root verb are low tone, the verb is a low (Ofori 2002).

Abakah (2006) studies tonal processes in Akan. He suggests that verbs or nouns of the same class behave tonally the same in Akan, and that from tone melodies, one can differentiate between a compound and a phrase. Ewe behaves differently as far as compounding is concerned. Tone deletion, spreading, stability and assimilation are common in compounding in Ewe.

According to Agbedor (2009), vowel deletion involves the removal of a vowel from a word under two conditions. The first is the morphological process of compounding. The other condition takes place where a possessive pronoun is in construction with a noun which begins with a vowel. Agbedor concludes that it is the vowel that begins the second word (N2) that is deleted as shown in the example below.

(13)	a. agbeli		+	agble		→	`agbeligble	
	cassava		farm				‘cassava farm’	
	b. ga	+	aba	+	ati	→	gabati	
	iron		bed		wood		‘metal bed’	(Agbedor 2009)

Agbedor’s observation is not entirely the case. Detailed investigation into vowel sequence and vowel sequence processes in this thesis reveals the fact that this vowel deletion rule does not apply when N2 is a numeral. This will be discussed in chapter four of this thesis.

2.8 Some morphological and semantic issues

Ofori (1988, 2002) discusses compounding as one of the nominalization processes in Ewe. Ofori posits that nominalisation processes are prevalent in Ewe and they include the processes of compounding, permutation, affixation, reduplication and combination of two or more of these processes which are both phonological and morphological. She concludes that compounding is a nominalisation process. This will be thoroughly investigated since the data available for the present work suggests that compounding can produce other word class like adjectives. Ofori's on Ewe nominalisation represents an important foundation upon which the present work builds because her work set the stage for this work which seeks to provide an account of the nature and classification of compounds in Ewe.

Westermann (1907) and Ameka (1991) write on person markers/ possessive markers in Ewe. They observe that person markers occur as affixes in some contexts and as free forms in other contexts. According to Westermann, Ewe has four different person markers, *-nɔ* 'mother', *-tɔ́* 'father', *-a* and *-la*. He argues that the markers *-a* and *-la* are very similar in terms of their functions. The marker *-a* is used in older varieties, while that of *-la* is very regular in modern varieties of Ewe. Ameka (1991) calls these markers possessive markers. According to Ameka the possessive suffixes *-tɔ́*, *-nɔ*, and *-ví* are homophonous with the kin terms *tɔ́* 'father', *nɔ* 'mother', and ví 'child' respectively. Claudi and Heine (1986) suggest that the former have evolved from the latter through metaphorical language usage and conceptualization. According to Ameka, one can distinguish between the use of these forms as possessum suffixes where they maintain their kin term sense and

their use as possessor suffixes where they have acquired new meanings. This is relevant to the present work because these forms can occur as affixes and they can also occur as free forms (lexemes) in compounding.

According to Ameka (1991), semantically, an adjective describes some important but non-criteria property of an object. This means that an adjectival will draw a line between two members of the same species that a single common noun makes reference to. Ameka identifies five basic adjectives in Ewe (gã 'big', võ 'bad', Ɣí 'white', ví 'small' and dzĭ́ 'red colour'). The list below with English examples were the basis of the cross linguistic comparison of the adjective word class.

(14) Classes of adjectives

a. DIMENSION - big, large, little, small, long, short, narrow, wide,
b. PHYSICAL PROPERTY - hard, soft, sweet, sour, rough, smooth, hot
c. COLOUR - black, white, red, green, yellow, blue.
d. HUMAN PROPENSITY - jealous, happy, kind, rude, proud, cruel...
e. AGE - new, young, old....
f. VALUE - good, bad, precious, delicious, atrocious....
g. SPEED - fast, quick, slow....

The list above has been investigated with Ewe examples in chapter three.

2.9 Theoretical Framework

This thesis is framed on autosegmental theory. The theory will help provide answers to some questions about the phonological processes involved in compounding in Ewe. The theory utilized will help describe, illustrate and discuss the phenomena of vowel deletion, resyllabification, simplification of vowel sequence at morpheme boundaries, assimilation, effects of tone, and cluster reduction in compounding in Ewe

2.9.1 Autosegmental Theory

Autosegmental phonology comprises several linear arrangements of elements and each linear sequence constituting a distinct tier. The principle permits a close link between investigations of segments into distinct features of which every feature in a language appears on precisely one tier.

The common assumption in Sound Pattern of English (SPE) is that the feature specifications for a given segment were combined without any order. When the non-linear theory is developed, it is generally accepted that representation of features should be autosegmentally structured: where every feature is organised on a distinct tier and linked to syllable positions or other tiers by lines of association Goldsmith (1976a). Autosegmental representation permits each feature to be accessed individually by the various phonological processes such as deletion and assimilation. Goldsmith (1976a), the brain behind the theory, sees the segments and their features as distinct and for that matter they are labeled as being parallel.

This means that the features are not part of the segments but they look at them as their properties.

This study discusses deletion as a way of avoiding vowel sequence segment at morpheme boundaries in compounding. Sometimes when the vowels deletes they do not go with their tonal feature; the tones may be preserved and may have influence at other segments. This shows clearly that the segments and their features are different things all together. Precisely, what this means is that, segments and features constitute discrete tiers and that a change in one does not disturb the other. The segments and their features separately bear their consequences. Features and their segments are independent entities. The illustrations help to draw a line between the segments and their tiers.

Autosegmental phonology helps to resolve numerous problems in the literature. Problems involving tonology which autosegmental phonology resolves are the representation of contour tones and tone preservation also known as stability. In resolving vowel sequence segments at morpheme boundaries in compounding in Ewe some vowel may delete but their tones remain. Whatever happens to the tones afterwards is another thing altogether Morte (2013). Autosegmental phonology also answers the questions floating tones bring. Discussion with illustrations in this domain is dealt with later in chapter 4.

2.10 Conclusion

In this chapter, I have discussed general issues (definition, classification, headedness and test for compound hood) in the study of compounding. There are hardly any universally accepted criteria for determining what a compound is in spite of extensive research into compound and compounding processes as far as definition and classification are concerned. These general issues are meant as a general backdrop against which Ewe compounding will be discussed in the next three chapters

CHAPTER THREE

MORPHOSYNTACTIC ANALYSIS OF EWE COMPOUNDS

3.1 Introduction

Compounding in Ewe has been studied for a short time and it has featured in just a few studies in Ewe (cf. Duthie 1996, Ofori 2002) as a word formation process. However, none of the existing studies provides a detailed account of the different forms of compounds in the language or offers a classificatory account of the different forms of compounds. I aim to classify Ewe compounds both structurally (i.e. morphosyntatically) and semantically. This chapter presents the grammatical and syntactic relations in Ewe compounds as well as the syntactic category of the constituents of the compound members (i.e. N-N, N-A. N-V, V-N, V-V, N.V.N). It also covers the presence of a head element, which presents endocentric and exocentric types of compounds. Again, the position of head constituents which gives left-headed, right-headed and dual headed compounds is presented in this chapter. Finally the chapter presents the semantic relations between constituents.

The goal is to establish the morphosyntatic and semantic principles and relationships that underline the formation of compounds in Ewe. The analysis is couched within the approaches adopted by Bisetto and Scalise (2005), and Appah (2013b).

This chapter is organized into five sub-sections with each sub-section focusing on a category of compound. The rest of the chapter is organized as follow. Section 3.2

looks at the grammatical and syntactic relations in Ewe compounds. Section 3.3 features Noun-Noun (N-N) compounds. Section 3.4 deals with Noun Adjective (NA) compounds followed by Noun-Verb (N-V) compounds in 3.5. Section 3.6 is on Verb-Noun (V-N) compounds. Section 3.7 presents Verb-Verb (V-V) compounds, followed by Noun-Verb-Noun (N-V-N) compounds in 3.8. Section 3.9 concludes the chapter.

3.2. Grammatical and syntactic relations in Ewe compounds

It is not just any two verbs, nouns or adjectives for example that can be combined to form a Verb-Verb or a Noun-Noun or adjective-adjective compound. Also it is not just any noun and adjective or any verb and noun that can be compounded to form a Noun-Adjective and a Verb-Noun compound respectively. According to Appah (2013), there must be some observable or imaginable relationships between the elements of the compound. According to Downing (1977:831), "any entity to be referred to as a compound participant participates in many relationships which, in absolute terms, may serve as compounding relationships". Marchand (1969:11) suggests that "the principle of combining two words arises from the natural human tendency to see a thing identical with another one already existing and at the same time different from it". Finally Selkirk (1982:22) posits that, "the compound apron string designates a string that is somehow related to an apron, by being attached to one, in the form of one, or whatever". Naturally two words are combined because there is an already existing relationship between the two. In other words, various relationships characterize the constituents in a compound and these relationships form the basis for the formation of different types of compounds. Following

Bissetto and Scalise (2005) and Scalise and Bissetto (2009), this study pursues account of Ewe compounds based on the different synthetic and semantic relation between words in compounding. The grammatical relations that are acceptable between the two constituents of a compound are those existing in syntactic constructions: subordination, coordination, and attributive (cf. Bissetto and Scalise 2005). Based on the relationship between the constituents Ewe compounds can be subordinate, attributive and coordinative.

3.2.1 Subordinate Ewe Compounds

Subordinate compounds are compounds with the two elements sharing a head-complement relation. One constituent in Ewe subordinate compounds is a complement of the other as shown in example (1).

1.	**BASE 1**	**BASE 2**	**COMPOUND**
a)	koko	àgblè	kokogblè
	cocoa	farm	cocoa farm
b)	àbólo	ewɔ́	àbólowɔ́
	bread	powder	bread flour
c)	dzì	kú	dzìkú
	heart	die	anger
d)	trɔ̃́	ʋú	trɔ̃ʋú
	fetish	drum	fetish drum

In example (1a) above *koko* is the complement of *àgblè.* Likewise, *àbólo* is the complement of *ewɔ* in (1b) *dzì* is the complement of *kú* in (1c) and *trɔ̃* and *vu* (1d) are also in complementary relation and t*rɔ̃* is the complement.

3.2.2 Attributive compounds

Attributive compounds in Ewe consist of a noun-head that can be modified by an adjective, as in the example (2) below.

2.		BASE 1	BASE 2	COMPOUND
	a.	ta	gã́	tagã́
		head	big	big headed
	b.	àzi	tutu	àzitutu
		groundnut	grinded	groundnut paste
	c.	detsi	*ʃu ʃ*ui	detsi*ʃu ʃ*ui
		soup	dried	light soup
	d.	*ʃ*odo	gã	*ʃ*odogã
		belly	big	big bellied
	e.	gbè	àvú	gbèvú
		bush	dog	ruffian

In the examples (2) the non-heads convey a property of the head. In example (2a), *gã* conveys a property of *ta*, in tagã and *tutu* conveys a property of *azi* in azitutu in (2b).F*ufui* and *gã* convey properties of *detsi* and *ʃodo* in (2 c and d) respectively. In example (2e), the non-head is a noun unlike the others which have adjectives as

non-noun heads. When the non-head is a noun, its attributive value is associated with a metaphorical interpretation as in *gbèvu* in (2e) above.

3.2.3 Coordinate compounds

Constituents in coordinate compounds in Ewe equally share head-like characteristics. (cf. Fabb 1998). These compounds can be considered to be characterized by two heads. They are co-compounds and dual headed in nature as shown in example (3).

3.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	àbà	àtí	àbàtí
	mat	wood	bed
b.	àtí	àkplɔ	àtíkplɔ̀
	wood	arrow	walking stick
c.	àgbà	ná	àgbàná
	goods	give	credit

From a semantic point of view, the compounds in (3) can be considered to be characterized by two heads.

In the next four sections I discuss syntactic classification of Ewe compounds. In these section I classify Ewe compounds according to the syntactic categories of the individual constituents of the compounds (N-N, N-A. N-V, V-N, V-V, N-V-N)

and the category of the resultant compound (Nominal compounds, verbal compounds, adjectival).

3.3 Noun-Noun (N-N) Compounds

Two separate nouns are put together which yield an output form which is a nominal. According to Downing (1977), N-N compounding is the concatenation of any two nouns to form a third noun. Most of the studies on compounding (e.gAppah 2013b; Dressler 2006; Bauer 2009; Booij 2002) suggest that the N-N compound is the most productive compound type. Ewe has more N-N compounds than any other categories as shown in my dataset.

Simple and compound nouns can be combined in N-N compounds. According to Ameka (1991), the simple nouns are made up of a root and a vocalic prefix *a-* or *e-* for example, *e-gbè* 'bush', a-mi 'oil', *e-dzè* 'salt'. According to him complex nouns are made from other words. A verb can go through a nominalisation process by reduplication, and a noun goes through a nominalisation process by suffixation. Two simple nouns can combine in the formation of N-N compound. Simple nouns like *dzo* 'fire' and *wɔ* 'powder can merge to form the compound *dzowɔ* 'ash'. Other examples of simple noun compounds are shown in the example (4) below.

4.		**BASE 1**	**BASE 2**	**COMPOUND**
	a.	blí corn	wɔ́ flour'	blíwɔ́ 'corn flour'
	b.	tugbe beauty	èfia queen	tugbefia beauty queen
	c.	àbólo bread	èkpó hill/mound	àbólokpó oven
	d.	zã night	ʊ́ lorry	zãʊ́ deceit

The examples in (4) are the combinations of two simple nouns. *Blí* and *wɔ́* (4a) are root words that may take vocalic prefix *e* as in *èblí* and *ewɔ́* èblíwɔ́. Again, a complex noun and a simple noun can merge in the N-N compound formation as shown in the example (5):

5.		**BASE 1**	**BASE 2**	**COMPOUND**
	a.	àgbá-me bowl	àtádí pepper	àgbámetádí raw pepper
	b.	nyadzɔdzɔ news	àgbàlẽ paper	nyadzɔdzɔgbalẽ newspaper
	c.	kpèkpé gathering	àgbàlẽ book/paper	kpèkpégbalẽ invitation card
	d.	àbolowɔ́ bread flour	kotokú sack	àbolowɔ́kotokú flour sack
	e.	ŋɔtíme nostril	dzèsi sign	ŋɔtímedzesi tilde

Furthermore, two complex nouns can combine in the formation of N-N compounds in Ewe as in example (6)

6.	**BASE1**	**BASE2**	**COMPOUND**
	aya-me-ʊú	dzè-*ʃ*é	ayameʊúdze*ʃ*é
	aero plane	station	airport

3.3.1 Person Markers/ Possessive Markers (PM).

Another thing that is worth mentioning, as far as the structure of N-N compound is concerned, is the role person markers/ possessives play. They function as affixes in certain contexts and free forms in other contexts. According to Westermann (1930) Ewe has four different person markers, *-nɔ* (mother), *-tɔ́* (father), *-a* and *-la*. He argues that the markers *–a* and *–la* are very related in terms of functions. The marker *–a* is used in older varieties, while *–la* is very regular in modern varieties of Ewe. Ameka refers to these markers as possessive markers. According to Ameka (1991), the possessive suffixes *-tɔ́*, *-nɔ*, and *-ví* are homophonous with the kin terms *tɔ́* 'father', *nɔ* 'mother', and *ví* 'child' respectively.

These forms can occur as affixes and as free forms (lexemes). As affixes they can combine with roots to perform ownership functions as shown in example (7).

7. a. witch-PM adze-*tɔ́* (a person with witchcraft)
'witch or wizard'

b. wisdom-PM *aɖaŋu-tɔ́* (a person with wisdom)
'wise man'

c. *gourd-PM go-nɔ* (a woman with gourd)

'pregnant woman'

d. hunting-PM *ade-la* (a person who hunts)

'hunter'.

These markers, as affixes (personal markers PM) can also establish certain semantic patterns as shown in example (8-12) when they are added to nouns.

8. **[N-PM] 'Person whose occupation is connected with N'**

a. weave-PM avɔ-tɔ 'weaver'/

b. lorry-PM ʊu-tɔ 'driver'

c. 'hunting-PM ade-la 'hunter'

9. **[N-PM] 'Person who suffers from disease N**

a. wound –PM àbì-tɔ 'person who suffers from fever'

b. leprosy-PM kpo-nɔ 'person who suffers from leprosy'

c. smallpox-PM sakpate-tɔ 'person who suffers from smallpox'

10. **[N-PM] 'Person who possesses or owns object N'**

a home-PM a*ʃ*é-tɔ́ 'Land lord/lady'

b money-PM ga-tɔ 'rich man'

c cloth-PM avɔ-tɔ 'cloth owner'

11. **[N-PM] 'Person whose physical attribute is object N'**

a. fú-nɔ pregnant-PM 'pregnant woman'

b. ábì-tɔ́ sore-PM ‘person full of sores’

c. eye-PM ŋkú-nɔ ‘a blind person’

12. **[N-V-PM] ‘Person who performs action V involving object N**

a. sheep-to lead-PM alẽ-kplɔ-la ‘shepherd’

b. way-to go-PM mɔ́-zɔ-a ‘wanderer’

d. medicine-to make-PM amatsi-wɔ-lá ‘herbalist’

The examples above show how personal markers function as affixes but not free forms. For instance *nɔ̀* in *kponɔ̀* as shown in example (9b) above cannot stand on its own as a free form. The same way *tɔ́* in *àfétɔ́* in example (10a) is not a free form but an affix.

When tɔ́, nɔ̀ and vì combine with other nouns in N-N compounds, they appear as kin terms not affixes. They are free forms as shown in example (13).

13.	**BASE1**	**BASE2**	**COMPOUND**
a.	vi ‘child’	tɔ́	vìtɔ́
	child	father	father
b	fia	ví	fiaví
	chief/king	child	pince/princess
c.	vè	nɔ̀	vènɔ̀
	two	mother	mother of twins

Ameka admits that it is difficult to tell whether the combinations of these forms are words or phrases. According to Ameka (1991:204) "the constructions that are formed by the use of these forms as possessum suffixes are hard to describe in terms of either words or phrases formed by the juxtaposition of two nominal". This is the situation when the two parts of the constructions are not modified. I suggest that these combinations are words when the forms occur as lexemes and compound with other nominals. That is *vìtɔ́* 'father' and *vènɔ̀* 'mother of twins' are free forms'. *Tɔ́* in sentence (14) is a free form meaning 'father', while in (15) it is an affix meaning 'one who has'.

14. Kofi tɔ́ dzè dɔ̀

    Kofi POSS father fall sick

    'Kofi's father falls sick'

15. Gàtɔ́ lá kú

    Money-owner (one who has) DEF die.PST

    'The rich man died'

The difference is that, as affixes they are attached to a noun, and as free forms they are on their own.

Table (5) is a summary of N-N compounds formed by concatenating both simple and complex nouns. For example row (a) in the data below is the combination of two simple nouns *àbólo* and *èwɔ*. Row (d) has two complex nouns *yamevú* and *dzèfé* and cell (i) has a complex noun *tɔdzí* and a simple noun *èvu*.

Table 5. Noun-Noun Compounds

	Base1	**Gloss**	**Base 2**	**Gloss**	**Compound**	**Meaning**
a.	àbólo	bread	ewɔ́	flour	àbólowɔ́	bread flour
b.	àbɔ̀bì	anchovies	àtádí	stew	àbɔ̀bìtádí	anchovy stew
c.	àbà	mat	àtí	wood	àbàtí	bed
d.	yameʋú	aeroplane	dzè*ƒ*é	station	yameʋúdze*ƒ*e	airport
e.	àdzɔ	contribute	gà	money	àdzɔ̀gà	tax
f.	àdzàle	soap	àgba	bowl	àdzàlegbá	sponge dish
g.	àɖáka	box	dzèsì	mark	àɖákadzèsi	box number
h.	àblɔɖe	freedom	àme	man	àblɔ̀ɖeme	freeman
i.	tɔdzi	sea	èʋu	lorry	tɔdziʋu	ship
j.	blí	corn	wɔ́	flour	blíwɔ́	corn flour
k.	dè	home	kɔnú	ritual	dèkɔnú	culture
l.	de	palm	àhà	wine	deha	palm wine
m.	dɔ̀	sick	ami	oil	dɔ̀mì	ointment
n.	dɔmè	stomach	dzò	fire	dɔ̀mèdzò	anger
o.	dzò	fire	wɔ́	powder	dzòwɔ́	ash
p.	trɔ	fetish	ʋú	drum	trɔʋú	fetish drum
q.	tɔdzí	sea	àhà	wine	tɔdzíha	schnapps
r.	tugbe	beauty	efia	queen	tugbefia	beauty queen

From the dataset above, we see that the morphology of Ewe N-N compound is mostly regular and flexible as far the relationship between the head and the modifier is concerned. These compounds are also very easy to interpret. Names can be identified easily and when two nouns are put together, the difficulty to identify the lexemes is very minimal.

3.3.3 Numeral compounds

Ewe cardinal numbers one (1) to nine (9) form compounds with the root of ten (bla), hundred (alafa) and of thousand (akpe) to yield cardinal numbers like *blaevè* 'twenty' *blaetɔ̃* 'thirty' *alafàɖèká* 'one hundred' *alafádrẽ* 'seven hundred' *àkpévè* 'two thousand' *àkpéàtɔ́* 'five thousand' just as Twi compounds (cf. Ofori 2008).

Note that the categorical status of numeral compounds is still an issue linguists are wrestling with (cf. Hurford 1987, Cover and Zwarts 2006). They have been arguing for four positions: one is that, numerals are adjectives. The second one is that numerals are nouns. Those who argue for the third view think that, lower numerals are adjectives whilst higher numerals are nouns. The fourth position regards numerals as constituting a separate syntactic category Appah (2013b). Langacker (1987) defines noun as a linguistic unit which profile a thing, where a thing is defined as a 'region of some domain and region is characterized in terms of the interconnectedness of entities within a domain. Therefore numerals or number names are considered nouns in the sense that they profile specific regions in the domain of number Appah (2013b). Wiese terms profiling of region in the domain of number as number assignment. Wiese (2003, 2007) posits that numerals refer to specific positions or items (eg. with cardinality) in the domain of number. Numeral compounds in Ewe behave differently from noun-noun compounds. This is discussed in details in chapter four.

Tables (2&3) show some numeral compounds.

Table 6. Ewe numeral compounds (20-90)

NO	BASE1	GLOSS	BASE2	GLOSS	COMPOUND	NUMERAL
a.	blá	ten	èvè	two	bláve	20
b.	blá	ten	ètɔ̃	three	blátɔ̃	30
c.	blá	ten	ènè	four	bláne	40
d.	blá	ten	àtɔ̃	five	bláàtɔ̃	50
e.	blá	ten	adé	six	bláadé	60
f.	blá	ten	adré	seven	bláadré	70
g.	blá	ten	enyí	eight	blányí	80
h.	blá	ten	àsíeke	nine	blâsieke	90

Table 7. Ewe Numeral Compounds (100-900)

	BASE1	GLOSS	BASE2	GLOSS	COMPOUND	NUMERAL
a.	alafá	hundred	ɖeka	one	alafaɖèká	100
b.	alafá	hundred	ève	two	alafávè	200
c.	alafá	hundred	ètɔ	three	alafátɔ̃	300
d.	alafá	hundred	ene	four	alaféne	400
e.	alafá	hundred	àtɔ̃	five	alafáàtɔ̃	500
f.	alafá	hundred	ade	six	alafádé	600
g.	alafá	hundred	adre	seven	alafadrẽ	700
h.	alafá	hundred	enyi	eight	alafányí	800
i.	alafá	hundred	àsieke	nine	alafáàsíeke	900

As indicated above and in the data set, Ewe cardinal numbers one (1) to nine (9) (ɖèká, èvè, ètɔ̃ ènè àtɔ́ adé adré enyí àsíéke) enter into compounding with the root of tens (bla), hundreds (alafa) and of thousands (àkpé) to yield cardinal numbers like *blavè* 'twenty' (table 1 cell a) *blâtɔ̃* 'thirty' (table 1 cell b) *alafávè* 'two hundred' (table two cell 2). *Àkpévè* 'two thousand' is merger of *akpe* 'thousands' and *èvè* 'two' meaning thousand multiplied by two. *Alafàɖèká* 'one hundred' is the combination of *alafa* 'hundred' and *ɖèká* 'one' meaning hundred multiplied by one. Blâtɔ̃ 'thirty' is compounding of *blă* 'tens' and *ètɔ̃* 'three' meaning ten multiplied by three. There is an understood operator that multiplies the roots (bla, alafa, akpe) by the cardinal numbers 1-9 (ɖèká, èvè, ètɔ̃ ènè àtɔ́ adé adré enyí àsíéke).

Note that the combination *bla* 'tens' and *ɖèká* 'one' **blaɖèká* which will mean ten multiplied by one is not in the language. Ten multiplied by one is still ten. *Bla* 'ten' is the head. The head cannot be omitted but the modifier can be omitted.

3.3.4 Semantic relations in N-N Compounds

The constituents of Ewe N-N compounds share attributive relation. There is one constituent (the *head*) that expresses a main idea, and another (the modifier) that stands in the relation of *attribute* to the head. N-N compounds establish certain semantic patterns such as; ingredient of, location of, part of, made for, made for, type of, part of, cause of and etc. as demonstrated in example (16-22).

16. **[N_1-N_2] N_1 is an ingredient for N_2**

	BASE1	**BASE2**	**COMPOUND**
a.	àzí	detsi	àzìdétsi
	groundnut	soup	groundnut soup
b.	né	ami	némi
	kernel	oil	kernel oil
c.	àbɔ̀bì	atádí	àbɔ̀bìtádí
	anchovies	stew	anchovies stew
d.	àká	dzò	akadzo
	charcoal fire	fire	charcoal fire

The data in example 16 shows that the first constituents are ingredient for the preparation of the second constituents. For example, *àzì* is the ingredient for the preparation *détsi* (16a).

17. **[N_1-N_2] N_2 is location of N1**

	BASE1	BASE2	COMPOUND
a.	yameʋu	dze*f*e	yameʋudze*f*e
	aeroplane	station	airport

b.	tsi	vudo	tsivudo
	water	dug out	'well'
c.	amatsi	ezé amatsi	amatsizé
	medicine	pot	'herb pot'

The nouns in N_2 are locations of the nouns in N_1. In other words N_2 is where N_1 can be found. For example *tsi* 'water' can be located in *vudo* 'dug out' as in 17b.

18. **[N_1-N_2] N_2 is a place for N_1**

	BASE1	**BASE2**	**COMPOUND**
a.	àfĩ	èdo	àfĩdo
	mouse	hole	'mouse hole'
b.	bàbà	ekɔ́	bàbàkɔ́
	termite	mound/hill	ant hill
c.	anyí	eto	anyito
	bee	hole	bee hive
d.	gbɔ̃	kpó	gbɔ̃kpó
	goat	fence	pen

The examples above establish a place for or a hiding place for one constituent in the compounds. For example *dò* 'hole' is place where *àfì* 'mouse' is located. Likewise *kpo* 'pen' is a place for *gbɔ̃* 'goats'

19. **[N_1-N_2] N_2 is made for N_1**

	BASE1	**BASE2**	**COMPOUND**
a.	blí	àvà	blíva

	maize	'ban	barn(for storing maize)
b.	àkpa	kusi	àkpakusi
	fish	basket	basket for storing fish
c.	gà	kotokú	gakotokú
	money	sack	money bag
d.	ami	ègo	amigo
	oil	container	container

All the nouns in base 2 in example 19 are made for the nouns in base 1. *Àvà* 'ban' is made for storing *blí* maize.

20. **[N_1-N_2] N_2 the result of N_1**

	BASE1	**BASE2**	**COMPOUND**
a	dzo	afi	dzòfĩ
	fire	dust	ash

Àfĩ 'dust/ash' is produced when there is fire. So *àfĩ* is produced as a result of *dzò* 'burning fire'.

21. **[N_1-N_2] the whole is a type of N_2**

	BASE1	**BASE2**	**COMPOUND**
a.	àgbèlì	amɔ́	àgbèlìmɔ́
	cassaava	dough	cassava dough
b	gbe	àfĩ	gbefi
	bush	mouse	bush mouse

c.	dzògbè	edé	dzògbèdé
	savanna	palm	savanna palm

Example 21 presents a relationship that suggests that the compound is a type of the head (N_2). In (21a), N_2 is made of N_1. That is *amɔ́* is made of *àgbèlì* and *àgbèlìmɔ́* is a type of *amɔ́*.

22. **[N_1-N_2] N_2 is part of N1**

	BASE1	**BASE2**	**COMPOUND**
a.	àgbèlì	etsró	àgbèlìtsró
	cassava	back	cassava pill’
b.	gbɔ̃	fú	gbɔ̃fú
	goat	hair	goat hair/faire
c.	àbɔ̀bɔ́	ègò	àbɔ̀bɔ́go
	snail	shell	‘snail shell’
d.	ta	ɖa	taɖa
	head	hair	hair

The examples in (22) show ‘a part of relation. All the N_2 are part of their counterparts in N_1. These compounds express meronymic relations. Ameka (1991).

23. **[N_1-N_2] represents the user of N_2**

BASE1	**BASE2**	**COMPOUND**

a.	nyɔ́nu	avɔ́	nyɔ̀nuvɔ́
	woman	cloth	'ladies cloth'
b.	fia	zìkpì	fiazikpi
	king/chief	stool	chief stool

The nouns that belong to the N1 in (23) are users of the nouns in N2

3.3.5. Headedness in N-N compounds

The head of a compound is located on the right or left of the compound. The compound can also be said to be dual-headed. Scholars suggested that the position of the head is a parameter that has to be set for each language, so that the morphology of a language is either left-headed or right headed, depending on the language. The head of the compound can take the position of the compound where the compound is expected to occur but the same cannot be said of the non-head constituents.

Many languages including Ewe have both left-headed and right-headed compounds. According to the data available for this study, Ewe endocentric N-N compounds are mostly right-headed, but there are left-headed and dual-headed N-N compounds as well.

3.3.6 Right-headed N-N Compounds

Right-headed N-N compounds are regular, mostly compositional and the commonest subtype. Examples of Right-headed N-N compounds are shown in table (8).

Table 8. Right- Headed Noun-Noun Compounds

	BASE1	**GLOSS**	**BASE2**	**GLOSS**	**COMPOUND**	**GLOSS**
a	kókló	chicken	àtsú	male	kóklótsú	rustle
b	dzò	fire	àfĩ	ash	dzòfí	ash
c	àvùvɔ	cold	àwù	dress	àvùvɔ̀wù	sweater
d	tɔ́dzí	river top	àhà	drink	tɔdzíha	schnapps
e	àdè	hunt	àvú	dog	àdèvú	hunting dog
f	kpé	cough	dɔ̀	ailment	kpédɔ	cough ailment
g	àkútsá	sponge	àgbá	bowl	ákútságbá	sponge dish
h	kokló	chicken	àzì	egg	koklózì	egg
i	agbeli	cassava	amakpa	leaves	agbelimakpa	cassava leaves
j	tɔdzí	sea	ʋú	lorry	tɔdzíʋú	ship/boat

As explained earlier, the head determines most properties of the compound through the mechanism of feature filtration so that the class of elements denoted by the compound is usually a subset of the class of elements that is denoted by the head of the compound. For example, *àgbelìmàkpà*, is a hyponym of *amakpa*, the head. Therefore, *amakpa* can occupy the position *àgbelìmàkpà* is expected to occur without so much change in the meaning of the construction, but the same cannot happen to the non-head constituent *àgbèlì* occurring alone where *àgbelìmàkpà* is expected to occur. Example (24 & 25) explains further.

24. àgbèlìmàkpà/amakpa -ʃo -se
    Cassava leaf/leaf -bears -flower
    'The leaf bears flower

25. *agbeli -ʃo -se
    Cassava -bear -flower
    'The cassava bears flower'

3.3.7 Left- headed N-N Compounds

The left-hand constituent in left-headed N-N compounds is the most important element in the structure. These are N-N compounds for which the whole is a hyponym of constituents and the rest are numeral compounds as shown in Table (9).

Table 9. Left-Headed Noun-Noun Compounds

	BASE1	**GLOSS**	**BASE2**	**GLOSS**	**COMPOUND**	**GLOSS**
a	àkpa	fish	èví	child	àkpaví	fingerlings
b	gbɔ̃	goat	èví	child	gbɔ̃vi	
c	abɔ	arm	afã	half	abɔ̀fã	half piece
d	ka	rope	ɖèká	one	kàɖèká	one hector
e	kpó	piece	èvè	two	kpóvè	two pieces

Akpa is the head in the compound *akpavi* in table 5, row (1). This is because *akpa* can occupy the position where *akpavi* the whole compound can occur. Example (26&27) explains further.

26. Kofi ɖè akpavi/akpa
    Ama catch fingerlings/fish
    'Kofi caught fingerlings/fish'

27. *kofi ɖe evi
Kofi catch child
'Kofi caught child'

3.3.8 Coordinate N-N compounds in Ewe

According to Fabb (1998:67) when both words are thought of as "equally sharing head-like characteristics, as in *student-prince* (both a student and a prince)" then they are co-compounds. Coordinate compounds are dual headed by nature.

Table 10. Dual- Headed Noun-Noun Compounds

	BASE1	**GLOSS**	**BASE2**	**GLOSS**	**COMPOUND**	**GLOSS**
a	àba	mat	àtí	tree	àbàtí	bed
b	nɔ́ví	sibling	nyɔ́nu	girl	nɔ́vínyɔ́nu	sister
c	mamá	grandmother	gbɔ̀ví	made	mamágbɔ́ví	one trained by grandmother
d	àtí	tree	akplɔ	hook	àtíkplɔ	walking stick
c	nɔ́ví	sibling	ŋútsu	male	nɔ́víŋútsu	brother

A close examination of these compounds shows that the compound as a whole denotes not the sum of the two parts but a compromise between the two parts, a half-way point between them. *Aba* and *ati* in *abati* in Table 7 cell (1) equally share head-like characteristics (cf. Bauer 2008).

3.3.9 Exocentric N-N compounds

A compound that has no head element in it is called an exocentric compound (Bloomfield 1993). Exocentric compounds are hyponyms of some unexpressed semantic head, but not of any of its components. Endocentric compounds are defined as "compounds which are hyponyms of their head elements" (Bauer 2010.

167). Exocentric compounds on the other hands, are usually defined as the class that is left after endocentric compounds have been removed (Scalise and Guevara 2006: 192). Often, the meanings of exocentric compounds cannot be determined from its constituents.

Exocentric compounds are the less common type of compounds identified in Ewe. More often than not, meanings of exocentric compounds are not determined from their constituents. Examples in (28) are some exocentric compounds identified in Ewe.

28.	**BASE1**	**BASE2**	**COMPOUND**
a.	gbè	àvú	gbèvú
	bush	dog	ruffian
b.	zã	eú̀u	zãʋú
	night	car	deceit
c.	zã	nú	zãnú
	night	thing	bribe

The data shows that exocentric compounds in Ewe usually express metaphorical relations. For instance, *zanu* 'bribe' connotes a metaphorical meaning rather than the surface meaning of 'night thing'. The constituents of *zavu* in the example (28c) are *za*, night' and *vu* 'lorry', but the meaning of the compound is neither a type of car or night. The meaning is *deceit.*

3.3.10 Summary

I have discussed the properties of N-N compounds in Ewe in this session. The dataset and the discussion in the section shows that N-N compounds are largely regular, in spite of certain items that behave like affixes in some environments and full lexemes in other environments. I have pointed out that N-N compounds are largely attributive and even though most N-N compounds are right-headed and endocentric, there exist left-headed and dual-headed N-N compounds as well as exocentric compounds in the language. I have also established certain semantic patterns such as ingredient of, location of, part of, made for, made for, type of, part of, cause and etc. with examples.

3.4 Noun-Adjective (N-A) Noun Compounds

Ewe Noun –Adjective Compounds are made up of a noun as head and adjective as modifiers. According to Ameka (1991) there are five basic adjectives in Ewe (gã 'big', võ 'bad', ɣí 'white', ví 'small' and dzĺ 'red colour'). The rest of the adjectives are idiophones and derived. The adjectives in N-A compounds listed in table (11) are made up of adjectival roots, idiophones which are underived and derived adjectives.

Table 11. Noun- Adjective Compounds $(N\text{-}A)_N$

No	BASE1	GLOSS	BASE2	GLOSS	COMP	GLOSS
a.	àgbè	life	yeye	new	àgbèyeye	new life
b.	àkpatá	hall	gã	big	àkpatágã	main hall
c.	ame	man	gã́	big	amegã́	sir /mr
d.	àhà	wine	víví	sweet	àhàvíví	soft drink
e.	ame	man	tsitsi	grow	ametsitsi	adult
f.	akpa	fish	yiyi	smoked	akpayiyi	smoked fish

g.	detsi	soup	*ʃúʃúí*	dry	detsi*ʃúʃúí*	type of soup
h.	dù	town	gã	big	dùgã	city
i.	dù	town	gbàdzà	wide	dùgbàdzà	community
j.	nya	word	nyúí	good	nyanyúí	good news
k.	suku	school	kɔ́kɔ́	tall	sukukɔ́kɔ́	high school
l.	tɔ́	father	ɖi	young	tɔ́ɖi	junior uncle
m.	tɔ́	father	ga	big	tɔ́ga	senior uncle
n.	tsi	water	dzódzòe	hot	tsidzódzoe	hot water
o.	xe	bird	ví	small	xeví	small bird
p.	xɔ	room	háyá	rented	xɔháyá	rented room
q.	zì	seat	kpùì	short	zikpùì	stool

From table 11, we can argue that there are some nouns that compound with basic adjectives, others are merged with idiophones as adjective and the rest are combined with derived adjectives as shown in the examples below.

29. **Noun + Basic adjectives**

	BASE1	**BASE2**	**COMPOUND**
a.	tɔ́	gã	tɔ́gã
	father	big	Senior uncle
b.	xe	ví	xevi
	bird	small	small bird

30. **Noun + idiophones**

	BASE1	**BASE2**	**COMPOUND**
a.	tsi	pɔ̀tɔ̀	tsipɔ̀tɔ̀
	water	dirty	dirty water
b.	gà	suè	gasue

metal/bell	small	'bell'

31. **Noun + derived adjectives**

	BASE1	**BASE2**	**COMPOUND**
a.	dzɔgbe	nyuí	dzɔgbenyui
	birthday	good	good luck'
b.	du	gbadza	dugbadza
	town	wide	community

Appah (2016) has shown that in Akan, N-A compounds are all left-headed, patterning like NPs in which attributive adjectives modify head nouns. A similar pattern is found in Ewe. For example, N-A compound *gbɔ̃dzẽ* 'dog' has *gbɔ̃* 'goat' and *dzẽ* 'red' as its constituents. It is clear that *dzẽ* attributively modifies *gbɔ̃*.

Compounding is not only a nominalization process in Ewe as it is in Akan (cf. Appah 2013) and other languages. In Ewe compounding process can yield adjectives. This compounding process involves a noun and an adjective. Sometimes the nouns compound with derived adjectives and the output is an adjective as shown in Table (12 a & b). In other instances, the noun refers to a body part. The output of these body part noun and adjectives during compounding can be used to qualify another noun (Ameka 1991). This is shown in the table (12 c-d).

Table 12. Noun-Adjective Compound $(N\text{-}A)_A$

	BASE1	**GLOSS**	**BASE2**	**GLOSS**	**COMPOUND**	**GLOSS**
a.	gbè	grass	mú/múmu	fresh	gbèmú/gbèmúmu	green
b.	aŋutí	orange	ɖiɖi	riped	aŋutíɖiɖi	yellow
c.	ta	head	gá	big	taga	big headed
d.	aɖu	tooth	ɣí	white	aɖuɣi	white tooth
e.	afɔ	leg	lege	slim	afɔlege	slim legged
f.	abɔ	arm	gã̀	big	abɔga	big armed
g.	kpe	hip	baye	flat	kpebaye	flat hip
h.	ŋku	eye	gã́	big	ŋkuga	big eyed
i.	*ʃ*odo	belly	gã́	big	*ʃ*odoga	big bellied

In table (12b) *aŋutí* 'orange' compounds with *ɖiɖi* 'riped' and the output is *aŋutíɖiɖi* 'yellow' an adjective as shown in example (32).

32. E-do.a awu aŋutíɖiɖi

he-wear.CONT. dress yellow

'He wears yellow dress.'

In Table (12i), *ʃodo* 'belly' compounds with *gã́* 'big' and the result is *ʃodogã́* 'pot-bellied an adjectival. The product can be used to qualify another noun as in the example (33) below.

33. ŋútsu *ʃodogã́* ma gbɔ̀ -nà

Man belly big INT. come -PROG.

'That pot-bellied man is coming

Derived adjectives class of compounds is a large class comes from several sources. According Ameka (1991), the processes that are involved in developing them are

so productive and different from the processes of derivation of other classes such as nouns. This makes the class an open one.

3.4.1 Semantic relations in Noun-Adjective compounds

Semantically, an adjective describes some important but non-criteria property of an object (Ameka 1991). This means that an adjectival will draw a line between two members of the same species that a single common noun makes reference to. The adjective in N-A compounds expresses a property and is in a modifier relation to the noun (cf. Bisetto and Scalise 2005). The examples of the members of each of the semantic are examined in Ewe as shown in example (34-38).

34. **N-A compounds with DIMENSION**

	BASE1	**BASE2**	**COMPOUND**
a.	*ʃ*odo	gã	*ʃ*odogã́
	belly	big	pot-bellied
b.	ta	gã́	tagã́
	head	big	big-headed
c.	ŋukú	gã́	ŋukúgã́
	eye	big	big-eyed/greedy

The examples in (34) are body part nouns compounding with adjectives showing dimension or size. *Gã* ‘big’ in *ʃ*odogã́ ‘pot-bellied’ expresses the meaning size that is how big *ʃ*odo ‘belly’ is. *Ɔkúgã* in (34c) does not only show size as to how big the eye is but it also connotes greed.

35. **N-A compound with PYSICAL PROPERTY**

	BASE1	**BASE2**	**COMPOUND**
a.	gbɔ̀gbɔ̀	kɔ̀kɔ̀e	gbɔ̀gbɔ̀kɔ̀kɔ̀e
	spirit	clean	holy spirit
b	àzì	gbó	àzìgbó
	Groundnut	fresh	fresh groundnut
c.	kpé	xɔasi	kpéxɔasi
	stone	precious	pearl

The compounds in (35) show certain physical properties. The relationship between the nouns and the adjectives expresses some kind of quality or the state of the nouns. The non-heads convey a property of the heads.

36. **N-A compound with COLO UR**

	BASE1	**BASE2**	**COMPOUND**
a.	gbè	mú	gbèmú
	grass	fresh	green
b.	aŋutí	ɖiɖi	aŋutíɖiɖi
	orange	riped	yellow

These compounds (36) are colours. The non-heads describe the heads attributively.

37. **N-A compound with show AGE**

	BASE1	**BASE2**	**COMPOUND**

a.	ame	tsitsi	ametsitsi
	human	old	adult
b.	*ʃ*e	yeye	*ʃ*eyeye
	year	new	new year’
c.	tɔ́	gã	tɔ́gã
	father	big	uncle

The compounds above show age. The meaning the adjectives express in that domain is of age.

38. **N-A compound with VALUE**

	BASE1	**BASE2**	**COMPOUND**
a.	suku	kɔ́kɔ́	sukukɔ́kɔ́
	School	tall/high	high school
b.	amɔ́	ʋaʋã	amɔ́ʋaʋã
	dough	leaven	leaven dough

The adjectives in the compounds in (38) add some kind of value to their noun counterparts.

3.4.2 Headedness in N-A Compound

N-A compounds in Ewe are all left-headed. *Detsi**ʃ**u**ʃ**ui* is a name of a type of soup. *ʃúʃúí* ‘dried’ attributively qualifies *detsí* ‘soup’. The same way *taku* ‘scarf’ is the head that *ví* ‘small’ qualifies in the noun *takuvi* ‘handkerchief’

3.4.3 Summary

In this section I have discussed the properties of N-A compounds in Ewe. I have shown that basic adjectives, idiophones and derived adjectives combine with the noun head to form a new lexeme. I have also drawn a line between N-A compounds whose outcomes are nouns and those that result in adjectives suggesting that compounding is not only a nominalization process in Ewe. Other word classes can be derived from compounding. I also point out that N-A compounds are all left-headed, patterning like NPs in which attributive adjectives modify head nouns. Some interesting semantic relations are enumerated in this session

3.5 Noun+Verb (N-V) Nominal Compounds

Ewe Noun-Verb (N-V) compounds are formed as the result of the merger of a noun and a verb to form a new word. An argument-head relation can be distinguished between the constituents of N-V compounds and the grammatical and/or semantic properties of both constituents contribute to the determination of the meaning of the compound. Most N-V compounds in Ewe show a patient-action semantic relation. The N-V compounds may also be left-headed in the language as shown in Table 13.

Table 13. Noun-Verb Compounds

	BASE1	**GLOSS**	**BASE2**	**GLOSS**	**COMPOUND**	**MEANING**
a.	agbà	goods	na	give	agbana	credit
b.	agbà	goods	tè	drag	agbate	heavy load
c.	agbà	load	tsɔ/kɛ	carry	agbakɛ/tsɔ	shelve
d.	agbè	life	lì	to be/is	agbeli	cassava

e.	afɔ	leg	kú	die	afɔku	accident
f.	dzì	heart	kú	die	dziku	anger
g.	dzì	heart	dzɔ̀	straighten	dzidzɔ	happiness
h.	dzì	heart	vé	pain	dzive	heartache
i.	ɖo	cloth	vú	tear	ɖovu	rag
j.	kɔ	neck	zɔe	rest	kɔzɔe	pillow
k.	nu	mouth	*ʃ*o	beat/strike	nu*ʃ*o	talk/speech
l.	nu	thing	ɖui	eat up	nuɖui	rheumatism
m.	nu	mouth	kú	die	nuku	surprise
n.	ɣe	sun	trɔ́	turn	ɣetrɔ	afternoon

The two lexemes that combine to form N-V compounds behave like inherent complement verbs but the resultant word is a noun. Their meaning is metaphoric.

The semantic relation between the constituents of Ewe N-V compounds are *agent-action*, *patient-action* and *experiencer*. This is shown in the examples (39&40)

39. **Patient-Experiencer Semantic Role**

	BASE2	**BASE2**	**COMPOUND**
a.	dzì	kú	dzìkú
	heart	die	anger
b.	afɔ	kú	afɔkú
	leg	die	accident
c.	dzì	vé	dzìvé
	heart	pain	heartache

40. **Agent-Action Semantic Role**

	BASE1	**BASE2**	**COMPOUND**
a	àgbè	lì	àgbèlì
	life	stay	cassava
b.	nu	ƒo	nuƒo
	mouth	beat	talk
c.	ɣe	trɔ́	ɣetrɔ́
	sun	turn	afternoon

The grammatical relation between the constituents of Ewe N-V compounds is *subject- verb or object-verb* as shown in examples (41).

41. **Subject-Verb Grammatical relation**

	BASE1	**BASE2**	**COMPOUND**
a	àgbè	li	àgbèlì
	life	stay	cassava
b.	nu	ƒo	nuƒo
	mouth	beat	talk
c.	ɣe	trɔ́	ɣetrɔ́
	sun	turn	afternoon
d.	afɔ	kú	afɔkú
	leg	die	accident
e.	dzì	vé	dzìvé
	heart	pain	heartache

As we can see from the dataset above, the nouns in Ewe left-headed N-V compounds behave like the subject of the verbs they compound with. For instance afɔ 'leg' combines with kú 'die' resulting in a noun afɔkú 'accident' (41d), (lit. leg dies). Also ɣe 'sun' combines with trɔ́ 'turn' in ɣetrɔ́ 'afternoon' (41c), (lit. sun turns). So afɔ 'leg' and ɣe 'sun' in the illustrations above act as the subject to their corresponding verbs kú and trɔ́ respectively.

3.5.1 Exocentric N-V Compounds

Most Ewe N-V compounds available for this study are exocentric. The meaning of the compounds cannot be predicted just by looking at the meaning of the constituents. Their meanings are metaphoric. They are headless as shown in Table 14.

Table 14.Exocentric Noun-Verb Compounds

	BASE1	**GLOSS**	**BASE2**	**GLOSS**	**COMPOUND**	**GLOSS**
a.	ɣe	sun	trɔ́	turn	ɣetrɔ́	afternoon
b.	dzì	heart	vé	boil	dzìvé	anguish
c.	afɔ	leg	kú	die	afɔkú	accident
d.	àgbè	life	lì	be	àgbèlì	cassava
e.	dzì	heart	kú	die	dzìkú	anger
f.	dzì	heart	dzɔ̀	straighten	dzìdzɔ̀	happiness
g.	ɖo	cloth	vu	tear	dovu	rag

.

The nouns in the N-V compounds seem to lose some of their semantic content since they are usually interpreted metaphorically. For instance, there is nothing about the words *afɔ* 'leg'and *kú* 'die' to suggest that when they merge, the construction will mean the noun *afɔkú* 'accident.' Again, *ɣetrɔ́* 'afternoon' is not a type of *ɣe* 'sun'. The only left headed (endocentric) N-V compound in the dataset table (14g) is *ɖòvú* 'rag'. *ɖò* 'cloth' is the head because *ɖòvú* is a type of *ɖò* and

the position *ɖòvú* can occupy in a sentence ɖò can also occupy to communicate the same meaning. The illustration in (44) explains the point better. It shows that *ɖò* can occupy the place of *ɖòvú* to convey the same message.

42. *ɖòvú/ ɖò lá lé dzò*

rag /cloth DEF catch fire

'the rag/cloth catches fire.'

The verbs in Ewe N-V compounds are intransitive and the noun constituents correspond to the notional subjects of the verbs. This means that the constructions have the same linear order of constituents as typical intransitive constructions (cf. Appah 2013).

3.5.2 Summary

My aim in this section was to present an adequate account of the types and properties of Ewe N-V compounds. I have grouped the members according to the presence and position of head elements. The exocentric types are in the majority. Only one left-*headed* type is found in the dataset. No right-*headed* subtype is identified as far as this study is concerned. Another is the semantic role of the constituents, giving subtypes like *agent-action*, *patient-action* and *experiencer-stimulus.* A third criterion is the grammatical role of the noun constituent, giving types like *object-verb* and *subject-verb* compounds. I have observed that, the nouns in the N-V compounds seem to lose some of their semantic content thus have to be interpreted metaphorically. The verbs in Ewe N-V compounds are

intransitive and the noun constituents correspond to the notional subjects of the verbs.

3.6 Verb + Noun (V-N) nominal compounds

Ameka (1991) submits that the compounding of V+N is another distinct adjectivalization process which is different from nominalization and relativization. He questioned what one would say is the deep category source of these adjectival. Whether they are deep verbs because they come from predicates or they also can be assigned to two deep categories V and N since they come from both. I assign the source of the constituents to the two deep categories, verb and noun for the purposes of compounding since the V-N compounds come from both verbs and noun. For the first issue raised above, that is the issue concerning the outcomes, my dataset indicate that, some V-N compounds are nouns and others are adjectives.

V-N compounds are compounds made up of verbs (inherent complement verb (ICV) and canonical transitive verb (CTV)) and nouns that share grammatical relations (cf. Dzamesi 2002). Both ICVs and CTVs can compound with the noun.

Table 15. Verb-Noun Compounds $(V\text{-}N)_N$

	BASE 1	GLOSS	BASE 2	GLOSS	COMPOUND	MEANING
a.	dzì	sing	hà	song	hàdzìdzì	singing
b.	dzrá	sell	nú	thing	núdzáddzrá	sales
c.	dó	plant	dzì	heart	dzìdódó	endurance
d.	ɖó	gather	dzè	voice	dzèɖóɖó	chatting

e.	ɖè	remove	kúkú	hat	kúkúɖeɖe	plea
f.	ɖì	burry	tsà	boredom	tsaɖiɖi	touring
g.	ɖù	eat	nú	thing	núɖuɖu	food
h.	ɖù	eat	dzí	top	dzíɖuɖu	victory
i.	fà	mix	dé	palm	défafa	palm paste
j.	fà	mix	azi	groundnut	azifafa	groundnut syrup
k.	fà	mix	amɔ́	dough	amɔ́fafa	dough syrup
l.	fɔ́	wake	ŋɔli	time	fɔ́ŋli	down
m.	*f*ò	gather	*f*ú	bone	*f*ú*f*o*f*o	gathering
n.	*f*ò	bit	kókó	porridge	kókó*f*o*f*o	plea
o.	kù	drive	ʋu	car	ʋukuku	driving
p.	nyí	lick	dome	property	domenyínyí	inheritance
q.	ʋlì	drag	hò	money	hòʋìʋli	competition
r.	ʋù	open	ŋkú	eye	ŋkúʋuʋu	modernity
s.	wɔ̀	make	hò	noise	hòwɔ̀wɔ̀	commotion
t.	xɔ̀	take	dzò	fire	dzòxɔ̀xɔ̀	heat

There is a permutation and reduplication process at the output level in the V-N_N in (15). According to Ofori (2002), permutation is a morphological process of reversing the order of words in a structure. The order of the words is reversed in the output of V-N_N as seen in the dataset above where the V- N order is permuted and then the verbal part is reduplicated (cf. Ameka 1991)

Table 16. Verb-Noun Compounds (V-N)$_A$

	BASE1	**GLOSS**	**BASE2**	**GLOSS**	**COMP.**	**NUMERAL**
a.	*f*ò	strike/	ɖi	dirt	*f*oɖi	dirty
b.	dzé	show	ɖèká	whole/one	dzeɖèká	handsome
c.	dzé	show	tùgbè	beauty	dzetugbe	beautiful
d.	ʋà	move	ŋu	side	ʋaŋu	jealous
e.	xɔ̀	get	ŋkɔ	name	xɔŋkɔ	famous
f.	dzɔ̀	straighten	àtsú	male	dzɔtsu	huge

The examples in Table (16) [V+N_A] show Verb- Object and Action-Patient grammatical and semantic relations. In the dataset the adjectives are derived from a verb root and a noun which is its inherent complement. I will therefore define the

Ewe Verb-Noun compound as the combination of an inherent complement verb ICV or canonical transitive verb CTV and its obligatory nominal. When the constructions go through permutation and reduplication the outcome is a noun. The outcome is an adjective when no reduplication and permutation process takes place.

3.6.1 Grammatical, Semantics relations between constituents of V-N compounds

The grammatical relation between the constituents of V-N compounds is very clear and easy to identify. The noun constituents can be interpreted as objects of the verb, the verb's inherent complement. See examples (43).

43.		**BASE1**	**BASE2**	**COMPOUND**
	a	xɔ̀	ŋkɔ́	xɔ̀ŋkɔ́
		take	name	famous
	b.	dzì	hà	hàdzìdzì
		sing	song	singing

The semantic relation exhibited in a typical V-N compound in Ewe is also not difficult to identify. The noun constituent is the patient of the action designated by the verb as shown in (44)

44.		**BASE1**	**BASE2**	**COMPOUND**
	a.	dó	dzì	dzìdódó
		plant	heart	'endurance'
	b.	kù	ʊu	ʊukuku
		drive	lorry	driving

Syntactically, a V-N compound has a verb as the head and a dependent noun bearing one of the thematic roles associated with the verb. This can be manner, instrument and location, among others. Appah (2013b) argues that, since every activity takes place within time and space, we can almost always establish a head-dependent relation between the constituents of such compounds. For example *fò* strike' *ɖi* 'dirt' *fòɖí* 'dirty' exhibits manner relation.

3.6.2 Exocentric V-N Compounds

From the literature on compounding, V-N compounds are said to be generally exocentric in nature. Kornfeld (2009) suggests that in the Spanish V-N compounds, none of the constituents may apparently function as the head. Appah (2013b) also points out that such compound types are found in Akan. This can also be said about Ewe V-N compounds. V-N compounds in Ewe are left headed and some are exocentric. The Nouns and Adjectives are formed from the verb root and a noun which is its inherent complement. The noun is fixed to the verb which is its head (cf. Ameka 1991). *vaŋu* (shake skin) 'jealous' is an example of exocentric V-N compound in which the word for skin and strike are not explicitly mentioned in the outcome of the compound.

3.6.3 Summary

In this section, I have discussed Ewe V-N compounds, trying to address the pertinent issues that come to play in the discussion of Ewe V-N compounds. I try to answer the two questions that Ameka (1991) posed concerning the source; whether they are deep verbs, because they come from predicates, or they are two

deep categories V and N, since they come from both. I showed that the source of the constituents belong to the two deep categories, verb and noun. Regarding issue concerning the outputs, my data set shows that, some V-N compounds are nouns and others are adjectives. I suggest a definition for Ewe V-N compounds as; the combination of ICV or CTV and their obligatory nominals. When the constructions go through permutation and reduplication the outcome is a noun. On the other hand, the output is an adjective when no reduplication and permutation process takes place.

3.7 Verb + Verb (V-V) Nominal compounds

According to Appah (2013b) the case for a V-V compound analysis included the fact that the constituents have the same order as the same verbs occurring in an analogous SVC. The Ewe V-V compounds are made up of two lexical items of the same form class (V-V) and the output is compounds with a completely different form class (N). This type of compound is not very productive in the language as shown in the Table (17).

Table 17. Verb-Verb Compounds

NO	BASE 1	GLOSS	BASE 2	GLOSS	COMPOUND	MEANING
a.	dó	test	kpɔ́	see	dodókpɔ́	examination
b.	ɖɔ́	taste	kpɔ́	see	ɖɔɖɔ́kpɔ́	tasting
c.	ɖà	cook	*ƒ*lè	buy	ɖà*ƒ*lè	food
d.	gbɔ̀	breath	xí/xé	block	gbɔ̀xí	asthma
e.	kè	open	té	close	keté	kente cloth
f.	ku	dig	xí	block	kuxí	burden
g.	sa	tie	kplí	stick	sakplí	lie
h.	tsɔ́	take	ɖù	Eat	tsɔ́ɖu	benefit

i.	tsɔ́	take	kè	open	tsɔ́ke	forgiveness
j.	xɔ̀	take/get	sè	hear	xɔ̀sè	faith/ belief
k.	xɔ̀	take	vá	come	xɔ̀vé	destiny

3.7.1 Structure of V-V Compounds

As can be seen from the data, some of the V-V compounds in the data set undergo a reduplication process. According to Ofori (2002), nominalization in Ewe involves the reduplication of the stem. Dolphyne (1988:124) observes that "reduplication is a type of compound formation which consists of the repetition of the whole or part of a stem". When a part of the stem is repeated, it is known as partial reduplication. Complete/total reduplication is realized when the whole is repeated as in (cell a & b) in Table (17) and example (45) respectively.

45.	**BASE1**	**BASE2**	**COMPOUND**	
a.	dó	kpɔ́	dodókpɔ́	
	Examine	see	examination	
b.	ɖɔ́	se	ɖɔ̀ɖɔ́se	
	taste	see/hear	tasting	
c.	zɔ̀	vá	zɔ̀zɔ̀vá	
	walk	come	coming by walking	(Ofori 2002)

Some of the V-V compounds in the (Table 17, cell g, f, k) do not undergo reduplication. Most of these compounds are exocentric in nature, as shown in example (46). This is because the compounds are headless. Their meanings are not predictable even though the meanings of the compound may be related to the constituents.

46.		**BASE1**	**BASE2**	**COMPOUND**
	a.	sà	kplí	sakplí
		tie	stick	lie
	b.	kù	xí	kuxí
		dig	block	'burden'
	c.	xɔ̀	vá	xɔvé
		take	come	destiny'

Some of the V-V compounds in example (47) are combinations of two verbs that Ameka (1991) suggests together co-lexicalize a verbal meaning but the current study sees them as nominals.

47.		**BASE1**	**BASE2**	**COMPOUND**	
	a	xɔ̀	sè	xɔsè	
		take	hear	'belief'	
		ɖɔ	kpɔ́	ɖɔ̀kpɔ́	
		taste	see	taste'	(Ameka 1991)

3.7.2 Headedness in V-V Compounds

The Ewe V-V compounds are doubly-headed. They are also referred to as coordinate compounds. According to Scalise and Bisetto (2009) coordination can in fact: (a) associate two individual elements without reference to any of them as a separate entity, as in *father-mother* = *parents*; or else (b) express two properties

associated with an entity, as is the case in modern formations such as *poet-novelist* or *learner driver*. The sense in which the constituents contribute to the overall meaning of the compound may be actual or metaphorical Balmer and Grant (1929) as shown in (48).

48.		**BASE1**	**BASE2**	**COMPOUND**
	a	kù	xí	kuxí
		dig	block	burden
	b.	sa	kplí	sakplí
		tie	stick	'lie'

In example (48) you cannot determine the head based on the meaning of the compounds. The meaning of the compound is completely different from the meaning of the constituents.

3.7.3 The semantic properties of [V-V] compounds

V-V compounds are exocentric and they are metaphorical. The connotation of the compound can be inferred from the meanings of the constituents. Usually, the meanings of the constituents may be related to the meanings of the compounds metaphorically. For Ewe speakers, to believe or have faith in something one must get the thing and hear it. This confirms the cliché "seeing believes". The same way, the Ewe word for burden *kuxí* comes from compounding *kù* 'dig' and *xí* 'block'. To be under a burden one has to metaphorically burry himself in some uncomfortable situation.

3.7.4 Summary

The aim of this session was to discuss the properties of Ewe V-V compounds. I have shown that Ewe V-V Compounds are double-headed. Some V-V compounds go through reduplication and others do not. When serial verbs undergo a nominalization process, the first verb is reduplicated and compounded with the following verb. Some of the verbs are serial verbs construction (SVC) and may be inseparable so that replacing one with another verb may alter their meaning. Most of the V-V compounds are exocentric. It is interesting to note that the syntactic category of V-V compounds is different from that of the constituents. That is a noun is formed from two verbs.

3.8 Noun +Verb +Noun (N-V-N) Nominal Compounds

Bauer (1988:38) defines compounding as "the formation of a new lexeme by adjoining two or more **lexemes**" while for Katamba (1993:291) "a prototypical compound is a word made up of at least two **bases** which can occur elsewhere as independent **words**." Ewe compounds are not formed as the result of putting together only two separate words to form a new word, as seen in the dataset for this study. Some Ewe compounds are made up of combination of more than two words. The processes involved in compounding of N-V-N structure are similar to those of verbs and nouns. Table (18) shows some examples.

Table 18. Noun-Verb-Noun Compounds

BASE 1	GLOSS	BASE 2	GLOSS	BASE 3	GLOSS	COMP.	GLOSS
ame	human	kɔ́	take	mɔ	machine	amekɔ́mɔ	lift
anyí	down	mlɔ́	sleep	awu	dress	anyímlɔ́wu	pajamas
aŋutí	orange	fiá	squeeze	emɔ	machine	aŋutífiámɔ	juicer
àtíke	medicine	xɔ	take	àgbàle	book	àtíkexɔgbale	prescription
bɔl	ball	*f*o	play	há	group	bɔl*f*ohá	football team
dɔ̀	work	dé	put	àsí	hand	dɔ̀dási	responsibility
dɔ̀nɔ̀	patient	kpɔ̀	see	exɔ	room	dɔ̀nɔ̀kpɔ́xɔ	surgery
dɔ̀	work	tsɔ́	take	èvi	child	dɔ̀tsɔ́ví	steward
dɔ̀	work	wɔ	do	nú	thing	dɔ̀wɔnú	tool
dzì	heart	dé	put	*f*o	stomach	dzìdé*f*o	encouragement
dzí	heart	dzè	fall	émè	inside	dzìdzemè	comfort
gà	money	xɔ̀	take	àgbàle	book	gàxɔ̀gbàle	cheque
gbe	weed	lɔ́	collect	kusi	basket	gbèlɔ́kusi	litter bin
gè	beard	lu	shave	èhé	knife	gèlùhé	shaving stick
ɖà	hair	lu	shave	èhé	knife	ɖàlùhé	scissors
mɔ́lu	rice	si	harvest	èhé	knife	mɔ́lusihé	
mɔ́	road	fiá	point	dzèsì	sign	mɔ̀fiadzesi	road sign
nú	thing	dzrá	sell	ègà	money	núdzrága	proceed
nú	thing	ɖu	eat	té*f*é	place	núɖu*f*é	restaurant

Similar to the compounds above are combinations of various free forms which are used as names of persons. These names can sometimes be analysed as sentences as shown in (49)

49. a. Agbe-le-mawu-si

b. Nye-me-bui-o

c. Kpɔ-tɔwo-gbɔ

d. Agbe-nye-gã

As compounds (names), the examples in (49) are written as a unit. It will be very revealing to look at the grammatical, syntactic semantic and pragmatic properties of these compounds in discourse as a way of confirming their form class membership. I will, however, leave that for future research.

3.8.1 Summary

The aim of this session is to bring to the fore a compound type which is not common in many languages. These are N-V-N compounds, a combination of three free forms that produces a new form (nominal).

3.9 Conclusion

In this chapter I have presented an account of the types and properties of Ewe compounds. I have classified Ewe compounds by various criteria, including the syntactic category of the compound members (N-N, N-A. N-V,V-N,V-V), the presence of a head element (endocentric vs. exocentric compounds), the position of head constituents (left-headed, right-headed, dual headed) and the semantic & grammatical relations between the constituents.

I have discussed six compound types (N-N, N-A, N-V, V-N, V-V, N-V-N) drawing attention to the regular and irregular properties that characterize them. Compounds have been classified into *attributive*, *subordinate* and *coordinative* compounds in the literature. Ewe compounds also share these relationships. Most

N-N and N-A compounds are attributive, N-V and V-N compounds are subordinate and V-V and some N-N compounds are coordinative.

The dataset and the discussion in the section shows that N-N compounds are largely regular, in spite of certain items that behave like affixes in some environments and full lexemes in other environments. I have pointed out that N-N compounds are largely attributive and even though most N-N compounds are right-headed and endocentric, there exist left-headed and dual-headed N-N compounds as well as exocentric compounds in the language. I have also established certain semantic patterns such as; ingredient of, location of, part of, made for, made for, type of, part of, cause, etc. with examples.

I have shown that basic adjectives, idiophones and derived adjectives concatenate with the noun head to form a new lexeme. I have also drawn a line between N-A compounds whose outcomes are nouns and those that result in adjectives suggesting that compounding is not only a nominalization strategy in Ewe. Other word classes can be derived from compounding. I also point out that N-A compounds are all left-headed, patterning like NPs in which attributive adjectives modify head nouns. Some adjectives function as inherent complements to their head nouns. Some interesting semantic relations are enumerated in this session. I have also identified the few exocentric N-A compounds in the language.

I have observed that the nouns in the N-V compounds seem to lose some of their semantic content thus have to be interpreted metaphorically. The verbs in Ewe N-

V compounds are intransitive and the noun constituents correspond to the notional subjects of the verbs. These properties seem cross-linguistic.

I suggest a definition for Ewe V-N compounds as the combination of inherent complement verb (ICV) or canonical transitive verb (CTV) and their obligatory nominal. When the constructions go through permutation and reduplication the outcome is a noun. On the other hand, the outcome is an adjective when no duplication and permutation process takes place.

It is also clear in the discussion that compounding is not just a nominalization process. Other word classes could be derived in the concatenations of two or more free forms. Again more than two free forms can be combined in Ewe compounds. Compounding is therefore a very productive word formation process in Ewe.

CHAPTER FOUR

PHONOLOGICAL ANALYSIS OF EWE COMPOUNDS

4.1 Introduction

There are several phonological processes associated with compounding in Ewe. This chapter analyzes the phonological processes associated with compounding in Ewe. Specifically, the chapter is aimed at establishing the phonotactic and tonal constraints in Ewe compounding and the mechanisms available in Ewe grammar for dealing with the violations of these constraints. The significant frameworks for this endeavour are the distinctive feature theory and the syllable theory in the context of non-linear phonology.

The rest of the chapter is organized as follows: Section 4.2 focuses on Vowel sequence and vowel sequence processes in Ewe. Section 4.3 is devoted to consonantal and consonant related processes in Ewe compound. Section 4.4 is devoted to tone processes in Ewe compounds. In Section 4.5 is a summary of the findings and their significance to linguistic theory.

4.2 Vowel Sequence and Vowel Sequence Processes in Ewe Compounds

This section deals with vowel sequence and vowel sequence processes in the formation of compound words in Ewe. This section focuses on the ways of solving the problems of vowel sequence in Ewe compounds. According to Harris (2011), vowel sequences lacking an intervening consonant are cross-linguistically dis-preferred, and wherever morpheme combination threatens to

create a hiatus configuration of this sort, languages can take various measures to resolve it. This phenomenon (hiatus) is common when different lexical categories are compounded during compounding in Ewe. Languages use various ways of resolving the problem of vowel sequence including deletion and epenthesizing (Harris 2011). According to Duthie (1996), deletion is used as a repair mechanism in resolving the problem of hiatus in Ewe. That is, the language prefers dropping one of the clustering vowels rather than having both of them to repair the phenomenon.

The analysis focuses on establishing the permissible and impermissible vowel sequences in Ewe compounds, and what the repair strategies in Ewe grammar are for dealing with impermissible vowel sequences. The table below presents the possible vowel-vowel contact during compounding.

Table 19. Possible Vowel Sequence at Morpheme Boundaries

		i	**u**	**e**	**ɔ**	**o**	**a**
High vowels	**i**	*ii	*iu	ie	*iɔ	*io	ia
	u	*ui	*uu	ue	*uɔ	*uo	ua
Mid vowels	**e**	*ei	*eu	ee	*eɔ	*eo	ea
	ɔ	*ɔi	*ɔu	ɔe	*ɔɔ	*ɔo	ɔa
	o	*oi	*ou	oe	*oɔ	*oo	oa
Low vowel	**a**	*ai	*au	ae	*aɔ	*ao	aa
		1	2	3	4	5	6

The sequences with the asterisks are never realised at morpheme boundaries in compounding. Vowel-vowel sequences without the asterisks occur at the morpheme-morpheme boundary during compounding.

This subsection (4.2) is focused on strategies in Ewe grammar for dealing with these vowel sequences at the morpheme boundaries. Section 4.2.1 examines vowel sequence involving a high vowel as V_1, section 4.2.2 presents vowel sequence with a mid-vowel as $V_{1,}$ and Section 4.2.3 is devoted to vowel sequence with a low vowel as $V_{1.}$

4.2.1 Vowel sequence with a high vowel as V_1

This part of the study examines the high vowels (V_1) combinations with other vowels in compounding in Ewe. The high vowels are i, u, at morpheme boundary in this section.

4.2.1.1 High Vowel (i) + Low vowel (a) Sequence

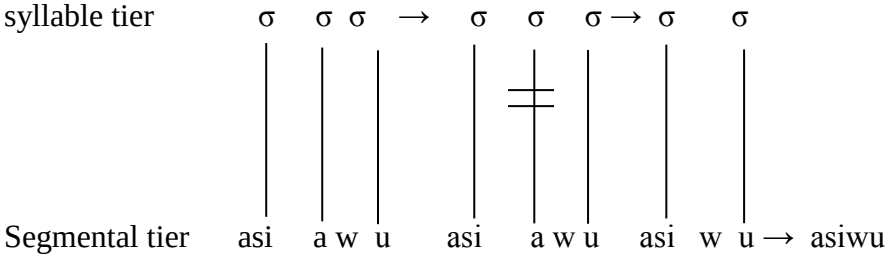
The data in (1) presents vowel sequences involving Ewe high –vowel /i/ and a low vowel /a/ in compounding.

1		**BASE1**	**BASEE 2**	**COMPOUND**
	a.	àgbèlì	àtí	àgbèlìtí
		cassava	stick	cassava stick
	b.	àsí	awu	àsíwu
		hand	dress	glove
	d.	àzi	àgblè	àzigble
		groundnut	farm	groundnut farm

e.	afi	átíke	àtíke
	mouse	medicine	pesticide

The data in (1) shows that all occasions, it is the V_2 /a/ that deletes and the V_1 'i' survives to the output level. For example in (1b), 'i' V_1 in *àsí* survives deletion and 'a' V_2 of *awu* is deleted. This is further represented in example (2) below.

2. Presentation of V_2 deletion



4.2.1.2 High Vowel (i) + Mid vowel (e) Sequence

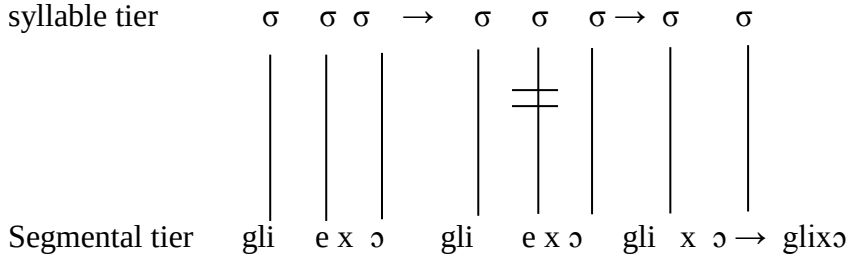
The data in (3) represents vowel sequences involving the Ewe high vowel /i/ V_1 and a mid-vowel /e/ V_2 in compounding.

3.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	glì	èxɔ̀	glìxɔ̀
	wall	house	mud house
b.	àtádí	ewɔ́	àtádíwɔ́
	pepper	flour	powdered pepper
c.	àtí	èkè	àtíke
	tree	root	medicine

d.	ami	èʊu	amiʊú
	oil	lorry	fuel tanker

In the examples above, only one of the two clustered or adjacent vowels found its way in the outputs. The 'e' (V_2) of ewɔ́, elides and 'i' (V_2) of *àtádí* survive into the output *àtádíwɔ́* in example (3b). The same way, the vocalic prefixes 'e' delete in the second inputs in the rest of the examples. The illustration in (4) represents the deletion of 'e'.

4.



4.2.1.3 High Vowel (u) + Low vowel (a) Sequence)

This part of the data looks at the high-vowel /u/ (V_1) and a low vowel /a/ (V_2) in a vowel -vowel sequence at morpheme boundary in Ewe compounds.

5.	**BASE1**	**BASE2**	**COMPOUND**
a.	ku	àɖáka	kúɖáka
	death	box	coffin
b.	kú	àba	kúbá
	death	mat	death bed
c.	lũ	agble	lũgble
	millet	farm	sorghum farm

d.	nu	ayí	nuyí
	mouth	flesh	lip
e.	mɔ́lũ	àgblè	mɔ́lũgle
f.	àɖú	àtíke	àɖùtíke
	tooth	medicine	tooth medicine
g.	àkɔɖú	àgblè	àkɔɖúgble
	banana	farm	banana farm

The effect of deletion above shows that, the vowels with no onset are deleted and the vowels occupying the final positions are maintained. All the (V_2) in the dataset in the data set do not find their way into the output.

4.2.1.4 High Vowel (u) + Mid vowel (e) Sequence

The data in (6) show vowel sequences involving Ewe high –vowel /u/ (V_1) and mid vowel /e/ (V_2) at morpheme boundaries in compounding. The data shows that in all occasions, it is the V_2 'e' that deletes and the V_1 'u' survives to the output. For example in (6b), 'u' V_1 in *afu* survives deletion and 'e' V_2 of *èké* is deleted. That is why *afuké* is correct and * *afeké* is incorrect. The same 'u' in *Yevú* finds its way in the compound word *Yevúgbe* but 'e' in *ègbè* does not.

6.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	dù	eta	dùtà
	town	head	abroad
b.	à*f*ù	èké	a*f*uké
	sea	sand	sea sand

c.	tú	èkpé	túkpé
	gun	stone	bullet
d.	dzù	ègbè	dzùgbè
	insult	voice	insult
e.	à*f*ù	èké	à*f*uké
	sea	soil	sea sand
f.	Yevú	ègbè	Yevúgbe
	Whiteman	language	English language

4.2.2 Vowel sequence with a mid-vowel as V1

In this section, I look at the mid-vowel as V_1 in a vowel-vowel sequence at morpheme boundary in Ewe compounds. The mid-vowels are (ɔ, o e).

4.2.2.1 Mid-Vowel (ɔ) + mid-vowel (e) Sequence

The data in (7) are vowel sequence involving a mid-vowel /ɔ/ and mid-vowel /e/ at morpheme boundaries in compounding. That is **(ɔ + ə Sequence).**

7.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	afɔ	èkú	afɔkú
	leg	death	accident
b.	àdzɔ̀	ègà	àdzɔ̀gà
	collection	money	tax
c.	àgblɔ̀	èʋú	àgblɔ̀ʋú
	curved stick	drum	type of drum.
d.	dzìdzɔ̀	enya	dzìdzɔ̀nya

	happy	news	good news
g.	kɔ̀	ègà	kɔga
	neck	metal	necklace

In example (7) only one of the two clustered or adjacent vowels found its way in the outputs. The entire V_2 delete but the V_1 in all the words are seen in the compound words. For example the 'e' (V_2) of *ègà*, elides and 'ɔ' (V_1) of *kɔ̀* survives deletion and it is seen in the compound *kɔga* (7g). In example (7a), afɔkú is correct and **afekú* is incorrect because it is 'e' of *eku* that is deleted and not 'u' of *kú*. The same applies to the rest of the words. The vocalic prefixes 'e' delete in the second inputs and do not find their way in the output.

4.2.2.2 Mid-Vowel (ɔ) + Low-Vowel (a) Sequence

The data in (8) shows vowel sequences involving Ewe mid –vowel /ɔ/ V_1 and a low vowel /a/ V_2 in compounding.

8		**BASE1**	**BASE 2**	**COMPOUND**
	a	àfɔ	àsabù	àfɔsabu
		leg	net	type of fishing net
	b	dɔ̀	ami	dɔ̀mì
		sick	oil	ointment
	c	àfɔ	àɖàŋù	afɔɖaŋu
		leg	skills	football
	d	àgɔ̀	àtí	àgɔ̀tí
		royal palm	tree	royal palm

e	àfɔ̀	awu	àfɔwu
	leg	dress	socks
f	àgblɔ̀	èʊ́	àgblɔ̀ʊ́
	stick	drum	type of drum

The compounds in example (8) are made up of bases 1 and 2. /ɔ/ ends all bases identified under base 1 sets and /a/ at word initial in all elements listed in base 2. The /ɔ/ is elided from the output forms listed under compounds while the /a/ in all elements in base 2 are retained in the output forms.

Looking at (8a), one can notice that the /ɔ/ at word final of *àfɔ* is elided whereas the initial /a/ in *àsabù* is sustained in the output *àfɔsabu*.

4.2.2.3 Mid-Vowel (ɔ) + Low-Vowel (a) Sequence.

The data in (9) looks at vowel sequences involving the mid- vowel /o/ V_1 and low-vowel /a/ V_2 sequence at morpheme boundaries.

9.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	kòko	àgblè	kòkogblè
	cocoa	farm	cocoa farm
b.	dzò	àká	dzòká
	fire	coal	charcoal
c	kokló	àʊalã	koklóʊalã
	chicken	wing	chicken wing
d.	dzò	àve	Dzòvé
	fire	forest	January

e.	kòko	àgblè	kòkogblè
	cocoa	farm	coacoa farm
f.	dzò	àfĩ	dzòfĩ
	fire	powder	ash
g.	koklo	àzì	koklózì
	chicken	egg	egg

Examples (9a-g) follow the same trend as pertains in all the previous examples discussed so far. There is elision of the initial vowel /a/ V_2 in the second bases while the mid- vowel /o/ V_1 is maintained in the first bases.

4.2.2.4 Mid-Vowel (ɔ) + Low-Vowel (a) Sequence

Example (10) shows vowel sequences involving Ewe mid –vowel /ɔ/ V_1 and a mid- vowel /e/ V_2 at morpheme boundaries in compounding.

10.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	dzò	èkà	dzòkà
	fire	rope	talisema
b.	*f*o	ewɔ́	*f*owɔ́
	millet	powder	millet flour
c.	kpo	èdɔ̀	kpodɔ
	log	sickness	leprosy
d.	kokló	èlã	koklólã
	chicken	meat	chicken meat

Similar to what has been examined in (9), example (10) also shows a typical vowel elision to satisfy the vowel sequence rule of Ewe. Here, vowel /o/ and /e/ are in sequence in both bases where base 1 has /o/ at word final while /e/ at word initial in base 2 of all the words listed in the data set. The output compounds are therefore formed with /e/ elided.

4.2.2.5 Mid-Vowel (e) + Mid-Vowel (e) Sequence

The data in (11) shows vowel sequences involving Ewe mid –vowel /e/ V_1 and mid- vowel /a/ V_2 at morpheme boundaries in compounding.

11		**BASE 1**	**BASE 2**	**COMPOUNDS**
	a	àgblè	exɔ	àgblèxɔ̀
		farm	building	farm hut
	b.	gbe	èhà	gbeha
		bush	pig	wild pig
	c.	àvè	ègbɔ̃	àvègbɔ̃
		forest	goat	antelope
	d.	dzè	ètsì	dzètsì
		salt	water	salt solution

Per the deletion rule established in Ewe, compounds which are formed with bases that typically have /e/ and /e/ in sequence are required to eliminate one of the vowels in the sequence. In the data set found in example (11), the first /e/ V_1 in the sequence is what is maintained in the output form. (11d) shows how the /e/ of *dzè* is retained but the /e/ of *etsi* gets elided in *dzètsì* ‘salt solution’.

Evidence of this is realized from the low tone marking on the /e/ in the compound *dzètsì*.

4.2.2.6 Mid-Vowel (e) + Low-Vowel (a) Sequence

The data in (12) shows vowel sequences involving Ewe mid –vowel /e/ V_1 and a low vowel /a/ V_2 at morpheme boundaries in compounding.

12		**BASE 1**	**BASE2**	**COMPOUND**
	a.	gbè	àvú	gbèvú
		bush	dog	ruffian
	b.	de	àgblè	degble
		palm	farm	palm plantation
	c.	àdè	ama	àdème
		slime	leaf	juice mallow
	d.	àkpé	àtɔ́	àkpâtɔ́
		thousand	five	five thousand
	e.	àkpé	adé	àkpádé
		thousand	six	six thousand
	f.	àkpé	adrɛ̃́	àkpádrɛ̃́
		thousand	seven	seven thousand

Example (12) shows how the vowels in cluster are repaired in the outputs. Two things are happening here. The data comprising the non-numeral compounds (12 a-c), have their V_2 deleted. For the numeral compounds, (12 d-f) the V_1 is deleted while the V_2 is maintained in the compound. There is the case of

compensatory lengthening in numeral compounds. This phenomenon is discussed in detail with further examples and illustrations in example (20-25).

4.2.3 Vowel sequence with a low vowel as V_1

This section focuses on compounds with vowel sequence involving the low vowel, */a/* and any other permissible vowel at morpheme boundaries. That is Low-vowel /a/ as V_1 and V (low, non-low).

4.2.3.1 Low-Vowel (a) + Low-Vowel (a) Sequence

The data in (12) shows vowel sequences involving Ewe low –vowel /a/ V_1 and a low vowel /a/ V_2 at morpheme boundaries in compounding.

13	**BASE 1**	**BASE 2**	**COMPOUND**
a	aɖiba	amakpa	aɖibamakpa
	pawpaw	leaf	pawpaw leaf
b	gà	awu	gàwu
	metal	dress	metal dress
c	lã	àgbàlẽ	lãgbalẽ
	animal	skin	leather
d	ta	àti	tati
	head	wood	pestle

In (13a-d) all V_1 are maintained over V_2 as shown in a compound like *tati* where /a/ in *ta* is deleted while the other /a/ at word initial in *ati* preserved**.**

4.2.3.2 Low-Vowel (a) + mid-Vowel (e) Sequence

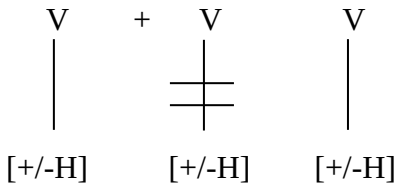
Example (14) shows vowel sequences involving Ewe low –vowel /a/ V_1 and a mid- vowel /e/ V_2 at morpheme boundaries in compounding.

14		**BASE 1**	**BASE 2**	**COMPOUND**
	a.	gà	èxɔ̀	gàxɔ̀
		metal	room	prison
	b.	siká	ekplu	sikakplu
		gold	cup/trophy	golden cup
	c.	agba	ekpe	àgbàkpé
		load	stone	pillar
	d.	gà	èsɔ́	gàsɔ́
		metal	horse	bicycle
	e.	alafá	èvè	alafávè
		hundred	two	two hundred

In this data set, all lists in base 1 have /a/ at word final position and the base 2 words have /e/ at word initial position. The two vowels which happen to be in sequence are required to be repaired by deleting one of the vowels. The second vowel in the sequence is therefore deleted as part of the repair mechanism as shown in (14d) *gà + èsɔ́ = gàsɔ́*.

The effect of deletion above shows that, for non-numeral compounds there is segment deletion at the same time syllable deletion. One can also argue that the vowels with no onset are deleted and the vowels with onset are preserved in compounding in the language. The vowel simplification rule in the noun-noun compounds for non-numerals is illustrated

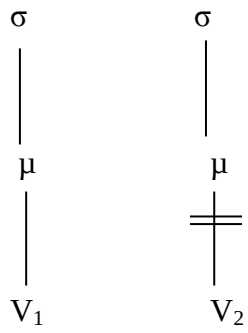
15.



The rule says that when there is a sequence of two vowels at word or morpheme boundary in Ewe and the first vowel (V_1) is whether low or high and the (V_2) can also be low or non-low, it is the V_2 that is deleted. This is illustrated further in (16 &17)

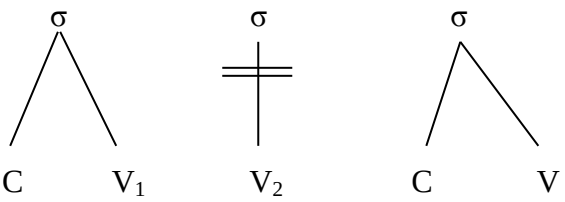
16.	a.	tú	+ èkpé	→	túkpé	*tuekpe 'bullet'
	b.	adzɔ	+ ègà	→	àdzɔ̀gà	*adzɔega 'tax'
	c.	gà	+ èxɔ̀	→	gàxɔ̀	*gàxɔ̀ 'prison'

17a. Presentation of V_2 deletion in noun compounds

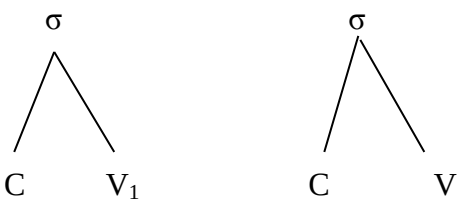


b.

Input



Output



The examples in (16) of the presentation in (17) show that, for non-numeral compounds there is segment deletion at the same time syllable deletion. According to Harris (201:1614), "a vowel forms a local sonority peak and thus projects its own syllable nucleus, so removing it inevitably unleashes resyllabification. The phenomenon of segment deletion and syllable deletion in non-numeral compounds creates room for resyllabification. When two or more words are combined in compounding such that the first word ends with a vowel and the initial of the second word is also a vowel, the outcome is a hiatus situation which Ewe does not accept as explained earlier on. The language uses deletion to repair this situation as illustrated (17) above. The illustration suggests that before compounding there are three syllables, but when the V_2 deletes in the process of compounding the syllables reduce to two.

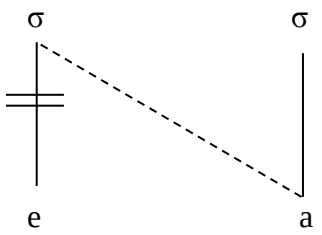
4.2.4 Vowel Sequence in Numeral Compounding in Ewe

Numeral compounds behave differently from noun compounds. The argument is that, there is V_2 deletion during compounding of noun compounds. It is the syllable without an onset that deletes in noun compounds. The argument fails completely when it comes to numeral compounds. The only occasion where segments or a vowel have survived deletion in an attempt to repair vowel sequence is in numeral compounds. For numeral compounds the low vowel /a/ is always preserved regardless of where the low vowel is as shown in (17 & 18).

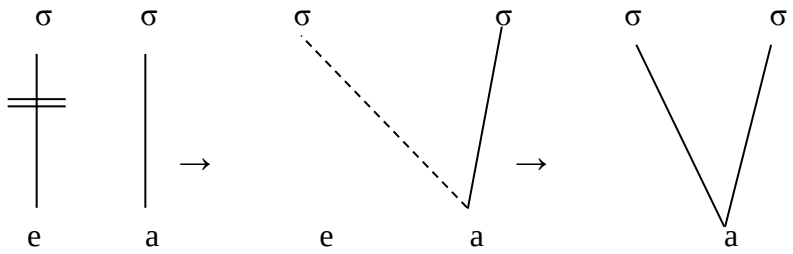
17.	BASE1	BASE2	COMPOUND
a.	àkpé	atɔ́	àkpáàtɔ́
b.	àkpé	adé	àkpáàdé
	thousand	six	six thousand
c.	akpe	adre	akpáàdre
	thousand	seven	seven thousand
d.	àkpé	àsieke	àkpáàsieke
	thousand	nine	nine thousand

18. Presentation of regressive compensatory lengthening

àkpé + àtɔ́ → akpáàtɔ́ 'five thousand'



OR



The examples in (18) above clearly show that V_1 but not V_2 that deletes. This is contrary to the trend common in the language in noun compounds where it is V_2 which always deletes. The low vowel can be V_1 or V_2, the rule states that it must be preserved. When the low vowel /a/ in numeral compounds is a V_2 and the mid-vowel /e/ is the V_1 and /e/ deletes, /a/ is lengthened to compensate for the loss of /e/ regressively.

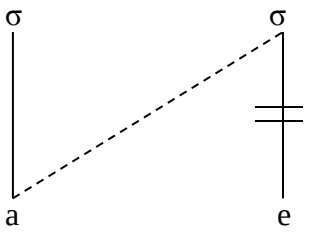
When the low vowel /a/ in numeral compounds is a V_1 and the non-low vowel for example /e/ is the V_2 the non-low vowel deletes the low vowel then lengthens to compensate for the loss of the non-low vowel progressively as shown in (19 & 20).

19.	**BASE1**	**BASE2**	**COMPOUND**
a.	blá	èvè	bláàvè
	tens	two	twenty
b.	blá	ètɔ̀	bláàtɔ
	tens	three	thirty
c.	blá	ènè	bláànè
	tens	four	forty
d.	alafá	ètɔ̃	alafáàtɔ̃̀
	hundred	three	three hundred.

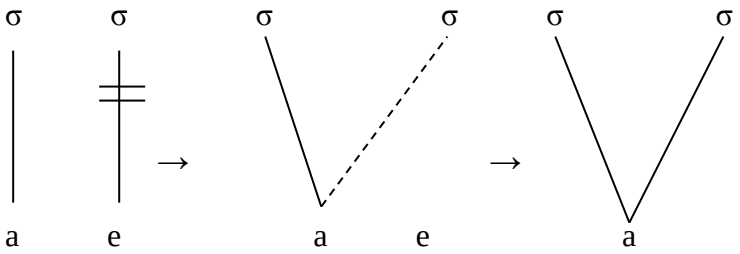
20 **Illustration of Progressive Compensatory lengthening**

blá + èvè bláàvè

20.



OR



In example (20) V_1 lengthens progressively to compensate for the loss of V_2

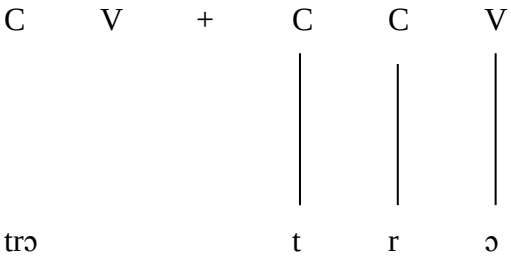
4.3 Consonantal Processes in Ewe Compounds

Consonant clusters are allowed within a syllable. A consonant sequence consists of up to two consonants, the second consonant may be of a liquid or a glide in the following words respectively: *f*le 'to buy' tre 'to seal'. In a noun compound consisting of a Verb and a Noun (V-N) where the verb element contains consonant clusters and goes through reduplication, the first consonant in the reduplicated template is dropped as in (21) which lead to cluster reduction and partial reduplication.

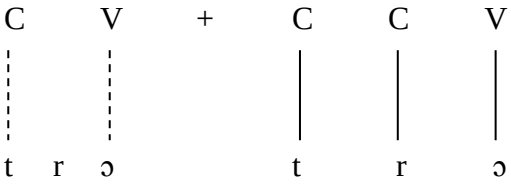
21.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	kplɔ̀	nú	núkpɔkplɔ
	to sweep	thing	sweeping
b.	dzrá	nú	núdzádzrá
	to sell	something	sales
c.	*f*lè	ame	ame*f*e*f*le
	to buy	human	slave
d.	ʋlì	hò	hoʋiʋli
	to drag	wealth	competition
e.	trɔ̀	tsi	tsitɔtrɔ
	to drain/collect	water	rain water

Example (21) shows some V-N compounds that undergo permutation and reduplication. The outputs indicate that the first items in the reduplicative template drop their second consonants but the second items maintain their second consonants. This happens because the reduplicant is a CVI syllable which is copied. In an attempt to reduplicate the verb element *kplɔ̀* in (21a) the first *kplɔ̀* in the reduplicative template drops its second consonant /l/ but the /l/ is maintained in the second reduplicative template. This is why the output is *núkpɔkplɔ* and **núkplɔkplɔ* is not correct. In the same way, trɔ̀ in (24e) also elides /r/ in its first reduplicative template but maintains it in the second template for the output *tsitɔtrɔ* but not **tsitrɔtrɔ* (cf. Ofori 2002). This is further illustrated in the examples (22) below.

22. Illustration of cluster reduction.



Output



It is clear that the reduplicant is an empty CV syllable. It is dependent on the base for its segmental content. That is why *tɔtrɔ* is correct and **trɔtrɔ* is wrong.

4.4 Tonology of Compounds in Ewe

This part of the study is to examine the effects of tone on compounding in Ewe. It looks at the possible tone segments and their effects at morpheme boundary in N-N, and other tonal processes in N-A, V-N, N-V, and N-V-N compounds. I discuss the effect of high tone, low tone and mid tone when they are juxtaposed to each other. The goal is to identify the tones that elide, survive, spread or assimilate.

4.4.1 Tone Segment Involving High and Low Tones (N-N Compounds)

The data in (23) represent tone segment involving H+L tones

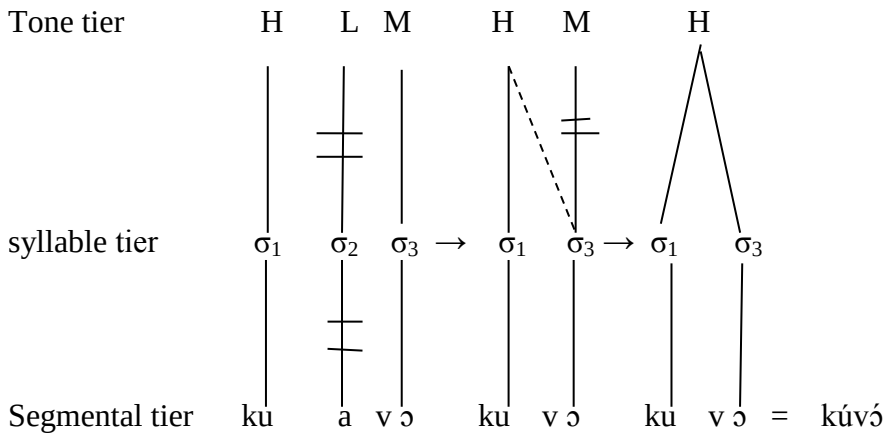
23.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	àtí	àgblè	àtígble
	tree	farm	woodlot
b.	kú	àɖáka	kúɖáka
	death	box	coffin
c.	ewɔ́	àkplé	ewɔ́kplé
	corn flour	food	type of food
d.	blá	àtɔ̃́	blá`tɔ̃́
	tens	five	fifty
e	àkpé	àtɔ̃́	àkpátɔ̃́
	thousand	five	five thousand

The data in (23) shows that, all the prefixed vowels of the final nouns (Base 2) except (e & f) are elided with their tones. The high tones of the first items survive while the low tones of the final nouns are deleted. Sometimes, during compounding it is possible that the segment carrying the high tone does not suffer elision. When it happens that the high vowel is not elided, but the low vowel at the syllable boundary suffers deletion, the whole of the segment carrying the high tone is carried into the output form. This means that the vowel of the following noun drops its segment and low tone as well. The high tones and the segments of the first nouns knock out the initial vowels of the tones of the second nouns and occupy their positions. There is no spreading situation here. The following data also confirms this point.

24		**BASE 1**	**BASE 2**	**COMPOUND**
	a	kú	àvɔ	kùvɔ́
		death	cloth	funeral cloth
	b	kú	ègà	kúga
		death	money	funeral donation
	d	ákaɖí	àtí	àkaɖítí
		light	tree	lamp stand
	e	blí	àgblé	blígble
		corn	farm	corn farm

In (24) the high tones of the first items survive with their segments while the low tones at word initial of the final nouns are deleted with their segments. There is the case of segment deletion at the same time syllable deletion as shown in (25)

25.



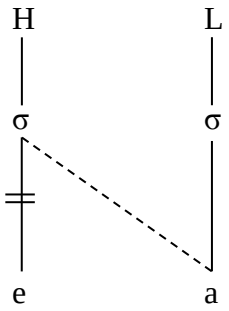
In the illustration above, the initial vowel and its low tone (as in *àvɔ*) delete. (Also, the high tone of *kú* spreads to delink the mid tone of *vɔ* as in (24a)).

For the numeral compounds (23 e & f), there is segment deletion but no syllable deletion. Even though a segment is deleted another segment lengthens to compensate for the loss either progressively or regressively, so the tones are not affected. This observation is evident in example (26).

26.		**BASE1**	**BASE2**	**COMPOUND**
	a.	blá	èvè	bláàvè
		tens	two	twenty
	b.	blá	àtɔ́	bláàtɔ́
		tens	five	fifty
	c.	blá	àsíéke	bláàsíéke
		ten	nine	ninety

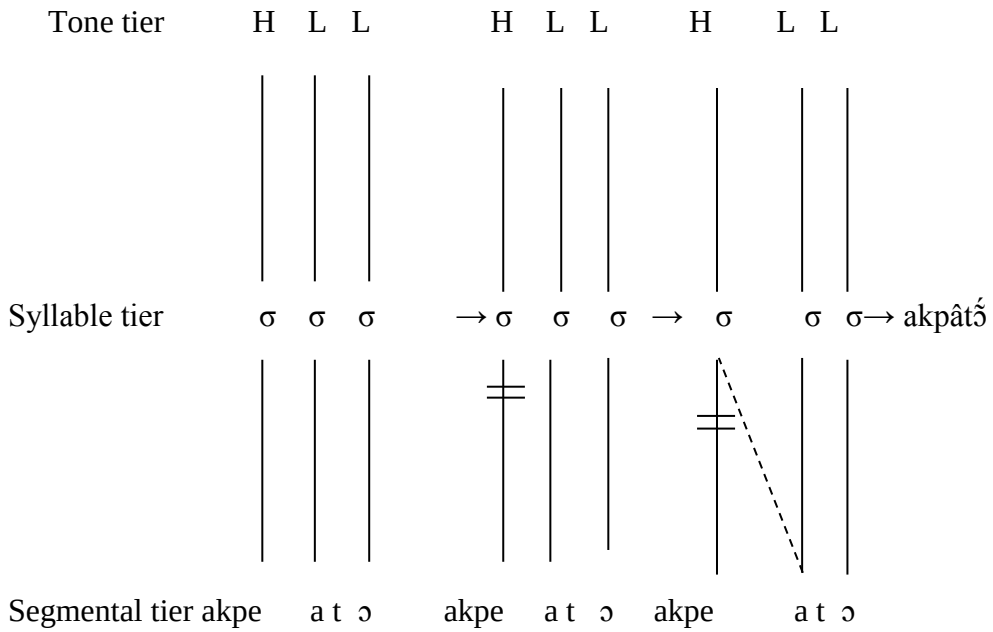
In (26) both the high tones of V_1 and the low tones of the V_2 survive as the result of compensatory lengthening. This is illustrated in (27 & 28).

27. àkpé + àtɔ́ → akpáàtɔ́



The illustration above shows that /a/ lengthens to delete /e/ but the tones are not affected. Further representation of the low vowel lengthening is shown in (28).

28. Illustration of low vowel lengthening



The illustration above in (28) shows that the high tone on *akpe* is maintained because /a/ of the intial vowel of *atɔ* lengthens to compensate for the loss of the segment [e] that carries the high tone.

4.4.2 Tone Segment Involving High and Mid Tones (N-N Compounds)

The data in (29) presents H-M tone segment at morpheme boundary.

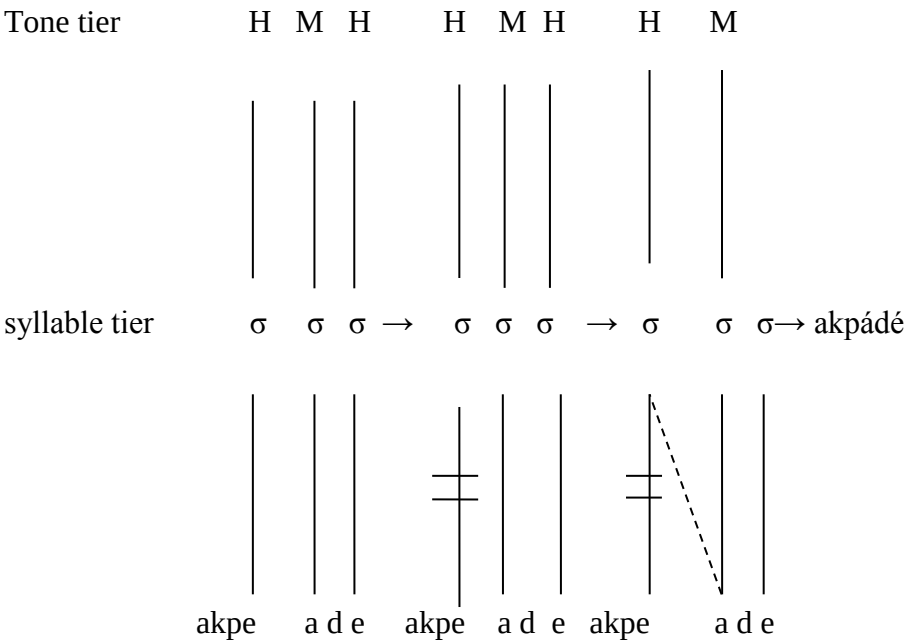
29.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	àsí	awu	àsíwu
	hand	dress	glove
b.	blí	amɔ́	blímɔ́
	corn	dough	corn dough
c.	àḍìbá	amakpa	àḍìbámakpa
	pawpaw	leaf	pawpaw leaf

d.	kokonté	ewɔ́	kokontéwɔ́
	dried cassava	flour	type of flour.
e	àkpé	adré	àkpádré
	thousand	seven	seven thousand

The data above presents H+M tone sequence. All the vowels (prefixes) of the final nouns except (29e) are deleted with their mid tones. In the case of (29e), it is the first noun that elides its final vowel e but the high tone is preserved because the a of *adré* compensate for the loss of e of *àkpé*. Here again the mid tones and the high tones survive in the compound akpádré. More data of this sort is presented in (30).

30.	**BASE1**	**BASE2**	**COMPOUND**
a.	àkpé	adé	àkpádé
	thousand	six	six thousand
b.	akpe	adre	akpadre
	thousand	seven	seven thousand
c.	àkpé	enyí	àkpényi
	thousand	eight	eight thousand

31. Illustrating high tone and mid tone behaviour in numeral compounds



In the illustration above, the high tone has lost its original host [e] in a hiatus situation but it is compensated for by [a]. Both tones are maintained in the output

4.4.3 Tone Segment Involving Mid and Low Tones (N-N Compounds)

The data in 32 presents mid and low tones at morpheme boundary.

32	**BASE 1**	**BASE 2**	**COMPOUND**
a.	àfɔ̄	èkú	àfɔkú
	leg	death	accident
b.	ami	àtí	amití
	oil	tree	type of tree
c.	ta	àtí	tatí
	head	wood	pestle

d.	àfɔ	àɖàŋù	àfɔɖaŋu
	leg	skills	game of football
e.	kpo	èdɔ̀	kpodɔ
	log	ailment	leprosy

Example (33) presents two interesting scenarios. Where the second noun ends in a high tone, the high tone is carried onto the output after its low tone prefix is elided as shown in (33 a-c).In the cases where the second nouns ends in a low tone, the low tone of the final items assimilate the mid tones of the preceding items to mid regressively as in (33 d & e).

4.4.4 Tone Segment Involving Mid and Mid Tones (N-N Compounds)

The examples in (34) are tone segments involving mid and mid tones at morpheme boundaries.

34.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	àfɔ	awu	àfɔwu
	leg	dress	socks
b.	àbólo	ewɔ́	àbólowɔ́
	bread	flour	flour
c.	enu	ayí	enuyí
	mouth	flesh	lip

There is no significant change in the M + M tone segments above. The prefixes of the second nouns elide and the vowels that survive surface with their tones into the outputs.

4.4.5 Tone Segment Involving Low and Mid Tones (N-N Compounds)

35.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	èdɔ̀	ami	èdɔ̀mì
	ailment	oil	ointment
b.	àdè	ama	àdèmà
	slime	leaf	juice mallow
c.	gà	awu	gàwù
	metal	dress	shield
d.	àgbèlì	amakpa	àgbèlìmakpa
	cassava	leaf	cassava leaf

The example (35) presents L+M tones at morpheme boundary. The mid tones of the prefix of the second nouns elide with their segments. The low tones of the final items of the first nouns assimilate the mid tone of the final items of the second nouns to low tone progressively. For example the low tone of gà assimilate the mid tone of /u/ of awu to a low tone as in gàwù *gawu. (35c).

4.4.6 Tone Segment Involving Low and Low Tones (N-N Compounds)

Example (36) is the combination of L+L tone segments at morpheme boundary. The tone and the segment of the final nouns elide. They do not surface in the output forms. That is why we have ègàdzò *ègädzò (40e) and àgbèlìtí *àgbèlìtí (36c).

36.	**BASE 1**	**BASE 2**	**COMPOUND**
a.	ègà	àgbá	ègàgbá
	metal	bowl	basin
b.	dzò	àvé	dzòvé
	fire	forest	January
c.	àgbèlì	àtí	àgbèlìtí
	cassava	stick	cassava stick
d.	àdè	àwù	àdèwù
	hunting	dress	hunting dress
e.	ègà	èdzò	ègàdzò
	money	fire	unclean money

Generally the tone on the initial vowels or prefixes on the noun-noun constituents in compounds are non-high. The same low tone reflects in the word initial of the output (compound) as in example (37).

37.	**BASE1**	**BASE2**	**COMPOUND**
a.	àzã	àvɔ	àzãvɔ
	festive	cloth	festive cloth
b.	àdè	àwu	àdèwù
	hunting	dress	attire for hunting
c.	èkpo	èdɔ	èkpodɔ
	stick	sickness	leprosy
d.	ègà	àgba	ègàgbà
	metal	bowl	basin

e.	àgbeli	amɔ	àmɔ̀
	cassava	dough	àgbèlimɔ̀

4.4.7 Tone Processes in V-V Compounds

When two serial verbs are combined, the verbs undergo reduplication process sometimes. The first verb is reduplicated and suffixed with the following verb which always retains its original tone. When the verb (CV stem) is a high tone, the counter changes its high tone to a low tone while the root retains the high tone as in (38). When both the counter verb and the root verb are low tone, the verb (CV stem) is a low tone as in (39) (cf. Ofori 2002).

38.	**BASE1**	**BASE2**	**COMPOUND**
a.	dó	kpɔ́	dòdókpɔ́
	to test	see	examination
b.	sí	dzó	sìsídzó
	to run	go	going by running
c.	té	kpɔ́	tètékpɔ́
	to press	see	pressing

In (38a) above the verb *dó* in the output drops its high tone in the counter stem (first stem) but maintains it in the root stem (second stem). The second verb *kpɔ́* retains its high tone. The rest of the examples are also the same.

39.		**BASE1**	**BASE2**	**COMPOUND**
	a.	zɔ̀	vá	zɔ̀zɔ̀vá
		walk	come	coming by walking
	b.	tè	kpɔ́	tètèkpɔ́
		drag	see	temptation’
	c.	gbɔ̀	vá	gbɔ̀gbɔ̀vá
		turn	come	returning

In (39a) above, the counter verbs and the root verbs in the reduplicative templates retain the low tone as in the original verbs. The second verbs which suffix the reduplicative template also retain their high tones. For instance, *zɔ̀* retains its low tone in the reduplicative template and the second verb *vá* also maintains its high tone.

4.4.8 Tone Processes in V-N Compounds

According to (Ofori 2002), Verb-Noun compounds go through permutation (reversing word order) and reduplication process. The noun is brought forward and the verb is repeated. When the two items (sometimes CV stem are inherent compliment verbs) undergoing compounding have low tones, the items in the reduplicative template and the permuted word retain their low tones in the output. Examples in (40) are of this kind.

40.		**BASE1**	**BASE2**	**COMPOUND**
	a.	ʋlì	hò	hòʋìʋlì
		drag	money	competition

b.	dzì	hà	hàdzìdzì
	sing	song	singing
c.	gbà	ʊɔ̀	ʊɔ̀gbàgbà
	break	door	burglary

In the example above, the reduplicative template and the permuted word retain their low tones in the output.

When the verb is low tone and the noun is high the reduplicated verb assimilates the high tone of the noun progressively to become mid tone as in (41).

41.	**BASE1**	**BASE2**	**COMPOUND**
a.	fà	amɔ́	amɔ́fafa
	mixed	dough	dough syrup
b.	*f*ò	*f*ú	*f*ú*f*o*f*o
	beat	bone	gathering
c.	zɔ̀	mɔ́	mɔ́zɔzɔ
	walk	way	traveling

The examples above illustrate the situation where the reduplicated verbs assimilate the high tones of the noun to become mid tones.

If the noun has high tone and the verb is low, they retain their tone in the output. Examples in (42) are this kind.

42.		**BASE 1**	**BASE 2**	**COMPOUND**
	a.	ɖó	dzè	dzèɖóɖó
		gather	voice	chatting
	b.	bí	dzì	dzìbíbí
		turn	dzi	anger
	c.	dó	dzì	dzìdódó
		plant	heart	endurance

Here the verbs and the noun retain their high and low tones respectively in the output.

4.4.9 Tone Processes in N-A Compounds

Compounding of nouns and adjectives is a compounding process that does not involve any tonal change as shown in (43).

43.		BASE1	BASE2	COMPOUND
	a.	detsi	*ʃ*u*ʃ*ui	detsi*ʃ*u*ʃ*ui
		soup	dried	light soup
	b.	ta	gã́‘	tagã́
		head	big	big headed
	c.	dɔ	dzẽ	dɔdzẽ
		sickness	red	leprosy’
	d.	ŋkeke	nyuí	ŋkekenyuí
		day	good	festival

4.4.10 Tone Processes in N-V-N

The processes involve in the compounding of N-V-N structure are similar to those of verbs and nouns. Sometimes the final syllable of the stem may have a low tone changed to a rising one as shown in (4 a, b e & f).

44.	**BASE 1**	**BASE 2**	**BASE 3**	**COMPOUNDS.**
a.	aŋutí	fíá	emɔ	aŋutífíámɔ̌
	orange	squeeze	machine	juicer
b.	dzì	kè	dzò	dzìkèdzɔ̌
	sky	open	fire	thunder
c.	bɔl	*f*ò	há	bɔl*f*òhá
	ball	play	group	football team
d.	dɔ̀	wɔ	nú	dɔ̀wɔnú
	work	do	thing	tool
e.	gà	xɔ́	àgbàle	gàxɔ̀gbàlɛ̌
	money	take	book	cheque
f.	mɔ́	fíá	dzèsì	mɔ̀fíadzesĭ
	road	point	sign	road sign

4.5 Conclusion

This chapter examines some phonological processes observed in compounding in Ewe. Some of the phonological processes I look at include both segmental and non-segmental processes; vowel deletion, consonant deletion (cluster reduction) resyllabification, tone spreading and stability and assimilation.

First, I focus on establishing the permissible and impermissible vowel sequences in Ewe compounds, (vowel sequence involving a high vowel, vowel sequence involving a mid-vowel, vowel sequence involving a low vowel and vowel sequence involving a round vowel) and what the repair strategies in Ewe grammar are for dealing with impermissible vowel sequences.

The phenomenon (hiatus) is common when different lexical categories are compounded during compounding in Ewe. In compounding in Ewe, deletion is used as a repair mechanism in resolving the problem of hiatus. The effect of deletion shows that, mostly the vowels with no onset are deleted. The V2 deletion is in the majority while V1 deletion is in the minority in the language. The syllable that suffers from the deletion becomes short of a segment which leads to resyllabification.

In a noun compound consisting of a Verb and a Noun (V-N) where the verb element contains consonant clusters and goes through reduplication, the first consonant in the reduplicated template is dropped.

The chapter also examines the effects of tone on compounding in Ewe. It looks at the possible tone segments and their effects at morpheme boundary in N-N, and other tonal processes in N-A, V-N, N-V, and N-V-N compounds. I discuss the effect of high tone, low tone and mid tone when they are juxtaposed to each other. Mostly all the prefixed vowels of the final nouns (Base 2) are elided with their tones. The high tones of the first items survive while the low tones of the

final nouns are deleted with their segments. The high tones and the segments of the first nouns knock out the initial vowels of the tones of the second nouns and occupy their positions which do not lead to spreading. Sometime there are instances where during compounding the low tone is specified. The segment bearing the low tone elides but the low tone is preserved. It is also interesting to note that the first segment (V1) can elides instead of (V2). When this happens, the vowel /e/ of the first item of the compound elides but its high tone is preserved and spread onto the prefix of the second item of the compound /a/ which also maintains its low tone. This gives rise to a contour tone.

Where the second noun ends in a high tone, the high tone is carried onto the output after its low tone prefix is elided. In the cases where the second nouns end in a low tone, the low tones of the final items assimilate the mid tones of the preceding items to mid regressively. In the case for L+M tones at morpheme boundary, the mid tones of the prefix of the second nouns elide with their segments. The low tones of the final items of the first nouns assimilate the mid tone of the final items of the second nouns to low tone progressively.

The combination of L+L tone segments at morpheme boundary, the tone and the segment of the final nouns elide. They do not surface in the output forms. Sometimes the final syllable of the stem of V-V-N compounds may have a low tone changed to a rising one.

Autosegmental theory addresses the situations which put tones and other phonological features together as if they have no autonomy.

CHAPTER FIVE

SUMMARY AND CONCLUSION

5.1 Introduction

The goal of this thesis has been to establish the morphosyntactic and the phonological principles underlie compounding in Ewe. It discusses Ewe compounds in relation to the syntactic categories of constituents, position of the head element, the presence of a head element and phonological processes in compounding in order to establish how related or different they are from what exits in other languages. This chapter is the summary of the core issues in the previous chapters. It outlines what the study has discovered about compounding in Ewe and finally proposes areas for future studies. The rest of the chapter is organised as follow. Section 5.2 presents the summary of the previous chapters, section 5.3 is the contribution of the study to knowledge and recommendation for future studies concludes the chapter in section 5.4.

5.2 Summary of chapters

In chapter one I presented the topic of the study. I showed in the chapter that compounding is one area in morphology that has attracted numerous debates. Both definitions related and typology /categorization related issues have been identified in the study of compounding; the reason for a comprehensive description of the linguistic phenomenon of compounding in Ewe is essential. The chapter showed that, comparatively there have not been any detailed studies into compounding in Ewe. The subject has been under-studied and

therefore needed to be studied in order to examine the structure and establish the morphophonological processes involved in the formation of compounds in Ewe. I also presented an overview of the background of the Ewe people as well as their language. The objective of the study, research questions, methodology and the significance of the study are also featured in the chapter.

In chapter two, I discussed some general issues concerning the study of compounding in the literature. I discussed various works of the general issues in the study of compounding and show that the study of compounds has attracted interest from diverse fields of scholarship. I reviewed literature on issues concerning definition, classification and headedness. I showed that there are hardly any universally accepted criteria for determining what a compound is in spite of extensive research into compound and compounding processes as far as definition and classification are concerned. Concerning definition I pointed out that most of the definitions are language specific because compound members appear differently in various languages. I propose a definition for Ewe compounds as the combination of two or more related bases which occur alone as free forms to form a new lexeme. For example, *àgbèlìtí* 'cassava sterm' is a new lexeme formed by combining two related bases *àgbèlì* 'cassava' and *àtí* 'stick'. The same applies *dɔ̀nɔ̀kpɔ́xɔ* 'ward' is the combination of three free forms *dɔ̀nɔ̀* 'patient' kpɔ́ 'see' exɔ 'room'. I showed that Ewe compounds can be formed with word formation affixes, they are spelled together, they can be right-headed, left-headed and dual-headed, and they are inflected as a whole and are syntactically or structurally inseparable.

The classification of compounds has been a central issue in the linguistic literature. Almost every scholar dealing with study of compounding has proposed his/her own view. Bases on various works discussed concerning classification, I showed in the chapter that compounds can be classified based on the form-class of the constituents, yielding, N-N, N-A, N-V, etc., or that of the output category of the compound, yielding verbal, nominal, adjectival, etc. compounds. Again, the presence and position of a head element, distinguishing between compounds which are hyponyms of their head and those which are not, yielding endocentric vs. exocentric compound respectively is another way of classifying compounds. A final approach uses the grammatical and semantic relation between the constituents. A agreed that it is not uncommon to see most classifications involve more than one of the above parameters, so it is not unusual to find terms like endocentric N+N coordinates and V+V endocentric compounds.

Booij (2007) opines that headedness of a compound is not only relevant for its formal properties, but also for its semantic interpretation. Regarding headedness I showed that Ewe endocentric N-N compounds are mostly right-headed, but there are left-headed and dual-headed N-N compounds as well. The same is true of V-V compounds, but all N-A compounds are left-headed. I finally presented a discussion on the theoretical framework for the thesis in chapter two. I suggested that, authosegmental theory helps us to account sufficiently for segments and features as constituting discrete tiers so that a modification in one does not necessarily affect the other; they individually bear their significances.

In chapter three, I classify Ewe compounds both structurally (i.e. morphosyntatically) and semantically. In this chapter I have presented an adequate account of the types and properties of Ewe compounds. I have classified Ewe compounds by various criteria. First, is the syntactic category of the compound members, (N-N, N-A. N-V, V-N,V-V) followed by presence of a head element, endocentric vs. exocentric compounds. Classification based position of head constituents, left-headed, right-headed, dual headed was also dicussed including semantics & grammatical relations between constituents

I have discussed six compound types, (N-N, N-A, N-V, V-N, V-V, N-V-N) drawing attention to the regular and irregular properties that characterize them. Compounds have been classified into *attributive*, *subordinate* and *coordinative* compounds in the literature. Ewe compounds also share these relationships. Most N-N and N-A compounds are attributive, N-V and V-N compounds are subordinate and V-V and some N-N compounds are coordinative. The dataset and the discussion in the section shows that N-N compounds are largely regular, in spite of certain items that behave like affixes in some environments and full lexemes in other environments. I have pointed out that N-N compounds are largely attributive and even though most N-N compounds are right-headed and endocentric, there exist left-headed and dual-headed N-N compounds as well as exocentric compounds in the language. I have also established certain semantic patterns such as; ingredient of, location of, part of, made for, made for, type of, part of, cause and etc. with examples. I have shown that basic adjectives, idiophones and derived adjectives concatenate

with the noun head to form a new lexeme. I have also drawn a line between N-A compounds whose outcomes are nouns and those that result in adjectives suggesting that compounding is not only a nominalization in Ewe. Other word classes can be derived from compounding. I also point out that N-A compounds are all left-headed, patterning like NPs in which attributive adjectives modify head nouns. Some adjectives function as inherent complements to their head nouns. Some interesting semantic relations are enumerated in this session. I have also identified the few exocentric N-A compounds in the language. I have observed that, the nouns in the N-V compounds seem to lose some of their semantic content thus have to be interpreted metaphorically. The verbs in Ewe N-V compounds are intransitive and the noun constituents correspond to the notional subjects of the verbs. These properties seem cross-linguistic.

I suggested a definition for Ewe V-N compounds as: the combination of inherent complement verb (ICV) or canonical transitive verb (CTV) and their obligatory nominal. When the constructions go through permutation and reduplication the outcome is a noun. On the other hand, the outcome is an adjective when no duplication and permutation process takes place. It is also clear in the discussion that compounding is not just a nominalization process. Other word classes could be derived in the concatenations of two or more free forms. Again more than two free forms can be combined in Ewe compounds. Compounding is therefore a very productive word formation process in Ewe.

In chapter 4, I examined some phonological processes observed in compounding in Ewe. Some of the phonological processes I look at include both segmental and non-segmental processes; vowel deletion, consonant deletion (cluster reduction) resyllabification, tone stability and assimilation. First, I focus on establishing the permissible and impermissible vowel sequences at morpheme boundaries in Ewe compounds, (vowel sequence involving a high vowel as $V_{1,}$ vowel sequence involving a mid-vowel as $V_{1,}$ and vowel sequence involving a low vowel as V_1.) I also presented what the repair strategies in Ewe grammar are for dealing with impermissible vowel sequences at morpheme boundaries. The phenomenon (hiatus) is common when different lexical categories are compounded during compounding in Ewe. The language does not allow vowel segment sequence. In compounding in Ewe, deletion is used as a repair mechanism in resolving the problem of hiatus. For non-numeral the effect of deletion shows that, mostly the vowels with no onset are deleted. The V_2 deletion occurs in non-numerals. There is syllable deletion at the same time segment deletion. In numbers there is segment deletion but there is no syllable deletion. The low vowel is always preserved in numeral compounds that give rise to compensatory lengthening. The compensatory lengthening may be progressive or regressive depending on where the low vowel /a/ is located. The syllable that suffers from the deletion becomes short of a segment which leads to resyllabification. In a noun compound consisting of a Verb and a Noun (V-N) where the verb element contains consonant clusters and goes through reduplication, the first consonant in the reduplicated template is dropped. The chapter also examines the effects of tone on compounding in Ewe. It looks at the possible tone segments and

their effects at morpheme boundary in N-N, and other tonal processes in N-A, V-N, N-V, and N-V-N compounds. I discuss the effect of high tone, low tone and mid tone when they are juxtaposed to each other. Where the second noun ends in a high tone, the high tone is carried onto the output after its low tone prefix is elided. In the cases where the second nouns end in a low tone, the low tones of the final items assimilate the mid tones of the preceding items to mid regressively. In the case for L+M tones at morpheme boundary, the mid tones of the prefix of the second nouns elide with their segments. The low tones of the final items of the first nouns assimilate the mid tone of the final items of the second nouns to low tone progressively. For the combination of L+L tone segments at morpheme boundary, the tone and the segment of the final nouns elide. They do not surface in the output forms. Sometimes the final syllable of the stem of V-V-N compounds may have a low tone changed to a rising one. Autosegmental theory addresses the situations which put tones and other phonological features together as if they have no autonomy.

5.3 Findings and contribution to knowledge.

This thesis investigates compounding in Ewe. The study has investigated Ewe compounds both morphosyntactically and phonologically.

The study provides basic answers to how Ewe compounds are formed, the types of compounds and the relationship that exist between compounds and their constituents. The compound types the study reveals based on the form-class of the constituents in the language are N-N, N-A, N-V, V-V, V-N and N-V-N. Ewe compounds have also been classified into *attributive*, *subordinate*

and *coordinative* based on the relationship that exits between the constituents. The study also identifies exocentric and endocentric compounds in the language. The study being the first to investigate compounding at this magnitude reveals that compounding is not only a nominalization process but also an adjectivization process. The study has therefore contributed to Ewe morphology and will serve as a reference material in the literature.

Phonologically, the study shows that the Ewe does not allow vowel segment sequence. For numeral compounds the study shows that there is that case of low vowel preservation regardless of where it is located (that is whether it is V_1 or V_2). The low vowel always lengthens to compensate for the deletion of non-low vowel. With numbers again, there is segment deletion but there is no syllable deletion. The phenomenon of compensatory lengthening in numeral compounds may be regressive or progressive depending on where the low vowel is. The low vowel is also doubly associated in numeral compounds for that matter there is no tone loss in the output. Unlike the numeral compounds there is segment deletion at the same time syllable deletion in non-numeral compounds which unchecks resyllabification. The segment that elides in non-numeral compounds goes with its tone and syllable. All non-numeral compounds experience a V_2 deletion at morpheme boundaries. In reduplication, the reduplicant is an empty CV syllable.

In general, the application of the frameworks of the distinctive feature theory and the syllable theory in the context of non-linear phonology has added to the call in linguistic to distinguish features from their segments since they operate

at different levels. Finally this study adds to the study of compounding in all-purpose and specifically Ewe.

5.4 Recommendation for future studies

It will be very revealing to look at the syntactic distribution, semantic and pragmatic properties of compounds that are formed with more than three bases in discourse as a way of confirming their form class membership. This clearly shows that issues bordering on compounding are not comprehensive considering what has been done in this present study. I will, however, leave that for future research.

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APPENDIX

The items cited came from data collected from native speakers going about their normal duties, linguistic works and Ewe language course books and candidate's own understanding of Ewe as a native speaker.

NOUN-NOUN COMPOUNDS

NO	BASE 1	GLOSS	BASE 2	GLOSS	COMPOUND	MEANING
1.	àbàdzí	bed top	àvɔ̀	cloth	àbàdzívɔ̀	bedsheet
2.	àbà	mat	hó	money	àbàhó	coffin money
3.	àblàdzó	plantain	kɔ́	slice	àblàdzókɔ̀	plantain slice
4.	àbólo	bread	kpó	hill	àbólokpó	oven
5.	àbólo	bread	ewɔ́	flour	àbólowɔ́	bread flour
6.	abɔbi	anchovies	atadi	stew	abɔbitadi	anchovy stew
7.	àblɔ	street	mè	inside	àblɔ̀me	outdoor
8.	àba	bed	hó	money	àbàhó	coffin fine
9.	àbà	mat	àtí	wood	àbàtí	bed
10.	àgbà	load	kèké	truck	àgbàkèké	truck
11.	àgbà	load	afɔ	leg	àgbàfɔ̀	ladder
12.	àgbame	bowl	àtádí	pepper	àgbametádí	raw pepper
13.	àdzɔ	contribute	gà	money	àdzɔ̀gà	tax
14.	àdzàle	soap	àgba	bowl	àdzàlegbá	sponge dish
15.	àɖàŋù	idea	nù	something	àɖàŋùnú	craft
16.	àɖáka	box	dzèsì	mark	àɖákadzèsi	box number
17.	àɖibá	pawpaw	amàkpa	leaf	àɖìbámàkpa	food wrapper (leaf)
18.	àblɔɖe	freedom	àme	person/man	àblɔ̀ɖeme	freeman
19.	áde	search	gbe	bush	adegbe	hunting
20.	ádè	limy	ama	leaf	àdèmè	juice mallow
21.	àdè	hunting	àvú	dog	àdèvú	hunting dog
22.	àdè	hunting	ʋú	dance	àdèʋú	war dance
23.	àɖà	eye	ètsi	water	àɖàtsì	tears
24.	àɖù	dirt	kpó	hill	àɖùkpó	refuse dump
25.	àdzè	witch	ègà	money	àdzega	dirty money
26.	afɔ	leg	dzi	top	afɔdzi	toilet
27.	afɔ	leg	kpa	cover	afɔkpà	shoe
28.	afɔ	leg	ku	death	afɔku	accident
29.	afɔ	leg	asabu	net	afɔsabui	small fishing net
30.	afɔ	leg	àɖàŋù	skills	afɔɖaŋu	football
31.	à*f*é	home	afi	mouse	à*f*éfi	home mouse
32.	à*f*é	house	me	inside	à*f*éme	home
33.	àgbàlẽ	book/paper	kòtòkú	sack	àgbàlẽkótòkú	envelop
34.	àgblè	farm	núkú	produce	àgblènúkú	farm produce
35.	àgblè	farm	exɔ	room	àgblèxɔ̀	farm hut
36.	àgblè	farm	nú	thing	àgblènú	hoe
37.	àgbélì	cassava	amakpa	leaf	àgbèlìmàkpà	cassava leaf

38.	àgbèlì	cassava	ètsró	back	àgbèlìtsró	cassava back
39.	àgbèlì	cassava	amɔ́	dough	àgbèlìmɔ̀	cassava dough
40.	àgbèlì	cassva	kàkló		àgbèlìkàkló	
41.	àgbèlì	cassava	àgblè	farm	àgbèlìgblè	cassava farm
42.	àgbónu	entrance	dzɔ̀à	keeper	àgbónudzɔ̀à	gate keeper
43.	àgà	valley	èkpé	stone	àgàkpè	pillar
44.	aŋɔ	coal	tsi	water	aŋɔtsi	paint
45.	àhiã	love	ví	child	àhiãví	girl friend
46.	àhò	widow	asi	wife	àhòsì	widow
47.	àhò	widow	àvɔ́	cloth	àhòvɔ́	widow cloth
48.	àkaɖí	light	àtí	stick	àkaɖítí	lamp stand
49.	àkpa	fish	ta	head	àkpata	fish head
50.	alɔ́	face	go	container	alɔ́go	cheek
51.	àkɔli	dumping	kpó	heap	àkɔ́likpó	dumping place
52.	àkutsá	sponge	àgba	bowl	àkutságbá	sponge dish
53.	alɔ	hand	gɛ	metal	alɔgɛ	bangle
54.	ama	leaf	détsì	soup	amdétsì	spinach soup
55.	amedzró	stranger	xɔlá	taker	amedzróxɔa	receptionist
56.	ami	oil	àtíke	medicine	amitíke	ointment
57.	ami	oil	èʋu	car	amiʋú	fuel tanker
58.	anagótè	potato	àgblè	farm	anagótegble	potato farm
59.	anyí	cloud	èʋɔ̀	python	anyíèʋɔ̀	rainbow
60.	anyígbá	land	tátá	drawing	anyígbátátá	map
61.	àsí	hand	nu	end/mouth	àsínu	handwriting
62.	àtátútú	loose leg	èdɔ̀	sickness	àtátútúdɔ	stroke
63.	àtí	tree	ke	root	àtíke	medicine
64.	àtí	tree	èkú	seed	àtíkú	seed
65.	àtɔ	apple	ama	herb	àtɔ́ma	type of herb
66.	àtɔtɔ	pineapple	àgblè	farm	àtɔ́tɔ́gble	pineapple plantation
67.	àtíke	root	kú	seed	àtíkekú	capcule/tablet
68.	àsì	market	gbè	day	àsìgbè	market day
69.	àsí	hand	awu	dress	àsíwu	glove
70.	asra	fever	dɔ	ailment	asradɔ	fever
71.	àtí	tree	àkplɔ̃	arrow	àtíkplɔ̃	walking stick
72.	àve	forest	àtsú	male	àvètsú	jungle
73.	àve	forest	ègbɔ̃	goat	àvègbɔ̃	antelope
74.	àví	crying	hà	song	àvíha	dirge
75.	àvùvɔ	cold	àwù	dress	àvùvɔ̀wù	sweater
76.	àzã	festive	gbè	day	àzãgbè	birthday
77.	àzi	groundnut	àgblè	farm	àzigble	groundnut farm
78.	bàbà	termite	èkɔ́	hill	bàbàkɔ́	ant hill
79.	blí	corn	wɔ́	flour	blíwɔ́	corn flour
80.	blí	corn	àgblè	farm	blígble	corn farm
81.	dè	home	kɔnú	ritual	dèkɔnú	culture
82.	de	palm	tsi	water	detsi	soup
83.	de	palm	àhà	wine	deha	palm wine

84.	dɔdzí	work top	kpɔ̀lá	seer	dɔ̀dzíkpɔ́lá	manager
85.	dɔ̀	stomach	kà	rope	dɔ̀kà	intestine
86.	dɔ̀	stomach	mè	inside	dɔ̀mè	abdomen
87.	dɔ̀	sick	ami	oil	dɔ̀mì	ointment
88.	dɔmè	stomach	dzò	fire	dɔ̀mèdzò	anger
89.	dɔ̀	work	amegã	big person	dɔmegã	boss
90.	dɔ̀	stomach	nɔ̀	female	dɔ̀nɔ̀	patient
91.	dù	town	kɔ́	hill	dùkɔ́	nation
92.	dù	town	tà	head	dùtà	abroad
93.	dù	town	ègà	money	dùgà	contribution
94.	dzè	salt	tsì	water	dzètsì	salt solution
95.	dzì	heart	kú	death	dzìkú	anger
96.	dzì	birth	gbè	day	dzìgbè	birthday
97.	dzí	top	awu	dress	dziwu	shirt
98.	dzìdzɔ	happy	nyà	word	dzìdzɔ̀nyà	good news
99.	dzò	fire	kà	rope	dzòkà	charm
100.	dzò	fire	àká	coal	dzòká	charcoal
101.	dzò	fire	ègbé	grass	dzògbè	savanna
102.	dzò	fire	nú	thing	dzònú	bead
103.	dzò	fire	gbɔ́	place/side	dzògbɔ́	porridge
104.	dzò	fire	àmì	oil	dzòmì	red/palm oil
105.	dzò	fire	àtí	tree	dzòtí	clan
106.	dzò	fire	wɔ́	powder	dzòwɔ́	ash
107.	dzò	fire	àfĩ	powder	dzòfĩ	ash/grey
108.	dzò	fire	mè	inside	dzòmè	december
109.	dzò	fire	àvé	forest	dzòvé	january
110.	dzò	fire	dzè	rest	dzòdzè	february
111.	dzò	fire	gò	gourd	dzògò	corner
112.	dzò	fire	nú	thing	dzònú	bead
113.	ɖètí	cotton	èkà	thread	ɖètíka	cotton wool
114.	de	palm	àgblè	farm	degble	palm plantation
115.	de	palm	àtí	tree	dètí	palm tree
116.	dè	home	dù	town	dedu	home town
117.	de	palm	àhà	wine	déha	palm wine
118.	dè	home	àzã	festival	dèzã	cultural festival
119.	dù	town	nyà	word	dùnyà	politics
120.	eʋè	ewe	mè	inside	eʋèmè	eweland
121.	fe	money	tú	payment	fetú	wages
122.	fiẽ	evening	nú	food	fiẽnú	supper
123.	fia	chief	à*f*è	owner	fia*f*é	chief palace
124.	fia	chief	zìkpuì	stool	fiàzipkui	
125.	fia	chief	àtíkplɔ	staff	fiàtíkplɔ	linguist staff
126.	fia	chief	kúkú	hat	fiàkúkú	crown
127.	*f*o	stomach	me	inside	*f*ome	family
128.	*f*u	sea	ta	head	*f*uta	coast
129.	*f*u	sea	gódo	behind	*f*ugódo	oversea
130.	gà	metal	èmɔ̀	machine	gàmɔ̀	trap

131.	gà	metal	nú	thing	gànú	tin
132.	gà	metal	àgba	bowl	gàgbá	pan
133.	gà	metal	èxɔ̀	room	gàxɔ̀	prison
134.	gà	metal	èsɔ́	horse	gàsɔ́	bicycle
135.	gà	metal	gò	gourd	gàgò	tank
136.	ga	metal	ete			
137.	gà	metal	àɖákà	box	gàɖákà	trunk
138.	gà	metal	èkpò	log	gàkpò	iron/metal
139.	gà	metal	ŋ̀kú	eye	gàŋkú	eye glasses
140.	gà	metal	ètsí	ladle	gàtsí	spoon/ladle
141.	gà	metal	àwù	dress	gàwù	shield
142.	gè	beard	àtí	tree	gètí	type of fish
143.	gbàgblàdzà	cockroach	àtíkè	medicine	gbàgblàdzàtíkè	insecticide
144.	gbe	grass	àɖuɖɔ	rubbish	gbèɖúɖɔ	rubbish
145.	gbè	voice	à*f*ã	sound	gbè*f*ã	announcement
146.	gbè	grass	ta	head	gbèta	abroad
147.	gbè	voice	gbɔ̀gblɔ̀	saying	gbègbɔ̀gblɔ̀	language
148.	gbè	voice/lang	tɔ́	owner	gbètɔ́	human being
149.	gbɔ̀	town	mè	inside	gbɔ̀mè	outdoors
150.	gbɔ̃	goat	elã	meat	gbɔ̃lã	goat meat
151.	gbɔ̃	goat	détsi	soup	gbɔ̃détsi	goat soup
152.	gbé	bush	èhà	pig	gbéha	bush pig
153.	gbé	bush	afi	mouse	gbéfi	bush mouse
154.	gbɔgbɔ	spirit	kɔkɔe	clean/holy	gbɔgbɔkɔkɔe	holy spirit
155.	gbɔgbɔ̀mè	spirit inside	èdɔ̀	ailment	gbɔ̀gbɔ̀mèdɔ̀	psychosomatic illness
156.	gbè	voice	dé	palm	gbèdè	blacksmith#
157.	gbe	bush	àvú	dog	gbèvú	ruffian
158.	glì	wall	xɔ̀	building	glìxɔ̀	mud house
159.	hà	song	ló	crocrodile	hàló	idiom
160.	hà	song	gbè	voice	hàgbè	singing voice
161.	kètékè	train	mɔ́	road	kètékèmɔ́	railway
162.	kètékè	train	dzè*f*é	rest place	kètékèdzè*f*é	train station
163.	kesé	monkey	àkàbà	mark	kesékaba	deceit
164.	kesé	monkey	kúkú	hat	kesékúkú	fooled
165.	kokló	chicken	lã	meat	koklólã	chicken
166.	kokló	chicken	àzì	egg	koklózì	egg
167.	kokló	chicken	àtsú	male	koklótsú	rustle
168.	kòko	cocoa	àgblè	farm	kòkogblè	cocoa farm
169.	kokló	chicken	àvàlã	wing	kokĺovalã	chicken wing
170.	kokló	chicken	èfú	feather	koklófú	chicken feather
171.	kú	death	nú	thing	kúnú	funeral
172.	kɔ	neck	nú	thing	kɔnú	ritual
173.	kɔ	neck	ga	metal	kɔga	necklace
174.	ka	rope	ègó	pant	kamegó	nicker
175.	kpé	stone	kú	seed	kpékú	cheapens

176.	kpé	cough	èdɔ̀	ailment	kpédɔ	cough ailment
177.	kpé	cough	zã	night	kpezã	flu
178.	kpé	cough	àtíkè	medicine	kpétíkè	candy/cough syrup
179.	kpèkpé	gathering	àgbàlẽ	book	kpèkpégbalẽ	invitation card
180.	kpo	stick	dɔ	ailment	kpodɔ	leprosy
181.	kpɔ	fence	mè	inside	kpɔ́mè	garden
182.	kpɔ	fence	xa	side	kpɔ́xa	toilet
183.	kú	death	gà	money	kúga	funeral donation
184.	lã	meat	me	part	lãme	body/health
185.	lã	animal	àgbalẽ	skin	lãgbalẽ	leather
186.	lã	animal	nya	word	lãnya	nonsense
187.	lãgbalẽ	learther	kotokú	bag	lãgbalekotokú	leather bag
188.	máwú	God	nya	word	máwúnya	gospel
189.	máwú	God	dɔ̀lá	servant	máwúdɔlá	angel
190.	mɔ́	road	tó	side	mɔ́tó	roadside
191.	mɔ	road	dzí	top	mɔ́dzí	journey
192.	mɔ	road	nu	mouth	mɔ́nu	entrance
193.	mɔli	rice	àgblè	farm	mɔ́ligble	rice plantation
194.	mú	mosquito	dɔ́	shed	múdɔ́	mosquito net
195.	mú	mosquito	àtíkè	medicine	mútíkè	insecticide
196.	né	kernel	ami	oil	némi	kernel oil
197.	nɔví	sibling	nyɔ́nù	female	nɔvínyɔ́nù	sister
198.	nɔví	sibling	ŋútsù	male	nɔvíŋútsù	brother
199.	nɔví	sibling	nɔví	sibling	nɔvínɔví	relatives
200.	nú	thing	ɖuɖu	eating	núɖuɖu	food/menu
201.	nú	thing	kɔ́	hill	núkɔ́	slice
202.	nú	thing	àgbágbè	living	nùgbágbè	bacteria
203.	nú	thing	kú	death	núkú	seed
204.	nú	thing	nànà	giving	núnáná	gift
205.	nyadzɔdzɔ	news	àgbàlẽ	book	nyadzɔdzɔgbalẽ	newspaper
206.	nyi	cow	àɖú	teeth	nyiɖú	ivory
207.	nyi	cow	nótsì	breast water	nyinótsì	milk
208.	nyi	cow	àfɔtí	leg stick	nyifɔtí	cow leg (meat)
209.	nyi	cow	lã	meat	nyilã	beef
210.	nya	word	èkpé	stone	nyakpé	morpheme
211.	nya	word	gbè	voice/ language	nyagbe	sentence
212.	nya	word	àtí	tree	nyatí	subject matter
213.	nyɔ́nu	female	fìà	chief	nyɔ́nufia	queen mother
214.	ŋdí	morning	nú	thing	ŋdinú	breakfast
215.	ŋdɔ	afternoon	nú	thing	ŋdɔnú	lunch
216.	ŋkú	eye	mè	inside	ŋkúme	face
217.	ŋɔ̀ŋlɔ̀	writing	dzèsì	sign	ŋɔ̀ŋlɔ̀dzèsì	letters
218.	ŋɔtímè	nostril	dzèsì	sign	ŋɔtímedzesi	tilde
219.	ŋútí	skin	nya	word	ŋútínya	story

220.	sika	gold	èxɔ̀	room	sikáxɔ̀	golden room
221.	súɖí	pillow	kotokú	sack	súɖíkotokú	pillow case
222.	siká	gold	àsígɛ̀	ring	sikásígɛ̀	golden ring
223.	siká	gold	tógɛ̀	earring	sikátógɛ̀	golden earring
224.	siká	gold	àɖáká	box	sikáɖáka	golden casket
225.	siká	gold	àfɔ̀kpà	footwear	sikáfɔ̀kpà	golden boot
226.	siká	gold	èkplú	cup	sikákplú	golden cup
227.	siká	gold	èkɔ̀wla	necklace	sikákɔwla	golden necklace
228.	ta	head	kú	seed	takú	headgear
229.	ta	head	àtí	tree/wood	tatí	pestle
230.	ta	head	nyà	word	tanyà	heading
231.	ta	head	kpékpé	gathering	takpékpé	meeting
232.	te	yam	àgblè	farm	tegble	yarm farm
233.	tú	gun	kpé	stone	túkpé	bullet
234.	tú	gun	èxɔ̀	room	túxɔ	amory
235.	tó	ear	gà	metal	tógɛ	earring
236.	tó	ear	ɣlí	sound	tóɣli	disturbance
237.	tó	ear	mè	inside	tóme	earlobe #
238.	trɔ	fetish	xɔ̀	house	trɔxɔ̀	shrine
239.	trɔ	fetish	ʋú	drum	trɔʋú	fetish drum
240.	tsátsá	lotto	àgabàlẽ	book	tsátságbalẽ	lottery ticket
241.	tsátsá	lottery	gò	container	tsátságo	gambler
242.	tsátsá	lottery	mɔ	machine	tsátsámɔ	lottery machine
243.	tɔdzí	sea	àhà	wine	tɔdzíha	schnapps
244.	tɔdzí	sea	èʋu	car	tɔdzíʋú	ship
245.	tsì	water	èkpé	stone	tsikpé	ice cube
246.	tsì	water	kɔ	neck	tsikɔ	thirst
247.	tugbe	beauty	efia	queen	tugbefia	beauty queen
248.	vì	child	ŋútsù	male	vìŋútsù	son
249.	vì	child	nyɔ́nù	female	vinyɔnù	daughter
250.	vì	child	nɔ̀	mother	vìnɔ̀	nursing morther
251.	vì	child	tɔ́	father	vìtɔ́	father
252.	ʋu	car	àfɔ̀kú	accident	ʋufɔkú	motor accident
253.	ʋu	car	àdzɔ̀	tax	ʋudzɔ	fare
254.	ʋu	car	àtí	tree	ʋùtí	type of tree
255.	ʋù	blood	àtíkè	medicine	ʋùtíkè	blood tonic
256.	ʋù	blood	kɔ́	hill	ʋùkɔ́	blood clot
257.	ʋu	car	tó	side	ʋùtó	lorry station
258.	ʋu	drum	gbè	voice	ʋugbe	drum language
259.	xèxlèmè	amount	dzèsì	sign	xèxlèmèdzèsì	number
260.	xɔ	room	fetú	payment	xɔfetú	rent
261.	xɔlã	game	detsi	soup	xɔlãdetsi	game soup
262.	ya	air	mè	inside	yamè	weather/ atmosphere
263.	yame	atmosphere	ʋú	car	yameʋú	aeroplane
264.	yameʋú	aeroplane	dzè*ƒé*	rest place	yameʋúdze*ƒé*	airport
265.	yame	atmosphere	tɔ́/nú	owner/	yametɔ́	witch/wizard

				thing		
266.	zã	night	nú	thing	zãnú	bribe
267.	zã	night	gbé	bush	zãgbé	night hunting
268.	zã	night	eʊú	car	zãʊú	deceit

VERB –NOUN COMPOUNDS

NO	BASE 1	GLOSS	BASE 2	GLOSS	COMP.	MEANING
1	dzídzí	measure	nú	thing	dzídzínú	measuring tin
2	dzì	sing	hà	song	hàdzìdzì	singing
3	dzrá	sell	nú	thing	núdzáddzrá	sales
4	dó	plant	dzì	heart	dzìdódó	endurance
5	ɖó	gather	dzè	voice	dzèɖóɖó	chatting
6	ɖè	remove	kúkú	hat	kúkúɖeɖe	plea
7	ɖì	burry	tsà	boredom	tsaɖiɖi	touring
8	ɖù	eat	nú	thing	núɖuɖu	food
9	ɖù	eat	dzí	top	dzíɖuɖu	victory
10	fà	mix	dé	palm	défafa	palm paste
11	fà	mix	àzi	groundnut	àzifafa	groundnut syrup
12	fà	mix	amɔ́	dough	amɔ́fafa	dough syrup
13	fɔ́	wake	ŋɔli	time	fɔ́ŋli	down
14	*f*ò	gather	*f*ú	bone	*f*ú*f*o*f*o	gathering
15	*f*ò	bit	kókó	porridge	kókó*f*o*f*o	plea
16	kù	drive	ʊu	car	ʊukuku	driving
17	nyi	lick	dome	property	domenyínyí	inheritance
18	ʊlì	drag	hò	money	hòʊìʊli	competition
19	ʊù	open	ŋkú	eye	ŋkúʊuʊu	modernity
20	wɔ̀	maɔke	hò	noise	hòwɔ̀wɔ̀	commotion
21	xɔ̀	take	dzò	fire	dzòxɔ̀xɔ̀	heat
22	zɔ̀	walk	mɔ́	way	mɔ́zɔzɔ	journey

VERB-VERB COMPOUNDS

NO	BASE 1	GLOSS	BASE 2	GLOSS	COMPOUND	MEANING
1.	dó	test	kpɔ́	see	dodókpɔ́	exam
2.	ɖó	taste	kpɔ́	see	ɖɔɖókpɔ́	tasting
3.	ɖà	cook	*f*lè	buy	ɖà*f*lè	food
4.	gbɔ̀	breath	xí/xé	block	gbɔ̀xí	asthma
5.	kè	open	té	close	keté	kente cloth
6.	ku	dig	xí	block	kuxí	burden
7.	sa	tie	kplí	stick	sakplí	lie
8.	tsɔ́	take	ɖù	eat	tsɔ́ɖu	benefit
9.	tsɔ́	take	kè	open	tsɔ́ke	forgive
10.	xɔ̀	take	sè	hear	xɔ̀sè	faith
11.	xɔ̀	take	vá	come	xɔ̀vé	destiny

NOUN-VERB COMPOUNDS

NO.	BASE1	GLOSS	BASE2	GLOSS	COMP.	MEANING
1.	agbà	load	na	give	agbana	credit
2.	agbà	load	te	drag	agbate	heavy load
3.	agbà	load	tsɔ/kɛ	carry	agbakɛ/tsɔ	shelve
4.	agbè	life	lì	to be/is	agbeli	cassava
5.	afɔ	leg	kú	die	afɔku	accident
6.	dzì	heart	kú	die	dziku	anger
7.	dzì	heart	dzɔ̀	straighten	dzidzɔ	happiness
8.	dzì	heart	vé	pain	dzive	heartache
9.	ɖo	cloth	vú	tear	ɖovu	rag
10.	kɔ	neck	zɔe	rest	kɔzɔe	pillow
11.	mú	mosquito	dɔ́	cover	mudɔ	mosquito net
12.	nu	mouth	*f*o	beat	nu*f*o	talk/speech
13.	nu	thing	ɖui	eat up	nuɖui	rheumatism
14.	nu	mouth	kú	die	nuku	surprise
15.	ɣe	sun	trɔ́	turn	ɣetrɔ	afternoon
16.	ɖò	cloth	vú	tear	ɖòvú	rag

NOUN-ADJECTIVE COMPOUNDS

NO	BASE 1	GLOSS	BASE 2	GLOSS	COMP.	GLOSS
1.	àblàdzó	plantain	meme	roasted	àblàdzómeme	roasted plantain
2.	àbì	wound	yeye	new	àbìyeye	a cut
3.	àbì	wound	xóxó	old	àbìxóxó	scar
4.	àbɔ	arm	kpui	short	àbɔ̀kpui	short sleeve
5.	àbɔ	arm	lègbè	long	àbɔ̀lègbè	long sleev
6.	àgba	bowl	gbadze	flat	àgbagbadze	tray
7.	àgba	bowl	gobo	dip	àgbagobo	basin
8.	àgbè	life	yeye	new	àgbèyeye	new life
9.	àgbàtè	load	ví	small	àgbàtèví	porter
10.	àhà	drink	víví	sweet	àhàvíví	soft drink
11.	àkpatá	hall	gã	big	àkpatágã	main hall
12.	ama	leaf	mumu	fresh	amamumu	green
13.	ame	man	dzró	empty/new	amedzró	guest
14.	amedzró	guest	dzè*f*é	rest place	amedzródze*f*é	hotel
15.	ame	man	gã́	big	amegã́	sir /mr
16.	ame	man	gbètɔ́	being	àmègbètɔ́	human being
17.	ame	man	yibɔ	black	ameyibɔ	black man
18.	àbɔ	hand	legbe	long	àbɔ̀legbe	long sleeve
19.	àhà	wine	víví	sweet	àhàvíví	soft drink

20.	àhiã	courting	ví	small	àhiãví	girl friend
21.	à*ɟ*énɔ	madam	ví	small	à*ɟ*énɔví	miss
22.	àgbàlẽ	book	ví	small	àgbàlẽví	documents
23.	ame	man	dró	empty	amedzró	guest
24.	àgbèli	cassava	mèmè	roasted	àgbèlìmèmè	roasted cassava
25.	ame	man	gã	big	amegã	sir/mr
26.	ame	man	yibɔ	black	ameyibɔ	blackperson
27.	ame	man	tsitsi	grow	ametsitsi	adult
28.	amɔ	dough	ʋávɑ̃́	leaven	amɔ́ʋávɑ̃́	leaven dough
29.	amɔ	dough	mumu	raw	amɔ́mumu	raw dough
30.	akpa	fish	mú	fresh	akpamúmu	fresh fissh
31.	akpa	fish	yiyi	smoked	akpayiyi	smoked fish
32.	akpa	fish	ta	head	akpata	fish head
33.	àtá	thigh	legbe	long	àtálegbe	trouser
34.	aŋutí	orange	ɖiɖi	ripe	aŋutíɖiɖi	yellow
35.	àzi	groundnut	gbó	fresh	àzìgbó	fresh groundnut
36.	àzi	groundnut	tɔtɔ	roasted	àzítɔtɔ	roasted groundnut
37.	àzi	groundnut	tutu	grinded	azitutu	groundnut paste
38.	blí	corn	yeye	new	blíyeye	fresh corn
39.	blí	maize	tɔtɔ	roasted	blítɔtɔ	roasted corn
40.	blí	corn	mumu	raw/fresh	blímumu	fresh corn
41.	blí	corn	*ɟ*ú*ɟ*ú	dried	blí*ɟ*ú*ɟ*ú	dried corn
42.	daa	mother	ví	small	daaví	sister
43.	detsi	soup	*ɟ*ú*ɟ*úí	dry	detsi*ɟ*ú*ɟ*úí	type of soup
44.	dzí	heart	tìtrì	thickened	dzìtìtrì	heartless
45.	dzì	heart	blèwù	slow	dzìblèwù	patient
46.	dzì	heart	gbàdzà	wide	dzìgbàdzà	big heart
47.	dzì	heart	kpèkpè	heavy	dzìkpèkpè	heavy heart
48.	dɔ̀	sickness	dze	red	dɔ̀dze	leprosy
49.	dù	town	gã	big	dùgã	city
50.	dù	town	gbàdzà	wide	dùgbàdzà	community
51.	nú	thing	dzádzrá	selling	núdzádzrá	sale items
52.	dzɔgbè	destiny	nyúí	good	dzɔ̀gbènyúí	good luck
53.	ɖèká	one	kpúí	short	ɖèkákpúí	gentle man
54.	ɖètùgbì	lady	ví	small	ɖètùgbìví	young lady
55.	fia	chief	gá	big	fiagá	paramount chief
56.	gànú	metal thing	ví	small	gànúví	buckle
57.	gbɔ̀gbɔ̀	spirit	vɔ̃́	bad	gbɔ̀gbɔ̀vɔ́	devil
58.	gbɔ̀gbɔ̀	spirit	kɔ̀kɔ̀e	clean	gbɔ̀gbɔ̀kɔ̀kɔ̀è	holy spirit
59.	gbɔ̃	goat	dzĩ	red	gbɔ̃dzĩ	dog
60.	gbè	grass	mú	raw/fresh	gbèmú	green
61.	glì	wall	kpò	shot	glìkpò	broken wall
62.	ɣè	sun	bia	red	ɣèbia	rust
63.	ɣletí	moon	ví	small	ɣletíví	star
64.	ka	thread	dzẽ	red	kadzẽ	blood
65.	ké	sand	ví	small	kéví	small sack
66.	kɔ́ŋkɔ́	glass	ví	small	kɔ́ŋkɔ́ví	tot glass

67.	koklo	chicken	ví	small	kokloví	chick
68.	kókó	porridge	ɣí	white	kókóɣí	white porridge
69.	kɔ́	hill	dze	red	kɔ́dze	red mud (paint)
70.	lã	meat	tɔtɔ	fried	lãtɔtɔ	fried meat
71.	lã	meat	meme	roasted	lãmeme	roasted meat
72.	lã	meat	yiyi	smoked	lãyiyi	smoked meat
73.	lɔ	love	xó	old	lɔxó	mother inlaw
74.	lɔ̀lɔ̀	love	yeye	new	lɔ̀lɔ̀yeye	fresh love
75.	lɔ̀lɔ̀	love	ŋ̀kúmè	facial	lɔ̀lɔ̀ŋ̀kúmè	facial love
76.	mɔ́	road	didi	long	mɔ̀didi	long journey
77.	mɔ́	road	xáxá	narrow	mɔ́xáxá	narrow road
78.	mɔ́	road	dzèvè	divided into	mɔ́dzèvè	junction/forked
79.	mɔ́	way	keke	wide	mɔ́keke	holiday
80.	mɔ́	road	tátá	cleared	mɔ́tátá	cleared road
81.	mɔ́	road	dódó	constructed	mɔ́dódó	tarred road
82.	mo	face	nyúí	good/fine	monyúí	handsome face
83.	mo	face	dzáká	restless	modzáká	entertainment
84.	núgbágbè	living thing	ví	small	núgbágbèví	bacteria
85.	nú	thing	maɖinú	useless	númaɖinú	unnecessary thing
86.	núŋɔŋlɔ	writing	kpui	short	núŋɔŋlɔkpui	short hand
87.	nya	word	nyúí	good	nyanyúí	good news
88.	nubáblá	covenant	xóxó	old	nubábláxóxó	old covenant
89.	nubáblá	covenant	yeye	new	nubábláyeye	new covenant
90.	suku	school	kɔ́kɔ́	tall	sukukɔ́kɔ́	high school
91.	srɔ	spouse	ɖi	young	srɔɖi	young spouse
92.	takú	headgear	ví	small	takúví	handkerchief
93.	tɔ́	father	ɖi	young	tɔ́ɖi	uncle
94.	tɔ́	father	ga	big	tɔ́ga	uncle
95.	tsi	water	fafa	cold	tsifafa	cold water
96.	tsi	water	dzódzòe	hot	tsidzódzoe	hot water
97.	tsi	water	gbɔgblɔe	warm	tsigbɔgblɔe	warm water
98.	tsi	water	pɔtɔ	muddy	tsipɔtɔ	muddy water
99.	tsi	water	zɔzrɔ	clear	tsizɔzrɔ	clean water
100.	tsi	water	bublu	dirty	tsibublu	dirtywater
101.	tsi	water	tsétsé	hanging	tsitsétsé	a fall
102.	tɔ	river	dzí	red	tɔdzí	red sea
103.	vi	child	dzi	red	vidzi	baby
104.	xe	bird	ví	small	xeví	bird
105.	xɔ	room	háyá	rented	xɔháyá	rented room
106.	zì	seat	kpùì	short	zikpùì	stool

NOUN-VERB-NOUN COMPOUNDS

NO	BASE 1	GLOSS	BASE 2	GLOSS	BASE 3	GLOSS	COMP.	GLOSS
1	àgbà	load	dró	lift	te*ƒé*	place	àgbàdró*ƒé*	mile
2	ame	human	kɔ́	take	mɔ	machine	amekɔ́mɔ	lift
3	ami	oil	dze	buy	te*ƒé*	place	amidze*ƒé*	filling station
4	anyí	down	mlɔ́	sleep	awu	dress	anyímlɔ́wu	pajamas
5	aŋutí	orange	fiá	squeeze	emɔ	machine	aŋutífiámɔ	juicer
6	àsí	hand	klɔ́	wash	te*ƒé*	place	àsíklɔ́*ƒé*	wash basin
7	àtíke	medicne	xɔ	take	àgbàle	book	àtíkexɔgbale	prescription
8	bɔl	ball	*ƒ*o	play	há	group	bɔl*ƒ*ohá	football team
9	dɔ̀	work	dé	put	àsí	hand	dɔ̀dási	responsibility
10	dɔ̀nɔ̀	patient	kpɔ̀	see	exɔ	room	dɔ̀nɔ̀kpɔ́xɔ	surgery
11	dɔ̀	work	tsɔ́	take	èvi	child	dɔ̀tsɔ́ví	steward
12	dɔ̀	work	wɔ	do	nú	thing	dɔ̀wɔnú	tool
13	dzì	heart	dé	put	*ƒ*o	stomach	dzìdé*ƒ*o	encouragement
14	dzí	heart	dzè	fall	émè	inside	dzìdzemè	comfort
15	gà	money	xɔ̀	take	àgbàle	book	gàxɔ̀gbàle	cheque
16	gbe	weed	lɔ́	collect	kusi	basket	gbèlɔ́kusi	litter bin
17	gè	beard	lu	shave	èhé	knife	gèlùhé	shaving stick
18	ɖà	hair	lu	shave	èhé	knife	ɖàlùhé	scissors
19	mɔ́lu	rice	si	harvest	èhé	knife	mɔ́lusihé	
20	mama	grandmother	yɔ́	call	èví	child	mamayɔ́ví	grandchild
21	máwúti	godwater	dé	pour	eta	head	máwútsidéta	baptism
22	mɔ́	road	fíá	point	dzèsì	sign	mɔ̀fiadzesi	road sign
23	mɔ́	road	fìá	point	àkaɖi	light	mɔ́fíákaɖí	traffic light
24	mɔ́	road	glɔ́	bend	tè*ƒé*	place	mɔ́glɔ́*ƒé*	curve
25	nú	thing	dzrá	sell	èga	money	núdzrága	proceed
26	nú	thing	ɖa	cook	mlkpuí	stove	núɖamlékpuí	cooker
27	nú	thing	ɖu	eat	té*ƒé*	place	núɖu*ƒé*	restaurant
28	nú	thing	ɖu	eat	gàtsí	spoon	núɖugatsí	table spoon
29	nú	thing	ɖu	eat	àkplɔ	table	núɖukplɔ	dining table
30	nú	thing	ŋlɔ	write	àtí	stick	núŋlɔtí	pen/pencil
31	nú	thing	tɔ	fry	àgba	bowl	nútɔgbá	frying pan
32	nú	thing	tu	grind	mɔ	machine	nútumɔ	blender
33	ʊu	car	ku	drive	ahuhɔe	mirror	ʊukuhuhɔe	driving mirror
34	ʊu	blood	trɔ	turn	atike	medicine	ʊutrɔtike	blood tonic
35	xɔme	room	tso	divide	avɔ	cloth	xɔmetsovɔ	curtain