

THE STRUCTURE OF THE DP IN DAGBANI

BY

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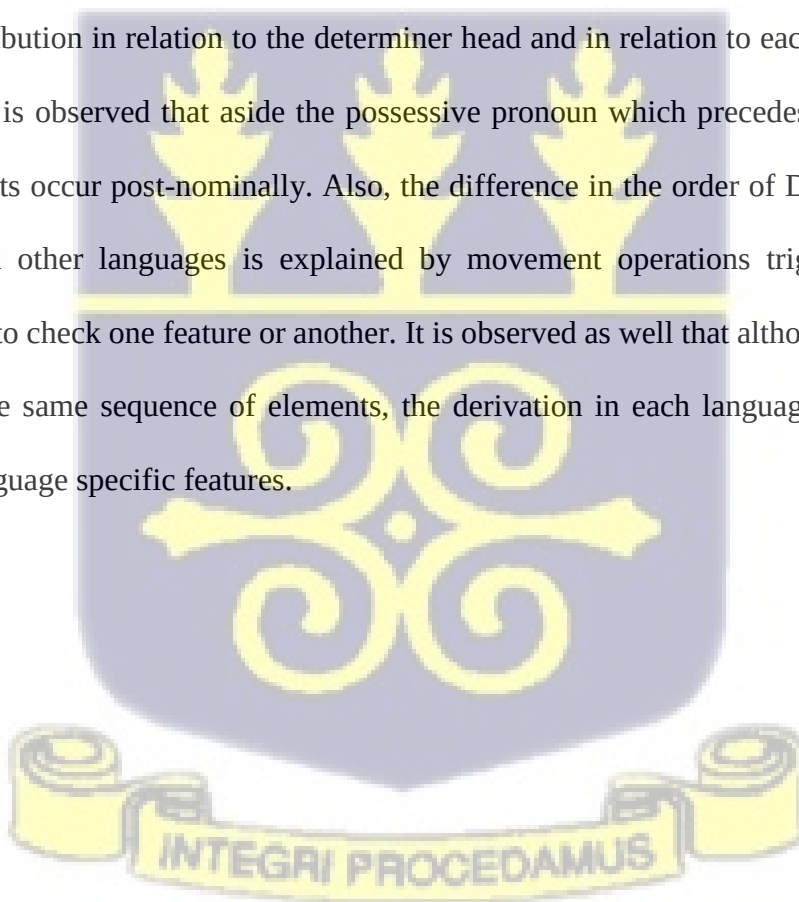
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ABSTRACT

Guided by Chomsky's (1995) Minimalist Program, this thesis examines the structure of the Dagbani DP. It gives a systematic description of the different combinations of DP-internal elements, the order in which they occur, and also accounts for the derivation of these different element combinations based on theoretical assumptions presented in the literature. The semantic and morphological properties of DP elements such as articles, demonstratives, numerals, quantifiers and possessive pronouns are discussed. An analysis of their distribution in relation to the determiner head and in relation to each other is also presented. It is observed that aside the possessive pronoun which precedes the noun, all other elements occur post-nominally. Also, the difference in the order of DP elements in Dagbani and other languages is explained by movement operations triggered by the requirement to check one feature or another. It is observed as well that although languages may have the same sequence of elements, the derivation in each language could differ based on language specific features.



DECLARATION

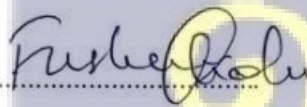
I do hereby declare that with the exception of references that have been duly cited, this dissertation is the result of my own research, and that it has not been presented either in whole or in part for another degree elsewhere.

Khadija Abdulai.....

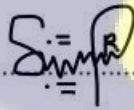
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DEDICATED

To

MY FAMILY



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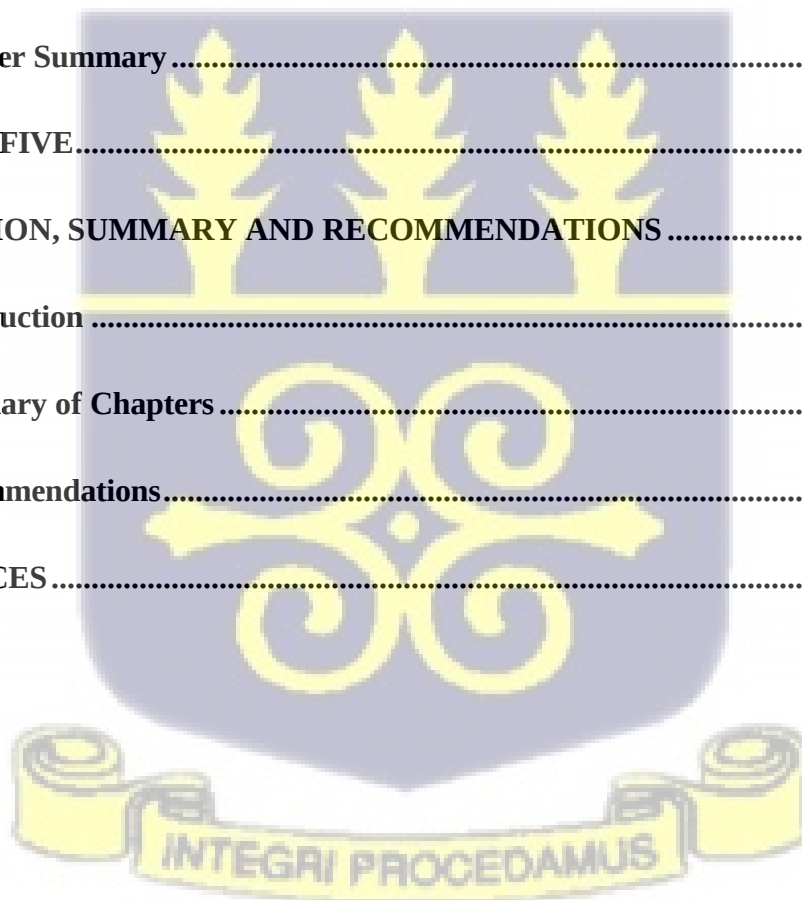


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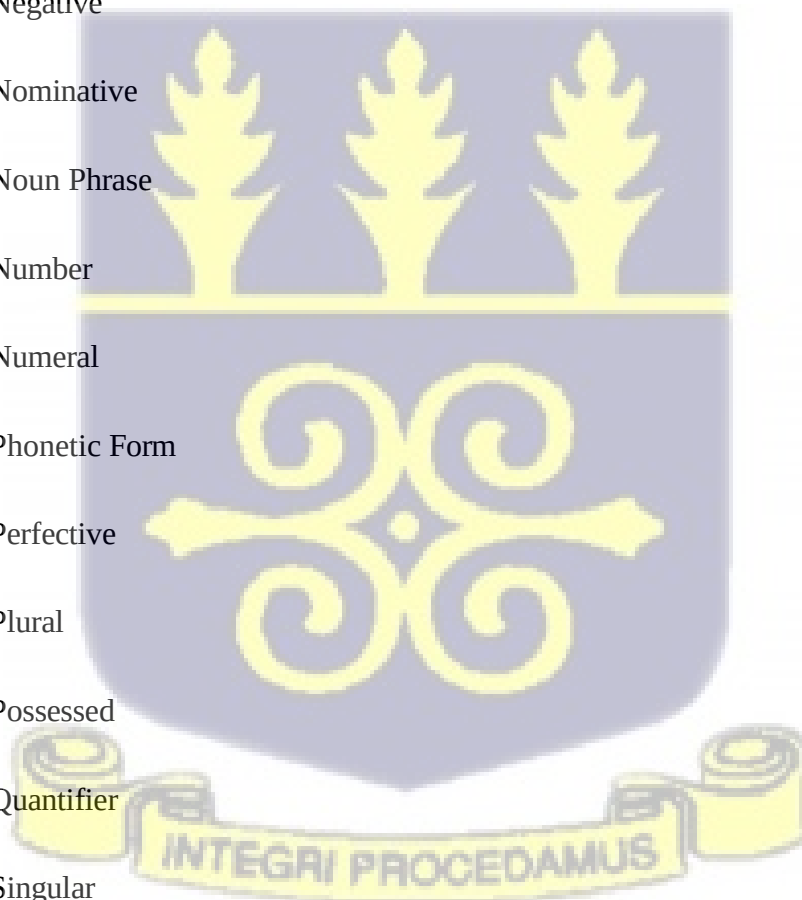


LIST OF ABBREVIATIONS

1	First Person
2	Second Person
3	Third Person
CL	Classifier
CLP	Classifier Phrase
D	Determiner
DEF	Definite
DEM	Demonstrative
DM	Distal Marker
DP	Determinant Phrase
FL	Faculty of Language
FP	Functional Phrase
GB	Government and Binding
H	High
HORTA	Hortative
IC	Inclusiveness Condition
INAN	Inanimate
Infl	Inflection



IP	Inflectional Phrase
IPFV	Imperfective
L	Low
LF	Logical Form
MP	Minimalist Program
N	Numeration
N	Noun
NEG	Negative
Nom	Nominative
NP	Noun Phrase
Num	Number
NUM	Numeral
PF	Phonetic Form
PFV	Perfective
PL	Plural
POSSD	Possessed
QNT	Quantifier
SG	Singular
Spec	Specifier



SVO	Subject-Verb-Object
UG	Universal Grammar
VP	Verb Phrase
V	Verb



CHAPTER ONE

GENERAL INTRODUCTION

1.0 Introduction

The inconsistencies in the analysis of the noun phrase under the X-bar framework came to be resolved following the proposal to treat the nominal and clausal domains in a similar fashion. In his seminal work, which laid the foundation for a fresh analysis of the internal structure of the noun phrase (NP), Abney (1987) argues that a parallelism exists between the nominal and clausal domains, in that, they are both headed by functional elements. That is, the determiner and inflection respectively. Hence, what is traditionally considered as the noun phrase is headed by the determiner (D) and not the noun (N) and by extension, the determiner phrase (DP) is to be preferred to noun phrase (NP) in labelling the nominal category. The DP-hypothesis, as it has come to be known in the literature, has been extensively investigated from different linguistic perspectives in a variety of languages (see for example, Granfeldt 2000; Visser 2008; Fassi Fehri 1999; Chang 2009; MacLaughlin 1997; Aboh 2004). In general, these discussions have presented varying and yet interesting reports concerning this hypothesis. From a syntactic perspective, for instance, some languages are known to share the same DP-internal elements but differ in terms of the ordering of these elements. Some languages are observed to have the same ordering of elements within their DPs but deeper analysis reveals that their derivations are not consistent with one another. Taking these findings into account, the current study seeks to follow suit by investigating the structure of the Dagbani DP. Specifically, the study will be examining the order of elements within the DP and account for the derivations of these

different order combinations. Particular attention is also paid to observations characteristic of the Dagbani DP as well as similarities it shares with other languages in relation to the theoretical assumptions put forward in the literature about the DP.

1.1 The Dagbani Language and its Speakers

Dagbani is amongst the major languages spoken by the people of northern Ghana. Speakers of the language are generally referred to as *Dagbamba*. The language has the status of being one of the eleven (11) government-sponsored languages used as medium of instruction in schools. Aside that, it is also recognized as a subject or course from the elementary level to the tertiary level. Dagbani belongs to the group of languages that has been classified under the Gur language family (Wilson 1971). Bodomo (1993; 1994; 2005) however disagrees with this and proposes that the term ‘mabia’, which means *mother’s child/sibling*, better describes languages belonging to this family since it depicts the close relationship that exists between them. Hence, the term ‘mabia languages’ is sometimes used as a cover name for Dagbani and its sister languages like Dagaare, Gurune, Kusaal, Buli, Mampruli and Kasem. Hudu (2010) notes that Dagbani has three main dialects: Tomosili, Nayahili and Nanunli. The Tomosili dialect, which is also known as the western dialect, is spoken in and around Tamale, the administrative capital of the northern region. Nayahili, the eastern dialect, is spoken in and around Yendi which is the traditional capital of the region and the Nanunli dialect is spoken in Bimbilla and surrounding towns. Aside from their distinction in terms of the geographic location of speakers, they also differ from each other in terms of tone and intonation, and some lexical and grammatical items (Hudu 2010). These major dialects also have sub-dialects that are spoken in some areas in the region. The data in (1)

taken from Inusah (2020) illustrates these dialectal differences in terms of lexical items and tone.

1) Tomosili	Nayahili	Nanunli	Gloss
a. [zɔʔ-ó]	[zɔʔ-ó]	[dʒò-hò]	‘head’
b. [zɔ-lí]	[zɔ-lí]	[dʒò-li]	‘tail’
c. [nú]	[nú]	[nù]	‘drink’
d. [nɔʔ-ó]	[nɔʔ-ó]	[nòhɔ]	‘navel’
e. [nɔʔ-ó]	[nɔʔ-ó]	[nòhɔ]	‘chest’

A cursory look at the examples above shows that the Tomosili and Nayahili dialects are much similar and differ from the Nanunli dialect. In examples (1a) and (1b) for instance, the alveolar fricative in the two dialects is realized as a palato-alveolar affricate in the Nanunli dialect. Also, the palatal nasal in the former is realized as an alveolar nasal in the latter. Another glaring difference is that the high tones in the Tomosili and Nayahili dialects are realized as low tones in the Nanunli dialect. Although the Nayahili and Nanunli dialects have received some attention, the bulk of literature on Dagbani is based on the Tomosili dialect; this can be attributed to its wide use. For one, it is considered as the standard form as it is spoken by majority of Dagbani speakers. It is also used as a medium of instruction and taught as subjects or courses in schools. In the media, and in writing literary materials too, it is this dialect that is preferred. Data employed in this research are based on this dialect.

1.2 Statement of Problem

Although Dagbani is considered to be one of the Gur languages that has been extensively explored in the literature, there is still much to be uncovered. The structure of the language, for instance, has been discussed from different angles. The current study seeks to add to

this repertoire of knowledge by investigating the structure of the Determiner Phrase (DP) in Dagbani. Previous studies that come close to this include Issah (2013) and Yakubu (2021) who have attempted an analysis of the nominal category in its traditional sense. That is, from the perspective that the head of the nominal category (NP) is the Noun. Consequently, their analysis does not test the theoretical assumptions proposed in the literature about the DP. Hence, explanations with regard to the motivations for the order of the different combinations of elements in the Dagbani DP and how they concur with or differ from other languages are not provided. By attempting a reanalysis of the nominal category in Dagbani in light of the DP hypothesis, this research seeks to fill this gap.

1.3 Research Objectives

As pointed out earlier, linguistically, there still remains much to be unearthed about the Dagbani language. One such area that has more room for this exploration is the structure of the language. Accordingly, this research seeks to:

- Provide a systematic description of the components of the DP in Dagbani.
- Account for the derivations of the different orders of elements in the Dagbani DP.
- Ascertain the similarities and differences between the derivations of the different orders of elements in the DP in Dagbani and other languages.

1.4 Research Questions

In testing the theoretical assumptions put forward in the literature about the DP on Dagbani, the following questions will be considered:

- What are the components of the DP in Dagbani?

- How are the different orders of elements in the Dagbani DP derived?
- What are the similarities and differences between Dagbani and other languages in terms of how the order of elements in the DP are derived?

1.5 Relevance of the study

Aside complementing previous studies on the nominal category in Dagbani, the study will:

- Provide in-depth insight into the nature of the DP in Dagbani.
- Add to the literature on cross-linguistic studies on Dagbani and related (unrelated) languages.
- Serve as a reference point for future studies.

1.6 Grammatical properties of Dagbani

Some grammatical properties such as the word order, tone, and noun class system of Dagbani are discussed in this section. With regard to the ordering of words, Dagbani is an SVO (Subject-Verb-Object) language. Thus, in a typical sentence, the subject comes first, followed by the verb and then the object respectively. The data in (2a) through (2c) illustrates this. Also, since case is not overtly marked in Dagbani, the case of an argument is dictated by the order of the words in a sentence.

(2) a. Wúmpìnì dá- Ø búá
Wumpini buy-PFV goat
'Wumpini has bought a goat.'

b. *Wumpini búá dá- Ø
Wumpini goat buy-PFV
'Wumpini has bought a goat.'

The sentence in (2a) typifies a grammatical sentence in the language because it follows the SVO order. (2b) and (2c) on the other hand are rendered ungrammatical because they violate the order prescribed by the language. In (2b) for instance, the object precedes the verb, and in 2(c) the verb precedes the subject and the object.

3) Table 1: Dagbani Noun Class System

Class	SG	PL	Example	Gloss
1	-gu/-ga	-ri	záb-gù, záb-rì	‘hair on the head’
2	-gu	-ti	gbár-gú, gbár-tì	‘cripple’
3	-ga	-sí	kpáh-gá, kpáh-sí	‘mat’
4	-a/-oo/-uu	-hi	bì-á, bì-hí	‘child’
5	-li	-ya	pù-lì, pù-yá	‘stomach’

6	-li	-a	kúg-lí, kúg-á	‘stone’
7	-o:/-m	-ba	dó-ó, dób-ba/dáb-bá	‘man’
8	- Ø	-nima	bá, bá-nímá	‘father’
9	-	-	kpéé, tábá	‘colleague’

The table shows that although a particular noun class could have no, one or more than one singular suffix, the plural suffix for that class is always the same. Also, the kind of number suffixes that nouns take is dependent on the noun class they belong to. Three types of number marking have been identified to exist in Dagbani (Olawsky 1999; Hudu 2005). One type includes marking with regular singular and plural suffixes, which appears to be the most productive type. For this type of marking, nouns with a particular singular suffix will take a corresponding plural suffix in its plural form. Nouns that belong to class (1) through to (7) in the table above exhibit this kind of plural marking. In class (1) for instance, a noun with the singular suffix *-gu/-ga* attached to it takes the plural suffix, *-ri* in its plural form. Another type of number marking is one that involves irregular plural suffixes. One way of doing this in the language is by employing suppletion. Class (9) in the above table constitutes nouns that behave this way. An example is given in the table where the singular noun, *kpéé*, takes the completely different form, *tábá*, when marked for plural. The third type of marking involves the default plural suffix, *-nímá*. This suffix is attached to nouns that do not have a distinct singular suffix in their singular forms. This type corresponds to class (8) on the nominal class system above. Hence, a singular noun like *ba'*, which has no clear-cut singular suffix, becomes *banímá* in its plural form.

Another grammatical property of Dagbani is its unique tone system, which is integral to its grammar and communication. The language makes a distinction between two lexically phonemic tones: High (H) and Low (L) tones. Thus, similar words are semantically distinguishable based on their tonal patterns. Some examples include the following:

- 4) a. pállí ‘road’ pállì ‘new’
 b. gbállí ‘grave’ gbàllì ‘zana mat’

It is observed in these examples that despite their similarity, their tonal patterns make them distinguishable meaning-wise. Aside the function of lexical distinction, tone in Dagbani also has a grammatical function. Grammatically, tone is used to indicate mood. This is exemplified in the following sentences where the appearance of the high tone on the pronoun in (5c) gives a hortative reading. However, when the tone on the same pronoun is low, as in (5a) and (5b) the hortative reading is lost.

- (5) a. Bì dà-rí bíndírígú
 3PL buy-IPFV food
 ‘They buy food’
 b. Bì dà-Ø bíndírígú
 3PL buy.PFV food
 ‘They have bought food’
 c. Bí dá-m bíndírígú
 3PL buy-HORTA food
 ‘They should buy food’

It is vital to note that the hortative reading obtained in (5c) is not occasioned by the high tone on the pronoun only. There is also the introduction of an imperative suffix on the verb in the sentence. The tone therefore combines with this marker to give the meaning we have. Interestingly too, it is only the third person singular and plural pronouns that are affected by this change. The first and second person pronouns are excluded.

1.7 Methodology

1.7.1 Data Collection

The main source of data for this thesis is obtained through consultation with native speakers of Dagbani. Here, my intuition as a native speaker will also play a role. This is supplemented by data from other texts in Dagbani including the Dagbani-English dictionary. Specifically, the data is based on Tomosili, the western dialect.

1.7.2 Theoretical Framework

The study is guided by the Minimalist Program (MP) proposed by Chomsky (1995). With the goal of providing a simpler and more efficient explanation of language structure, the theory provides tools for accounting for and understanding the basic structures of a language in a principled way; this makes it suitable for the current work. The framework is discussed further in the next chapter.

1.8 Organization of Work

The thesis is organized as follows: Aside from the current chapter which provides an introduction to the research, four other chapters follow. This first chapter presents general information including background knowledge on the language of research, the problem

statement, research objectives, relevance of the research and methodology. The next chapter considers related literature and the theoretical framework. Constituents of the DP in Dagbani and their order is discussed in chapter three. The fourth chapter gives an account of the derivations of the different orders of constituents in the DP. Chapter five then summarizes and concludes the work.

1.9 Chapter Summary

This chapter has been concerned with an introduction to the study. It specifically touched on the language of research and its speakers, as well as some grammatical properties of the language. The statement of problem, including the objectives, significance of the study and methodology are discussed. A road map on the organization of the thesis is also laid out.



CHAPTER TWO

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.0 Introduction

This chapter delves into issues within the framework that guides this thesis. It particularly discusses Chomsky's (1995) Minimalist Program including the concepts and principles at the core of it, and its pertinence to the current discussion. It also reviews studies in the literature related to the DP-Hypothesis; more especially works that examine the structure of the Determiner Phrase (DP).

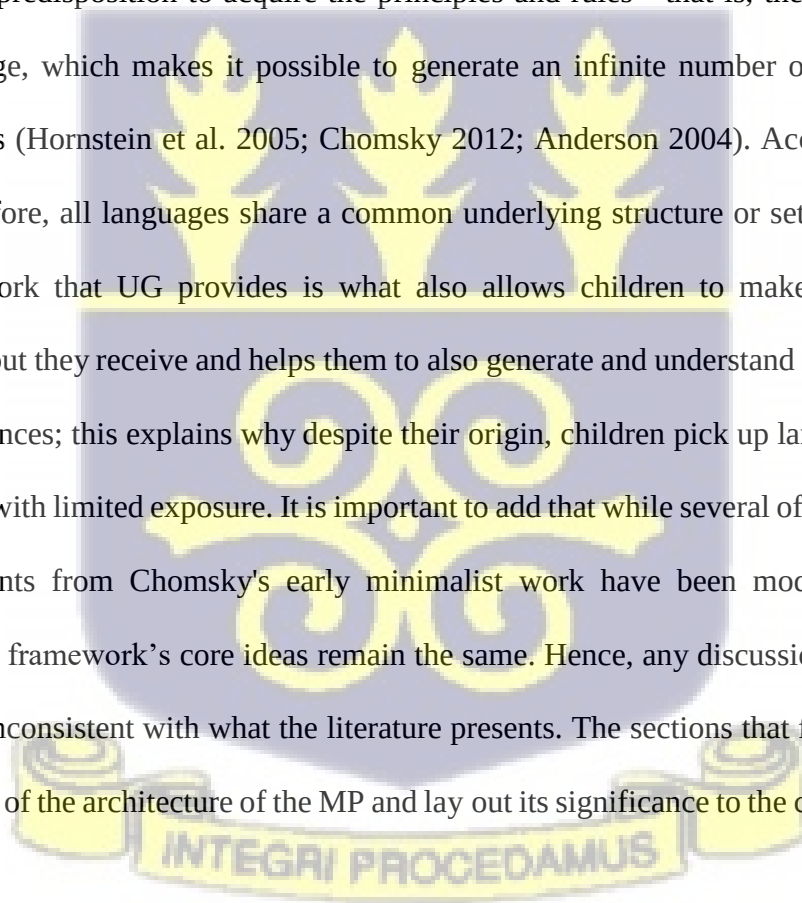
2.1 Theoretical Framework

As an approach to the study of language, generative grammar fundamentally seeks to understand the language capacity of humans and the mind that harbors this capacity. As such, its view of grammar as a system of rules that is capable of generating all the possible sentences or structures in a language is the premise of all models born out of this theory. The most recent of them, which guides the current discussion is the Minimalist Program (MP). This model as put forth by Chomsky (1995) aims at providing a simple and more efficient explanation of language structure by reducing the set of principles needed to generate and interpret language structures. Hence, as (Lasnik 2002) points out,

[t]he Minimalist program maintains that the derivations and representations constituting linguistic competence conform to an 'economy' criterion demanding that they be minimal in a sense determined by the language faculty (ultimately by general properties of organic systems): that is, there

are no extra steps in derivations, no extra symbols in representations, and no representations beyond those that are conceptually necessary (2002: 432).

The simplicity of this framework is thus observed in the reduction of the number of linguistic levels of representation and of constraints on syntactic derivations, which distinguishes it from earlier models. At the core of the framework is also the notion of Universal Grammar (UG), a cognitive capacity unique to humans which makes language acquisition possible. Hence, native speakers of a particular language are said to have been born with a predisposition to acquire the principles and rules - that is, the grammar - of their language, which makes it possible to generate an infinite number of grammatical constructions (Hornstein et al. 2005; Chomsky 2012; Anderson 2004). According to this theory therefore, all languages share a common underlying structure or set of principles. The framework that UG provides is what also allows children to make sense of the linguistic input they receive and helps them to also generate and understand grammatically correct sentences; this explains why despite their origin, children pick up languages easily and quickly with limited exposure. It is important to add that while several of the operations and constraints from Chomsky's early minimalist work have been modified or even replaced, the framework's core ideas remain the same. Hence, any discussions in this line will not be inconsistent with what the literature presents. The sections that follow provide a description of the architecture of the MP and lay out its significance to the current work.



2.1.1 The Minimalist Program (MP)

Chomsky's Minimalist Program aims to uncover and explore the fundamental principles and mechanisms that underlie the human language faculty. It proposes that part of the cognitive endowment of humans is the Faculty of Language (FL) which is responsible for the acquisition, generation and comprehension of language. This FL primarily comprises the lexicon and the computational system (syntax). The lexicon contains the mental representations of words or lexical items. In the computational system, a set of principles and constraints guide the combination of lexical items in order to ensure the accuracy of syntactic structures that are built. These lexical items enter the computational system as a bundle of phonological, grammatical, syntactic and semantic features. Before these lexical items get to the computational system however, they go through an intermediary component known as the numeration—otherwise referred to as workspace in recent minimalist work (see Chomsky, Gallego and Ott 2019:237) where individual lexical items are paired up. The Numeration (N), contains the lexical items that will be used in a syntactic derivation, each with an index that indicates how many instances of that lexical item are present. Thus, as Hornstein et al. (2005: 69-70) point out, the lexical items used for the building of a particular syntactic structure are pre-selected from the lexicon before the computation begins. This makes the work of the computational system very simple as it does not have to search the entire lexicon for lexical items to apply a derivation to. Once lexical items get to the numeration, access to the lexicon is barred until a new operation begins. This component also plays the essential role of providing the input for fundamental operations such as Merge and Move, where lexical items are combined and rearranged in a way that allows the system to produce the target output. After the structure-building

process, the computation is split into two by the operation Spell-out which then sends the relevant information to the interfaces for interpretation. The interfaces or levels of representation include the Phonetic Form (PF), which is the interface to the Articulatory-Perception System and the Logical Form (LF), which is the interface to the Conceptual-Intentional System. Form and meaning are represented at these two interfaces (Zeijlstra 2004:12). As the only levels required under the MP, it reflects one of the ways in which the MP departs from previous models under the generative grammar framework. For instance, while the MP recognizes two levels of representation, its immediate antecedent, the Government and Binding (GB) theory recognizes four: D-structure, S-structure, PF and LF. A language's grammar according to the Minimalist Program is therefore derived principally through the interaction of the lexicon, computational system, and the PF and LF interfaces.

2.1.2 Lexicon

The lexicon is the component of the language faculty often likened to a mental dictionary contained in a speaker's mind. This mental dictionary harbors the speaker's lexical knowledge which comprises a collection of lexical items in the speaker's mind, as well as details on their pronunciation, meaning, morphological characteristics, and syntactic characteristics. Thus, for a lexical item like *read* for instance, its pronunciation is specified, its meaning as well as its syntactic category as a verb is defined. In addition, its morphological property as a simple word together with its inflectional forms as well as any derivational affixes or processes associated with it are all provided in the lexicon. These lexical items are also interconnected with each other at various levels. Depending on numerous factors such as age, language proficiency, educational level, cultural

background, and exposure to different vocabulary, the average number of lexical items in a speaker's lexicon can vary greatly; this makes it impossible to provide a specific number for the lexical items contained in a speaker's lexicon.

2.1.3 Computational system

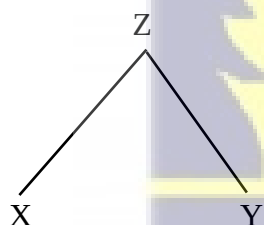
The computational system serves as the engine that builds sentence structures from raw materials in the form of lexical items received from the lexicon. The set of rules and constraints which govern the structuring of these sentences is also contained here. This includes the fundamental operations of Merge and Move, as well as information on case assignment, c-command, feature checking and the principles of government and binding and economy. These rules and constraints collectively shape the syntactic and semantic structure of sentences, providing a framework for generating and interpreting linguistic expressions within the computational system.

2.1.3.1 Merge, Move and Feature Checking

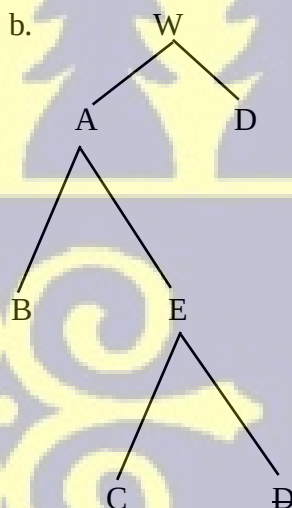
As an essential component of any theory of human grammar (Collins 2002: 43), the operation Merge is involved in the generation of syntactic structures. It basically combines two linguistic elements to form a new and more complex structure. This combination allows for the creation of nested and structured expressions, reflecting the hierarchical organization of phrases and clauses in languages. It also allows for the generation of an infinite variety of complex linguistic structures from a finite set of elements. Linguistic expressions in languages are therefore products of the recursive application of Merge to linguistic elements.

Another operation that plays a crucial role in the structure-building process under the minimalist framework is Move. The operation involves displacing elements from their base-generated positions to other positions within a structure. One motivation for this, as Chomsky (1995:262) indicates, is the satisfaction of certain feature checking requirement. Another is to achieve particular interpretive effects. Hence, displacement under the Move operation is motivated by the need to fulfill certain grammatical requirements or realize specific communicative effects. This accounts for linguistic phenomena such as question formation, topicalization and focus, which are observed in natural languages. The operation also helps to capture the flexibility and expressive power of natural language syntax. The structures below illustrate how Merge and Move operate.

(6) a.



b.



The tree diagrams in (6a) and (6b) illustrate the Merge and Move operations respectively. In (6a), X and Y are combined to yield the new syntactic object, Z. In (6b), C and D which are selected from the lexicon are merged to form E. B is then merged with E to form A. D is then moved to merge with A forming W and leaving behind a copy which is indicated in the diagram by a strikethrough. Under the Minimalist Program, moved elements leave

behind copies rather than traces. This is backed by the copy theory of movement introduced by Chomsky (1993) which asserts that a moved element leaves behind a copy of itself which is available at LF for interpretation, although they are deleted at PF (in the case of overt movement). This is also in conformity to the Inclusiveness Condition (IC) (Chomsky 1995), an inviolable principle under the framework that prevents syntax from introducing new features or elements in the course of a computation. Since traces are not originally part of the numeration that is built for the computational system, they are regarded as new elements and thus, introducing them results in a violation of the IC. Also, in line with general principles of economy which require operations of the computational system to be as simple and optimal as possible, Move is subject to the principles of Shortest Move and Last Resort. While the former is a condition that favors short movements over long ones, the latter ensures that an operation takes place only when necessary. The principle of Last Resort in particular sees to it that irrelevant steps are not included in a derivation.

Lexical items that enter into a computation are perceived as a set of bundled features. While some features need to be eliminated during the computation process, others do not. In order to eliminate a feature, it has to enter into a checking relation with another feature. This process, of which much of the computation in minimalism revolves around, is known as feature checking. For the purpose of the current discussion, two properties of features are considered: strong and weak features. A strong feature is considered to be uninterpretable to the articulation interface. Hence, it is unacceptable at PF and therefore needs to be eliminated before spell-out (in overt syntax). A weak feature, on the other hand, is acceptable at the PF interface and can therefore be left until after spell-out (in covert syntax).

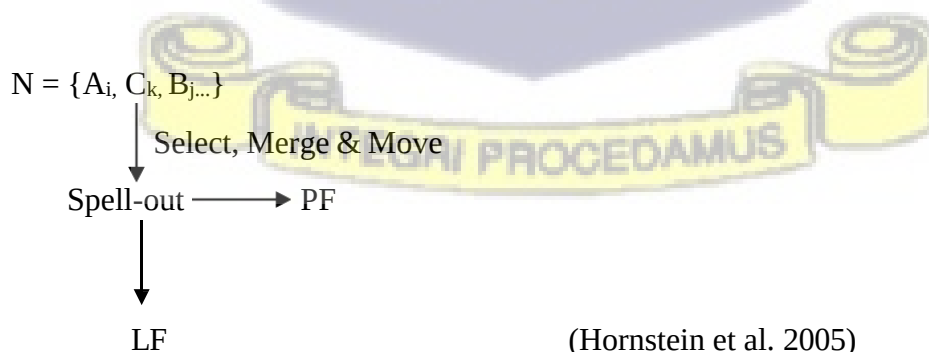
2.1.4 Phonetic Form (PF)

The PF interface is responsible for mapping the abstract syntactic representations generated by the syntactic component into phonological representations, which are then realized as the actual sounds of speech. In other words, the PF interface deals with the pronunciation of sentences and phrases. It takes the hierarchical structure of the syntax and assigns appropriate phonetic features, intonation, and stress patterns to produce the phonetic output of an utterance. The output of the PF interface is therefore what we hear when someone speaks a sentence or phrase.

2.1.5 Logical Form (LF)

The LF interface is concerned with assigning meaning to syntactic structures. It maps the structures created by the syntactic component into logical representations, which constitute the semantic content of these structures. These logical representations too are typically in the form of semantic representations that capture the truth-conditional meaning of the sentences. The LF interface therefore deals with how meaning is derived from a syntactic structure. In light of the detailed explanation above on the architecture of grammar and how syntactic structures are derived under the minimalist framework, the diagram below illustrates the model of grammar under the framework.

7. The Model of Grammar under the Minimalist Framework



(Hornstein et al. 2005)

2.1.6 Significance of the Framework

As a framework that lays strong emphasis on simplicity and efficiency in the design of the computational system underlying language, the Minimalist Program provides a comprehensive and elegant framework for understanding the complex nature of language and the factors that influence word order variation across languages. Its emphasis on economy and universal principles of grammar helps to explain the factors that influence word order patterns across languages, and this makes it immensely relevant to the current work. In addition, although the Program's proposals are still being tested against empirical data from diverse languages and consequently undergoing revision, there is no doubt that it provides a more refined approach to explaining linguistic phenomena such as variations in word order as compared to previous models under the generative grammar framework.

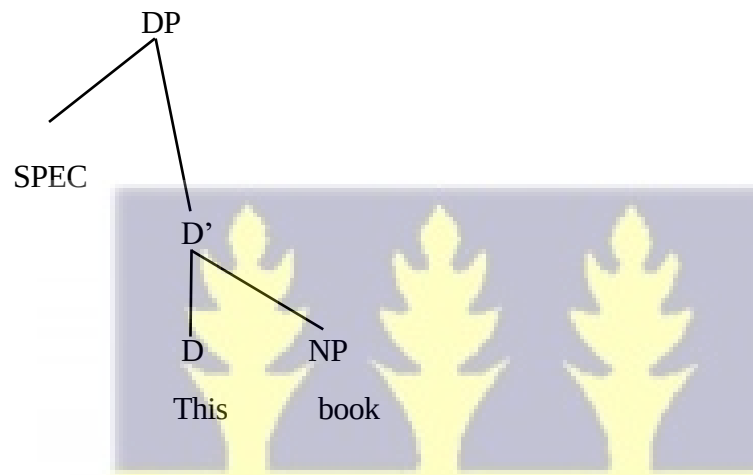
2.2 Literature Review

This section seeks to expose us to discussions in the literature on the DP. It considers the relevant arguments and proposals presented thereof with regard to the DP structure of various languages. These include Abney's (1978) seminal work which sets the tone for understanding the basis of cross-linguistic inquiry into the DP, Longobardi (1994), Aboh (2004), Sulemana (2012), and Bernstein (1997).

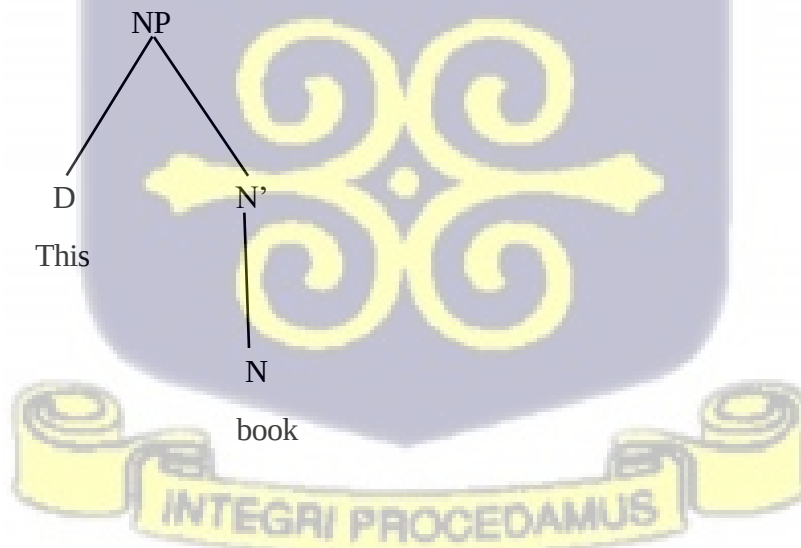
In his seminal work which set the tone for a novel analysis of the nominal category in languages across the world, Abney (1987) proposes for the parallel treatment of the nominal and clausal domains. He argues that just as the clausal category (IP) is headed by a functional element, Inflection (infl), the nominal category (NP) is also headed by the functional element, the Determiner (D). Accordingly, the determiner projection (DP) becomes the category that introduces the noun phrase, just like the IP introduces the

sentence. The noun therefore becomes a complement of the D head. Abney's analysis of data from languages like English, Yup'ik, Mayan, Turkish and Hungarian brought to light these deductions, which have come to be known as the DP-hypothesis. Hence, the description Determiner Phrase (DP) is to be preferred to the Noun Phrase (NP). The tree diagram in (8) illustrates Abney's analysis of the nominal category and that of (9) shows the traditional analysis prior to that.

8.



9.



In (8), the D is the head and takes the NP as its complement. In (9) however, the NP heads the phrase while the D occupies the specifier position. Observations in other

languages have shown that (8) can be more complex. Especially with regard to accounting for the word order in different languages.

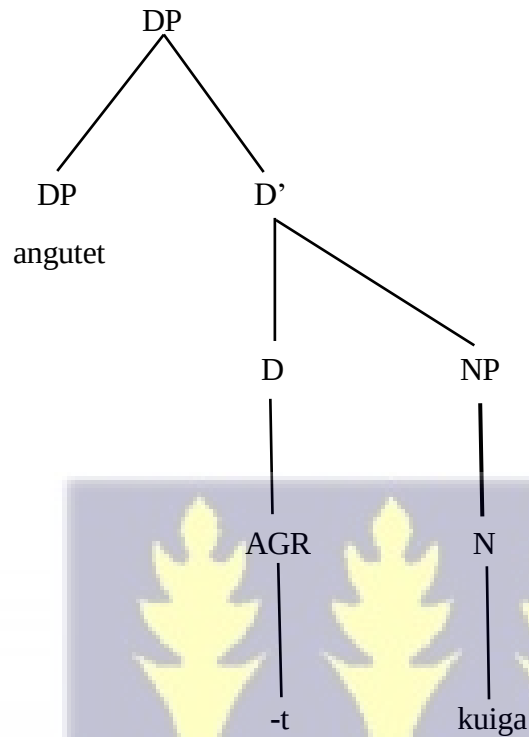
Abney (1987) argues that this parallelism between the IP and the DP, which has become the main motivation for the proposal of the hypothesis, is observed in languages with either or both of the following properties: first, possessed nouns have an agreement relation with their subjects just as verbs do with their subjects and secondly, possessors bear the same case as the subject of the sentence. An example of such language is Yu'pik, a Central Alaskan Eskimo language. Basically, nouns in this language agree with their possessors. Further analysis of the language reveals the existence of an agreement morpheme in the DP similar to what we have in the IP. This is exemplified below (10).

- 10) a. angute-t kuga-t
 men-ERG river-SM
 the men's river
- b. angute-t kiputa-a-t
 men-ERG buy-OM-SM
 the men(PLU) bought it (Abney 1987:39)

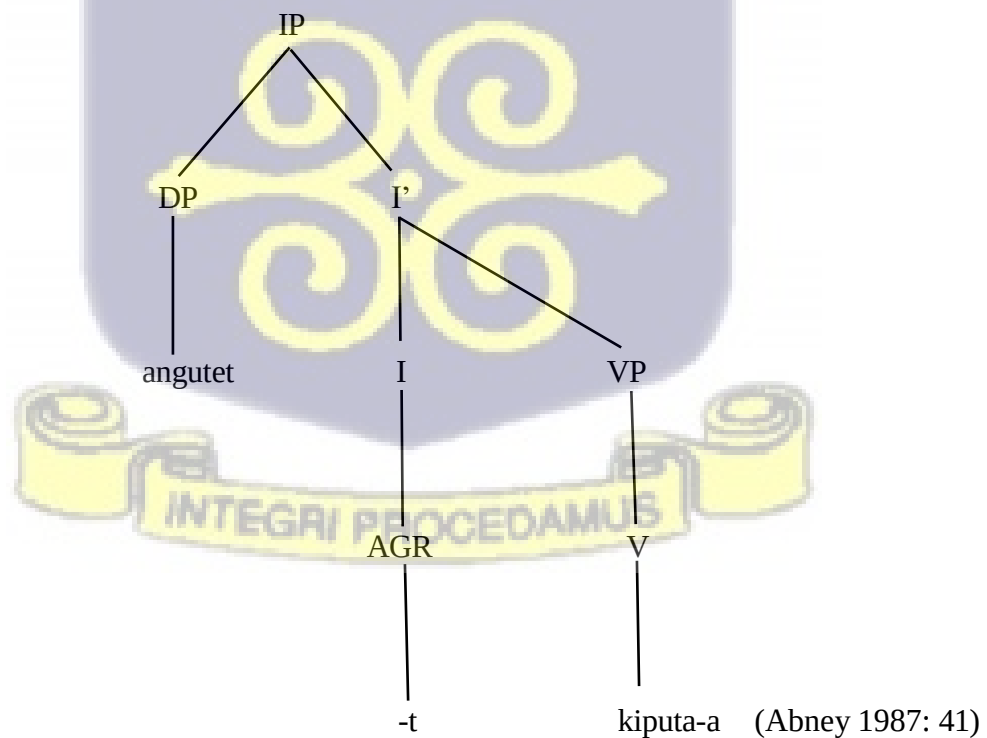
In (10a), the subject agreement marker (-t) that is marked on the noun, *kuga* 'river' is the same as the agreement marker on the verb, *kiputa* 'buy' in (10b). Likewise there is an ergative case marked on the possessive noun, *angute* 'men' in (10a) similar to the one

marked on the subject in (10b). The likeness between the IP (10a) and the DP (10b) constructions is more apparent in the structures presented below.

11) a.



b.



Apart from Yu’pik, Abney (1987) makes similar observations in Mayan, Hungarian, and Turkish, where head nouns agree with their possessors just as inflections agree with their specifiers. In Hungarian for instance, the head noun agrees with the possessor, and the possessor bares the same case as the subject of a sentence. More interesting however in the language is the morphological identicalness between the agreement that the noun has with its possessor and the agreement between the verb and subject. The following examples in (12) illustrate this.

- 12) a. az en vendeg-e-em
 DET I.NOM guest-POSSD-1SG
 ‘My guest’
- b. a te vendeg-e-d
 DET you.NOM guest-POSSD-2SG
 ‘Your guest’
- c. (a) Mari Vendeg-e-s
 (DET) Mary.NOM guest-POSSD-3SG
 ‘Mary’s guest’ (Abney 1987:44)

In the examples (12a) through (12c), the possessors take nominative cases similar to the case of the subject of a sentence. Likewise, the head noun *vendeg* ‘guest’ agrees with the possessors in each construction in that, the person marker on the head noun tallies with the person specification of the possessor. Based on these examples, Szabolcsi (1987) argues

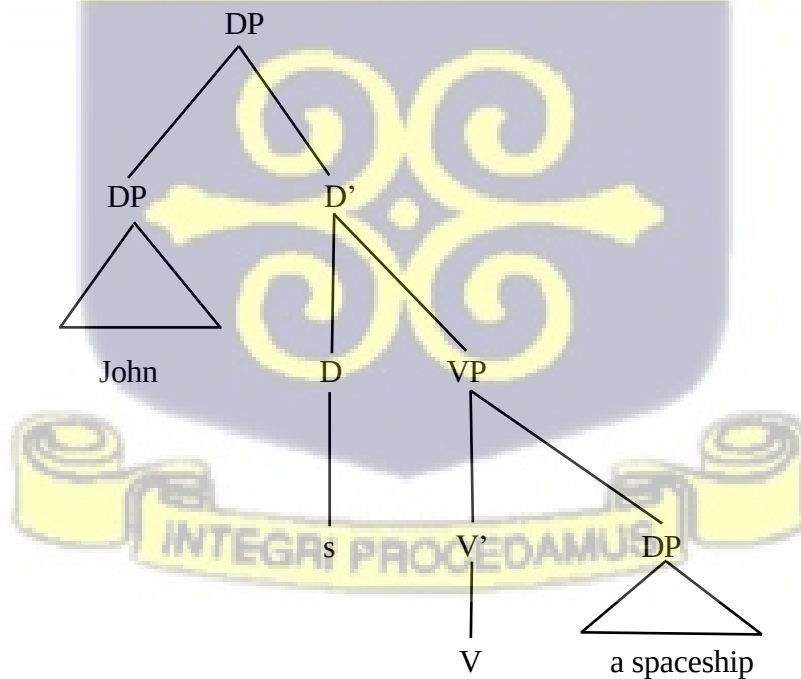
that there is an inflection node in the noun phrase. Hence, just as inflection is responsible for assigning nominative case to the subject in a sentence, the nominative cases in the examples above are assigned by an inflection in the noun phrase. Supporting this argument, Abney (1987) argues that this inflection corresponds to a determiner (D) node in the noun phrase.

Additionally, Abney's (1987) novel analysis of the noun phrase structure also provides a solution to the analysis of 'poss-ing' gerundive constructions like (13) in English.

(13) John's building a spaceship

From one angle, such constructions are noun phrases and from another, sentences. Analysing such constructions have therefore posed a challenge because of their puzzling nature. The DP-hypothesis is, however, able to offer a solution to this as presented in (14).

(14)



(Abney 1987: 23)

With the interesting observations on the structure of the nominal category such as the ones presented above, the DP-hypothesis has subsequently stimulated a line of research on the DP in a variety of languages. Although the hypothesis provides a foundation for these analyses, there are variations with regard to how it applies in specific languages. The current work follows suit by delving into the structure of the Dagbani DP while paying attention to idiosyncrasies as well as observations that concur with or differ from findings in other languages.

Longobardi (1994), for instance, also presents evidence for the existence of the DP in Italian. He compares noun phrases that contain overt determiners and those in which an overt determiner is absent and observes that the latter is the case when the noun phrase is an argument of a predicate and is also headed by a singular count noun. Contrarily, a noun phrase headed by a mass noun or plural count noun may not take an overt determiner even though it serves as an argument. On this basis, Longobardi (1994) proposes that in Italian, a nominal expression qualifies as an argument only when it is introduced by a D. He further argues that since this distributional restriction only affects noun phrases that serve as arguments, we cannot presume that the noun phrase lacks a DP layer; hence, noun phrases that lack overt determiners should be considered as containing phonetically null Ds. He further proposes that since argument noun phrases and predicate noun phrases have different requirements, the former must be DPs and the latter, DPs or NPs. Although plausible, this particular claim raises the question of how to analyse proper names in the language since in some cases we find that they are not accompanied by determiners and yet, have argument functions; at the same time, they do not meet the requirements of the

group of nominal expressions postulated to contain an empty D. In reconciling these supposedly contradicting arguments, Longobardi (1994) provides compelling evidence that proves that proper names with determiners — such as last names of female human beings — are base-generated at N position and remain in situ. Then, in accounting for those that lack determiners, the names generated at N raise to D in order to be considered as arguments. This type of movement is observed to also exist in other Romance languages. Ultimately, the analysis of the nominal phrase as a DP and movement of the elements within it is as well confirmed for Italian.

So far, we have seen evidence of the existence of the DP in Yu'pik, Mayan, Hungarian, Turkish, English and Italian, and how elements within it may be required to move in order to derive a specific structure. A more complicated and yet, interesting application of the DP-hypothesis is observed in Gungbe, a Gbe language. In accounting for the DP in Gungbe, Aboh (2004) proposes a split-D hypothesis. According to him, the Gungbe D-system comprises two functional heads: D^0 and Num^0 which encode the features $[\pm specific]$ and $[\pm plural]$ respectively. The feature $[\pm specific]$ which corresponds to the specificity marker, *lɔ/dɛ* acts as a link between the noun phrase and the discourse. The $[\pm plural]$ feature, on the other hand, corresponds to the number marker, *lé* which is the locus of number features. Also, while D^0 heads the highest projection in the D-system, Num^0 serves as head to the lowest projection between the D-system and the nominal inflectional system. He further notes that when a noun phrase is marked for specificity and number, the noun phrase is followed by the markers of both features. Thus, in Gungbe, the noun phrase together with its modifiers which make up the nominal inflectional system

occurs before the specificity marker and then followed by the number marker. This is illustrated in the constructions that follow.

15) a. Kókú xò távò xóxó ló lé

Koku buy-Perf table old Spf_[+def] Num

‘Koku bought the specific old tables’

b. Kókú xò távò xóxó dẽ mí mòn ló lé

Koku buy-Perf table old that 1pl see.Perf Spf_[+def] Num

‘Koku bought the specific tables that we saw’

c. *Kókú xò távò ló xóxó dẽ mí mò lé

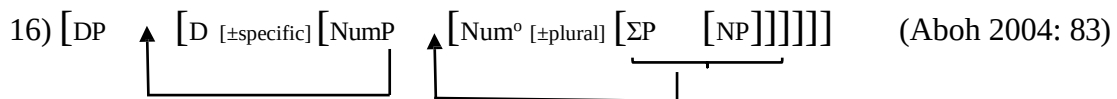
Koku buy.Perf table Spf_[+def] old that 1pl see.Perf Num

(Aboh 2004:80)

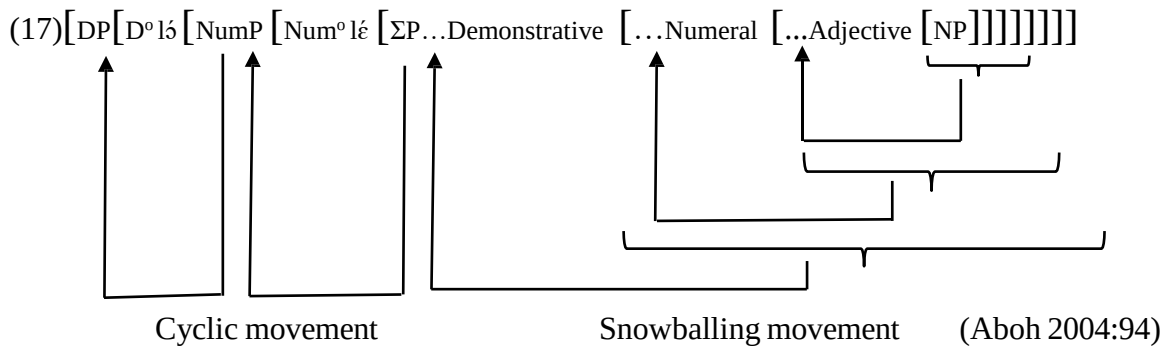
In (15a), the noun and its modifier are followed by the specificity marker, *ló* and the number marker *lé*, respectively. The construction in (15b) also shows the relative clause *dẽ mí mòn* being situated between the noun phrase and the specificity and number markers. In (15c), however, the construction is rendered ungrammatical by the intervening elements *xóxó dẽ mí mò* occurring between the specificity marker and the number marker. The unacceptability of this kind of construction provides clear proof of the specificity and the number markers belonging to the same system — the D-system.

Additionally, Aboh (2004) suggests that adopting the specifier-head-complement word order hypothesis (Kayne 1994), the [noun + modifier + specificity marker + number

marker] sequence observed in Gungbe constructions such as (15a) is arrived at by the cyclical movement of the entire nominal inflectional domain (ΣP) through [spec Num P] to [spec DP] as illustrated in (16). This movement, according to him, is motivated by the need for the noun to check its [$\pm$ plural] and [$\pm$ specific] features at Num⁰ and D⁰ respectively.



He further proposes that the surface order Noun>Adjective>Numeral>Demonstrative>Number>Determiner is accounted for by assuming Hawkings' (1983) universal word order of Noun>Adjective>Numeral>Demonstrative>Number>Determiner. Based on this universal sequence, Aboh (2004) argues that the word order in Gungbe is arrived at by two major movements. First, a snowballing movement within the nominal inflectional system and then, a cyclical movement which has been described earlier. In the first type of movement, the NP moves to the left of the adjective, creating the noun-adjective sequence. The new sequence subsequently moves to the left of the numeral, resulting in the phrase noun-adjective-numeral. The whole phrase then moves again to the left of the demonstrative forming the phrase noun-adjective-numeral-demonstrative. At this point, the second type of movement sets in where the whole phrase moves cyclically to [spec NumP] and then [spec DP] generating Noun>Adjective>Numeral>Demonstrative>Number>Determiner as the sequence. The diagram in (17) illustrates this derivation.



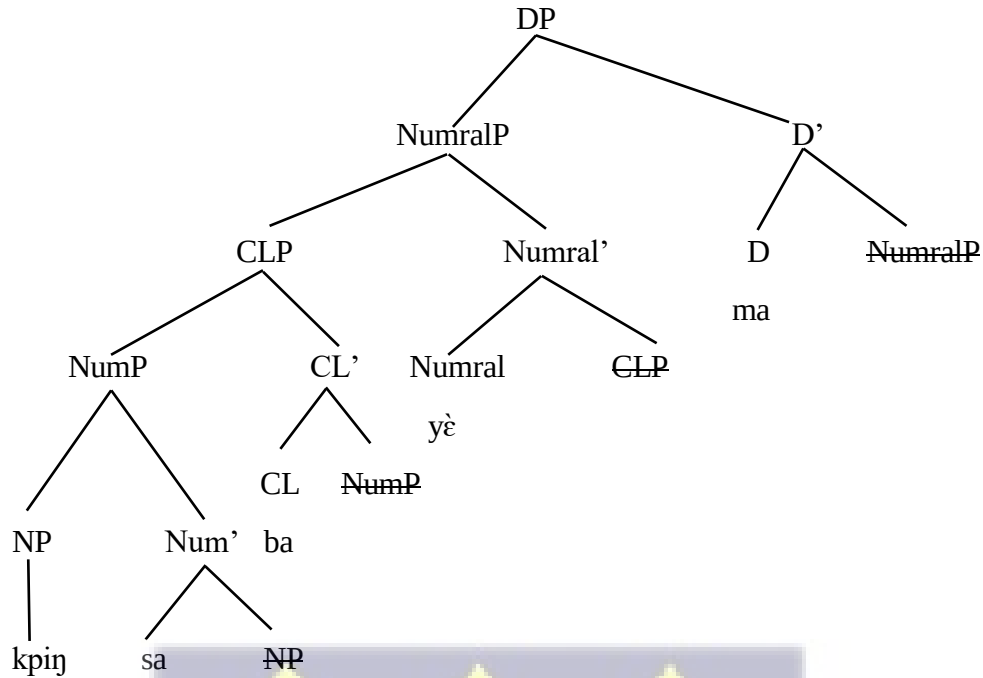
Another discussion in the literature that examines the internal structure of the DP and the derivation of elements within it is Sulemana (2012). More related is this particular study to the current work than the works reviewed earlier. Firstly, because they both discuss the DP and also because the languages under discussion are both Gur languages. This relatedness is likely to reflect in their DP internal structures and how the order of elements within the structures are derived. It is therefore expected that the current work benefits from some of the ideas presented in it. Sulemana's (2012) analysis of the Buli DP reveals that adjectives, numerals, determiners and determiners, are elements that modify the noun within the DP. He also observes that these modifiers always occur post-nominally. A movement analysis is proposed to account for the order of these modifiers. In deriving the noun-determiner sequence in the language for instance, he proposes that NP moves to the spec of D in order for the former to check its [definite, deixis and number] features at the latter's position. This concurs with the observation in Gungbe where similar explanation is given for the noun-determiner sequence. This account is however inconsistent with the observations in languages such as Italian, English and German, where N to D raising is argued to account

for the same sequence. Sulemana (2012) notes that languages in which inflectional morphology is absent on the nouns are less likely to exhibit N to D raising. For the derivation of the noun-adjective-determiner DP structure in Buli, the adjective is assumed to intervene between the DP and NP, hosted by a functional projection. Granted this, the structure in question is arrived at by the NP moving to spec of AP to yield the noun-adjective order. This sequence then moves to Spec DP to generate the noun-adjective-determiner structure in the language. This type of movement, known as snowballing movement is similar to the one attested in Gungbe (Aboh 2004). He further argues for the existence of NumP in the DP which specifies for number. According to him, the Num position is morphologically realized when the DP is [+plural] and null when it is [-plural]. He also shows that class markers and numerals are different functional heads and therefore project their own phrases in the Buli DP; in this case, the DP structure will have the class marker projecting CLP and the numeral projecting NumeralP. This is exemplified in the structure in (18b) for the construction in (18a).

- 17) a. kpín-sá bà-yè mǎ
 orphan-PL CL-two DEF
 ‘the two orphans’



b.



(Sulemana 2012: 129)

As can be observed in (18b), the DP structure containing the numeral, *yè* ‘two’ and the class marker, *ba* has both elements projecting their own phrases, NumralP and CLP respectively. NumralP, however, occupies a higher structural position — in the spec of DP— than CLP which occupies the spec of NumralP.

Lastly, Bernstein (1997) examines the syntactic structure and movement properties of demonstrative reinforcement constructions in the DP of Romance and Germanic languages. He postulates that for such constructions, the demonstrative and the reinforcer are always base-generated pre-nominally as complex elements within a functional category, FP below DP with the reinforcer as head and the determiner occupying the specifier position. This is represented in (19a) for the French example, *ce-ci* and its English equivalent, *this here* in (19b).

18) a. [_{FP} ce [_F -ci]]

b. [_{FP} this [_F here]]

In Germanic, the demonstrative and reinforcer precede the noun thereby corresponding to the Demonstrative-Reinforcer-Noun underlying structure. Romance languages on the other hand exhibit a Demonstrative-Noun-Reinforcer sequence. Although syntactic differences between Romance and Germanic have often been attributed to the presence of X (noun) movement in the former and the relative absence of this movement in the latter (Valois 1991; Cinque 1994; Bernstein, 1993) , Bernstein (1997) notes that noun movement does not provide an adequate explanation for the post-nominal position of the reinforcer. This is because, the solution does not work out where nouns are being modified by adjectives (20a) or accompanied by complements (20b); in which case the noun will be required to move together with these elements.

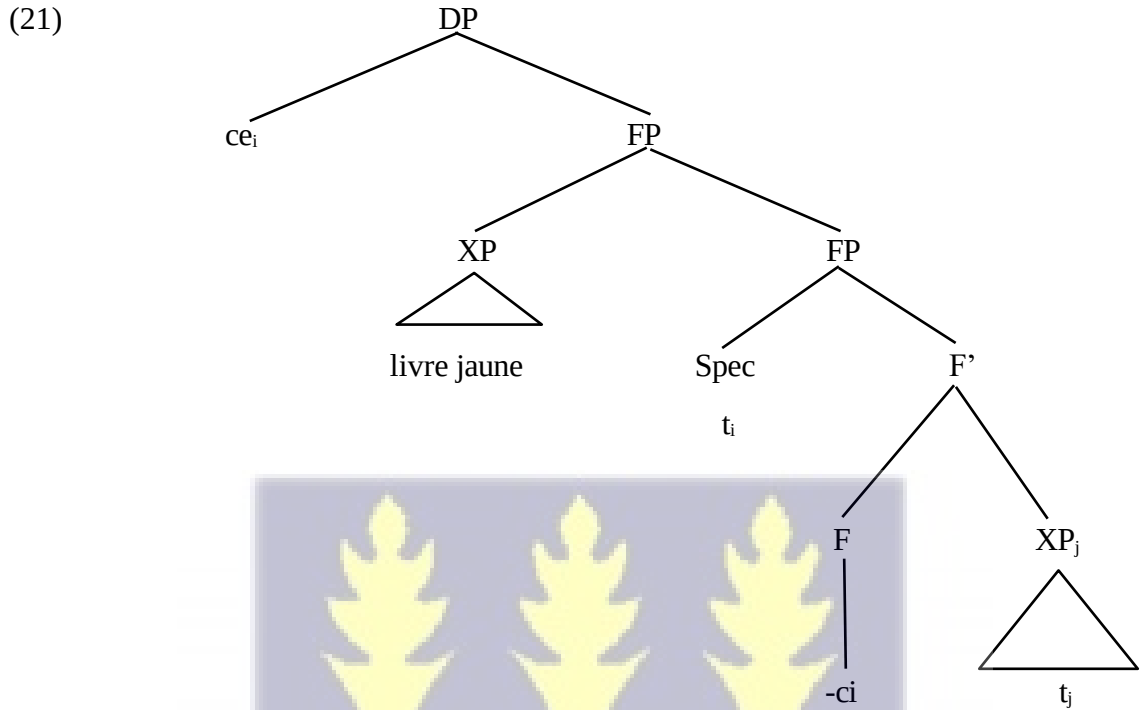
(20) a. ce livre jaune ci
this book yellow here
'this yellow book' (Bernstein 1997:98)

b. ce marchand de vin ci
this merchant of wine here
'this wine merchant' (Bernstein 1997:99)

Alternatively, therefore, movement of a phrasal category (XP) is proposed. Here, XP which contains the noun and optional modifiers moves to adjoin to FP which is lower than DP.

The demonstrative which occupies the specifier of FP also raises up into the head of DP,

situating the noun between the demonstrative and reinforce. The structure in (20a) is thereby derived as in (21).



(Bernstein 1997:100)

The movement of XP in deriving the order of elements in demonstrative reinforcement constructions in Romance languages, according to Bernstein (1997), is due to the strong feature contained in the head of FP. In order to be checked, this feature influences XP to raise up and adjoin to left of FP. It is due to the absence of this strong feature that the noun remains in situ, occurring pre-nominally in demonstrative reinforcement constructions as observed across Germanic languages. This analysis, including previous ones prove the adequacy of operations such as movement and feature checking under the Minimalist Program in accounting for the word order differences in the DP of the world's languages.

Consequently, it is safe to presume that these concepts will be applicable in the discussion on the Dagbani DP.

2.3 Chapter summary

In this chapter, the Minimalist Program proposed by Chomsky (1995) is explored as the framework by which the current study will be guided, taking note of concepts and proposals that drive the main ideas of the program and their relevance to the study. Earlier works within the context of the DP-hypothesis are also reviewed. Abney's (1987) work explains the parallelism that exists between the clausal and nominal domains by examining data from Hungarian, Mayan, Turkish and English, thereby validating the DP-hypothesis. Longobardi (1994) also confirms the existence of the DP in Italian, proposing that only nominal expressions introduced by a D qualify as arguments. Aboh (2004) as well argues for a split-D system for Gungbe which comprises two functional heads: D° and Num° which encode the features $[\pm\text{specific}]$ and $[\pm\text{plural}]$ features respectively. Sulemana (2012) also provides detailed explanations for the derivation of the order of elements within the Buli DP. For the derivation of the noun-adjective-determiner DP sequence, he proposes a snowballing movement similar to what is attested in Aboh (2004) for Gungbe. A cyclical movement alongside a snowballing movement is as well proposed to account for the order of all possible elements in the DP. Bernstein (1997) does same for the derivation of demonstrative reinforcement constructions in Romance and Germanic. She comes to the conclusion that the position of the reinforcer in relation to the noun in Romance is different in Germanic due to the movement of XP in the former which is absent in the latter.

CHAPTER THREE

DP-INTERNAL WORD ORDER IN THE DAGBANI DETERMINER

PHRASE (DP)

3.0 Introduction

Cross-linguistic studies have shown that various elements occur in the Determiner Phrase (DP). There is the noun which serves as the head complement in the DP. Also known as modifiers, some of these elements in the structure typically specify, modify or quantify the noun complement. Amongst them are the definite and indefinite articles, demonstratives, possessive pronouns, quantifiers, numerals and relative clauses. The determiner position, which is also the head position in the DP, hosts some of these elements. Abney (1987) and Szabolcsi (1994), for instance, note articles, possessives and quantifiers as occupying the determiner position in the English and Hungarian DPs respectively. The same elements including demonstratives have been confirmed for French (Leu 2008) and Buli (Sulemana 2012). Watanabe (2006) also discusses the role of classifiers and numerals in Japanese DPs where overt definite and indefinite articles are absent. These, among other studies provide a cross-linguistic view of how the DP is structured and the variety of elements that occur within it across the world's languages. This section is, accordingly, devoted to discussing the DP internal elements in Dagbani and the order in which they occur. Specifically, articles, demonstratives, numerals, quantifiers, possessives and adjectives are discussed while considering each element's meaning, form and position in relation to the noun complement are. Firstly, however, elements capable of serving as heads are considered, and then other modifiers. This will hopefully expose us to the linguistic properties of these

elements and also serve as a basis for understanding the processes involved in the derivation of their sequences later in chapter four.

3.1 Determiners as Heads in the Dagbani DP

As pointed out earlier, the head position in the DP Dagbani can be occupied by elements such as articles, demonstratives, quantifiers, numerals and possessive pronouns. These include the articles *máá* and *lá*, the demonstrative, *ɲó* and *ɲó há/sá* and quantifiers such as *shéli*, *záá*, *pám*, and *biélà*. *áyí*, *átá*, *áyóbù*, and *píá* are amongst the numerals in the language. The meanings, forms and distribution of these elements in the context of the DP are considered in the subsequent sections.

3.1.1 Articles

Articles are generally used in languages to identify nouns as being specific or non-specific. In some languages, a distinction is made between two kinds of articles: definite and indefinite articles. English, for instance, encodes definiteness by the use of the definite article, ‘the’ and indefiniteness by using the indefinite articles, ‘a/an’. Gonja also does so with *na* ‘definite’ and *ko* ‘indefinite’ (Kotochi 2017); the same can be said of Spanish, French and German (Herslund 200; Carlier 2013; Wesener 1999). Dryer (2007:152), however, argues that for most languages it is very common in to find either of the two types of articles but not both. This is the case in languages like Arabic and Hebrew where definiteness is expressed with a definite article and indefiniteness with bare nouns. Dagbani also falls under this category. In the language, the forms, *máá* and *lá* are used to express definiteness (Issah 2013; Inusah 2017) while bare nouns, although with some exceptions, are used to express indefiniteness (Kwame & Westergaard 2020). Semantically speaking therefore, *máá* and *lá* are used in a construction to show that the referent noun is definite.

The two forms, however, encode definiteness differently. *Máá* is used when there is a previous mention of the referent in a discourse or when the discourse context makes the referent known to the hearer. *Lá*, on the other hand, encodes a noun as definite when there is shared knowledge between the speaker and the addressee over the referent, making it identifiable to both interlocutors (Issah 2013). The use of a bare noun on the other hand suggests that the referent is not specific due to a lack of shared knowledge about it and therefore not identifiable by both the speaker and hearer. The examples below illustrate this.

22) a. Adam dá-Ø búá. Búá máá nyela bú-zéé.

Adam buy-PERF goat.SG. Goat DEF COP goat-red.

Sohala ka Adam sa dá-Ø búá máá.

Yesterday FOC Adam TDP buy goat DEF

‘Adam bought a goat. The goat is red. It was yesterday that Adam bought the goat.’

(Kwame & Westergaard 2020)

b. nó-ó lá zó-yá

fowl-SG DEF escape-PFV

‘The fowl has escaped.’

c. nó-ó bí dí-rí zá

fowl-SG NEG eat-IPFV millet

‘A fowl does not eat millet’

In (22a), the definite article, *máá* is used together with the noun *búá* ‘goat’ in the second sentence to indicate that the referent is the same as the goat mentioned in the previous sentence; therefore giving it a definite interpretation. The use of the article, *lá* also gives

nóó ‘fowl’ a definite interpretation; but this type of definiteness indicates that the fowl in question is identifiable by both the speaker and hearer based on shared knowledge. In (22c), it is observed that the noun is not accompanied by any article, which gives *nóó* ‘fowl’ an indefinite interpretation. Meaning that the fowl being referred to in this case is not a specific one. Another aspect of these articles that must be looked at is their forms. Morphologically speaking, articles in Dagbani do not change form irrespective of the noun they occur with. The same forms are observed when they accompany singular nouns as in the earlier examples in (22a) through (22c), or plural nouns as in (23a) and (23b), count nouns as observed in the examples provided in (22) and (23) and mass nouns like the construction given in (23c).

- (23) a. *bí-hí* *máá* *chán* *shúkúró*
 child-PL DEF go.PFV school
 ‘The children have gone to school.’
- b. *bí-hí* *lá* *chán* *shúkúró*
 child-PL DEF go.PFV school
 ‘The children have gone to school.’
- c. *bíndígú* *máá* *ká* *kpé*
 food DEF NEG here
 ‘The food is not here.’

In terms of their distribution, *máá* and *lá* occur post-nominally. This is why constructions like the examples in (23a) and (23b) where the articles follow the noun are acceptable in the language whereas those in (24a) and (24b) below where the articles precede the noun are not.

(24) a. *máá bí-hí cháj shúkúró

DEF child-PL go.PFV school

‘The children have gone to school.’

b. *lá bí-hí cháj shúkúró

DEF child-PL go.PFV school

‘The children have gone to school.’

Even in relation to other elements in a phrase, they still occur post-nominally. That is, aside the noun, the definite articles also follow elements like adjectives and numerals in the DP. In (25a) for instance, the article *máá* ‘the’ follows the noun, *bíá* ‘child’ as we have encountered in earlier examples. In (25b) where it occurs together with the same noun and the modifying adjective, *viéllí* ‘beautiful’, it is preceded by the noun and adjective. Similarly, it follows the noun, adjective and numeral, *áyí* ‘two’ in (25c).

(25) a. bí-à

máá

child-SG

DEF

‘the child’

b. bí

vié-llí

máá

child

nice-SG

DEF

‘the beautiful child’

c. bí

vié-lá

áyí

máá

child

nice-PL

two

DEF

‘the two beautiful children’

3.1.2 Demonstratives

Also known as deictic elements, demonstratives generally indicate the position of an entity

or event in relation to the speaker and express distance in time and space. Diessel (1999) identifies four major groups of demonstratives: demonstrative pronouns, demonstrative determiners, demonstrative adverbs and demonstrative identifiers. The focus here is on demonstrative determiners. These demonstratives basically show the location of a specific referent in relation to the speaker.

Many languages are found to have what Diessel (1999) calls a ‘two-term deictic system’. This is where ‘two demonstratives are used to locate the referent at two different points on a distance scale: a proximal demonstrative referring to an entity near the deictic center, and a distal demonstrative indicating a referent that is located at some distance to the deictic center’ (Diessel 1999). In English, for instance, the proximal demonstratives ‘*this /these*’ are used to refer to entities that are close in time and space to the speaker or deictic center, and *that/those* refer to entities that are far from the speaker. Languages like Vietnamese, French, Buli, Safaliba, Gonja and Dagbani also have this deictic system.

3.1.2.1 Proximal and Distal Demonstratives

As pointed out, in Dagbani a two-way system is used to express distance in terms of time and space. The proximal demonstrative, *ηó* ‘this/these’ is used to indicate that the referent is close in time and space to the speaker and addressee and the distal demonstrative, *ηó há/sá* ‘that/those’ expresses farthensness of the referent to the deictic center. According to Issah (2013), the distal demonstrative is a product of the combination of the proximal demonstrative, *ηó* and a distal marker, *há/sá*. The use of these determiners is exemplified in the constructions below where the use of *ηó* indicates closeness of the referent nouns, *yíli* ‘house’ and *yíyá* ‘houses’ to the deictic center in (26a) and (26b) respectively. Examples (26c) and (26d) also show that the referents *kúglí* ‘stone’ and *kúgá* ‘stones’ occurring with *ηó há* and *ηó sá* suggests that the referents are far from the deictic center.

- (26) a. yí-lí ηό
 house-SG DEM
 ‘this house’
- b. yí-yá ηό
 house-PL DEM
 ‘these houses’
- c. kúg- lí ηό há
 stone-SG DEM DM
 ‘that stone’
- d. kúg-á ηό sá
 stone-PL DEM DM
 ‘those stones’

These demonstratives are also observed to have the same form throughout in the constructions above although they modify singular nouns in (26a & c) and plural nouns in (26b & d). This is however not the case in English, and in related language like Dagaare (Bodomo 1997) and Gonja (Kotochi 2017) where a distinction is made between singular and plural demonstratives. Languages like Buli (Sulemana 2012) and Safaliba (Inusah 2015) on the other hand share this morphological property of demonstratives with Dagbani. In relation to distribution, the acceptable order of the noun and its modifying demonstrative in a phrase is that it occurs after the noun. This is so irrespective of the type of noun being modified. This explains the inadmissibility of the examples below as against the grammaticality of the examples encountered in (26).

- (27) a. *ηό yí-lí
 DEM house-SG

‘this house’

b.*ɲɔ yí-yá

DEM house-PL

‘these houses’

c.*ɲó há kúg-a´

DEM DM stone-PL

‘those stones’

3.1.3 Numerals

In every language, there are expressions used to denote quantities and represent numbers. One of such is the group of expressions known as numerals. Numerals are specific words or symbols that denote exact quantities. Thus, they provide precise numerical information. Based on their function and form, we could categorize them into cardinal, ordinal, fractional, and multiplicative numerals. More commonly discussed in the literature, however, are cardinal and ordinal numerals. Cardinal numerals denote the exact quantity of a referent. Examples of this in English include the expressions, *one*, *two*, *three*, *twenty*, and *hundred*. Ordinal numerals on the other hand like *first*, *second*, *third*, *fifth*, and *eleventh* in English ‘identify a referent in terms of its order with respect to other referents’ (Dryer 2007: 60). Expressions for cardinals in Dagbani comprise single words and phrases. For instance, the cardinal ‘three’ is *átá* and ‘twenty-one’ is *píŋ ní yíni*. The expression ‘three children’ will therefore be *bíhí átá*. Ordinals, on the other hand, as noted by Issah (2013), are a bit more complex since they are expressed using relative clauses. Hence, an expression like ‘the third man’ is expressed as *do’ so ɲun pahiri átá*, literally meaning ‘the man who adds up as third’. Although Dagbani’s numeral system accommodates both types of expressions, the focus here is on cardinals.

3.1.3.1 Cardinal numerals

In Dagbani, cardinal numerals are used in general counting and to indicate the number of a referent. Below is a table presenting these numerals from one to ten as used to modify a referent (B) and as used in counting (A) in the language.

Table 2: Cardinal numerals in Dagbani

Numeral	A	B
One	n-dààm,	yín-ó, yín-í
Two	n-yí	áyí
Three	n-tá	átá
Four	n-náhi	ánáhi
Five	n-nú	ánú
Six	n-yóbù	áyóbù
Seven	m-pòin	ápòin
Eight	n-nû	ánû
Nine	n-wéi	áwéi
Ten	píá	píá

It is observed that the forms in A and B bear some resemblance. Apart from the numerals representing ‘one’ (*ndààm, yínó, yíní*) which have completely different forms, and the numerals for ‘ten’ (*píá, píá*) which have identical forms, the rest of the numerals differ only in their initial sounds. The alveolar ‘*n*’ sound is prefixed to all the counting numerals while the vowel ‘*a*’ initial sound is observed for the expressions used to specify the number of a referent. I suggest a simple explanation for the pattern in these expressions. In order to

express the number of a referent, we go with the numeral prefixed with an ‘a’ initial sound. In counting, however, we employ the numeral counterpart with the ‘n’ initial sound. As explained earlier, numerals are generally used to indicate the number of referents a noun denotes and the same applies in Dagbani. The constructions in (27) exemplify this.

- (27) a. páy-á yínó
 woman-SG one
 ‘one woman’
- b. páyá-bá áyí máá kána-Ø
 woman-PL two DEF Come
 ‘the two women have come’
- c. líígá- Ø yíní ñó dáyí-yá
 dress-SG one DEM dirty-PFV
 ‘this one dress is dirty’
- d. líígá-nímá áyí
 dress-PL two
 ‘two dresses’

The numeral put together with the noun in the phrases above shows the number of women being referred to in (27a & b). Likewise, the numerals in (27c and d) indicate the number of dresses. Also, aside the examples in (27a) and (27c) which show different forms (*yínó* and *yíní*) being used to indicate ‘one’, generally, the forms of numerals do not change irrespective of the nouns they modify. This is clear from (27a and c). In these examples, *áyí* ‘two’ is used to modify the animate noun, as *páyábá* ‘women’ and the inanimate noun, *líígánímá* ‘dresses’. Although *yínó* and *yíní* both refer to ‘one’, the choice of one over the

other is motivated by the semantic properties of the nouns they modify. The form, *yínó* is used with animate entities like in (27a) and *yíní* is used when the referent noun is inanimate like in (27c). In the context of the DP, the numeral always occurs after the noun as can be observed in the examples in (27a) to (27d). A change in this order will therefore render a construction ungrammatical like in the examples below.

e. **yíní* *lígá*
 one dress.SG
 ‘one dress’

f. **áyí* *páyá-bá*
 two woman.PL
 ‘two women’

Another property of numerals in Dagbani is that they cannot be used with mass nouns and non-count nouns. Any construction like what is presented in the examples below is therefore ungrammatical.

g. **shíkírí* *áyí*
 sugar two
 h. **pòhìm* *ánú*
 air five

3.1.4 Quantifiers

The category of quantifiers basically characterizes nouns by giving information about the quantity or amount of a noun’s referent. Although cardinal numerals are regarded as quantifiers, they are numeric in nature. Hence, the information they provide about a noun is related to a specific numerical value indicating the referent’s quantity or amount. The information provided by quantifiers on the other hand is non-numerical. This is why I

discuss cardinal numerals separately from their non-numeric counterparts which will be looked at in this section. Presented in the table below (taken from Issah 2013 with a slight modification indicated by a highlight showing an addition made) are quantifiers in Dagbani.

Table 3: Quantifiers in Dagbani

Quantifier	Gloss
Pám	a lot/many
Só	certain (animate)
Biélà	little/few
Shébà	some (animate, human)
Shénà	some (inanimate)
Shéli	some (inanimate, non-count)
Kó	only
Kám	every
Záá	all

(Issah 2013:210)

Apart from the quantifiers that have specific features indicated against them, all other quantifiers can modify any type of noun. This means that some quantifiers are selective in terms of the type of noun they occur with. *Shébà*, ‘some’, for instance, can only modify nouns that are animate and human (28a). Putting it together with inanimate or non-human nouns (like in 28b) will be unacceptable. Also, as exemplified in (28c & d), *shénà* ‘some’ on the other hand can modify inanimate nouns and not animate ones.

(28) a. *dáb’ shébà

man some
‘some men’

b. *yíl shébà

house.SG some
‘some houses’

c. yíl shéṇà

house.SG some
‘some houses’

d. *dáb’ shéṇà

men.PL some
‘some men’

It is pertinent to explain the behavior of the nouns in the phrases above. As observed, their forms are not fully spelt out. This is because nouns have to be in their root forms or have their suffixes truncated in order to co-occur with quantifiers. In (28a), the plural noun, *dáb-bá* ‘men’ has its plural suffix truncated, giving the new form, *dáb’* before occurring with the quantifier *shébà*. A similar observation is made in (28c) where *yílí* ‘houses’ is also shortened into *yá’* and then combined with *shéṇà* to yield the phrase, *yá’shéṇà* ‘some houses’. The constructions in (28e & 28f) where the full forms of the nouns co-occur with the quantifiers are hence not grammatically acceptable.

e. *dáb-bá shébà

man-PL some
‘some men’

f. *dó-ó só

man-SG certain

‘a certain man’

Despite the change in form of the nouns being modified, the forms of these quantifiers are not altered. This excludes the expressions *shébà*, *shéli* and *shéjà* for ‘some’. Notice how the sounds they are made up of are similar except in the last two. Given that they all express the same meaning too, we can argue that they are the same and only vary in form depending on the type of noun they occur with. When the noun is animate and plural, the form, *shébà* is employed (28a). Both *shéli* and *shéjà* on the other hand, qualify inanimate nouns. Another distinction can be made between them based on the number specification of the noun each is modifying. *Shéli* is used when the referent is singular (29a) and *shéjà* (28c) is preferred when the referent is plural. Any change in this order (as shown in 29b & c) makes the construction grammatically incorrect and hence, unacceptable in the language.

(29) a. ti’ shéli

tree some

‘some tree’

b. *bi’ shéli

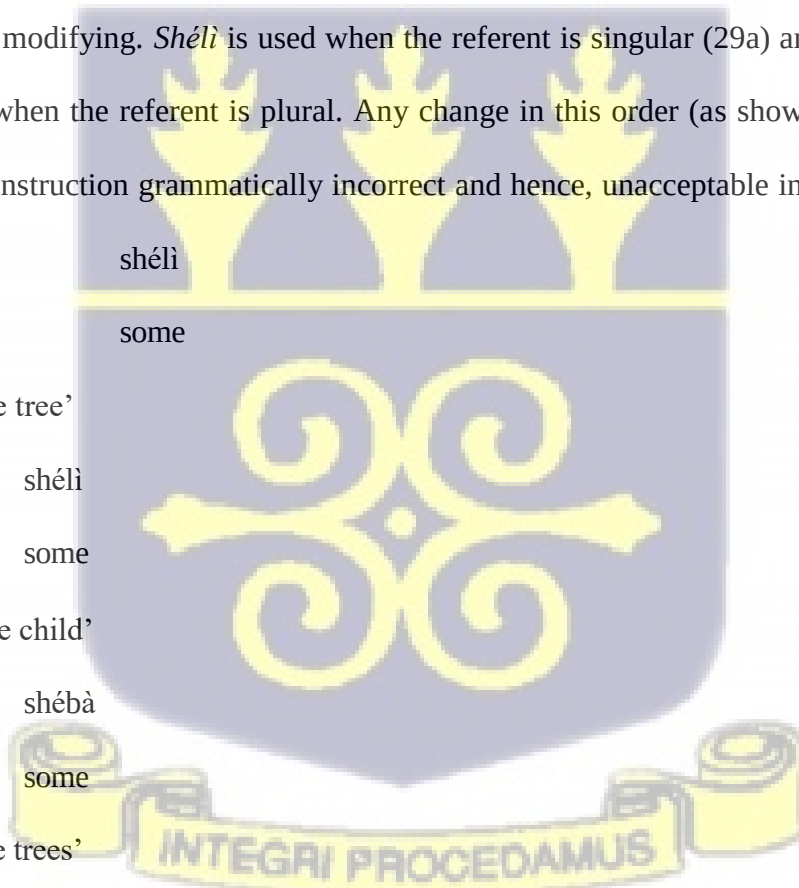
child some

‘some child’

c. *ti’ shébà

tree some

‘some trees’



In relation to their distribution, all quantifiers generally follow the noun; the examples encountered so far speak to this fact.

3.1.5 Possessive pronouns

Possessive relations are expressed differently across languages. Dagbani uses associative constructions to express this relation. In this construction, the possessor is juxtaposed with the possessed entity without any intervening associative marker as illustrated in (30a through 30c).

- (30) a. bé bínǵírgù
 3.PL food
 ‘their food’
- b. Wúmpinì lóorí máá
 Wumpini car DEF
 ‘Wumpini’s car’
- c. dóó máá búkú
 man DEF book
 ‘the man’s book’

It is also noticed that a possessive pronoun can take the function of the possessor (30a), as well as proper names (30b) and common names (30c). The interest here however is on possessive pronouns in the context of the DP. Hence, the rest of the section will be exploring that further. A good start to this will be to look at the pronominal system of the language. Table 3 (based on Abubakari & Issah 2020 with slight modification) summarizes the pronominal system in Dagbani.

Table 4: The Dagbani Pronominal System

	Non-Emphatic pronouns				Emphatic pronouns		Possessive pronouns	
	Subject forms		Object forms		Subject forms		Subject forms	
Person	Singular	Plural	Singular	Plural	Singular	Plural	Singular	Plural
1 st	m, n, ɲ	tí	Má	tí	mánì	tínimá	m, n, ɲ	tí
2 nd	Á	yí	Á	yá	nyínì	yínimá	Á	yí
3 rd (ANIM)	Á	bé	Ò	bá	ɲúnà	bánà	Ò	bé
3 rd (INAN)	dí	dí	lí	ɲá	dínà	dínimà	dí	dí

(Abubakari & Issah 2020: 2)

As has been reported for other sister languages like Gureɛ, Kusaal, and Buli, Dagbani's pronominal system can be divided into two main categories: emphatic and non-emphatic pronouns (Purvis 2007; Olawsky 1999). Unlike the set of emphatic pronouns, a distinction is made between subject and object forms of non-emphatic pronouns. Emphatic pronouns are also observed to have full forms while non-emphatic pronouns are clitic-like in nature. Aside the feature of animacy which applies to only third person pronouns, all other pronouns are marked for person, number as indicated in the table above. Hence, their occurrence in a particular context is determined by these features. The emphatic pronoun, *máni* 'me' for instance is a first person singular pronoun that occurs in subject position. Its plural counterpart, *tínimá* also occurs in subject position. The third person singular non-emphatic pronoun *ò* 'he/she' on the other hand occur in and both subject and object position but can only represent animate nouns. They are paired with the plural forms, *bé* 'they' in

subject position and *bá* ‘them’ in object position. Additionally, the set of possessive pronouns have subject forms but not object counterparts. A distinction is further made between the singular and plural forms of these pronouns. These pronouns which are used to mark possession are also observed to be clitic-like in form. The next section will consider these different forms, as well as their distribution in relation to the noun.

3.1.4.1 First Person Singular/Plural (*m*, *n*, *ɲ* / *tí*)

The first person possessive pronouns are used when a speaker(s) want(s) to refer to themselves in relation to possessing one or more entities. The first person possessive pronouns, *m*, *n*, and *ɲ* ‘my’ are singular in number and *tí* ‘our’ is plural. Both pronouns only occur at subject position. As indicated in the table, the first person singular possessive pronoun has three different forms. The choice of a form in a particular construction depends on the initial sound of the noun being modified. Thus, there has to be a concord between the possessive pronoun and the initial sound of the noun. Nouns with bilabial sounds at initial position occur with the *m* variant. If the initial sound of the noun is alveolar the *n* form is chosen, and *ɲ* goes with nouns that have a velar sound at the initial position. This is illustrated below.

(31) a. *m búkú máá dó tɪŋá*
 1SG book DEF lie floor
 ‘my book is lying on the floor’

b. *n lóóri máá kána*
 1SG car DEF come.PFV
 ‘my car(ride) has come’

3.1.4.1.1 *ɲ gá-lá máá bí-yá*
 1SG egg-PL DEF cook-PFV
 ‘my eggs are cooked’

d. tí bú-hí máá zó-yá
 1PL goat-PL DEF escape-PFV
 ‘our goats have escaped’

e. tí gónd-à máá bí-yá
 1PL pawpaw-PL DEF ripe-PFV
 ‘our pawpaws have ripened’

The example in (31a) shows the form *m* modifying the noun *búkú* ‘book’ because of the bilabial, ‘b’ initial sound of the noun. In the next example (31b), the pronoun *n* also goes with *lóóri* ‘car’ which begins with the alveolar sound, ‘l’. (31c) also shows the modified noun, *gálá* ‘egg’ which has the initial velar sound, ‘g’ occurring with the pronoun, *η*. The first person plural possessive pronoun *tí*, on the other hand, has only one form and modifies any noun irrespective of the sound occurring at the initial position of the noun. In (31d), it occurs with *búhí* ‘goats’ which begins with the bilabial, ‘b’. The same form again in (31e) occurs with *gálá* ‘eggs’ which has a velar sound beginning it. We also observe that in the juxtaposition of the possessive pronoun and the modified noun, there is a particular order. The pronoun always precedes the noun, making its position in relation to the noun, pre-nominal. Hence, we observe in the examples above that the nouns, *búkú*, *lóóri*, *gálá*, *búhí* and *góndà* follow the possessive pronouns *m*, *n*, and *η* respectively in (31a) through (31e). Any order apart from this will render the construction ungrammatical.

3.1.4.2 Second Person Singular/Plural (*á* / *yí*)

In expressing possession in relation to the addressee, the second person singular possessive pronoun, *á* ‘your’ and second person plural possessive pronoun, *yí* ‘yours’ are employed. Both pronouns are only allowed at the subject position of a construction. Just like their first person counterparts, they also occur pre-nominally. Both pronouns also have only one form

each which is not altered irrespective of the noun it occurs with. The constructions that follow exemplify this.

- (32) a. á nó-hí máá zó-yá
 2SG fowl-PL DEF escape-PFV
 ‘your (singular) fowls have escaped’

- b. yí nó-hí máá zó-yá
 2PL fowl-PL DEF escape-PFV
 ‘your (plural) fowls have escaped’

3.1.4.3 Third Person Animate Singular/Plural (ò/ bɛ́)

The third person singular and plural possessive pronouns are used to show possession of an entity in relation to a person(s) other than the speaker and the addressee. For these pronouns, a distinction is made between pronouns that are designated for animate entities and those that are used for inanimate entities. This section dwells on pronouns of the former category. In this case, pronouns whose referents are restricted to humans. These third person animate possessive pronouns include *ò* ‘his/her’ for singular referents and *bɛ́* ‘their’ for plural referents. In terms of position, they also come before the noun. The semantic restriction on these pronouns to modify only animate nouns is illustrated in (33a) and (33b) where the referents of *ò* ‘his/her’ and *bɛ́* ‘their’ are humans. Their post-nominal position is also observed in their occurrence after the noun *bíndírgù* ‘food’ in both examples.

- (33) a. ò bíndírgù máá bí-yá
 3SG food DEF finish-IPFV
 ‘his or her (Abu or Amina’s) food is cooked/ready’

- b. bɛ́ bíndírgù máá bí-yá

3SG food DEF finish-IPFV

‘their (the children’s) food is cooked/ready’

3.1.4.4 Third Person Inanimate Singular/Plural (*dí/ dí*)

As pointed out earlier, the third person inanimate possessive pronouns are used when the referents in question are non-human. Thus, they are used for referents like animals, plants and non-living entities. They include the singular and plural forms, *dí* ‘its’ and *dí* ‘their’ respectively. There is no distinction between the forms for the singular and plural inanimate possessive pronouns. Hence, in referring to one or more inanimate entity in relation to possessing an object, the same form of the pronoun (*dí*) is used. This is shown below in the construction in (34a) where the use of this form is making reference to a single tree but refers to more than one tree in (34b).

(34) a. *dí vári máá kúrgí-rá*
 3SG leaves DEF old-IPF
 ‘its (the tree’s) leaves are growing old’

b. *dí vári máá kúrgí-rá*
 3SG leaves DEF old-IPFV
 ‘their (the tree’s) leaves are growing old’

3.2 Adjectives as Other Modifiers in the DP

So far, we have looked at modifiers that can occupy the head position in the DP. We turn next to other modifiers in the DP. Here, we talk of modifiers such as adjectives and relative clauses that although occur in the DP, do not occupy the Determiner position. Due to the complex nature of relative clauses as compared to adjectives and other modifiers already discussed, this section focuses solely on adjectives. It also sheds light on the different semantic attributes they assign to nouns, the forms they take depending on the nouns they

co-occur with and their distribution in relation to the noun complement.

3.2.1 Adjectives

As modifiers, adjectives play the role of providing descriptive information about a noun, noun phrase or pronoun. This descriptive information captures notions/concepts such as shape, colour, height, texture, size, among others, which serve as the basis for the semantic classification of the class of adjectives in languages. As shown in the examples below, Dagbani also shares this semantic property.

Category	Adjectives
Colour	zée ‘red’, píellí ‘white’
Size	bilà ‘small’, kárlí ‘big/large’
Shape	kpillí ‘round’, pátì ‘flat’
Height	wáyínlí ‘tall’, jíá ‘short’
Texture	pòlíplí ‘smooth’, gbúrímágbúrímá ‘rough’

In a DP, the noun can combine with the adjective including other modifiers as shown in the examples that follow.

(35) a. páy’

zée

woman SG

fair

‘fair woman’

b. páy’

zé-hí áyí nò

woman.PL

fair-PL two

DEM

‘these two fair women’

c. bú

píe-llí

lá

goat.SG white-SG DEF

‘the white goat’

d. bú’ píé-lá máá záá

goat.PL white.PL DEF all

‘all the white goats’

e. *páyá zé-é

woman.SG fair-SG

‘fair woman’

f. *páy’ zé-é

woman.PL fair-SG

‘fair woman’

A look at the constructions above (except for the ones marked as ungrammatical) gives an indication of a peculiar morphological pattern. The co-occurrence of the noun and adjective elicits a behaviour that has been observed in contexts where nouns are modified by quantifiers, which has been discussed earlier in this section. Here, I am referring to the truncation of the noun whenever it occurs with the adjective. Instead of the full form, it is the root form of the noun that surfaces. For instance, the noun, *páyá* ‘woman’ surfaces in (35a) as *páy’* because it is appearing together with the adjective, *zéé* ‘fair’. The apostrophe at the end of the noun represents an orthographic convention that indicates an omission of the number suffix attached to the noun. The same observation is made in examples (35b) through (35d). This explains the ungrammaticality of (35e). In this example, instead of the truncated form, the full form of the noun is observed although it is occurring with an

adjective. Another morphological property of this noun-adjective association concerns number. An adjective's form is affected when it occurs together with a plural noun. Thus, an adjective is marked plural when the noun being modified is plural. Here, the number feature on the noun moves from the noun unto the modifying adjective. This is exemplified in (35b & 35d). In (35b), the noun *páybá* 'women' which is realized as *páy* 'due to context, has its plural feature influencing the adjective *zéé* 'fair' to become *zéhi* 'fair'. The phrase *bú* 'white goats' in (35d) also results from the plural feature moving from the noun, *búhi* 'goats' unto the adjective, *piélli* 'white'. Example (35f) on the other hand has the adjective *zéé* not being marked for plural in spite of the noun *páy* 'being plural; this makes it ungrammatical in the language. Like other related languages a concatenation of adjectives is possible in Dagbani. Issah (2013) however points out that this is allowed in the language so far as the adjectives do not semantically contradict one another. The constructions below from Issah (2013) confirm this fact.

- (36) a. *páy' kúr' zé' wáyín' b'é'' títálí máá*
 womanold fair tall ugly big DEF
 'the tall old fair big ugly woman'
- b. *bí' kúr' zé' kpùl' jí' víél' yólí máá*
 child old fair portable short nice naughty DEF
 'the old fair portable short nice naughty child' (Issah 2013:205)
- c. *bí' kúr' zé' kpùl' jí' víél' yó-yá máá*

child old fair portable short nice naughty-PL DEF

‘the old fair portable short nice naughty children’

In (36a) the noun *páyá* is modified by five adjectives and (36b) has six modifying adjectives occurring together with the noun, *bíá*. It is also observed that except for the final adjective, all other adjectives occur in their root forms. Also, as encountered in earlier examples, an adjective occurring with a plural noun is inflected for number. This is still the case in constructions where the adjective is more than one, except that the plural marker is attached only to the final adjective. Hence, irrespective of the number of adjectives occurring together with a noun, the last of them always appears in its full form. (36c) clearly demonstrates this. Although the plural noun, *bíhí* is followed by six adjectives, *yóyá* ‘naughty’ which is the last of them bears the number feature. Distributionally, adjectives serve as post-modifiers of nouns in Dagbani. Hence, they occur post-nominally. The examples presented so far under this section demonstrates this distributional property.

3.3 The Order of Modifiers in the Dagbani DP

This section considers the order of articles, demonstratives, quantifiers, numerals, adjectives and possessives discussed under this chapter as modifiers in the Dagbani DP. Although the distribution of these modifiers has already been looked at in this chapter, they were only considered in relation to the noun complement. This is taken up further in this section to ascertain their arrangement in relation to one another. Such an analysis will be useful in accounting for how the order of elements in the DP is derived, which is the focus of the next chapter.

3.3.1 Noun - Demonstrative - Article

As stated earlier, articles and demonstratives occur post-nominally in relation to the noun. Their order in relation to each other in the DP is however fixed. When both elements alone co-occur with the noun, the demonstrative is always preceded by the article as exemplified below in (37a) and (37b). Both examples show that the noun appears first, followed by the demonstrative, *ηό* and then the article *μάά*. (37c) on the other hand is marked as ungrammatical because of the wrong ordering of these elements.

- (37) a. *yí-lí* *ηό* *μάά*
 house-SG DEM DEF
 ‘this house’
- b. *yá* *ηό* *μάά*
 house.PL DEM DEF
 ‘these houses’
- c. **yí-lí* *μάά* *ηό*
 house-SG DEF DEM
 ‘this house’

3.3.2 Noun - Numeral - Demonstrative - Article

Like articles and demonstratives, numerals also post-modify the nouns they occur with. Combining all three elements in the DP will require that the numeral comes first. The demonstrative then follows before the article is introduced. The grammatical examples in (38a) and (38b) as against the ungrammatical ones in (38c) and (38d) illustrate this.

- (38) a. *yí-yá* *áyí* *ηό* *μάά*
 house-PL NUMRL DEM DEF
 ‘these two houses’

b. bí-hí ánáhí ɲó máá

house-PL NUMRL DEM DEF

‘these four children’

c.*yí-yá ɲó áyí máá

house-PL DEM NUMRL DEF

‘these two houses’

d.*yí-yá máá áyí ɲó

house-PL DEF NUMRL DEM

‘these two houses’

3.3.3 Noun - Numeral - Demonstrative -Article - Quantifier

When an article is combined with a demonstrative, a numeral and quantifier as modifiers of a noun, the sequence, numeral - demonstrative - article - quantifier must be followed. Any change in this sequence will render a construction ungrammatical. This explains why the construction in (39a) is acceptable in the language and (39b through 39d) are not.

(39) a. yí-yá áyí ɲó máá záá
house-PL NUMRL DEM DEF QUANT
‘all these two houses’

b.*yí-yá máá záá áyí ɲó
house-PL DEF QUANT NUMRL DEM
‘all these two houses’

c.*yí-yá áyí ɲó záá máá
house-PL NUMRL DEM QUANT DEF
‘all these two houses’

d.*yí-yá áyí máá ɲó záá

house-PL NUMRL DEF DEM QUANT

‘all these two houses’

3.3.4 Possessive pronoun - Noun - Numeral - Demonstrative -Article - Quantifier

Amongst the modifiers discussed, the possessive pronoun is the only one that pre-modifies the noun in the DP. Where it occurs together with the article, demonstrative, numeral and quantifier, it precedes all of them too. The sequence, possessive pronoun - numeral - demonstrative - article - quantifier is therefore observed as the acceptable order of these elements in the DP. This is exemplified as follows:

(40) a. tí yí-yá ánáhí ɲó máá záá

2PL house-PL NUMRL DEM DEF QUANT

‘all these our four houses’

b. bé bí-á yínó ɲó máá kó

3PL child-SG NUMRL DEM DEF QUANT

‘this their one child/this one child of theirs’

c.*yí-yá tí ánáhí ɲó máá záá

house-PL 2PL NUMRL DEM DEF QUANT

‘all these our four houses’

d.*yí-yá ánáhí ɲó máá záá tí

house-PL NUMRL DEM DEF QUANT 2PL

‘all these our four houses’

(40a) and (40b) are not acceptable constructions due to the shifting of the pronoun, *tí* from its original initial position to different positions within the DP.

3.3.5 Possessive Pronoun - Noun-Adjective - Numeral -Demonstrative - Article

Quantifier

Adjectives also occur as post modifiers of the noun complement in the DP. However, when it comes to the adjective's position in relation to other modifiers, it can occur before or after these modifiers depending on the particular modifiers present in the construction. Apart from the possessive pronoun which comes before the adjective, all other modifying elements that the DP hosts follow it. We therefore have the possessor - adjective - numeral - demonstrative - article - quantifier sequence as the order of elements in the DP with the exception of the relative clause which has been excluded from the beginning of the discussion. This order is illustrated below.

- (41) a. tí yí' ká-rá ánáhi ɲó máá záá
 2PL house.PL big.PL NUMRL DEM DEF QUANT
 'all these our four big houses'

3.4 Chapter Summary

This chapter has examined the different elements and their order in the Dagbani DP. Specifically, articles, demonstratives, quantifiers, numerals, possessive pronouns and adjectives are considered. It is observed that elements in the DP generally do not have a complex morphology and syntax system. Based on this observation, I suggest, for instance, that the difference observed in the initial sounds of the two types of cardinal numeral expressions in Dagbani is basically semantically motivated. These elements also occur in a fixed order. Thus, apart from the possessive pronoun which precedes the noun, all other modifiers follow the noun. It is also observed that the structure of the DP with all possible modifiers present (with the exception of relative clauses) is, possessive pronoun - noun -

adjective - numeral - demonstrative - article - quantifier.

Having described the elements in the DP and established their order, I proceed to discuss the derivation of this order based on the theoretical assumptions presented in the literature.



CHAPTER FOUR

DERIVING THE SURFACE ORDER OF THE DETERMINER

PHRASE IN DAGBANI

4.0 Introduction

The focus of this thesis has so far been on modifiers and their semantic, morphological and syntactic relation with the noun complement as well as their order in the DP. Given that modifiers in the DP of various languages have different linguistic properties and as such, may vary in terms of how their surface orders are derived, different theoretical assumptions presented in the literature account for these differences. This chapter seeks to apply these assumptions in explaining the derivation of the elements in Dagbani DP. While at this, similarities that exist between the account on Dagbani and other languages are pointed out. At the same time, peculiarities observed for the Dagbani DP are noted.

4.1 The Simple DP Structure

In its simplest form, the DP constitutes a determiner head and a noun complement. More complex DP structures are formed by adding on more of these modifiers. A basic DP structure therefore consists of a noun and determiner as illustrated in the examples below.

- (42) a. bí-á máá
 child-SG DEF
 ‘the child’
- b. dó-ó só
 man-SG QNT
 ‘a certain man’
- c. yí-lí ɲó

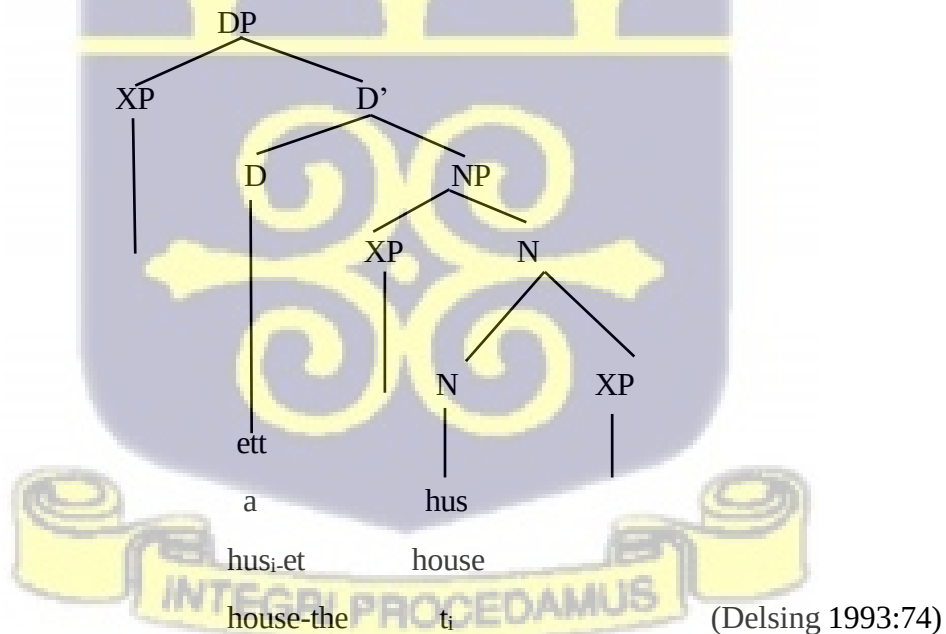
- house-SG DEM
 ‘this house’
 d. búkú ɲó há
 book DEM DM
 ‘that book’
 e. páy-bá áná hí
 woman-PL NUMRL
 ‘four women’
 f. tí bí- hí
 PP child-PL
 ‘our children’

The nouns in (42a through 42f) occur with the article, quantifier, demonstrative, numeral, and possessive pronoun respectively. These examples like others encountered in the previous chapters prove that with the exception of possessive pronouns which pre-modify the noun, all other modifiers occur post-nominally, thereby giving us a noun-determiner sequence. Following the universal sequence of nominals proposed by Hawkins (1983), which follows the order Determiner > Number > Demonstrative > Numeral > Adjective > Noun, the noun-initial order within the DP in Dagbani will require some modification. The minimalist framework caters for this. Thus, based on the assumption that movement operations result in the different surface structures observed in languages, the structure of the DP in Dagbani can be explained. In the literature, two types of movements have been proposed to account for the noun-determiner order in the DP. It is suggested that either N to D movement (Bernstein 1993; Longobardi 1994; Davies & Dresser 2005) or NP movement to Spec DP (Aboh 2004; Cinque 2005) has taken place within the DP to yield this sequence. I propose that the order in Dagbani is best explained by the latter type of movement. There are good reasons for suggesting this. For one, N to D movement explains

the DP structure observed in languages that lack determiners. Longobardi (1994) for instance, suggests that proper names that lack determiners are generated at N but have to move to D in order to be considered as an argument and by extension, a DP in Italian. In addition, this type of movement is more common among languages that mark definiteness by suffixing the definite marker to the noun. Delsing (1993) and Grosu (1989), for example, also analyse the suffixed article on Scandinavian languages and Romanian respectively in terms of Noun raising to D. The following noun phrases and DP structure demonstrates this type of movement in Sweedish.

- (43) a. *en bil* *ett hus* *Bilar* *Hus*
a car a house Cars Houses
Bilen *Huset* *Cilarna* *Husen*
car-the house-the cars-the houses-the

b.



It can be noticed from the noun phrases in (43a) that indefiniteness on the noun is marked in Sweedish by a separate category that is not attached to the noun. An example is *ett hus*

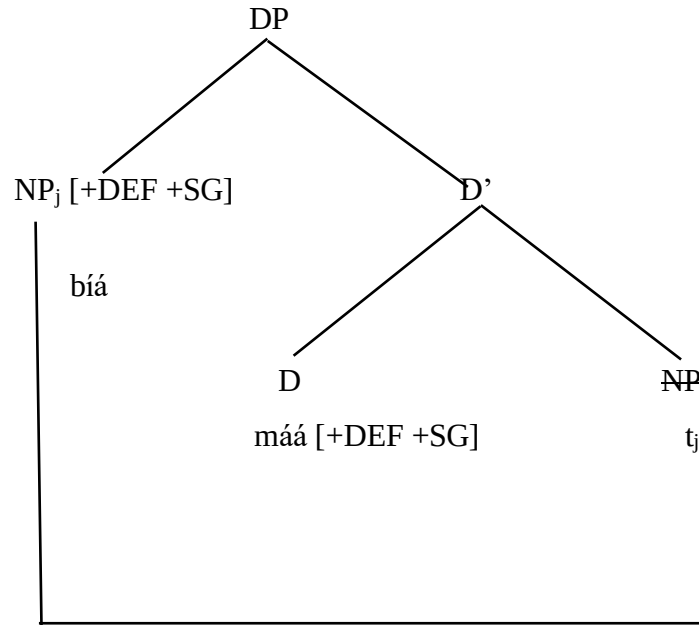
which translates as ‘a house’. Definiteness on the other hand is expressed by attaching the definite marker to the noun as a suffix like in the example, *huset* ‘house-the’. According to Delsing (1993), the structure in (43b) shows that for the indefinite expression, *ette hus* ‘a house, the indefinite article *ette* and the noun *hus* are both generated at D and N respectively and remain in situ. In deriving its definite counterpart *huset* which has the definite marker attached to it however, the noun *hus* which is also generated at N has to raise and join with the definite marker, *-et* which is base generated at D. Chapter three of this thesis has shown that all determiners, including the definite determiners are not morphologically attached to the noun. Thus, definiteness in Dagbani is marked separately from the noun in the DP. This therefore cancels out D to N movement as a plausible explanation to the noun-initial order of the Dagbani DP.

The other alternative, that is, NP movement to Spec of DP, however, is able to account for this order. I propose that this particular movement takes place due to the need for NP to check its [definite], [number] and [deixis] features at D, which forces it to raise to the Spec of DP. The derivation of (42a) repeated here as (44a) exemplifies this.

- (44) a. bí-á mǎá
 child-SG DEF
 ‘the child’



b.



In the diagram, *máá*, which is occupying the D (head) position can be replaced by any other modifier apart from the possessive pronoun in this derivation. Thus, in a basic DP structure where a demonstrative, numeral, quantifier or adjective co-occurs with the noun only as in the phrases in (42), the derivation remains the same. This account is similar to that of a related language, Buli (Sulemana 2012), and other languages such as Gungbe (Aboh 2004).

4.2 Noun - Demonstrative - Article

Next, we consider the derivation of the DP consisting of a complement noun, a demonstrative and an article. Just like we have in a basic DP, the noun occurs at the left edge of the DP structure and the article occurs to the right. The difference here however is that the demonstrative mediates between the two elements. Although examples of this are provided in chapter three, similar ones are presented here for ease of reference. Consider the constructions below where both the proximal demonstrative, *ɲó* and the distal demonstratives *ɲó há/ɲó sá* both occur between the noun and article in (45a) and (45b and c) respectively.

(45) a. búkú ɲó máá
 book.SG DEM DEF
 ‘this book’

b. *búkú ɲó há máá
 book.SG DEM DM DEF
 ‘this book’

c. *búkú ɲó sá máá
 book.SG DEM DM DEF
 ‘this book’

It is also observed in these examples that unlike the proximal demonstrative, *ɲó* which can occur with the article as in (45a), a construction is rendered ungrammatical when the distal demonstrative occurs together with the article like in (45b). I suggest that this is because the distal marker *sá/há* included in *ɲó há* ‘that’ and *ɲó sá* ‘that’ carries a definite feature which is already an inherent feature of the definite article. Including it in a construction with the definite article would therefore make it superfluous. This behaviour of the demonstrative and the article as co-elements in the Dagbani DP raises the question of whether or not the article and the demonstrative are in complementary distribution in the language since each element can occur exclusively in a construction and still be acceptable. Discussions around this question in the literature point to two different views. While some scholars have treated the demonstrative as a determiner, others are against equating the two elements (Bernstein 1993 ; Giusti 1997 ; Brugé 1996 ; Rosen 2003). The latter group base their argument on crosslinguistic studies that show that many languages have the definite article and the demonstrative co-occurring and as such they should be considered as occupying separate structural positions in the DP. Evidence for this can be found in Michif where the presence of a demonstrative in a construction requires the inclusion of an article (Rosen 2003: 40). As the Dagbani data suggests, this analysis provides a viable explanation for the situation in Dagbani where the definite article and the demonstrative co-occur;

except that it applies only to the proximal demonstrative, *ɲó* ‘this’. It is however important to point out that the article is not required to co-occur with the demonstrative. As such, with or without the article, a construction containing the demonstrative article alone remains grammatical. Hence, the construction in (45d) where the article, *máá* ‘the’ cooccurs with the demonstrative, *ɲó* ‘this’ is as grammatical as the construction in (45e) where only the demonstrative *ɲó* ‘this’ occurs.

d. *búkú ɲó máá*
 book.SG DEM DEF
 ‘this book’

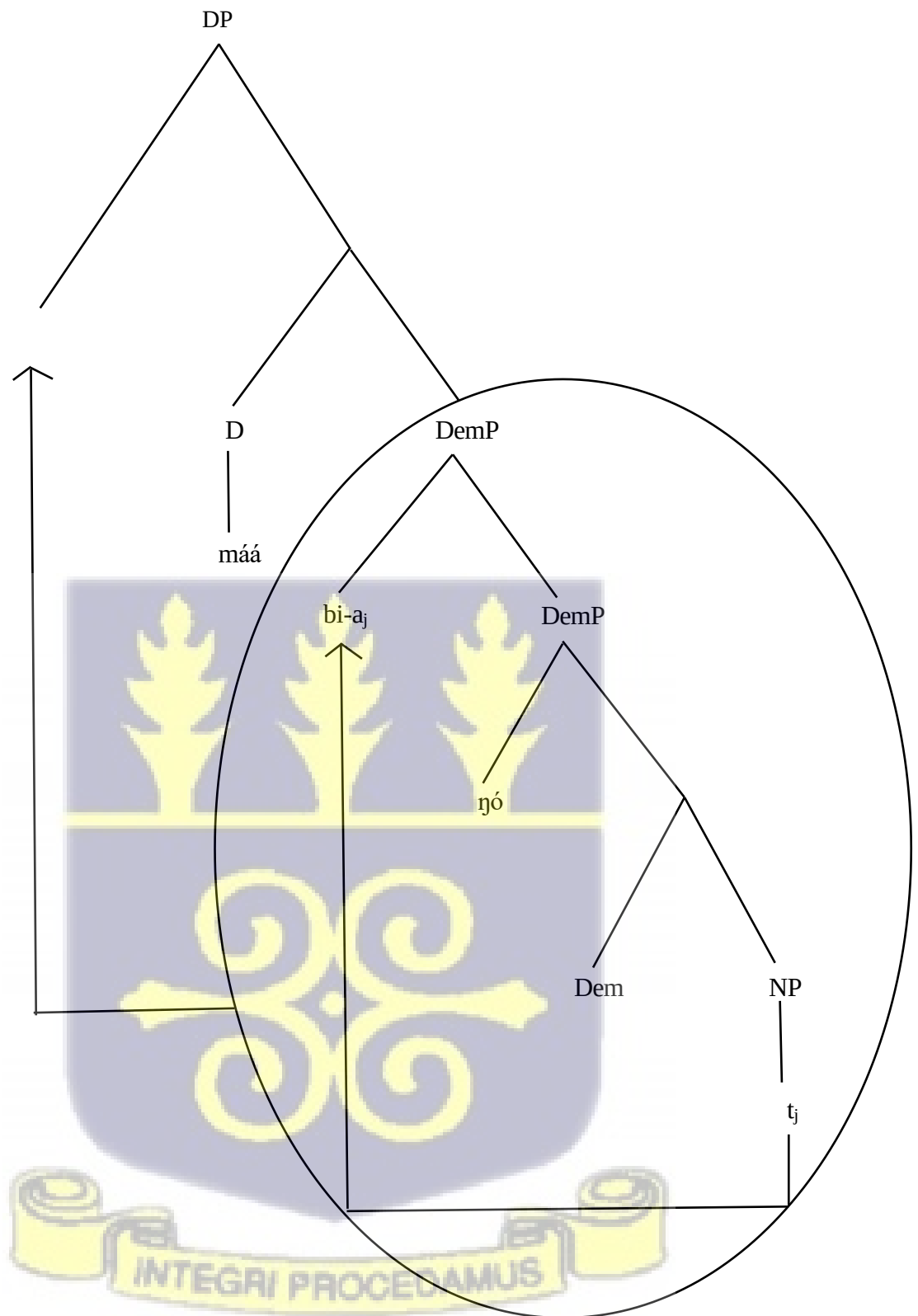
e. *búkú ɲó*
 book.SG DEM
 ‘this book’

The fact that the demonstrative is the head in a construction where it occurs with the noun alone, coupled with the fact that its co-occurrence with the definite article implies that they occupy distinct structural positions in the DP brings to bear an inconsistency that needs to be addressed. If the demonstrative is the head in a DP in which it co-occurs with a noun, what then is its position in a DP where it occurs together with a noun and an article. I resolve this seemingly contradicting observations by proposing that the demonstrative should be treated as a head in the former case like in (41b) and as a modifier in the latter. Granted this, the demonstrative in (45a) is to be considered as a modifier and not a head and hence, cannot occupy the D position. Instead, it is base generated at the specifier position of a functional category, DemP. The structure in (41b) will therefore have a derivation like in (44b). For (45a), I propose following Bernstein’s (1997 ; 2001) argument for the Romance DP that in deriving a structure as this, the demonstrative is firstly base-generated in the Spec of DemP. This puts it in a position between NP and DP. The article, on the other hand, is base-generated as the head of D. In order to derive the observed order in

Dagbani, the NP moves leftward to the specifier of DemP where it checks its [+deictic] feature. Motivated by the need to also check its [+definite] feature, the whole of DemP projection hosting NP and Dem subsequently raises to the Spec of D deriving the order noun – article - demonstrative. This derivation is illustrated in the structure below.

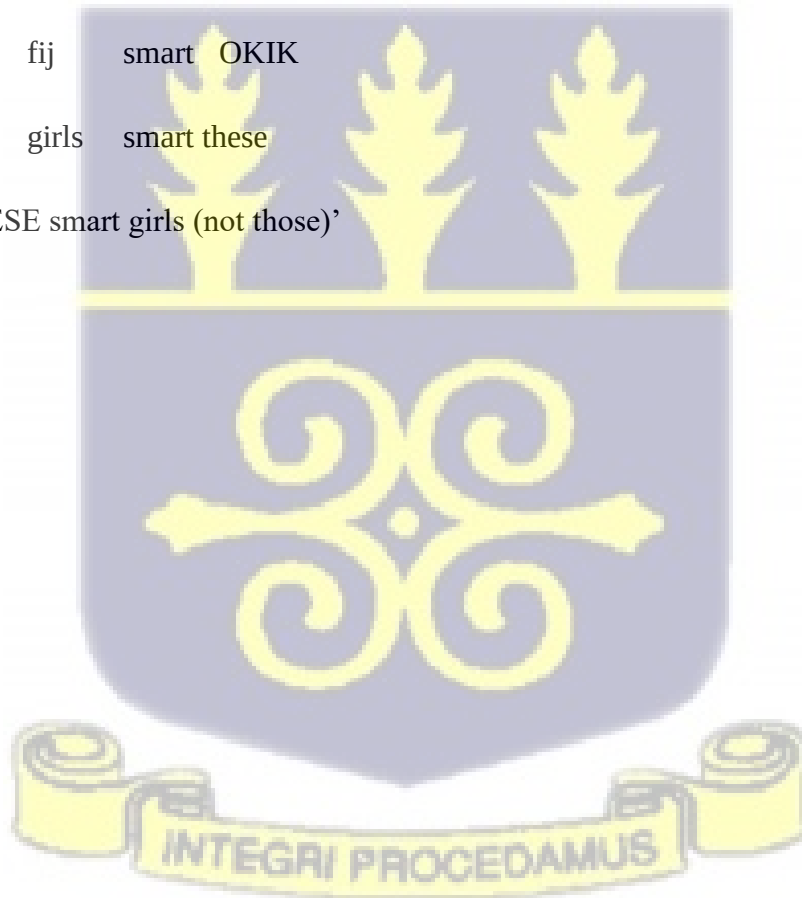
- (46) a. bi-a ɲó máá
 child-SG DEM DEF
 ‘this child’



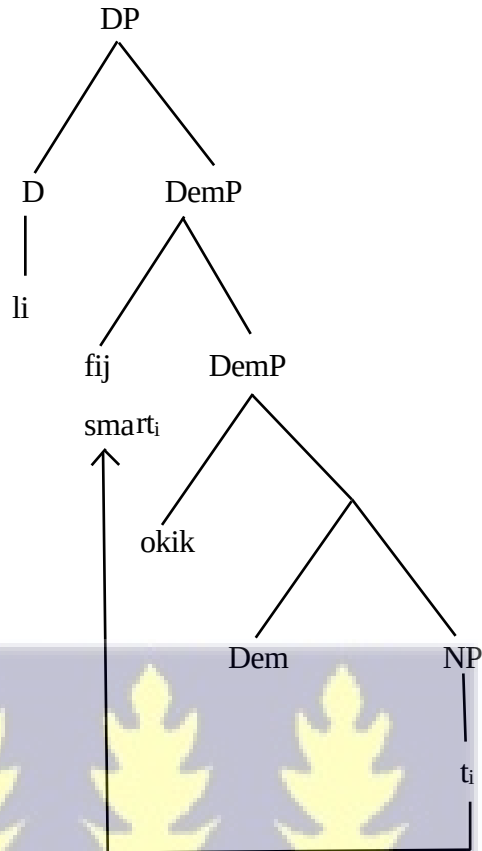


This is similar to the account for the derivation of the post-nominal order of the demonstrative in Spanish and French (Bernstein 2001) and Michif (Rosen 2003). The difference, however, is that in these languages, the derivation only involves movement of NP to a Spec position higher than DemP. This is what Rosen (2003) refers to as leftward NP scrambling. The subsequent movement of DemP to Spec of DP like in Dagbani does not take place since the order of elements (article – noun – demonstrative) in these languages is arrived at after the initial movement. To grasp this similarity better, consider the examples in (46) which show the post-nominal order of the demonstrative and its derivation in Michif.

- (47) a. li fij smart OKIK
 the girls smart these
 ‘THESE smart girls (not those)’



b.



(Rosen 2003: 52-53)

The construction in (46a) shows the NP *fij smart* ‘smart girls’ moving to the Spec of DemP and thereby raising it above the demonstrative, *okik* ‘these’ and making the position of the demonstrative post-nominal. Rosen (2003) proposes that this leftward movement of NP which raises the noun above the demonstrative is triggered by the need to ‘assign prosodic prominence for emphasis of the demonstrative’ which ends up on the right periphery.

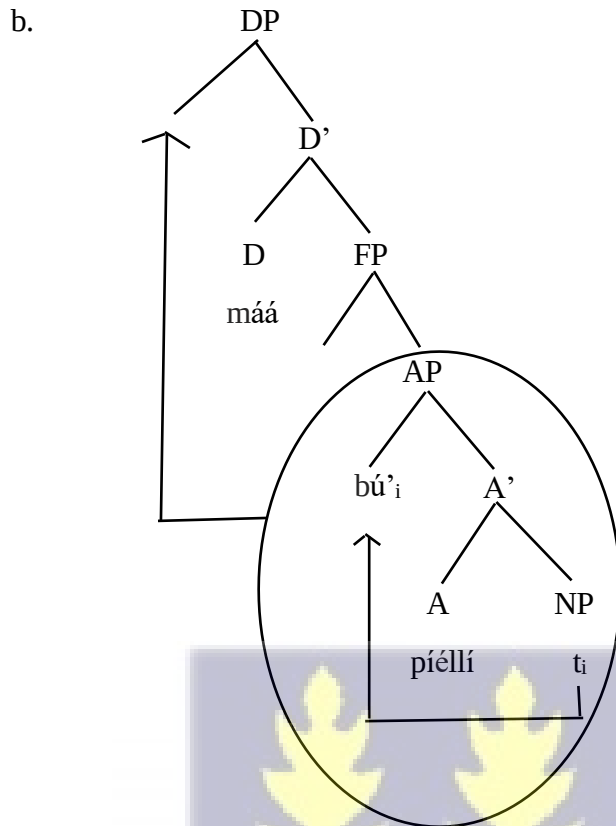
4.2 Noun - Adjective - Article

The post-nominal order of modifiers in Dagbani is also observed for the noun - adjective - article DP sequence as in (48a) below. Complex DP structures containing a head, noun complement and modifiers are argued to have functional projections between DP and NP

which host modifiers and inflectional categories (Cinque 2005 ; Aboh 2004 ; Haegeman et al. 2007). As Haegeman et al. (2007) point out, evidence for this lies in the fact that inflectional categories such as number and gender are overtly marked on nouns in some languages ; projecting functional categories that host these categories makes it easy to account for their presence on the nouns. Aside that, movement patterns such as those involving leftward movement of the head noun away from their base generated positions require movement of N to a higher head position which implies the existence of a higher functional category. Accordingly, the complex DP structure like the noun - adjective - article sequence as well as subsequent ones are analysed based on this assumption. Following this assumption therefore, the structure for (48a) will have the adjective being hosted by the functional projection, AP above the NP and below the DP. The order of the elements within this sequence will then be derived by moving NP to the specifier of AP which yields the order article - noun – adjective. The whole of the AP projection which now hosts the noun in addition to the adjective will also move to the Spec of D to check its [+definite] feature. This situates the noun and adjective above the article and thus yields the expected order as shown in (48b).

- (48) a. bú' píé-llí máá
 goat.SG white.SG DEF
 'the white goat'

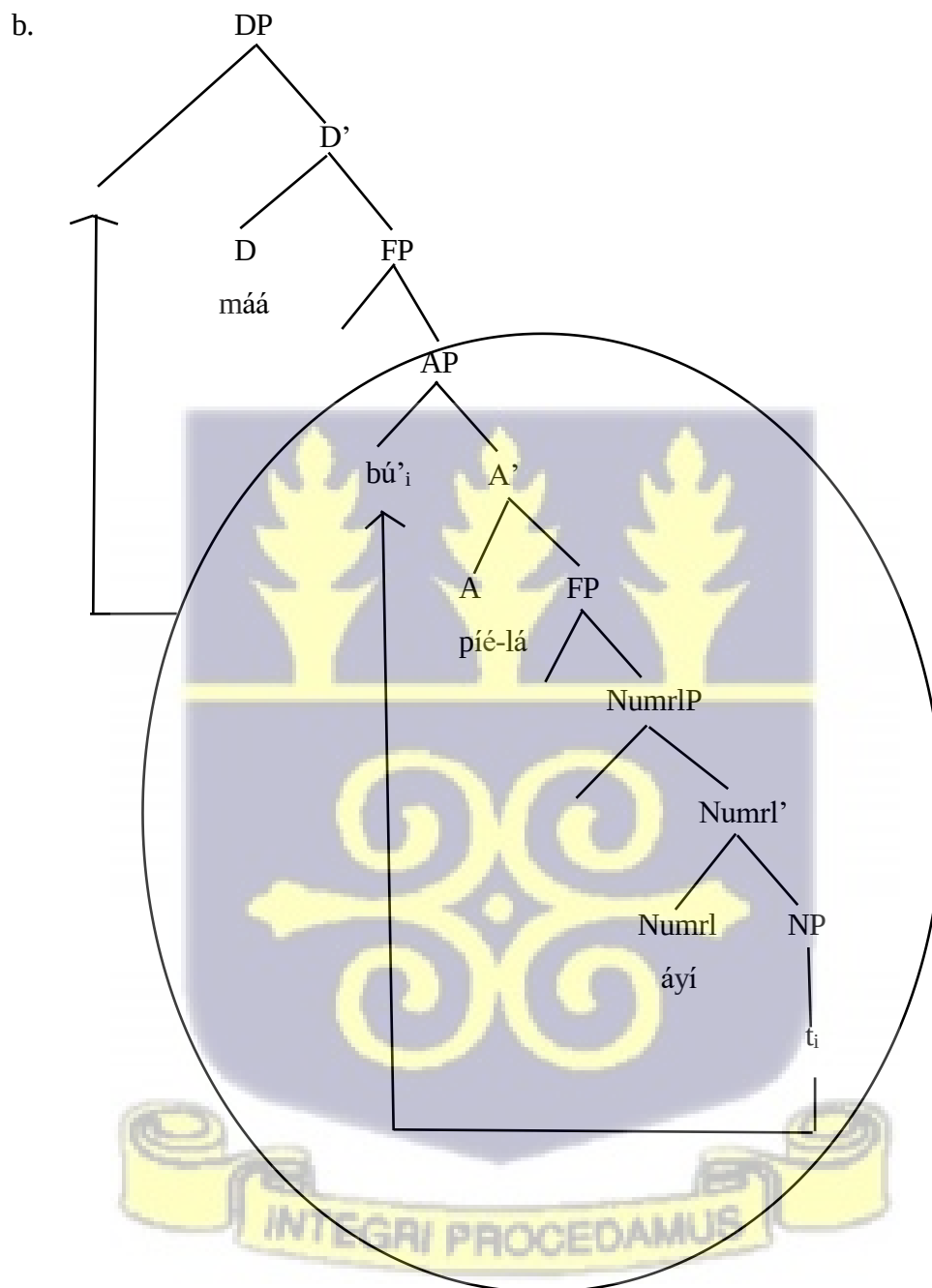




4.3 Noun - Adjective - Numeral - Article

Backed by the same assumption leading to the introduction of the adjective in the DP by a functional projection, the numeral in the noun – adjective – numeral – article sequence is also introduced by the functional projection, NumrP (Numeral Phrase). Hence, in the derivation of the sequence here which contains an adjective and a numeral, the DP structure must host two functional projections: AP and NumrP between DP and NP. This gives us a structure and a derivation similar to the one in (48b). In this derivation, NP moves to the Spec of AP giving us the article - noun - adjective numeral sequence. Also motivated by the need to check its [+definite] feature, the whole AP projection moves to the Spec of DP. (49b) captures this derivation for the example in (49a).

- (49) a. bú' píé-lá áyí máá
 goat.PL white-PL Numrl DEF
 'the two white goats'



4.4 Noun - Adjective - Numeral - Demonstrative - Article - Quantifier

The derivation of this more complex order above requires a post-nominal positioning of the determiner and modifiers. In this case, the functional projections AP, NumrIP, DemP and QP are introduced above NP to host the modifying adjective, numeral, demonstrative, and quantifier respectively in their specifier positions. Given the base-generated position of the noun (DP-final) and its DP-initial position in the surface structure, the noun (N) is required to raise all the way up to a position higher than the functional projections above it. Due to the complex nature of this sequence, the question of how the movement within the structure should take place in order to situate the noun in the initial position while ensuring the right order of the modifiers arises. If NP is raised upwards to the Spec of D, the noun occurs in the initial position as expected but the article which is supposed to be in a position after the modifiers will precede the modifiers. Additionally, the order of the modifiers will be inaccurate, thereby yielding an unacceptable sequence as demonstrated in (50b) and (50c). In (50b), the movement of the noun, *bú* ‘goat’ to the specifier of DP brings the noun to its correct position which is the initial position in the sequence noun-article-demonstrative-numeral-adjective-quantifier. The modifying elements which include the demonstrative, numeral, adjective and quantifier are however not in the right positions in relation to one another as shown in (50c) which makes the construction ungrammatical in the language. Considering this type of movement will therefore be problematic. With this in mind, a better alternative will be to propose in line with Aboh (2004) that movement in this case is successive as suggested for the movement in the Gungbe nominal category. Here, the NP moves past QP which hosts the quantifier and moves to the left of the adjective to give us the article-demonstrative-numeral- noun-adjective-quantifier order. The noun-adjective

sequence then moves to the left of the numeral where the order article-demonstrative-noun-adjective-numeral-quantifier is obtained. Subsequently, the order noun-adjective-numeral also raises to the left of the demonstrative and this yields the article-noun-adjective-numeral-demonstrative-quantifier sequence. The noun-adjective-numeral demonstrative order finally moves to Spec DP where the [+definite] feature of the entire sequence is checked and the surface form, noun-adjective-numeral-demonstrative-article-quantifier is yielded. This type of movement which Aboh (2004) refers to as snowballing movement is considered as a disguised form of head movement which usually occurs when noun movement alone is not possible in a language. The derivation is given in (50d).

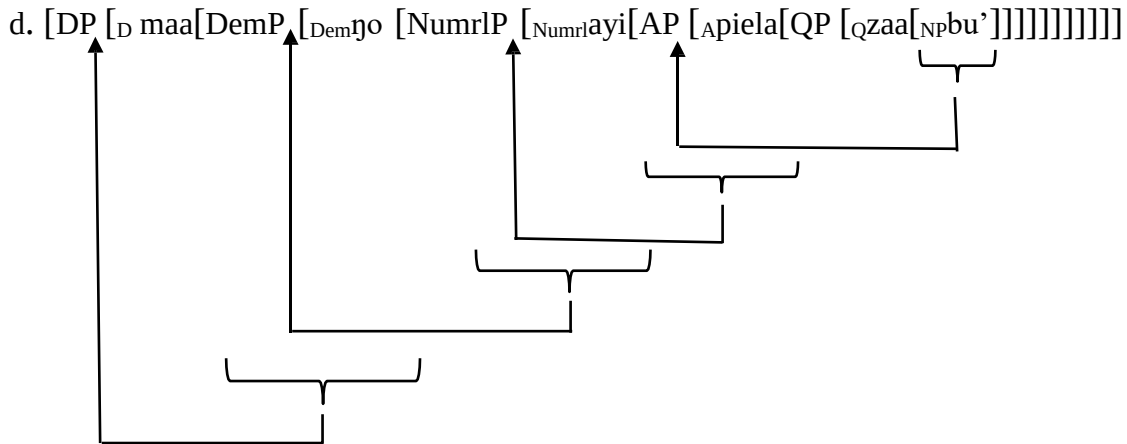
- (50) a. bú'

bú'	píe-lá	áyí	ŋó	máa	záa
goat.PL	white-PL	Numrl	DEM	DEF	all
'all these two white goats'					

b.*[DP [_D maa[DemP [_{Dem}ŋo [NumrIP [_{NumrI}ayi[AP [_{API}ela[QP [_Qzaa[_{NP}bu']]]]]]]]]]]]

c.*bú'

*bú' máá nọ áyí píé-lá záá
goat.PL DEF DEM Num1 white-PL all
'all these two white goats'



4.5 Possessive Pronoun - Noun - Adjective - Numeral - Demonstrative - Article - Quantifier

Finally, I look at the derivation of the DP sequence with the possessive appearing pre-nominally. Aside from occurring before the noun, the possessive pronoun also precedes all other modifiers in this DP sequence as the construction in (51a) indicates. Hence, it has a fixed position in relation to other elements in the DP. According to Ghomeshi et al. (1996), depending on the context, a prenominal possessive pronominal can potentially occupy two positions: D or Spec of DP. When a DP comprises a possessive pronominal and a noun, for instance, the D position is occupied by the pronominal as in the English example, ‘my book’. On the contrary, where the DP includes an article alongside a noun and other modifiers, the D position can only be occupied by the article. In this case then, the possessive pronominal occupies the Spec of DP. Due to the presence of both the article and the possessive pronominal in the sequence under analysis, the landing site of the former element would have to be in the Spec of DP. In formulating a structure for deriving this complex sequence, the assumption of introducing functional projections to cater for the modifiers in the structure is followed here too. PP, AP, NumrIP, DemP and QP AP which host the possessive pronominal, the adjective, numeral, demonstrative, and quantifier are

4.6 Chapter Summary

The syntactic structures for the sequences of different elements in the Dagbani DP are presented in this chapter. Based on assumptions and proposals presented in the literature, an attempt is made at accounting for the derivation of these sequences. For the basic DP structure which typically comprises a determiner head and a noun complement, the post-nominal position of the determiner is arrived at by movement of NP to spec of DP, where NP checks its [+definite], [+diectic] or [number] feature. When a demonstrative is included in the structure, it becomes a bit complex. It is observed that although the language permits the co-occurrence of the demonstrative and the definite article within a DP, it applies to the proximal demonstrative and not the distal demonstrative. The reason suggested for this is that the distal marker which is a part of the distal demonstrative carries a definite feature which is already an inherent feature of the definite article and therefore makes it impossible for both elements to co-occur. Based on this observation, it is concluded that where the demonstrative alone occurs with the noun it should be analysed as the head of the DP. On the other hand, in a DP where both the demonstrative and the definite article co-occur, the former should be considered as a modifier and the latter, the head of the structure. In this latter case therefore, both elements are considered as occupying different structural positions within the DP structure. The derivation of the sequence in this type of structure would involve a leftward movement of the NP to the Spec of DemP, a functional category between DP and NP, hosting the demonstrative. This is triggered by the need to check the [+diectic] feature at DemP. The whole of Dem P then raises to the Spec of D where it checks its [+definite] feature and derives the noun-demonstrative-article order. The noun-adjective-article sequence is also arrived at by introducing a functional category, AP to host the adjective. Here also, NP is moved to the Spec of AP and then the whole of AP moves to Spec of D to check the [+definite] feature. The same movement applies in the derivation of the noun-adjective-numeral-article sequence, except that two projections, AP and NumrP are introduced in this case to host the adjective and

numeral respectively. Finally, the derivation of the noun-adjective-numeral-demonstrative-article-quantifier and the possessive pronoun-noun-adjective-numeral-demonstrative-article-quantifier sequences are also observed to involve movement of elements to the Spec of functional projections in a successive manner; a type of movement known as ‘snowballing movement’ (Aboh 2004).



CHAPTER FIVE

CONCLUSION, SUMMARY AND RECOMMENDATIONS

5.0 Introduction

The discussion in this thesis has been centered on the structure of the Determiner Phrase (DP) in Dagbani. More specifically, the sequence of elements within the DP and their derivation have been discussed. Each chapter of the thesis has hence covered different aspects of this analysis, leading to a fair coverage of the topic. The subsequent sections provide a summary of what each chapter entails and also provides recommendations for future research.

5.1 Summary of Chapters

Chapter one basically introduced the study by providing background information on Dagbani and its speakers and as well as some grammatical properties of the language. The objectives of the study, the significance of the study, statement of problem and methodology are also laid out here.

In chapter two, the framework guiding the study is explored and earlier works related to the current study are reviewed. Among these works are Abney (1987), which serves as the basis for the discussion on the DP. Longobardi (1994) confirms the existence of the DP in Italian and proposes that only nominal expressions introduced by a D qualify as arguments. Aboh (2004) also argues for a split -D system comprising two functional heads: D° and Num° which encode [$\pm$ specific] and [$\pm$ plural] features respectively in Gungbe. Other works

such as Bernstein (1997) and Sulemana (2012) which provides explanations for the derivation of the order of elements within the Buli DP are also reviewed.

Chapter three identifies the different modifying elements in the DP and examines their morphology, semantics and syntax. Their order within the DP is also examined, revealing that apart from the possessive pronoun which precedes the noun, all other elements in the DP occur post-nominally. Excluding relative clauses therefore, the linear order of all possible elements in the DP is possessive pronoun- noun-adjective-numeral-demonstrative-article-quantifier.

In chapter four, the sequences of the different combinations of the DP internal elements are accounted for. For the basic DP structure which typically comprises a determiner head and a noun complement, the post-nominal position of the determiner is arrived at by movement of NP to spec of DP, where NP checks its [+definite], [+diectic] or [number] feature. When a demonstrative is included in the structure, NP moves leftward to the spec of DemP in order to check its [+diectic] feature at DemP. The whole of Dem P then raises to the Spec of D where it checks its [+definite] feature and derives the noun-demonstrative-article order. The noun-adjective-article sequence and the noun-adjective-numeral-article go through a similar derivation process. In deriving the former sequence, NP is moved to the spec of AP and then the whole of AP moves to Spec of D due to the [+definite] feature at the position. For the latter sequence, the whole of AP moves to the Spec of NumP before NumP moves to Spec D to check the [+definite] feature. The noun-adjective-numeral-demonstrative-article-quantifier and the possessive pronoun-noun-adjective-numeral-demonstrative-article-quantifier sequences are also involve movement of elements to the Spec of functional projections in a successive manner; a type of movement referred to as

‘snowballing movement’ (Aboh 2004). These accounts reveal that movement operations triggered by the requirement to check one feature or another explains the difference in the order of elements in the DP structure of Dagbani and other languages. Additionally, they show that although languages may have the same sequence of elements, the derivation in each language could differ based on language specific features.

5.2 Recommendations

Although the attempt made in this thesis covers a fair scope of the subject of the DP in Dagbani, there are other aspects that remain untouched. Relative clauses, for instance, are not covered under the analysis of elements and their position and derivation within the DP. The position of number in the Dagbani DP has also not been discussed in detail. This creates a gap that ought to be filled.

Also, other aspects such as the interaction of tones in relation to the noun complement and its modifiers in the DP which would be looking at the syntax-phonology interface within the DP will undoubtedly be an interesting avenue for future research.

Additionally, due to the possibility of some linguistic differences between Dagbani and its sister languages, an investigation into the DP of other Gur languages as has been done for Buli (Sulemana 2012) can bring to bear similarities and differences between these related languages.



REFERENCES

- Abdul-Razak, Inusah. 2020. Elaboration of segmental phonemes of Dagbani dialects. *International Journal of Language, Literature and Culture* 7 (1), 1-13.
- Abney, Steven. 1987. *The English noun phrase in its sentential aspect*. Doctoral Dissertation, MIT.
- Aboh, Enoch Oladé. 2004. *The morphosyntax of complement-head sequences*. Oxford: Oxford University Press.
- Abu-Bakari, B. 1978. *Collected notes on Dagbani grammar*. M.S, Ajumako.
- Abubakari, Hasiyatu & Samuel Alhassan Issah. 2020. The syntax of weak and strong pronouns in Dagbani and Kusaal. *Studia Linguistica* 74(3), 584-612.
- Bernstein, J. 1993. The Syntactic role of word markers in null nominal constructions. *Probus* 5.1-2: 5-38.
- Bernstein, Judy B. 1997. Demonstratives and reinforcers in Romance and Germanic languages. *Lingua*, 102(2-3), 87-113.
- Bernstein, Judy B. 1993. *Topics in the syntax of nominal structure across Romance*. Ph.D thesis, City University of New York.
- Bernstein, Judy. 1993. *Topics in the syntax of nominal structure across romance*. Doctoral Dissertation, The City University of New York.
- Bernstein, Judy. 1997. Demonstratives and reinforcers in Romance and Germanic languages. *Lingua* 102, 87–113.

- Bernstein, Judy. 2001. Focusing the right way in Romance determiner phrases. *Probus* 13, 1–30.
- Bodomo, Adams B. 1993. Complex predicates and event structure: An integrated analysis of serial verb constructions in the Maba languages of West Africa. *Working Papers in Linguistics* 20.
- Bodomo, Adams B. 1994. Language, history and culture in northern Ghana: An introduction to the Maba linguistic group. *Nordic Journal of African Studies* 3(2), 25–43.
- Bodomo, Adams B. 1997. *The structure of Dagaare*. Stanford: CSLI Publications
- Bodomo, Adams B. 2005. Moore and the Gur languages. In Philip Stranzy (Ed.), *Encyclopedia of Linguistics* 2, 709 - 711. New York, Oxon. Taylor and Francis
- Boeckx, Cedric. 2006. *Linguistic minimalism: Origins, concepts, methods, and aims*. Oxford: Oxford University Press.
- Brugé, L. 1996. Demonstrative Movement in Spanish. A Comparative Approach. *University of Venice Working Papers in Linguistics* 6.1: 1–53.
- Carlier, Anne. 2013. Grammaticalization in progress in Old French: Indefinite articles. *Research on Old French: The state of the art* 45–60.
- Chang, Soo Jun. 2009. *Nominal structure and interpretation: On the syntax of the Korean determiner phrase*. Doctoral dissertation, University of Georgia.
- Chomsky, Noam A. 1995. *The minimalist program*. Cambridge, MA: MIT Press.
- Chomsky, Noam, Ángel J. Gallego & Dennis Ott. 2019. Generative grammar and the faculty of language: Insights, questions, and challenges. *Catalan Journal of Linguistics*, 229–261.

- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In Kenneth Hale and Samuel J. Keyser (eds.), *The view from building 20*, 1-52. Cambridge, Mass: MIT Press.
- Cinque, Guglielmo, 1994. On the evidence for partial N-movement in the Romance DP. In G. Cinque, J. Koster, J.-Y. Pollock, L. Rizzi, R. Zanuttini (eds.), *Paths towards universal grammar: Studies in honor of Richard S. Kayne*, 85-110. Washington, DC: Georgetown University Press.
- Cinque, Guglielmo. 2005. Deriving Greenberg's universal 20 and its exceptions. *Linguistic Inquiry* 36 (2), 315-332.
- Davies, D. William & Craig A. Dresser. 2005. The structure of Javanese and Madurese determiner phrases. In Heinz & Ntelitheos (eds) *UCLA Working Papers in Linguistics 12, Proceedings of AFLA XII*, 57-72.
- Delsing, Lars-Olof. 1993. *The internal structure of noun phrases in the Scandinavian languages: A comparative study*. Doctoral Dissertation, University of Lund.
- Diessel, Holger. 1999. *Demonstratives: form, function, and grammaticalization*. Amsterdam: John Benjamins Publishing Company.
- Dryer, Mathew S. 2007. Noun phrase structure. In Shopen, T. (ed.), *Language typology and syntactic description, II: Complex constructions*, 151-205. Cambridge: Cambridge University Press.
- Fassi Fehri, Abdelkader. 1999. Arabic modifying adjectives and DP structures. *Studia Linguistica* 53(2), 105-154.

- Ghomeshi, Jila, & Elizabeth Ritter. 1996. Binding, possessives, and the structure of DP. *North East Linguistics Society*. 26 (1).
- Giusti, G. 1997. The categorial status of determiners. In L. Haegeman (ed.) *The New Comparative Syntax*, 94-113. Cambridge: Cambridge University Press.
- Granfeldt, Jonas. 2000. The acquisition of the determiner phrase in bilingual and second language French. *Bilingualism: Language and Cognition* 3(3), 263-280.
- Grosu, Alexander. 1988. On the distribution of genitive phrases in Rumanian. *Linguistics* 26, 931-949.
- Haegeman, Liliane, Alexiadou, Artemis & Stavrou, Melita. 2007. *Noun phrase in the generative perspective*. Berlin : De Gruyter Mouton.
- Hawkins, John. 1983. *Word order universals*. New York: Academic Press.
- Herslund, Michael. 2008. Articles, definite and indefinite. *Essays on Nominal Determination. Studies in language companion series* 99.
- Hornstein, Norbert, Jairo Nunes & Kleanthes Grohmann. 2005. *Understanding minimalism*. Cambridge, UK: Cambridge University Press.
- Hudu, Fuseini. 2005. *Number marking in Dagbani*. MSc thesis, University of Alberta.
- Hudu, Fuseini. 2010. *Dagbani tongue-root harmony: A formal account with ultrasound investigation*. Ph.D dissertation, University of British Columbia.
- Hyman, Larry, M. 1993. Structure preservation and postlexical tonology in Dagbani. In E. Kaisse, & S. Flargus (eds.), *Lexical phonology*, 235-254. Academic Press.

- Inusah Abdul-Razak. 2015. The structure of noun phrase in Safaliba. *Research on Humanities and Social Sciences* 5(14), 78–90.
- Inusah, Abdul-Razak. 2017. Patterns of relative clauses in Dagbanli. *Sage Open* 7(1), 1–9.
- Issah, Samuel Alhassan & Hasiyatu, Abubakari. 2021. Semantics of nominal classification in Mabia languages. A paper presented at the 10th World Congress of African Linguistics, Leiden University, June 7th - June 12th 2021.
- Issah, Samuel Alhassan. 2013. The structure of the Dagbani simple noun phrase. *South African Journal of African Languages* 33(2), 203-212.
- Kotochi, Jacob Shaibu. 2017. *The syntax of the Gonja noun phrase*. Ph.D Dissertation, University of Education, Winneba.
- Kwame, Abukari & Marit Westergaard. The acquisition of English articles among L1 Dagbani L2 English learners. *The Canadian Journal of Linguistics* 65(4), 496-534.
- Lasnik, Howard. 2002. The minimalist program in syntax. *Trends in Cognitive Sciences* 6(10), 432-437.
- Leu, Tomas. 2008. *From Greek to Hungarian: A comparative investigation of DP structure*. Doctoral dissertation, NYU
- Longobardi, Giuseppe. 1994. Reference and proper names: A theory of N movement in syntax and logical form. *Linguistic Inquiry* 25 (4), 609-665.
- Longobardi, Giuseppe. 1994. Reference and proper names: A theory of N movement in syntax and logical form. *Linguistic Inquiry* 25 (4), 609-665.
- MacLaughlin, Dawn. 1997. *The structure of determiner phrases: evidence from American Sign*

Language. Dissertation. Boston, MA: Boston University.

Olawsky, J. K. 1999. *Aspects of Dagbani grammar: with special emphasis on phonology and morphology*. Munich: Lincom.



- Olawsky, Knut J. 1999. *Aspects of Dagbani grammar: with special emphasis on phonology and morphology*. Munich: Lincom.
- Olawsky, Knut J. 2004. What is a noun? What is an adjective? Problem of classification in Dagbani. *Journal of African Languages and Linguistics* 25, 127–148.
- Purvis, Tristan Micheal. 2007. A reanalysis of non/emphatic pronouns in Dagbani. In Frederick Hoyt et al. (eds.), *Texas Linguistics Society IX: The morphosyntax of underrepresented languages*, 239-263. Stanford: CSLI Publications.
- Rosen, Nicole. 2003. Demonstrative position in Michif. *Canadian Journal of Linguistics/Revue Canadienne de Linguistique* 48(1-2), 39-69.
- Samuel Alhassan Issah. 2013. The structure of the Dagbani simple noun phrase. *South African Journal of African Language* 33(2), 203-212.
- Sulemana, Abdul-Razak. 2012. *The structure of the determiner phrase in Buli*. M.Phil thesis, University of Ghana.
- Szabolcsi, Anna. 1994. The noun phrase. In F. Kiefer & K. É. Kiss (eds.) *The syntactic structure of Hungarian* 179-275. Academic Press.
- Szabolsci, Anna. 1987. Functional categories in the noun phrase. In Istvan Kenesei (ed.), *Approaches to Hungarian 2, Theories and Analyses*, 167–189. Szeged, Hungary: JATE.
- Valois, Daniel. 1991. *The internal syntax of DP*. Ph.D thesis, University of California, Los Angeles.
- Visser, Marianna. 2008. Definiteness and specificity in the isiXhosa determiner phrase. *South African journal of African languages* 28(1), 11-29.

Watanabe, Akira. 2006. Functional projections of nominals in Japanese: Syntax of classifiers. *Natural Language & Linguistic Theory* 24(1), 241-306.

Wesener, Thomas. 1999. Production strategies in German spontaneous speech: definite and indefinite articles. *Proceedings of the 14th International Congress of Phonetic Sciences*. Berkeley: Department of Linguistics, University of California.

Wilson, William A. A. 1971. Class pronoun desuetude in the Moore-Dagbani sub-group of Gur. *Journal of West African Languages* 3(2), 79-83.

Yakubu, Ziblim. 2021. Morphosyntax of Dagbani Nominal Phrase. Afribary. Retrieved from <https://afribary.com/works/morphosyntax-of-dagbani-nominal-phrase>.

Zeijlstra, Hedde. 2004. *Sentential negation and negative concord*. Ph.D dissertation, University of Amsterdam.

