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Aspects of Kusaal Grammar:

The Syntax-Information Structure Interface

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Abstract

Aspects of Kusaal Grammar: The Syntax-Information Structure Interface

This dissertation covers two central areas for two fundamental objectives. The first is to provide a general discussion on aspects of the grammar of Kusaal, a Mabia (Gur) language spoken in Ghana, Burkina Faso and Togo. This is relevant since not much is known in the literature on this language, especially speaking of the Kusaal spoken in Ghana. The section on Kusaal grammar gives a general perspective on the phonology, morphology as well as the syntax of the language.

The second objective is to draw attention to some issues of current interest in both descriptive and theoretical linguistics. Thus, the second section is of more interest to linguists working on information structure as well as those using the Lexical Functional Grammar (LFG) framework (Bresnan et al 2016; Bresnan 2001; Kaplan and Bresnan 1982). Kusaal combines various strategies: morphological, syntactic and prosodic means, for packaging discourse related information. Whilst information focus is morphologically null, contrast and exhaustivity is marked using the particles *ń*, *né* and *kà*.
Furthermore, the dissertation fills a vacuum in the literature on topic constructions in Kusaal and by extension some Mabia languages. Topic constituents in Kusaal and other Mabia languages are generally qualified by special topic phrases or particles. Familiarity topics are morphologically null in Kusaal whilst contrastive topics are marked using the phrase *yáꞌá àn* 'if be'. It is generally observed that Mabia languages have features that place them somewhere in between topic prominent languages and subject prominent languages unlike previous attempt to entirely classify all Niger-Congo languages as subject prominent (Li and Thompson 1976).

In addition to the above, the dissertation also draws attention to some issues in previous analysis of information structure within the Lexical Functional Grammar framework. It is observed that there are mismatches between the c-structure and the i-Structure leading to instances of ambiguities in the interpretations of mostly contrastive focus constructions as opposed to information focus constructions. The i-structure is argued to be inadequately resourced to capture the different subtypes of focus constructions in Kusaal. Using prominence to differentiate subtypes of focus, (Choi 1996), does not solve the problem since all focus types receive some degree of prominence in Kusaal.

In addressing the above problem, the dissertation provides alternative suggestions by building on the proposals of King (1996) and Choi (1996). It is suggested that an additional predicate attribute referred to as discourse type (DTYPE), with a value that subcategorizes subtypes of focus and topic notions be introduced in the i-structure. DTYPE will have attributes that provide finer grained details of the discourse subtype: contrastive focus, information focus, contrastive topic and familiarity topic. The value for DTYPE will conform with the discourse status of the constituent in question together with the corresponding particle if any or the feature specification

of the said discourse status determined by the language in question. For instance a DTYPE can have the value {contrastive focus: né} for Kusaal and {contrastive focus: +NEW +PROM} for German.

The value of DTYPE may be morphologically, phonologically, or syntactically encoded in the particle used or the phonological features associated with the said notion. This will also be entirely language dependent since different languages have different discourse particles that may also be tied to specific discourse strategies. This approach is intended to make the i-structure a complete, a comprehensive and an independent projection capable of disseminating full discourse interpretation of constituents.

The suggested proposal when adopted has a cross linguistic tendency of eradicating ambiguities as well as mismatches in the interpretations of constructions relating to various aspects of information structure.

Zusammenfassung

Grammatikaspekte von Kusaal: Die Syntax-Informationsstruktur-Schnittstelle

Diese Dissertation beschäftigt sich mit zwei zentralen Bereichen. Das erste Ziel ist eine allgemeine Diskussion ausgewählter Grammatikaspekte von Kusaal, einer Mabia/Gur-Sprache in Ghana, Burkina Faso und Togo. Dies ist ein relevanter Beitrag zum Forschungsstand, da es nicht viel Literatur über Kusaal gibt (besonders über die in Ghana gesprochene Variante). Der Abschnitt über die Grammatik von Kusaal bietet einen allgemeinen Überblick über die Phonologie, Morphologie und Syntax der Sprache.

Das zweite Ziel der Dissertation liegt auf der Diskussion spezieller Themen der deskriptiven und theoretischen Linguistik. Der zweite Abschnitt ist besonders für Linguisten von Interesse, die sich mit dem Konzept „Lexical Functional Grammar“ (LFG) beschäftigen (Bresnan et al. 2016; 2001; Kaplan & Bresnan 1982).

Kusaal verbindet verschiedene morphologische, syntaktische und prosodische Strategien, um Diskursinformation zu übermitteln. Während der Informationsfokus ein Null-Morphem ist, werden Kontrast und Vollständigkeit durch die Partikel *ń, né* und *kà* markiert.
Topikkonstituenten in Kusaal und anderen Mabia-Sprachen sind im Allgemeinen durch spezielle Topikphrasen oder -partikel gekennzeichnet. Familiarity-Topiks sind in Kusaal Null-Morpheme, während kontrastive Topiks durch die Phrase *yáꞌá àn* ‚falls sein‘ markiert werden.

Die Dissertation diskutiert auch relevante Themen in der bisherigen Analyse der Informationsstruktur nach dem LFG-Konzept. Es wurde beobachtet, dass es Unstimmigkeiten zwischen der c-

Struktur und der i-Struktur gibt, was zu Ungenauigkeiten bei den Interpretationen von überwiegend kontrastiven Fokuskonstruktionen im Gegensatz zu Informationsfokus-konstruktionen führt. Unter Bezug auf die Arbeiten von King (1996) und Choi (1996) bietet die Dissertation einen neuen Lösungsansatz, demzufolge ein weiteres Prädikatsattribut namens Diskurstyp (DTYPE) mit einem Wert, der Subtypen von Fokus und Topik weiter kategorisiert, in die i-Struktur eingeführt werden sollte.

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LIST OF ABBREVIATIONS

ACC	Accusative	L. Entry	Lexical Entry
ADJ	Adjunct	LOC	Locative
ADP	Adposition	M	Masculine
a-fns	Argument functions	NEG	Negative
Ans.	Answer	NML	Nominalised
ASP	Aspect	NOM	Nominative
att	Attribute	NSF	Non-Subject Focus
COMP	Complement	NTYPE	Type of Noun
COND	Conditional	NUM	Number
CONJ	Conjunction	OBJ	Object
COP	Copula	OBL_{θ}	Object Oblique
DEF	Definite Article	PAST	Time Depth Marker
d-fns	Discourse Function	PERF	Perfective Aspectual Marker
DEM	Demonstrative	PL	Plural
EMPH	Emphatic	POS	Positive
EXIST	Existential	POSS	Possessive
F	Feminine	PRED	Predicate
FM	Focus Marker	PROM	Prominence
FOC	Focus Marker	Q	Question/Question Marker
FUT	Future	REL	Relative Pronoun
GEND	Gender	SF	Subject Focus
HAB	Habitual	SG	Singular
INDEF.P.	Indefinite Pronoun	SUBJ	Subject
INT	Interrogative	TOP	Topic Marker
IPF	Imperfective	val	Value

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The successful completion of this dissertation comes from the immense benefit I received from various people to whom I would like to express my deepest appreciation.

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I also owe it a duty to thank my Kusaal language consultants who have supported me relentlessly in ensuring that the data used in this dissertation reflect the language of the native speakers of Kusaal. To Mr. Michael Awimbila of (G.I.L.L.B.T) Tamale, Ghana, I say thank you Uncle, you have supported me since the days of my Master's degree and still continue to do so. Again, to Mr. Samson Abuosi of Bawku and Mr. Sulemana Braimah of Accra, I also say thank you for tirelessly cross-checking my data for the whole duration of this programme.

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Dedication

To my family and the people of the Kusug Kingdom

Chapter 1

General Introduction

1.0. Introduction

This dissertation covers two central areas for two fundamental objectives. The first is to provide a general discussion on aspects of the grammar of Kusaal. This is deemed relevant since not much is known in the literature on this language, especially speaking of the Kusaal spoken in Ghana. For this reason, the dissertation provides a discussion on important aspects of the grammar of the language; aspects of which will greatly enhance the understanding of various concepts and phenomena in other chapters of this dissertation. The section on Kusaal grammar gives a general perspective on the phonology, morphology as well as the syntax of the language. The relevance of this discussion is further realized as subsequent chapters make extensive reference to chapter three which provides the general discussion on the grammar of the language.

The second objective is to draw attention to some issues of current interest in both descriptive and theoretical linguistics. Thus, the second section is of more interest to linguits working on information structure as well as those using the Lexical Functional Grammar (LFG) framework (Bresnan et al 2016; Bresnan 2001; Kaplan and Bresnan 1982). Issues concerning information structure in languages have gained a lot of attention in recent years in the literature. However there is no comprehensive attention devoted to the topic in Kusaal specifically and Mabia languages in general. Focus construction in Mabia languages has also attracted some attention (Abubakari 2011; 2016; Fiedler and Schwarz 2005; Fiedler et al 2010; Issah 2013; Hiraiwa Bodomo 2008; and Hudu 2012).Unlike other sister languages like Dagaare and Buli, where the subject cannot be morphologically marked for focus, it will be observed that Kusaal morphologically codes the subject for contrastive and exhaustive focus interpretations.

(1.1) Q.a. Who is in the room: a man or a woman?
Ans. b. Dáú ń bɛ́ dɔ́ɔ́gìn lá.
man FOC COP room.LOC DEF
'It is a man that is in the room.'

(1.2) Q. a. Who ate the food? The children or the adults?
b. Bíís lá ń dī dííb lá.
children DEF FOC eat food DEF
'THE CHILDREN ate the food.'

The particle 'n' is used as in-situ contrastive subject focus particle in (1.1b, 1.2b). The existence of focus particles exclusively for the subject is not unique to Kusaal; similar observation is made in Farefare (Gurenɛ) (Dakubu 2003) and Dagbani (Issah 2013) where the said contrastive subject focus particles can also be preceded by *wh*-phrases. The examples in (1.3) is taken from Dakubu (2003) and (1.4-5) from (Issah 2013).

(1.3) à-nɪ n zàa nyɛ́ bʊ́dáa lá
a-WH FM yest. see man DEF
'Who saw the man yesterday?'

(1.4) ŋuni n da-Ø loori maa?
who FM buy.PERF lorry DEF
'Who bought the lorry?'
IS: Subject new, verb is old, object is old.

(1.5) A: a. Napari n da-Ø loori maa.
Napari FM buy.PERF lorry PERF
'It is Napari who bought the lorry.' (Issah 2013:160)

It will be observed later in this dissertation (chapter 4) that the subject focus particle *ń* cannot be found after *wh*-phrases in Kusaal. In addition, it will also be observed that Non-Subject Focus (NSF) must obligatorily occur with the particle *kà* or *né* for contrastive and exhaustive interpretation in Kusaal contrary to earlier assumption that NSF cannot or need not be marked for focus in Mabia, Kwa and Chadic (Hausa) (Fiedler et al 2010).

(1.6) a. Aduk saw the woman.
b. Dáú lá kà Àdúk sà nyɛ̄.
man DEF FOC Aduk PAST see
'It is the man that Aduk saw (not the woman).'

c. Àdúk sà nyɛ̄ nɛ́ dáú lá.
Aduk PAST see FOC man DEF
'It is the man that Aduk saw (not the woman).'

Furthermore, the dissertation fills a vacuum in the literature on topic constructions in Kusaal and by extension some Mabia languages. Unlike focus constructions in these languages that have gained some attention, little is known on topic constructions in these languages. It is generally observed that these languages have features that place them somewhere in between topic prominent languages and subject prominent languages unlike previous attempt to entirely classify all Niger-Congo languages as subject prominent (Li and Thompson 1976).

In addition to the above, the dissertation also draws attention to some issues in previous analysis of information structure within the Lexical Functional Grammar framework. It is observed that there are mismatches between the c-structure and the i-Structure leading to instances of ambiguities in the interpretations of mostly contrastive focus constructions as opposed to information focus constructions. The i-structure is argued to be inadequately resourced to capture the different subtypes of focus constructions cross linguistically. The dissertation provides alternative suggestions by modifying and introducing new resources in the existing i-structure (King 1997; Choi 1996) to mitigate the problem. The suggested proposal when adopted has a cross linguistic tendency of eradicating mismatches in the interpretations of constructions relating to various aspects of information structure.

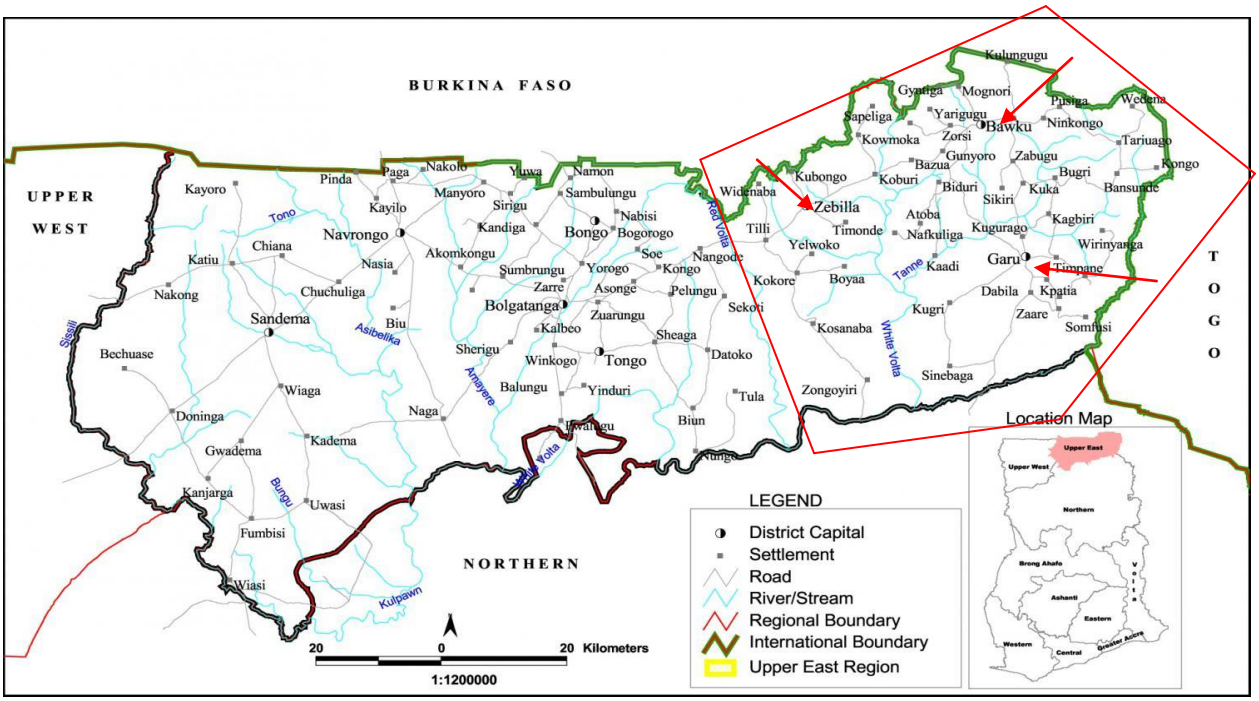
In the rest of the introductory part, I present a brief background on the Kusaal language and its speakers followed by the organization of the rest of the dissertation.

1.1. Kusaal and its speakers

Kusaal is a language spoken by the group of people called Kusaase (PL) or Kusaasi (SG) (Abubakari 2007). It belongs to the Central Mabia subgroup of Mabia languages (Bodomo 2017), previously referred to as the Western Oti-Volta subgroup of Gur languages (Westermann & Bryan 1952; Greenberg 1963; Bendor-Samuel 1971; 2006) of the Niger-Congo language family. The term Mabia which is a compound word composed of the words *ma* 'mother' and *bia* 'child' is argued to be more representative of the languages under this group since these two words can be traced in almost all the languages compared to the term 'Gur' which is derived from the initial syllables of only three/four of the languages in this group: Gurensi, Gurma and Gurenɛ.

Kusaal is spoken in Ghana, Burkina Faso and Togo. The data in this dissertation is representative of the variety spoken in Ghana which has phonological and lexical variances with the Kusaal spoken in either Burkina Faso or Togo. In Ghana, Kusaal is spoken in the Upper East Region of the country with its main speaking areas including Bawku, Garu-Tempani, Pusiga, Zebilla, and Binduri. The figure in (1.1) is the map of the Upper East Region of Ghana showing the borders of Kusaal speaking areas in the demarcated pentagon. The arrows point to the three district capitals of Bawku West: Zebilla, Bawku Municipal: Bawku and Garu-Tempane: Garu.

Fig. 1.1. Map of Upper East Region of Ghana



Source: Mary Esther Kropp Dakubu (n.d.). Online material: http://aodl.org/oralnarratives/farefari/object/4A-1C5-B/

There are two dialects of Kusaal: Agole and Atoende. While the Atoende dialect is spoken in Zebilla and its surrounding areas the Agole dialect is spoken in Bawku Municipal, Garu-Tempane and adjoining areas. The two dialects are highly intelligible with the main differences being mostly lexical and phonological as demonstrated in example (1.7) below:

(1.7)

Linguistic Variations	Agole	Atoende	Gloss
Phonological	ligidi	ligiri/ligidi	money
	pɛug	piˈuk	basket
Lexical	dau	buraa	man.SG
	abanja	apigidaag	lizard
	piˈam	tuˈam	speak.Imperative

Although there is no official census on the number of speakers of Kusaal, it is estimated that there will be over 2 million people who use Kusaal as their native language across the West

African sub-regions. Information gathered from the Ghana Statistical Service Department based on the 2010 population and housing census indicates that there are 534, 681 speakers of Kusaal in the various regions and districts of Ghana. With a total population of 24658823 (PHC 2010:1), Kusaase people make approximately 2.2% of the population of Ghana as at 2010.

1.2. Data collection: Methodology

All the data used in this dissertation were collected from three rounds of the author's own fieldwork in 2015, 2016 and 2017 (in a total of six months) to the Upper East Region of Ghana and specifically to Kusaal speaking areas. The author visited the Ghana Institute of Literacy, Linguistics and Bible translation in Tamale, Ghana (G.I.L.L.B.T.), where several literacy documents in Kusaal which are prepared by the institute were gathered as well as audio translations of the Bible and several Christian literatures. Visits were also made to several villages and towns: Zebilla, Bawku, Pusiga, Garu, Zorsi etc where Kusaal is spoken and interactions made with both influential and local native speakers of Kusaal. Data was elicited via interviews which were recorded and later transcribed. With permission from interlocutors, casual speeches and conversations were also recorded. The author had the privilege of recording folktales, proverbs, songs and other oral traditions from speakers. In addition, some printed materials on folktales were also received as gifts from natives. The author also consulted an existing Kusaal wordlist by Naden (2015). More importantly, the author's own intuition as a native speaker influenced a lot of the grammaticality judgement of data. All data were further crosschecked by Mr. Michael Awimbilla of (G.I.L.L.B.T), Samson Abuosi (Bawku) and Sulemana Braimah (Accra) before they were used.

It is important to add that the data used in this dissertation is mainly from the Agole dialect. However, there are instances where data from the Atoende dialect is used to explain some concepts. This will be duly indicated whenever such need arises.

Kusaal as at the time of this dissertation remains one of the understudied languages of the Mabia subgroup. Attempts made at documenting the language have also concentrated mostly on the Agole dialect. However, efforts are being made to see the language receive the necessary boost it deserves in both academia and beyond. Initial scientific studies of the language began with the work of Spratt and Spratt (1968) on C*ollected field report on the phonology of Kusaal* and Spratt and Spratt (1972) on *Kusaal Syntax*. Next to this is Abubakari (2007) on *Aspects of the Verb Phrase in Kusaal*, followed by Musah (2010) on *Aspects of Kusaal Phonology*. After this comes Abubakari (2011) on '*Object sharing as symmetric sharing, Predicate clefting and serial verb constructions in Kusaal*. The recent contribution is Niggli (2014) on *Grammaire élémentaire du Kusaal* which uses data from the Kusaal spoken in Burkina Faso. Again, there is currently a translation of the Bible into the Agole dialect by the Ghana Institute of Literacy and Bible Translation in Tamale, Ghana. They have also initiated several adult literacy programs for speakers of the language.

1.3. Overview of thesis

This dissertation is roughly divided into two parts: (i) Aspects of Kusaal Grammar which primarily discusses the general phonological, morphological, and syntactic properties of the language and (ii) the Syntax, Information Structure (IS) interface which looks at information packaging relating to focus and topic constructions in Kusaal. It further provides a formal analysis of IS using the Lexical Functional Grammar framework. The dissertation is divided into six chapters. In the following, I provide a brief overview of each chapter alongside the major corresponding findings.

Chapter 2 provides the theoretical background necessary for understanding basic grammatical concepts in the dissertation. It becomes more important moving into chapter 5 because it serves as the foundation which already introduces readers to the major structural representations in LFG. The chapter is an introduction to the Lexical-Functional Grammar framework. It is aimed at highlighting the core aspects of the theory that are deemed necessary for both grammatical and theoretical discussions in the dissertation. Aspects of the framework that are discussed include the lexicon, subcategorization as well as structural representation in LFG. The chapter further looks at the various levels of representation in LFG: the a-structure, the c-structure and the f-structure and finally examines the interaction between the c-structure and the f-structure.

Chapter 3 is a description of aspects of the grammar of Kusaal, a background considered necessary for the understanding of major issues in chapter four of this dissertation. It examines the phoneme inventory of Kusaal discussing elements that are phonemic and those that are not depending on the phonotactic constraints in the language. The chapter also shows some phonological processes such as vowel deletion, epenthesis and labialization in Kusaal. On a more important note, tone in Kusaal is phonemic. This is crucial as it plays a role in revealing the differences between particles that may otherwise be considered as the same. More important for the discussion in chapter four is the nominal phrase in conjunction with the verbal phrase in Kusaal. Whereas a sentence has a rigid SVO word order in the Kusaal, information structural conditions such as topic and focus markings alter the constituent order of elements to mostly the left periphery position of the clause in both topics and in ex-situ focus constructions. Finally, the chapter concludes on the observation that the contrastive focus particles *ń*, *né* and *kà* are grammaticalized from the NP conjunctions *né* and the VP conjunction *ká* respectively.

Chapter 4 gives a detailed description of topic constructions, focus constructions and question formation in Kusaal. These are shown to involve various forms of constituent dislocations to clause initial positions. Unlike focus constructions that require no resumptive pronouns at the base position, it is obligatory for a topic constituent to be accompanied by a resumptive pronoun at the base position not only in Kusaal but also in other Mabia languages. In addition, the sections on focus and topic constructions show evidence of the use of morphological, syntactic as well as prosodic means in expressing these notions in the language. Whilst information focus is morphologically null and expressed by prosody, exhaustive and contrastive focus notions are

expressed using the particles *kà*, *ń* and *né* in addition to prosody. There are, equally, some syntactic alternations when the ex-situ particle *kà* is used compared to the in-situ use of *ń* and *né*. Considering topic constructions on the other hand, it will be seen that topic constituents are qualified by a special topic phrase *yá'á àn* 'if.be'. Some general characteristics of topic constructions in Mabia languages as well as tests for topic identification are also proposed.

Related to both the structural and semantic notions of focus constructions in Kusaal is question formation. Central to the discussion on question formation is the use of the focus particle *kà* after all fronted wh-phrases. Wh-phrases in Kusaal can be grouped into two: focused wh-phrases which are always accompanied by the focus particles *kà* in ex-situ position and *né* in in-situ non-subject environments as against non-focused wh-phrases which are neither followed nor preceded by any of these particles. However, it is ungrammatical to have the contrastive subject focus particle *ń* occurring after a subject wh-phrases though answers to such questions can either be focused with the particle or not. Also, there is a strong correlation between a focused wh-constituent and non-focused wh-constituent and their corresponding answer pairs. Answers to focused wh-constituents in the interrogative sentence must have the corresponding constituent in the answer also focused whilst non-focused wh-phrases in the interrogative sentence do not require the corresponding constituents in the answer to be focused.

Chapter 5 gives a formal account of information structure in Kusaal using the Lexical Functional Grammar framework. The goal is to point out issues in previous analyses of focus constructions in the i-structure projection and to suggest possible ways of addressing the problems.

It is observed that the i-structure is inadequately resourced to account for the various subcategories of discourse notions more specifically the difference between information focus and contrastive focus. These two major subtypes of focus are observed to have identical i-structures although their c-structures may be different especially with languages where overt morphological particles play important roles in expressing the discourse statuses of elements. The impossibility of differentiating between subtypes of focus in the i-structure results in ambiguity and under specification of discourse interpretations.

In addressing the above problem, suggestions are made building on the proposals of King (1997) and Choi (1996). It is proposed that an additional predicate attribute DTYPE with a value that subcategories subtypes of focus and topic notions be introduced in the i-structure.

Chapter 6 concludes the dissertation.

Chapter 2

Theoretical Framework

2.0. Introduction

This dissertation is formalized using the theory of Lexical-Functional Grammar (Bresnan et al 2016; Kaplan & Bresnan 1982; Falk 2001; Bresnan 2001 and Dalrymple 2001; etc). Lexical-Functional Grammar has been used to analyse several phenomena cross-linguistically, evidence of which include English, German, French, Japanese, Swedish, Cantonese, Akan, Dagaare, Diraytata, etc. The application of the theory to several languages demonstrates its applicability to a wide range of empirical problems (Bresnan 2001; Dalrymple 2001; Toivonen 2001, 2003; Sudmuk 2005; Fang 2006; Lam 2008; Bodomo 1997; Marfo 2005; Pan 2010; Wondwosen 2006 etc). It is believed that the application of the theory to Aspects of Kusaal Grammar and the syntax information structure interface will extend its empirical coverage as well as enrich its typological study with data from all diverse grammatical and discourse aspects of the language.

This chapter provides an introduction to the Lexical-functional Grammar (henceforth LFG) framework. It aims at highlighting the core issues of the theory necessary for discussions in this dissertation. The rest of the chapter is organized as follows: Section 2.1 gives a general overview of LFG whilst taking a closer look at the Lexicon, subcategorization, as well as structural representation in the LFG framework. Section 2.2 discusses the a-structure in LFG. Section 2.3 looks at the c-structure. Section 2.4 explores the f-structure whilst section 2.5 examines the interaction between the c-structure and the f-structure. This will be followed by section 2.6 which is the conclusion.

2.1. The Lexical-Functional Grammar Framework

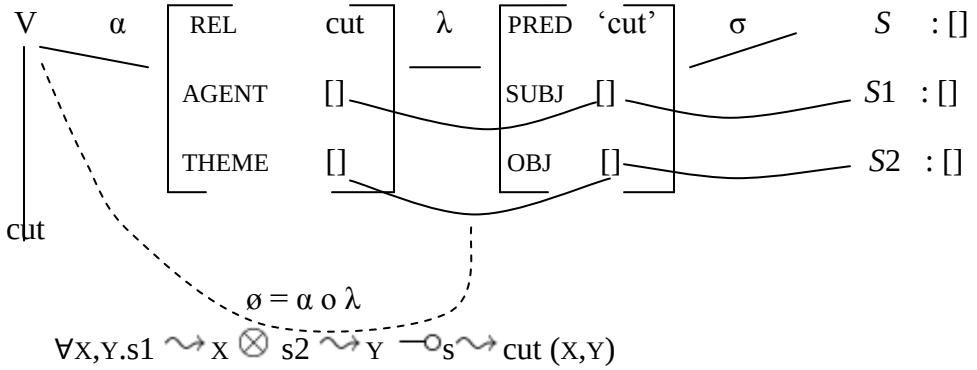
The LFG framework originated in the (1970)s. It was officially initiated by Roland Kaplan and Joan Bresnan in their co-authored book entitled *Lexical-Functional Grammar: A Formal System for Grammatical Representation* in (1982). As indicated by Kaplan and Brenan (1982:2), LFG is designed with the purpose of promoting a medium for expressing and explaining important generalizations about the syntax of human language and to serve as a vehicle for independent linguistic research. It is a restricted, mathematically tractable notation for which simple, psychologically plausible processing mechanisms can be defined. LFG has evolved from both the transformational framework (e.g. Bresnan (1978) and from earlier computational and psycholinguistic investigations (Woods 1970; Kaplan 1972, 1973, 1975; Wanner and Maratsos 1978 (*cf* Kaplan and Bresnan (1982)).

The questions informing the discussions in this chapter include: (1) what is LFG? And (2) how different is this theory from the others? LFG is a theory of grammar which has a powerful,

flexible as well as a mathematically well-defined grammar formalism designed to suit typologically diverse languages. As a variety of generative grammar and an alternative approach to syntax, LFG shares similar goals with the transformational theory but strongly rejects most if not all of the assumptions around which the latter is built. Unlike transformational theories, LFG is a non-derivational theory. There is no distinction between "deep-structure" or "surface structures". LFG solely uses the lexicon and phrase structure as derivational devices. There is only one level of constituent structure referred to as the c-structure. Again, LFG is built around what is called unification. This involves having features and functions emanating from different places in the tree becoming compatible with one another. In addition, unlike transformational grammar where grammatical functions are universally defined on the basis of phrase structure, in LFG, grammatical functions are not defined by c-structure categories, but are treated as the *primitive* elements of syntax. Each grammatical function has no single universal structural form. Grammatical relations such as subject and object etc. are primitives of the theory. In general, as a theory designed for all languages whether configurational or non-configurational language types, LFG is non-compositional and it allows "content" of a constituent to vary depending on its context (see Bresnan et al 2016: xi, 84-85).

Lexical-Functional Grammar postulates three modules: the lexicon, the syntax and the semantics. Below is an adaptation of a proposed architecture of LFG form Butt, Dalrymple and Frank (1997:2).

Fig. 2.1. The architecture of LFG



According to Butt, Dalrymple and Frank (1997:1), this architecture differs from usual assumptions on the grounds that the argument structure projects directly from c-structure — that is, the α projection function maps nodes of the c-structure tree to pieces of the argument structure. Argument structures are mapped to f-structures by the linking function λ, which in a way, serves as a representation of linking theory into the projection architecture. In consequence, the familiar ø projection relating the c-structure to the f-structure can be seen as a composition of the α and λ functions.

This dissertation will primarily touch on two out of the three outlined modules. The discussions will be limited to the lexicon and the syntax, leaving out the semantics which is beyond the scope of this work.

2.2. The Lexicon

The lexicon plays a pivotal role in the framework of LFG. All grammatical functions are represented in the lexicon. The lexicon is composed of lexical entries of words and their affixes. The lexical entries carry morphological information, phonological information, discourse related information, categorial information, meaning, as well as subcategorizable grammatical information. Subcategorization in LFG refers to grammatical functions and not categorial functions. The next subsections look at grammatical functions and subcategorization in LFG.

2.2.1. Grammatical Functions

A significant concept behind f-structure is grammatical function. Unlike in transformational theories where grammatical functions are defined on the basis of phrase structure, in LFG they are not defined on the basis of the c-structure but rather they are seen as primitive elements of syntax. Each grammatical function does not have a single universal form. Grammatical functions are classified into argument functions and non argument functions.

Argument functions are functions that express the argument of a predicate. They are grouped under core and noncore functions. Core functions are associated with central participants of the eventuality expressed by the verb. They include Subject (SUBJ), Object (OBJ), and Object indirect (OBJ_θ[1]). Core functions are always realized as NPs/DPs in languages like English and Kusaal and nominative or accusative case in languages that mark morphological case. In the c-structure, they are generally expressed using other c-structure categories such as NP, VP, CP, AP etc. Noncore functions on the other hand include: Object Oblique (OBL_θ), Complements (COMP) and Adjunct (ADJ).

Core and noncore functions are arranged in a functional hierarchy, also referred to as a "relational hierarchy" (Keenan and Comrie 1977) as illustrated in (2.1) below.

(2.1) Core Noncore

$$\overbrace{\text{SUBJ} > \text{OBJ} > \text{OBJ}_\theta}^{\text{Core}} > \overbrace{\text{OBL(IQUE)}_\theta > \text{XCOMP,COMP} > \text{ADJ(UNCT)}}^{\text{Noncore}}$$

All argument functions as seen in (2.1) are more prominent than adjuncts. An Adjunct is classified as a nonargument function alongside others like TOP(IC) and FOC(US). Nonargument

[1] The grammatical function OBJ_θ, OBL_θ are conveyed with the subscript "θ" which designates the thematic roles associated with these arguments. By implication OBJ is a member of OBJ_θ with a THEME thematic role. in the same way, OBL loc is associated ith OBL_θ with a LOCATIVE thematic role.

functions express relations other than argumenthood. They allow multiple instances without violating the uniqueness condition[2] of f-structure (Bresnan et al 2016; Falk 2001).

Table 2.1. Examples of Kusaal grammatical functions in LFG modelled around Asudeh and Toivonen (2015: 380).

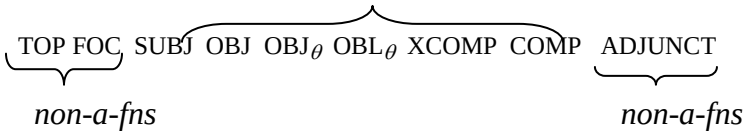
SUBJECT (SUBJ)	(a) Súkúbíís lá sà tʊ̄m túúmá lá. school-child-pl DEF PAST work work.nominalized DEF 'The school kids did the work yesterday.'
OBJECT	Primary object[3] (b) Púˈá lá dʊ̄g dííb lá. woman DEF cook food DEF 'The woman cooked the food.' (c)Púˈá lá tīs bíís lá dííb lá. woman DEF give children DEF food DEF 'The woman gave the children the food.' (d) *Púˈá lá tīs dííb lá bíís lá. woman DEF give food DEF children DEF 'The woman gave the food to the children'
OBJECT$_\theta$ (OBJ$_\theta$)	Secondary object; thematically restricted object (OBJECT$_{theme}$, restricted to theme roles) (e) Púˈá lá tīs bíís lá dííb lá. woman DEF give children DEF food DEF 'The woman gave the children the food.'
OBLIQUE$_\theta$ (OBL$_\theta$)	Typically has oblique case or a PP (Post Position) (f) Ò dīgīl gbáná lá téébúl lá zúg. 3SG put-down book.pl DEF table DEF head 'S/he placed the books on the table.'
COMPLEMENT (COMP)	Closed (saturated) complement: a clause argument which has its own subject (g) Àsíbí mīˈ yé bíís lá dī múí lá. Asibi know COMP children DEF eat rice DEF 'Asibi knows that the children ate the rice.'

[2]Uniqueness condition requires every attribute to have one unique value (see subsection 2.5.1.3 for details).
[3] A primary object is the indirect object in a ditransitive clause or the direct object in a monotransitive clause, while a secondary object refers to the direct object of in a ditransitive clause.

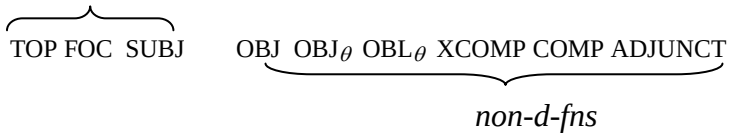
XCOMP	Open (unsaturated) predicate complement (subject controlled from outside and in Kusaal realized as a resumptive pronoun with anaphoric relations (h) Àsíbí àn bísúm. Asibi COP.be child.good 'Asibi is a good child.'
ADJUNCT (ADJ)	A modifier, a nonargument (i) Ǹ sáám sà tīsi tì lígíd lá dɔ́ɔ́g lá ní. 1.POSS father PAST give 2PL money DEF room DEF inside 'My father gave us the money in the room.'
XADJ	Open predicate adjunct (j) Bán káˈá dɔ́ɔ́g lá zúg, yír lá dím gbɛ̄n yíŋ. 3PL.Emp. have-NEG room DEF reason house DEF people sleep out 'Having no room, the family slept in the open.'
POSSESSOR (POSS)	Possessor phrase (k) Dáú lá lór. man DEF car 'the man's car'
TOPIC (TOP)	Grammaticalized discourse function; must be identified with or anaphorically linked to another grammatical function (l) Bíís lá, Súlé nɔ́ŋí *(ba). (TOP=OBJ) child.PL DEF Sule love 'The children, Sule loves (them).' (m) Yaˈá àné bíís lá, Súlé nɔ́ŋí bá. if COP.be child.PL DEF Sule love 3PL 'As for the children, Sule loves them.' (TOP anaphorically linked to OBJ) (TOP anaphorically linked to OBJ)
FOCUS (FOC)	Grammaticalized discourse function; must be identified with or anaphorically linked to another grammatical function (n) Gbauŋ kà bà sà dāˈ —. (FOC=OBJ) book FOC 3.PL PAST buy 'It was a book that they bought yesterday.' (o) Gbàuŋ kà bà sà dāˈ (*lì) book FOC 3PL PAST buy it (FOC≠ anaphorically linked to OBJ)

Following Bresnan et al (2016:100), grammatical functions are cross-classified into argument functions and grammaticalized discourse functions. Argument functions are labeled *a-fns* as in (2.2) and grammaticalized discourse functions (DF) are labeled *d-fns* as in (2.3).

(2.2)



(2.3)



2.2.2. Subcategorization

It has early on been indicated that subcategorization in LFG refers to grammatical functions and not categories. In the example in (2.4) below, the predicate *di* –'eat' subcategorizes for both SUBJ and OBJ grammatical functions. Its lexical entry is further given in (2.5).

(2.4) Àsíbí sà dī múì.
Asibi PAST eat rice
'Asibi ate rice yesterday.'

(2.5) di- V (PRED) = 'di-<(↑SUBJ) (↑OBJ)>'

(This means that the PRED of the verb *di* is two place predicate with SUBJECT and OBJECT functions)

2.2.3. Structural representation

The framework of LFG is premised on three main separate but parallel sub(structures) in the syntax. These structures are the argument structure (a-structure), the functional structure (f-structure), and the categorial or constituent structure (c-structure). In the quest to analyse more phenomena in diverse languages, more and more structures are proposed. One such structure is the information structure (i-structure: Choi 1996; King 1997).[4] These structures are said to be

[4] It is also important to mention the phonological structure (p-structure) which is prominent in the issues related to phonology in the LFG framework. The p-structure is however not parallel to the other structures since it falls outside the syntactic domain.

separate and independent from one another because none is derived from the other. As will be seen in our subsequent discussions, these structures have distinct set of independent constraints that model different aspects of the syntax. However, they interconnect via the mapping constraints and principles as a form of checking and explaining the grammaticality or otherwise of constructions. These different but parallel aspects of constructions are referred to as role, function, and category. Bresnan (2001) puts it as follows:

> Roles correspond to the grammatically expressible participants of eventualities (modelled by a-structure), syntactic functions belong to the abstract system of relators or roles to expressions (modelled by f-structure), and phrase structure categories belong to the overt structure of forms of expression (modelled by c-structure). The structures are associated by principles of functional correspondence (also called "linking" or "mapping" principles). (Bresnan 2001: 20)

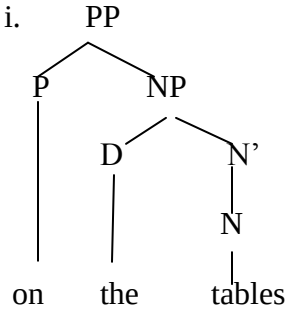
The formal model of LFG embodies three general design principles: variability, universality and monotonicity. Before looking at the various models, we will briefly touch on these principles which serve as the parameters governing the formation of the various models.

2.2.3.1. Principle of variability

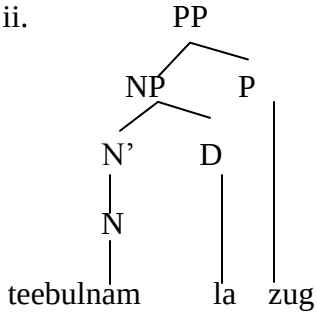
The principle of variability is one that is influenced by the external structures of languages. The "external structure" or "expression structure" simply refers to the mode of expression of a language. This structure is organized for expression, and its form is determined by generalizations about the order, pronunciation, and form of words and their grouping into phrases of the language. The principle of variability states that external structures vary across languages. The formal model used for representing external structures in LFG is called the "constituent-structure" or "the categorial structure". Sentences and phrases are assumed to be built using their constituent parts. Thus to say, sentences and phrases are ordered by precedence, dominance, and structural types. In LFG fully inflected words are the terminal elements of the c-structure and every word belongs to exactly one node. This restriction between the c-structure and word structure is referred to as lexical integrity which gives rise to much of the variability of c-structure across languages (Bresnan et al 2016:4). Compare the c-structure of the prepositional phrase in Kusaal and English. These two have identical internal structures but different external structures.

(2.6) Example: on the tables

i.



ii.



tables the head (on)

English: P +NP (DET +N) Kusaal: NP (N + DET) + P

2.2.3.2. The Principle of Universality

The principle of universality indicates that the internal structures of languages are predominantly invariant across languages. The internal structure of a language is where the grammatical structures are represented and show how syntactic functions are associated with semantic predicate argument relations. In addition, the internal structure is reflected in phenomena such as case government, pronominal binding, and agreement relations among the predicators and arguments of a sentence. The internal structure in LFG is formally represented using the "functional-structure." The concept of "subject" (SUBJ), "object" (OBJ), "predicate" (PRED) etc. occur at this level, because unlike NP, VP, V etc. they abstract away from expression in terms of external order and category by taking as equivalent all those expressions that behave alike under the mappings to argument structure. (Bresnan et al 2016:42).

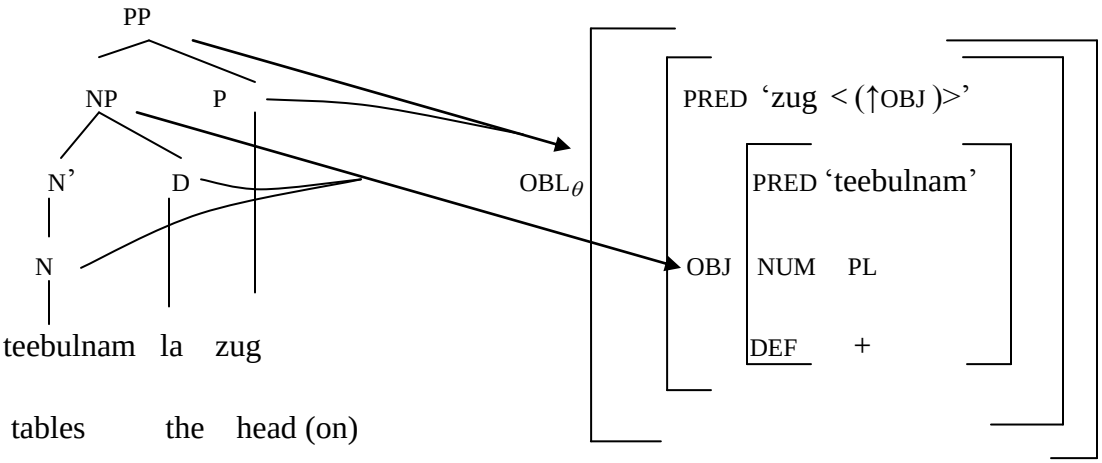
(2.7) On the table/ teebul la zug

$$\begin{bmatrix} \text{OBL}_\theta & \begin{bmatrix} \text{PRED} & \text{'zug< (↑OBJ)>'} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'teebul'} \\ \text{NUM} & \text{PL} \\ \text{DEF} & + \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

2.2.3.3. The Principle of Monotonicity

In LFG, the correspondence mapping between internal and external structures does not preserve sameness of form but rather it is designed to preserve inclusion relations between the information expressed by the external structure and the content of the internal structure. As a nontransformational approach to Syntax, Syntactic structures in LFG are built monotonically. This is to say, there are no deletions or possibilities of changing syntactic information but only additions of new information. In effect, grammatical relations of parts are preserved in the whole. The mapping from c-structure to f-structure does not destroy, delete or change any grammatical relations. This renders the correspondence between these two structures piecewise and monotonic. Monotonicity is also a computationally plausible constraint on Syntax (Falk 2001:9; Bresnan et al 2016:43).

(2.8) A monotonic correspondence between a c-structure and an f-structure



'On the tables'

2.3. Argument Structure (A-Structure)

The a-structure gives information about the number of arguments a verb or predicator ought to take. It defines the syntactic types of these arguments as well as their hierarchical organization needed for the mapping to syntactic structure. Arguments can possibly be identified by the roles they play in the predicate's meaning; thematic roles or θ roles. An argument may thus be labeled as Agent, Patient, Theme, Goal, Source, Experiencer etc. The hierarchical ordering of arguments also reflects their relative prominence which further reveals their individual relationships to the predicate. In the conceptualization of an action or event, the Actor has primacy over the Patient/Beneficiary where both are present. The patient or Beneficiary is deemed to have been affected as a result of an action taken by the Actor. Similarly, the Instigator has primacy over the Theme, which in turn is also more prominent than the Path, Location, or Reference Object in

spatial conceptualization (Falk 2001:104). The relative prominence of the thematic roles is indicated by their left to right order and reflects a thematic hierarchy. The following (2.9a) is a representation of the thematic hierarchy, supported by the example in (2.9b).

(2.9) a.Agent>Beneficiary>Experiencer/goal>Instrument>Patient/Theme>Path/Location (Bresnan 2016:329; Falk 2001:104)

b. Ò_{agent} sà tīs $\text{bííg}_{\text{beneficiary}}$ lá $\text{ní}^{\text{l}}\text{ím}_{\text{theme}}$ lá
3SG PAST give child DEF meat DEF
$\text{dɔ́ɔ́gìn}_{\text{loc}}$ lá.
room.LOC DEF
'S/he gave the meat to the child in the room yesterday.'

Argument features are decomposed into natural classes as shown in (2.10).

(2.10)

	-r	*+r*
-o	SUBJ	$\text{OBL}_{\text{Ø}}$
+o	OBJ	$\text{OBJ}_{\text{Ø}}$

[±r]: *(un)restricted*
[±o]: *(non)objective*

Through the feature decomposition, a-structure features - [±*r*] and [±*o*] constrain the way in which the thematic roles are mapped onto argument functions in f-structures. The example in (2.11) is an illustration of the a-structure of the predicate *di* 'to eat', its selected argument roles as well the individual feature description.

(2.11) dī <agent, patient>
↓ ↓
[-*r*; -*o*] [-*r*; +*o*]

2.4. Constituent structure (C-Structure)

Constituent structure is the entire organization of words and phrases that make up a sentence into successively larger and larger units, where each unit (constituent) belongs to a category (Falk 2001:33). C-structure encodes hierarchical organization, linear order of constituents, syntactic categories as well as the input to the phonological component of a grammar. In other words, the c-structure exhibits the superficial arrangement of words and phrases in a sentence (see Wondwosen 2006). C-structure categories can either be organized endocentrically or lexocentrically. Endocentric organizations are used in highly hierarchical c-structure such as

English whilst lexocentric organizations are used in flat c-structure languages such as Walpiri, Jiwarli, Tagalog and other non-configurational languages of Australia (Bresnan et al 2016:101; Kroeger 1993:3; Simpson1991). In lexocentric languages, all syntactic functions are specified by morphological means such as case and agreement. All arguments including subjects are sisters to the verb. Kusaal has an endocentric c-structure.

The c-structure, in LFG, is commonly represented by the phrase structure tree, defined by phrase structure rules augmented by regular expressions. They use word categories of a language for both their input and output and Phrase Structure rules are expressed following Jackendoff (1977)'s X'-Theory. In this dissertation, I assume the phrase structure version proposed by Bresnan et al (2016:101) where the c-structure schemata is interpreted as tree admissibility condition (constraints on possible tree structures) rather than as rule for rewriting , generating, or further still "projecting" structure. The proposal for the endocentric constraints on phrase structure rules is formulated as in (2.12).

(2.12) a. $X' \rightarrow X^0, YP$
b. $XP \rightarrow YP, X'$

There are four lexical categories in Kusaal: N(ouns), (V)erbs, A(adjectives), AD(postpositions). These categories have double bar projections: N^0, V^0, A^0, and AD^0 represent the lexical categories and N^1, V^1, A^1, and AD^1 and NP, VP, AP, AND ADP (PP) represent projections of respective lexical categories. The phrases with double bar projections are called maximal projections. The close class categories also referred to as the "functional" F^0 categories are further assumed to have double bar projections similar to the lexical categories. Thus in English for instance, I^0 (read as "Infl") is used for inflectional categories, C^0 is for the complementizer category and D^0 is for Determiners, Demonstratives and pronouns (Brenan et al 2016:101). The phrase structure for the Kusaal sentence in (2.13) is as illustrated in (2.14).

(2.13) Àsíbí dī múì.
Asibi eat rice
'Asibi has eaten rice.'

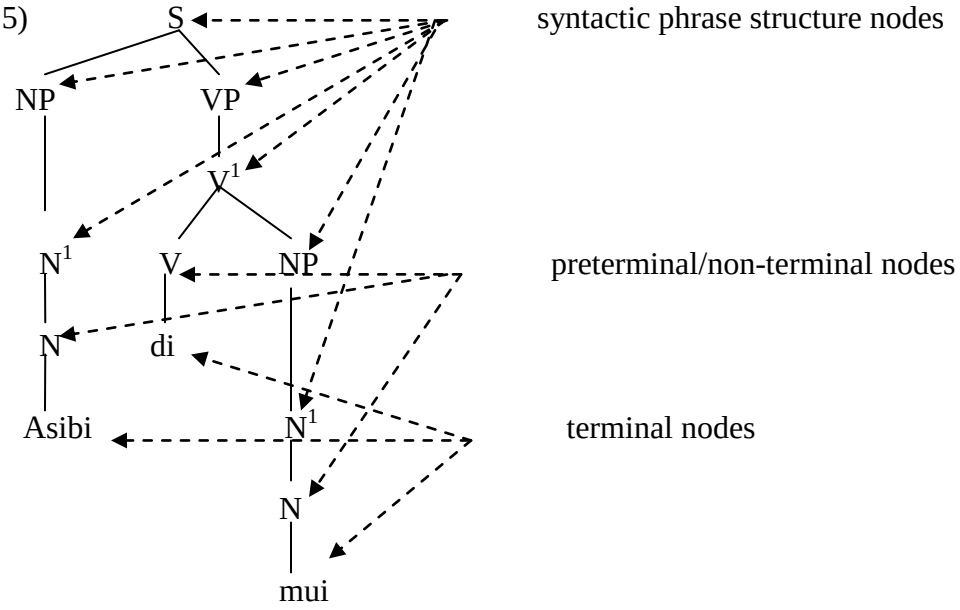
(2.14) $S \rightarrow NP, VP$ NP<VP
$VP \rightarrow V, NP$ V<NP
$NP \rightarrow N$

The phrase structure rule in (2.14) is interpreted as follows: The S node dominates the NP and the VP nodes and the order is such that the NP precedes the VP. In the same vein, the VP node in the second rule dominates the V and the NP such that the V also precedes the NP. In these rules, the comma (",") is used for indicating Intermediate Dominance (ID) relations between nodes whilst Linear Precedence relations are represented using the greater than symbol: "<" between the daughter nodes as in NP < VP and V< NP (see Falk 2001:48).

2.4.1. Constituent Structure Tree

Among the similarities between LFG and other generative syntactic approaches e.g. Principles and Parameters, is the notion of tree diagrams used in representing constituent structures in given strings or words or sentences. A constituent or categorial structure is a tree structure that contains categorial information with fully inflected lexical words at its terminal nodes. Each node of a constituent structure is realized in three levels: the syntactic phrase structure nodes, the preterminal nodes and the terminal nodes. The sentence in (2.13) is used as a demonstration in (2.15).

(2.15)



In the tree structure in (2.15), the nodes S, NP, VP, V^1, N^1, NP, N^1 are syntactic phrase structure nodes whereas the preterminal nodes are: N, V, N. The terminal nodes are the morphological words: *Asibi*, *di* and *mui*. One important observation from the structure in (2.15) is that the syntactic nodes do not immediately dominate the terminal nodes.

A constituent structure tree, in LFG is subjected to two principles which restraint the occurrence of all three levels of representations: the Principle of Economy of Expression and the Principle of Lexical Integrity quoted in (i) and (ii) respectively.

i. Economy of expression
   All syntactic phrase structure nodes are optional and are not used unless required by independent principles (completeness, coherence, semantic expressivity) (Bresnan et al 2016:90).

Using (2.15) as illustration, the principle of economy of expression applies to only the syntactic phrase structure nodes exempting the preterminal and terminal nodes. This principle ensures the elimination of all nodes that only provide redundant information such as N^1 and V^1 in (2.15). In

addition, all empty category nodes that do not add anything to either the f-structure or meaning are eliminated. Thus the economy of expression principle allows the use of empty categories but requires them to be functional. According to Bresnan et al (2016: 92) "empty categories can appear as a "last resort" in highly configurational languages which lack other means of specifying functions."

ii. Lexical Integrity
Morphologically complete words are leaves of the c-structure and each leaf corresponds to one and only one c-structure node (Bresnan et al 2016:92).

This principle requires only morphologically complete words or fully inflected lexical items to be inserted at the terminal nodes.

2.5. Functional Structure (F-structure)

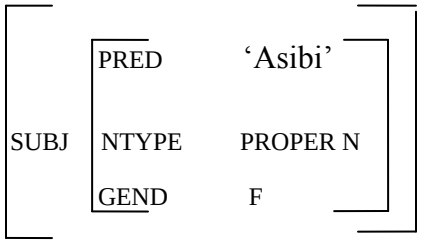
The f-structure is a form of grammatical representation which abstracts away from the c-structure. It represents predicate argument structure as well as grammatical function relations such as subject and object. The F-structure is composed of all the sets of attributes and value pairs for all smaller constituents in a sentence. In other words, the f-structure consists of pairs of attributes-value matrices (AVM). The first member in the pair is the attribute and the second member is its corresponding value. The f-structure is always represented in a tabular form as illustrated below following Bresnan et al (2016:44).

(2.16)

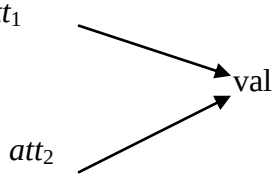
$attribute_1$	$value_1$
$attribute_2$	$value_2$
.	.
.	.
.	.
$attribute_n$	$value_n$

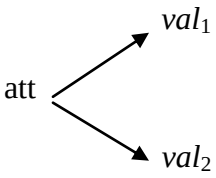
An attribute is represented by a symbol, e.g. SUBJ, TENSE, NUM, PRED etc. A value on the other hand can be (a) a symbol, such as SG, PL, as in [NUM SG] and [NUM PL]; (b) a semantic form(value) as in the value for the PRED *di*-'eat' in example (2.13) will be [PRED '*di*-<↑ SUBJ) (↑OBJ)>']; (c) a f-structure such as the value of the SUBJ Asibi in (2.13) is illustrated in (2.17).

(2.17)



In LFG, it is possible to have two attributes having the same value (2.18a) but it is not possible to have one attribute with two values (2.18b) (see Bresnan et al 2016:45).

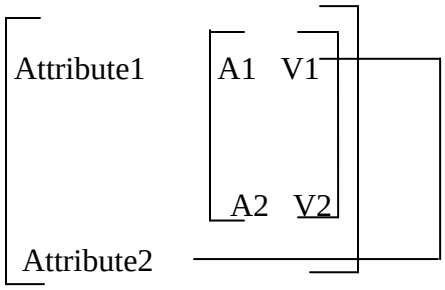
(2.18) a. √ 

b. * 

$val_1 \neq val_2$

The f-structure in (2.18b) is not acceptable because a single attribute with two values violates the Uniqueness Condition, to be discussed shortly, which requires every attribute to have a single and unique value. In contrast, the possibility of two attributes sharing identical values is captured in tableau (2.19) (also see Wondwosen 2006:37).

(2.19)



2.5.1. Well-formedness condition

In LFG, the f-structure is constrained by three well-formedness conditions. These conditions ensure the validity of the f-structure such that the violation of any single one of them renders the structure ungrammatical. The three are the Completeness, the Coherence, and the Uniqueness (Consistency) Conditions. We shall discuss each of these conditions in the following subsections.

2.5.1.1. Completeness

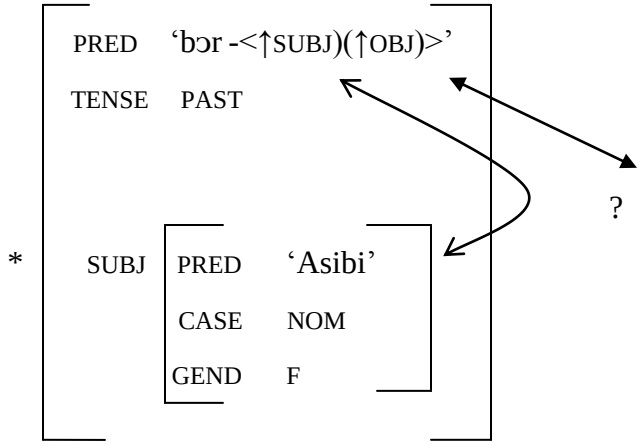
The Completeness Condition requires that "all argument functions specified in the value of the PRED feature must be present in the local f- structure. All functions that receive a thematic role must have a PRED feature" (Falk 2001:63). In other words "completeness requires that every

function designated by a PRED be present in the f-structure of that PRED" (Brenan et al 2016:62). This implies that the functional structure of every sentence must obligatory have the grammatical relations that are subcategorized by the predicate. This condition ensures the ungrammaticality of structures that have less number of arguments than required by the predicate as in (2.20).

(2.20) *Àsíbí bɔ̄ɔ̄d.
Asibi want
* 'Asibi wants.'

The verb *bɔɔd* 'wants' is a two place predicate in Kusaal and as such subcategorizes for SUBJ and OBJ grammatical functions. The f-structure of (2.20) is illustrated as in (2.21).

(2.21) Incomplete f-structure



This f-structure is incomplete because the predicate *bɔɔd* 'wants' is a two place predicate and requires two arguments but there is only a subject argument *Asibi* without an object argument. As a consequence, it violates the completeness condition by subcategorizing below the requirement of the predicate.

2.5.1.2. Coherence.

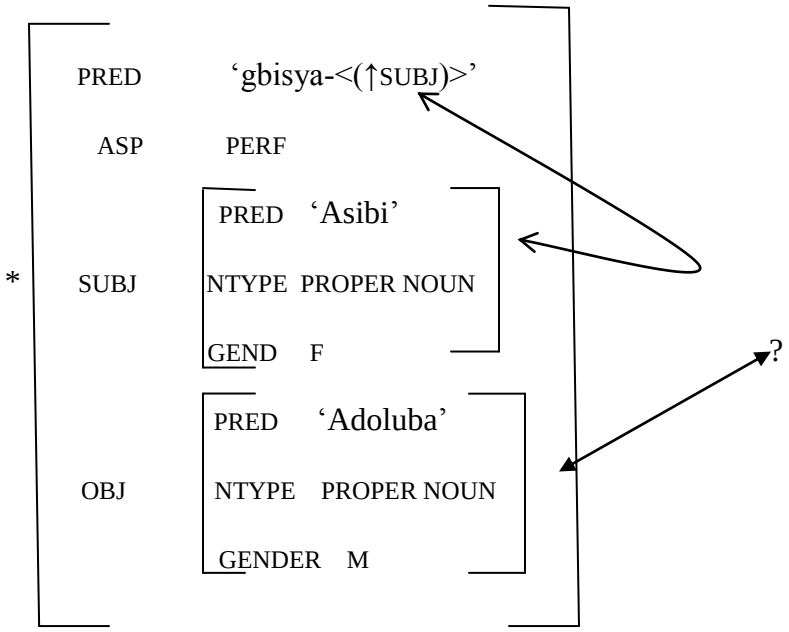
According to Falk (2001) the Coherence Condition requires that "all functions in an f-structure must be incorporated into the semantics. Argument functions are subject to the Coherence Condition. Overlay functions must be identified with arguments or adjuncts. Adjuncts must be in f-structures containing PREDs" (Falk 2001:64). Put in other words "coherence requires that the value of every argument function in an f-structure be designated by a PRED. Furthermore, any function that has a semantic role feature must match up with a designator associated with a semantic role by its PRED" Bresnan et al (2016:62).

This condition implies that an f-structure is coherent if it does not contain additional argument beyond the requirement of the predicate. Any additional argument that cannot be functionally interpreted in an f-structure causes a violation of the coherent condition. It is for this reason that (2.22) is considered as ill-formed.

(2.22) *Àsíbí gbīsyá Àdólúbá
Asibi sleep-PERF Adoluba
*'Asibi slept Adoluba.'

The f-structure of (2.22) is as in (2.23).

(2.23) Incoherent f-structure



The f-structure in (2.23) is incoherent because the predicate *gbisya* 'slept' subcategorizes for only one argument, SUBJ function which is *Asibi*. But it happens to have two argument functions *Asibi* and *Adoluba* with subject and object functions respectively. Since the predicate cannot subcategorize for the two argument function, the structure in (2.23) is ruled out for violating the coherent condition.

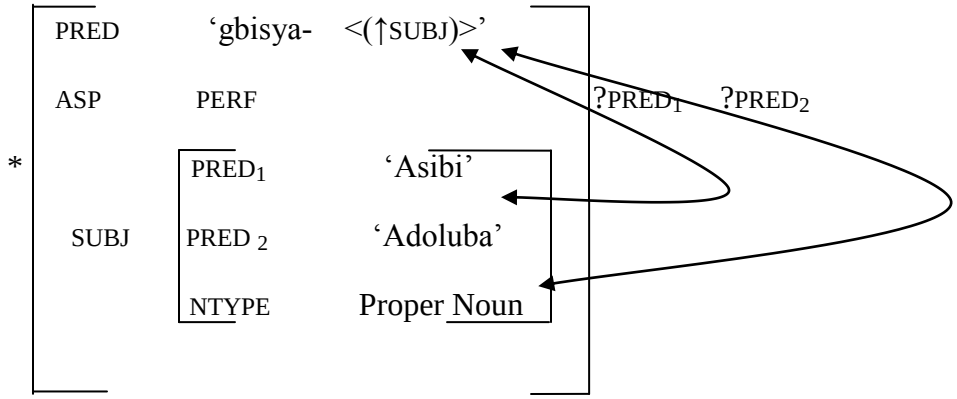
2.5.1.3. Uniqueness Condition (also called Consistency condition)

The uniqueness condition requires every attribute to have a unique value (Bresnan et al 2016:45; Falk 2001:64). What this condition implies is that every predicate, for instance, cannot have more than one identical grammatical function. By consequence, a verb cannot take two subjects at the same time.

(2.24) * Àsíbí Àdólúbá gbīsyá.
Asibi Adoluba sleep.PERF
'Asibi Adoluba slept.'

The sentence in (2.24) has two subjects: *Asibi* and *Adoluba*. The f-structure is represented as in (2.25).

(2.25) Inconsistent f-structure

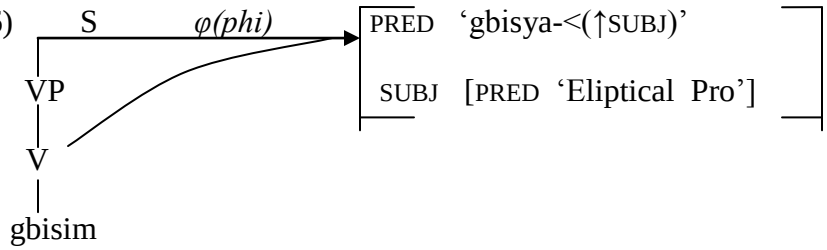


The f-structure is inconsistent because there are two arguments competing for the single grammatical function slot of subject. This is a violation of the uniqueness (consistency) condition.

2.6. C-Structure to F-Structure Correspondence

After discussing the properties of both the c-structure and the f-structure in the preceding sections, this section will consider the mapping relation between the two. Mapping is the heart of the descriptive power of LFG for the reason that it deals with the relationship between overt syntactic elements and the features they represent (Falk 2001:64). The mapping relation from c-structure to f-structure is marked by the symbol *φ(*read *phi).* What this means is that every c-structure node has a direct relationship with a particular f-structure via *φ (phi)*. This is demonstrated using the imperative structure: *gbisim* 'sleep!' as in the example in (2.26) below.

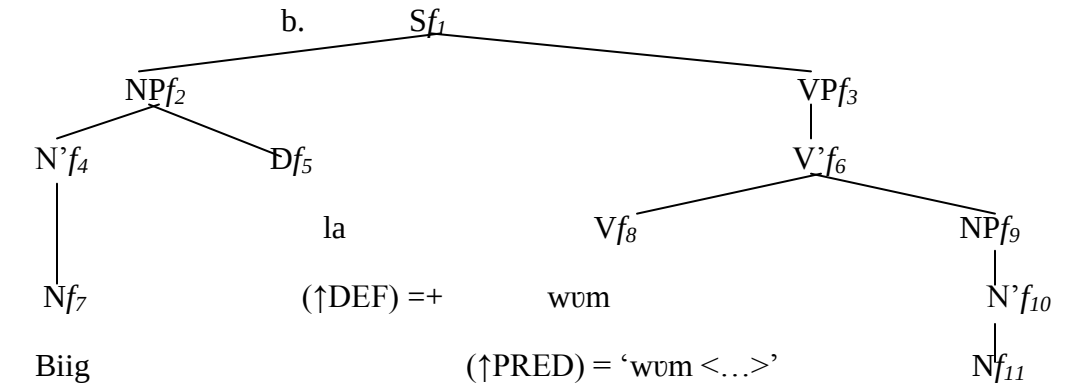
(2.26)



The correspondence between the c-structure and the f-structure is realized through the use of variables. In the c-structure in (2.27b), the nodes in the tree are marked using variables (f_1,f_2,f_3,…..etc) these variables are used in the mapping from c-structure to f-structure.

(2.27) a. Bííg lá wʊ̄m Kúsáàl.
child DEF hear Kusaal
'The child speaks/understands Kusaal.'

b.



Every variable in (2.27b) corresponds to a pair of matrix brackets in the f-structure. The correspondence, described as piecewise, sees multiple nodes in the tree corresponding to the same (sub)AVM.

(2.28)

f_1,f_3,f_6,f_8,

PRED	'speak <SUBJ, OBJ>'	
TENSE	PRESENT	
SUBJ	f_2,f_4,f_5,f_7,	DEF +
		NUM SG
		PRED 'child'
OBJ	f_9,f_{10},f_{11},	[PRED 'Kusaal']

The variables f_1, f_3, f_6, f_8, mean that the information contained in these nodes contribute the PRED features to the sentence. Similarly, the information contained in the nodes f_2, f_4, f_5, f_7, contribute the SUBJ information to the sentence.

The definition of the mapping between the c–structure and the f-structure is carried out by a set of functional equations called the f-description (or functional description). The equation for an f-description is mathematically represented as (fα) = v moving the left parenthesis outside the function as compared to the standard mathematical form of f(α) =v. The major role of the f-description is that it unifies dispersed information on individual nodes in the annotated c-structure by bringing them together for the construction of the corresponding f-structure. For example, to say that f_1 and f_3, in (2.27b), are the same f-structures; i.e. the f-structure correspondents of constituents 1 and 3 are identical, the equation is written as in (2.29).

(2.29) $f_1=f_3$

Again, we can say that the value of the SUBJ attribute of f_1 is f_2 thus the subject of the sentence f_1 corresponds to the constituent in f_2.

(2.30) $(f_1 \text{ SUBJ}) = f_2$

In a bid to simplify the f-description and make it much more clearer, annotational devices called metavariables, represented by the symbols ↑ and ↓, are used. These are called metavariables because they are variables over f-structure variables such as f_1, f_2, f_3. The ↑ referred to as the 'up' arrow designates the immediately dominating node or the mother node and the ↓ also referred to as the 'down' arrow designates the immediately dominated node also referred to as this node or self node. The equations (SUBJ↑)=↓ and ↑=↓ are read as "up's SUBJ equals down" and "up equals down respectively where "up" refers to the mother node and "down" refers to the f-structure of the annotated node.

For illustration purpose, let us consider the annotated phrase structure of (27). Following Bresnan et al (2016:52), the following rules are applied: (i) assign the functional equation (↑K) =↓ to a maximal projection (where K stands for grammatical functions such as SUBJ, OBJ etc) and (ii) assign ↑=↓ to non-maximal categories.

(2.31) Annotated phrase structure rule for (2.27a)

a. S → NP VP NP < VP
(↑SUBJ)=↓ ↑=↓

b. NP→ N (Def) N < Def
↑=↓ (↑=↓)

c. VP → V (NP) V < NP
↑=↓ ((↑OBJ) =↓)

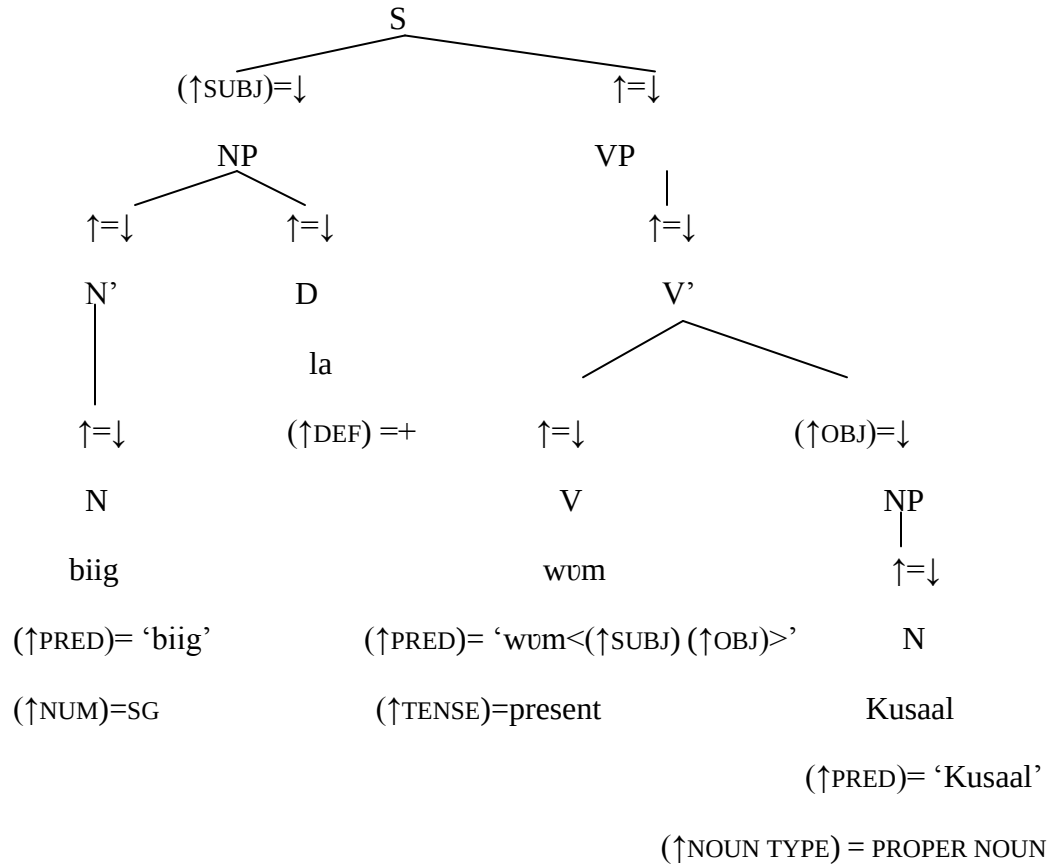
In the phrase structure rule expanding the NP, N is assigned the functional equation ↑=↓ for the reason that it is the phrase structure head of NP. In the rule that expands the VP, we also see that the NP is assigned (↑OBJ) =↓since it is a maximal projection whilst the head V is assigned ↑=↓. In the same vein, in the phrase structure rule expanding S, the NP is assigned (↑SUBJ) =↓ because it is a maximal projection and VP is assigned ↑=↓. In this instance, VP is a functional head of S and not a phrase structure head of S. Thus the information about VP is information about S and vice-versa. This means that V is a lexical head of VP whereas VP serves as the functional head of S. Using the phrase structure rules in (2.31) and its corresponding sentence in (2.27a), the lexical elements of this sentence will have the following entries.

(2.32) Lexical entries

Biig	N (↑PRED) = 'Biig'
	(↑NUM) =SG
	(↑DEF) =+
wʊm	V (↑PRED) = 'wʊm -<(↑SUBJ) (↑OBJ)>'
	(↑TENSE) = PRESENT
Kusaal	N (↑PRED) = 'Kusaal'
	(↑NOUN TYPE) = PROPER NOUN

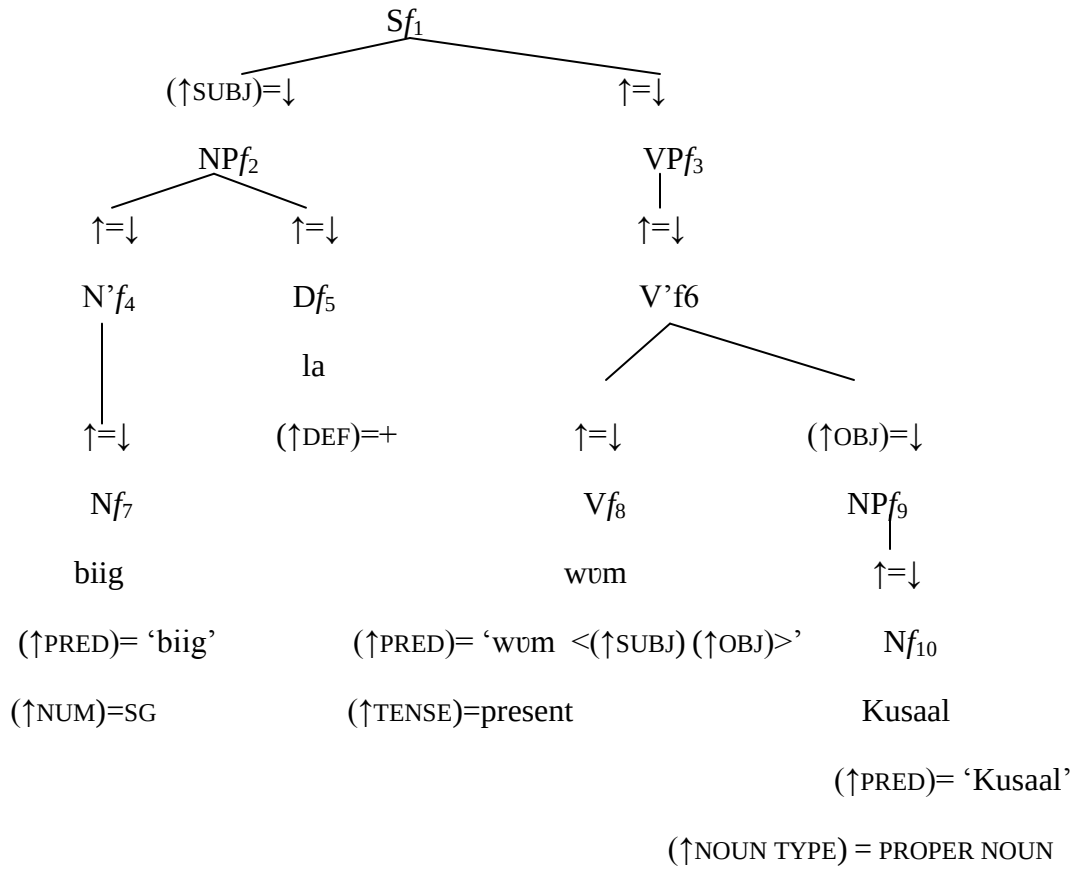
The phrase structure rules in (2.31) and the lexical entries in (2.32) will be used in building an annotated f-structure. This process constitutes three steps which involve firstly, the annotation of the phrase structure, secondly, the generation of the f-description and thirdly the construction of the minimal f-structure by way of solving the functional description.

(2.33) Step 1. Assignment of functional annotation instantiated by meta-variables (↑↓) to all nodes on the tree

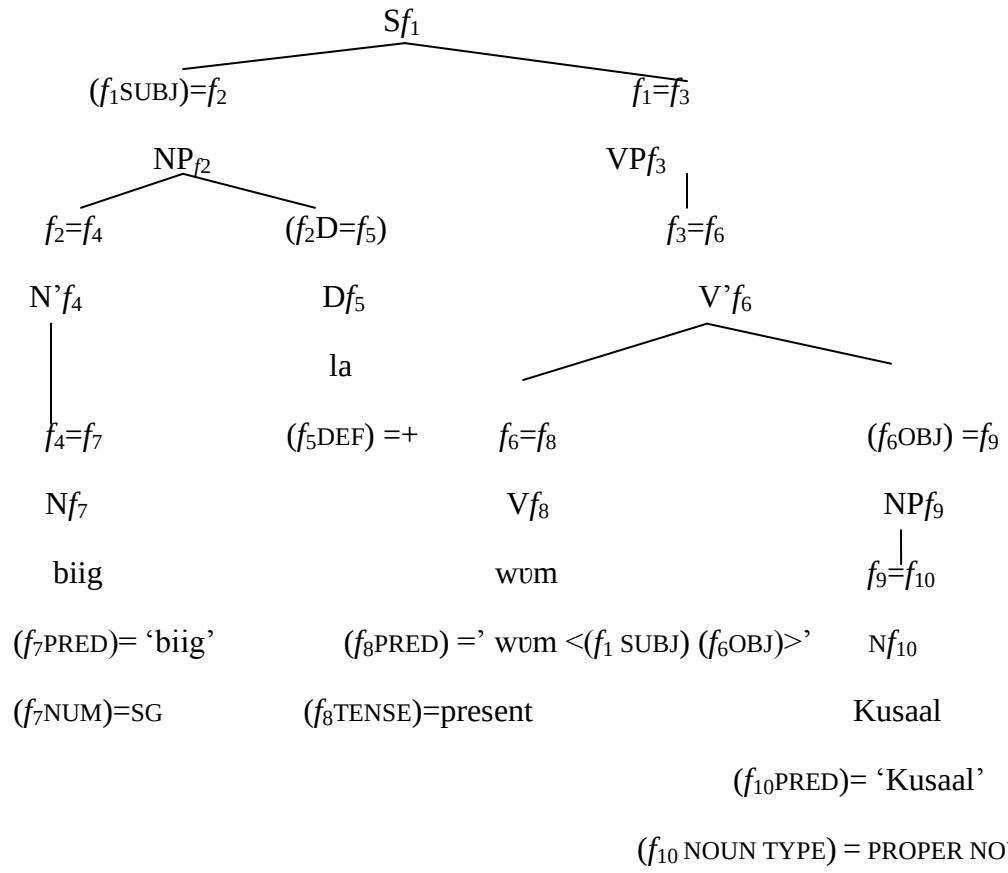


Step 2 is made up of two parts. First is to assign indices to the various nodes on the c-structure and second is to substitute the meta-variables ↑=↓using the assigned indices of the various nodes.

(2.34) Step 2a



(2.35) Ste 2b.



Step 3 is the construction of the minimal f-structure that satisfies the functional description generated by Step 2. Although this can be done in any order, for the sake of convenience, I will move from the top of the tree down and from left to right. For instance, from the NP node in (2.35), (f_1 SUBJ) = f_2; that is f_1 has a SUBJ attribute whose value is f_2. From this, the minimal f-structure in (2.36) is built to replace the f-description.

(2.36) f_1: [SUBJ f_2]

Similarly, we know from the VP node in (2.35) that f_1=f_3; that is to say, f_1 has the same structure as f_3. The equation in (2.36) is then revised to (2.37).

(2.37) f_1, f_3 : [SUBJ f_2]

From the N node we further learn that f_2=f_4; that is f_2 is one and the same as f_4. We add this information and revise (2.37) as below.

(2.38) f_1, f_3 : [SUBJ f_2, f_4]

Again, from the same NP node it is clear that f_2 =f_5 because f_5 has the same structure node as f_2. This information in included in (2.38) which then gets discarded.

(2.39) f_1, f_3 : [SUBJ f_2, f_4, f_5]

In addition, the N node further shows that f_4=f_7 which is added to (2.39) to generate (2.40).

(2.40) f_1, f_3 : [SUBJ f_2, f_4, f_5, f_7]

From the V node we have f_3=f_6, we add this information following our process.

(2.41) f_1, f_3, f_6 : [SUBJ f_2, f_4, f_5, f_7]

Furthermore, the V node reveals that f_6 =f_8, we then add this to (2.41).

(2.42) $f_1, f_3, f_6 f_8$: [SUBJ f_2, f_4, f_5, f_7]

From the NP node (f_6OBJ) = f_9, it is clear that f_6 has an attribute OBJ with the value f_9. When we add this to (2.42) we generate (2.43).

(2.43) $f_1, f_3, f_6 f_8$: [SUBJ f_2, f_4, f_5, f_7; OBJ f_9]

We also learn that f_9 =f_{10} which is further added to (2.43).

(2.44) $f_1, f_3, f_6 f_8$: [SUBJ f_2, f_4, f_5, f_7; OBJ f_9, f_{10}]

The lexical entry of f_7 makes the following information available: (f_7PRED) = 'biig', (f_7NUM) =SG and f_5 also makes available (f_5DEF) =+ information. From this we know that f_7 is an f-structure with two attribute value-pairs and f_5 has one attribute value. We add this information as illustrated in (2.45).

(2.45)

$f_1, f_3, f_6 f_8$: [SUBJ f_2, f_4, f_5, f_7 [PRED 'biig'; NUM SG; DEF +]; OBJ f_9, f_{10}]

Likewise from the lexical entry of f_{10} we gather the information that (f_{10}PRED) = 'Kusaal' and (f_{10}NOUN TYPE) = PROPER NOUN which also means that f_{10} is an f-structure with two attribute value-pairs. This added to (2.45) generates (2.46).

(2.46)

$f_1, f_3, f_6 f_8$: [SUBJ f_2, f_4, f_5, f_7 [PRED ‘biig’ NUM SG DEF +]
OBJ f_9, f_{10} [PRED ‘Kusaal’ N Type ‘Proper Noun]

Finally, we also retrieve from f_6 the information that (f_8PRED) = ‘wʊm - < (f_1SUBJ) (f_6OBJ)>’, and (f_8TENSE) = present. Integrating this information to the structure in (2.46) gives us the complete f-structure in (2.47).

(2.47)

$f_1, f_3, f_6 f_8$: [SUBJ f_2, f_4, f_5, f_7 [PRED ‘biig’ NUM SG DEF +]
OBJ f_9, f_{10} [PRED ‘Kusaal’ N Type ‘Proper Noun]
PRED ‘wʊm - < (F_1SUBJ) (F_6OBJ)>’
TENSE PRESENT]

2.7. Chapter Summary

This chapter has concentrated on issues relating to the LFG framework. Although LFG originated in the (1970)s, it was officially initiated by Roland Kaplan and Joan Bresnan in their co-authored book entitled *Lexical-Functional Grammar: A Formal System for Grammatical Representation* in (1982). From the architecture of LFG, it is demonstrated that LFG is composed of three modules: the lexicon, the syntax and the semantics. Our discussion focused on the lexicon and the syntax since they are what are relevant for this dissertation.

To begin with, the lexicon is composed of lexical entries which feed the framework with the most important information. The lexicon carries morphological information, phonological information, discourse information, categorial information as well as meaning and the subcategorizations. It has been indicated that subcategorization in LFG refers to functions and not categories. In Kusaal, we identify functions such as SUBJ, OBJ, OBJØ, OBJLØ, COMP, XCOMP, ADJ, XADJ POSS, TOP and FOC. These grammatical functions are classified into argument functions (a-fns): SUBJ, OBJ, OBJØ, OBJLØ, COMP, XCOMP, ADJ and non-argument functions (non-fns): TOP, FOC,

ADJ. The classification further includes discourse functions: TOP, FOC and SUBJ vs non-discourse functions: OBJ, OBJØ, OBJLØ, COMP, XCOMP, ADJ.

On the other hand, the syntactic model comprises of three models: the a-structure, the f-structure and the c-structure. It embodies three designed principles namely: the principle of variability, the principle of universality and finally the principle of monotonicity.

The a-structure determines the number of arguments a predicate takes. It defines the syntactic types of these arguments in addition to their hierarchical organization that is needed in mapping to the syntactic structure. Arguments are identified by their thematic roles in a given sentence. Their features are decomposed into natural classes of [±restricted] and [±objective] which constrain the way in which thematic roles are mapped onto argument functions in the f-structure.

In like manner, the c-structure encodes hierarchical organization, linear ordering of constituents, syntactic categories as well as the input to the phonological component of a grammar. The categorial structure is assigned by context free phrase structure rules and it is represented in tree structure. The c-structure is constrained by two principles namely the Principle of Economy of Expression and the Principle of Lexical Integrity.

Comparatively, the f-structure abstracts away from the c-structure and it represents the predicate argument structure in addition to the grammatical function relations such as subject and object. It is composed of sets of attributes-value matrices (AVM) and constrained by the following three well-formedness conditions: Completeness, Coherence and Uniqueness (Consistency) conditions.

Finally, the mapping correspondence between the c-structure and the f-structure is marked by the symbol ϕ(read as *phi*). The mapping is carried out by a set of functional equations referred to as the f(unctional) description. The process involves three steps. Firstly, assign functional annotations instantiated by meta-variables (↑↓) to all nodes on the c-structure. Secondly, assign indices to the various nodes on the c-structure and replace all meta-variables using the assigned indices of the various nodes. Thirdly, construct minimal f-structure to satisfy the functional description.

Chapter 3

A sketch of Kusaal Grammar

3.0. Introduction

In this chapter, I discuss aspects of the grammar of Kusaal with particular attention to the phonology, the morphology, and the syntax of the language. The chapter is divided into six (6) sections with section 3.1 looking at the phoneme inventory of Kusaal. Section 3.2 discusses the nominal system whilst section 3.3 considers the verbal system alongside the structure of a simple sentence in Kusaal. It goes further to look at particles and their functions in Kusaal. Section 3.4 takes into account complex constructions such as SVCs, and coordinating and subordinating constructions in Kusaal. Section 3.5 looks at the diachronic and synchronic uses of the particles *nέ* and *ká* in Kusaal. The last section, section 3.6 is a summary of all discussions.

3.1. Segmental Phonology: Phoneme Inventory

The orthography employed in this dissertation to code the phonemes in Kusaal is based on the 'uniform coding system for Mabia languages' (Bodomo & Abubakari 2017) alongside a guideline outlined in the 'Handbook of Kusaal Orthography' (Musah et al 2013) published by the Ghana Institute of Linguistics, Literacy and Bible Translation. There is no significant difference between these two orthography proposals except whilst the first is a proposal for a uniform writing system for all Mabia languages, the latter is solely prepared for Kusaal. Both proposals have the same set of phonemes for Kusaal and these phonemes are represented using the Latin scripts.

3.1.1. Consonants

Table (3.1) is a representation of the consonantal system in Kusaal. In all, there are 24 consonants in the language. In the table, I illustrate the various places and manners of articulations of the various sounds. All consonants to the right are voiced and those to the left are voiceless. The sounds in brackets are the IPA representations of the orthographies in cases where the two are different. The palatal fricative /j/ is orthographically represented as (j) whereas the approximant /j/ is orthographically represented as (y). The palatal nasal /ɲ/ is also orthographically represented as (ny) (Bodomo & Abubakari 2017; Musah 2010 and Musah et al 2013).

Table 3.1. Consonantal Phonemes in Kusaal

	Bilabial	**Labio-dental**	**Alveolar**	**Palatal**	**Velar**	**Labio-velar**	**Glottal**
Plosives	p b		t d		k g	kp gb	ʔ
Fricatives		f v	s z	j [ɟ]			h
Nasals	m		n	ny[ɲ]	ŋ	ŋw	
Laterals			l				
Trill			r				
Approximants				y[j]		w	

The alveolar stop /d/ and the trill /r/ are allophones in the Atoende dialect of Kusaal as can be seen from the following examples: /gadok/ or /garok/ 'bed', / liǵiŕì/ or /liǵiɗì/ 'money', /zabir/ or /zabid/ 'fight'. The trill /r/ does not occur at word initial position in Agole though the situation is unclear for the Atoende dialect. Additionally, it is common to have voiceless plosives aspirated [^{h}] at syllable initial positions: /t^{h}on/ 'sibling', /p^{h}al/ 'street', /k^{h}awɛn/ 'maize'.

3.1.2. Vowels

A set of nine (9) oral vowels are established in the Kusaal vocalic system. These vowels are captured in table (3.2) below.

Table 3.2. Vowels in Kusaal

	Front		**central**	**back**	
	+ATR	-ATR	(-ATR)	+ATR	-ATR
high	i	ɪ		u	ʊ
mid	e	ɛ		o	ɔ
low			a		

A common co-occurrence constraint on the vowels, as shown in table (3.2), involves the distinctive feature [±ATR]. In a word that is composed of a stem and an affix, the vowel in the affix must conform to the [±ATR] value of the vowels in the stem. This is prominently realized in the noun classification system of Kusaal (Abubakari 2016b).

(3.1)

Stem	Sing. Affix	Noun	Gloss
bi	gI	biigi	'child'
tʊb	rI	tʊbɪrɪ	'ear'
bɔnˈɔ	gU/O	bɔn'ɔgʊ/ɔ	'valley'

Attempts made at identifying minimal pairs of words that exhibit phonemicity in vowel harmony in the language has not been so productive. However, further research is required to establish that vowel harmony is not phonemic in Kusaal since the data used is mostly from the Agole dialect. The examples in (3.2) show that the replacement of [–ATR] sounds with [+ATR] counterparts and vice versa is likely to cause awkward pronunciation which may still be understood as the target word but this does not have any semantic implication(s) on the word. The words with question marks (?), in the examples in (3.2), are awkward but understandable.

(3.2)

+ATR	-ATR	Wrongly Pronounced	Gloss
vuud	vʊʊd	no	'sound'
?kpeem	kpɛɛm	yes	'an elder'
diib	dɪb	no	'food'
?nobir	nɔbir	yes	'leg'

In addition, all the nine vowels in Kusaal also have long counterparts. The difference between the long and the short vowels is realized by the duration in the vowel production. Long vowels are transcribed by the use of a colon after the short counterpart e.g. /ɔ/ is short and /ɔ: / is long. The data below include examples of all the short and long vowels in the language.

(3.3) Minimal Pairs for Vowel Length

Short Vowels			Long Vowels		
<bà>	[ba]	'3 Pl/ they'	<báá>	[ba:]	'dog'
<pīg>	[pig]	'to stalk/trail sb'	<pí:g>	[pi:g]	'ten'
<tīg>	[tɪg]	'to be satisfied'	<tííg>	[tɪ:g]	'tree'
<tʊ̄m>	[tʊm]	'to work'	<túʊm>	[tʊ:m]	'to be desolate'
<tū>	[tu]	'dig'	<tūū>	[tu:]	*' to dig'*
<zɔ̄m>	[zɔm]	'to run'	<zɔ́ɔ́m>	[zɔ:m]	' refugee'

<gūr>	[gur]	'to wait'	<gúúr>	[gu:r]	'shore'
<gɛ̄ŋ>	[gɛŋ]	'to fence off'	< géɛ́ŋ >	[gɛ:ŋ]	'madness'
<ón>	[on]	'3Sg. Emphatic	<òòn>	[o:n]	'even'

The examples in (3.3) do not demonstrate ample evidence showing that vowel length is phonemic in Kusaal. The different meanings of the words are alluded to the difference in tonal qualities. This is further illustrated using the vowels /a-a:/, /i-i:/ and /u-u:/ where the long and short forms appear as allophones.

(3.4)

a.	<bà> '3Pl'	?<bàà>		c.	<búúdí>	'a tribe'	? <búdí>
b.	<pīg> 'to stalk'	?<pīig>		d.	<dūūs>	'to dust'	? <dūs>

The words with question marks (?) in (3.4) have awkward pronunciations. Further consultations with native speakers reveal that these words do not have any semantic interpretations but are likely to be identified as wrongly pronounced forms of the correct variants.

On nasality, there are five nasal vowels in Kusaal. These are [ĩ, ɛ̃, ɔ̃, ʊ̃, ã]. These nasal vowels belong to the category of unadvanced tongue root [-ATR] sounds. The nasality on these vowels is represented by /n/ in the orthography. Below are minimal pairs showing contrast between nasalized and oral vowels.

(3.5) Contrast between nasalized and oral vowels

Nasal			Oral		
< *ɔn* >	[ɔ̃]	'him'	< ɔ >	[ɔ]	's/he'
< *tɪn* >	[tĩ]	'to vomit'	< tɪ >	[tɪ]	'us'
< *nyan* >	[nyã]	'shame'	<nya>	[nya]	'to borrow'
<*sɛn*>	[sɛ̃]	'to sew'	<sɛ>	[sɛ]	'to plant, transplant'
<*kʊn*>	[kʊ̃]	ptc 'just'	<kʊ>	[kʊ]	'to kill'

Furthermore, all oral vowels in Kusaal with the exception of /e/ can be nasalized: [ĩ, ɪ̃, ɛ̃, õ, ɔ̃, ũ, ʊ̃, ã]. Vowels are nasalized when they precede tautosyllabic nasal consonants[5] with the direction of assimilation being leftward.

[5] Tautosyllabic phonemes are phonemes or segments that occur in the same syllable. Therefore, a vowel that preceds a nasal in the same syllable is nasalized in Kúsáàl.

(3.6)

Noun	Gloss	Noun	Gloss
gbãũŋ	'book'	tõm	'to work'
sããn	'stranger'	kuõm	'water
taˈãm	'shea fruit'	nĩŋgbĩn	'body'
nĩntaa	'rival'	nĩntãŋ	'sun' 'daytime'
nyãŋ	'to conquer'	mɛ̃ŋ	'self'
yãm	'wisdom'	mɔ̃ŋ	'to refuse'

There is no nasalization in contexts where the pre-nasal vowel falls in a different syllable with the nasal consonant. Nasalization does not occur in heterosyllabic context as illustrated below.

(3.7)

Noun	Gloss	Noun	Gloss
gbà.nà	'books'	sáa.má	'strangers'
túú.má	'work (PL)'	táˈá.má	'shea fruits'
nìŋ.gbí.ná	'body (PL)'	mɔ̃.ŋìd	'refusal'

3.1.2.1. Vowel sequencing

On vowel sequencing, Kusaal shows several instances of diphthongs. Instances of triphthongs on the other hand are rare. Below are some examples of diphthongs as recorded in the available data.

(3.8) Dipthongs

/au/	< lauk >	'equipment'	/ei/	< ayei >	'no'
/ɛʊ/	< wɛʊg >	'cheap'	/aʊ/	< akaʊŋ >	'grasshopper'
/ie/	< bielim >	'seed'	/eo,ɛɔ/	< bɛog >	'tomorrow'
/ae/	< faae >	'grow thin'	/ao/	< yaog >	'a grave/tomb'
/ai/	< mail >	'mile'	/ia/	< lia >	'to harness, bridle a horse'
/ɪɛ/	< kpɪɛn >	'to dry up'	/io/	< wiiog >	're-brown, ripe'
/ɔɛ/	< tɔɛ >	'to be bitter'	/ɛɔ/	< pɛɔg >	'basket'
/aɛ/	< faaɛn >	'to rob'	/oi/	< oi >	'alas' 'woe'
/ui/	< mui >	'rice'	/ua/	< zua >	'friend'

3.1.3. Phonological Processes

3.1.3.1. Vowel Deletion

Lexical items that end with vowels have the tendencies of deleting the vowels at word final positions in certain predictable environments. For instance, the V_2 in CV_1CV_2 and V_3 in $CV_1CV_2CV_3$ syllabic words respectively may undergo deletion. It is also possible to have long vowels shortened at word final positions. Vowel deletion predominantly occurs when the bare forms of words are used. Below are lists of lexical items from various categories for illustrations.

(3.9)

Word Category	Examples	Gloss
Verbs	gɔ̄s, gɔ̄sì, gɔ̄sɛ̀	'to look at, look'
	tīs, tīsī	'give, to give'
	dīī, dī	'to eat, eat'
	nyɛ̄, nyɛ̄ɛ̄	'to see'
	dīg, dīgī	'to lie down, lay/put something down'
	bū'ōs, bū'ōsì, bū'ōsɛ̀	'to ask question, ask for
	sɔ̄s, sɔ̄sī	'to make a request, , beg, pray for'
Nouns	màà, mà	'mother'
	bííg, bíiga, bíigi	'child'
	pú'áb, pú'ábá, pú'ábì	'women
	pít, pítú	'younger sibling'
	pɛ́ɔ́g, pɛ́ɔ́gɔ̀	'basket'
	A̰duk, A̰dukʊ́	'Proper noun (person)'
Pronoun	yà, yàà	'2.PL.'
	fʊ̀, fʊ̀ʊ̀	'2SG'
	bà, bàà	'3.PL.'
	tì, tìì	'1.PL.'
	ò, òò	'3.SG'
Adjective	títá'ár, títá'árì, títá'ádà, títá'ád	'big'
	vɛ́nl, vɛ́nlá	'beautiful, nice'
	wɔ̄k, wɔ̄kà	'tall, long'
	-bíl, -bílá	'little, small'
	bí'él, bí'élà, bí'élàa, bí'élɛ̀	'a few'
	-sábìl, -sábìlì	'black'
Adverbs	tɔ́'ɔ́tɔ́ɔ, tɔ́'ɔ́tɔ́	'quickly'

àgɔlá, àgɔl	'loudly'
fɔ́ɔ́nɛ̀, fɔ́ɔ́n	'silent'
bíˡél, bíˡélà, bíˡélàa, bíˡélè	'small'

Final vowel deletion in Kusaal further reveals some relationship with the phonotactics of the language. Certain consonantal segments that precede vowels at word final positions have the tendencies of dropping the final vowels. In the following consonantal list of segments, the ones in bold do not occur at syllable coda: /p, b, t, d, k, g, **kp, gb**, ʔ, f, **v**, s, **z, j**, h, m, n, **ɲ**, ŋ, **ŋw**, l, r, **j**, **w**/. A quick look at the examples of words shows they all end with segments that occur at coda or word final positions. Words that end with a CV such that the C can be a coda segment have the tendencies of deleting the vowels that occur after them in both Atoende and Agole dialects of the language.

The phoneme /ɟ/ in *àbánjà* 'lizard' does not occur at syllable coda in Kusaal hence the ungrammaticality of deleting the vowel, /a/, which occurs after it in the bare form of the noun as well as when the noun is used in declarative and interrogative sentences as illustrated in (3.10a-c).

(3.10) a. Lì ànɛ́ àbánjà/*abanj
3SG. COP.be lizard
'It is a lizard.'

b. Áyé, lì káˡá àbánjà /*abanj.
no, it COP.NEG lizard
'No, it is not a lizard'

c. Ò sà nyɛ̄ àbánjà /*abanj lá?
3SG. PAST see lizard DEF
'Did s/he see the lizard yesterday?'

Other examples include: *nyɔ́yá→ *nyɔy* 'nose.PL' and *kʊ̄yà →*kʊy* 'funeral.PL'

3.1.3.2. Epenthesis

The syllable structure of Kusaal is composed of the regular syllable types: N, V, CV, CVC, CVN, CVV. One marked feature in the phonotactics is the occurrence of consonant clusters. Such occurrences are resolved by the use of the epenthetic vowel /i/. This situation is predominantly observed in both singular and plural formation in nouns. The insertion of /i/ becomes more salient since these nouns have strong tendencies of deleting the final vowels in their suffixes which may create undesirable clusters. Though the presence of the final vowel and the absence

of the /i/ insertion does not violate the *CC constraint in most instances, the insertion of /i/ remains predominantly used in the language.

(3.11)

Stem	Suffix	Output	Gloss		
nínsáal	-ba	nínsáalìb(á)	'human beings'	?ninsaalba	*ninsaalb
kpíb	-ri/ɛ	kpíbír(í)	'lice'	?kpibri	*kpibr
níd	-ba	nídíbá	'people'	?nidba	*nidb
tʊ̄b	-ri	tʊ̄bìr(i)	'ear'	?tʊbri	*tʊbr
pít	-ba	pítíb(à)	'siblings'	?pitba	*pitb
béŋ	-ri	béŋírì	'bean'	?bɛŋri	*bɛŋr

Similarly, undesirable vowel sequences in heterogeneous sequences or adjacent syllables are broken by consonant insertion. The occurrence which can be described as a case of vowel hiatus is resolved by the use of the epenthetic glide /j/. The canonical simple noun in Kusaal usually ranges between disyllabic and trisyllabic represented as below.

(3.12)

Syllable Structure Form	Example Word	Gloss
CVC.CVV.CV	nín.sáa.lá	'human being'
CVV	báá	'dog'
CVV.CV	bíi.sì	'children'
CV.CVV	gʊ.yáa	'cola nuts'
VC.CV.CV	àn.sí.bà	'uncle'
VV.CV	íébì	'search.N'
VVC	īīl	'horn'

From the examples above, it is apparent that CVV and VV structures are monosyllabic word initially and medially. Again unlike word finally, all manner of syllable types can be found word initially. The commonly attested word final syllable types are CV and CVV but not VV. This is made clearer following the examples below:

(3.13)

Noun stem	Suffix	Output	Gloss
gʊ	-rɛ	gʊʊ.r(ɛ́)	‘cola nut’
gʊ	-aa	gʊ.**y**á(a)	‘cola nuts’
zʊ	-rɛ	zúʊ. r(ɛ́)	‘tail’
zʊ	-aa	zú. **y**á(a)	‘tails’
nyu	-rɛ	nyúu.r(ɛ̀)	‘yam’
nyu	-aa	nyú.**y**á(a)	‘yams’
zuo	-rɛ	zúó.r(ɛ̀)	‘mountain’
zuo	-aa	zúó.**y**à(a)	‘mountains’

The undesirable occurrence of VV word finally is resolved by the epenthetic use of /j/ as an intervening segment to remedy the situation.

3.1.3.3. Assimilation: Labialization

Labialization is observed on otherwise non-rounded consonant sounds in Kusaal. The process occurs when primary articulated sounds are produced with a secondary lip rounding feature. This observation is regarded as one that is influenced by an adjacent [+High,+Round] vowel which spreads its roundedness on preceding otherwise non-rounded consonants. In establishing whether labialized consonants are phonemes or not, the following minimal pairs demonstrate to some extend that some labialized sounds in the language can be considered as phonemes compared to their non-labialized counterparts.

(3.14) Minimal Pairs: Labialized/Unlabialized Consonants

tw	/t^{w}ak/	‘to drip, drop’	t	/tak/	‘to re-do, change’
dw	/d^{w}a/	‘to deliver, give birth’	d	/da/	ptc ‘remote past’
lw	/l^{w}ak/	‘to avoid’	l	/lak/	‘to uncover’
kw	/k^{w}a/	‘to plough’	k	/ka/	ptc ‘comp, Conj, Foc’
sw	/s^{w}ɛn/	‘to anoint’	s	/sɛn’/	‘to roast’
zw	/z^{w}a/	‘friend’	z	/za/	??
jw	/y^{w}ol/	‘to cajole’	j	/yol/	??
gw	/g^{w}an/	‘to roam’	g	/gan’/	‘to eat (t.z.) without soup, ‘eat dry’

The process of establishing minimal pairs in the table is not entirely productive. Even though the first five examples illustrate instances where labialized consonants contrast with non-labialized counterparts, it will be an overgeneralization to conclude and to add labialized consonants to the inventory of phonemes in the language. It is suggestive to rather consider necessary factors that distinguish one form from the other. By so doing I turn to consider whether any contrast can be traced between non-labialized consonants followed by /u/ and their labialized counterparts and also if the appropriate labialized consonants followed by /u/ contrast with either of the first two. This approach follows the work of Kotey (1974) on labialization in Ga (a Kwa language spoken in Ghana).

(3.15)

A		B		C	
/ twak/	'to drip,drop'	/tuak/	'to drip, drop'	/ twuak/	'to drip, drop'
/dwa/	'to give birth'	/dua/	'to give birth'	/dwua/	'to give birth'
/lwak/	'to avoid'	/luak/	'to avoid'	/lwuak/	'to avoid'
/kwa/	'to plough'	/kua/	'to plough'	/kwua/	'to plough'
/mwi/	'rice'	/mui/	'rice'	/mwui/	'rice'
/nwa/	'fowl'	/nua/	'fowl'	/nwua/	'fowl'
/swɛn/	'to plough'	/sʊɛn/	'to plough'	/swʊɛ/	'to plough'
/zwa/	'friend'	/zua/	'friend'	/zwua/	'friend'
/ywol/	'to cajole'	/yuol/	'to cajole'	/ywuol/	'to cajole'
/gwan/	'to wander'	/gʊan/	'to wander'	/gwuan/	'to wander'

From this table, the words under column A are labialized consonants followed by a vowel which is not /u/ thus [-High,-Round] vowels. Column B is also composed of forms that are non-labialized consonants followed by /u/ thus [+High, +Round] and another vowel which should be [-High, -Round]. The third column, C, has forms that are labialized and also followed by /u/ and any vowel which is [-High, -Round]. In all three sets and more importantly the insertion of /u/ after both labialized and non-labialized consonants, the meanings of the words remain unchanged. This leads to the assertion that labialization in Kusaal is triggered by the leftward feature spreading of roundedness from /u/ to preceding non-rounded consonants. With this background, I predict an underlying form which implies that labialized consonants assimilate their roundedness from a following /u/ sound in a /uV/ set of diphthong. The rule in (3.16) is modelled to exempt redundant features from the proposal of Kotey (1974).

(3.16) [cons] →[+round] / − [+High, +Round] [+Voice, -Cons]

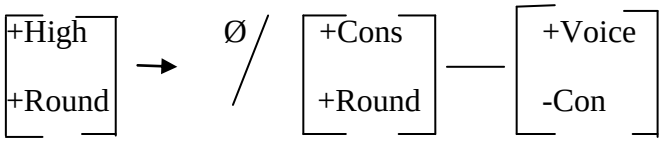
In this rule, a consonant is labialized when it is followed by /u/ which is [+High, +Round] in addition to another vowel /uV/. It is also relevant to point that it is natural for non-rounded consonants to be produced with some roundedness (labialization) anytime /u/ occurs after them. Labialization is however more visible when another vowel follows /u/.

(3.17)

/gʊ́ʊ́r/	'kola nut'	/tʊʊm/	'work(N)'	/kūl/	'go-home'
/yʊ̄ˈʊ̄m/	'sing'	/dūūs/	'to dust'	/pʊ́/	'NEG'

Another rule that can explain the occurrence of labialization is to posit the deletion of /u/ after labialization has taken place. This explains why the forms in columns A and B are more natural and highly preferable in the language compared to column C in example (3.15).

(3.18)



The [+High +Round] vowel /u/ is deleted in between [+High +Con] /w/ and any vowel thus [+Voice –Con]. It is relevant to add that the phonological rules in both (3.16) and (3.18) are assumed to operate on syntactic inputs to realize the phonetic output (see Kotey 1974:50). It is suggested here that labialization in Kusaal should be viewed as 'phonetic' rather than 'phonemic'.

3.1.4. Tonal system

Previous researches on the tonal system of Kusaal show evidence of three level tones: High (H), Mid (M) and Low (L) with a further downstep high tone (Bodomo &Abubakari 2017; Musah 2010; Spratt and Spratte 1968 and Niggli 2014).

(3.19)

High		Low		Mid	
báˈ	'father'	bà	3PL	dī	'to eat'
kʊ	'kill'	kʊ	NEG	gūlsè	'to write'

nɔ́ŋ	'poverty'	nɔ̀ŋ	'like'	sū:r	'heart'
yú::m	'year'	yù:m	'a song'	yʊ̄ˈʊ̄m	' to sing'
dá	NEG	dà	'ptc.,remote past'	dā'	'to buy'
mɔ́n	'monitor lizard'	mɔ̀n	'stir (v)'	nyɔ̄:k	'chest'
lá	'DEF.DET'	là	'laugh'	nā:b	'chief'
dá:m	'local drink'	-	-	dā:m	'to worry, disturb'

The example in (3.19) (also see Musah 2010:109) provides evidence indicating contrast between two tonal distinctions. It is common to have instances of two minimal pairs compared to three minimal pairs. The examples below show some evidence of three minimal pairs in Kusaal tonology.

(3.20)

bāŋ	'know (v)'	báŋ	'bracelet/trap'	bàŋ	'agama lizard'
bʊ̄k	'to divine'	búk	'to be weak'	bʊ̀k	to subside e.g. from anger'
būg	'to carry on shoulder'	búg	'to be drunk'	bùg	'to powder/put powder on/on somebody'
gɛ̄n'	'to thrush about'	gɛ́n'	'to be angry'	gɛ̀n'(gɛndig)	'to mix things'

Mid tones appear to be lexically conditioned as they are commonly realized on verbs. Even though evidence showing three minimal pairs are not as common as those showing two minimal pairs, the presence of the three types of tones in the language cannot be overlooked. Most minimal pairs usually occur between high and low tone compared to high and mid or low and mid as illustrated in (3.21). The assumption is that Kusaal potentially has a hybrid tone system which is gradually changing from a three- to two-toned system. This is supported by the difficulty is establishing overwhelming instances of three minimal pairs in addition to which mid tones also seem to be lexically conditioned on verbs.

(3.21)

aẃáná	INT 'how?'	àwànà	'thus, this way'
báˈá	'a peg eg for hanging things'	bàˈà	'concern, attention'
gíŋ	'short'	gìŋ	'to hinder, stand in the way'

The combinations of high, low and mid tones in both disyllabic and polysyllabic words are permissible in the language resulting in the following nine (9) sequences: HH, HL, HM, LL, LH, LM, MM, MH and ML.

(3.22)

HH			
kólúg	‘river, well’	váúg	‘leaf’
zólúg	‘a fool’	tɔ́ˈɔ́tɔ́	‘quickly’
HL/LH			
bàlérìg	‘ugly person’	àgɔ́l	‘high’
bámà	‘those’	ànsíb	‘uncle’
HM/MH			
kɔ́dīg	‘to slaughter’	tú:lūg	‘heat’
nāsá:rá	‘white man’		
LM/ML			
nɔ̄kìm	‘take’	gūlsè	‘write’
kārìm	‘read’	nɔ̀gbān	‘lip’
MM			
nāˈāyī:g	‘a thief’	tūbīs	‘to spew, spit’
nɔ̄rā:g	‘rooster’	ūdīg	‘to sweep away’
LL			
nìnsà:l	‘human beign/mankind’	kʊ̀rʊ̀g	‘old’
pʊ̀tɛ̀nˈɛ́r	‘thought.NOM’	bà:lìm	‘slowly, carefully’

The mora is the tone bearing unit in Kusaal (*also see* Musah 2010:113). The presence of all three types of tones (H, L, M) in Kusaal tonology makes it different from other Mabia languages like Dagaare and Gurenɛ where two level tones and a downstep high tone are established (Bodomo 1997 and Dakubu 1982). Kusaal can be compared to Buli where three tonal levels are established (Akanlig-pare 2005).

3.1.4.1. Function of Tones in Kusaal

Tone in Kusaal is phonemic and it performs two distinct functions as is also the case in many Mabia and Kwa languages such as; Dagaare, Dagbani, Gurenɛ, Akan, and Ewe. The two functions of tone in Kusaal are lexical and grammatical functions.

3.1.4.1.1. Lexical functions

This occurs in instances where the segmental compositions of some lexical items are identical with different tonal representations. The difference in tone causes difference in the semantic compositions of the lexical items involved.

(3.23)

i.	bàˡ	'to fix into'	báˡ	'father'
ii.	bìˡyá	'soup seed'	bíˡyá	'riped, matured'
iii.	kà	'contrastive focus particle'	ká	COMP 'that', CONJ 'and'

3.1.4.1.2. Grammatical function

The perfective and future negations in Kusaal are expressed by the use of tone marking on the preverbal particles. The particles *pʋ* and *ku* are both negative future morphemes. The use of a low tone on these morphemes as in *pʋ̀/kù* translate to 'will not' and a high tone as in *pʋ́/kú* will mean 'did not' (Musah 2010).

(3.24)

iv. Perf: [ḿ! pʋ kúà] 'I did not farm'
v. Fut.: [ḿ! pʋ̀ kùà] 'I will not farm'
vi. Fut.: [ń! kʋ̀ keŋɛ] 'I will not go'
vii. Perf.:[ń! kʋ keŋɛ] 'I did not go, I could not go'

In summary, the identification of three level tones in Kusaal is significant to the study of tonology in languages across the Mabia subgroup. The absence of overwhelming instances of three minimal pairs compared to instances of two minimal pairs possibly indicates a gradual shift from three-toned to two-toned language. The lexical and grammatical functions of tone in Kusaal also serve as an indication of the interface that exists between phonology and morphology where identical morphological segments acquire different semantic interpretations by virtue of their tone. The next section looks at the nominal system of Kusaal.

3.2. The Nominal system of Kusaal

3.2.1. The Head

The head of the nominal phrase in Kusaal is generally composed of a simple noun (singular or plural), a conjoined noun, a compound noun, a possessive (genitive) Y of X relationship, as well as pronouns.

(3.25)

Head Noun	Singular Forms	Plural Forms
Simple Noun	bííg(ì) child.SG '(a) child'	bíís(ì) child.PL 'children'
Conjoined Noun	dáú né púà man.SG CONJ woman.SG '(a) man and (a) woman'	dáp(á) né púàb(á) man.PL CONJ woman.PL 'men and women'
Compound noun	dáú né púà né bííg(ì) man.Sg conj woman.Sg Conj child.Sg '(a) man, (a) woman and (a) child'	dáp(á) né púàb(á) né bíís(ì) man.Sg Conj woman.Sg Conj child.Pl 'men, woman and children'
Possessive	bííg(ì) lá sáàm child DEF father 'the child's father'	bíís(ì) lá sáàm child.PL DEF father 'the children's father'
Pronoun	Ò 3SG. 's/he'	Bà 3PL 'they'

Nouns in Kusaal come in two forms: 'short forms' and 'long forms'. It is hypothesised that the short forms are derived from the long counterparts by dropping the final vowel.

(3.26)

Nominal	Singular		Plural	
	Long	Short	Long	Short
husband	sídá	síd	sídíbá	sídíb
cow	nááfɔ́	nááf	níígí	ná'á
child	bíígì/bíígá	bííg	bíísì/bíísá	bíís

lizard	àbánjá	*abanj	àbánjànámá	abanjanam

These forms are used in different contexts. What I refer to as the long forms are used in questions, negation as well as in marking emphasis including contrast (3.27) and the short forms are used elsewhere for instance they are used as bare nouns (3.28a) and they also appear in declarative sentences (3.28b,c).

(3.27) The long forms in questions, negation, and contrastive focus

a. Àsíbì ànɛ́ ò bííga/*bííg bɛ́?
Asibi COP 3SG.POSS child Q
'Is Asibi his/her child?'

b. Àyé, Àsíbì ká'á ò bíígaˊ/*bííg.
No, Asibi COP.NEG 3SG.POSS child
'No Asibi is not his/her child.'

c. (Lî ànɛ́) bííga bɛ̄ dɔ̀ɔ̀gí-n lá.
(it is) child.EMPH EXIST room-LOC DEF
'It is a child that is in the room.'

(3.28) Short forms as bare nouns:

a.

bííg	bííg	lá	?bíígá/íˊ	?bíígá/íˊ	lá
child	child	DEF	child	child	DEF
'child'	'the child'				

Short forms in declarative constructions

b. Àsíbì ànɛ́ m̀ bííg/*bíígá.
Asibi COP.be 1SG.POSS child
'Asibi is my child'

c. Bííg bɛˊ dɔ̀ɔ̀gíˊ-n laˊ.
child EXIST room-LOC DEF
'(There is) a child is in the room.'

It is common phenomenon to find languages deleting final vowels. It is suggested here that nouns in Kusaal have one lexical entry with the short forms derived from the long counterparts since questions and negations have the high tendency of reserving the archaic forms of languages.

The head noun is strictly head initial in Kusaal. It may or may not take a modifying element. It co-occurs with specifying and modifying elements such as adjectives, genitives, demonstratives, quantifiers, and articles. Most of these modifiers occur at postnominal positions. The only prenominal element in Kusaal is the genitive.

3.2.2. Prenominal Element

The genitive or possessive modifier is so far the only element identified to occur before the head noun in Kusaal. In a construction labeled as N of N, the first N is the possessor whilst the second N serves as the possessed and the head of the phrase. The genitive may be a single word or it may be accompanied by other modifying elements in which case all these elements will occur before the head noun. The possessive can be in the form of a pronoun (3.29a), a noun (3.29b) and a noun plus modifying adjective(s) as in (3.29c).

(3.29)

a. ǹ sáàm
1SG.POSS father
'my father'

b. bííg lá sáàm
child DEF father
'the child's father'

c. púˈa áwɔ̄k vɛ́nlìŋ lá síd
woman tall beautiful DEF husband
'the tall and beautiful woman's husband'

3.2.3. Postnominal elements

The NP is predominantly accompanied by post modifying elements in Kusaal. With the exception of the genitive, almost all other specifiers and modifiers are postnominal. Below is a discussion on various postnominal specifiers and postnominal modifiers in Kusaal.

3.2.3.1. Postnominal specifiers

These include: definite articles, demonstrative determiners, and quantifiers and numerals.

3.2.3.1.1. Definite article

Kusaal does not have an overt marker for indefiniteness corresponding to the English an/a; for example the word *puˈa* may refer to 'woman' or 'a woman'. The definite article in Kusaal is *lá* 'the' and it occurs immediately after the head noun. The definite article does not mark number morphologically.

(3.30)

a. bíig	lá	bíis	lá
child.SG	DEF	child.PL	DEF
'the child'		'the children'	
b. gbáúŋ	lá	gbáʊ́nà	lá
book. SG	DEF	book.PL	DEF
'the book'		'the books'	

The definite article *lá* equally occurs at the end of an entire DP or relative clause (3.31a, b).

(3.31) a.

Yá	gbìlìgà	àtá	lá
house. PL	round.PL	three	DEF

'The three round houses'

b.

Dáú	kán	ká	tì	sà	nyɛ̄	lá	keŋ	Bɔ́k.
man	REL	COMP	2PL.	PAST	see	DEF	go	Bawku

'The man that we saw yesterday has gone to Bawku.'

3.2.3.1.2. Demonstrative Determiners

The demonstrative determiners -*nwa* 'this', -*kaŋa* 'this one', *lina* 'that one (inanimate)' and –*ban*, 'those' -*bama* 'these' are all postnominal.

(3.32)

biínwà	'this child'
dápbámá	'these men'
bʊ́bámá	'these goats'
dáúkáŋà	'this man'
líná ká m̀ bɔ́ɔd	'I like that one'
bán ká m̀ bɔ́ɔd	'I like those ones'

3.2.3.1.3. Numerals and Quantifiers

Cardinal numerals and quantifiers directly occur after the head noun. The example in (3.33) is a list of cardinal numbers from one to ten in Kusaal.

(3.33)

(1)	a̍yínne̍	gba̍n a̍yínne̍	'one book'	ni̍d a̍yínne̍	'one person'
(2)	a̍yi̍	gba̍n(a̍) a̍yi̍	'two books'	ni̍dib(a̍) a̍yi̍	'two people'

(3) a̍tán̍ˈ	gba̍n(a̍) a̍tanˈ	‘three books’	ni̍di̍b(a̍) a̍tánˈ	‘three people’
(4) a̍naá̍si̍	gba̍n(a̍) a̍naá̍si̍	‘four books’	ni̍di̍b(a̍) a̍naá̍si	‘four people’
(5) a̍nu̍	gba̍n(a̍) a̍nu̍	‘five books’	ni̍di̍b(a̍) a̍nu̍	‘five people’
(6) a̍yu̍o̍bu̍	gba̍n(a̍) a̍yu̍o̍bu̍	‘six books’	ni̍di̍b(a̍) a̍yu̍o̍bu̍	‘six people’
(7) a̍yɔ̍pɔi̍	gba̍n(a̍) a̍yɔ̍pɔi̍	‘seven books’	ni̍di̍b(a̍) a̍yɔ̍pɔi̍	‘seven people’
(8) a̍nii̍	gba̍n(a̍) anii̍	‘eight books’	nidib(a̍) a̍nii̍	‘eight people’
(9) a̍wai̍	gba̍n(a̍) a̍wai̍	‘nine books’	ni̍di̍b(a̍) a̍wai̍	‘nine people’
(10) pii̍g(a̍)	gba̍n(a̍) pii̍ga̍	‘ten books’	ni̍di̍b(a̍) pii̍ga̍	‘ten people’

Ordinal numbers are expressed in two forms: (1) using the word *daan* ‘owner’ after the numeral and (2) prefixing the numeral with the phrase *Line tiaˈala* ‘that which is next/comes next or *kanɛ tiaˈala…* ‘one who’.

(3.34) a.

Ordinal Number	Number+*daan*	*Line tia’ala* +Number
1st	yii̍ga̍	yiiga
2nd	àyí dáán	líné tíáˈálá àyí
3rd	àtánˈ dáán	líné tíáˈálá àtánˈ
4th	ànáásì dáán	líné tíáˈálá ànáásì
5th	ànú dáán	líné tíáˈálá ànú
6th	àyúobù dáán	líné tíáˈálá àyúobù
7th	àyɔ́pɔ́ì dáán	líné tíáˈálá àyɔ́pɔ́ì
8th	àníí dáán	líné tíáˈálá àníí
9th	àwáí dáán	líné tíáˈálá àwáí
10th	píígá dáán	líné tíáˈálá píig(á)

The example below shows the ordinal number coming after the head noun.

b. Àwínbón àné m̀ bi̍i̍g kánɛ́ tíáˈálá àyí
Awinbon COP.be 1SG.POSS child who follow two
‘Awinbon is mysecond child.’

The following quantifiers are all post-nominal.

(3.35) a.

Quantifier	Gloss
wúsá, zán', zán'ásá	'all'
sí'á	'any'
mɛ́kám, kám	'every'
bàbáyí	'both'
pámm	'many'

b. Bíís lá wúsá sà dīyá.
children DEF all PAST eat-PERF
'All the children have eaten.'

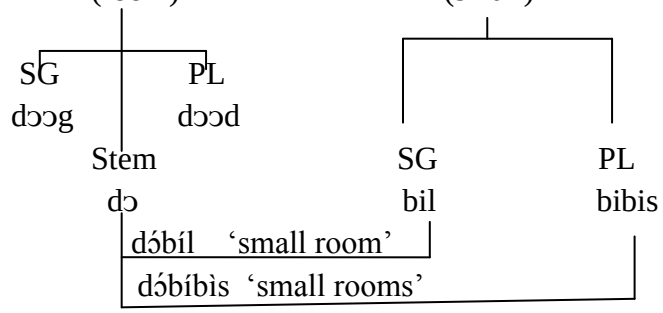
3.2.3.2. Postnominal modifiers

Postnominal modifiers in Kusaal include (1) adjectives, (2) locatives, and (3) intensifiers.

3.2.3.2.1. Adjectives

Adjectives, as used in this section, refer to the group of words that modify certain property or properties of the head noun in Kusaal. Their semantic types include words that are used for dimension e.g. *fiin* 'small', *tita'ar* 'big'; age e.g. *bil* 'young'; values e.g *sʋm* 'good', colour e.g. *sabilig* 'black' and physical properties e.g. *vɛnl* 'beautiful' (see Dixon 2004:4). Adjectives in Kusaal are strictly postnominal. Nouns in the language agree with adjectives in number but not class. The stem of the noun forms a compound with the modifying adjective as illustrated in figure (3.1) below.

Fig. 3.1. Nominal (room) + Adjective (small)



The stem does not mark number in itself. Number is marked on the form of the adjective as shown in figure (3.1). The following rule explains the situations when the noun takes a modifying adjective.

(3.36) $N_{root/stem}$ Adj_{num}

A noun which is modified by two or more adjectives has number expressed on all the adjectives.

(3.37) a. búwɔk piélúg lá búwáˈád piéla lá
goat-tall-SG big-SG DEF goat-tall-PL white- PL DEF
'the tall white goat' 'the tall white goats'

b. bútítáˈar piélúg lá bútítádà piéla lá
goat-big-SG white-SG DEF goat-big-PL white- PL DEF
'the tall white goat' 'the tall white goats'

c. yír piél gbílíg lá yá píélá gbílà lá
house white round DEF house.PL white- PL round- PL DEF
'the white round house' 'the white round houses'

d. búwɔk títáˈar piélúg lá
goat-tall-SG big-SG white-SG DEF
'the tall white goat'

e. búwáˈád títádà píélá laˊ
goat-tall-PL big-PL white-PL DEF
'the tall white goats'

However, interactions with speakers also reveal the possibility of marking plural on only the last adjective in the series (see example 3.39h).

Below are examples of singular and plural forms of some of the most used day to day adjectives by speakers.

(3.38)

Adjective		
Singular	**Plural**	**Gloss**
vɛ́nlîŋ	vɛ́nlîs	beautiful
giŋ́	giŋ́á/giímiś	short
wɔk	wáˈád	long, tall

sʊ̀ŋ	sʊ̀mà	good
bɛ̋'óg	bi̋'és	bad, poisonous
títáˈár	títáˈádá/ títáˈárá	big
fíín bíl	fífííns bíbís	small
yɔ̀ɔ̀g	yɔ̀ɔ̀d	useless
pɔ̀n'ɔ́sɨ̀r	pɔ̀n'ɔ́sà	rotten
maˈaśɨ̀r	maˈaśà	fresh
laḿmiŕ	laḿmaˊ	flat
mauk	maˈad	square, *zumauk* 'blockheaded'
kɛ̄ndɨ̂g	kɛ̄ndà	tattered/broken
zuˈʊŋ̀	zuˈiímà	deep
kpiˈeúŋ̀	kpiˈeímà	strong
zɛ́nˈɔ́g	zɛ́nˈís	red
píél/píélíg	píélá/píélís	white
sábíl/sábílíg	sábílígá/sábílís	black
tɛ̀bísír	tɛ̀bísírá	heavy
máˈásír	máˈásírá	wet
tʊ́ʊ́lúg	tʊ́ʊ́lúgá	hot
kúdúgɔ́	kúdá	old
tɔ́ɔ́g	tɔ́ɔ́d	bitter/sour

Series of adjectives co-occurring with a noun have a flexible order in Kusaal. In the DP in (3.39), nationality (Nat.) must always occur before the head noun (HN) and height often precedes colour. Aside these all other adjectives can be reordered and the construction will still be an acceptable one.

(3.39) Lexemes: *Gaáná*`'Ghana', *puˈˈa*`'woman', *saʼbiˈl* 'black' *tiˈtaˈˈár* 'fat/big', *giˈŋ* 'short', *vɛ́nlɩ̀ŋ* 'beautiful, *laˊ* 'DEF'

a. ?Gaáná púˈá tiˈtáˈár saʼbiˈl giˈŋ vɛ́nlɩ̀ŋ laˊ Nat. HN Size Colour Height Quality DEF

b. ?Gaána̍ púˈá sa̍bîl gíŋ tiťáˈaŕ vɛ́nlîŋ la´	Nat.HN Colour Height Size Colour Quality DEF
c. Gaána̍ púˈá gíŋ sabil tiťáˈaŕ vɛ́nlîŋ la´	Nat. HN Size Height Colour Quality DEF
d. Gaána̍ púˈá vɛ́nlîŋ sa̍bîl tiťáˈaŕ gíŋ la´	Nat. HN Quality Size Colour Height DEF
e.Gaána̍ púˈá vɛ́nlîŋ sa̍bîl gíŋ tiťáˈaŕ la´	Nat. HN Colour Height Quality Size DEF
f. ?Gaána̍ púˈá sa̍bîl vɛ́nlîŋ gíŋ tiťáˈaŕ la´	Nat. HN Colour Quality Height Size DEF
g. Gaána̍ púˈá tiťáˈaŕ vɛ́nlîŋ gíŋ sa̍bîl la´	Nat. HN Size Height Quality Colour DEF
h. Gaána̍ púˈá gíŋ sa̍bîl vɛ́nlîs lá	Nat.HN Height Colour Quality.PL DEF

It is important to add that adjectival stacking is not unique to Kusaal. It is one possible feature across the Mabia group of languages. Bodomo (2014:4), building on the work of Angkaaraba (1980), shows the possibility of having more than four stacked adjectives on one head noun in Dagaare contrary to an earlier claim by Bendor-Samuel (1971) that a head noun can be followed by only one adjective in Mabia languages. Sulemana (2012:81-86) also shows the possibility of having series of adjectives modifying a head noun in Buli. A probable argument in support of the claim made by Bendor-Samuel (1971) is by assuming that a noun forms a compound (one word) when modified by an adjective or series of adjectives most especially when plural number is marked only on the final adjective in the entire series (also see Bodomo 2014:5). However the fact still remains that a head noun in the Kusaal language can be modified by series of adjectives as shown in the examples from (3.39a-h). In addition, aside the head noun which uses its stem, where applicable, and is written together with the first adjective in adjectival stacking, the adjectives most of the time retain their full forms and are written as separate words in these circumstances.

Adjectives in Kusaal can be identified with by two main functions: as adnominals and as intransitive predicates (Cinque 2010; Dixon 2004). Almost all semantic types of adjectives can directly occur after the head noun. Below are example DPs with adnominal adjectival modifiers.

(3.40) a. dáú gíŋ lá
man short DEF
'the short man'

b. nínsʊmá lá
people-good.PL DEF
'the good people'

c. bíwɔ́k lá
child-tall DEF
'the tall child'

d. bʊ́sábʊlʊ́g lá
goat.black DEF
'the black goat'

d. pú'á kʊ́dʊ́g lá
woman old DEF
'the old woman'

e. pú'ásád vɛ́nlʊ́g lá
lady beautiful DEF
'the beautiful lady'

f. dàtɛ́bìsír lá
wood-heavy DEF
'the heavy wood'

g. kú'ótʊ́ʊ́lʊ́g lá
water-hot DEF
'the hot water

Additionally, adjectives that are mostly used for physical properties also perform predicative functions. They are used as intransitive predicate and also take available morphological features of verbs in the language (see Dixon 2004). As illustrated in (3.41), it can be seen that the adjectives delete their number suffixes when they are used as predicates (refer to example 3.38).

(3.41) a. Pú'á lá vɛ́nl.
woman DEF beautiful
'The woman is beautiful.'

b. Dáúg lá tɛ́bís.
wood DEF heavy
'The wood is heavy.'

c. Kú'òm lá (sà) tʊ́l.
water DEF PAST hot
'The water was hot (yesterday).'

d. Dííb lá má'áeyá.
food DEF cold-PERF
'The food is cold.'

e. Kpáríkɛ́ʊng lá má'ádnɛ́
rag DEF wet-IMPERF
'The rag is getting wet.'

The dimensional adjectives *giŋ* 'short' and *wɔk* 'tall' are also used as in (3.42). These cannot take verbal inflections as those in (3.42aii-bii).

(3.42) a. i. Dáú lá gím
man DEF short
'The man is short.'

ii. *Dáú lá (sà) gímyá
man DEF PAST short.PERF

b. i.Bííg lá wáˡám
child DEF tall
'The child is tall/the child has grown taller.'

ii. *Bííg lá sà wáˡámyá
child DEF PAST tall.PERF

Other adjectives for dimension, age, colour and value which cannot be used as intransitive predicates function as copula complements (4.43).

(3.43) a.i. Nídíb lá àn sʊ́m hálí.
people DEF COP.be good very
'The people are very good.'

ii. * Nídíb lá sʊ́m hálí.
people DEF good very
'The people are very good.'

b. i. Búúg lá àné sábìlìg.
goat DEF COP.be black
'The goat is black.'

ii. * Búúg lá sábìl
goat DEF black
'The goat is black.'

c. i. Dɔ́ɔ́g lá àné fíin.
room DEF COP.be small
'The room is small.'

ii. *Dɔ́ɔ́g lá fíin.
room DEF small
'The room is small.

It is also quite common to have the noun-adjective compound used as copula complement in the examples in (3.43a-c) as also illustrated below using the adjectives *tita'ar* 'big' and *nya'aŋ* 'old' in (3.44a-b). The adjective *nya'aŋ* 'old, for some reason, obligatorily requires a head noun in forming a complement as shown in (3.44b).

(3.44) a. i. Gádúg lá àné (gád)títá'ár.
bed DEF COP.be bed-big
'The bed is big.'

ii.* Gádúg lá (gád)títá'ár.
bed DEF bed-big
'The bed is big.'

b. i. Pú'á lá àné pú'á nyá'áŋ
woman DEF COP.be woman-old
'The woman is old.'

ii. * Pú'á lá pú'á nyá'áŋ
woman DEF woman-old
'The woman is old.'

iii. * Pú'á lá àné nyá'áŋ
woman DEF COP.be old
'The woman is old.'

3.2.3.2.2. Locatives

Locatives are commonly postpositions in Kusaal. They occur after the nouns they modify and are synonyms of body parts. The examples in (3.45a) represent some locatives in Kusaal whilst (3.45b) show how they are used in context.

Body part	Gloss	Locative
zúg	'head'	'on , on top'
síà	' waist'	'lower, below, back'
nɔ́ɔ́r	'mouth'	'at, on, near'

(3.45) a.

púúg	'stomach, belly'	'in, interior, inside
nyàˈàŋ	'back'	'behind'

b. (i) yír lá nyàˈàŋ
house DEF back
'behind the house'

(ii) dɔ́ɔ́g lá nɔ́ɔ́r
room DEF mouth
'at the entrance to the room'

3.2.3.2.3. **Intensifiers**

Intensifiers form another set of post modifying elements in Kusaal. Examples of the commonly used ones include: *fiin* 'small/a little' and *bɛdɪgɔ* 'a lot' as used below.

(3.46) a. nídíb bɛ̀dìgɔ̀
people plenty
'a lot of people'

b. kúˈòm fiín síˈél
water little some/certain
'some little amount of water'

3.2.4. Noun Classes in Kusaal

The classification of nominals in Kusaal is observed to involve a complex interaction of morphology, phonology and semantics (Abubakari 2016b). However, our discussion in this section of the dissertation will be limited to only the morphosemantics of noun classes in the language. Before advancing with this discussion, it is important to indicate that the stems of the nouns to which the various suffixes are added to generate the singular and plural forms are identified by using the part of the noun that combines with an adjective anytime a noun is modified by an adjective as illustrated in the discussion on section 3.2.3.2.1 above. Due to space, I will indicate the stems of the various nouns in the data used in this section, however, readers can identify the stem by simply taking away a supposed suffix from a noun: e.g. *bíig(i)* 'child', *bíis(i)* 'children' *bísʊm* 'good child' *bísʊma* 'good children' the stem is *bi-* and the singular suffix is *-g(i)* while the plural suffix in *-s(i)*. Number is marked on the adjective: *sʊ́m* 'good.SG' and *sʊ́mà* 'good.PL'. In the classification, I have indicated the long forms of all the lexical entries of nouns as well as the derived forms which refer to the short forms of the nouns also discussed in section 3.2.1.

Nouns in Kusaal are basically grouped into 11 classes. The classifications are predominantly based on stems and suffixes as is also the case in several African languages with Mabia languages being no exceptions (see Niggli 2014, Bodomo and Abubakari 2017, Bodomo and Marfo 2006, Olawsky 1997; 1999, Bodomo 2007, Nsoh 2002; Rapp 1966; Dakubu 1996). The

various classes of nouns reveal strong semantic correlations where most of the nouns in an identified group have close semantic features. Common semantic features range from: +/- Human, Human & Social Status; Human & Kinship relation; +/- Animate; Sex; Shape/Dimension; Size; Consistency; Function; Arrangement; Habitat; Number/Amount/Mass/Group; Measure; Weight; Time; Action; and +/-Visible (see Senft 2000:24). Nouns that have close semantic features also have identical suffix morphemes. Singular and plural nouns that share identical semantic features will be paired. This means that nouns in class 1 will have class 2 as their plural counterparts. The singular classes are represented by odd numbers whereas plural classes are represented by their counterpart even numbers. What this means is that one gets class 1 as singular and class 2 as plural of class 1, class 3 as singular and class 4 as plural of class 3 (see Nsoh 2002).

3.2.4.1. Classes 1&2

These constitute the most irregular group in the nominal system of Kusaal. Unlike most other Mabia languages that uniformly have the suffix –V/bV for the singular and plural respectively, Kusaal is not easily predictable in this same manner. I have divided class 1, in the tables below, into (1a) and (1b). Class 1a, which solely refers to persons and human nouns, takes the suffixes: /-a/ for the singular form and /-ba/ for the plural form. Class 1b on the other hand, is also a class of +Human with features including: +kin relations, +honorary and respect titles as well as some borrowed words. The singular in kin relations also takes /-a/ for the singular whereas the plural takes /–nam(a)/. Honorary and respect titles have /-ba/ for their singular and /-nam(a)/ for their plural forms.

Table 3.2.

Classes 1a&2a	**Sing. Class 1**			**Plural class 2**		
+Human	L. Entry	Derived	Gloss	L. Entry	Derived	Gloss
-a, /b(a)	púˈáá	púˈá	‘woman’	púˈábá	púˈáb	‘women’
	nída	nid	‘person’	nídíba	nidib	‘persons’
	sída	sid	‘husband’	sídíba	sidib	‘husbands’
	pítʊ	pít	‘sibling’	pitiba	pítíb	‘siblings’

Table 3.3

Classes 1b&2b	Singular Class 1			Plural Class 2		
+Kin relations a/-nam(a)	L. Entry	Derived	Gloss	L. Entry	Derived	Gloss
	màa	mà	‘mother’	mànàmà	mànàm	‘mothers’
	bà'a	bà'	‘father’	bàˈànàmà	bàˈànàm	‘fathers’

+Honorary/respect terms -b(a)/-nam(a)	yáábá	yááb	'ancestor'	yaánamá	yaánám	'ancestors'
	náábá	nàˈàb	'chief'	náˈánàmá	náˈánám	'chiefs'
+Borrowed words and others (–human) V/-nam(a)	ámúsɛ	ámús	'cat'	ámùsnàmà	ámùsnàm	'cats'
	teebulɛ	teebul	'table'	teebulnámá	teebulnám	'tables'

3.2.4.2. Classes 3&4

This group has the features; +human, +animals, +trees and other things. The singular forms take the suffix /-g(V)/ whilst the plural forms take the suffix /-s(V)/.

Table 3.4.

Classes 3&4 **-g(V)/-s(V)**	**Singular Class 3**			**Plural Class 4**		
	L. Entry	Derived	Gloss	L. Entry	Derived	Gloss
+Human	wábígá	wábíg	lame person	wábísɛ́	wábís	lame persons
	gìka	gik	dumb person	gígísɛ́	gígís	dumb persons
+Animals	búúgɪ	búúg	' goat'	búúsɛ	búús	goats
	pɛˈògi/ʊ	pɛˈog	'sheep'	pɛˈèsɛ̀	pɛˈès	sheep
	lɔlʊgɔ	lɔlʊg	'ox'	lɔlisɛ	lɔlis	'oxen'
+trees	tìigì	tìig	'tree'	tìisɛ	tìis	'trees'
	kpʊkpáríga	kpʊkpáríg	'palm tree'	kpʊkpàrìsɛ	kpʊkpàrìs	'palm trees'
Others	kɔ́lúgɔ	kɔ́lúg	'bag'	kɔ́lísɛ	kɔn	'bags'
	wííga	wííg	'flute'	wíísɛ	wíís	'flutes'

3.2.4.3. Classes 5&6

This group is made up of animals. The singular takes the suffix /–fɔ/ and the plural takes either /gi/ or /-di/.

Table 3.5.

Classes 5&6 **-f(ɔ)/-gi,di**	**Sing: class 5**			**Plural class 6**		
+Aminals	L. Entry	Derived	Gloss	L. Entry	Derived	
	nááfɔ	nááf	'cow'	níígì	nííg	'cattle'
	wááfɔ	wááf	'snake'	wíígì	wííg	'snakes'
	wíefɔ	wíéf	'horse'	wídì	wid	'horses'

3.2.4.4. Classes 7&8

This group takes the suffixes /-g(V)/ for singular and /-d(ɛ)/ for plural. The semantic features for the nouns here are mainly + object, +places.

Table 3.6.

Classes 7&8 -g(V)/-d(ɛ)	**Singular Class 7**			**Plural Class 8**		
	L. Entry	Derived	Gloss	L. Entry	Derived	Gloss
+places	bɔ́nˈɔ́gɔ́	bɔ́nˈɔ́g	'valley'	bɔ́nˈɔ́dɛ	bɔ́nˈɔd	'vallies'
	dɔ́ɔ́gú/ɔ	dɔ́ɔ́g	'room'	dɔ́ɔdɛ	dɔɔd	'rooms'
+objects	mɔ́ɔ́gú/ɔ	mɔ́ɔ́g	'grass'	mɔ́ɔ́dɛ	mɔ́ɔd	'grasses'
	dáugú/ɔ	dàug	'wood'	dààdɛ́	dàad	'woods'

3.2.4.5. Classes 9& 10

This group is a mixture of items with several features. It has features such as +grains, plants, animals, parts of the body, fruits and some miscellaneous. The singular class, takes the suffix /-r(i/ɛ)/ and the plural, class 10, takes the suffix /-a/. The singular suffix is however realized as /-Ir(i/ɛ)/ in a C-C environment. The plural suffix /-a/ is also realized as /-ya/ in a V-V environment.

Table 3.7.

Classes 9& 10 -r(V)/-a(a)	**Singular Class 9**			**Plural Class 10**		
+body& object parts	L. Entry	Derived	Gloss	L. Entry	Derived	Gloss
	túbírɛ́	túbír	'ear'	túbàa	túba	'ears'
	nyúˈúrí	nyúˈúr	'navel'	nyúdáa	nyʊda	'navels'
	zúúrɛ	zúúr	'tail'	zúyaá	zúya	'tails'
	wíllɛ	Wil	'stem'	wíláa	wíla	'stems'
+Food crops/fruits	nyuurɛ́	nyuur	'yam'	nyuyáá	nyuyá	'yams'
	gúúrɛ	gúúr	cola nut	gúyàa	gʊya	cola nuts
	bɛ́ŋìr ɛ́/ɪ	bɛ́ŋìr	'beans'	bɛ́ŋáa	bɛ́ŋa	'beans'
+Animals	kpíbír ɛ́/ɪ	kpíbìr	louse	kpíbáa	kpiba	'lice'
	sɛ́ɛ́mɛ́	sɛ́ɛ́m	'porcupine'	sɛ́ɛmáa	sɛɛma	'porcupines'
	gbígím ɛ́/ɪ	gbígìm	'lion'	gbígìmáa	gbígìmá	'lions'

3.2.5.5. Class 11

This class represents the group with the features +liquids, mass/collective objects as well as abstract nouns. They form the only single class and have the suffix /–m/.

Table 3.8.

Class 11 -m	**Class 11 Noun**	**Gloss**
+Liquids	kúˈòm	'water'
	zíím	'blood'
	bínˈísím	'milk'
+Abstract	míˈìlím	knowledge
	zɔ̀tìm	fear, reverence
	vùˈùsʊ̀m	'breath'
+Mass objects	zɔ́m	flour
	bùgúm	fire
	yáárìm	yaari 'salt'

3.2.5.6. Summary of Morphosemantics content of noun classes in Kusaal

Table 3**.9.**

Class	**semantic features**	**suffix morphemes**
1a	+Human	/-a/
1b	+kin relations +Honorary/respect terms +Borrowed words(-human)	/-a/, /-b(a)/, /-V/
2a	Plural of 1a	/-b(a)/
2b	Plural of 1b	/-nam(a)
3	+Human, +Anima, +trees Others	/-g(V)
4	Plural of 3	/-s(i/ɛ)/
5	+Anima	/-f(ɔ)/

6	Plural of 5	/-gi/ /-di/
7	+Places, +Objects	/-gV/
8	Plural of 7	/-d(ɛ)/
9	+body & object parts, +food crops/fruits +Animals	/-r(V)
10	Plural of 9	/-a(a)/
11	+mass objects, +Liquids, +Abstracts	/-m/

3.2.6. Pronouns in Kusaal

3.4.1.1. Personal Pronouns

Personal pronouns in Kusaal do not mark gender and case. Unlike languages like English, German and French where gender is marked in the 3rd person singular and plural forms e.g. *she-he*, *sie-er* and *elle-ill* in English, German and French respectively, Kusaal uses *ò* for both the 3rd person masculine and feminine. Case is equally not an overwhelming characteristic of the pronominal system of Kusaal. The available instances where case is registered is in the distinction between the subject (nominative) and the object (accusative) forms of the first and second person singular pronouns *n/m* 'I' and –m/*ma* 'me' on the one hand and *fʋ* 'you'(2SG.nominative) and *-f/-if/-ɛf/-ʋf* 'you' **(**2SG.acusative) respectively (Abubakari 2011). It must however be indicated that the underlying form of the subject pronoun is *n* which is assimilated to *m* in the environment of bilabials. The nominative forms cannot be used as accusative and vice-versa.

Another important aspect of the pronominal system with reference to both the nominative and accusative pronouns in Kusaal has to do with the presence of strong and weak forms. These forms are used to express emphasis. The strong and weak forms are similar to the French *je-moi, tu-toi,* and the German *ich-mich, du-dich* paradigms. Also see Bodomo (1997) for similar observation in Dagaare.

In addition to the above, Kusaal makes distinction between human and non-human forms in only the third person singular form of the pronoun.

Table 3.10. Personal Pronouns in Kusaal

Person	Nominative		Accusative	
	Non-Emphatic/Weak	Emphatic/Strong	Non-Emphatic/Weak	Emphatic/Strong
1Sg	**n/m**	**man/mam**	**-m/ma**	**mam/man**
2Sg	**fʊ**	**fʊn**	**-f/-if/-ɛf/-ʊf**	**fʊn**
3Sg	**o**	**on/ona**	**o**	**on/ona**
3Sg (non-human)	**li**	**-lin**	**li**	**-lin**
1Pl	**ti**	**tinam**	**ti**	**tinam**
2Pl	**ya**	**yanam**	**ya**	**yanam**
3Pl	**ba**	**ban/bannam**	**ba**	**ban/bannam**

The non-emphatic first and second person singular object pronouns *–m* 'me' *-f/-if/-ɛf/-ʊf* 'you' are clitics. They are attached to the verb and yet function as separate words.

(3.47) Ò sà nɔ̄k lígídí lá tīsíf (bɛ́ɛ́)?
3SG PAST take money DEF give-you Q
'Did he give you the money yesterday?'

(3.48) Ò sà nɔ̄k lígídí lá tīsí ò (bɛ́ɛ́)?
3SG PAST take money DEF give 3SG Q
'Did s/he give her/him the money yesterday?'

(3.49) A̰nɔ́ˈɔ́n nwɛ̄ˈɛ̄fɔ́?
who hit-you
'Who hit you?'

(3.50) Ǹ kʊ̀ mɔ̄ŋʊ́f ɗíìb.
1SG NEG refuse-you food
'I will not refuse you food/I will not let you go hungry.'

3.4.1.2. Genitive/Possessive Pronouns

Kusaal does not distinguish between the nominative and genitive forms of the pronoun morphologically. To express possession, speakers use the nominative pronouns plus the possessed item. The emphatic nominative pronoun has so far not been cited in genitive use.

(3.51)

Person	Genitive Pronoun	Gloss
1SG	n/m	mine
2 SG	fʊ	your
3 SG	o	His/hers
3 SG (n/h)	li	its
1PL	ti	our
2 PL	ba	their
3 PL	ya	your

(3.52) a. Ò sáàm
3SG father
'his/her father'

b. Bà yá
3PL house.PL
'their houses'

3.4.1.3. Reflexive Pronouns

The reflexive pronouns in Kusaal are composed of the words; *mɛŋ, mɛŋa, mɛŋaa, mɛŋi, mɛŋɛ* 'self' plus the genitive/nominative pronoun. They perform two functions which I will refer to as 'emphatic' and 'non-emphatic'. Whereas the emphatic uses the strong form of the pronoun, the non-emphatic uses the weak form of the pronoun. The emphatic reflexive pronouns are mostly used in contexts where an exhaustive/exclusive interpretation is desired e.g. *maám méŋ* 'I and no one else/ 'it is I and no body else'.

(3.53)

Non emphatic reflexive pronoun		Emphatic reflexive pronoun	
m̀ mèŋ	'myself'	maám méŋ	'I, myself'
fʊ̀ mèŋ	'yourself'	fʊ́n mèŋ	'you, yourself'
ɔ̀ mèŋ	'him/herself'	ón mèŋ	's/he, him/herself'
tì mèŋ	'ourselves'	tiínaám mèŋ	'we, ourselves'
lì mèŋ	'itself'	yánám mèŋ	'you, yourselves'
yà mèŋ	'yourselves'	bà mèŋ 'themselves'	bánám mèŋ 'they, themselves'

3.4.1.4. Reciprocal Pronouns

(3.54)

1 PL	tì táabá
2 PL	yà táabá
3 PL	bà táabá

The reciprocal pronouns in Kusaal are composed of the word *taaba* 'fellow, brethren' plus the possessive pronoun. The word *taaba* does not change irrespective of its antecedent. It translates into the English forms 'each other' or 'one another'.

(3.55) Tì nɔ̄ŋ táabá.
1PL like/love each other/one another
'We love each other other/one another'

(3.56) Yà nɔ̄ŋ táabá.
2PL like/love each other/one another
'You love each other/one another'

(3.57) Bà nɔ̄ŋ táabá.
3PL love/like each other/one another
'They love each other/one another.'

3.4.1.5. Bound Relative Pronouns

The bound relativizers in Kusaal are *–kan,-kanɛ* 'which who (3rd person singular), *-ban,-bane* 'who, which, that (3rd parson plural)'. They are written as suffixes attached to the head noun. Kusaal does not distinguish between human and non-human forms of the relative pronoun compared to a language like English. The following are example sentences illustrating the use of these pronouns.

(3.58)

a. púˈákàn dī dííb lá
woman-REL eat food DEF
'the woman who ate the food'

b. púˈábàn dí dííb lá
woman-REL.PL eat food DEF
'the women who ate the food'

c. tìkàn sà lū lá
tree-REL PAST fall DEF
'the tree that fell down yesterday'

d. tìbàn sà lū lá
tree-REL.PL PAST fall DEF
'the trees that fell yesterday'

The nouns *tiig/tiis* 'tree/trees', *puˈa/puˈaba* 'woman/women' in (3.58) have the relativizers attached to their stems and number is identified on the form of the relativizer. The rule in (3.59) simplifies the concept.

(3.59) N_{stem} -Rel_{num}

3.4.1.6. Free/unbound relative Pronouns

The words *din/dinɛ, lin/linɛ* 'that which' and *ban* 'those who' are unbound/free relative pronouns as they do not function as affixes. Whereas *din/dinɛ, lin/linɛ* 'that which' are third person inanimate relative pronouns and do not mark number, *ban* 'those who' is third person plural animate relative marker.

(3.60) Ò pú lén zɔ̄t dínè kēnnā bɛ́ɛ́ dínɛ́ gāād
3SG NEG again run REL coming or REL passed
bɛɛ́ dínɛ̀ vɔ̀līsìd o.
or REL frightens him.
'S/he is no longer scared of that which is coming, that which has passed or that which frightens (him/her)'/ 's/he is no longer scared of anything.'

(3.61) Nídíb báné tūm túúmá lá kūlyá.
people REL work work-PL DEF go-home-PERF
'The people who did the work have gone home.'

3.4.1.7. Interrogative Pronouns

The following are some identified interrogative pronouns in Kusaal. The sentences after these pronouns are demonstrations of how they are used in context.

(3.62)

bó/bɔ́/bɔ́ɔ	'what (non-human singular)'
bɔ́nám	'what (non-human plural)'
bɔ́zúg	'why'
ànɔ́ˈɔ́n	'who (human singular)'
ànɔ́ˈɔ́nám	'who (human-plural)'
yá, yáánɛ́	'where'

búndáár ‘when/which day’

(3.63) Bɔ́ dāāmìdi bà?
what disturb-IMPERF 3PL
‘What is disturbing them?’

(3.64) Bɔ́zúg kà fʊ̀ sà kūl tɔ́ nà?
why FOC 2SG PAST go-home early LOC
‘Why did you return home early yesterday?’

(3.65) Anɔ́ˈɔ́n kārīm gbáúŋ lá?
who read book DEF
‘Who has read the book?’

3.4.1.8. Demonstrative Pronouns

Demonstrative pronouns function more like markers of specificity within sentences showing how approximal or distal an item is located from the speaker/place of utterance in time and space. These pronouns agree in number and also indicate the animacy statuses of their referents in Kusaal. Below are examples of some identified demonstrative pronouns in Kusaal.

(3.66) a.

Demonstrative Pronoun	Gloss
nwà	this
ànwà	this
-kàŋà	this one
néˈéŋà/ néˈ	this (inanimate)
kànná/ kàn/ kánlá	that (animate and inanimate)
-líná	that one (inanimate)
néˈéŋà	these (inanimate)
-bàmà	these
-bán	those
-bánná	those there

The pronouns *nɛˈɛŋa, nɛ, -lina, nɛˈɛŋa*, are only used for inanimate entities whereas others like *kan*, *nwa, nwa, -kaŋa, -bama, -ban, -banla* are used for both animate and inanimate entities. Below are demonstrations of some demonstrative pronouns in context.

b. Bííg nwà/kàŋà dī dííb lá.
child DEM eat food DEF
'This child ate the food.'

c. Bííg kánná/kánlá dī dííb lá.
child DEM eat food DEF
'That child ate the food.'

3.4.1.9. Indefinite Pronouns

The examples in (3.67) are some identified indefinite pronouns in Kusaal. They can occur alone or as suffixes with the head nouns they modify. The pronoun *síˈá* 'any, some' has a generic use whilst *sɔ́ˈ* is only used for human beings and *síˈél* for non-human entities. The plural *síébá* does not also have a distinctive quality.

(3.67)

Indefinite Pronoun	Status	Gloss
síˈá	Generic	any, some
sɔ́ˈ, -sɔ́ˈ	Human	anyone, someone, somebody, whoever anyone at all
sɔ́ˈɔ́sɔ́	Human	'NEG.somebody', no one at all, nobody
síˈél	Non-human	something, anything, somewhere
síˈél-síˈél	Non-human	'NEG.something', 'nothing'
síébá	Generic plural	

The following sentences are illustrations of the use of some of these indefinite pronouns in context.

(3.68) (Níŋ)sɔ́ˈ sà kēnā ēí fʋ̀.
person.INDEF.P PAST come.LOC look 2SG
'Someone came here looking for you yesterday.'

(3.69) a. Dáú síˈá sà kēnā ēí fʋ̀.
man INDEF.P PAST come.LOC look 2SG
'A certain man came looking for you yesterday.'

b. Tísíˈá lúyá.
tree.INDEF fall-PERF
'A certain tree has fallen'

(3.70) a. (Bún) síˈél dāāmìd bííg laˊ.
item/element INDF.P disturb-IMPERF child DEF
'Something is disturbing the child.'

b. Bà sà kɛ̄ŋ wɛ̀ŋsíˈá.
3PL PAST go somewhere
'They went somewhere.'

With the exception of *sɨ̌ɓaˊ,* the indefinite pronouns become negative polarity items (Baker 1970) when they get reduplicated. They are licensed by the negative particle *púˊ/bóˊ* 'not'. In such situations, *sɔ'ɔsɔ'* is used for human beings whilst *si'el-si'el* is used for non-human entities as shown in (3.71-3.73).

(3.71) Ò pú tīsī bà síˈél-síˈélá.
3SG NEG give 3PL nothing
'He did not giv them anything.'

(3.72) Sɔ́'ɔ́sɔ́' pú kɛ̄n láˈásúg lá nà.
nobody NEG come meeting DEF LOC
'Nobody came to the meeting.'

(3.73) Síˈél-síˈél pú māālɛ́.
nothing NEG happen
'Nothing happened.'

3.4.1.10. Relative Pronouns

The examples in (3.74) are some identified relative pronouns in Kusaal.

(3.74)

Relative Pronoun	Gloss
kán	which/ who/that (+animate)
lín	which (-animate)

(3.75) Dáú káné sà dā˥ lór lá mɔ̄r lígídí bédégɔ́.
man REL PAST buy car DEF have money plenty
'The man who bought the car has a lot of money.'

(3.76) Báá káné nɔ̄k kɔ́bír lá zɔ̄yá.
dog REL take bone DEF run-away-PERF
'The dog which took the bone has run away.'

(3.77) Fὺ nà nyɛ̄ lín ká fὺ ɪ̄éd lá.
2SG. FUT get REL COMP 2SG search DEF
'You will get that which you seek.'

In summary, this section has given an account of the structure of the nominal phrase in Kusaal revealing the elements that can co-occur with the NP as well as their order of occurrences. It has suggested the classification of nouns in Kusaal into 11 classes purely based on both morphological and semantic criteria. The various forms of pronouns in the language are also discussed. Having looked at the NP, the next section concentrates on the verbal system of the language.

3.5. The Verbal system of Kusaal

This section examines the verbal system of Kusaal as well as some observed co-occurrence restrictions exhibited by the perfective aspectual forms of the verb in the language. The verb in Kusaal does not inflect for tense, number and person as is also the case in other Mabia languages (Abubakari 2011; Bodomo 1997). Though the morphological properties of the verb in Kusaal is not so distinct from what is observed in other Mabia languages with particular reference to tense and aspect (Bodomo 1999), the main observation is that the perfective aspectual form of the verb with the suffix *–ya* blocks object NPs, negative particles, and directional as well as some temporal adverbials. In this subsection, I attempt to give a comprehensive analysis of the VP in Kusaal with the central objective being exploring reasons why the various mentioned complements are blocked in the environment of the perfective aspect marked using the suffix *–ya*. This section will further examine preverbal particles and their forms, distributions and roles in Kusaal. It goes further to look at adverbs in the language.

3.3.1. The VP in a simple sentence in Kusaal

Kusaal has a canonical SVO constituent order. A simple sentence in the language has the order where the verbal element is sandwiched between an NP subject and an NP object, thus in instances involving a transitive verbs.

(3.78)

Subject NP	preverbal particles-main verb- (postverbal particle)	Object NP	Adjuncts

The following sentence serves to illustrate this structure:

(3.79) Dáú lá sà dī ɖîib lá.
man DEF PAST eat food DEF
'The man ate the food yesterday.'

(3.80) Dáú lá sà dī nɛ́ ɖîib lá.
man DEF PAST eat FOC food DEF
'It is the food that the man ate yesterday (not say the fruit).'

In the example in (3.79), the word *Dau la* is the subject. This is followed by the time-depth particle *sa* which shows that the action took place yesterday. The particle preceded the main verb *di*. The in-situ postverbal contrastive focus particle *nɛ* follows the verb and precedes the focused NP *diib* 'food' in (3.80). The presence of the postverbal particle creates a direct semantic impact on the utterance in (3.79) to the interpretation in (3.80).

3.3.1.1. Transitivity

Kusaal has transitive, intransitive, ditransitive, as well as ambitransitive[6] verbs. The following examples instantiate the claim with (3.81) showing a transitive verb, (3.82) intransitive verb (3.83) ditransitive verb and (3.84-85) ambitransitive.

(3.81) Bà sà dāˈ láˈád lá.
3PL PAST buy item DEF
'They bought the items yesterday.'

(3.82) Bíís lá kēŋ gbīs.
children DEF go sleep
'The children have gone to sleep/the children have gone to bed.'

(3.83) a. Àsîbí sà tīs púˈá lá lígídí lá.
Asibi PAST give woman DEF money DEF
'Asibi gave the woman the money yesterday.'

[6] Ambitransitive verbs are ones that can be used with or without objects. Thus these verbs function both as transitive and intransitive verbs without any morphological changes on their forms (Dixon & Aikhenvald 2000).

b. Àsíbí sà nɔ̄k lígídí lá tīs púˈá lá.
Asibi PAST take money DEF ADP woman DEF
'Asibi gave the money to the woman.'

Ditransitive constructions in Kusaal come in two forms: a double object construction (3.83a) and an indirect object construction expressed in the form of a benefactive SVCs (3.83b). The difference lies in the alternation between the order of the theme-argument *lígídì*'money' and the recipient-argument *puˈa*̀'woman'. Two suggestions that can be used to explain (3.83) are (1) the proposal that the verb *tīsì*̀'give' is grammaticalized into an adposition leading to the emergence of a prepositional phrase in the sentence. The reanalysis of verb phrases in serial verb constructions into adverbials, adposition etc are quite common in SVC languages like Yoruba (Heine and Reh 1984:108), Akan (Osam 1994) and Leteh (Akrofi 2014:164-165). The other suggestion, thus (2), following Bodomo (2007: 105-6) is the postulation that double object constructions alternate with serial verb constructions in ditransitive constructions.

(3.84) Bíís lá sà kārīm gbáúŋ lá.
children DEF PAST read book DEF
'The children read the book (yesterday).'

(3.85) a. Bíís lá sà kārīm súˈòs wʊ́sá.
children DEF PAST read yesterday all
'The children read the whole of yesterday.'

b. Ǹ kārīm dɔ́ɔ́g lá ní.
1SG read room DEF inside
'I read in doors.'

3.3.1.2. Pseudo-Passives

Passivisation in Kusaal does not take the form and structure of the concept in the way it occurs in languages like English. The ungrammaticality of the example in (3.86b) shows the impossibility of rendering the active sentence in (3.86a) into a passive sentence (3.86b) in a way similar to what happens in English.

(3.86) a. Bíís lá đī mɔ́ŋɔ́nám lá wʊ́sà.
child.PL DEF eat mango-PL DEF all
'The children have eaten all the mangoes.'
b. * mɔ́ŋɔ́nám lá wʊ́sà đī bíís lá.
mango-PL DEF all eat child.PL DEF
Intended: 'All the mangoes have been eaten by the children.'

A transformational process that comes closest to expressing an active sentence into a passive one involves the fronting of the object of the active sentence. It is similar to focus fronting, left dislocation or cleft constructions in Kusaal which will be the major topics of discussion in the next chapter. This process is illustrated using the active sentence in (3.86a) as (3.87).

(3.87) Mɔŋɔ́nám lá wúsà kà bíís lá dī.
mango-PL DEF all FOC child.PL DEF eat
'It is all the mangoes that the children ate.'

The transformational process further assigns a focus function on *mɔ́ŋɔ́naḿ laˊ wúsa*̀ 'all the mangoes' which occurs before the focus particle *kà*. This process cannot be assessed as a passive construction in the language.

One approach which comes close to passivisation is the use of the impersonal constructions where the pronoun *bà* '3PL' is employed as a subject (3.88a-b). The pronoun usually has a general reference although it may also assume a specific or a narrowed interpretation.

(3.88) a. Bà tīsì púˈáb lígídí.
3PL give women money
'Women are given money (mostly by men).'

b. Bà dīīs bílíà áwà wúsà.
3PL feed baby hour all
'A baby is fed every hour (by all people).'

Another possible approach is the use of what can be referred to as pseudo-passive constructions in Kusaal. In this instance, the subject is deleted and replaced with the object of the sentence.

Context: Assuming one finds herself at the market place where some particular items are really *selling* or *being bought* very fast, the following example in (3.89) can be used to describe the situation.

(3.89) Gbáná lá síd dāˈād.
books DEF truly buy-IMPERF
'The books are really being bought (selling) (fast).'

In this sentence the supposed subject is deleted and replaced with the object of the clause *gbana* 'books'. It will be ungrammatical to switch positions, where the subject also takes the position of the object as illustrated in (3.90b) and (3.91c).

(3.90) a. Nídíb lá síd dāˈād gbáná lá.

people DEF truly buy- IMPERF books DEF

'The people are really buying the books (fast).'

b. * Gbáná lá síd dāˈād nídíb lá.

books DEF truly buy- IMPERF people DEF

Lit. 'The books are being bought by the people.'

(3.91) a. Nídíb lá dāˈād búús lá.

people DEF buy. IMPERF goats DEF

'Thepeople are buying the goats.'

b. Búús lá dāˈād.

goats DEF sell- IMPERF

'The goats are being bought (fast).'

c. * Búús lá dāˈād nídíb lá.

goats DEF buy- IMPERF people DEF

Lit. 'The goats are being bought by the people.'

It is important to add that, there are restrictions on the types of objects that can be used in pseudo-passive constructions in Kusaal. Unlike non-human entities e.g. books, goats, grass etc, which maintain their theta roles as patients or themes, it is impossible to use entities with the semantic features of human beings to achieve the same purpose as shown in (3.92).

(3.92) a. Dáú lá síd wɛ̄bīgìd púˈá lá.

man DEF truly oppress- IMPERF woman DEF

'The man is indeed oppressing the woman.'

'The man indeed oppresses the woman.'

b. Púˈá lá síd wɛ̄bīgìd.

woman DEF truly oppress.IMPERF

'The woman is indeed abusive/ oppressive.'

In (3.92b), *puˈa la* 'the woman' is no longer the patient but rather the agent unlike non-human entities which will maintain their theta roles but change their functions from the object to the subject of the clause. Pseudo-passivisation in Kusaal involves function-changing in constituents

but not role changing. The example in (3.92b) is not a pseudo-passive because *puˈa la* 'the woman' has undergone both functional and thematic role changes from (3.92a).

Following the argument that passivisation involves a lexical rather than a derivational process (Falk 2001: 6-7, 93-99), it is assumed that the verbs that are used in active and pseudo-passive constructions in Kusaal have different properties in the values of their respective PRED features but not in their verb forms[7]. The verb *dāˈād* 'buy-IMPERF' in example (3.91) is used in (3.93) for illustration.

(3.93) a. *dāˈād*'<(↑SUBJ) (↑OBJ)>' …… Active construction
b. *dāˈād*'<ø (↑SUBJ)>'……...Pseudo-passive construction

The verb, *dāˈād* 'buy-IMPERF', subcategorizes as a two-place predicate but with different mappings of the argument. In (3.93a), the first argument, which is the agent, is mapped to the grammatical function SUBJ whilst the second, which is the patient, is mapped to the OBJ. In the pseudo-passive in (3.93b), the second argument is rather mapped to the SUBJ whilst the first argument is unexpressed in the syntax (See Falk 2001:94). Following Falk (2001:94), the relationship between lexical forms as they are listed in the lexicon is assumed to be based on the mapping of arguments which has a direct link on grammatical functions. On the background that the active mapping is more basic, the pseudo-passive lexical forms are argued to be the product of a remapping operation. Using the mathematical symbol ↦ 'maps into' pseudo-passives in Kusaal are analysed as in (3.94).

(3.94) (↑SUBJ) ↦ ø
(↑ OBJ) ↦ (↑SUBJ)
where (↑OBJ): -HUMAN

3.3.1.3. Main verb

The verb form in Kusaal does not inflect for tense, person and number. Talking of an infinitive form therefore becomes a bit complicated. I will hence talk of a dictionary entry/ a bare infinitive form/ or the stem (also see Bodomo 1997:81, 90). For illustration I use the verbs *kuos* 'to sell', and *di* 'to eat'.

(3.95) a. kūōs dictionary form
b. kūōs past/perfect/future
a. dī dictionary form
b.dī past/perfect/future

[7] The verb does not take any inflection for pseudo-passivisation.

(3.96) Ò kūōs lá'ád lá.
3SG sell item DEF
'S/he sold the items'

(3.97) Bà sà kūōs lá'ád lá.
3PL PAST sell item DEF
'They sold the items.'

(3.98) Ǹ nà kūōs lá'ád lá.
1SG FUT sell item DEF
'I will sell the items.'

The 3SG, 2PL, and 1SG all have the same form of the verb. There are no morphological indications marking number or person on the verb. There are no inflections on the verb marking tense as well. This will be further discussed in subsequent sections. However aspect is morphologically marked as illustrated below.

(3.99) a. kūōs perfective aspectual form (transitive)
b. kūōs-yá perfective aspectual form (intransitive)
c. kūōs-ìd imperfective aspectual (habitual)
d. kūōs-ìd-nɛ́ imperfective aspectual (progressive)

a. dī perfective aspectual form (transitive)
b. dī-yá perfective aspectual form (intransitive)
c. dī-t imperfective aspectual (habitual)
d. dī-t-nɛ́ imperfective aspectual (progressive)

The table below presents a summary of the various forms of the verb in marking tense and aspect in Kusaal. "Time depth" is predominantly expressed using particles and the root form of the verb. Aspect on the other hand uses suffix markings (discussed further in section 3.3.1.4.2 below).

Table 3.11. Aspectual Suffix Forms

Present	Future	Past/perfect	Imperfective	Perfective
stem.ø Only OR Imperfective habitual form: stem.*t/d*	particle +stem *na*+ stem	particle + stem *sa* + stem.*ø* *daa*+ stem.*ø* *da* + stem.*ø*	(particle)+stem.tnɛ/dnɛ *sa* + stem.*tnɛ/dnɛ* *daa* + stem.*tnɛ/dnɛ* *da* + stem.*tnɛ/dnɛ* OR Stem.*t/d*	i.(particle)+stem.ya *sa* + stem.*ya* *daa* + stem.*ya* *da* + stem.*ya* ii.(particle) +stem.ø (particle) + stem.ø *sa* + stem.*ø* *daa* + stem.*ø* *da* + stem.*ø*

3.3.1.4. Tense and aspect marking in Kusaal

This section looks at tense (present, past and future) and aspectual markings (imperfective and perfective) in Kusaal.

3.3.1.4.1. Tense

Tense relates the time of the situation referred to to some other time, usually to the moment of speaking (Comrie 1976:1-2). Tense describes the relationship between two times: the reference time (RT) thus the interval that the speaker makes a claim about and utterance time (UT) the time at which the utterance is made (Reichenbach 1947; Klein 1994). In Kusaal, tense is generally expressed using the root form of the verb accompanied by particles where necessary to mark the remoteness of the activity in question. A sentence which does not have any preverbal or temporal adverbial particle may be interpreted as present or perfect depending on the context (see Olaswky 1999:38 for similar observation in Dagbani).

(3.100) Ò kēŋ sákúr.
3SG go school
'S/he goes to school.'
'S/he went to school.'

(3.101) Bííg lá dī múì.
child DEF eat rice
'The child eats rice.'
'The child ate rice.'

The introduction of any temporal adverbial particle immediately situates the event within a particular time frame in the past.

(3.102) Bííg lá sà dī múì.
child DEF PAST eat rice
'The child ate the food (yesterday).'

However, the imperfective aspectual form which is usually used for habitual is also used in expressing events that are generally true, unchanging situations and habitual.

(3.103) Ánkàrà án téŋ títáˈár.
Accra COP.be town big
'Accra is a big city.'

(3.104) Bà zāmīsìd Kusaal.
3PL learn.IMERF Kusaal
'They are learning to speak Kusaal.'

The present or habitual form of the verb is not used in expressing the future. The particle *na* precedes the verbs when the future is expressed.

(3.105) Ὲ̀ nà kūl ásúbá nwá.
3SG FUT go.home own DEM
'They will go home this down.'

(3.106) Ò nà dāˈ láˈád lá ká náán kūlnà.
3SG FUT buy item DEF CONJ before return.home
'S/he will buy the items before returning home.'

The past tense and the future tense are marked using the preverbal particles in table (3.12) as below.

Table 3.12: Tense Particles in Kusaal

Tense	Preverbal particle	Gloss
Past/perfect	paˈà	immediate past
	sà	a day old
	dàà	two days old/less than a year
	dà	a year and beyond
Future	nà	future positive
	kʊ̀	future negative
	dá	future negative and imperative

3.3.1.4.2. Aspect

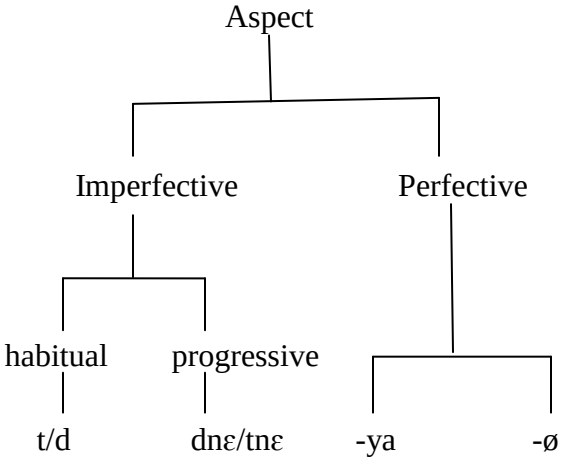
Aspects represent the different ways of viewing the internal temporal constituency of situations (Comrie 1976:3; Holt 1943:6). Consider the following examples:

(3.107)	Àdúk	sà	dītnɛ́	ká	ǹ	kpɛ̄nˈ	nà.
	Aduk	PAST	eat.IMPERF	CONJ	1SG	enter.PERF	LOC
	'Aduk was eating when I entered.'						

Adopting the explanation of Comrie (1976), the first verb in the sentence above gives the background to the second event. 'The second verb present the totality of the situation referred to (here, my entry) without reference to its internal temporal constituency: the whole of the situation is presented as a single unanalysable whole, with beginning, middle, and end rolled in one, no attempt is made to divide this situation up into the various individual phases that make up the action of entry.' (Comrie 1976:9). The verbal forms with this type of meaning are said to express the perfective aspect while those like *ditnɛ* 'eating' which makes reference to the internal portion of Aduk's eating without reference to the beginning or end are said to express what is called the imperfective aspect (see Comrie 1976).

Kusaal expresses two forms of the aspectual namely the perfective (completed) and the imperfective (progressive) (Abubakari 2011). Each of the aspectual forms has two types as illustrated in the figure (3.2) below.

Fig. 3.2. The aspectual forms in Kusaal.



The table below highlights the various morphological forms of aspectual markings on some verbs in Kusaal.

Table 3.13. Aspectual morphological markings on verbs in Kusaal

Verb Root/Bare Infinitive		Perfective		Imperfective	
	Gloss	PERF A	PERF B	IMPERF A	IMPERF B
bʊ̄ˈ	‘beat’	bʊ̄ˈ	bʊ̄ˈʊya´	bʊ̄ˈʊd	bʊ’ʊdnɛ´
mɛ̄	‘build’	mɛ̄	mɛ̄ya´	mɛ̄d	mɛ̄dnɛ´
gbīs	‘sleep’	gbīs	gbīsìya´	gbīsìd	gbīsīdnɛ´
tīs	‘give’	tīs	tīsìya	tīsīd	tīsīdnɛ´
kūōs	‘sell’	kūōs	kūōsìya´	kūōsìd	kūōsìdnɛ´
dī	‘eat’	dī	dīya´	dīt	dītnɛ´
dāˈ	‘buy’	dāˈād	dāˈāya´	dāˈād	dāˈādnɛ´

3.3.1.4.2.1. The Imperfective

Unlike the past tense which is expressed using tense particles, the present tense is often inferred from the context as it does not have any morphological representation in Kusaal. It can also be expressed using the imperfective forms of the verb. The imperfective A forms of the verbs are characterized by the suffixed morpheme */-d/* or */-t/* whereas the imperfective B forms have an additional suffix /*-nɛ*/ after /*-d*/ or /*-t*/ as the case may be. On their functions, the imperfective A forms are used in expressing habitual events and the imperfective B forms on the other hand are used in expressing progressive actions (Abubakari 2011).

(3.108) Ǹ mɛ̄d yá.
1SG build-IMPERF houses
‘I build houses.’ (say, for a living)

(3.109) Ǹ mɛ̄dné yír.
1SG buid-IMPERF house
‘I am building a house.’

(3.110) Ǹ kūōsìdné.
1SG sell-IMPERF
‘I am selling.’

(3.111) Bà wāˈādné.
3PL dance-IMPERF
‘They are dancing.’

3.3.1.4.2.2. The Perfective

It is apparent from table (3.13) that the perfective A forms of the verb are the same as the root whereas the perfective B forms carry the suffix morpheme *–ya*. A perfective action involving all types of verbs: transitive, intransitive, ditransitive as well as ambitransitive verbs, can be expressed in the form of perfective A and the verbs always occur with complements be them(complements) object NPs or adverbials (3.112a-c). It is equally grammatical to have negative particles co-occurring with the perfective A forms (3.112d-e).

(3.112) a. Bííg lá dī-ø dííb lá.
child DEF eat food DEF
'The child ate the food.'

b. Bíîg lá gbīs sʊ́m.
child DEF sleep well
'The child slept well.'

c. Púˈá lá tīs bííg lá dííb lá.
woman DEF give child DEF food DEF
'The woman gave the child the food'

d. Bííg lá pʊ́ dī-ø díîb lá.
child DEF NEG eat food DEF
'The child did not eat the food.'

e. Bíîg lá pʊ́ gbīs sʊ́m.
child DEF NEG sleep well
'The child did not sleep well.'

The perfective B forms cannot be used with transitive verbs (3.113a), and ditransitive verbs (3.113c) in the process of which these verbs are only used intransitively. It is ungrammatical to have an object NP after the *–ya* suffix morpheme (3.113aii, c).

(3.113) a. i. Bíîg lá dī-yá. ii. *Bíîg lá dīyá díîb lá.
child DEF eat-PERF child DEF eat-PERF food DEF
'The child has eaten.' 'The child has eaten the food.'

b Ò gbīs-yá.
3SG sleep-PERF
'S/he has slept.'

c. *Púˈá lá tīsyá bííg lá dííb lá.
woman DEF give-PERF child DEF food DEF
'The woman gave the child the food'

Equally ungrammatical is the co-occurrence of the perfective B forms of verbs with the negative particle in Kusaal. The acceptable form of expressing negation in the perfective is by the use of the perfective A forms of verbs as illustrated in (3.114ai-bi).

(3.114) a.i Bííg lá pʊ́ dīi ii *Bííg lá pʊ́ dīyá
child DEF NEG eat-PERF child DEF NEG eat-PERF
'The child has not eaten.' Lit. 'The child has not eaten.'

b i. O pʊ́ gbīs ii. *O pʊ́ gbīs-yá
3SG NEG sleep 3SG NEG sleep-PERF
'S/he has not slept' Lit. 'S/he has not slept'

Additionally, it is ungrammatical to have some adverbs, most especially directional adverbials, occurring after the perfective B forms unlike in instances involving the perfective A forms. Sentences formed out of the permutations of the subject, the verbs and most especially directional adverbials or the temporal adverbial *suˈos* 'yesterday' in the table in (3.14) result in utterances that are awkward and very unnatural in Kusaal (3.115).

Table 3.14 Co-occurrence Restriction on Perfective B Forms

Subject
Bà 'They'

Verbs	Gloss
tīsìyá	'given'
dīyá	'eaten'
dāˈāyá	'bought'
kūlyá	'gone-home'
gbīsyá	'slept'
dūgyá	'cooked'
gūlisìyá	'written'
kūˈōsyá	'sold'
keŋyá	'went/left/gone

Adverbs	Gloss
tɔ́ˈɔ́tɔ́	'harriedly'
dɔ́ɔ́gin la	'in the room'
súˈòs	'yesterday'
bɛ́degʊ	'a lot/plenty'
dáár wúsá	'always'
bàànlímm	'slowly,quietly'
yɔ́rí	'carelessly'
zíná	'today'
dáˈán	'market place'

(3.115) a. i. *Bà kūlyá súˈòs.
3PL go.home-PERF yestrday
'They went home yesterday.'

ii. Bà kūl sú'òs.
3PL go.home yesterday
'They went home yesterday.'

b. i. *Bà sà kēŋyá dá'án lá.
3PL PAST go-PERF market DEF
'They went to the market.'

iii. Bà sà kēŋ dá'án lá.
3PL PAST go-PERF market DEF
'They went to the market.'

c. i. Bà dīyá dɔ́ɔ́gín lá.
3PL eat-PERF room.LOC DEF
'They ate in the room'

ii. Bà dī dɔ́ɔ́gín là.
3PL eat room.LOC DEF
'They ate in the room.'

d. i. Bà dīyá bàànlímm.
3PL eat-PERF quietly
'They ate quietly.'

ii. Bà dī bàànlímm.
3PL eat quietly
'They ate quietly'

The morpheme *–ya* as illustrated in the various environments above blocks objects in transitive and ditransitive as well as in negative constructions. It further blocks directional adverbs as well as some temporal adverbials most especially the adverb *su'os* 'yesterday' from co-occurring with it. What remains clear is that it does not replace an object, a fact proven by virtue of the grammatically of *-ya* co-occurring with intransitive verbs (3.113b).

In the next section, I discuss possible reasons on the various constraints exhibited by the perfective B forms on object complements and negation and directional adverbials in Kusaal.

3.3.1.5. Explanation on co-occurrence restrictions

3.3.1.5.1. Intransitive Perfective aspectual forms

Bodomo (1997:90-91) observes that verbs in Mabia can be classified in pairs of oppositions mainly based on derivational processes such as causativity, transitivity, reversivity etc. The Kusaal verbs below are all opposite in transitivity.

Table 3.15. Verbal oppositions in Kusaal

kʊ	'to kill'	kpi	'to die'
da^{l}ae	'make fall'	li/lu	'fall'
diis	'to feed'	di	'to eat'
di	'to marry'	bas	'to stop/abandon/divorce'
di	'be indebted'	yɔ^{l}	'to pay/to settle debt
zi^{l}	'to be ignorant/to know not'	baŋ	'to know/understand'

While all the verbs on the left are transitive those on the right are intransitive in the opposite sense of what we have on the left. Returning to the perfective aspectual forms of verbs in Kusaal, all the verbs on the left cannot be used with the aspectual suffix *–ya* whilst all those on the right cannot be used in the aspectual form without the suffix *–ya*. These represent aspects of verbal oppositions in causality, reversivity and transitivity.

(3.116) a. Ò kʊ̄ búúg lá. b. *Ò kʊ̄yá búúg lá.
3SG kill goat DEF 3SG kill.PERF goat DEF
'S/he killed the goat.' Lit. 'S/he killed the goat.'

(3.117) a. Dáú lá kpíyá. b. *Dáú lá kpí bííg lá.
man DEF die.PERF man DEF die child DEF
'The man is dead.' Lit.'The man is dead.'

(3.118) a. Ò dīis bííg lá. b.* Ò dīisyá bííg lá.
3SG feed child DEF 3SG feed.PERF child DEF
'S/he fed the child.' Lit. 'S/he fed the child.'

c.*Ò dīisyá
3SG feed.PERF
?? 'S/he fed'

The absence of object complements with the perfective B forms of verbs is therefore hypothesized to be due to the fact that the perfective B forms of verbs with *–ya* are contextually

intransitive with opposing contextually transitive counterparts elsewhere, where applicable, which do not take the suffix *–ya*.

Table 3.16: Verbal opposition in transitivity

Perfevtive Transitive			Perfective Intransitive	
dāˈ	'bought'		dāˈyá	'bought'
dī	'ate'		dīyá	'ate'
gūlsē	'wrote'		gūlsēyá	'wrote'
-	-		gbūīsyá	'slept'
-	-		kpīyá	'dead'

Furthermore, it is a common assumption that though an object complement is not syntactically present, when a verb is transitive, ditransitive or ambitransitive, it is present in the minds of speakers. Thus, anytime an object is blocked in the environment of *–ya*, the supposed object item is familiar to interlocutors. This cannot provide evidence that *–ya* represents the object complement since intransitive verbs always require *-ya* in the perfective form.

3.3.1.5.2. Negation and Perfective Aspectual Forms

The other observation relates to the blocking of negative particles anytime an event is expressed in the perfective aspectual with the suffix *–ya* in Kusaal.

(3.119) a . Ǹ dī dííb lá.
1SG eat food DEF
'I ate the food.'

b. Ǹ pʊ́ dī dííb lá.
1SG NEG eat food DEF
'I did not ate the food.'

(3.120) a. Ǹ dīyá.
1SG eat.PERF
'I ate.'

b. *Ǹ pʊ́ dīyá.
1SG NEG eat.PERF
Lit. 'I did not eat.'

Since the perfective A forms do not block negation, it will be illogical to generalize that negation is blocked by perfective aspect. The proposal here is that, negation is not blocked by the concept of perfective aspect but rather by some atomic features embedded in the interpretation of *–ya*. The suffix *–ya* may have other features/ characteristics embedded in its interpretation beyond marking the perfective. The aspectual suffix morpheme affirms the presupposition that the event is completed. It is then argued that the suffix *–ya* has a positive affirmative feature as one of its embedded atomic features. This feature is in complementary distribution with the negative polarity particle *pv* resulting in the blockage.

3.3.1.5.3. Adverbials and Perfective Aspectual Forms

The other observation relates to the fact that the perfective aspectual forms block the temporal adverbial *su'os* 'yesterday' but not others like *zina* 'today' (3.121).

(3.121) a. Ò sà kēŋ sú'òs.
3SG PAST go yesterday
'He went yesterday.'

b. * Ò sà kēŋyá sú'òs.
3SG PAST go.PERF yesterday
'He went yesterday.'

c. ?Ò kēŋyá zíná.[8]
3SG go.PERF today
'He went today.'

Directional adverbs are also blocked in the environment of the perfective aspectual forms (3.122b). The same constraint is not observed in relation to place adverbs as in (3.122c).

(3.122) a. Ò sà kēŋ Víɛ́ná.
3SG PAST go Vienna
'He went to Vienna.'

b. * Ò sà kēŋyá Víɛ́ná.
3SG PAST go Vienna
'He went to Vienna'

[8] Opinions are divided over the use of the temporal adverb *zina* 'today' in the environment of the perfective aspectual suffix *ya*. Whilst some speakers agree it can be used after the suffix others say it cannot be used.

c. Ò sà dīyá dɔ́ˈɔ́gín lá.
3SG PAST eat.PERF ROOM.LOC DEF
'He ate in the room.'

Manner adverbials on the other hand are not constrained in any way with the intransitive aspectual forms (3.123).

(3.123) a. Bà kūlyá bàànlímm.
3PL go.home.PERF quietly
'They went home quietly.'

b. Bà kūl bàànlímm.
3PL go.home quietly
'They went home quietly.'

It is not clear why the perfective B form constraints some adverbials but not others. It is once again impossible to make a generalization in this regard since that will not reflect the real situation especially in instances regarding temporal adverbials. Whilst the adverb *zina* 'today' is not constraint, the adverb *suˈos* 'yesterday' is highly constrained in the environment of *–ya*. This can be explained as an exceptional situation. On why directional adverbials are blocked, it is presupposed that interlocutors are familiar with a supposed destination anytime the suffix-*ya* is used with a directional verb in an utterance. The possibility of a 'directional' connotation in the interpretation of *–yá* further supports the claim of embedded atomic features in the interpretation of this suffix explaining why it is in complementary distribution with other constituents that either have similar interpretations (hence blocked for redundancy) or opposite in meaning hence incompatible. It is important to add that, this hypothesis is priliminary and will require further research to establish same or otherwise.

In this subsection, I have discussed the verbal system of Kusaal with particular interest in finding out reasons behind the co-occurrence restrictions exhibited by the perfective B aspectual forms of the language with complements such as object NPs and directional adverbials. The Perfective B also blocks negative particles. It is found that verbs in Kusaal usually have opposite counterparts in transitivity, causality and reversivity as indicated by Bodomo (1997) for Mabia languages. It is claimed that the verbs that fall under perfective A are transitive counterparts of those that fall under perfective B. While those that fall under perfective A are transitive verbs and allow object NPs, adverbials etc, those that fall under perfective B with the suffix *–ya* are underlyingly intransitive verbs and they block complement elements. On why directional adverbials and negation are blocked in the environment of the perfective B aspectual form, it is argued that the suffix *–ya* has other atomic features inherent in its interpretation which are in complementary distribution with the blocked elements. However, these hypotheses require further research to establish the claims. The findings in this section is likely to have implication

on other Mabia languages and it will be interesting to extend the research to cover other sister languages to find out if same can be established or further pointers can be observed to enhance our understanding of tense and aspect in these languages.

3.3.2. Particles in Kusaal

A very important aspect of both the structural and semantic compositions of sentences in Kusaal has to do with the prevalent use of particles in the language. What may be termed as both preverbal and postverbal particles are used in diverse ways in information packaging in Kusaal. This section is devoted to discussions on the various identified particles in the language (also see Spratt and Spratt 1972; Abubakari 2007; Abubakari 2011; Bodomo and Abubakari 2017; Niggli 2014; Bendor-Samuel 1971 and Bodomo 1993). Though particles are used to express tense, aspect, mood, polarity, as well as diverse discourse related information, their full functional scope remains unresolved since ongoing observations continuously unravel additional functions of these particles. A single particle is observed to have more than a single meaning or to perform more than a single function. The table below gives a list of commonly used particles in Kusaal.

Table 3.16. Preverbal Particles (PVP) and Postverbal particle (PTVP) in Kusaal

	Particles	gloss	
Time Depth	pàˈà	immediate past	Preverbal Particles
	sà	past (yesterday)	
	dàà	past (two days ago/less than a year)	
	dà	remote past (more than a year)	
	èɛ̀ntì	used to	
	nàn	yet to (future)	
Polarity	bò	negative	
	pʊ́		
Tense+Polarity	nà	future positive	
	kʊ̀	future negative	
Mood	yáˈá	if/when	
	kʊ̀n/pʊ̀n	just	
Mood + Polarity	dá	negative imperative (present /future)	
	sáá	positive imperative (future)	
Others	sìd	actually, really	
	pʊ̀n	already	

	lɛ́m	again	
Focus	kà nɛ́ ń	contrastive focus “ “	Ex-situ In-situ “
Other	lá	marker of assertion	Clause Final Determiner

3.3.2.1. Time Depth Particles

Tense is not morphologically marked in Kusaal. The present tense is deduced from context. Particles are, however, used to situate events in the past[9].

(3.124)

Time depth particle		Adverbial	
sà	‘yesterday’	súˈòs	‘yesterday’
dàà	‘two days ago’	dáár	‘two days ago’
dà	‘a year and beyond’	dáár	‘two days ago’
pàˈà, nán	‘just now, immediate past’	nánnáná	‘now’

What is referred to as ‘time depth adverbial particles’ or ‘light adverbials’ express the remoteness of an activity in Kusaal. These particles perform similar semantic roles as adverbials of time in the language. They are ‘light adverbials’ because they are morphologically and phonologically lighter compared to other adverbials as can be observed in (3.124). Some of the main differences between adverbials and the time depth adverbial particles in Kusaal include the following: (1) adverbials are adjuncts but preverbal particles are not. For this reason the time depth adverbial particles freely co-occur with adverbials in the same sentence. (2) Unlike nouns, verbs, adverbs, adjectives etc that form major clause constituents and can be moved to other parts of the sentence, as will be shown in the next chapter, time depth adverbial particles have fixed positions before the verb and cannot be moved elsewhere in the proposition. The example sentences in (3.125) are contextual illustrations involving the particles in (3.124).

(3.125) a. Ǹ nán kpɛ̄nˈ ná la̋.
1SG just enter LOC. LA
‘I just got in/ entered.’ (event in the immediate past)

[9] I gloss the time depth particles as PAST in this dissertation. I give additional information on the remoteness of the event in the English translation where necessary.

b. Bíís lá sá gbīs tɔ́ˡ (súˡòs)[10].
children DEF PAST sleep early yesterday
'The children slept early yesterday' (event is a day old)

c. Ǹ dàà kēŋ túʊmá (zíná bákúáí).
1SG PAST go work today week
'I went to work a week ago.' (event more than two days old but less than a year)

d. Zàbà dà bɛ̄ Bɔ́k.
fight PAST EXIST Bawku.
'There was conflict in Bawku sometime ago' (event more than a year old)

3.3.2.2. Polarity and Time Depth Particles

Negation is generally marked using the particle *pʊ* 'NEG' in Kusaal as in (3.126a). However, the particles *na* and *ku* are future positive and future negative particles respectively (126b-c).

(3.126) a. M̀ pú kēŋ túúma zíˡná.
1SG NEG go work today
'I did not go to work today.'

b. N̄ nà kēŋ túúmá.
1SG FUT go work
'I will go to work.'

c. N̄ kʊ̀ kēŋ túúmá.
1SG FUT+NEG go work
'I will not go to work.'

3.3.2.3. Modality and Aspectual Particles

Particles such as *ɛɛ̀ntɪ̀* 'used to' *kʊ̀n*, 'just' *saá́* 'positive imperative particle' and *dá́* 'negative imperative particle' express modality, aspect as well as polarity.

(3.127) a. Bííg lá ɛɛ̀ntʊ̄ kāās.
child DEF HAB cry-out
'The child cries all the time.'

[10] Brackets mean optional constituents.

b. Àyîpóká pʊ̀n gbīs né.
Ayipoka just sleep FOC
'Ayipoka just slept.'

The particle *saá́* is an imperative marker for an activity due to happen in the near future latest in a day from the time of utterance.

(3.128) a. Fʊ̀ sáá būōlím.
2SG FUT+IMPERF call-1SG.ACC
'Do call me.'(Time reference: till the end of the next day)

The particle can also be used to express emphasis/assertion. In such instances it is used along with either the future positive or the future negative particles as in (3.128b) and (3.128c) respectively.

b. Ǹ sáá nà būōlìf.
1SG FUT+IMPERF FUT+POS call-2SG.ACC
'I will call you (Time reference: from utterance time to next day).'

c. Ǹ sáá kʊ̀ būōlìfɔ́.
1SG FUT+IMPERF FUT+NEG call-2SG.ACC
'I will not be calling you (Time reference: from utterance time to next day).'

The particle *dá* is an imperative negative marker used for activities both in the present and in the future as in illustrated in (3.128d) below.

d. Dá būōlí má!
NEG+IMPERF call.1SG.ACC
'Do not call me!'

3.3.2.4. Focus Particles

The particles *kà, ń* and *né* are identified as focus particles in Kusaal. The identified particles, *kà, ń* and *né* correlate with a focus interpretation anytime they occur in a construction with discourse related interpretation. This will be discussed in much detail in the next chapter. Below are some example usages of the focus particles *kà,* and *né*.

(3.129) a. Àsíbì sà dāˈ né **gɛ́lá** dáˈá-n lá.
Asibi PAST buy FOC eggs market-LOC DEF
'It is eggs that Asibi bought in the market (not say: **sugar**)'

b. Gɛ́lá kà Àsíbì sà dāˈ dáˈá-n lá.
eggs FOC Asibi PAST buy market- LOC DEF
'It is eggs that Asibi bought in the market (not say: **sugar**)'

c. Dáú ń bɛ̄ dɔ́ɔ́gín lá.
man FOC EXIST room. LOC DEF
'It is a man (that is) in the room (not a woman).'
'It is a brave man (that is) in the room (not a coward).'

The particle *kà* is restricted to fronted focused constituents while the particles *ń* and *ńɛ* are limited to in-situ focused constituents.

3.3.2.5. Postverbal Particle: *nɛ*

It is important to indicate the difference between the contrastive/emphatic focus particle *né* and the imperfective aspectual marker *-né*. These two particles are homophones with different distributional properties. While the imperfective aspectual marker is a suffix attached to the habitual form of the verb thus the root+*-t/-d*, the contrastive forcus particle is a free morpheme. Additionally, the two have distinguishable impacts any time they are used. The contrastive focus particle encodes a contrastive interpretation whereas the progressive form expresses the continuity of an action or event. The question that comes to mind then is what if, for instance, a speaker intends to contrastively focus an object NP in-situ when the verb is in the progressive aspectual form? In such situations the focus particle gets deleted as in (3.130). Speakers then use focal stress to create the desired interpretation.

(3.130) a. Ò sà dī né múì.
3SG PAST eat FOC rice
'It is rice he ate yesterday (not say beans)'

b. O dītné́ múì.
3SG eat-IMPERF rice
'He is eating rice.'

c. O dītné́ **múì.**
3SG eat.IMPERF rice
'It is RICE he is eating (not, for instance, beans)' ??O ditnɛ *nɛ ***mui**

The deletion of the focus particle in the environment of the progressive aspectual suffix can be explained following the principle of economy in phonology (Sweet 1888: 156). According to Sweet (1888) a sound maybe dropped (i) if it is superfluous (ii) for ease of transition from one sound to another, leading to the convergence and assimilation of other sounds (cf Zhou 20020).

It is more probable that the contrastive focus particle in the context described above is assimilated into the progressive aspectual suffix marker for ease of transition.

3.3.3. Adverbs

Adverbials in Kusaal can be grouped into temporal, manner, quantity and spatial adverbials. Other categories include adverbials of emphasis, negation and doubt. Most adverbs are commonly found sentence finally though they are also used sentence initially. What is undoubted is that they are not found sentence medially with the exception of the time depth adverbial particles which can only occur before the verb in Kúsáàl. Below is a detailed account of each type of adverbial mentioned above.

3.3.3.1. Temporal adverbials

These are a group of adverbials whose function is to answer the question ‘when’ in relation to the action denoted by the verb. They usually occur at sentence final slots though they can be fronted mainly for discourse related purposes. Temporal adverbials situate an action described by the verb within a particular timeframe. Examples of such adverbials are listed below.

(3.131) a.

zínádáár	‘three days ago’	bɛ́óg	‘tomorrow’
dáár	‘two days ago/day after tomorrow	dábáyí	‘two days from now’
sú' òs	‘yesterday’	daɓaťań	‘three days from now’
zíná	‘today’	bákúấì	‘a week from now’
nànnánnà	‘now’	nwádíg	‘a month from now’

b. Dúórím lá ànɛ́ dábánú.
festival DEF COP.be day-five
‘The festival is in five days/five days from now.

Typical adverbial interpretations can equally be deduced from the temporal adverbial particles since they situate events within particular time frames.

(3.132) a. pà'à ‘early today/near past’

sà ‘recent past, yesterday’

dàa ‘mid-remote past (from two days ago but less than one year)’

dà ‘remote-past, over a year’

b. Àtìbíl sà sɛ̄ bɛ̄ŋír lá.

Atibil PAST plant beans DEF
'Atibil planted the beans yesterday.'

3.3.3.2. Spatial Adverbials

Spatial adverbials, also referred to as adverbs of place, define the location or goal of motion verbs. They answer the question 'where' thereby helping us to locate where the action denoted by the verb took place. Spatial adverbials in Kusaal, as in most other Mabia languages, come in the form of postpositions. Below are lists of some of the postpositions which also function as spatial adverbials in Kusaal.

(3.133)

na/naa	'location', 'here'	sia	'waist/lower, below, back'
-n	'suffix-location'	nɔɔr	'mouth/at, on, near'
aniŋa, anina, ani, kpɛˈɛsa	'there'	pʊʊg	'stomach, belly/in, interior, inside'
kpʊkpɛŋ	'outside'	nyaˈaŋ	'back/behind'
zug	'head /on , on top'	kpɛˈ/kpɛla	'here'

(3.134) a. Bà sà gbīs dɔ́ɔ́g lá **púúgín**.
3PL PAST sleep room DEF inside-loc
'They slept in the room yesterday.'

b. Dáú lá páˈá zīˈē yír lá **nyàˈàŋ**.
man DEF just stand house DEF behind/back
'The man was standing behind the house.'

3.3.3.3. Manner Adverbials

Manner adverbials describe the way the action portrayed by the verb is/was carried out. They answer the question 'how?' Below are some manner adverbials in Kusaal.

(3.135) a. Manner adverbials in Kusaal

àgɔ́l gɔ́lá	'loudly'	tɔˈɔ́	'quickly, suddenly'	tútúlá	'backwards'
búrá-búrá	'variously, inconsistently'	tɔˈɔ́tɔ́/ɔ	'quickly'	túúlíg	'urgently'

bfɔ́ɔ́n/fɔ́nˈ	‘quietly, in a calm’	túòm	‘frequently’	túúlígá	‘warmly’
kíí	‘steadily’	súˈàdìmnéé	‘secretly’	vénlíŋá	‘nicely’
vîkí	‘reliable, exactly’	màˈàsìgá	freshly, calmly’		

c. .

b. Ò páˈá tʊʊm tʊúm lá tɔˈɔ́tɔ́.
3SG just work work.NOM DEF quickly
‘S/he did the work quickly.’

3.3.3.4. Intensity Adverbials

Intensity adverbial also referred to as degree adverbials are used to describe the degree or intensity of an action, an adjective or another adverb.

(3.136)

a.	fiîn	‘small’	bíˈélá	‘small’
	bɛ́dígɔ́	‘a lot’	bàànlím	‘softly, slowly, carefully’
	àgɔl gɔlaˊ	‘loudly’		

b. Bà sà pīˈānˈàd baáńlím.
3PL PAST speak softly
‘They spoke softly yesterday.’

3.3.3.5. Adverbs of Emphasis

These adverbials function in ways similar to intensifiers. They add additional stress or emphasis to an utterance. The most used in Kusaal are the following particles:

(3.137)

a.	yáásé	‘again’
	mɛ̀n	‘indeed’

b. Bíís lá dī díīb lá yáásé.
child-PL DEF eat food DEF AGAIN
‘The children ate the food again.’

3.3.3.6. Adverbs of Negation

These are adverbial particles used to negate an act or deny the very existence of something. The following examples in (3.138a) constitute the few established examples in the language.

(3.138)

a.

àyéí	'no'	nɛ́ɛ́m	'nothing'
kɔ́táá	'not at all'	záalɪ́m	'nothing'

b.

Ayéî,	ǹ	kʊ̀	dāˈ	bʊ́ʊ́g	lá.
no,	1SG	NEG+FUT	buy	goat	DEF

'No, I will not buy the goat.'

c.

Àkúdà	sà	pʊ́	tʊ́m	kɔ̄táá	nɛ́.
Akuda	PAST	NEG	work	not-at-all	FOC

'Akuda did not do any work at all yesterday.'

d.

Bà	tūm	záalím.
3PL	work	nothing

'They work for nothing.'

The adverb *kɔtaa* 'not at all' must always be licensed by the negative particle *pʊ* 'not' as in (3.138c) while same is not required for *nɛɛm* 'nothing' and *zaalim* 'nothing'.

3.3.3.7. Postpositions in Kusaal

Kusaal predominantly uses postpositions instead of prepositions. As mentioned earlier, postpositions are expressed using body parts. I repeat some of the earlier examples on spatial adverbials which are used as postpositions for further illustration in (3.139-141).

(3.139)

Postposition	Body part	Gloss
zúg	head	'on , on top'
síà	waist	'lower, below, back'
nɔ́ɔ́r	mouth	'at, on, near'
pʊ́ʊ́g	stomach, belly	'in, interior, inside'
nyàˈàŋ	back	'back/behind'

Below are some sentences where some of these postpositions are used in context.

(3.140) Gbáná lá dīgī téebúl lá zúg.
book-PL DEF lye table DEF on-top
'The books are lying on top of the table.'

(3.141) Lígídì lá bɛ̄ kɔ́lúg lá púúg.
money DEF EXIST bag DEF inside
'The money is in the bag.'

In summary, a simple sentence in Kusaal has the SVO (Adv) constituent order and the verb does not inflect for tense but rather aspect. Tense is expressed using particles with the present tense mainly deduced from context. There are both preverbal and post verbal particles used for several discourse functions. A particle may perform multiple functions in the language. Talking of adpositions, Kusaal does not exhibit overwhelming instances of prepositions as compared to instances of postpositions. Postpositions in the language are predominantly synonyms for body parts. The next section looks at complex sentences as a build up on the simple sentences considered in this section.

3.4. Complex Constructions in Kusaal

3.4.1. Serial Verb Constructions (SVCs)

Kusaal is a serializing language with prototypical SVC features such as: multiple predications, argument sharing, TAMP (Tense, Aspect, Mood and Polarity) sharing and the absence of connectors. SVCs in Kusaal are monoclausal constructions in which series of verbs are used in coding single events or series of activities that are closely related (Abubakari 2011, Bodomo 1993). Below are some examples of SVCs in Kusaal.

(3.142) a. Búpùŋ lá dà dāˈāè bííg lá lɔ̃b bás téŋ.
girl DEF PAST push child DEF throw leave ground
'The girl pushed the child onto the ground.'

b. Ò sà pó dó yí kēŋ dáˈ dííb lá.
3SG PAST NEG get-up come-out go buy food DEF
'S/he did not get up and go and buy the food.'

The verbs in the series (3.142a-b) are assumed to be of the perfective A type where there is no overt aspectual markings on the verb. It is ungrammatical to have the perfective B forms with the *–yá* suffix in SVCs in Kusaal (3.142c).

c. *Bà zɔ̄yá kīnyá dīyá dííb lá.
‘They ran and went and ate the food.’

The imperfective forms on the other hand can be used with series of verbs as demonstrated in (3.142d-e)

d. Bà zɔ̄tnɛ́ kēnnɛ́ dīt múì lá.
3PL ran-IMPERF go-IMPERF eat-IMPERF rice DEF
‘They run to go and eat rice.’ (repeatedly)

The same can be interpreted as habitual though speakers also use the habitual suffix morpheme when desired as shown below.

e. Bà ɛ̄ɛntí zɔ̄tnɛ́ kēnnɛ àní dīt múì lá.
3PL HAB run- IMPERF go- IMPERF DEM eat- IMPERF rice DEF
‘They run there to eat the rice.’ (Habitual)

It is not possible to combine different aspectual forms in the same sentence. This can only be done in a coordinated sentence as demonstrated in (3.142f).The star outside the bracket means the element is obligatory.

f. Bà zɔ̄ kēŋ àní *(ká) dīt múì lá.
3PL run go DEM CONJ eat-IMPERF rice DEF
‘They ran there and were eating the rice.’

Comparatively, SVCs are also used extensively in folktales just as in casual speeches in Kusaal. The following lines are except from a story on *Asumbul nɛ Ayalsuŋ* ‘Mr Rabbit and Mr Songbird taken from Akon & Anaba (2013:35).

(3.143) a. Àsúmbúl yáán dà bɛ̄ ká dáár yínnɛ́ ká ò dūōe
rabbit again PAST EXIT CONJ day one CONJ 3SG get-up
záámnɔ́ɔ́ré zāŋī ò gɔ́ŋɔ́ kēŋ síínd tāabūg.
down take 3SG.POSS sickle go honey hunt
‘There lived Mr Rabbit who got up one day and took his sickle and went hunting for honey.’

b. Ká	ò	dūōe	zɔ̄ɔ̄	kūlī	yɛ̄lī	ò	púˈá	né
LINKER	3SG	get-up	run	go-home	tell	3SG.POSS	wife	CONJ
ò	bíís.							
3SG.POSS	child.PL							

'He got up and ran home and informed his wife and children.'

Interestingly, the particle *ń* is observed to occur in between some series of verbs in what could be described as an SVC in Kusaal. There is the possibility of describing it (the particle) as a marker of dependency connecting the series of activities in the succession of their occurrences. This does not appear helpful since the same sentences show instances where series of verbs are used without the supposed marker of dependency. In (3.144a) the series of verbs: *paae* 'arrive' *tisi* 'give' and *nu* 'drink' *kpi* die' occur in the same sentence without the 'connector'. Equally noticeable in (3.144b) are the series of verbs: *duom kpɛnˈ ..piis* 'get-up, enter…sweep' without the 'connector'.

(3.144) a. Ò yɛ̄lì ò méŋ yé, ò nà dāˈ né dáám lá
3SG say 3SG self COMP 3SG FUT buy FOC wine DEF
ká bɔ̄ tíkúúdím **ń** lɔ̄s dáámín lá **ń** pāaē
CONJ search poison N put wine.LOC DEF N arrive
tīsī bà ká bà nūū kpī ká ò sʊ̄ˈoē
give 3PL.ACC CONJ 3PL.NOM drink die CONJ 3SG own
lígídí lá wʊ́sá.
money DEF all

(Akon and Anaba 2013:25)

'He told himself that, it is wine/drink he will buy and look for poison to add to the drink, to go and give it to them and they will drink and die so that he takes all the money.'

b. Ká	ò	tānsī	ò	púˈá	yé	ò	dūōm	tɔ́ˈɔ́tɔ́
LINKER	3SG	shout	3SG.POSS	wife	COMP	3SG	get-up	quickly
ń dɔ̄l	ò	kpɛ̄nˈ	ò	dɔ́ɔ́gìn	sàà	pīīs…….		
N follow	3SG	enter	3SG	room.LOC	FUT	sweep		

(Akon and Anaba 2013:21)

'And he shouted on his wife to get-up quickly and get in the room and sweep the place….'

The *ń* particle is hence interpreted as a marker of assertion similar to the focus particles *ń* and *né* in which sense it emphatically/exclusively shows how one activity enhances the accomplishment

of another. However, this requires further investigation to ascertain the real status of the particle in constructions of this nature.

3.4.2. Coordinating Constructions in Kusaal

Coordination is used in joining two or more phrases and clauses into compound structures. There are several coordinating conjunctions in Kusaal among which include: *nɛ́/né, ká, ámaá, bɛɛ́, koó*[11]. Whereas *nɛ/ne* functions as NP conjunction, *ká* and *ámaá* function as VP conjunction while *bɛɛ́*, and *koó* can be used both as NP and VP conjunctions.

3.4.2.1. *nɛ́/né* as a coordinate conjunction

The particle *nɛ́/né* which translates into the English conjunction 'and/with' is restricted as an NP conjunction.

(3.145)	Àsùmbúl	nɛ́	Àvúlúmvúúl	nɛ́	Àbáá	nɛ́	Àdàyúúg	nɛ́
	Asumbul	CONJ	Avulumvuul	CONJ	Abaa	CONJ	Adayuug	CONJ
	Àtámpʊ́á	yɛ́lá.						
	Atampʊa	matter						

'The story of Asumbul, Avulumvuul, Abaa, Adayuug and Atampʊa'

3.4.2.2. *Ká* as VP conjunction

Ká is used in joining two or more VPs to form compound constructions. It translates into the English conjunction 'and'.

(3.146)	Bà	nà	dɔ̄l	ká	pāām	lígídí.
	2PL	FUT	follow	CONJ	reach	money

'They will pursue and make money'

(3.147)	Bà	pʊ̄ˈʊ̄s	taába´	ká	wīdīg	nɛ´	súmaĺísím.
	2PL	greet	oneanother	CONJ	disperse	with	peace

'They greeted one another and dispersed peacefully.'

3.4.2.3. Clause initial *ká*

A common observation in Kusaal is the use of what I refer to here as a clause initial *ká.* It has some inherent emphatic connotation anytime it occurs in utterances. This particle functions as a connecter which links all the activities in a story or conservation as a whole. A sentence introduced by *ká* has a direct link with a preceding one as well as the one that follows it.

[11] The conjunctions *ámaá* and *koó* are borrowed from Hausa into Kusaal.

(3.148) a. Ká nànnànnà bɛ̄ lá, bíís gɔ̄síg káˈá náˈánáá
LINKER now EXIST LA child care COP.NEG easy
'As we speak/in this present days, taking care of a child is not easy.'

b. Ká Àkpénténr yɛ́lí ò mà yé, ò
LINKER Akpentenr tell her mother COMP, 3SG
kʊ̀ nyāŋē mɔ̄r púʊ́g ká zānmīsìd sɛ́ɛ́nb lá.
NEG able have stomach CONJ learn seamstressing DEF
'Akpentenr told her mother she cannot combine pregnancy with learning a trade'

The clause initial *ká* in both (3.148a-b) suggests that these utterances form part of a lager discourse or conversation. They indicate some kind of link between the utterances here and possibly some preceding ones not ruling out additional possibilities of other utterances that may follow them.

3.4.2.4. The conjunction *àmáá, ká*

These conjunctions translate into the English 'but'. The difference between the translation of *ká* as 'and' and 'or' is determined by the context of usage. This means that the connector *ká* translates into both 'and' and 'but' in English.

(3.149) Bà kēná ká pʊ́ tʊ̄m túʊ́má lá.
3PL come.LOC CONJ NEG work work DEF
'They came but did not do the work'

(3.150) a. Bà keñá àmáá bà pʊ́ tʊ̄m túʊ́má lá.
3PL come.LOC CONJ 3PL NEG work work.NOM DEF
'They came but they did not do the work.'

b. ? Bà kēná àmáa pʊ́ tʊ̄m túʊ́má lá.
3PL come.LOC CONJ NEG work work.NOM DEF

It is relevant to also have the subject repeated in the form of a pronoun after the conjunction *àmáá* unlike in instances involving *ká* where one can easily omit it without any form of ungrammaticality.

3.4.2.5. The conjunctions *'bɛ́ɛ́' 'koó'*

The conjunctions *bɛ́ɛ́, kóó* translate into the English form 'or, and either or '(3.151a- b) and when combined with the negative particle pʊ/bo…. *bɛ́ɛ́, kóó* translates to 'neither nor' (3.151c). Unlike *bɛ́ɛ́, kóó* is borrowed from Hausa into Kusaal and mostly used in casual speech.

(3.151) a. Ò kēŋé Bɔ́k bɛ́ɛ Zébíllá?
3SG go Bawku or Zebilla
'Is he gone to Bawku or Zebilla?'

b. Ò dā' né lɔ́r bɛ́ɛ yírɛ́.
3SG buy FOC car or house
'He bought either a car or a house.'

c. Ò pú dā' lɔ̄r bɛ́ɛ yírɛ́.
3SG NEG buy car or house
'He bought neither a car nor a house.'

In all the examples above, the connector functions as a DP conjunction and it is associated with an exclusive interpretation which conveys the semantic logic (a or b but not both). An inclusive interpretation can also be derived by use of the same particles (3.151d). This interpretation is of the semantic logic (a or b or both) (see Noveck et al 2010).

d. Ò pú nyāŋɛ́ kārīm bɛ́ɛ sɔ̄bɛ́.
3SG NEG able read or write
'He couldn't read or write.'

The connectors *bɛ́ɛ́, kóó* are also used in disjunctions where the interpretations could also be either exclusive (3.152a-be) or inclusive (3.152c-d).

(3.152) a. Ò kūōs né búúg bɛ́ɛ ò dā' né pɛ́'óg.
3SG sell FOC goat or 3SG buy FOC sheep
'He either sold a goat or he bought a sheep.'

b. Ò kūōs né búúg kóó ò dā' né pɛ́'óg.
3SG sell FOC goat or 3SG buy FOC sheep
'He either sold a goat or he bought a sheep.'

c. Ò pú kūōs búúg bɛ́ɛ ò pú dā' pɛ́'óg.
3SG NEG sell goat or 3SG NEG buy sheep
'Either he did not sell a goat or he did not buy a sheep or he did none.'

d. Ò pú kūōs búúg kóó ò pú dā' pɛ́'óg.
3SG NEG sell goat or 3SG NEG buy sheep
'Either he did not sell a goat or he did not buy a sheep or he did none.'

3.4.3. Subordinating Constructions in Kusaal

Subordinate clauses in Kusaal are introduced by subordinating conjunctions such as: *yeˊ, káˌ* and *linkaˊ*. They involve the joining together of one or more independent or main clause(s) to one or more independent or subordinate clause(s).

3.4.3.1. The complementizers *yé* and *ká*

Kusaal has two forms of complementizers: *yeˊ* and *kaˊ*. The former is restricted in usage to the verbs of thinking and saying: *miˈ* 'to know' *baŋ* 'to know' *ziˈ* 'not know', *tɛnˈɛs* 'to think', *buˈos* 'to ask' and *yɛl/ye* 'to say'. The similarity between the complementizer *'ye'* and the morphological form of the verb *yɛl/ye* 'say' cannot be overlooked. This provides another instance where a verb of saying *'yɛl/ye'* is grammaticalized into a complementizer *yé* in Kusaal.

(3.153) Ká púˈá lá lɛ̄bīs yé, Àsúmbúl yáˈám máˈáyá
LINKER woman DEF respond COMP Asumbul mind calmed
'The woman replied that Asumbul's mind is now at pease/calm.'

(3.154) Ǹ tɛ̄nˈɛ̄s yé ò bɛ̄ dɔ́ɔ́g lá ní.
1SG think COMP 3SG EXIST room DEF inside
'I think that he is in the room.'

(3.155) Fʊ̀ sà yɛ̄l yé fʊ̀ pʊ̀ mɔ̄r lígídí bɛ́ɛ?
2SG PAST say COMP 2SG NEG have money Q
'Did you say you do not have money yesterday?'

The verbs of saying with the exception of *yɛl/ye* 'say' can occur with *ká* mostly when a warning is being given as in (3.156).

(3.156) Bāŋīm ká fʊ̀ yáá yúúg, ǹ nà kēn ká
know COMP 2SG if delay, 1SG FUT go CONJ
bāsif.
leave.2SG
'Be aware that I will leave you behind if you delay.'

3.4.3.2. The Subordinating Conjunction *'ká'*

ká also translates into the subordinating conjunctions: *then/before/as.*

(3.157) MǸ pāāyaˊ ká fʊ̀ náán kēnaˊ.
1SG arrive CONJ 2SG before arrived

‘I got here before you arrived.’

(3.158) Bà èèntì māk né gbín ká vɔ̄l kùkpárʊ́g.
3PL do measure FOC anus CONJ swallow palm nut
‘You consider your ability before taking decision.’

3.4.3.3. The Subordinating Conjunction *Linka,* dinzug/linzug/alazug

This conjunction translates into English as: ‘reason, why/which, therefore, hence’ and introduces the subordinate clause.

(3.159) Línká bà yē Àsúmbúl mɔ̄r yám
reason/why 3SG say Asumbul has wisdom
hálí lá.
intensifier DEF
‘The specific reason why they say Mr. Rabit is very wise.’

(3.160) Ò pʊ́ mɔ̄r lááfì dínzúg/àlázúg/línzúg ò pʊ̀ kēnáa.
3SG NEG have health CONJ 3SG NEG come
‘He is not well and as a result has not come.’

3.4.4. Relativization

In relativization in Kusaal, the head noun of the relative clause comes in initial position, left-most position, of the relative clause with a clause final determiner *lá* (glossed as DEF) which encodes an interpretation of definiteness on the entire clause. In addition, a particle, *kàn* (glossed as REL), has to appear immediately after the head noun of the relative clause and before the verb when the subject is fronted (3.161). The relativizer forms a compound with the root form of the noun where applicable. There are two forms of non-subject relativization in Kusaal. These are (1) the use of *kàn* with the complementizer *ká* which occurs directly after *kàn* when an element other than the subject is fronted as in (3.161a) and (2) the use of the indefinite markers *si̋el* ‘certain.inanimate’ or *sɔ˙* ‘certain.animate’ in in-situ non-subject relativization where the head noun remains in its original position and directly followed by the indefinite article as in (3.161b).

(3.161) Subject Relativization

a. Ǹ sà ŋyɛ̄ bíbáné sà wǎ˙ lá.
1SG PAST see child-REL.PL PAST dance DEF
‘I saw the children who were dancing yesterday.’

b. Fù sà tūm túúm kàn àn(ɛ) súm lá.
2SG PAST work work.NOM REL COP.be good DEF
'You did the work which was good/You did the good work yesterday.'

(3.162) Object Relativization
a. Bà sà nyɛ̄ búpuŋ́ kàn ká bà sà tīs ø/**ð** lígídi
3PL PAST see lady REL COMP 3PL PAST give ø/3SG money
lá.
DEF
'They saw the lady whom they gave the money to yesterday.'

b. Bà sà nyɛ̄ bà (n)ɛ́ sà tīs búpuŋ́ sɔ́ˡ lígídi lá.
3PL PAST see 3PL COMP PAST give lady INDEF money DEF
'They saw the lady whom they gave the money to yesterday.'

(3.163) a. Túúmkán ká Àdúk sà tūm lá àn(ɛ) súm.
work.NOM REL COMP Aduk PAST work DEF COP good
'The work which Aduk did yesterday was good.'

b. Àdúk n(ɛ́) sà tūm túúm síˡél lá àn(ɛ)
Aduk COMP PAST work work.NOM INDEF DEF COP
súm.
good
'The work which Aduk did yesterday was good.'

A pronominal subject NP in the matrix clause uses a post-subjectival particle *n* or *nɛ* in the Agole and Atoende dialects respectively as marked in examples (3.162b) and (3.163b). This particle is glossed as complementizer. Readers are directed to Abubakari (forthcoming 2018) for a comprehensive discussion on relativization in Kusaal.

3.5. Diachronic and Synchronic uses of *Nɛ* and *KA* in Kusaal

The striking sameness or near sameness between copulas, connectives, complementizers and contrastive focus markers in Kusaal cannot be overlooked. The close phonological and morphological similarities in clausal connectives and focus markers are quite common in African languages with Ghanaian languages being no exception. Fiedler and Schwarz (2005) in their work on five (5) Ghanaian languages: three (3) Kwa and two (2) Gur languages suggest that clausal conjunctions are used in linking together focus constituents and their non-focal parts.

They allude the inter-marriage between particles that function both as connectives and focal markers to grammaticalization process in the languages they studied though they are quick to add that the process is still at its inception stages. Data from Kusaal point to the same direction and further show that the grammaticalization process in this language can be said to be in a far advanced stage if not even completed compared to the languages used by Fiedler and Schwarz (2005). The grammaticalization chain (Stassen 1997:85) in Kusaal as will be shown in this section stretches from two copula verbs *an(ɛ)* 'to be' and *ka"a'* 'to be/have not' to connectives to complementizers to present day focus markers. For the sake of clarity, I will repeat examples of sentences used in the previous section on complex constructions for illustrations. I begin by showing the distribution and meaning of *nɛ* as it is used in coordination, focus constructions and relative constructions and follow same with *ka*.

3.5.1. The uses of *Nɛ*

i. Coordination

(3.164) Àsùmbúl né Àvúlúmvúúl né Àbáá né Àdàyúúg né
Asumbul CONJ Avulumvuul CONJ Abaa CONJ Adayuug CONJ
Àtámpʊ́á yɛ́lá.
Atampʊa matter
'The story of Asumbul, Avulumvuul, Abaa, Adayuug and Atampʊa'

ii. Focus Particle

(3.165) Àsùmbúl né Àkúndúŋ **ń** dà bɛ̄. SF
Mr.Rabbit CONJ Mr. Hyena FOC PAST EXIST.
'There lived MR RABBIT AND MY HYENA.' (not Mr Wolf and Mr Spider or any other animal)

(3.166) Àsùmbúl né Àvúlúmvúúl dāˈ né dáám. NON-SF
Asumbul CONJ Avulumvuul buy FOC alcohol
'Asumbul and Avulumvuul bought ALCOHOL.'(not water or any other thing in addition)

(3.167) Àsùmbúl né Àvúlúmvúúl dāˈ dáám né. IP FOCUS
Asumbul CONJ Avulumvuu buy alcohol FOC
Asumbul and Avulumvuul bought a alcohol.' (not any other activity, this action also evokes surprise)

iii. Relative Clauses

(3.168) Àdúk n(ɛ) sà tūm túúm síˈél lá àn(ɛ) súm.
Aduk COMP PAST work work.NOM INDEF DEF COP good
'The work which Aduk did yesterday was good.'

A pronominal subject NP in the matrix clause of the Relative Clause in (3.169) uses the emphatic form of the pronoun.

(3.169) Fún sà tūm túúm síˈél lá àn(ɛ́) súm.
2SG.EMPH PAST work work.NOM INDEF DEF COP good
'The work YOU did is good.'

Clearly, ***nɛ*** has different distributions matching the diverse functions it plays. The conjunction does not have same interpretation or scope as the focus particle. The use of *n(ɛ)* in relative clauses cannot be directly linked to the conjunction but the emphatic interpretation could have a bearing with the focus marker. I assume from the above situations that *nɛ* as conjunction and as focus marker are different lexical items synchronically though a diachronic relationship can be strongly traced.

3.5.2. The uses of KA

The sentences below are repeated from examples given in the previous section on complex constructions in Kusaal. This is aimed at providing a holistic view of the functions of the KA morpheme in a single glance.

i. Coordination

(3.170) Bà nà dɔ̄l ká pāām lígídí.
2PL FUT follow CONJ reach money
'They will pursue and make money.'

ii. Clause initial linker

(3.171) Ká nànànnnà bɛ̄ lá, bíís gɔ̄síg
LINKER now EXIST LA children see.NOM
káˈá náˈánáá.
NEG.COP easy
'As we speak/in this present days, taking care of a child is not easy.'

iii. Complementizer

(3.172) Bāŋīm ká fʊ̀ yáˡá yúúg, ǹ nà kēn ká bāsíf.
know.IMP COMP 2SG if delay, 1SG FUT go CONJ leave.2SG
'Be aware that I will leave you behind if you delay.'

(3.173) Bà sà nyɛ̄ búpúŋ kàn ká bà sà
3PL PAST see lady REL COMP 3PL PAST
fīs ø/**ò** lígídi lá.
give ø/3SG money DET
'They saw the lady whom they gave the money to yesterday.'

iv. Ex-situ non-subject focus

(3.174) a. Lì ànɛ́ dáám kà Àsúmbúl nɛ́ Àvúlúmvúuˡ dāˡ
it COP.be alcohol FOC Asumbul CONJ Avulumvuul buy
'It is alcohol that Asumbul and Avulumvuul bought.' (not, for instance, water)

b. Dáám kà Àsúmbúl nɛ́ Àvúlúmvúuˡ dāˡ.
alcohol FOC Asumbul CONJ Avulumvuul buy
'It is alcohol that Asumbul and Avulumvuul.'(not, for instance, water)

In all scenarios, KA functions as a clausal connector. In (3.170) it links two independent clauses, whilst in (3.171-174) it introduces the subordinate clauses. However the particle in (3.174) has undergone some phonological change with respect to tone. Whereas the conjunction, the complementizer as well as the clause initial *ká* are marked with high tones, the particle *kà* after the fronted focused constituent has a low tone. The argument here is that the conjunction *ká* has metamorphosized into an inherently emphatic clause initial *ká* and further into a complementizer which is equally emphatic and restricted in usage to only ex-situ relativized head nouns compared to the default complementizer *yé* in the language. The inherently emphatic *ka* is further reanalyzed into a focus marker when it occurs after a fronted non-subject constituent in Kusaal where an interpretation proposed to be a contrastive focus interpretation is encoded instead of mere emphasis.

The proposed grammaticalization of the conjunctions *nɛ́* and *ka̗* into focus particles is not unique to Kusaal since this has been attested as one prominent feature in information structure particles in mostly African languages (Heine and Kuteva 2002: 95, 331; Heine and Reh 1984:181-2; Stassen 1997:85; Ines and Schwarz 2005:137; Boadi 1974; Ameka 1992). In a more recent observation, Mwinlaaru and Yep (2017) discuss the grammaticalization of demonstrative into focus particles in Lobr Dagara, a dialect of Dagaare. From the table illustrated below, I conclude by suggesting a pattern of desemanticization of focus particles in Kusaal from the copula verbs

àn(ɛ) 'to be' and the negative polarity copula verb *ka˝a´* 'to be/have not'. These particles trigger contrast and or exhaustive focus interpretation when they occur with a focused constituent. They are analysed as focus particles following the chain presented in table (3.17) below.

Table 3.17. Grammaticalization Chain

Lexical items	Copula >Conjunction > Complemtizer > Focus Particle			
Copula 'to be'	àn(ɛ́)	nɛ́	nɛ́	ń, nɛ́
Copula+Neg 'to be/have not'	ká˝á	ká	ká	kà

This section has thrown some brief light on complex constructions including SVCs, coordinating constructions, subordinating constructions as well as relative constructions. The interesting aspect in this section is the constant appearance of the particles *ka*, and *nɛ* in coordinating constructions, subordinating constructions and non-subject relative constructions not forgetting the fact that the same particles are used as focus markers in Kusaal. The conclussion arrived at in this section points to a diachronic relationship between these particles. It is suggested that these particles have their roots from copulas to conjunctions to complementizers to present day focus markers. The next chapter will further show in details the uses of these particles in various grammatical constructions in Kusaal.

3.6. Chapter Summary

This chapter has given a concise introduction to the grammar of Kusaal, a background deemed necessary for the understanding of major issues in this dissertation. It started out by looking at the phoneme inventory of Kusaal discussing to an appreciable length elements that are phonemic and those that are not depending on the phonotactic constraints in the language. The chapter has also shown some phonological processes such as vowel deletion, epenthesis and labialization in Kusaal. On a more important note, tone in Kusaal is shown to be phonemic, this is crucial as it plays a role in revealing the differences between particles that may otherwise be considered as the same. More important for the discussion in the next chapter is the nominal phrase in conjunction with the verbal phrase in Kusaal. Whereas a sentence has a rigid SVO word order in the language, information structural conditions such as topic and focus markings alter the constituent order of elements to mostly the left periphery position of the constructions in both topics and in ex-situ focus constructions. Finally, the discussion on particles especially post verbal particles in connection to coordinating, subordinating and relative constructions in Kusaal form part of issues that are very crucial for the next chapter. The synchronic use of the particles *n´*, *nɛ́* and *ká* as contrastive focus markers establishes the fundamentals for our next chapter on information structure in Kusaal.

Chapter 4

Information Structure and Q-Formation in Kusaal

4.0. Introduction

This chapter has two main objectives: (1) to give a comprehensive account of focus and topic constructions in Kusaal. This is done by giving detailed description of structural and lexical encodings of these concepts as they occur in Kusaal. Where relevant, data from other Mabia languages will be compared to what is observed in Kusaal solely for purposes of giving a general picture on how Kusaal identifies or digresses syntactically, morphologically and semantically from other sister languages. (2) To look at questions formation in Kusaal and to draw a parallelism between focused wh-phrases and non-focused wh-phrases in the language. The chapter aims at serving a dual purpose by, first, providing the basis upon which the analysis of information structure will be carried out in the next chapter. Secondly, it gives a cross-sectional overview of forms of dislocations in Kusaal. It is important to include that, though I discuss question formation in Kusaal, it will not be part of the analysis in chapter five.

The relevance of this discussion cannot be overemphasized since till now little is known in the literature on a comprehensive analysis of this nature on Kusaal thus in the areas of Information Structure (focus constructions and topic constructions) in particular and non-argument constructions in general. Kusaal just as other Mabia languages is endowed with a rich oral tradition which ensures archaic forms of the language are reserved for studies of this nature.

Both morphological and syntactic strategies for marking Information Structure and other constructions such Wh-question formation in African languages have contributed significantly to debates on Information Structure by revealing overt morphological markers for expressing or modeling such constructions. The need to delve deeper and get to know what many more African languages have to offer cannot be overlooked.

The chapter is divided into five sections. Section 4.1 presents a general overview of information structure as related in the literature with further explications supported with data from Kusaal. Section 4.2 explores focus constructions in Kusaal though mention is made of the phenomenon as it occurs in related Mabia languages. Section 4.3 further looks at topic constructions in Kusaal in particular and Mabia languages in general and coming out with generalizations that explain the concept in Mabia languages. Section 4.4 discusses question formation in Kusaal while section 4.5 is the summary of issues discussed in the chapter.

4.1. Information Structure

Studies in information structure date as far back as Paul (1880) and till date no general consensus has been reached in both terminology and definition of the concept. Halliday (1967) coined the

term information structure which is recently followed by Lambrecht (1994).Other terms referring to the same concept include Information Packaging (Chafe 1976), and Discourse Pragmatics and Informatics (Vallduví 1990b) to mention but a few.

Information structure (IS) concerns the structuring of linguistic information whilst prioritizing specific information units for maximum discourse effect. Halliday (1967:200) argues that information structure deals with the organization of language (text/spoken) into units which are not constrained by the constituent structure. Information structure is therefore independent of the constituent structure as the latter does not determine the order of the former. Information structure hence is not about the information unit to be specific but rather about how it is transferred and interpreted by the interlocutor (hearer). What seems as a direct support of this view is, Chafe (1976:27)'s 'packaging' where information structure is more concerned about how the content is transmitted than the content itself. The same information units in a sentence may be packaged or ordered differently depending on the background as well as the targeted objectives the message is intended to convey. The sentences in (4.1-2), below, virtually contain the same information units but different word order; therefore they express different information structures in Kusaal.

(4.1) a. Bíís lá sà dī dííb lá sú'òs.
children DEF PAST eat food DEF yesterday
'The children ate the food yesterday.'

b. Yá'á àn bíís lá, bà sà dī dííb lá
if COP.be children DEF 3PL PAST eat food DEF
sú'òs.
yesterday
'As for the children, they ate the food yesterday.'

c. Yá'á àn dííb lá, bíís lá sà dī lī
if COP.be food DEF children DEF PAST eat it
sú'òs.
yesterday
'As for the food, the childrey ate it yesterday.'

d. Yá'á àn sú'òs, bíís lá sà dī
if COP.be yesterday children DEF PAST eat
dííb lá.
food DEF
'As for yesterday, the children ate the food.'

The subject, object as well as the adverbial in (4.1) have each been dislocated to the left in (4.1b), (4.1c) and (4.1d) respectively. The topic constituents in examples (4.1b) and (4.1c) are replaced by resumptive pronouns at their respective base positions. The sentence in (4.1b) is about the children, whilst the sentence in (4.1c) is about the food and finally the sentence in (4.1d) is about yesterday. The set of sentences in (4.2a-c) are for further illustration.

(4.2) a. Bíís lá ń sà dī dííb lá sú^{l}òs.
children DEF FOC PAST eat food DEF yesterday
'It is the children that ate the food yesterday,'

b. Dííb lá kà bíís lá sà dī sú^{l}òs.
food DEF FOC children DEF PAST eat yesterday
'It is the food that the children ate yesterday.'

c. Sú^{l}òs kà bíís lá sà dī dííb lá.
yesterday FOC children DEF PAST eat food DEF
'It is yesterday that the children ate the food.'

The object in (4.2b) and the adverbial in (4.2c) have undergone displacement to the left while the subject unit in (4.2a) is focused in-situ with the particle *ń*. These strategies have contributed in changing the discourse interpretations of these units. In effect the various discourse functions played by these sentences, (4.2a-c), can be illustrated using the answers to the following questions: sentence (4.2a) answers the questions: 'Who ate the food yesterday?', while sentence (4.2b) answers the question: What did the children eat yesterday?' and sentence (4.2c) responds to the questions: 'When did the children eat the food?'

Consequently the sentences in (4.1b-d) and (4.2a-c) share a common truth-value with the main proposition in (4.1a). Thus all these sentences will only be true if there are children who ate a certain food yesterday. The differences between the sentences in (4.1b-d) and (4.2a-c) correspond with the information structural unit topic and focus respectively. Each sentence in (4.1b-d) has a different topic whilst each sentence in (4.2a-c) has a different focus.

In reemphasizing the importance of structural organization of information units for the optimization of discourse transfer, Dalrymple and Nikolaeva (2011:45) explain the notion of information structure as *"the level of sentence organization which represents how the speaker structures the utterance in context in order to facilitate information exchange. Specifically, it indicates how the propositional content of an utterance fits the addressee's perceived state of knowledge at the time of utterance*".

On his part Lambrecht (1994:5) defines IS as "*That component of sentence grammar in which propositions as conceptual representations of states of affairs are paired with lexicogrammatical*

structures in accordance with the mental states of interlocutors who use and interpret these structures as units of information in given discourse contexts."

In summary, information structure, as defined in this work, relates to a speaker's ability to tie together her propositional content (words and phrases) in sentence organization such that she is able to transfer new as well as salient information whilst incorporating the hearer's (interlocutor's) mental state in decoding the various information units for maximum discourse effect. Thus information structure is generally understood as a process that involves knowledge build up taking into account the known and the unknown in the course of conversation in attempt to maximize information transfer.

Information structure is modelled around several structures in the literature with researchers such as Vallduví and Engdahl (1996) proposing a file card system identical to Heim (1982) in which information about discourse referents is updated in the course of conversation. Recent transformational approaches such as the proposal of Krifka and Musan (2012) see the incorporation of information structure notions such as topic, focus in addition to other informational labeling at the constituent structure. The following examples illustrate such a situation where focus (4.3) and *aboutness* Topic (4.4) are linked are linked to specific syntactic positions in Kusaal.

(4.3) a. [Dííb]$_{f}$ kà bíís lá dī.
food FOC children DEF eat
'It is food that the children have eaten.'

b. Bíís lá dī né dííb lá.
children DEF eat FOC food DEF
'It is the food that the children have eaten.'

(4.4) [Yáˈá àn bíís lá,]$_{abT}$ bà dī dííb lá.
if COP.be children DEF 3PL eat food DEF
'As for the children, they have eaten the food.'

Information structure as shown above does not constitute an entirely independent structure. The marking of topic and focus scopes via the use of brackets coupled with indices along with optional indications of prosodic stress serves to combine, somewhat haphazardly, the content of information with the order of constituents, not excluding speech features (also see Sakurai 2014:74). The next chapter will show the disadvantages of such approaches as it explores analysis of this nature in LFG.

4.1.2. Components of Information Structure: Terminological Explanations and Assessments

There are many proposals in the literature in attempts to coin terminologies to capture various information structure components. Levinson (1983) asserts that "terminological profusion and confusion, and underlying conceptual vagueness, plague the relevant literature to a point where little may be salvageable." As indicated by Vallduví (1990b:35), all approaches aimed at proposing what he refers to as 'informational articulation of the sentence' share a common factor which is that they all recognize that an information structured proposition or sentence has 'some sort of informational split between a more informative part and a less informative part.' Where the split is as well as the type of split has been and still remains the point of controversy. In this section, I intend to explain the ideas expressed by some of these terminologies which are commonly found in most literatures on information structure. The list as provided below (see Büring 1997:29, Vallduví 1990:36, Zerbian 2006:6-10) are also not exhaustive. What will be used in this chapter are the pairs focus/background and topic/comment. The others may not surface as much as the two mentioned.

(4.5)

i. Topic	Comment
ii. Topic	Focus
iii. Theme	Rheme
iv. Given/Old	New
v. Background	Focus
vi. Presupposition	Focus

4.1.2.1. Topic/Comment

Topic, most commomly, expresses some element of 'aboutness' (Reinhart 1981; Strawsson 1964; Kuno 1972; and Dik 1978) thus it answers the question 'what is the sentence about?' whilst comment refers to the rest of the sentence. In other words a comment refers to a predicate whiles the topic refers to what the predicate is about. The split between a topic and comment is realized with a pause in languages like Kusaal, English, Hausa and Akan as demonstrated in (4.6-9) below. In addition to this, there are language specific strategies used in marking topic comment relationship. There are languages that employ the use of overt topic markers against those that are unmarked. Other strategies also include the use of special phrases, the use of cleft sentences as well as the use of left dislocations. In the following examples, I demonstrate instances where topic is overtly marked and where it is marked with a pause. The English translations also demonstrate the use of special phrases to mark the points of split between topics and comments in given utterances.

(4.6)	Habib	de,	yaa	tafi.	Hausa
	Habib	TOP	3.masculin.pro	go.PERF	

'As for Habib, he is gone.'

(4.7) Ama diɛ, ɔ kɔ. Akan
Ama TOP 3SG go.PERF
'As for Ama she is gone.'

(4.8) Yáˈá àn bíig lá, ò gāādyá Kusaal
if COP.be child DEF 3PL go.pass-PERF
'As for the child, he is gone.'

(4.9) Óná, ò gāādyá Kusaal
3.SG.EMPH.ACC. 3SG go.pass-PERF
'As for him, he is gone.'

In Hausa and Akan, the particles *de* and *diɛ* are respectively used as topic markers. These particles follow the topic and the comment part of the sentence then follows the particle. Kusaal on the other hand uses the special topic phrase as in (4.8) or a pause as in (4.9).

4.1.2.2. Theme/Rheme

The terms Theme/Rheme are no different from the pair topic/comment as linguits tend to use both pairs synonymously (see Halliday 1967:211-212). The notions of psychological subject/psychological predicate, topic/comment, theme/rheme all refer to 'aboutness' and the proposition of the 'aboutness' respectively. Other linguists including (Büring 2016; Roobert 2011; Jacobs 2001) share divergent opinions on these perspectives. These will be further discussed in section 4.3.2.

4.1.2.3. Given/New

Given or old information is the knowledge an interlocutor is assumed to already have at the time of utterance whilst new information refers to the knowledge a hearer does not have which is expected to be newly introduced in the conversation. Old and new information can be compared to the pedagogical approach of teaching from the known to the unknown considering the way Lambrecht (1994:45/6) puts it:

> "Whatever is assumed by a speaker to be NEW to a hearer is information which is ADDED to an already existing stock of knowledge in the hearer's mind. The hearer's mind is not a blank sheet of paper on which new propositions are inscribed. Conveying information therefore requires constantly changing hypotheses on the part of the speaker about the state of knowledge of the hearer as speech progresses."

‘Old information’ and ‘new information, as used by Lambrecht (1994) are, restricted to aspects of information associated to propositions. ‘Old information’ thus, is the sum of “knowledge’” evoked in a sentence which a speaker assumes to be already available in the hearer’s mind at the time of utterance-“the old”, “the given”, or “the presupposed” (from Dahl 1976-145 cf Lambrecht 1994:50)-while “new information” is the information introduced to that knowledge by the utterance itself-“the new” in Dahl’s terms. Lambrecht (1994) replaces “old” and “new” with “presupposition” and “assertion” respectively.

Pragmatic Presupposition- The set of propositions lexicogrammatically evoked in a sentence which the speaker assumes the hearer already knows or is ready to take for granted at the time the sentence is uttered.

Pragmatic Assertion: The proposition expressed by a sentence which the hearer is expected to know or take for granted as a result of hearing the sentence uttered. (Lambrecht 1994:52)

A quite similar perspective to Lambrecht (1994) is drawn from Chafe (1971)’s distinction between given/new information as:

“Given (or old) is that knowledge which the speaker assumes to be in the consciousness of the hearer at the time of the utterance. So–called new information is what the speaker assumes he is introducing into the address’s consciousness by what he says.”

Equally interesting is the perspective shared by Halliday (1967:207) where information focus is assumed to assign the function ‘new’ to what is within its domain and what lies outside its domain can be said to have the function ‘given’; where the distinction arises between unmarked and marked focus.

(4.10) [Bʊ́ʊ́g]$_f$ kà dáú lá sá dá^{l} sú^{l}òs.
goat FOC man DEF PAST buy yesterday
‘It was a goat that the man bought yesterday.’

The example in (4.10) implicitly responds to a question like ‘what did the man buy?’ (or ‘did the man buy a sheep yesterday etc?’) . In response to this, *bvvg* ‘goat’ is in the focus domain and overtly marked for focus with the particle *ka*̀. The rest of the sentence presupposes that the man bought something (knowledge known/ old/given) but the identity of what is bought is either in doubt or not known by the questioner.

4.1.2.4. Background/Focus

Focus evokes a contrasting proposition or set of propositions (Rooth 1996). Focus is assumed to be the part of the utterance that indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions. The other constituent parts of the sentence are then referred to as the background (Krifka 2007).

(4.11) Q. Àdúk sà kēŋ yá sú'òsé[12]?
Aduk PAST go where yesterday
'Where did Aduk go yesterday?'

Ans. Àdúk sà kūl sú'òs.
Aduk PAST go.home yesterday
'Aduku went HOME yesterday' without nɛ

From the question in (4.11) speaker A wants to find out which proposition from the propositions 'Aduk went to *p*' is true where *p* varies with regard to places. Speaker B chooses from the possible set of places and indicates the choice by means of prosodic stress. Options are available to mark contrast as well as exhaustivity in focus in Kusaal as will be discussed in subsequent sections.

On the contrary, other linguists in this field hold the opinion that, the evocation of alternatives is mainly restricted to identificational/contrastive focus (Halliday 1967; Chafe 1976; Szabolcsi 1981; Rochemont 1986; É. Kiss 1998; Vallduví & Vilkuna 1998, and Molnár 2002). In this regard, É. Kiss (1998), for instance, differentiates between two types of focus: "information focus" and "identificational focus". The two are defined as follow and further supported with data from Kusaal.

> ''If a sentence part conveys new, nonpresupposed information marked by one or more pitch accents – without expressing exhaustive identification performed on a set of contextually or situationally given entities, it is a mere information focus." (É. Kiss (1998:246)

(4.12) a. Q: Àdúkú bū' àná'óné?
Aduku beat who
'Who did Aduku beat?'

b. Ans: Àdúkú bū' **bíígì lá.**
Aduku beat Asibi DEF.
'Aduku beat *the child*.

In the answer to question in (4.12a), (4.12b) conveys new, nonpresupposed information; since the questioner has no knowledge of the information or the response the respondent is going to offer. The focused items do not convey any form of contrastive/exhaustive interpretation and no overt morphological focus particles are used (Abubakari 2016a).

[12] *sú'ósé/ sú'ósì* 'yesterday' is the long form of *sú'òs* often used for emphasis in questions and negation. See section 2.4.1 of chapter 3.

''An identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds." (É. Kiss 1998:249)

(4.13) Q. Ànɔ́ˈɔ́né púˈá kà fʊ̀ īēdá: Àdɔ́lúbá bɛ́ɛ Àdúkɔ́?
who wife FOC 2SG. search Adɔluba or Adukɔ
'Whose wife are you after: Adɔluba or Adukɔ?'

Ans: M̀ īēd né Àdɔ́lúb a púˈá.
1SG. search FOC Adɔluba wife
'It is *Adoluba's wife* I am after.'

The question in (4.13Q) is an example of a *wh*-focus construction with a set of alternatives. The response equally conveys a strong contrastive focus interpretation by excluding other alternatives from who the person is looking for to *Adoluba's wife* and not *Aduku's wife* (see Abubakari 2016a).

The concise descriptions of the various terminologies mentioned above are meant to inform as well as refresh the memories of readers on some of the common terminologies in the literature on IS. As previously indicated, discussions in this chapter is narrowed to only two of these notions: (i) the notion of focus which marks the new or contrasting information in a proposition versus the background and (ii) the notion of topic which refers to the entity the proposition is about versus the provided information (comment). Section 4.2. looks at issues related to focus constructions in Kusaal whilst section 4.3. considers issues related to topic construction in Kusaal and finally, section 4.4 discusses question formation and the relationship between focused wh-phrases and non-focused wh-phrases with their corresponding answers pairs in the language.

4.2. Focus Construction in Kusaal

The definition of focus adopted in this work is an amalgamation of Rooth (1992, 1996) and É. Kiss (1998) influenced by the data and examples as available in Kusaal. All focus constructions in Kusaal are understood to evoke alternatives out of which one is chosen. All focused constituents in Kusaal receive special intonational prominence in addition to either morphological or syntactic mode of expression. However, the morphological or syntactic mode of focus expression in Kusaal is directly linked to a particular focus interpretation.

(4.14) Assuming a context where a stranger wants to buy medicine in town and wants to find where that can be possible.

a.Q: Yà ká bà kūōs tíˈímá Bɔ́k?
where FOC 3PL sell medicine Bawku
'Where do they sell medicine in Bawku?'

b. Ans.1: Bà kūōs tíˡímá dáˡán lá.
3PL sell medicine market. LOC DEF
'They sell medicine in the market/you can buy medicine in the market.'

c. Ans.2: # Bà kūōs tíˡímá **nέ** dáˡán lá.
3PL sell medicine FOC market.LOC DEF
'They sell medicine IN THE MARKET/It is in the market that they sell medicine.'

Whereas the interpretation in (4.14b) is non-exhaustive and felicitous, the interpretation in (4.14c) is exhaustive and infelicitous in this context due to the presence of the particle *né*. The proposition in (4.14b) serves as the correct answer to the 'mention some' context in (4.14i).

(4.15) In another context, assuming food is being shared per groups in a gathering and there is doubt as to which group has eaten and which has not. To clarify the situation, the following question is posed:

a. Ànɔˡɔ́n dī dííb?
who eat food
'Who has eaten (food)?'

b. Bíís lá dí dííb.
children DEF eat food
'The children have eaten (food).'

c. Àyéí, dáp lá **ń** dī dííb.
no men DEF FOC eat food
'No, it is the men who have eaten (food).'

d. Púˡáblá **#(ń)** dáásíˡérέ dī dííb mέn.
woman DEF FOC perhaps eat food also/too
'Perhaps the women too have eaten.'

Although the focused constituents: *biis la* 'the children', *dap la* 'the men' and *puˡab la* 'the women', may be assumed to have been selected from a pool constituting of several alternatives, *dap la* 'the men' receives an exhaustive focus interpretation due to the presence of the subject focus particle *ń* as against *biis la* 'the children' and *puˡab la* 'the women' which have non-exhaustive interpretations. It is ungrammatical to have *ń* with the additive particle *mɛn* 'too' as will be discussed further, later, in this dissertation. (4.15c) stands as the correct answer to the question in (4.15a) since it provides an answer which exhaustively excludes all other alternatives

be it speculative (4.15d) or not (4.15b). The need to differentiate between propositions such as (4.15c and 4.15b) where Kusaal uses overt morphological particles against the other which is morphologically null informs the need to differentiate between exhaustive focus in (4.15c) and information focus in (4.15b) in several aspects of this work. The notion of focus as denoting alternatives is more profound in exhaustive focus constructions in Kusaal compared to information focus judging from the respective interpretations they generate. All exhaustive focus constructions with the particles *kà, ń* and *né* are also associated with the interpretation of contrast in question-answer pairs, in corrections etc. This will be observed in most instances in this chapter and in the next chapter.

It is also important to add that the notion of focus as denoting alternatives should not be confused with the notion of new information since the later may not necessary imply the former in all cases as illustrated below.

(4.16) Q: a. Bíís lá sà dī bɔ́; múì béé béŋa?
children DEF PAST eat what rice or beans
'What did the children eat; rice or beans?'

Ans.b. Bíís lá sà dī **béŋa.**
children DEF PAST eat beans
'The children ate BEANS.'

(4.17) Q: a. Bíís lá sà dī béŋa lá yáánέ?
children DEF PAST eat beans DEF where
'Where did the children eat the beans?'

Ans. b. Bíís lá sà dī béŋa lá **dɔ́ɔ́gín** **lá**
children DEF PAST eat beans DEF room.LOC DEF
tɔ́ˈɔ́tɔ́.
hurriedly
'They ate the beans hurriedly IN THE ROOM.'

The example in (4.16) is an illustration that focus does not necessarily need to be new information. Likewise the example in (4.17) indicates that it is not all new information in a given proposition that mark focus. Thus, in (4.17b) both the adverb of location and the adverb of manner are new information but the only focused constituent, usually expressed with intonational prominence and represented here in bold, is the adverb of location which corresponds to the *wh*-question constituent: *yáánέ* 'where' (=focus). *Wh*-constituent questions are assumed to express the notion of narrow focus where focus is expressed on a single syntactic constituent as against the notion of wide focus where focus size can be larger covering

constituents like a VP or an entire IP. The dichotomy between the two forms of foci are easily delineable in Kusaal using the particle *né* which occurs before a focused DPs and AdvPs (4.18) and after focused VPs and IPs (4.19). It is important to add that, the use of *né* is obligatory when exhaustive interpretation is required (4.18b) or when something other than the expected (a surprise) happens (4.19b)

(4.18) Q: a .Àdúk kēŋ yáánɛ́?
Aduk go where
'Where is Aduk gone to?"

Ans.b. Àdúk kēŋ (né) **dáˈán.**
Aduk go (FOC) market.LOC
'Aduk went to THE MARKET/ it is to THE MARKET that Aduk is gone to.'

(4.19) Q: a. Bɔ́ māālɛ́?
what happen
'What happened?'

Ans. b. **Àdúkú kēŋ dáˈá né.**
Aduku go market FOC
'ADUKU WENT TO THE MARKET.'

Additionally, the importance between narrow and wide focus is relevant as it draws a difference between the types of alternatives they each evoke. Whilst possible alternatives for the focused adverbial in (4.18) could have been any member of the following referents [farm, home, school etc], possible alternatives for (4.19) could also involve any member of the following events or activities [Asibi ate the food, the boy fell down, the man sold the house etc]. The answer (4.19b) additionally implicitly conveys some notion of surprise which is out of hearer's expectation (Zimmermann 2008). It is used in an unexpected situation where for instance, men are forbidden to go to the market and Aduk (being a man) defies the order.

Most of the discussions, especially the tests for exhaustivity, in this section are taken from Abubakari (2016a) with slight modification when necessary. This section serves as a further development from Abubakari (2016a) where the syntax and semantics of the particles *kà, ń* and *né* are argued to be used for expressing contrast and exhaustivity in Kusaal anytime they are used in a construction with focus interpretation. Unlike the particle *kà* which is obligatory and used in ex-situ non-subject focus constrictions, the particles *ń* and *né* are used for in-situ subject focus and non-subject focus respectively. Their use is associated with exhaustive focus interpretation. Ex-situ focus is always associated with exhaustive interpretation, a most probable explanation for the obligatory use of the particle *kà*. The grounds for these assertions are premised out of the

observed syntactic and semantic properties exhibited by these particles in Kʊsaal. Even though these particles perform similar functions compared to grammatical focus markers by triggering focus related interpretations, they differ significantly from a default grammatical focus marker on the following grounds: First, the particles *kà*, *ń* and *né* are not default grammatical focus elements like *lá* and its variants in Dagaare where the default focus marker must obligatory occur in all declarative constructions (Bodomo 1997) when no contrastive or exhaustive focus interpretations are required. Second, the presence of these particles has a direct semantic impact on the interpretation of the focused constituent. They either cause an exhaustive/contrastive interpretation of the focused item or the focused status of the constituent could be said to cause the appearance of these particles. They are excluded in non-exhaustive environments such as 'mention-some' context or in a context where a property is known to hold more than the focused entity (Hartmann & Zimmermann 2007:242). In the following subsections, I give brief discussion on each of these particles and follow with some tests to ascertain whether indeed these particles are associated with exhaustive focus interpretation in Kusaal.

4.2.1. Focus particles and focus sensitive particles in Kusaal

In a context involving focus constructions, focus particles are particles that mark focus, but otherwise have no meaning. Focus-sensitive particles, on the other hand, are particles that may or may not occur 'in addition' to whatever a language does to mark focus, and contribute additional meaning when present, usually exclusivity or additivity. In addition to the focus particles: *kà*, *ń* and *né* other observed particles that express similar interpretations are the adverbial particles: *máˈáá/ máˈáánέ* "only, just, alone, *kʊn kʊn* 'just' *zaŋ zaŋ* 'only and the additive particles: *mén* 'also, too', *yáˈás* 'else, again' which are referred to as focus-sensitive particles in Kusaal. In this section, I give a brief discussion on each of these particles and the way they influence interpretations of focused constituents.

4.2.1.1. The particle *kà*

The particle *kà* is a focus particle in Kusaal and it is used for ex-situ focus marking. It occurs only when the focused constituent is moved to the left periphery position of the sentence. *Kà* immediately follows the focused item and precedes the verbal element. In cases where other preverbal elements are used in the construction, *kà* precedes all those elements and rigidly maintains its slot directly after the focused constituent (4.20a).

(4.20) Q: Bɔ́bún kà púˈá lá sà dāˈ?
what FOC woman DEF PAST buy
'What did the woman buy?'

a. Súmá lá kà púˈá lá sà dāˈ.
groundnut DEF FOC woman DEF PAST buy
'It's the groundnut the woman bought.'

b. * Súmá lá púˈá lá sà dāˈ.
groundnut DEF woman DEF PAST buy
Lit.: 'it's the groundnut the woman bought.'

c. * Súmá lá púˈá lá sà dāˈ kà.
groundnut DEF woman DEF PAST buy FOC
Lit.: 'it's the groundnut the woman bought.'

It is ungrammatical to omit *kà* after the fronting of the focused constituent (4.20b) and also it is ungrammatical for it to occur anywhere apart from the slot adjacent to the fronted constituent (4.20c). The interpretation of exhaustivity is assumed to be triggered by both the syntactic reordering of the focused constituent along with the particle *kà*. The exhaustive interpretation is a strong assertion on the truth conditional status of the utterance which triggers a non-cancelable (conventional) implicature. Should the focused constituent be left in-situ without any syntactic and morphological changes, the truth condition remains same but the exhaustive impact is lost. Such contrasts are used for managing expected hearer-resistance e.g. where the hearer believes something different (Zimmermann 2008).

The particle *kà* can also co-occur with other exhaustive adverbials in the same sentence (4.21a). It is quite obvious that *kà* does not contribute any meaning that *máá* 'only' does not already provide as illustrated in (4.21b) where *kà* is deleted but the meaning of the sentence remains unchanged. Compare examples (4.21a-b) to example (4.20a).

(4.21) a. Súmá lá máá kà púˈá lá sà dāˈ.
groundnut DEF only FOC woman DEF PAST buy
'It's only the groundnut the woman bought.'

b. Púˈá lá sà dāˈ súmá lá máá.
woman DEF PAST buy groundnut DEF only
'It's only the groundnut the woman bought.'

4.2.1.2. The particle ǹ

Subject constituents can be marked for focus in-situ with the particle *ǹ*. The particle occurs after the subject and before any other preverbal element and the verb. The use of the particle *ǹ* is associated with an interpretation of exhaustivity. From the general socio-cultural perception of speakers of Kusaal where things that are generally conceived as meek and feeble are associated with the feminine gender as opposed to things that are conceived as strong being associated with masculinity. The use of the focus particle in (4.23) excludes any other potential individual (a

woman or a child) as the person in the room to a man who is also not just any ordinary man but a brave man.

(4.22) Dáú bɛ́ dɔ́ɔ́gín lá.
man EXIST room.LOC DEF
'There is a man in the room.'

(4.23) Dáú ń bɛ́ dɔ́ɔ́gín lá.
man FOC EXIST room.LOC DEF
'It is a man that is in the room (rather than a woman).'
'That is a brave man in the room (not a coward (man)).'

The existential interpretation associated with (4.22) is cancelled by (4.23) which then excludes any other potential man who could be the one in the room to a specifically narrowed interpretation of a man (not a woman) in addition to which the person in the room is not just any mere man but a brave one for that matter.

The overwhelming use of the particle in folktales and other oral literary performances indicates its relevance in marking exhaustivity and other pragmatic related interpretations. A lot of the introductory lines in folktales which seem to introduce the protagonist(s) in the story use the particle *ǹ*. The use of this particle conveys an interpretation which gives so much attention to the lead character against other minor characters. It narrows the protagonist in the story to the one(s) mentioned in the initial lines and indeed from the beginning to the end, the story is woven around these main characters mentioned in the introduction although other minor characters may be included. Below are three opening sentences of folktales where the particle *ń* is used compared to additional two where the particle is absent.

i. *Niŋ kvvdiba atanˈ yɛla* 'The story of three murderers' (Akon and Anaba 2013:24)[13]

(4.24) Dápá àtánˈ **ǹ** dà bɛ̄. Bà dà ànɛ́ dápkándá súˈúŋà.
men three FOC PAST EXIST 3PL PAST COP men.giant well
'There were THREE MEN. They were really giants.'
(The three men are the protagonists and this story is entirely about them and not any other number of other individuals for examples 'women' or 'children').

[13] All folktales are originally in Kusaal authored by Akon and Anaba (2013) while all tone markings, glosses and translations are by the author of this dissertation.

ii. *Da basi fv tvvm kvdirɛ* 'Do not leave your old ways' (Akon and Anaba 2013:10)

(4.25) Àzáŋkúárí **ń** dà bɛ̄. Ká dáár yínné ká
Mr.wolf FOC PAST EXIST. LINKER day one CONJ
ò yɛ̄lī ò yídím yé, dʊ́nná,
3SG TELL 3SG.POSS house.people, COMP today
ón nà kēŋ màkká mɛ́n.
3SG.EMPH FUT go Mecca too
'There lived MR WOLF. One day he told his household that he was also going to Mecca (Saudi Arabia).' (Mr wolf is the protagonist and his housemates are minor characters. This story is about the lifestyle of the wolf rather than the rabit r hyena)

iii. *Àsúmbul̀ nɛ́ Àkúnduŋ́* (Akon and Anaba 2013:17)

(4.26) Àsúmbúl né Akúndúŋ **ń** dà bɛ̄. Kà
Mr.rabbit CONJ mr.hyena FOC PAST EXIST LINKER
púˈásàdȉr mɛ́ bɛ̄.
young-lady too EXIST
'There lived MR RABBIT AND MY HYENA. There also was a young-marriageable lady.' (Rabbit and Hyena (rather than wolf and spider) are protagonists who fight to win the love of a lady (the minor character))

iv. *Àpvźɔtyɛl̀ 'The fearless'* (Akon and Anaba 2013:50)

(4.27) Dáú dà bɛ̄ mɔ̄rì ò bírȉbíŋ, ká bííg
man PAST EXIST have 3SG.POSS son CONJ child
lá yúˈúr būōn yé Àpúzɔ́tyɛ́l.
DEF name call COMP Apʊzɔtyɛl
'There lived a man who has a son and the name of the child was Apʊzɔtyɛl.'
(Title is the name of son but story begins with father and adds the son.)

v.Dau nɛ o pu'a yimmir A man and his only wife' (Akon and Anaba 2013:39)

(4.28) Dáú dà bɛ̄ mɔ̄rì ò púˈá yímmír, ká
man PAST EXIST have 3SG.POSS wife only CONJ
púˈá lá yē ón pù lɛ́m bɔ̄ɔ̄d yé
woman DEF say 3SG.EMPH NEG+FUT again want COMP

ò	síd	lá	dī	púˡá	yáˡásɛ́….
3SG.POSS	husband	DEF	marry	woman	again

'There lived a man with his only wife who said she does not want the husband to have an additional wife…' (Characters in this story are diverse including)

There are clear structural and semantic distinctions between the introductory sentences with *n´* and those without it. The sentences with *ǹ* do not form compounds or complex sentences with their subsequent sentences. They end with full stops and the clause initial linker, *ká* (see subsection 3.4.2.3 of chapter three), is used in introducing the next sentences. On the contrary, the sentences without *n´* form compound sentences with their subsequent sentences. They mostly end with a pause and the VP conjunction is then used to link the second parts of the compound sentences. The fact that our folktales are usually centered on particular characters explains the use of the exhaustive particle which ordinarily narrows attention to the lead character while others follow as minor ones.

4.2.1.3. The particle nɛ́

The particle *né* is used for in-situ non-subject focus. It occurs before focused DPs, and PPs but after VPs and IPs. The use of *né* correlates with exhaustive focus interpretation of the focused constituent. Assuming a context where a school child is seen crying by the road side with a friend standing by him. A passer by asks to know what is wrong with the child as in (4.29a), and another gives the response in (4.29b) but the friend of the child corrects the wrong answer with the response in (4.29c).

(4.29) a. Bɔ́ dáˡámìd bííg láá?
what worry child DEF
'What is wrong with the child?'

b. Kɔ́m mɔ̄r ò.
hunger have 3SG
'He is hungry'

c. Àyéí, kɔ́m pù mɔ̄r ò, ò lígídí bɔ̄rīg nɛ́.
no, hunger NEG have 3SG, 3SG.POSS money lose FOC
'No, he is not hungry; IT IS HIS MONEY THAT IS MISSEN/LOST.'

In another context, assuming one sends a child to buy rice and the child buys groundnut. The one who sends the child comes in thinking she has the needed item to start cooking and to her

surprise the example in (4.30) is said as correction to the wrong assumption that the child indeed bought rice.

(4.30) Bííg lá dáˡ nɛ́ súmá.
child DEF buy FOC groundnut
'It is groundnut the child bought (not rice and nothing else).'

The truth condition of the sentence in (4.30) does not change should *nɛ́* be dropped however the exhaustivity effect on the referent disappears. This means that *nɛ́* only serves a conventional implicature effect as the truth condition remains non-cancellable.

4.2.1.4. The particles *mén* 'also, too', *yá'ás* 'else, again'

The additive particles *mén* 'also, too', *yá'ás* 'else, again' do not co-occur with the exhaustive particle *né* in Kusaal because the additive particles make their referents non-exhaustive in the sense that the action conveyed by the verb is assumed to have taken place with different/other referents, a contradictory stand to the exhaustive interpretation associated with the particle *né* in Kusaal.

(4.31) Púˡá lá sà dāˡ (*nɛ́) súmá *mén.*
woman DEF PAST buy (*FOC) groundnut also
'The woman bought groundnut in addition.'

However the additive particle can occur with *kà* in a sentence, an indication that *kà* is less exhaustive 'weakly exhaustive' compared to *né*. The particle *mén* occurs after the element it associates with. In (4.32), it associates with the referent *groundnut* whilst (4.33) is ambiguous because *mén* can be interpreted as having scope over the fronted NP (referent) or over the entire IP (event).

(4.32) Súmá *mén* kà púˡá lá sà dāˡ.
groundnut also FOC woman DEF PAST buy
'It is groundnut the woman bought in addition.'

(4.33) Súmá kà púˡá lá sà dāˡ *mén.*
groundnut FOC woman DEF PAST buy also
(i) 'it is [groundnut]$_f$ the woman bought in addition.'
(ii) '[It is groundnut the woman bought]$_f$ in addition. (The woman did not sell beans.)'

4.2.1.5. The particle *máˈáá/ máˈáánɛ́* "only, just, alone, *kʋn kʋn* 'just' *zaŋ zaŋ* 'only

The adverbials *máˈáá/ máˈáánɛ́* 'only, just, alone', *kʋn kʋn* 'just' *zaŋ zaŋ* 'only' make their referents exhaustive such that all other alternative possibilities are excluded from the reading. These adverbial particles, in many cases in Kusaal, are in complementary distribution with the exhaustive particles *ń* and *nɛ́* as illustrated in (4.34a-b) on the grounds of redundancy. The particle, *kà*, on the other hand must obligatorily co-occur with the adverbial when the focused constituent is fronted as in (4.34c).

(4.34) a. Bíís lá máˈáá (*ń) sà dī múì lá.
children DEF only FOC PAST eat rice DEF
'Only the children ate the rice.'

b. Bíís lá sà dī (nɛ́) múì lá máˈáá.
children DEF PAST eat FOC rice DEF only
'The children ate only the rice.'

c. Múì lá máˈáá kà bíís lá sà dī.
rice DEF only FOC children DEF PAST eat
'It is only the rice that the children ate.' (not say bean, and nothing else)

d. Bíís lá máˈáá (*ń) sà pʋ dī múì lá.
children DEF only FOC PAST NEG eat rice DEF
'It is only the children who did not eat the rice.'

The adverbial marker *máˈáá* can be said to introduce exhaustivity in the interpretations of the assertions in (4.34) as part of its truth condition (Hartmann & Zimmermann 2007). The addition or omission of the particles *ń* and *nɛ́* does not change the truth condition in anyway. The fact that these two elements are mostly in complementary distribution shows they somehow have identical semantic roles making the use of one redundant in the environment of the other. The open option available to speakers to use or not to use *nɛ́* whilst *kà* is obligatory suggests that the particle *kà* is semantically weaker in expressing exhaustivity compared to the particle *nɛ́*. The assumption is thus, if A is entailed by, but much weaker in meaning than, B, the redundancy is ok, but if A is entailed by and only a little weaker than B, then the redundancy is not ok. This explains the grammaticality of having *kà* which is much weaker than the exhaustive adverbial present in the environment of the later while *nɛ́* which shows little weakness may or may not be used, *ń* on the other hand, does not co-occur with adverbials (4.34a, d).

Having shown the various interpretations and distributions of the particles: *ń*, *nɛ́* and *kà*, the next section subjects these particles to several tests to establish they are indeed exhaustive focus markers in Kusaal.

4.2.2. Tests for exhaustivity

The discussion in this subsection is mainly taken from Abubakari (2016a) with modifications and adjustments where need be. Several standard tests are used in the literature in testing exhaustive focus. In this section, I demonstrate how some of these tests are used in justifying the claim that the particles *kà, ń* and *né* are associated with exhaustive focus interpretation anytime they are used in Kusaal. In all focus constructions with the aforementioned particles in the language, there is a conversational implicature that the answer to the question/subject under discussion is the strongest true answer (Beaver & Clark 2008; Roberts 2012). The following are accounts of some tests on the particles: *kà, ń* and *né* in Kusaal.

4.2.2.1. Natural context/Spontaneous speech context

This test is in line with what Van der Wal (2013) refers to as *Heuristic: Context conjuring*. It is considered as one of the simplest tests for focus diagnostics in languages. This test involves the creation of contexts or scenarios where speakers are presented with situations that will naturally incite/elucidate responses with exhaustive focus interpretations. Another angle is to present speakers with utterances with focus interpretation and ask their intuitions about when these utterances could be used felicitously or more naturally (Van der Wal (2013:5). The following contexts, 1 and 2, generate the responses in examples (4.35) and (4.36) respectively.

Context 1a: There are two animals, a goat and a sheep, and you ask which one the man bought (contrast/ exhaustive).

Context 1b: You expect the man to buy a sheep. (The responses could be used as corrections because the hearer believes something different. It could also be used to show surprise in unexpected situations).

(4.35) a. Dáú lá sà dāˡ né búúg.
man DEF PAST buy.PERF FOC goat
'It is a goat the man bought'

b. Búúg kà dáú lá sá dāˡ.
goat FOC man DEF PAST buy.PERF
'It is a goat the man bought.'

Context 2a: There are two people, a man and a woman, which one of them bought a goat? (contrast/ exhaustivity)
Context2b:You expect the woman to buy a goat (correction, unexpectedly)

(4.36) Dáú lá ń sá dāˡ búúg.
man DEF FOC PAST buy.PERF goat
'It is the man that bought a goat.'

The examples in (4.35-4.36) are naturally produced by speakers under the proposed contexts with the use of the particles *kà, ń* and *né*. These sentences convey exhaustive focus

interpretations. It is infelicitous to respond to the questions under the supposed contexts without using these particles.

4.2.2.2. Coordination

Szalbolsci (1981) uses coordination to identify exhaustive focus in Hungarian. Duah (2015) applies same to Akan, a language spoken in Ghana. In this test, I use a pair of sentences: one with a focused coordinated DP (4.37a-b) and another one where one of the coordinated DPs is dropped (4.37c-d). With exhaustive focus, the second sentence without the coordination cannot be a logical consequence of the first one. In the answers to question (4.37), I use both ex-situ and in-situ focus particles *kà* (4.37a) and *né* (4.37b) in comparison with in-situ focus without these particles (4.37a).

(4.37) Q: Bɔ́ kà dáú lá dāˈā?
what FOC man DEF buy.PERF
'What did the man buy?'

Ans. a. Búúg né nááf kà dáú lá dāˈ.
goat CONJ cow FOC man DEF buy.PERF
'It is a goat and cow that the man bought.'

b. Dáú lá dāˈ né búúg né nááf.
man DEF buy.PERF FOC goat CONJ cow
'It is a goat and cow that the man bought.'

c. ? Búúg kà dáú lá dāˈ.
goat FOC man DEF buy.PERF
'It is a goat that the man bought'

d. ? Dáú lá dāˈ né búúg.
man DEF buy FOC goat
'It is a goat that the man bought.'

(4.38) a. Dáú lá dāˈ búúg né nááf.
man DEF buy.PERF goat CONJ cow
'The man bought a goat and a cow.'

b. Dáú lá dāˈ búúg.
man DEF buy.PERF goat
'The man bought a goat.'

If the utterances in (4.37a-b) in which the coordinated NPs *goat* and *cow* are focused with the particles *kà* and *né* respectively are given by a speaker, this speaker cannot give the responses in (4.37c-d) as partial description of the former since this will amount to a contradiction. This arises

due to the presence of the particles *kà* and *né* which exhaustively express the number of items bought to be two: *goat* and *cow*. However, if the speaker had used the construction in (4.38a) where *goat* and *sheep* are focused in-situ (suprasegmentally) without the use of *kà* or *né* then the answer in (4.38b) can also be given as partial response to the question in (4.37)[14].

4.2.2.3. Numerals

Using a variation of the coordination test with focused numerals (see Szabolsci 1981; É. Kiss 1998) where a numeral is added to the noun and focused in instances where focus is exhaustive, the focused entity must be equal to the entity in number if not there will be contradiction in the sentence. The scope of the quantifier interprets as 'exactly' in exhaustive focus environments whereas it interprets as 'at least' in non-exhaustive environments in Kusaal. (see Szalbolsci 1981:155).

In the example in (4.39a), it is suggested that the number of people who went to the market is five. But (4.39b) which follows from (4.39a) shows that if five people went to the market then at least three people went to the market.

(4.39) Q. Nídíb àlá sà kēŋ dáˈá lá?
people how PAST go.PERF market DEF
'How many people went to the market?'

Ans.a. **Nídíb ànú** sà kēŋ dáˈá lá.
people five PAST go.PERF market DEF
'Five people went to the market.'

b. **Nídíb àtánˈ** sà kēŋ dáˈá lá.
people three PAST go.PERF market DEF
'*Three people* went to the market'

The logical conclusion from the interpretations of (4.39a-b) further reveals the semantics of numerals as not always exact. It could be either the exact amount or as a lower boundary (Horn 1972; Levinson 2000 cf Van der Wal 2013:15).

On the contrary, the focus particles; *kà, ń* and *né*, make it impossible for numerals to maintain their upward entailing quality and as such they only refer to the exact quantity in the number (see Van Kuppevelt 1996; Van Rooij 2002; Van Rooij & Schulz 2004).

(4.40) Q. Nídíb àlá sà kēŋ dáˈá lá?
people how PAST go.PERF market DEF
'How many people went to the market?'

[14] See Duah (2015: 11) for a similar analysis with data from Akan.

Ans.: a. Nídíb **ànú** **ń** sá kēŋ dáˈá lá.
people five FOC PAST go.PERF market DEF
'It was five people who went to the market.'

b. Nídíb àtánˈ **ń** sà kēŋ dáˈá lá.
people three FOC PAST go.PERF market DEF
'It was three people who went to the market

The example in (4.40a) contradicts (4.40b) because as (4.40a) implies that exactly five people went to the market, (4.40b) implies that exactly three people went to the market.
The different interpretations of the answers to the same questions (4.39Q) and (4.40Q) are due to the types of foci expressed by the answers to these questions. Whereas the answers to the question in (4.39Q) express information focus, the answers to the question in (4.40Q) express exhaustive focus using the particle *ń* for subject focus. The examples in (4.40a-b) suggest the impossibility of using the exhaustive focus marker in identifying a single entity out of a plural group (Hartmann & Zimmermann 2007:253). This suggests that the particles identified are exhaustive focus particles in Kusaal.

4.2.2.4. Weak quantifiers

The indefinite quantifiers *sí'á/ síébá* 'some' and *bí'él/bí'élá* 'a few' cause a narrow focus interpretation anytime they co-occur with the focus particles *kà, ń* and *né* in Kusaal. This, as also observed by (Skopeteas & Fanselow 2010:1387 cf Van der Wal 2013), is because "the definite quantifiers 'some' and 'a few' are upward entailing, i.e. they imply that the denoted quantity reaches at least a minimum from a scale of potential quantities" (cf Van der Wal 2013:15).

(4.41) Tì sà pāām lígídi lá síébá.
3PL PAST get.PERF money DEF some
'We got the/some of the money'
(…, so we can solve the problem)
#(…., so we cannot solve the problem)

The upward entailment quality of the quantifier in (4.41) makes it possible to interpret the sentence as 'receiving/getting all the required money or getting at least a substantial amount of the required money which can be used to address the situation at hand'.
On the contrary when the focus particles *kà, ń* and *né* are used with the indefinite quantifiers, *si'a/sieba* 'some', the derived interpretation excludes the upward entailing quality of the quantifier resulting in an interpretation with a narrow focus (4.42b).

(4.42) a. Lígídi là síébá kà tì sá pāām.
money DEF some FOC 3PL PAST get
'It is some/part of the money we got'

b.Tì sà pāām né lígídi lá síébá.
3PL PAST get FOC money DEF some

‘It is some/part of the money we got’
(…, so we can solve the problem)
(…., so we cannot solve the problem)

4.2.2.5. Part as a whole relationship

Unlike instances involving non-exhaustive focus when a part can be used in connection to a whole as illustrated in (4.43a) which is an answer to (4.43Q), it is illogical and illicit to use the exhaustive particle *ń* and *né* after a focused entity, (4.43b), which captures part of a whole group (wider entity). Hartmann & Zimmermann (2007:253) refer to this context as the “mention-some environment”. Consider the scenario below and the question and answer that follow it.

Context: *Asibi* is looking for a child to send on an errand. There are a lot of children playing at the playground. For lack of time, she only wants to get the name of one of them and she finds out from *Akuda*:

(4.43) Q*:* Àsíbí:fʊ̀ mīˈī báné díˈémìd yíŋ láá?
2SG know those play-IMPERF outside LA
‘Do you know those playing outside?’

Ans.: a. Àkúdà: ɛ́ɛ́n, Àzúmà bɛ́ bà sʊ́ʊ́gi-n.
Yes, Azuma COP.be their middle-LOC
‘Azuma is among them’

b. Àkúdà: ? ɛ́ɛ́n, Àzúma ḿ bɛ́ bà sʊ́ʊ́gi-n.
Yes, Azuma FOC COP.be their middle-LOC
‘It is Azuma who is among them.’

Akuda in (4.43a) mentions the name of a child who is among the children who are playing. It will be contradictory as well as illogical to use the exhaustive in-situ subject particle *m(n),*as in (4.43b), in this context since it will capture only part of the entire group of children playing outside. What this implies is that the stronger the effect of an exhaustive focus interpretation, whether by implicature or in the semantics, the less appropriate it will be as a response to a mention-some question (see Van der Wal 2013:10).

4.2.3. Pragmatic and Semantic uses of Focus in K usaal

The notion of focus/background is a relevant information-management technique in facilitating the understanding of what is said. Consequently, focus marking is pragmatically used to mark the constituent in the answer that corresponds to the *wh*-phrase in a preceding question.

(4.44) Q: Àdúk kēŋ yáánɛ́?
Aduk go where
‘Where did Aduk go?

Ans.: a. Àdúk kēŋ (*né) dáˈán[15].
Aduk go FOC market.LOC
'Aduk is gone to the market.'

In (4.44a) the focused constituent *dáˈán* 'market' corresponds to the *wh*-part of the question constituent *yáánɛ́* 'where'.

Additionally focus is used as a way of correcting and confirming information (Krifka 2006). Accordingly, the proposition in (4.44a) is refuted and corrected as in (4.44b) whilst (4.44c) is a confirmation of the proposition.

b. Àyéí, Àdúk kēŋ *(né) pɔ́ɔ́gín. (Correction)
no, Aduk go FOC farm.LOC
'No, Aduk is gone TO THE FARM.'

c. ɛ́ɛ́n, Àdúk kēŋ *(né) dáˈán. (Confirmation)
yes, Aduk go FOC market
'Yes Aduk is gone TO THE MARKET (not the farm).'

Clearly, in both propositions in (4.44b) and (4.44c), the use of the particle *ńɛ* emphasizes each proposition as the one that holds among other possible alternatives. The overt use of the focus particle in (4.44b-c) thus confirms speakers' ability to package their information such that the correct alternative stands above other possible alternatives in any given context or situation. Additional inferences often conveyed by focus constructions in languages include contrast, exhaustivity and existence (Beaver and Clark 2008, Krifka 2006, Zimmermann 2008, Grubic 2015). The notion of contrast expressed by focus constituents in corrections is assumed to be much stronger compared to answers to *wh*-questions. In Kusaal, answers to *wh*-questions depending on the context, may not necessary involve the use of the exhaustive *nɛ́* particle (4.44a) unlike in situations where corrections are to be made which require the obligatory use of the *nɛ́* particle (4.44b). It will be infelicitous to correct the wrong answer in (4.44a) without the particle *nɛ́* (4.44b). Additionally, in the context in (4.44b), there is a conventional implicature conveyed by the contrastive/exhaustive particles *nɛ́* suggesting that the correction provides the exhaustive answer which is non-cancellable in this case.

Detailed discussion on the relation between focused and wh-phrases will be given in the second part of this chapter

Moreover, focus constructions in Kusaal trigger strong existential presuppositions such that the sentence in (4.45a) presupposes that the child ate something. The presupposition conflicts with

[15] Star (*) inside bracket is ungrammatical while star inside bracket means obligatory.

the assertion that the child ate nothing which makes the examples in (4.45b-c) either with or without *né* infelicitous.

(4.45) a. Bííg lá dī né bɔ́ɔ́?
child DEF eat FOC what
'WHAT (specifically) did the child eat?'

b.#Bííg lá pó dī sí^{l}él-sí^{l}élá.
child DEF NEG eat nothing
'The child ate NOTHING.'

c.#Bííg lá pó dī né sí^{l}él-sí^{l}élá.
child DEF NEG eat FOC nothing
'The child ate NOTHING.'

For further illustration that focus constructions introduce strong existential presuppositions (EPs) (Rooth 1999), I use the following cleft constructions in (4.46-47) as demonstrations. Non-subject focus is always fronted in cleft constructions followed by the focus particle *kà* whilst subject focus is assumed to remain in-situ and speaker may drop the focus particle and still achieve the desired interpretation. The example in (4.46b) presupposes that the child ate something whilst (4.46c) asserts that what is eaten is rice. The example in (4.47b) with the in-situ focus also presupposes that someone is in the room, in combination with the strong assertion that it is a man (a brave man) that is in the room in (4.47c).

(4.46) a. Lì ànɛ́ múì kà bííg lá dī.
it COP rice FOC child DEF eat
'It is rice that the child ate.'

b. Presupposition: Bííg lá dí sí^{l}él
child DEF eat something
'The child ate something.'

c. Assertion: Bííg lá dí múì (+exhaustiveness)
child DEF eat rice
'The child ate rice.'

(4.47) a. Lì ànɛ́ dáú (ń) bɛ̄ dɔ́ɔ́gī-n lá.
it COP man FOC EXIST room-LOC DEF
'It is a man that is in the room.'

b. Presupposition: Sɔ́ˡ bɛ̄ dɔ́ɔ́gī-n lá.
someone EXIST room-LOC DEF
'Someone is in the room.'

c. Assertion: Dáú bɛ̄ dɔ́ɔ́gī-n lá.
man EXIST room-LOC DEF
'A man is in the room (+ exhaustiveness)

On focus sensitive particles such as additive and exclusive particles, Krifka (2006) argues that such particles do not affect the output common ground rather they restrict the input common ground as the alternatives are used to impose presupposition. Both adverbial particles and exclusive particles in Kusaal are in complementary distribution with the exhaustive focus particles in Kusaal, a confirmation that the two alternate in functions (Abubakari 2016a).

The adverbial *máˈáá/ máˈáánɛ́* "only, just, alone, *kʋn kʋn* 'just' *zaŋ zaŋ* 'only correlate with an exhaustive focus interpretations in Kusaal in such a manner that all other alternative possibilities are excluded from the reading (Abubakari 2016a, Rooth 1985; 1992; Krifka 2006).

(4.48) Àdúk(*ú) máˈáá sà dī múì lá.
Aduk only PAST eat rice DEF
'Only Aduk ate the rice.'

(4.49) Àdúk sà dī (*nɛ́) múì lá máˈáá.
Aduk PAST eat FOC rice DEF only
'Aduk ate only the rice.'

It is unnatural to hear speakers use the prosodically stress induced final vowel on either the focused subject or the particle *nɛ́* before the focused object in environments where the exclusive adverbial particle is used. Following linguists including (Jacobs 1983, König 1991 cf Krifka 2006), exclusive particles as observed in (4.48-4.49) indicate that the focused denotation is the *only* one among the alternatives that leads to a true assertion.

Equally ungrammatical is the co-occurrence of the additive particles *mɛ́n* 'also, too', *yáˈás* 'else, again' with the exhaustive focus *nɛ́* particles in Kusaal. The additive particle in this context expresses the assertion that the presupposition equally holds for other alternatives (Krifka 2006) thus making the referent non-exhaustive.

(4.50) Àdúk sà dī (*nɛ́) múì lá mɛ́n.
Asibi PAST eat FOC rice DEF also
'Aduk ate the rice also yesterday/it was also the rice that Aduk ate yesterday.'

4.2.4. Linguistic strategies of expressing Focus in Kusaal

This section focuses on discussing the various means of expressing focus in Kusaal. The discussion basically looks at the ways both subject and non-subject focus constituents are marked in the language. Focus can be marked in several ways: (i) by introducing new information into the discourse (information focus), or (ii) by setting contrast to a set of comparable alternatives (contrastive focus) (cf Fiedler et al 2010, Dik 1998, Jackendorf 1972, Rochemont 1986; Rooth 1985) and (iii) by expressing exhaustivity under which the focused constituent is identificationally exhaustive (E. Kiss 1998, E. Kiss 2010).

Languages employ several grammatical techniques in marking a given informational unit as the most salient or relevant. Focus marking in Kusaal as is also the case in several Mabia languages is mostly carried out by the use of particles. Kusaal employs both in-situ and ex-situ focus strategies in focus marking. DPs, VPs IPs can be focused both in-situ and ex-situ. Unlike information focus which maintains the canonical SVO order and with salience marked by means of prosody, exhaustive focus employs focus markers. The focused constituent is set in bold in Kusaal and translated in small capitals in English.

(4.51) Q. Dáú lá sá dāˡ bɔ́ɔ́?
man DEF PAST buy what
'What did the man buy?'

Ans. a. Ò sà dāˡ **búúg.** (In-situ Information Focus)
3SG PAST buy goat
'The man bought a **GOAT**'

b. **Búúg** kà dáú lá sá dāˡ. (Ex-situ contrastive/exhaustive)
goat FOC man DEF PAST buy
'It is GOAT the man bought (rather than sheep or cow).'

c. Dáú lá sá dāˡ né **búúg.** (In-situ contrastive/exhaustive)
man DEF PAST buy FOC goat
'It is GOAT the man bought (rather than something else, nothing more).'

The particle *kà* is obligatory in ex-situ focus and it cannot be used with in-situ focus neither can the particle *né* be used for ex-situ focus (4.52).

(4.52) i. * Búúg né dáú lá sá dāˡ.
goat FOC man DEF PAST buy
'It is GOAT the man bought' (rather than sheep or cow)

ii. * Dáú lá sá dā^{l} kà búúg.
man DEF PAST buy FOC goat
'It is GOAT the man bought (rather than something else, nothing more)

Additionally, it is important to add that it is ungrammatical to have multiple foci within a single sentence.

(4.53) Q: a. Anɔ́ɔ́né sà dā^{l} bɔ́ɔ́?
who PAST buy what
'Who bought what?

Ans. b. Dáú lá sà dá^{l} búúg.
man DEF PAST buy goat
'The man bought a goat.'

c. *Dáú lá ń sà dā^{l} né búúg.
man DEF FOC PAST man buy FOC goat
LIT.: 'THE MAN bought A GOAT.'

With this background, the following subsections discuss in details the various focus realization strategies for grammatical focus marking in Kusaal.

4.2.4.1. Morphological marking of focus

Morphological marking of focus is devoid of any kind of syntactic changes or word order permutations. It is a widespread focus strategy across the Mabia language subgroup as well as several African languages. Mabia languages such as Dagaare (Bodomo 1997), Byali, Buli, Dagbani, Gurenɛ (Fiedler et al 2010) to mention but a few have overt morphological focus particles used for this purpose. These particles predominantly precede the focused constituent as in (4.54a-d). As indicated by Fiedler et al (2010), these particles are usually (i) invariant information-structural particles (Kusaal, Dagaare, Buli, Dagbani), (ii) particles agreeing in gender with the focused NP/DP, (iii) copulas (assumed, in this work as shown in section 3.5 of chapter 3, to be grammaticalized to focus particles in Kusaal and other Mabia languages) and (iv) nominal affixes. The examples below demonstrate the overt realizations of morphological focus markers in the selected Mabia languages in answers to the questions in (4.54i, ii).

(4.54) i. What did the woman sell: beans or groundnut?

a. Pú^{l}á lá sà kūōs né súmá. Kusaal
woman DEF PAST sell FOC groundnut
'The woman sold GROUNDNUT/It is groundnut the woman sold.'

b. Pɔɣɔ maa sa kuhi la simi. Dagbani
woman DEF PAST sell FOC groundnut
'The woman sold GROUNDNUT/It is groundnut the woman sold.'

c. À pɔ́gɔ́ zàà kòɔ̀ré lá sèngkáà. Dagaare
DEF woman PAST sell FOC groundnut
'The woman sold GROUNDNUT/It is groundnut the woman sold.'

ii. What did the woman cook: beans or groundnut?

d. Wa dig ka sumkpaam. Buli
3SG cook FOC groundnut
'She cooked GROUNDNUT/ It is groundnut she cooked.'

From the answers in (4.54a-d), all the languages can have overt markings for in-situ focus. Thus the morphological focus particles: *nέ* is used for Kusaal, *la* for Dagbani (also see Issah 2013), *la* for Dagaare (see Bodomo 1997) and *ka* for Buli (see Fiedler and Ines) respectively. In in-situ focus constructions in Kusaal, the particle precedes focused DPs but it follows focused VPs and IPs. Additionally, the particle *la* in Dagaare is argued to be a default grammatical focus marker used in declarative sentences as well as in focus constructions (Bodomo 1997). Unlike Kusaal where *nɛ* can be used for asserting contrast and exhaustivity on an object NP, *la* is argued to be a predicate focus particle in Dagbani (Issah 2013) and Dagaare (PC: Bodomo).

4.2.4.2. Syntactic Focus marking

Syntactic focus marking involves word order alternation of the focused constituent relative to the other constituents in the sentence (see Fiedler et al 2010:238/9, Heinea and Reh 1984:147). This is the most common strategy employed by almost all Mabia languages. It is the means by which the canonical SVO order of these languages is changed for discourse effect. As also observed by Fiedler et al (2010), Mabia languages generally employ the use of focus particles in their ex-situ non-subject focus marking strategy. The focus particle directly follows the fronted focused constituent before the out-of-focus part of the sentence. Answering the same question in (4.54i, ii), repeated here as (4.55i, ii) the answers in (4.55a-d) serve as responses with the focused NP displaced to sentence initial position.

(4.55) i. What did the woman sell: beans or groundnut?

a. Súmá kà pú'á lá sà kūōs. Kusaal
groundnut FOC woman DEF PAST sell
'It is GOUNDNUT the woman sold'

b. Sèngkáà	lá	kà	à	pɔ́g	kòɔ̀rè.	Dagaare
groundnut	FOC	COMP	DEF	woman	sell.	

'It is GROUNDNUT the woman sold.'

c. Simi	ka	paɣa	maa	kohi.	Dagbani
groundnut	FOC	woman	DEF	sell	

'It is GROUNDNUT the woman sold.'

ii. What did the woman cook: beans of groundnut?

d. Ka	sumkpaam	ati	wa	dig.	Buli
FOC	groundnut	COMP	3SG	cook	

'It is GROUNDNUT that she cooked.'

In all the sentences in (4.55a-d), the focused DPs are moved to the left periphery position and they receive exhaustive focus interpretations. More importantly and in line with Fiedler et al (2010), Issah (2013), syntactic focus marking is not automatically triggered by *wh*-question which evokes information focus in the answer. Instead, the use of ex-situ focus strategy as illustrated in all the examples provided in (4.55) are compatible with specific context which more often, though not obligatory, involve some elements of contrast, surprise and exhaustivity.

As demonstrated so far, there are both in-situ and ex-situ focus marking strategies in Kusaal. Whilst it is obligatory to have the focus particle in ex-situ focus; same is not the case in in-situ focus constructions. The use of the particle or otherwise in in-situ focus is dependent on the intended discourse interpretation of the focused constituent. In-situ marking without focus particles is merely used for information focus whilst the same strategy with the in-situ particles is used for marking contrast, surprise and more importantly exhaustivity in Kusaal.

4.2.4.3. Prosodic Focus marking

Prosodic focus marking refers to the use of suprasegmental features such as stress and intonation in marking focus thus the focused constituent receives extra stress or prominence compared to other constituents in the sentence. Linguists including Truckenbrodt (1995); Jackendoff (1972); Selkirk (2004); Feŕy and Ishihara (2010:36-63) and Büring (2010:177-205) among others have proposed several approaches for the analysis of prosodic focus marking in languages. Focus prominence[16] as discussed by Selkirk (2004) takes different forms cross-linguistically. Though not exhaustive, the following are some of the cross linguistic properties used by languages to mark focus prominence.

[16] Focus is realized by prominence in its focus domain (Feŕy and Ishihara 2010:40)/focus needs to be maximally prominent (Büring 2010:178).

(4.56) Prosodic properties of focused marking (Selkirk 2004:1)

a. appearance of special tonal morphemes
b. appearance of default pitch accent
c. demarcation by a prosodic phrase edge/boundary
d. presence of main stress of a prosodic phrase
e. appearance in a higher pitch range
f. vowel length under main phrasal stress

The marking of focus by prosody in Kusaal combines two of the above properties (4.56d and 4.56f). Focused constituents/phrases in Kusaal generally receive extra stress compared to other constituents in the sentence. Information focus is expressed by the use of suprasegmental features in the absence of overt morphological marking or any kind of word order permutations.

(4.57) What did the woman sell?

a. Pú'á lá sà kūōs **súmá**.
woman DEF PAST sell groundnut
'The woman sold GROUNDNUT.'

b. Pú'á lá sà kūōs nɛ́ súmá.
woman DEF PAST sell FOC groundnut
'The woman sold GROUNDNUT/It is GROUNDNUT that the woman sold.'

Besides, anytime a subject NP is focused in-situ, the long form of the noun which is also emphatic, discussed in section 3.2 in chapter three, is used. Nouns that end with vowels undergo final vowel lengthening. The name *Asibi* in (4.58c), borrowed from Hausa, has its final vowel lengthened whilst the long form of the name *Aduk* is used in (4.58b). The use of the long form of the noun in (4.58b) is to emphasize and refute the claim made in (4.58a) whilst the final vowel in *Asibi* is also lengthened to mark emphasis and to provide the correct answer for the question in (4.58).

(4.58) Q: Who ate the food?

a. Àdúk sà dī dííb lá.
Aduk PAST eat food DEF
'Aduk ate the food.'

b. Àyéí, Àdúk**ú** sà pʊ́ dī dííb lá.
no. Aduku PAST NEG eat food DEF
'No, ADUKU did not eat the food.'

c. Àsíbí-**í** sà dī dííb lá.
Asibi PAST eat food DEF
'It is ASIBI who ate the food.'

It will be infelicitous to use (4.58d) to answer the question in (4.58) against the background of the given wrong answer in (4.58a).

d. #Àsíbí sà dī dííb lá.
Asibi PAST eat food DEF
'Asibi ate the food.'

In all these instances the focused phrases are pronounced with higher pitch (more stress) than those in the background.

Generally, Kusaal, as is the case of other Mabia languages, combines morphological, syntactic as well as prosodic means in expressing various focus notions: contrastive, exhaustive or information focus. There are overt realizations of focus either morphologically or morphologically plus syntactically. Focus can also be expressed prosodically via vowel lengthening plus prosody or vowel insertion plus prosody. Ex-situ focus mostly uses morphological marking in Mabia languages, in-situ focus marking, on the other hand, may or may not involve overt morphological markings. Focused constituents in Kusaal generally receive extra stress compared to other constituents in the sentence.

4.2.5. Syntax and Focus in Kusaal

A wide range of lexical items can be focused in Kusaal with the most prominent ones being NPs functioning as subjects, objects and indirect objects. Pronouns, modifiers, VPs can all be focused.

4.2.5.1. Subject Focus

Subject focus in Kusaal is expressed both morphologically and prosodically. Contrast and exhaustivity can be marked using the particle *ń* as illustrated (4.59a-c).

(4.59) a. Bíís lá ń dī dííb lá.
children DEF FOC eat food DEF
'It is the children [not the men, for instance] who ate the food.'

b. Pú'á lá ń dā' núá lá.
woman DEF FOC buy fowl DEF
'It is the woman [not the man, for instance] who bought the fowl.

c. Àdúku ń bʊ̄' bííg lá.
Aduku FOC beat child DEF
'It is Aduku [not Adoluba] that beat the child.'

Equally common is the use prosodic features rather than syntactic or morphological features in marking subject focus. In answering the question in (4.60i), the sentence in (4.60a) is new information but (4.60b-c) are contrastive in which instances the long form of the noun is used in (4.60b) and the final vowel in (4.60c) undergoes lengthening. These instances do not involve overt morphological elements for marking subject nor is there any structural reordering of elements for this purpose.

(4.60) i. Who ate the food?

a. **Àdúk** sà dī dííb lá.
Aduk PAST eat food DEF
'ADUK ate the food.'

As new information, the name *Aduk*, in the response in (4.60a) will not attract the use of any focus particle but will be prosodically prominent. In addition, it will be weird to use the long form of the name in this context. However, the long form is obligatory in (4.60b-c) below where a wrong impression is refuted (4.60b) while the correct answer is emphasized (4.60c). In all these instances too, the subject focus particle *ń* may optionally be used alongside the long forms of the nouns.

b. Àyéí, **Àdúkú** (ń) sà pʊ́ dī dííb lá.
no, Aduku FOC PAST NEG eat food DEF
'No, ADUKU did not eat the food.'

c. **Àsíbí-í** (ń) sà dī dííb lá.
Asibi FOC PAST eat food DEF
'It is ASIBI who ate the food.'

In like manner, focused subject pronouns are, in such examples, the emphatic forms which are also inherently prominent. With reference to the question in (4.60i), I substitute the proper nouns with pronouns in (4.60b, c) now (4.61a, b) respectively. It will be infelicitous to use the non-emphatic pronoun *ò* '3.SG' to refute the wrong claim regarding 'the one who ate the food' as well as using the non-emphatic *yà* '2.PL' to contrastively and exhaustively correct the originally wrong assumption.

(4.61) a. Àyéí, **ón(á)** sà pú dī dííb lá.
no, 3SG.EMPH. PAST NEG eat food DEF
'No HE did not eat the food/ HE is not the one who ate the food.'

b. **Yánámɛ́** sà dī dííb lá.
2PL.EMPH. PAST eat food DEF
'It is YOU [who] ate the food.'

A possible assumption that could be inferred from (4.61a, b) is that focus whether new information, exhaustive or contrastive, is more prominently expressed by prosody in subject focus in Kusaal. The emphatic pronoun needs to occur with either *nɛ́* or *kà* for exhaustive interpretation in non-subject focus as will be seen in sections 4.2.5.2 for example.

One may be quick in asking the question as to whether subject focus with the particle *ń* is an instance of in-situ focus or ex-situ focus. Subject focus is assumed to be an instance of in-situ focus because the particle *ń* is assumed to be a variant of *nɛ́* which is used for in-situ non-subject focus. More importantly, an argument involving displacement is not immediately clear. The general observation is that subject wh-phrases do not co-occur with the focus particle *ń* as illustrated in (4.62b) below. This will be further discussed in section 4.4.7.

(4.62) a. Bɔ́ ɔ́nb káwéná láá?
what chew maize DEF
'What chewed the maize?'

b. * Bɔ́ ń ɔ́nb káwéná láá?
what FOC chew maize DEF

4.2.5.2. Object Focus

Both direct and indirect objects can be focused in-situ and ex-situ in Kusaal where the particle *nɛ́* is used in-situ before the focused constituent whilst *kà* is used ex-situ after the focused constituent.

Contexts 1: There are two items to be bought: rice and groundnut: which one of them did she buy?

Context 2: You expected her to buy rice (correction, unexpectedly)

(4.63) a. ò sà dā' nɛ́ súmá.
3SG PAST buy FOC groundnut
'She bought GROUNDNUT/It is GROUNDNUT she bought.'

b. #ò sà dāˈ súmá.
3SG PAST buy groundnut
'She bought groundnut.'

(4.64) Súmá kà ò sà dāˈ.
groundnut FOC 3SG PAST buy
'She bought GROUNDNUT/It is GROUNDNUT she bought.'

The omission of *né* from (4.63b) does not change the truth value of the sentence; however, it erases the exhaustive interpretation and it is infelicitous in these contexts. *Né* and *kà* co-occur with the emphatic pronoun in-situ and ex-situ respectively in non-subject focus in expressing exhaustivity.

(4.65) S: Àdúk sà bʊ̄ˈʊ̄m̀.
Aduk PAST beat.1SG.ACC
'Aduk beat me.'

(4.66) Àdúk sà bʊ̄ˈ né mán (*m̀/mà)
Aduk PAST beat FOC 1SG.ACC.EMPH. (1SG.ACC)
'Aduk beat ME/It was ME that Aduk beat.'

(4.67) Mán(*mà/m̀) ká Àdúk sà bʊ̄ˈ.
1SG.ACC.EMPH(1SG.ACC) FOC Aduk PAST beat
'Aduk beat ME/It was ME that Aduk beat.'

Any time *né* or *kà* is used then the emphatic form of the pronoun must be used as in (4.66-67). However, the emphatic form can be used in-situ without the use of *né* as in (4.56). The omission of *né* in (4.68) deletes the exhaustive interpretation on the focused object pronoun.

(4.68) Àdúk sà bʊ̄ˈ mán (*m̀/mà).
Aduk PAST beat 1SG.ACC.EMPH (1SG.NOM)
'Aduk beat ME.'

Equally possible is the use of the emphatic form in the environments of *né*, *kà* and the exhaustive adverbial particle *máˈáá*. These possible combinations again reaffirm the assertion that the emphatic pronoun is much weaker in any exhaustive interpretation.

(4.69) Àdúk sà bʊ̄ˈ (nɛ́) mán máˈáá.
Aduk PAST beat FOC 1SG.ACC.EMPH only
'It is only me that Aduk beat.'

(4.70) Ḿán má'áá kà Àdúk sà bʊ̄'.
1SG.ACC.EMPH only FOC Aduk PAST beat
'It is only me that Aduk beat.'

Similarly indirect objects can be focused both in-situ an ex-situ as illustrated in (4.72) and (4.73) respectively.

(4.71) Q: Ànɔɔ'ɔ́n kà pú'á lá sà dā' súmá tīsɛ́?
who FOC woman DEF PAST buy groundnut give
'Who did the woman buy the groundnut for?

(4.72) Pú'á lá sà dā' súmá tīs nɛ́ bííg lá.
woman DEF PAST buy groundnut give FOC child DEF
'It is the child the woman bought groundnut for.'

(4.73) Bííg lá kà pú'á lá sà dā' súmá tīs.
child DEF FOC woman DEF PAST buy peanut give
'It is the child the woman bought the peanut for.'

4.2.5.3. Adverbial focus

Additionally, adverbial adjuncts or complements can be focused in-situ with or without *nɛ́*. *Nɛ́* is only used in-situ when exhaustive interpretation is desired (4.74b). If not, speaker resorts to the use of prosody where the focused adverbial is pronounced with more stress compared to other constituents. When *nɛ́* is used, it occurs before the focused adverbial as in the answer in (4.74c). For ex-situ adverbial focus, *kà* is obligatory after the fronted adverbial as in the answer in (4.74d).

(4.74) a. Q: Yà kà pú'á lá sà dā' núá lá?
where FOC woman DEF PAST buy fowl DEF
'Where did the woman buy the fowl?'

b. Pú'á lá sà dā' núá lá [$_{PP}$**dá'á-n** **lá**.]
woman DEF PAST buy fowl DEF market-LOC DEF
'The woman bought the fowl in the market'.

c. Pú'á lá sà dā' núá lá nɛ́ [$_{PP}$dá'á-n lá.]
woman DEF PAST buy fowl DEF FOC market-LOC DEF
'The woman bought the fowl IN THE MARKET'. /
'It is IN THE MARKET that the woman bought the fowl.'

d. Dáˈá-n lá kà púˈá lá sà dāˈ núá lá.
market-LOC DEF FOC woman DEF PAST buy fowl DEF
'The woman bought the fowl IN THE MARKET'/
'It is IN THE MARKET the woman bought the fowl.'

The example in (4.75) illustrates the possibility of equally focusing the temporal adverbial in-situ and ex-situ.

(4.75) Q: When did he go to Bawku?
e. Ò sà kēŋ Bɔ̄k né súˈòs.
3SG PAST go Bawku FOC yesterday
'It was YESTERDAY he went to Bawku.'

d. SúˈòS kà ò sà kēŋ Bɔ̄k.
yesterday FOC 3SG PAST go Bawku
'It was YESTERDAY he went to Bawku.'

4.2.5.4. Predicate focus/clefting

In focusing the VP or the IP, the particle *né* occurs at the end of the clause.

(4.76) Q: Bɔ́ kà Àdúk sà māālɛ́?
what FOC Aduk PAST do
'What did Aduk do?'

Ans: Àdúk [$_{VP}$ sà zɔ̄ né]
Aduk PAST run-away FOC
'Aduk RAN-AWAY.'

(4.77) Q: Bɔ́ɔ́ māālɛ́?
what happen/do
'What happened?
Ans: [IP Àdúk dāˈ núá né.]
Aduk buy fowl FOC
'ADUK BOUGHT A FOWL.'(an unexpected occurrence)

Similarly, predicates can be fronted or clefted for contrastive and exhaustive interpretations in Kusaal. Focus predicates are moved to the left periphery of the entire construction and they receive contrastive focus interpretations. Clefted predicates are obligatorily nominalised and they receive double pronunciations (Abubakari 2011, 2015, also see Hiraiwa and Bodomo 2007).

(4.78) Q: 'What did he do?'

Ans.: a. Ò sà sɛ̄nˡ né níˡím lá.
3SG PAST roast FOC meat DEF
'He ROASTED THE MEAT/It is roasting the meat he did.'

b. Sɛ́nb kà ò sà sɛ̄nˡ níˡím lá.
roast.NML FOC 3SG PAST roast meat DEF
'He ROASTED THE MEAT/It is roasting the meat he did.'

4.2.5.5. Focus negation and particles

How are focused constituents negated? Two ways of negation characterize focus constructions in Kusaal. The canonical negative particle *pʋ́/bò* is used in in-situ focus whilst the negative copula *káˈá* is used for ex-situ focus constructions. The negative particle is positioned before the verb in in-situ focus. Negation, like *máˈáá* 'only' etc, 'associates with' an element, namely the focus constituent, excluding the out-of-focus part of the proposition irrespective of whether the subject, object or entire IP is focused. In (4.79a) where the object is focused negation affects only the focused object, in (4.79b) where the entire IP is focused same applies.

(4.79) i. S: He ate [the food]$_f$.

a. Àyéí, ò pʋ́ dī né dííb láá.
no 3SG eat NEG FOC food DEF
'He did not ate THE FOOD.'

ii. S: [He ate the food]$_f$

b. Àyéí, ò pʋ́ dī dííb lá né, ò nūˡ
no, 3SG NEG eat food DEF FOC 3SG eat
dáám lá né.
alcohol DEF FOC
'No, HE DID NOT EAT THE FOOD but rather HE DRUNK THE ALCOHOL.'

The negative particle can equally have a wider 'association' depending on the position of the focus particle. If the focus particle is found at sentence final position as in the case of IP focus in (4.80), then the negative particle will scope over the entire IP.

(4.80) Ò pʋ́ dī dííb lá né.
3SG NEG eat food DEF FOC
'(What happened is that) HE DID NOT EAT THE FOOD.' (an unexpected occurrence)

In negating a focused subject, the negative particle does not change position; it remains after the subject and before the verb. The subject then receives higher prominence and where applicable, the long form of the noun is used. In the case of subject pronouns the emphatic forms are used.

(4.81) **Àdúkú** pó dī dííb láá.
Aduku NEG eat food DEF
'It was not **ADUKU** who ate the food/ **ADUKU** did not eat the food.'

(4.82) Ón(á) pó dī dííb lá.
3SG.EMPH NEG eat food DEF
'It is HE who did not eat the food.'

The negative copula *ká ˈá* is used in ex-situ focus negation. The copula occurs before the fronted constituents with the possible option of dropping the expletive pronoun in casual speech as in (4.83b).

(4.83) a. S: It is a goat the man bought.

b. (Lì) káˈá búúg kà dáú lá dāˈa.
3SG.inanimate NEG.COP.be goat FOC man DEF buy
'It is NOT GOAT the man bought.'

Adjectives can also be negated in-situ and ex-situ with *pó…né* and *ká ˈá* respectively.

(4.84) Bà pó dī né fíín, bà dī né lì wúsá.
3PL NEG eat FOC little 3PL eat FOC it all
'They did not eat just a little, they ate everything.'

(4.85) (Lì) káˈá fíín kà bà dīī, bà dī
it NEG.COP.be little FOC 3PL eat 3PL eat
né lì wúsá.
FOC it all
'They did not eat just a little, they ate everything.'

The 'scope' of negation also changes when optional elements like adjuncts are introduced into the focus construction. Negation in such contexts narrows down to exclude all other elements but the optional constituent (see Givoń 2001:231). The focus particle in such situations could be dropped (4.87). Thus negation is observed to be associated with only the adjunct.

(4.86) Ò pó dā' né búúgɔ.
3SG NEG buy FOC goat
'It is not goat that he bought (but rather cow).'

(4.87) Ò pú dā' (né) búúg sú'ósé.
3SG NEG buy FOC goat yesterday
'He did not buy a goat yesterday (but rather two weeks ago)'.

4.2.6. Asymmetry between Subject and Non-Subject Focus (NSF) in Kusaal

A distinction is noticeable in the ways subject and non-subject focused constituents are marked in Kusaal in the following ways: (i) a marking asymmetry, which requires non-subject focused to be marked both in-situ and ex-situ whereas subject focus are marked only in-situ; (ii) A prosodic asymmetry which makes it possible for subject focus to use the long forms of nouns as well as final vowel lengthening both of which are not necessary though possible in non-subject focus (iii) A structural asymmetry which requires that in-situ non-subject focus is marked differently from ex-situ non-subject focus.

4.2.6.1. Marking asymmetry

Kusaal is partly consistent with the observation of Fiedler et al (2010) that non-subject focus in Mabia, Kwa and Chadic (Hausa) need not be restricted to in-situ and partly defies their claim that NSF cannot or need not be marked syntactically (Fiedler et al 2010:242). Though they did not give an example from a Mabia language, the data below from Hausa is used to support the claim.

Hausa (West Chadic), *optional object marking (Fiedler et al 2010:243)*

(4.88) Q: i. What is Kande cooking?
Ans.: a. Kandeˊ taˊ-naa daʃa **kiifii**[17] Unmarked NSF
Kande 3SG.F.IPF cooking fish
'Kande is cooking (A) FISH.'

(4.89) ii: Kande is cooking meat.

b. **Kiifi** **(nee)** Kandeˊ taˊ-kee daʃaawa Marked NSF
fish FM Kandeˊ 3SG.F-IPF.REL cooking
'It is (A) FISH that Kande is cooking.'

Answering a question similar to (4.89ii) as in (4.90ii) in Kusaal, it is obligatory to use *né* in-situ as in (4.91a) and *kà* ex-situ as in (4.91c).

[17] With reference to the Hausa spoken in Ghana, it is equally possible to optionally use *nee* in-situ: Kandeˊtaˊ-naa daʃa **kiifii (nee) '**Kande is cooking (A) FISH)/ It is FISH that Kande is cooking.'

(4.90) i. What did Aduk cook?

a. Àdúk dūg (né) zíˈímí. Marked NSF

Aduk cook FOC fish

'Aduk cooked FISH/ It is FISH Aduk cooked.'

ii. Aduk cooked meat. Marked NSF

(4.91) a. Àdúk dūg né zíˈímí.

Aduk cook FOC fish

'Aduk cooked FISH/ It is FISH Aduk cooked.'

b. # Àdúk dūg zíˈímí.

Aduk cook fish

'Aduk cooked FISH'

c. Zíˈímí kà Àdúk dūg. Marked NSF

fish FOC Aduk cook

'Aduk cooked FISH/ It is FISH Aduk cooked'

Interestingly, the imperfective marker in Kusaal is marked using the suffix *-né* which as discussed in section 3.3.2.5 in chapter three is a homophone with the exhaustive focus marker. The two are not used simultaneously which requires that the focused object DP be pronounced with much higher prominence. It is argued in section 3.3.2.5 of chapter three that, the focused particle is deleted or more probably assimilated in to the aspectual suffix morpheme. The focused constituent then receives extra stress. In the example in (4.92) it is ungrammatical to repeat the focus particle although the desired interpretation should evoke exhaustivity.

(4.92) a. Àdúk dūgīdné (*né) **zímí.** Marked NSF

Aduk cook-IMPERF FOC fish

'Aduk is cooking FISH/ It is FISH Aduk cooking.'

It is equally weird to find a second *né* elsewhere as far as the verb is in the imperfective aspectual with the suffix *-né*.

b. Àdúk dūgīdné zímí (*né) dáá-n lá. Marked NSF

Aduk cook-IMPERF fish FOC market-LOC DEF

'Aduk is cooking fish IN THE MARKET/ It is IN THE MARKET that Aduk is cooking fish.'

A way of rendering (4.92b) is by using the imperfective A aspectual form without the suffix *-né*, discussed in chapter three section 3.3.1.4.2.1 as illustrated in (4.92c).

c. Àdúk dūgīd zímí né dáá-n lá. Marked NSF
Aduk cook-IMPERF fish FOC market-LOC DEF
'Aduk is cooking fish IN THE MARKET/ It is IN THE MARKET that Aduk is cooking fish.'

In contrast, ex-situ focus is consistent with the use of the imperfective simultaneously with the particle *kà*.

(4.93) Zími kà Àdúk dūgīd/dūgīdné. Marked NSF
fish FOC Aduk cook-IMPERF
'Aduk is cooking FISH/ It is FISH Aduk cooking'

Under the observed circumstances, NSF cannot be said to be unmarked in Mabia in general and Kusaal to be specific.

Additionally, SF in Kusaal is marked both prosodically and morphologically.

(4.94) Àdúkú dūg zími. Marked SF
Aduku cook fish
'ADUKU cooked fish/ It is ADUKU [who] cooked fish.'

(4.95) Àdúkú ń dūg zími. Marked SF
Aduku FOC cook fish
'ADUKU cooked fish/ It is ADUKU [who] cooked fish.'

4.2.6.2. Structural marking

Structurally, Kusaal shows strong asymmetry between SF-marking and NSF-marking. This observation is consistent with the finding of Fierdler et al (2010: 244-6) for other Mabia languages such as Buli, Dagbani, Ditammari, Gurenɛ, Kɔnni and Leemi which show high degrees of structural asymmetry in the realization of SF and NSF. The structural differences in marking SF and NON-SF can be grouped into two: (i) different particles used for in-situ SF and in-situ NSF (ii) different particles used for in-situ NSF and ex-situ NSF marking. In all instances the particles are obligatory except for SF where prosody can replace the particle.

In Kusaal three different particles are used depending on the focused constituent in question. SF can either be morphologically null as in (4.96a) or overtly marked with *ń* as in (4.96b). The difference becomes even more complex with different particles used for in-situ NSF on one hand and ex-situ NSF on the other. In both instances, the particles *kà* as in (4.97a) and *né* as in (4.97b), respectively, are obligatory.

(4.96) Q: Who bought the goat?

Ans.: a. Dáú lá dāˡ búúg lá.

man DEF buy goat DEF

'THE MAN bought the goat.' SF: No particle, prosodically prominent

b. Dáú lá ń dāˡ búúg lá.

man DEF FOC buy goat DEF

'THE MAN bought the goat.' SF: Obligatory particle *n* +prosodically prominent

c.*Dáú lá kà dāˡ búúg lá

man DEF FOC buy goat DEF

'THE MAN bought the goat.'

(4.97) Q: What did the man buy?

Ans.: a. Búúg kà dáú lá dāˡ.

goat FOC man DEF buy

'The man bough A GOAT.'

NSF: fronting + obligatory FM kà+prosodically prominent

b. Dáú lá dāˡ nɛ́ búúg lá.

man DEF buy FOC goat DEF

'THE MAN bought the goat.'

NSF: No fronting, + obligatory FM *nɛ́* +prosodically prominent

From the various instances demonstrated above, at least three possible asymmetries can be drawn from the three main strategies for focus constructions in Kusaal. It has been shown that there are obvious differences characterizing subject and non-subject focus constructions morphologically, prosodically as well as structurally.

4.2.7. Section summary

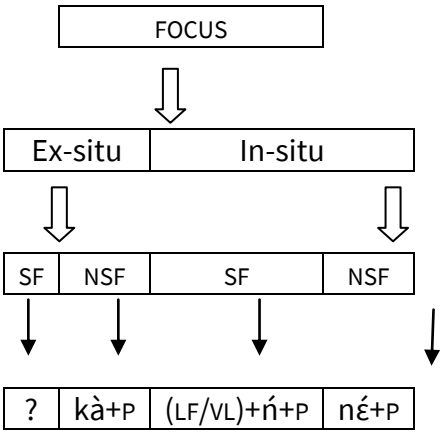
This section has given an elaborate discussion on focus constructions in Kusaal with further information on related Mabia languages. Focus constituents in Kusaal can be marked morphologically by using focus marking particles, structurally by fronting the focused constituent and prosodically by prominence and or vowel lengthening. The particle *kà* is used for ex-situ non-subject focus, *nɛ́* for in-situ non-subject focus and *ń* for in-situ subject focus. Other focus particles in the language include the adverbial particles: *máˈáá/ máˈáánɛ́* "only, just, alone, *kʋn kʋn* 'just' *zaŋ zaŋ* 'only as well as the additive particles: *mɛ́n* 'also, too', and *yáˈás* 'else, again'.

In addition, the section has explored the various 'lexical categories' or 'grammatical functions' that can be focused in Kusaal. It is observed that a wide range of items can be focused including

nouns functioning as subject, objects direct and object indirect, adverbials, pronouns and verbs. It is also possible to negate focused constituents in Kusaal.

Another important observation in the section concerns the asymmetry between subject and non-subject focus in Kusaal. It is shown that there are both structural and morphological asymmetries between subject and non-subject focus constituents in Kusaal. Generally, all focused constituents in Kusaal receive extra prominence compared to other constituents. However, there is also a subtle prosodic difference between subject focus and non-subject focus which requires the former to be the long forms of the noun or to undergo final vowel lengthening, a condition which is inconsequential in the latter. Figure (4.1) summarizes both the syntactic and morphological strategies in focus marking in Kusaal. The thicker arrows point to subtypes of the 'mother categories' above. The thinner arrows then narrow down to the corresponding particles for the various subtypes thus, subject focus (SF) and non-subject focus (NSF), of focus constructions. In addition to the particles, prosodic markings are indicated where P means prominence, LF means long forms and VL means vowel lengthening.

Fig.4.1. Syntactic, prosodic and morphological focus strategies in Kusaal



4.3. Topic and Left Dislocations in Kusaal

4.3.1. Introduction

Following Lambrecht (1994), I will not refer to topic as left dislocation since the term is potentially misleading. Whilst topic in Kusaal most commonly makes reference to what a proposition is about left dislocation is here considered as a topic-coding strategy. In both topic and ex-situ focus constructions in Kusaal, an argument or adjunct is assumed to have been displaced from its original position to a position outside its clause boundary mostly to the left of the entire construction. Whilst it is possible to refer to the process as it occurs in focus construction, question formation and relativization as fronting, such displacement is often referred to as left dislocation in topic constructions because unlike focus constructions and its likes where the fronted constituents mostly leaves a gap, it is imperative for a displaced topic constituent to be accompanied by a resumptive pronoun suggesting the absence of any form of movement in topicalization. Topic constituents are therefore not considered as fronted elements but rather base generated constituents (see Reinhart 1982). In section 4.4 of this chapter, it will be seen that focus construction in Kusaal patterns in ways that are quite similar to question formation. In both contexts, the contrastive focus particle *kà* is used after all fronted constituents without any resumptive pronoun left at the base positions.

In the rest of this subsection, I will discuss the form and function of topicalization in Kusaal and by extension Mabia languages as I attempt to answer the following questions: (i) what is topic (ii) what line of asymmetry can be drawn between subject and topic in Kusaal (Discourse subject/topic?) (iii) what are the grammatical properties of topicalization in Kusaal? (v) how can topic constituents be identified in Kusaal?

4.3.2. The Notion of Topic in Kusaal and some Mabia Languages

The pragmatic effect of topic marking has often surrounded notions such as 'psychological subject', 'what the sentence is about' etc, (Büring 2016), and regenerating divergent opinions in the literature. Linguists including Kuno (1972), Dik(1978) and Lambrecht (1994) describe topic as the constituent in a sentence which more or less expresses what the sentence is about and represents old information as opposed to the part which expresses 'what is said about the topic' thus the comment. Unlike example (4.98) which is a simple declarative sentence constituted by a subject and a predicate also marked in the English translation, example (4.99) is a topic-comment construction where the topic constituent *Yaˈa an biis la* 'as for the children' draws attention to the 'aboutness' of the sentence thus answering the question 'what is the sentence about?', and the comment constituent *ba di diib la* 'they have eaten the food' conveys the new message of what is being communicated about the topic thus answering the question 'what have the children done?'

(4.98) Bíís lá(SUBJ) dī dííb lá(PREDICATE).
children DEF eat food DEF
'The children have eaten the food.'
Subject Predicate

(4.99) Yáˈá àn bíís lá (TOP), bà dī dííb lá (COMMENT).
if COP.be children DEF, 3PL eat food DEF
'As for the children, they have eaten the food.'
Topic Comment

Others including Büring (2016) and Robert (2011) hold the opinion that this description is neither necessary nor sufficient in describing topic notions. Jacobs (2001) adds that 'there is no common functional feature (nor a common set of functional features) that justifies this classification [as 'topic' Büring (2016)].

According to Büring (2016) non-contrastive topic also called thematic topic includes clitic left dislocation in Romance (4.100a), preposing in English(4.100b) , or *wa*-marking in Japanese (4.100c) (all cf Büring 2016).

(4.100) a. Les pomes, jo no les he visit. (Catalan)
the apples I NEG them have.1SG seen
'The apples, I haven't seen them.' (Catalan: Lopez 2016)
b. Bagels, John likes.

c. (Tell me about the dog!)
Ano inu-wa kinoo kooen-de John-o kande-simatta
that dog-wa yesterday park-at John-ACC bite-ended.up
'That dog bit John in the park yesterday.' (Japanese: Vermeulen 2011)

Büring (2016) intimates that, thematic topics are characterized by features as follow: Some (syntactic, morphological, or intonational) marking does not have regular truth conditional effect, but appears to shape the pragmatic meaning of the sentence it occurs in, i.e. the kind of context it is felicitous in (sometimes, certain restrictions on the kind of constituents that can be so marked- e.g. 'referring expression only' –go hand in hand with that). If these effects are clearly not the ones found with F (answers to a question, new information, locus of correction…, or CT (contrastive topic), the marking is likely to be called (thematic) topic marking.

In Kusaal and some Mabia languages in general, thematic topics include both left dislocated morphologically marked topics with either topic phrases or topic particles, as well as non marked topics as illustrated below:

(4.101) a. Àsíbí, ò nwɛ̄ˈ bííg lá.
Asibi, 3SG hit child DEF
'Asibi, she hit the child.'

b. Yáˡá àn Àsíbí, ò nwɛ̄ˡ bííg lá.
if COP Asibi, she hit child DEF
'As for Asibi, she hit the child.'

The topic constituents in the sentences in (4.101a, b) thus *Asibi*, cannot be a focus constituent and will be infelicitous as answer to the question in (4.102a) or as CT (4.102b, c) in the concept of the analysis of what CTs are using alternative semantics (Büring 2016). It is ungrammatical to use the topic phrase or any form of left dislocations for the CT constituents in these situations[18].

(4.102) a. Ànɔ́ˡɔ́ŋ kà bà bɔ̄d yé bà nwɛ̄ˡ?
who FOC 3PL want COMP 3PL hit
'Who do they want to hit.'

b. Àsíbí$_{CT}$ bɔ̄d yé ò nwɛ̄ˡ né bííg$_{F}$ lá.
Asibi want COMP 3SG hit FOC child DEF
'ASIBI wants to beat THE CHILD'

c. Bííg$_{F}$ lá kà Àsíbí$_{CT}$ bɔ̄d yé ò nwɛ̄ˡ.
child DEF FOC Asibi want COMP 3PL hit
'It is THE CHILDthat ASIBI wants to hit.'

Topic constituents in Mabia languages identify an already established 'aboutee' by the use of phrases or particles but they cannot newly establish one (Büring 2016, Reinhart 1982). This explains the infelicitous use of (4.103c) in the context created in (4.103a)

(4.103) a. Dáú lá àné nàˡàyíiǵ.
man DEF COP thief
'The man is a thief.'

b. Àyípók mīˡī ò yɛ́lá.
Ayipok know 3SG.POSS matter. PL
'Ayioka knows that about him.'

c. ?Yáˡá àn Àyípók ò mīˡī ò yɛ́lá.
if COP Ayipok 3SG know 3SG.POSS matter.PL
'As for Ayipok, she knows that about him.'

[18] See Büring (2016) for a comprehensive discussion of contrastive topic (CT) and non-contrastive topic (thematic topic).

Additionally, thematic topics can be contrastive or not in Kusaal. This will be discussed in details in subsection 4.3.3.

Different languages adopt different coding strategies for expressing topic particularly with subject-prominent (Sp) languages[19] such as the Indo-European languages and the Niger-Congo languages to mention but a few (see Li and Thompson 1976). Below I present some data from six Mabia languages (Kusaal, Gurenɛ, Dagaare, Dagbani, Buli, Moore) in which all topicalized constituents are dislocated to the extreme left position of the sentence accompanied by resumptive pronouns at the base positions.

4.3.2.1. Kusaal

Kusaal has a special 'optional' topic phrase which precedes the topicalized constituent. The special topic phrase has an optional dummy subject pronoun followed by a conditional particle *ya'a* 'if' and a copula verb *àn(ɛ́)*.

(4.104) (Li) ya'a an …..
(it) if COP.be
Lit. 'regarding/ concerning/about/as for'

The special phrase in Kusaal, as is the case for other Mabia languages to be discussed soon, is not considered as a conditional clause because unlike conditional clauses that have *if*-word+ any verb aside the copula (4.101), the special phrase is limited to only an *if*-word + a copula (4.105).

(4.105) Bííg lá yá'á dī, ò kʊ̀ kāāsè.
child DEF if eat 3SG NEG cry
'If the child eats, s/he will not cry'

The verb *di* 'eat' can be replaced by any other verb example *gbuis* 'sleep', *diem* 'play' etc. but not a copula.

(4.106) *Bííg lá yá'á àn, ò kʊ̀ kāāsè.
child DEF if COP.be 3SG NEG cry

(4.107) (Lì) yá'á àn bííg lá, ò kʊ̀ kāāsè.
it if COP.be child DEF, 3SG NEG cry
'As for the child, s/he will not cry.'

The copula *àn(ɛ́)* 'be' in (4.107) cannot be replaced by any other verb in this environment.

[19] Term introduced by E.L. Keenan *cf* Li and Thompson (1976)

Though speakers more often than not use the special phrase, it is equally possible for the topicalized constituent to be bare without any qualifying phrase preceding it as illustrated in (4.108a-d).

(4.108) a. Bííg nwà, ò sààm sà nyɛ̄ ò.
child DEM 3SG.POSS father PAST see.PERF 3SG.ACC
'This child, his father saw him yesterday.'

b. Yáˈá àn bííg nwà, ò sààm sà nyɛ̄
if COP child this, 3SG.POSS father PAST see.PERF
ò.
3SG.POSS
'This child, his father saw him yesterday / As for this child his father saw him yesterday.'

c. Bííg lá, ò dī nɛ́ saˊáb[20].
child DEF, 3SG eat FOC TZ
'The child, he ate TZ.'

d. Yáˈá àn bííg lá, ò dī nɛ́ saˈáb.
if COP.be child DEF 3SG eat FOC TZ
'The child, he ate TZ/As for the child he ate TZ.'

In addition, an obligatory resumptive pronoun is required whether the topicalized constituent is an animate or an inanimate element as in (4.108a-d). The pronoun is however optional, though it is assumed to be present in the minds of speakers, in the environment of quantifying elements like *sábá* 'some', *záˈá* 'all' and *wʊ́sá* 'all' as in (4.109).

(4.109) a.Yáˈá àn taˊámá lá, m̀ dīi **lì** wʊ́sá.
if COP.be shea-fruits DEF, 1SG eat **it** all
'As for the shea-fruits, I ate all of it.'

b. Yáˈá àn taˊámá lá, m̀ dī **ø** wʊ́sá.
if COP.be shea-fruits DEF, 1SG eat **ø** all
'As for the shea-fruits, I ate all.'

[20] TZ 'Tuon Zaafi'-(from Hausa): is a staple meal popularly eaten in northern Ghana. It is locally called 'Saab' in a number of the Mabia languages.

4.3.2.2. Gurenɛ[21]

Gurenɛ as in the case of Kusaal uses a special 'optional' conditional phrase *san dɛna* 'if/ as for' which accompanies the topic. Equally obligatory is the use of an obligatory resumptive pronoun at the base position co-referent with the topic constituent except in the environment of a quantifying element as in (4.110) where it becomes optional.

(4.110) a. i. San dɛna bia la, ka sɔ nyɛ e.
COND COP child DEF his father see him
LIT.: 'If (as) it is the child, his father saw him.'
'As for the child, his father saw him.'

ii. Bia la, ka sɔ nyɛ e.
child DEF his father see him
'The child, his father saw him.'

b. San dɛna kɔma la ba di sagebɔ la.
COND COP children DEF 3PL eat TZ DEF
LIT.: 'If (as) it is the children, they ate the TZ.'
'As for the children, they ate the TZ.'

c. San dɛna sagebɔ la kɔma la n di bu.
COND COP TZ DEF children DEF FOC eat it
LIT:'If(as) it is the TZ, the children ate it.'
'As for the TZ, the children ate it.'

d. San dɛna taˈama la ma di ba zaˈa.
COND COP sheanuts DEF 1SG eat them all
LIT.: 'If(as) it is the shea-fruits, I ate them all.'
'As for the shea-fruits, I ate all.'

e. San dɛna gɔŋɔ la Asibi n dikɛ bo ma.
COND COP book DEF Asibi FOC take give me
LIT.: 'If (as) it is the book, Asibi gave it to me.'
'As for the book, Asibi gave it to me.'

[21] Data used for the other Mabia languages in this chapter were solicited from personal communications with native speaker of the various languages: Gurenɛ from Dr Samuel Atintoni (University of Education, Winneba Ghana), Moore from Baba More (Bawku, Ghana), Buli from Abdul-Razak Suleman (MIT, USA), Dagaare from Prof. Adams Bodomo (University of Vienna) and Dagbani from Ms Rahaina Tahiru (University of Development Studies, Tamale Ghana) and Samuel Alhassan Issah (University of Education Winneba, Ghana/ Goethe-Universität Frankfurt).

4.3.2.3. Moore

Moore has a structure identical to Kusaal and Gurenɛ where the topic constituent is qualified by an 'optional' topic phrase composed of an if-word and a copula *san ya* 'if be'. There is also an obligatory resumptive pronoun at the base position.

(4.111) a. i. San ya bii-a, a saam nya la me.
if COP child-DEF 3SG.POSS father see la 3sg
'As for the child, his father saw him.'

ii. Bii-a, a saam nya la me.
child-DEF 3SG.POSS father see LA 3SG
'The child, his father saw him.'

b. San ya sagib-a, kam-a dii me.
if COP TZ-DEF children-DEF eat it
'As for the TZ, the children have eaten it'

c. San ya kam-a obu dii sagib-a.
if COP children-DEF, 3PL eat TZ-DEF
'As for the children, they have eaten the TZ.'

d. San ya taama, mam dii me.
if COP shea-fruits, 1SG.EMPH eat it
'As for the shea-fruits, I ate it.'

e. San ya taama, mam dii faa.
if COP shea-fruits, 1SG.EMPH eat all
'As for the shea-fruits, I ate all.'

f. San ya gbaʊŋ-a, Asibi a kuŋ mam.
if COP book-DEF Asibi it give me
'As for the book, Asibi gave it to me.'

4.3.2.4. Buli

Buli has an optional topic particle *de* which comes directly after the dislocated constituent. There is also an obligatory resumptive pronoun for both animate and inanimate topicalized constituents.

(4.112) a. mi ɲa mango:ku Simple declarative sentence

1SG see-PERF mango.DEF

'I saw the mango.'

b. mango:ku de, mi ɲa *(ku)

mango.DEF TOP 1SG see-PERF it

'As for the mango, I saw it.'

c. mango:ku, mi ɲa * (ku)

mango.DEF 1SG see-PERF it

'The mango, I saw it.'

d. mi ɲa bi:ka

1SG see-PERF child.DEF

'I saw the child.'

e. bi:ka, mi ɲa *(wa)

child.DEF 1SG see.PERF him

'As for the child I saw him.

f. bi:ka de, mi ɲa *(wa)

child.DEF TOP 1SG see.PERF him

'As for the child I saw him.

4.3.2.5. Dagaare

Dagaare has an obligatory topic marker 'eng' (Bodomo 2000) which follows the topic constituent. There is also an obligatory resumptive pronoun which is co-referent with the topicalized constituent.

(4.113) a. i. A biiri eng, ba di la saao.

DEF children TOP, 3PL eat FOC TZ

'As for the children, they ate TZ.'

ii.* A biiri, ba di la saao.

DEF children, 3PL eat FOC TZ

'As for the children, they ate TZ.'

b.i A saao eng, a biiri di o la.
DEF TZ TOP DEF chidren eat.PERF it FOC
'As for the TZ, the children have eaten it.'

ii. * A saao eng, a biiri di la.
DEF TZ TOP DEF chidren eat.PERF FOC
'As for the TZ, the children have eaten it.'

c. i. A tagma eng, n di la a zaa.
DEF shea-fruit TOP 1SG eat.PERF FOC 3pl.inanimate all
'As for the shea-fruits, I have eaten all of them.'

ii. *A tagma, n di la a zaa
DEF shea-fruit 1SG eat.PERF FOC 3pl.inanimate all

iii. A tagma eng, n di la a zaa[22]
DEF shea-fruit TOP 1SG eat.PERF FOC 3pl.inanimate all
'As for the shea-fruits, I have eaten all of them.'

d. i. A gane na eng , Dakoraa ko m'o la.
DEF book that TOP Dakoraa give.PERF me-it FOC
'As for that book, Dakoora gave it to me.
ii. *A gane na, Dakoraa ko m'o la
iii. *A gane na eng, Dakoraa ko ma la

e. i. A biiri eng, ba saa nyɛ ba la
DEF children TOP, 3PL father see.PERF 3PL FOC
'As for the children, their father saw them.'
ii. *A biiri , ba saa nyɛ ba la
iii. *A biiri eng, ba saa nyɛ la

4.3.2.6. Dagbani

In Dagbani, topicalized constituents are followed by an optional emphatic pronoun. According to Bawa (1988:63 cf Olawsky 1999:28) an emphatic pronoun can be repeated after an antecedent which is a full noun. The purpose of the pronoun in such instances is to emphasize the NP in the construction. Hypothetically, the emphatic pronoun functions as a topic particle in Dagbani by

[22] According to my supervisor, this is good based on grammaticality judgement.

overtly signaling the inherent emphatic, contrastive interpretation on the topicalized constituent. The resumptive pronoun is also obligatory for both animate and inanimate entities.

(4.114) a. N sa nya moongu maa. simple declarative sentence
1SG PAST see-PERF mango DEF
'I saw the mango yesterday.'

b. Moongu maa ŋuna[23] n sa nya li.
mango DEF 3SG.EMPH 1SG PAST see-PERF it
'As for the mango, I saw it yesterday.'

c. ?[24] Moongu maa, n sa nya li.
mango DEF, 1SG PAST see.PERF it
The mango, I saw it.'

d. N sa nya bia maa.
1SG PAST see-PERF child DEF
'I saw the child yesterday.'

e. ??Bia maa, n sa nya o.
child DEF 1SG PAST see.PERF 3SG
'The child, I saw him.'

f. Bia maa ŋuna, n daa nya o.
child DEF 3SG.EMPH 1SG PAST see.PERF 3SG
'As for the child, I saw him.'

g. Bia maa ŋuna, o sa nya moongu maa.
child DEF 3SG.EMPH 3SG PAST see-PERF mango DEF
'As for the child, s/he saw the mango.'

Generally, Mabia languages overwhelmingly use left dislocation is topic constructions where the topicalized constituent is obligatorily accompanied by a resumptive pronoun. Additionally, topic constituents are mostly identified with either the subject or the object in addition to which they can also be anaphorically linked with either the subject or the object of the construction. More importantly, topicalized constituents in these languages are mostly coded with either optional

[23] *Ŋuna* is an emphatic pronoun for 1SG, 2SG and 3GSG and *bana* is it's counterpart for 1PL,2PL and 3PL.
[24] According to my consultant, this structure is hardly used making the use of the emphatic pronoun more preferred. This in a way corresponds with what another consultant, Samuel Alhassan Issah (personal conversation) indicates. According to Issah, the use of the particle *ŋuna* is optional.

topic phases, in languages like Kusaal, Gurenɛ and Moore, or optional topic particles, as in Buli, and Dagbani. Exception to the optionality of the topic particle is observed in Dagaare indicating that some of the Mabia languages have obligatory topic particles. The special topic phrases in Kusaal, Gurenɛ and Moore are uniformly characterized by the conditional conjunction *if* plus a copula. Moreover, the special topic phrases precede the topic constituent. Thus in Kusaal, Gurenɛ and Moore, the topic phrases precede the topicalized constituent. However, in languages like Dagaare, Buli and Dagbani where particles are used, the said particles occur after the topicalized constituent. Below is a summary of the various phrases and particles for the six Mabia languages discussed.

Tale 4.1. Topic phrases and particles in Mabia

Language	Topic Phrase	Status
Kusaal	(Li) yaˈa an(ɛ)….. it if COP	optional
Gurenɛ	San dɛna….. if COP	optional
Moore	San ya….. if COP	optional
Language	Topic Particle	Status
Dagaare	…..eng TOPIC	obligatory
Dagbani	……ŋuna/Duna Emph.Pronoun	optional
Buli	……de TOPIC	optional

It is postulated that the use of left dislocation in topic constructions coupled with the employment of topic phrases and particles in the six languages discussed are all strategies used for the expression of the notion of 'aboutness' on the topicalized constituent with the special phrases and particles further used as reinforcements for the inherent emphatic/contrastive interpretations on the topicalized constituents.

4.3.3. Subtypes of Topics in Kusaal

The inherent emphatic/contrastive interpretations that accompany topic constituents which are either qualified by the topic phrase or topic particle compared to those that are not accompanied by such phrases and particles require further explanation. Although I do not intend to delve deeper looking at subtypes of topics in other Mabia languages, the findings for Kusaal may have potential bearing on all related languages. Topic constructions in Kusaal can be subcategorized

into two purely based on the pragmatic interpretations of the constructions that employ the special phrase and those that do not. This shows that the special topic phrases and particles may not after all be optional.

Although all topic constructions in the language implicitly express an 'aboutness' connotation, the topic constructions with the phrase *yáá án* 'if.be' have an additional exclusive and contrastive interpretation as compared to the ones that are not qualified by the special topic phrase. In the later, the meaning derived is more of familiarity rather than exclusiveness and contrast. I use the contexts below to explain these postulations.

4.3.3.1. Contrastive Topic in Kusaal

Context One: Assuming a context where *Aduk* and *Ayipoka* know that there is a mango on the table. *Aduk* eats the mango without *Ayipoka*'s knowledge. *Ayipika* comes to the table looking for something. *Aduk* utters the following:

(4.115) a. Fù ēīd bɔ́ɔ́? Yaꞌá án móngó lá, ǹ dīyá.[25]
2SG search what if COP.be mango DEF 1SG eat
'What are you looking for? As for/if it is the mango, I have eaten it.'

It is infelicitous for *Aduk* to topicalize 'mango' in this context without the special phrase.

b. ??Fù ēīd bɔ́ɔ́? Móngó lá, ǹ dīyá.
2SG search what mango DEF 1SG eat.PERF
'What are you looking for? The mango, I have eaten it.'

4.3.3.2. Familiarity Topic in Kusaal

Context Two: *Aduk* and *Ayipoka* talk about *Asibi* in the conversation below.

(4.116) a. Aduk: Ǹ sà nyɛ̄ Àsíbí súˈòs.
Aduk: 1SG PAST see Asibi yesterday
Aduk: 'I saw Asibi yesterday.'

b. Ayipoka: Àsíbí, ò sáàm kpī àsùbá nwá.
Ayipoka: Asibi, 3SG.POSS father die down DEM
Ayipoka: 'Asibi, her father died this down.'

[25] Because of the perfective suffix –ya, the resumptive pronoun is absent though it is assumed to be present in the minds of speakers. Refer to chapter 3 section 3.3.1.4.2.2..

The topic element '*Asibi*' is familiar to both interlocutors and it lacks any contrastive or exhaustive interpretation. It will be infelicitous to use the topic phrase in this context.

c. ??Ayipoka:Yáˈá àn Àsíbí, ò sáàm kpī àsùbá nwá.
Ayipoka: if COP.be Asibi 3SG.POSS father die down DEM
Ayipoka: 'As for/if it is Asibi, her father died this morning.'

Following these observations, I assume two subcategories of topic constructions in Kusaal: contrastive topic and familiarity topic (see Ermisch 2006). This is open to further reaserch and discussions since what has been presented here cannot be claimed to be exhaustive for Kusaal and other Mabia languages.

4.3.4. Asymmetry between Subject and Topic in Kusaal

This subsection looks at observed asymmetries characterizing the use of the grammatical function 'subject' compared to the discourse function 'topic' in Kusaal. To begin with, whilst a subject pronoun does not need to be the emphatic form, a topic pronoun must always be the emphatic form in Kusaal.

(4.117) M̀ sà dāˈ gbáúŋ lá súˈòs.
1SG PAST buy book DEF yesterday
'I bought the book yesterday.'

The 1st person subject pronoun *M* 'I' in (4.173) is the subject of the sentence which has a direct relationship with the predicate of the sentence.

(4.118) Yáˈá àn mán, m̀ sà dāˈ gbáúŋ lá
if COP.be 1SG.EMPH., 1SG PAST buy book DEF
súˈòs.
yesterday
'As for me, I bought the book yesterday.'

The 1st person emphatic subject pronoun *Man* 'I-emphatic', in (4.118) is the topic about who the comment clause is about. A topicalized subject pronoun is always the emphatic form. The examples in (4.117) and (4.118) show that whilst a subject occurs with a predicate in a sentence, a topic occurs with a comment clause.

In Kusaal, unlike a subject, the exclusive 'as for' connotation of a topic is expressed by left dislocating the topic constituent and qualifying it with the special topic phrase *lì yáˈá ànɛ́* shortened as *yáˈá àn* which identifies the topicalized constituent as the main element of centrality, about which the succeeding comment clause is about. This strategy immediately marks the topic as old information in connection with the comment clause. The phrase, sort of,

foregrounds the notion of 'aboutness' in the minds of both interlocutors judging from the various meanings it generates: about…, regarding…, with regards to…., as for…, talking about…, with reference to… etc. The use of both left dislocation and the special phrase by speakers to mark topic as in (4.118) compared to the unmarked status of a subject as in (4.117) shows that the two, thus topic and subject, are used for different grammatical purposes. Where no overt grammatical topic markers are used, it is clearly shown that topic constituents are directly identified with either the subject or the object of the comment sentence by their accompanying resumptive pronouns.

Additionally a subject which is referred to as a default-topic connects clauses and it can be shared between coordinated clauses Falk (2001:59). However, the same cannot be said for a topic constituent because it cannot be shared between coordinated clauses as in (4.119b-c).

(4.119) a. Bíís lá sà kūl ká lɛ́n lɛ̄b sú'ò̀s na.
children DEF PAST go.home CONJ again return yesterday LOC
'The children went home and returned the same yesterday.'

b. *Yá'á àn bíís lá, sà kūl
if COP.be children DEF PAST go.home
'As for the children they went home.'

c.*Yá'á àn bíís lá, sà kūl ká lɛ́n
if COP.be children DEF PAST go.home CONJ again
lɛ̄b sú'ò̀s ná.
return yesterday LOC
'As for the children they went home and returned the same yesterday.'

The situation becomes more complex in serial verb constructions where multiple verbs share an identical subject (4.120a) which is impossible in the case of a topic constituent since it cannot be shared by multiple verbs (4.120b).

(4.120) a. Bíís lá sà kūli kēŋ dīɛ̄ lígídí.
children DEF PAST go.home go collect money
'The chidren went home for money.'

b. *Yá'á àn bíís lá, sà kūl kēŋ
if COP.be children DEF PAST go.home go
dīɛ̄ lígídí.
collect money
LIT. 'As for the children, they went home for money.'

Moreover, the subject unlike a topic has a selectional relation with the predicate of the sentence. Whilst all verbs may not select an object, for instance, one place verbs, every verb must select a subject and again whilst a subject can be either definite or indefinite, a topic is always definite (Li and Thomson 1976:461-466, Chafe 1976).

(4.121) Bíís lá dī dííb lá.
children DEF eat food DEF
'The children have eaten the food.'

(4.122) Yá'á àn bíís lá, bà dī dííb lá.
if COP.be children DEF, 3PL eat food DEF
'As for the children, they have eaten the food.'

(4.123) Yá'á àn dííb lá, bíís lá dī lì.
if COP.be food DEF, children DEF eat it
'As for the food, the children have eaten it.'

To explain (4.121-4.123), I will use the concept of grammatical functions discussed in chapter two. It was explained that grammatical functions are classified into argument functions and non-argument functions. Argument functions which include: subject, object, object direct and object indirect basically express the argument of a predicate whilst non-argument functions: topic, focus and adjunct are used for expressing relations other than argumenthood. The differences between these two functions are analogous to the distinction between A position and A-bar positions in GB. In LFG this difference is established between grammatical functions rather than the c-structure positions (Falk 2001:58). The NPs *biis* 'children' and *diib* 'food' in (4.121) perform the argument functions: subject and object respectively. They are both selected by the verb *di* 'eat' which is a two place predicate verb and requires an obligatory subject and object. The subject in this case is definite though it can equally be indefinite. *Biis* 'children' and *diib* 'food' in (4.122) and (4.123) assume a non-argument function of topichood by virtue of the fact that (1) the sentences (4.122 and 4.123) are respectively ABOUT these proposed NPs (2) these NPs are old information in the two respective sentences. The NPs *biis* 'children' and *diib* 'food' do not have any selectional relation with the verb in the main sentence and they are definite. Detailed analysis of these will be rendered in the next chapter of this dissertation. Table (4.2) summarizes some of the salient differences between a topic and a subject in Kusaal.

Table 4.2. Subject-Topic Asymmetries in Kusaal

Properties	**Subject**	**Topic**
Selectional relations	Yes	No
Emphatic pronouns	No	Yes
Markedness	No	Yes
Shared between clauses	Yes	No

4.3.5. Grammatical properties of topicalization in Kusaal

In this section, I intend to examine the characteristics of Topics in Kusaal which may apply to other Mabia languages in general looking at the close resemblance in the coding strategies for topics in the six sampled Mabia languages discussed in section 4.3.2. The approach adopted here looks at the various characteristics of topic constructions in Kusaal in particular and Mabia languages in general. The criteria followed include outlines set out by researchers such as Li and Thompson (1976:466-471), and Chafe (1976) Büring (2016) among others.

According to Li and Thompson (1976), 'Surface coding' is one of the observed features of topic-prominent (Tp) languages. According to them, Tp languages have surface coding for the topic, but not necessarily for the subject. Taking Mandarin as an example, the topic is always in initial position whilst Lisu and Lahu code the topic morphologically. None of these languages has surface coding for the subject. The examples below are taken from Li and Thompson (1976:462).

(4.124) a. hɛ chi tê pêˀ ɔ̄ dāˀ jâ (Lahu)
field this one classifier rice very good
"This field (topic), the rice is very good."

b. hɔ ɔ̄ na-qhɔ̂ yɨ́ ve yɔ̀ (Lahu)
elephant topic nose long PAST Declarative marker
"Elephants (topic), noses are long."

(4.125) Neì-xie shùmu shù-shēn dà (Mandarin)
those tree tree-trunk big
"Those trees (topic), the trunks are big."

Comparatively, almost all Mabia languages do not code subjects. Topics, on the other hand, have surface coding as illustrated below with examples from Kusaal and Buli.

(4.126) a. Bííg nwà, ò dīyá (Kusaal)
child DEM (topic), 3SG eat-PERF
'This child, s/he has eaten.'

b. Yáˈá àn bííg nwà, ò dīyá (Kusaal)
if COP.be child DEM (topic) 3SG eat-PERF
'As for this child, s/he has eaten.'

(4.127) a. mango:ku, mi ŋa *(ku) (Buli)
mango.DEF 1SG see-PERF it
'The mango, I saw it.'

b. mango:ku de, mi ŋa *(ku) (Buli)
mango.DEF TOP 1SG see-PERF it
'As for the mango, I saw it.'

It is however important to add that whilst Lisu, Lihu and Mandarin, reserve the basic word order in addition to surface coding for Tps, Mabia languages code by left dislocation in addition to morphological surface coding.

Another common feature of subject prominent languages as noted by several researchers including Li and Thompson (1976) is passivisation which on the contrary does not occur at all in Tp languages (Lahu and Lisu) or which may appear as a marginal construction, and rarely used in speech (Mandarin). Interestingly, passivisation as it occurs in English does not have the same structural form in Kusaal as shown in chapter three of this dissertation. The same situation is attested in other Mabia languages such as Dagaare (Bodomo 1997:140) and Dabgani (Olawsky 1999:68). In an explanation, Li and Thompson (1976) argue that in subject prominent languages, the notion of subject is so basic such that if a noun other than the one which a given verb designates as its subject assumes the subject function, the verb is marked to signal this "non-normal" subject choice. In Tp languages on the contrary, the topic other than the subject is what plays a more significant role in sentence construction. Any noun phrase can assume a topic function without any form of registration on the verb. This makes the absence of passivisation natural in Tp languages as opposed to Sp languages. The structural difference in passivisation as it occurs in subject prominent languages like English compared to the pseudo passive forms, (refer to section 3.3.1.2), found in Kusaal and other Mabia languages potentially points to a direction where in terms of a scale, it can be assumed that Mabia languages are neither entirely Sp languages nor are they fully Tp languages and as such somewhere in between the two.

The absence of "dummy" or "empty" subject per the criteria of Li and Thompson is one additional feature that distinguishes Tp languages from Sp languages. "Dummy" subjects such as *it* and *there* in English, *es*, in German, *il* and *ce* in French may be found in Sp languages because a subject is a necessary feature whether or not it has any semantic role to play as shown in the following.

(4.128) a. It is raining
b. It is hot in here
c. It is possible that the war will end.
d. There is a cat in the garden.

But Tp languages do not need the "dummy" subject simply because the notion of subject is not prominent compared to Sp languages as shown in Manderin (Li and Thompson 1997:468).

(4.129) a. Zhèr hěn rè (Mandrin)
here very hot

"It is very hot here."

b. Yǒu yī̍ - tiáo maō zàI huāyuán-li (Mandarin)
exist one-class cat at garden - in
"There is a cat in the garden."

Similarly, the sentences with the "dummy" subjects are rendered in Kusaal without any need for such subjects as is the case in Manderin.

(4.130) a. Kpɛ́lá tʊ́l nɛ́ gàlís.
here hot FOC excessive
'It is very hot here.'

b. Àmʊ́s bɛ́ lɔ́mbɔ́nˈɔ́gìn lá.
cat EXIST garden-LOC DEF
'There is a cat in the garden.'

c. Sáá fʊ̄kīdnɛ́
rain fall.IMPERF
'It is raining.'

It will be ungrammatical to use the "dummy" subject in any of the sentences in (4.130a-c) as exemplified in (4.131) below.

(4.131) *Li tʊ́l gàlís kpɛ́lá.
it hot excessive here
'It is very hot here.'

Again, unlike (4.131a) it is entirely impossible to even introduce a pronoun in (4.131b-c). The absence of 'dummy' subjects further reiterate the fact that Mabia languages are somewhere in between Tp and Sp languages and not entirely Sp.

All the examples presented so far reaffirm the assertion that topicalization in Mabia always involves 'left dislocation' with the use of an obligatory resumptive pronoun co-referential to the topicalized constituent. By this, it means that the basic sentence structure of topic-comment constructions differs from that of a subject-predicate construction as further illustrated below with examples from Kusaal and Buli.

(4.132) a. Ǹ sà nyɛ̄ bííg lá. Declarative Sentence (Kusaal)
1SG PAST see child DEF
'I saw the child.'

b. Bííg lá, m̀ sà nyɛ̄ *(ò).
child DEF 1SG PAST see 3SG.ACC
'The child, I saw him.'

c. Yáˈá àn bííg lá, m̀ sà nyɛ̄ *(ò).
if COP.be child DEF 1SG PAST see 3SG.ACC
'As for the child, I saw him.'

d. Yáˈá àn mán, m̀ sà nyɛ̄ bííg lá.
if COP.be 1SG.EMPH, 1SG PAST see child DEF
'As for me, I saw the child.'

(4.133) a. mi ɲa bi:ka Declarative Sentence (Buli)
1SG see-PERF child. DEF
'I saw the child.'

b. bi:ka, mi ɲa *(wa)
child.DEF 1SG see-PERF 3SG.ACC
'The child, I saw him.'

c. bi:ka de, mi ɲa *(wa)
child TOP 1SG see-PERF 3SG.ACC
'As for the child, I saw him.'

Whilst it is possible to topicalize a coordinated NP (4.134a), a subject (4.135b) or an object (4.135c), it is ungrammatical to repeat an NP in its full form in a topic construction (4.134b). Additionally, it is ungrammatical to topicalize two constituents at the same time (4.135d-e).

(4.134) a. Bííg lá nɛ́ dáú lá, ǹ sà nyɛ̄ bà.
child DEF CONJ man DEF, 1SG PAST see 3PL
'The child and the man, I saw them.'

b. * Bííg lá nɛ́ dáú lá, ǹ sà nyɛ̄ bííg
child DEF CONJ man DEF, 1SG PAST see child

lá nɛ́ dáú lá.
DEF CONJ man DEF

(4.135) a. Ǹ sà tīs bííg lá dííb lá.
1SG PAST give child DEF food DEF
'I gave the child the food.'

b. Bííg lá, ǹ sà tīs ò dííb lá.
child DEF 1SG PAST give 3SG food DEF
'The child, I gave him/her the food.'

c. Dííb lá, ǹ sà nɔ̄k lì tīs bííg lá.
food DEF 1SG PAST take it give child DEF
'The food, I gave it to the child.'

d. * Bííg lá, dííb lá, ǹ sà tīs ò lì.
child DEF food DEF 1SG PAST give him/her it

e. * Bííg lá dííb lá, ǹ sà nōk lì tīs ò.
child DEF food DEF 1SG PAST take it give him/her

In the same way, all examples presented including (4.135b) and (4.135c) demonstrate the possibility of topicalizing both subject and object constituents in Kusaal. What is equally possible is the topicalization of the predicate. Kusaal topicalizes predicates in the same way as subject and objects get topicalized by fronting. The topicalized predicate gets nominalized with a copy realized at the original base position as illustrated in (4.136-138).

(4.136) Yá'á àn kúósʊ́gɔ́, bà kūōs lɔ́r lá.
if COP.be sell.NOM 3PL sell car DEF
'As for selling, they sold the car.'

(4.137) Yá'á àn kúóbɔ́, ò kūōdnɛ́ hálí.
if COP.be farm.NOM 3SG farm.IMPERF intensifier
'As for farming, he farms a lot.'

(4.138) Yá'á àn núúbɔ́, ò nūūdì sáŋá wʊ́sá.
if COP.be drink.NOM 3SG drink.IMPERF time all
'As for drinking, he drinks always.'

Equally important is the negation of topicalized constituents. This is carried out in two ways per the type of topic-comment construction chosen: thus either using the special optional phrase or not. If one uses the special topic phrase, *yáˈá àn* then the positive copula *àn(ɛ́)* 'be' must be changed to the negative variant *káˈá* 'be.not'. *káˈá* 'be.not' is then licensed by the regular negative particle *pʊ́/bò* in the comment clause. The interpretation derived from the use of the double negatives is positive as demonstrated in (4.139).

(4.139) a. Yáˈá **káˈá** bííg lá, wɛ́lá m̀ **pʊ́** nyɛ̄ ò.
if NEG.COP.be child DEF, (then) 1SG NEG see 3SG
'If not the child, I did not see him.'
'I did not see the one who is not the child.'
'The child, I saw him.'

b.*Yáˈá **káˈá** bííg lá, m̀ nyɛ̄ ò.
if NEG.COP.be child DEF, 1SG see 3SG
'If not the child, I did not see him.'
#'I did not see the one who is not the child.'
#'The child, I saw him.'

Using the negative copula in the topic phrase with a non-negated comment clause is unusual and mostly weird especially if not properly situated in a context.
On the other hand, if the topic constituent is bare, thus when the phrase is not used, then a negative interpretation is derived by using the negative particle in the comment clause as illustrated in (4.140).

(4.140) Bííg lá, m̀ sà pʊ́ nyɛ̄ ò.
child DEF 1SG PAST NEG see 3SG. ACC
'The child, I did not see him.'

Negative interpretation can equally be derived using the special topic phrase whilst the comment clause contains the negative particle as in (4.141).

(4.141) Yáˈá àn bííg lá, ǹ sà pʊ́ nyɛ̄ ò.
if COP.be child DEF 1SG PAST NEG see 3SG. ACC
'As for the child, I did not see him.'

In general, topicalization in Kusaal and by extension Mabia languages patterns partly with topic prominent languages such as Manderin, Lahu, and Lihu and partly with subject prominent languages such as English. The various observations in this section are summed up in the following generalization on the properties of topic constructions in Kusaal and other Mabia languages.

i. Topicalization is uniquely marked using a special topic phrase introduced by an optional dummy pronoun and a conditional *if-word* or a topic particle. The topic phrases or particles serve as reinforcement for emphasis and contrast on the topicalized constituent and cannot be used in any other context.
ii. Topic are generally accompanied by resumptive pronouns which refer back to the 'aboutee' indicating what the sentence is 'about'.
iii. Topics are morphologically marked in Mabia languages. However the topic phrases and particles are optional with the exception of Dagaare where the said particle is obligatory.
iv. Unlike topics that are optionally marked morphologically, subject constituents are not marked.
v. Just like Sp languages (English), topicalization in Kusaal and other Mabia languages uniformly employ left dislocation defying the basic word order of the language.
vi. Just like Tp languages, passivisation as it occurs in English cannot be rendered in most Mabia languages.
vii. Just like Tp languages, the use of dummy pronouns as subjects is illicit in Kusaal.
viii. It is possible to topicalize both arguments and predicate clefts in Kusaal.

4.3.6. Identifying Topics in Kusaal and Mabia other languages

Linguists working on topic-comment including Gundel (1974); (1988) and Reinhart (1981) have proposed several tests for topichood: the 'as-for' test, the 'what about test' and the 'said about' test. These tests are aimed at providing operational tool(s) for identifying the topic in a sentence. However, some of these tests have been suggested to be problematic for being either too strict or too weak for satisfying their intended purposes (Gundel 1974:110, Vallduví1988 cf Vallduví (1990b). In this work, I intend to follow the suggestion of Reinhart (1981) and further propose an *if be* test for identifying topics in Kusaal and by possible extension to some other Mabia languages. If we consider the comment to be about the topic, then this automatically sets some constraints which can be used to identify the topic in a sentence: (1) 'aboutness' topic is the element of 'aboutness' by the comment clause which is also anaphorically linked to the resumptive pronoun in the comment clause in Kusaal and sister Mabia languages. (2) With the exception of generic expressions, 'aboutness' topic must be specific and definite. This is because 'aboutness' is incongruent with indefiniteness or unspecificity. (3) Quantificational elements such as *at least, nearly, all* cannot be used to express 'aboutness' topic for semantic reasons and (4) phrases such as *if be,* and a*bou*t can be used to express 'aboutness' in Kusaal.

Reinhart (1981) argues that the identification of the topic expression involves an interplay of syntactic, semantic and pragmatic considerations. Syntactically, she cautions against interpreting the grammatical subject of a sentence as its topic or further still placing the topic in subject position adding that the subject is usually the unmarked topic. This means that it is easier to use a sentence when we intend its subject to be a topic, though they are not obligatorily topics.

Structurally, topics can be identified with much ease. There are certain syntactic positions that are fixed or marked as topic positions and elements found in these positions automatically assume topic functions. The clearest of all as argued by Reinhart (1981) and also observed in this section is found in the structure known as Left Dislocation which is the main topic coding strategy in Mabia languages further illustrated using Kusaal and Buli as below.

(4.142) a. Bíís lá, ǹ sà nyɛ̄ bá. (Kusaal)
children DEF (topic) 1SG PAST see 3PL
'The children, I saw them.'

b. Yáˈá àn bíís lá, ǹ sà nyɛ̄ bá.
if COP.be children DEF (topic) 1SG PAST see 3PL
'As for the children, I saw them.'

(4.143) a. bi:ka, mi ɲa *(wa) (Buli)
child.DEF 1SG see-PERF 3SG.ACC
'The child, I saw him.'

b. bi:ka de, mi ɲa *(wa) (Buli)
child TOP 1SG see-PERF 3SG.ACC
'As for the child, I saw him.'

Any NP as well as nominalized predicative element found in a left dislocated constriction such as in (4.142) in Kusaal and (4.143) in Buli is marked as a topic.

Another approach is the use of the *if be* phrase in Kusaal which is also applicable to some Mabia languages. Any NP argument or a nominalized predicative element that follows an *if-word* and a copula is a topic. It is generally uncommon to find a copula following an *if-word* in the languages in (4.144) in any construction other than a topic construction.

(4.144) a. Yáˈá àn bíig lá, ò sáám sà nyɛ̄ ò
if COP.be child DEF (topic) his father PAST see him
'As for the child, his father saw him.' (Kusaal)

b. San dɛna bia la, ka sɔ nyɛ e. (Gurenɛ)
COND COP child DEF his father see him
'If (as) it is the child, his father saw him.'

c. San ya biig-a, a saam nyee la me. (Moore)
if COP child-DEF his father see LA him
'As for the child, his father saw him.'

Another deducible method following Reinhart (1981:64-65) is the use of the 'aboutness' test where the sentence in question is embedded in an *about* sentence. For how this works, consider the following 'aboutness sentence structure in embedded clause' where the about phrase or topic marker may precede or follow the NP in the various Mabia languages discussed.

(4.145) He said [about] NP, main clause (comment)

Structurally, the above structure is generated in these languages by basically following two steps:

i. Embed the sentence in question after the aboutness slot
ii. Introduce a corresponding pronoun co-referential to the about NP

Illustrating this, I use the structurally unmarked sentence in (4.146a). To identify the topic constituent, I replace both the unmarked sentence with structurally marked ones in which the NP subject and the NP object occur in topic positions as in (4.146b) and (4.146c) respectively. The marked sentences have different interpretations compared to the initial unmarked sentence making the NPs in the former topic elements of the original sentence in (4.146a).

(4.146) a. Dáú lá sà nyɛ̄ bííg lá.
man DEF PAST see child DEF
'The man saw the child.'

b. Ò yɛ́l yé yáˈá àn dáú lá, ò sá nyɛ̄ bííg lá.
3SG say COMP if COP.be man DEF 3SG PAST see child DEF
'He said that as for the man, he saw the child.'

c. Ò yɛ́l yé yáˈá àn bííg lá, dáú lá sá nyɛ̄ ò.
3SG say COMP if COP.be child DEF man DEF PAST see 3SG
'He said that as for the child, the man saw him.'

The NP after the 'about/ special phrase' is marked as the topic element both structurally and semantically by being pragmatically co-referential with their respective resumptive pronouns.

Basically, three approaches that can be used to identify a topic constituent in Kusaal and Mabia languages in general include: (1) left dislocated elements that are accompanied by a resumptive pronoun at their base positions, (2) the *if be* phrase in which a copula follows an *if-word* and all precede the topic constituent and (3) the 'aboutness' embedded sentence test where the topicalized constituent either follows the special topic phrase or precedes the topic particle in an embedded sentence.

4.3.7. Section summary

This section has explored in detail the various issues relating to topicalization in Kusaal in particular and Mabia languages in general. It has shown that these languages overwhelmingly employ left dislocation as a topicalization strategy. In addition, these languages either use special topic phrases or topic particles which may either be optional (Kusaal, Buli, Gurenɛ, Dagbani and Moore) or obligatory (Dagaare). More importantly, there are clear cut differences between topics and subjects with the former having to be introduced by special phrases and particles and mostly dislocated to the left of the entire construction whilst the latter is predominantly selected by the predicate in the sentence.

The section has further shown that Kusaal and other Mabia languages can be argued to be located somewhere in-between topic prominent languages and subject prominent languages since they have features that are common to either group and cannot entirely be said to belong fully to Tp or Sp languages.

To identify a topic constituent in Kusaal and other Mabia languages, I have shown three possible approaches that can be used: (i) All left dislocated constituents accompanied by a resumptive pronoun (for NP constituents) or a copy of the verb (for predicative elements) are topic constituents. (ii) Using the *if+ be* test, all elements that are preceded by the special *if.be* phrases in Kusaal, Gurenɛ and Moore are topic constituents, or all elements that are followed by the topic particles, *de* for Buli, *eng* for Dagaare and *ŋuna* for Dagbani are also topic constituents. (iii) Finally, topic constituents always follow the about slot in an embedded *about* sentence.

4.4. Question Formation and focused, non-focused wh-questions in Kusaal

4.4.1. Introduction

In this section, I attempt to discuss the various interrogative structures in Kusaal by looking at the strategies employed in question formation in the language. Kusaal, and perhaps most other Mabia languages, does not use inversion as a question strategy. It will be shown that intonation, interrogative particle/morpheme as well as interrogative words are the main strategies used in forming questions in Kusaal. I further explore the relationship between focused wh-phrases and non-focused wh-phrases in correspondence with their respective answer pairs and how these influence the discourse context.

4.4.2. Interrogative structures in Kusaal

4.4.2.1. Question Intonation

Ultan (1969:45) shows that intonation is, cross-linguistically, the most common among clause-level Q-feature though there have been two opposing stands in the history of structural linguistics as to whether intonational phenomena should be regarded as extra-linguistic, marginal or on a

par with other linguistic structural domains such as phonology or syntax. A principal argument for its inclusion in the proper domain of linguistics as indicated by Ultan (1969) is based upon the widespread contrast between a terminal falling and a terminal rising contour representing a meaningful distinction between an attitude of finality or conclusion (4.147) and one of suspension, incompleteness, doubt, questioning (4.148), or anything similar on the side of the speaker.

(4.147) Bà sa dī dííb lá↘. Declarative sentence
3PL PAST eat food DEF
'They have eaten the food.'

(4.148) Bà sa dī dííb láá ↗? Interrogative sentence
3PL PAST eat food DEF
'Have they eaten the food?'

The difference between (4.147) and (4.148) further shows that though intonation may be a universal human trait, it conveys formal-semantic covariance which constitutes a linguistic structure in ways similar to the opposition that exists between 'dog-dogs' in English and *baa-baas* 'dog-dogs' in Kusaal (Ultan 1969). The different semantic interpretations between (4.147) and (4.148) are therefore assumed to be due to the rise in pitch accent in (4.148).

In chapter three, it was indicated that lexical items in Kusaal are grouped into short and long forms and that whilst the short forms often occur elsewhere (thus other sentence types) the long forms are often used in question and negation most commonly at clause-final positions. This explains the difference between the terminating definite marker in (4.147) *la* and that in (4.148) *laa*. The interrogative sentences in (4.149b-d) are used for further illustrations.

(4.149) a. Bà sà dī dííb.
3PL PAST eat food
'They have eaten food.'

b. Bà sà dī díbɔ́ɔ́?
3PL PAST eat food -what
'What food did they eat (yesterday)?'

c. Bɔ́bún kà bà sà díí?
what FOC 3PL PAST eat
WHAT did they eat (yesterday)?

d. Bà sà dī bɔ́bú́né?
3PL PAST eat what
'WHAT did they eat (yesterday)?'

A possible question that may arise could be why positing long or short forms for lexical items in questions and negation when it could rather be because of lengthening or vowel insertion in these circumstances. The reason is that the use of the long forms is predictable under questions and negation whilst speakers randomly use them elsewhere. For instance the verb in (4.150) can either be the long form (4.150a) or the short form (4.150b) and the utterance is grammatical.

(4.150) a. Bà tīsī bííg lá dííb lá.
3PL give child DEF food DEF
'They have given the food to the child.'

b. Bà tīs bííg lá dííb lá.
3PL give child DEF food DEF
'They have given the money to the child.'

But a question or negative utterance will naturally occur with the long form. The use of the short forms in question and negation though not ungrammatical makes the utterance weird. Based on this, the argument as composed in chapter three is that the long forms are the archaic or original forms of the words whilst the short forms are derived by deleting the final vowels in certain acceptable environments (Abubakari 2016b). The final vowel in *tisi* 'give' in (4.150a) is deleted in (4.150b) respectively.

Again, there is an inherent emphatic interpretation that accompanies the use of the long forms of lexical items in Kusaal and in questions and negations this is further enhanced by the rise in pitch accent.

4.4.2.2. Interrogative Particle/Morpheme

Aside the possibility of distinguishing between a declarative sentence and a yes/no interrogative sentence solely by means of question intonation, speakers have options of using the conjunction *bɛ́ɛ́* 'or' which also doubles as a question particle *bɛ́(ɛ́)* and occurs at the end of the interrogative sentence. The question morpheme when used at the extreme right periphery creates what could be referred to as a tag question in Kusaal with an expected YES/NO response. The declarative statement in (4.149) is repeated as (4.151a) followed by the yes/no questions (4.151b).

(4.151) a. Bà sà dī dííb.
3PL PAST eat food
'They have eaten food (yesterday).'

b. Bà sà dī dííbɔ́ɔ́?
3PL PAST eat food-Q
'Did they eat any food (yesterday)?'

The conjunction *bɛ́ɛ́* 'or' is also used when two alternative answers are presented and only one of the given alternatives is required as answer.

(4.152) Bà pún dī dííb bɛ́ɛ́ bà nàn pù dī?
3PL already eat food or 3PL yet NEG eat
'Have they already eaten or they have not yet done so?

(4.153) Bà kpɛ̄ŋ bɛ̄ bɛ́ɛ́ bà kūlyá?
3PL still EXIST or 3PL go.home-PERF
'Are they still there or they have gone-home?'

(4.154) Ò dā' né lɔ́r bɛ́ɛ́ yíré?
3SG buy FOC car or house
'Did s/he buy a car or a house? '

4.4.2.3. Question words/Interrogative Pronouns

Like all other languages, Kusaal has an inventory of words that can be referred to as interrogative words or interrogative pronouns. These words serve as substitutes for nouns as well as a number of adverb-like words or phrases that express locative, temporal, enumerative, manner, purpose and other functions (see Ultan 1996:53). Below are some interrogative words in Kusaal.

Table 4.3. Interrogative words/pronouns in Kusaal

Interrogative words	Gloss
bɔ́ɔ́/ bɔ́	what
búndáár	when, which/what day
bɔ́zúg	why
yáánɛ́, -yá	where
ànɔ́ˈɔ́n	who (singular)

ànɔ́ˈɔ́nnámá	who (plural)
lín (inanimate) -káné (SG) -báné(PL)	which which which
àbúlá nɔ́ɔ́r álá	how many times/how many times
àlá	how many, how much
wɛ́lá, ánwɛ́lá	how

Question words in Kusaal do not mark animacy. The words: *ànɔ́ˈɔ́n*, 'who (sg)', *ànɔ́ˈɔ́nnámá* 'who (pl)' are limited for human beings whilst *-káné* 'which (sg)' and *-báné* 'which (pl)' are used for both human and non-human entities as against all the rest in table (4.3) that are entirely used for non-human entities. Question words can either be fronted or left in-situ for different discourse effects (4.155a). Anytime a question word is fronted, it is obligatorily followed by the focus particle *kà*.

(4.155) a. i. Bɔ́ kà bà sà māālɛ́?
what FOC 3PL PAST do
'WHAT did they do yesterday?'

ii. Bà sà māāl bɔ́ɔ́?
3PL PAST do what
'What did they do yesterday?'

b. Búndáár kà Àyìpóká nà mɔ̄r láˈád lá ná?
when FOC Ayipoka FUT bring items DEF LOC
'When will Ayipoka bring the items?'

c. Bɔ́zúg kà yà zābīdá?
why FOC 3PL fight-IMPERF
'Why are you fighting?'

d. Ànɔ́ˈɔ́n dà mɛ̄ yír lá?
who PAST eat food DEF
'Who built the house?'

e. Ànɔ́ˈɔ́nnámá dà mɛ̄ yír lá?
who-PL PAST eat food DEF
'Who built the house?'

f. Lín kà fʊ̀ nà dāˈ?
which FOC 2SG FUT buy
'Which one will you buy?'

g. Àlá kà fʊ̀ kūōsɛ́?
how money/how much FOC 2SG sell
'How many (items) have you sold?'
'How much money have you made so far from the sale?'

h. Nɔ́ɔ́r àlá kà ò sà kēŋ kɔ́lúg lá ní?
time how FOC 3SG PAST go well DEF LOC.
'How many times did s/he go to the well?'

Ala 'how much/many' can also occur at the beginning or at the end of the construction when it is makes reference to quantity. There are instances when the question word must occur at the end of the interrogative sentence for it to be grammatical. The word *wala* 'how/why' is only used at sentence final position in the interrogative construction.

(4.156) Fú àn(ɛ́) wálá? *wala ka fʊ an?
2SG COP.be how
'How are you?'

The word *bɔ* in questioning one's name can only be used at utterance final position:

(4.157) Fú yúˈúr būōn bɔ́ɔ́? * bɔɔ buol fʊ yʊ'ʊr?
2SG name call what
'What is your name?'

(4.158) Fʊ̀ mɔ̄r yúmá àlá? *ala yʊm mor fu *ala fu mor yʊm
2SG have years-PL how.many
'How old are you?'

In d-linked (discourse linked) phrases[26], for example *bíkáné* 'which child' *bíbɔ́* 'what sort of child' the non-human interrogative phrase *bɔ́* 'what' and *-káné/ -báné* 'which' are used for both human and non-human entities. It is ungrammatical to use the interrogative phrase *ànɔ́ˈɔ́n* 'who' in this circumstance for human beings hence the ungrammaticality of the sentence in (4.159bii).

(4.159) a. M̀ būōl bíkáné?
1SG call child-which.SG
'Which child should I call?

b. Bíbáné kà ǹ nà bōūlé?
child-which.PL FOC 1SG FUT call
'Which children shoud I call?'

(4.160) a. M̀ būōl bíbɔ́ɔ́?
1SG call child-what
'What sort of child should I call/did I call?'

b. i. Bíbɔ́ kà m̀ būōlé?
child-what FOC 1SG call
'What sort of child should I call/ did I call?'

ii.* Bíànɔ́ˈɔ́n kà m̀ būōlé?
child-who FOC 1SG call

The sentences in (4.156-60) presuppose there are a set of children and the use of *-káné* 'which.SG' or *bɔ́* 'what' is contextually defined. Whilst the use of *-káné* 'which.SG' presupposes that a child is yet to be called, the use of *bɔ́* 'what' mostly presupposes that a child is already called but its identity or character is in doubt. The examples in (4.161) demonstrate the use of the d-linked phrases *-káné/ -báné* 'which'and *bɔ́* 'what' with non-human elements.

(4.161) a. i. Láˈábáné kà ǹ nà kūōsé?
item-which.PL FOC 1SG FUT sell
'Which items should I sell?'

ii. Láˈábɔ́ kà ǹ nà kūōsé?
item-which FOC 1SG FUT sell
'What (sort) of items should I sell?'

b. i. M̀ pɛ́n náˈákáné?
1SG milk cow-which

[26] D-link phrases suggest the presence of a set of contextually-determined entities from which the speaker is asking for a choice (see Frazier and Clifton 2001).

‘Which cow should I milk?’

ii. M̀ pɛ́n ná'ábɔ́ɔ́?
1SG milk cow-what
‘Which cow do I have to milk?’

4.4.3. Types of questions in Kusaal

4.4.3.1. Polar questions/Yes/No question

Polar questions are generally considered as the most basic and widely distributed interrogative type in languages (Sadock and Zwicky 1985:179). They are used for soliciting the truth value of a given proposition, thus their answers affirm a given proposition as true or false. Polar questions are formed using either intonation or the *bɛ́ɛ́* particle at the end of what would otherwise have been considered as a simple declarative sentence in Kusaal.

(4.162) a. Ò dā' nɛ́ lɔ́r. (Declarative sentence)
3SG buy FOC car
‘He bought a CAR. ’

b. Ò dā' nɛ́ lɔ́rɛ́?
3SG buy FOC car
‘Did be buy a CAR?’

c. Lɔ́r kà ò dāˈā?
car FOC 3SG buy
‘Is it a CAR that he bought?’

d. Ò dā' nɛ́ lɔ́r bɛ́ɛ́?
3SG buy FOC car Q
‘Did be buy a CAR?’

e. Lɔ́r kà ò dā bɛ́ɛ́?
car FOC 3SG buy Q
‘Did be buy a CAR?’

4.4.3.2. Alternative question

Alternative questions offer possibilities out of which the speaker expects the addressee to choose the right answer. This may be formed using a disjunction[27] characterized by a rise pitch at the end of the entire construction (4.163a-b). The alternatives are often different predicates assumed to be mutually exclusive of each other (Sadock and Zwicky 1985:179).

(4.163) a. Fù kūōs né búúg lá bɛ́ɛ́ fù dā' né pɛ́ˡógɔ́?
2SG sell FOC goat DEF or 2SG buy FOC sheep
'Did you sell the goat or you bought a sheep?'

b. Bíís lá dī dííb lá bɛ́ɛ́ bà pɔ́ dī?
children DEF eat food DEF or 3PL NEG eat
'Have the children eaten the food or they have not?'

4.4.3.3. Coordinate questions

Coordinate questions are formed from coordinate clauses in which case each clause terminates with a question word and a rising final tone contour on each clause. The two clauses are joined with the VP conjunction *ká*. Though not ungrammatical, speakers normally will not use the question particle at the end of a coordinate question.

(4.164) a. Bà tūm túúm kànɛ̀ ká pāām lígídí álá?
3PL work work.NML which CONJ get money how.much
'Which work did they do and how much money did they make?

b. Bɔ́ túúmá kà bà tūm, ká lígídí àlá
what work.NML FOC 3PL work CONJ money how.much
kà bà pāām?
FOC 3PL get
'Which work did they do and how much money did they make?'

4.4.3.4. Content questions/ Information question/question-word question

Unlike alternative questions, content questions have open-ended alternative options which are not given by listing. They are used for sorting information from the addressee regarding the constituent in the question that has been replaced by the question-word. The said constituent becomes the most salient part of the proposition in Kusaal and may attract the use of a focus particle depending on the context. Thus a question that has an exhaustive interpretation in-situ is

[27] A compound statement joined by the connector 'or'

marked by the particle *né* (4.165b) whilst the one that is ex-situ is marked by the particle *kà* (4.165c). Information focus in-situ is however expressed using focal stress without any overt focus particle as in (4.165a).

(4.165) a. Bà sà dī bɔ́ɔ́?
3PL PAST eat what
'What did they eat (yesterday)?'

b. Bà sà dī né díbɔ́?
3PL PAST eat FOC food.what
'WHAT FOOD did they eat (yesterday)?'

c. Díbɔ̀ kà bà sà dī?
food.what FOC 3PL PAST eat
'WHAT/WHAT FOOD did they eat (yesterday)?'

However, assuming a background in which it is known that only one person could be asked or nominated for something, it is quite unnatural to ask the questions in (4.166-67) using the in-situ focus particle *né* although the ex-situ focus marker *kà* can be used when the question constituent is fronted.

(4.166) a. Tì tɔ̄n bū^{l}ōs ànɔ́ɔ́né?
2PL can ask who
'Who is it that we can ask?'

b. ? Tì tɔ̄n bū^{l}ōs né ànɔ́ɔ́né?
2PL can ask FOC who
'Who is it that we can ask?'

c. Ànɔ́ɔ́n kà tī tɔ̄n bū^{l}ōsé?
who FOC 2PL can ask
'Who is it that we can ask?'

(4.167) a.Kɔ́tí lá gāndīg ànɔ́ɔ́né yé ò nwɛ̄^{l}ɛ̄?
coach DEF nominate who COMP 3SG play
'Who is it that the coach nominated to play?'

b. ? Kɔ̀tí lá gāndīg né ànɔ́ɔ́né yé ò nwɛ̄ˈɛ̄?
coach DEF nominate FOC who COMP 3SG play
'Who is it that the coach nominated to play?'

c. Ànɔ́ɔ́n kà kɔ̀tí lá gāndīg yé ò nwɛ̄ˈɛ̄?
who FOC coach DEF nominate COMP 3SG play
'Who is it that the coach nominated to play?'

The absence of the in-situ focus particle in these contexts (4.166-67) can be explained to be due to the fact that these questions pragmatically dislike exhaustivity and as such sound odd when asked with exhaustive marking.

The fact that information/content questions interrogate part of a given proposition, the rest of the proposition is then considered as old or presupposed information. The sentence in (165a) for instance presupposes that something has been eaten and (4.165b) also presupposes that something has been sold. The new information in (4.165), (4.166) and (4.167) is the request for the identity of the interrogated parts of the sentences respectively.

4.4.3.5. "Greeting questions"

These types of questions are mainly used in greetings during which time the interlocutors ask questions about the health of each other as well as that of other family members. The question-word used in this context is *wɛ́lá*. This is one of the instances where the question word remains in-situ. It is unnatural in Kusaal to have the question-word fronted in this situation (4.168).

(4.168) Bíís lá àné wɛ́lá? * wala ka biis la an?
children DEF COP.be how
'How are the children?'

Polar questions can equally be used as greeting questions (4.169).

(4.169) a. Bíís lá àné súm?
children DEF COP.be good
'How are the children?/Hope the children are doing well.'

b. Bíís lá àn súm bɛ́ɛ́?
children DEF COP.be well Q
'Are the children well?/How are the children?'

4.4.3.6. Observation

From the previous examples on interrogative questions, two types of constructions can be observed which are further illustrated below in (4.170-72).

(4.170) Bíís lá dī dííb lá. Declarative sentence
children DEF eat food DEF
'The children have eaten the food.'

(4.171) Bíís lá dī bɔ́ɔ́?
children DEF eat what
'What have the children eaten?'

(4.172) Bɔ́ kà bíís là dī?
what FOC children DEF eat
'WHAT have the children eaten?'

The sentences in (4.171-172) question the object complement of the main predicate. The difference relates to the different positions occupied by the object complement. Unlike (4.171) where the question word shares the same syntactic position as the object complement, in (4.172) the question word is moved to the extreme left position of the entire sentence followed by the contrastive focus particle *ka*̀. Again the long forms of the lexical items are used at sentence final position as in (4.171). Though this has no syntactic implication, it is understood to be inherently emphatic. With the exception of *álá* 'how much' (pricing word) and *wɛ́lá* 'how'(greeting Q-word) all other question words can be used in-situ or moved to the left periphery in which cases they must obligatorily be followed by the contrastive focus particle *ka*̀as in (4.173-177) below.

(4.173) a. Bà nà māāl málúŋ lá búndáárɛ́?
3PL FUT do festival DEF day.which
'On which day will the festival be celebrated?'

b. Búndáár kà bà nà māāl málúŋ lá?
day.which FOC 3PL FUT do festival DEF
'ON WHICH DAY will the festival be celebrated?'

(4.174) a. Bà zābīd bɔ́zúgɔ́?
3PL fight.IMPERF why
'What are they fighting for?'

b. Bɔ́zúg kà bà zābīdá?
why FOC 3PL fight.IMPERF
'Why are they fighting?'

(4.175) a. Bà kēŋ yáánɛ́?
3PL go where
'Where have they gone to?'

b. Yáánɛ́ kà bà kēŋŋɛ́?
where FOC 3PL go
'WHERE have they gone to?'

(4.176) a. Bà àn wɛ́lá?
3PL COP.be how
'How are they?'

b. *wɛ́lá kà bà àn?
how FOC 3PL COP.be
'How are they?'

(4.177) a. Búúg lá àn àláá?
goat DEF COP.be how.much
'What is the price of the goat?'

b. *Àlá kà búúg lá àn?
how.much FOC goat DEF COP.be
'What is the price of the goat?'

The preposed constituents receive focus interpretations. Both the greeting Q-Word *wɛ́lá* and the pricing Q-Word *álá* are contextually fixed expressions that do not require any kind of focus interpretations (see Saah 1988:20). The pricing word when used for measuring quantity can be used both in-situ and ex-situ (section 4.4.2). The example in (4.176b) can be interpreted to mean '*that is their nature/attitude'* when used as a declarative statement but it is entirely unnatural as an interrogative sentence. Fronting *álá* as a pricing word in (4.177b) on the other hand is entirely unacceptable.

4.4.4. Properties of wh-questions in Kusaal

In this subsection, I will explore some of the basic properties of wh-questions in Kusaal looking at the various functions of the wh-phrase in specific contexts in the language. It has been mentioned that the wh-phrase represents a missing constituents in the interrogative construction. Thus to say the wh-phrase fills the grammatical requirement in the sentence that will otherwise be filled by a constituent phase be it an argument or an adjunct. The wh-phrase is identified as *filler* and its corresponding constituent as *gap*. This is commonly referred to as the filler-gap hypothesis in most literature on generative syntax. The example in (4.178) is an illustration showing the position of the gap with a (*t*) co-indexed with the wh-phrase and the gap. In main clause questions, the filler and the gap can appear in the same local domain, thus local wh-questions (Ross 1967).

(4.178) Ànɔ́ˈɔ́n$_j$ kà Àdúk sà nwɛ̄ˈ$_j$?
who FOC Aduk PAST beat
'Who did Aduk beat?'

Similarly it is possible to have the filler and the gap in different domains in Kusaal. In such circumstances the distance between the wh-phrase and its gap constituent is unbounded thus non-local wh-questions as illustrated in (4.179).

(4.179) Bɔ́bún$_j$ kà Àdúk tɛ̄nˈɛ̄s yé Àsíbí sà yɛ́l yé Àyípók
what FOC Aduk think COMP Asibi PAST say COMP Ayipok
sà dāˈāyá t$_j$?
PAST buy
'What did Aduk think Asibi said Ayipok bought?

In the rest of this section, I will explore local wh-questions, which are constructions in which the wh-phrase and its gap are found in the same clause, distinguishing between direct and indirect questions in Kusaal. I will further look at non-local wh-questions where the wh-phrase and its gap appear in separate clauses. Afterwards, I will discuss locality constraints (Ross 1967) on wh-constructions in Kusaal.

4.4.4.1. Local wh-questions

The term 'local-wh-questions' is here used in line with the description of (Vermaat 2006) where the wh-phrase or constituent is found within the same local domain as the gap constituent in the interrogative construction. I will divide this into two looking at direct questions where the wh-word in Kusaal is fronted to the left followed by the focus particle in the main clause and indirect or embedded questions where the wh-phrase is rather fronted in the embedded clause in the language.

4.4.4.1.1. Direct questions

Direct questions in Kusaal are usually formed by fronting the wh-phrase to sentence initial position followed by the particle *kà*. The gap that is supposedly filled by the wh-phrase is located in the same clause. Using the declarative sentence in (4.180a), (4.180b-e) represent various direct questions that can be formulated from it in Kusaal.

(4.180) a.Àdúk sà dāˈ núá tīs Àsíbí súˈòs.
Aduk PAST buy fowl give Asibi yesterday
'Aduk bought a fowl for Asibi yesterday.'

b. Ànɔ́ˈɔ́n sà dāˈ núà tīs Àsíbí súˈòsɛ?
who PAST buy fowl give Asibi yesterday
'Who bought a fowl for Asibi yesterday?'

c. Bɔ́ kà Àdúk sà dāˈ tīs Àsíbí súˈòsɛ?
what FOC Aduk PAST buy give Asibi yesterday
'What did Aduk buy for Asibi yesterday?'

d. Ànɔ́ˈɔ́n kà Àdúk sà dāˈ núá tīs súˈòsɛ?
who FOC Aduk PAST buy fowl give yesterday
'Who did Aduk buy a fowl for yesterday?'

e. Dáárdín kà Àdúk dàà dāˈ núá tīs Àsíbí?
day.which FOC Aduk PAST buy fowl give Asibi
'On which day did Aduk buy a fowl for Asibi?'

In these examples, (4.180b) represents an instance where the wh-phrase *ànɔ́ˈɔ́n* 'who' fills the subject gap and shares the same position as its gap compared to the declarative sentence (4.180a). In (4.180c), the wh-phrase *bɔ́ɔ́* 'what' associates with the direct object, whilst in (4.180d) the wh-phrase *ànɔ́ˈɔ́n* 'who' is identified with the indirect object. In (4.180e) on the other hand, the temporal wh-phrase *dáárdín* 'when' associates with the adjunct in the declarative sentence. As noticed all fronted non-subject wh-constituent are followed by the focus particle *kà*.

4.4.4.1.2. Indirect questions

Indirect questions, just as direct questions, begin with the interrogative wh-phrase in the embedded clause in Kusaal (4.181 a-d).

(4.181) a. M̀ bɔ̄ɔ̄d yé m̀ bāŋ yé ànɔ́ˈɔ́n kà
1SG want COMP 1SG know COMP who FOC

bííg lá sà nyɛ̄.
child DEF PAST see
'I want to know the person the child saw/met.'

b. Àdúk yāˈāmīsìdnɛ́ bɔ́ɔ́ dāāmīd bííg lá.
Aduk doubt.IMPERF what worry.IMPERF child DEF
'Aduk wonders what is wrong with the child.'

c. Ǹ zīˈ bʊ́ndáár kà Àdúk nà kūlná.
1SG know.NEG which.day FOC Aduk FUT return.home
'I do not know when Aduk will return home./I wonder when Aduk will return home.'

d. Ǹ yāˈāmīsìdnɛ́ bʊ́ndáár kà Àdúk nà kūlná.
1SG wonder.IMPERF which.day FOC Aduk FUT return.LOC
'I wonder when Aduk will return home.'

The wh-phrase phrase *bʊndaar* in (4.181c-d) an also be replaced using the interrogative suffix pronouns *-kanɛ* and *-banɛ* for singular and plural respectively as in (4.181e-f).

e. Ǹ zīˈ dáákan kà Àdúk nà kūlná.
1SG know.NEG day.which FOC Aduk FUT return.home
'I do not know when Aduk will return home./I wonder when Aduk will return home.'

f. Ǹ yāˈāmīsìdnɛ́ dáákan kà Àdúk nà kūlná.
1SG wonder.IMPERF day.which FOC Aduk FUT return.LOC
'I wonder when Aduk will return home.'

The embedded interrogatives do not differ greatly from the direct questions. All non-subject wh-phrases are fronted followed by the particle *ka*` whilst all subject wh-phrases are located at their base positions.

4.4.4.2. Non-local wh-questions in Kusaal

As indicated by Vermaat (2006:40), wh-phrases, under certain restrictions, may occur clause-initially in the matrix clause whilst their gap is traced in an embedded clause (long-distance dependencies). These restrictions are associated with embedded clauses selected by the verbs referred to as *bridging verbs* (Erteshik 1973) which include: *say, think, believe, claim* etc. There may be other unbounded embedded clauses that may occur between the fronted wh-phrase, the

filler, and its gap. The declarative sentence in (4.182a) is used in generating the various long-distance interrogative constructions in (4.182b-e). However, the resumptive subject pronoun in (4.182b) is obligatory whilst it is ungrammatical to have same (resumptive pronoun) for the object in (4.182c-d).

(4.182) a. Àdúk dāˈ lɔ́r.
Aduk buy care
'Aduk has bought a car.'

b. Ànɔˈɔ́n kà Àsíbí tɛ̄nˈɛ̄s yé ó dāˈ lɔ́ré?
who FOC Asibi think COM 3SG buy car
'Who does Asibi think bought a car?'

c. Bɔ́ kà Àsíbí tɛ̄nˈɛ̄s yé Àdūk dāˈāyá?
what FOC Asibi think COMP Aduk buy-PERF
'What does Asibi think Aduk bought?'

d. Bɔ́ kà Àsíbí tɛ̄nˈɛ̄s yé Àyípókyɛ́l yé Àdúk
what FOC Asibi think COMP Ayipɔk say COMP Aduk
dāˈāyá?
buy-PERF
'What does think Ayipok said Aduk bought?'

e. Bɔ́ kà Àsíbí tɛ̄nˈɛ̄s yé Àyípókyɛ́l yé
what FOC Asibi think COMP Ayipɔk say COMP
Àdólúb sīāk yé Àdúk dāˈāyá?
Adolub believe COMP Aduk buy-PERF
'What did Asibi think (that) Ayipok said (that) Adolub believes (that)
Aduk bought?

The main observation here is that all the verbs in the matrix clause belong to the verbs of saying and thinking referred to as the *bridging verbs* (Erteshik 1973). The complementizer is obligatory in all instances where these verbs occur in Kusaal. Similar instances where the bridging verbs are used in matrix clauses can be found in relative clauses as well as in topicalization in Kusaal where the complementizer remains obligatory (see Varmaat 2006:40 for similar instances in English).

(4.183) i. Relativization

a. Búkànɛ̀ ká Àdúk yɛ́l yé Àsíbí sà
goat.REL COMP Aduk say COMP Asibi PAST
dāˈāyá lá bɔ̄dīgyá.
buy-PERF DEF lose-PERF
'The goat which Aduk said (that) Asibi bought is lost.

ii. Topicalization

b. (Yáˈá ànɛ́) búúg lá, Àdúk sà yɛ́l yé Àsíbí sà
if COP.be goat DEF, Aduk PAST say COMP Asibi PAST
dāˈ lì.
buy it
'As for the goat Aduk said that Asibi bought it.'

4.4.5. Island constraints

Wh-constructions are constrained by island effect (Ross 1967). It has been demonstrated that wh-phrases may be associated with gaps in long-distance dependencies. However, there are instances when this is constrained when the gap appears in an island. The various constraints discussed here are quite identical to what is observed in relativization in Kusaal (Abubakari forthcoming 2018). The various constructions that form islands include: clauses, adjuncts, complex noun phrases, and coordinate structures. All gaps are marked with *t* and co-indexed with their respective wh-phrases.

Wh-island constraint: It is ungrammatical to have a wh-phrase associating with a gap in an embedded wh-interrogative clause.

(4.184) a. *Ànɔ́ˈɔ́n$_j$ kà Àdúk tɛ̄nˈɛ̄s yé [Àdólúb bʊ̄ˈyá …t*j*..]?
who$_j$ FOC Aduk think COMP Adolub beat.per…t$_j$..Q
*'Who did Aduk think that Adolub beat?'

b. * Ànɔ́ˈɔ́n$_j$ kà Àdúk tɛ̄nˈɛ̄s yé [Ànɔ́ˈɔ́n
who$_j$ FOC Aduk think.PERF COMP who
bʊ̄ˈyá…….t*j*…]?
beat-PERF…...t$_j$…Q
*'Who did Aduk think who beat?'

Adjunct island constraint: It is ungrammatical to have a wh-phrase associating with gap in an adjunct clause. Adjunct clauses include those that are formed with words such as wonder, doubt, if, when, because, as well as relative clauses.

(4.185) *Bɔ́dáár$_j$ kà fʊ̀ yā^{l}āmīs [Àsíbí sà dā^{l} búúg t$_j$]?
which.day FOC 2SG wonder Asibi PAST buy goat t$_j$ Q
*‘When do you wonder Asibi bought goat?’

Complex noun phrase constraint: It is also ungrammatical to have a wh-phrase associating with a gap in a complex NP.

(4.186) *Bɔ́ núá$_j$ kà fʊ̀ sɛ̄n^{l} [pú'á kànɛ̀ dā^{l} t$_j$ lá]?
what fowl FOC 2SG roast woman REL buy t$_j$ DEF
*‘Which fowl did you roast [the woman who bought… t$_j$]?

Left/Right Branch Island Constrain: It is ungrammatical to move wh-phrases that modify head nouns to the left. In Kusaal the possessor is the only left branch element. Other wh- determiners like *-kanɛ/ banɛ* ‘which’ and degree words like *wɛla* ‘how’ are to the right of the head noun. The Left Branch Condition (Ross 1967) is extended here to include *Right Branch Island* for languages like Kusaal. The expectation is to pied-pied the modifier along with the head noun.

(4.187) Left branch island
a.*Ànɔ́'ɔ́n$_j$ kà fʊ́ nyɛ̄ [*t$_j$* mà]?
who FOC 2SG see *t$_j$* mother
*‘Whose did you see [*t$_j$* mother]?

b. Ànɔ́'ɔ́n má$_j$ kà fʊ̀ nyɛ̄ [*t$_j$*]?
who mother FOC 2SG see
‘Whose mother$_j$ did you see [*t$_j$*]?

(4.188) Right branch island
a. *Kànɛ̀$_j$kà fʊ̀ nyɛ̄ [fótó..*t$_j$*]?
*‘which did you see [foto..*t$_j$*]?

b. Fótókànɛ̀$_j$ kà fʊ́ nyɛ̄ [*t$_j$*]?
photo.which FOC 2SG see
‘Which photo$_j$ did you see [*t$_j$*] ?

Coordinate structure constrain: It is ungrammatical for a wh-phrase to associate with a gap in a coordinate structure in Kusaal.

(4.189) *Bɔ́$_j$ kà fʊ̀ dā^{l} [búúg né……...t$_j$..]?
what FOC 2SG buy goat CONJ…tj..]
*‘What did you buy [goat and t$_j$..]?’

The coordinate structure constrain has exception. It does not affect 'across-the–board' constructions which consist of fronted wh-phrases associating with a gap in each of the two conjuncts (for similar observations see: Ross 1967; Hiwaiwa and Bodomo 2008; Abukakari 2011; Vermaat 2006).

4.4.6. Focused Wh-Phrases and Non-Focused Wh-Phrases in Kusaal[28]

In line with Aboh (2007), this section explores the relation between focused versus non-focused wh-phrases in Kusaal in an attempt to identify the manner in which they influence the information structure in wh-question answer pairs. It will be shown that wh-phrases in Kusaal need not be focused. Wh-phrases in the language are therefore argued to be of two forms: focused wh-phrases and non-focused wh-phrases. Focused wh-phrases also come in two types: Ex-situ wh-phrases which always involve the displacement of the focused constituent to sentence initial position followed by the focus particle *ka*̀ and in-situ focused wh-phrases where the wh-phrase stays in-situ and preceded by the focus particle *nɛ́* in non-subject wh-focused phrases. However subject wh-phrases are not followed by the usual in-situ focused particle *n*̀. Non-focused wh-phrases are always in-situ in Kusaal characterized by the absence of the in-situ focused particle. As a consequence, answers to focused wh-questions must obligatorily be accompanied by the focused particle whilst it is often illogical and infelicitous to respond to non-focused wh-question with the focus particle and vice versa. Subject wh-question on the other hand does not impose such restrictions on their answers just as the wh-phrase is not followed by the focus particle. Answers to such questions can either be focused or non-focused depending on the discourse context. In the rest of the section, I will explore the interaction between focused phrases and wh-phrases followed by a discussion on focused and non-focused wh-phrases and their corresponding answer pairs in Kusaal.

4.4.6.1. The interaction between focused phrases and wh-phrases in Kusaal

To ascertain the nature of the relationship between focused phrases and wh-phrases in Kusaal, I will consider both the clause structure and the information structure of focused phrases in conjunction with wh-phrases.

4.4.6.1.1. Clause structure, focused phrases, and wh-phrases

It has earlier been indicated that focused constituent and wh-phrases can either be in-situ or ex-situ. In both instances the focused constituent and the wh-phrase are parallel just as observed for Gungbe (Aboh 2007:289) and Italian where focused expressions and wh-phrases are observed to be in complementary distribution (Rizzi 1997, 2001).

(4.190)	a.	Àdúk	ń	dī	Àyípók.
		Aduk	FOC	marry	Ayipok

[28] The data will mostly concern argument focus though same is applicable to non-argument constituents.

'ADUK married Ayipok.'

b. Ànɔ́'ɔ́n dí Àyípóká?[29]
who marry Ayipoka
'Who married Ayipoka?'

(4.191) a.i. Àyípóká kà Àdúk dī.
Ayipok FOC Aduk marry
'Aduk married AYIPOKA.'

ii Ànɔ́'ɔ́n kà Àdúk dī?
who FOC Aduk marry
'WHO did Aduk marry?'

b.i. Àdúk dī né Àyípóká.
Aduk marry FOC Ayipoka
'Aduk married AYIPOKA.'

ii. Àdúk dī né ànɔ́'ɔ́né?
Aduk marry FOC who
'Aduk married WHO? / WHO (specifically) did Aduk married'

From the examples in (4.190-191), both fronted and in-situ focused constituents alongside wh-phrases can be said to have fixed positions either to the extreme left of the entire clause thus left to the focus particle *ka*` for non-subject. They remain in their original clause internal positions preceded by the in-situ focus particle *nɛ́* in non-subject focus in Kusaal. These positions can be said to be unique since focused constituents and wh-phrases are mutually exclusive in it (Aboh 2007). The following ungrammatical sentences in (4.192) confirm this assertion.

(4.192) a. * Àyípóká kà ànɔ́'ɔ́n kà dī?
Ayipoka FOC who FOC marry

b. * Ànɔ́'ɔ́n kà dī Àyípóká kà dī?
who FOC marry Ayipok FOC marry

I assume the clausal structure for focused constituents and wh-phrases ex-situ and in-situ as represented in (4.193) for the example in (4.190), (4.194) for the example in (4.191a) and (4.195) for the example in (4.191b) respectively. (also see Rizzi 1997, Aboh 2007).

[29] Notice the subject-wh-phrase has no overt focus particle. The context determines its interpretation.

(4.193) a. ?[$_{CP}$[$_{FocP}$ Aduk[Foc ń [$_{TP}$ t_{Aduk} di Ayipok]]]]
b.? [$_{CP}$[$_{FocP}$ anɔ'ɔn [$_{FOC}$ ø [$_{TP}$ $t_{anɔ'ɔn}$ di Ayipok]]]]
c.?[$_{CP}$[$_{FocP}$ bɔ'ɔ [$_{FOC}$ ø [$_{TP}$ $t_{bɔ'ɔ}$ ɔnb vaad la]]]]

(4.194) a. [$_{CP}$[$_{FocP}$ Ayipok[$_{Foc}$ kà [$_{TP}$ Aduk di t_{Ayipok}]]]]
b. [$_{CP}$[$_{FocP}$ anɔ'ɔnɛ [$_{Foc}$ kà [$_{TP}$ Aduk di $t_{anɔ'ɔnɛ}$]]]]

(4.195) a [$_{TP}$ Aduk di [$_{FocP}$ [$_{Foc}$ nɛ́ [Ayipok]]]]
b. [$_{TP}$ Aduk di [$_{FocP}$ [$_{Foc}$ nɛ́ [anɔ'ɔnɛ]]]]

The question mark on the examples in (4.193) is to indicate that the status of subject focus with the particle *ń* as an instance of ex-situ focus in Kusaal remains unclear. Available data shows the ungrammaticality of using the subject focus particle *ń* after subject wh-phrases in Kusaal though answers to such questions can either be focused or not (4.196).

(4.196) a. Q: i Ànɔ́ˈɔ́nɛ́ sà dā laˈ́ád lá?
who PAST buy item DEF
'Who bought the items?

ii. * Ànɔ́ˈɔ́nɛ́ ń sà dā laˈ́ád lá?
who FOC PAST buy item DEF

Ans: i. Púˈá lá ń sà dā laˈ́ád lá.
woman DEF FOC PAST buy item DEF
'It is the woman who bought the items.'

ii. Púˈá lá sà dā laˈ́ád lá.
woman DEF PAST buy item DEF
'The woman bought the items.'

The non-subject focus particle, on the other hand, can be used in-situ with similar non-subject wh-phrases as in (4.197).

(4.197) a. Ò sà tūm nɛ́ ànɔ́ˈɔ́nɛ́?
3SG PAST send FOC who
'WHO is it that s/he sent?'

b. O sà dāˈ nɛ́ bɔ́ɔ́?
3SG PAST buy FOC what
'What is it that s/he bought?'

However, sister Mabia languages with in-situ subject focus particles show the grammaticality of having the focus particle follow subject wh-phrases as in Gurenɛ (Dakubu 2003) in example (4.198) and Dagbani (Issah 2013) in example (4.199).

(4.198) à-nɪ n zàa nyɛ́ bódáa lá
a-WH FOC yest. see man DEF
'Who saw the man yesterday?' Dakubu (2003)

(4.199) Ŋuni n da-Ø loori maa?
who FM buy.PERF lorry DEF
'Who bought the lorry?'
IS: Subject new, verb is old, object is old. (Issah 2013:155)

One possible explanation will be the postulation of a possible deletion of the focus particle in focused subject wh-questions in Kusaal as in (4.193b-c) but the reason for the said deletion is elusive. For lack of immediate argument to explain the situation in Kusaal, subject focus is assumed to be an instance of in-situ focus and if any movement hypothesis is to be assumed, this could be explained following the Vacuous Movement Hypothesis (VMH) which requires overt evidence for syntactic movements. Thus movement is blocked except when it affects the linear order of the sentence it applies to (Chomsky 1986:48-54; George 1980). The structure for the focused subject construction in (4.190a) repeated below as (4.200a) is assumed as in (4.200b).

(4.200) a. Àdúk ń dī Àyípók.
Aduk FOC marry Ayipok
'ADUK married Ayipok.'

b. [TP Aduk [FocP [Foc n[VP di Ayipok]]]]

4.4.6.2. Information structure, focused phrases and wh-phrases in Kusaal

Looking at information structure and its relation with focused phrases and wh-phrases in the language, what remains apparently undoubted is the fact that wh-questions often elicit focused answers in question answer pairs as is the case in other languages such as Gungbe (Aboh 2007). A wh-question as in (4.201) can trigger answers that can be interpreted as expressing either informational (4.201b) or exhaustive focus (4.201c-d and 4.201e-i).

(4.201) a. Bɔ̀ kà pú'á lá sà dā'?
what FOC woman DEF PAST buy
'WHAT did the woman buy?'

b. Pú'á lá sà dā' núá.
woman DEF PAST buy fowl
'The woman bought A FOWL.'

c. Núá kà pú'á lá sà dā'.
fowl FOC woman DEF PAST buy
'The woman bought A FOWL.'

d. Pú'á lá sà dā' né núá.
woman DEF PAST buy FOC fowl
'The woman bought A FOWL.'

e. Bɔ́ɔ́ māālé?
what happen
'What happened?'

i. Pú'á lá sá dā' núá né.
woman DEF PAST buy fowl FOC
'THE WOMAN BOUGHT A FOWL.' (an unexpected occurrence)

The responses in (4.201b-d) are all felicitous to the question in (4.201a). Whilst (4.201b) encodes new informational interpretation on the focused constituent *núá* 'fowl' devoid of any exhaustive interpretation, (4.201c-d) encodes contrastive and exhaustive interpretation on the same item ex-situ (4.201c) and in-situ (4.201d). It is also possible to focus an entire VP or IP as in (4.201e) where the answer could be expressed as a surprise to an unanticipated event or occurrence (Zimmermann 2008). The distribution of the non-subject focus particle *né* is further demonstrated in double-object constructions as in (4.202) below.

(4.202) Q: i.Who is it that she gave the food to?

a. Ò tīs né [bííg lá]$_f$ dííb lá.
3SG give FOC child DEF food DEF
'She gave THE CHILD the food.'

ii. What is it that she gave to the child?

b. Ò tīs bííg lá né [dííb lá]$_f$
3SG give child DEF FOC food DEF
'She gave the child THE FOOD.'

iii. What happened to the child?

c. [Ò tīs bííg lá]$_f$ né dííb lá.

3SG give food DEF FOC child DEF

'SHE GAVE THE FOOD to the child.'

The in-situ non-subject focus particle behaves as an adnominal selected by the NP/DP or PP it modifies as in (4.202a-b). However, it functions as an adverbial when it left adjoins the entire VP or IP at VP-internal periphery and scopes over the entire VP or IP (Abubakari 2016a; Renans 2016). This observation is illustrated as in (4.199) below.

(4.203) a. nɛ́ [NP/DP]……Adnominal nɛ́

b. [VP] nɛ́…….Adverbial nɛ́

c. [IP] nɛ́……...Adverbial nɛ́

4.4.7. Focused Wh-Phrases and Non-Focused Wh-Phrases with their Corresponding Answer Pairs in Kusaal

Wh-phrases in Kusaal can be grouped into two: focused wh-phrases and non-focused wh-phrases. The focused status of a wh-phrase is directly linked to its associating gap. Unlike subject wh-phrases, non-subject wh-phrases can be focused in-situ or ex-situ. All ex-situ wh-phrases are obligatorily focused and followed by the particle *ka*.[30] In-situ wh-phrases on the other hand can either be focused or not. Thus the use of the in-situ focus particle in wh-phrases is intended to further reinforce an exhaustive interpretation on the constituent represented by the wh-word. This suggests that the fronting of the wh-phrase to the left periphery is not entirely employed as a question strategy but also as an information structure strategy in Kusaal (also see Aboh 2007). The questions in (4.204b-c) are generated from the sentence in (4.204a) with corresponding answer in (4.204d).

(4.204) Q: a. Àyípóká sà dūg dííbí tīs bíís lá.

Ayipoka PAST cook food give children DEF

'Ayipoka prepared food and gave it to the children.'

b. Bɔ́ *(kà) Àyípóká sà dūg tīs bíís lá?

what FOC Ayipoka PAST cook give children DEF

'What did Ayipoka cook and give to the children?'

c. Àyípóká sà dūg né bɔ́ɔ́ tīs bíís lá?

Ayipoka PAST cook FOC what give children DEF

'What did Ayipoka cook and gave to the children?'

[30] *(α) star outside bracket means obligatory particle whilst star inside (*α) bracket means ungrammatical.

Ans.: d. i. Dííb *(kà) Àyípóká sà dūg tīs bíís lá.
food FOC Ayipoka PAST cook give children DEF
'It is food that Ayipoka cooked and gave to the children.'

ii. Àyípóká sà dūg né dííb tīs bíís lá.
Ayipoka PAST cook FOC food give children DEF
'It is food that Ayipoka cooked and gave to the children.'

In the examples in (4.204), the wh-phrase *bɔ́* 'what' is exhaustively focused ex-situ in (4.204b) and in-situ in (4.204c). The elements that correspond to the focused constituents in (4.204b, c) in the responses in (4.204d) are equally exhaustively focused ex-situ (4.204di) and in-situ (4.1204dii) respectively.

It is important to add that, further checks with native speakers show that, there seem not to be a strict correlation in non-subject question answer pairs between focusing strategies. Thus, ex-situ focus questions, for instance, can equally be answered with in-situ focus answers and vice-versa as illustrated in (4.205-206).

(4.205) Q: i. Bɔ́ kà Àyípóká sà dūg tīs bíís lá?
wha FOC Ayipoka PAST cook give children DEF
'What did Ayipoka cook and give to the children?'
Ans.: a. Dííb kà Àyípóká sà dūg tīs bíís lá.
food FOC Ayipoka PAST cook give children DEF
'It is food that Ayipoka cooked and gave to the children.'

b. Àyípóká sà dūg né dííb tīs bíís lá.
Ayipoka PAST cook FOC food give children DEF
'It is food that Ayipoka cooked and gave to the children.'

(4.206) Q: Àyípóká sà dūg né bɔ́ tīs bíís lá?
Ayipoka PAST cook FOC what give children DEF
'What did Ayipoka cook and give to the children?'

Ans.: a. Dííb kà Àyípóká sà dūg tīs bíís lá.
food FOC Ayipoka PAST cook give children DEF
'It is food that Ayipoka cooked and gave to the children.'

b. Àyípóká sà dūg nɛ́ dííb tīs bíís lá.
Ayipoka PAST cook FOC food give children DEF
'It is food that Ayipoka cooked and gave to the children.'

Additionally, non-focused interrogative phrases also have their corresponding constituents in the answers prosodically focused without any exhaustive interpretation. This is illustrated as in (4.207).

(4.207) a. Àyípóká sà dūg bɔ́ɔ́ tīs bíís lá?
Ayipoka PAST cook what give children DEF
'What did Ayipoka cook and gave to the children?'

b. Àyípóká sà dūg **dííbí** tīs bíís lá.
Ayipoka PAST cook food give children DEF
'Ayipoka cooked FOOD and gave it to the children.'

Subject wh-phrases, on the other hand, do not occur with the in-situ subject focus particle *ń* as in (4.208a) and (4.209a) respectively but answers to such questions may either express information or exhaustive focus (4.208bi,bii) and (4.209bi,bii) respectively. Assuming a context where someone needs information on the identity of the person who cooked for a group of children, the question in (4.208a) is used and the answer in (4.208bi) is used as felicitous response although (4.208bii) can also be used if the respondent wants to exclude all other potential people who may have cooked. However, if both interlocutors know that different people cooked for different categories of people and the questioner intends to find out who in particular cooked for the children, the question that can be asked still remains (4.208a). It is ungrammatical to mark the question word with the subject-focus marker. Based on the supposed background, the desired response will, in this situation, be (4.208bii).

(4.208) Q: a. Ànɔ́'ɔ́n (*ń) sà dūg dííbí tīs bíís láá?
who FOC PAST cook food give children all
'WHO cooked food and gave to the children?'

Ans.: b. i. **Àyípóká** sà dūg dííbí tīs bíís lá.
Ayipoka PAST cook food give children DEF
'AYIPOKA prepared food and gave it to the children.'

ii Àyípóká **ń** sà dūg dííbí tīs bíís
Ayipoka FOC PAST cook food give children
lá.
DEF

'It is Ayipoka who prepared the food and gave it to the children.'

The example in (4.209) uses a different question word to show that the restriction is not limited to a particular type of question phrase(s).

(4.209) Q: a. Bɔ́bún (*ń) sà ɔ̃nb váánd lá wʊ́sá?
what FOC PAST chew leaves DEF all
'What chewed all the leaves?'

Ans. b. i. Bʊ́ʊ́g lá sà ɔ̃nb váánd lá wʊ́sá.
goat DEF PAST chew leaves DEF all
'The goat chewed all the leaves.'

ii. Bʊ́ʊ́g lá (*ń) sà ɔ̃nb váánd lá wʊ́sá.
goat DEF FOC PAST chew leaves DEF all
'It is the goat that chewed all the leaves.'

With reference to non-subject arguments in the examples above, a dichotomy can be established between focused wh-questions (expressing exhaustive/identification focus) and non-focus wh-question (expressing information focus). Focused questions require the use of the focused particles in their respective answers whilst non-focused wh-question requires their respective answers to be non-focused. Subject wh-questions are open to answers expressing information focus or exhaustive focus. The fact that focused wh-questions require the target constituent in its corresponding answer pair to be equally focused whilst non-focused wh-question require same from its target constituent in the answer to be non-focused indicates that the discourse status of a wh-question determines the discourse status of its target constituent in its corresponding answer pair. Similar observations are made in languages like Lele, Amharic and Gungbe (Frajzyngier 2001:284/86; Drubig &Schaffar 2001; Aboh 2007:305) respectively (all cf Aboh 2007:302-306).

To sum up, this section has offered an elaborate investigation on the interrogative system of Kusaal highlighting aspects of the grammar of wh-question formation in the language which has received little attention in the literature.

I have demonstrated the various strategies used in question formation in Kusaal which include: the use of intonation, the use of question particles and the use of interrogative pronouns with its associating restrictions. It has been indicated that the disjunctive operator *bɛ́ɛ́* 'or' also doubles as a question particle/marker in Kusaal.

Additionally, I have explored the various types of questions and their formation in Kusaal: polar questions, alternative questions, content questions and "greeting questions".

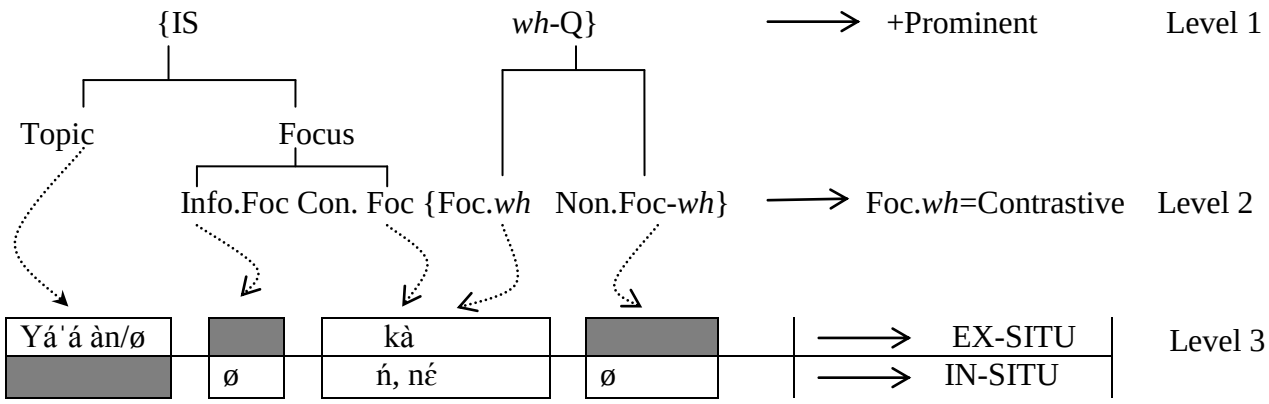
Also, attention has also been given to the properties of wh-questions in Kusaal by looking at both local and non-local wh-questions. Unlike local wh-question where the wh-constituent and its corresponding gap are found in the same local domain, non-local wh-question may have the wh-phrase in the matrix clause whilst the gap is traced in an embedded clause. I have further established that wh-constructions in Kusaal are constrained by island effect (Ross 1967).

More importantly, the discussion in this section has also revealed that wh-phrases can be grouped into focused and non-focused wh-phrases with a direct impact on their corresponding answer pairs. Whilst focused wh-phrases require the use of the particles *kà* and *nέ* in non-subject focus in both the question and answer pairs, same is not the case in non-focused wh-phrases and their corresponding answer pairs. This shows a correlation between the structure of a wh-question and its intended discourse interpretation.

4.5. Chapter Summary

All together, this chapter has combined issues in information structure and the syntax of Kussal. I have discussed relevant concepts in focus constructions, topic construction, and *wh*-question formation in Kusaal. The discussions on these topics explored important generalizations that relate these grammatical concepts in Kusaal. The overlap between these grammatical concepts in Kusaal is mainly related to the use of common phonological, morphological and syntactic modes of expressions that characterize these notions. The diagram below explains the interconnectedness of these concepts in the language.

Fig. 4.2. Information structure and wh-phrases in Kusaal



From the figure above, information structure constituents, here referring to topic and focus constituents and *wh*-phrases are observed to be closely related prosodically, morphological and syntactically in Kusaal. Prosodically, these elements are prominent relative to other constituents in any given constructions where they are used. Prominence encodes emphasis in the interpretation derived from these constructions.

With the exception of topicalized constituents which are located at the left periphery of the entire IP by left dislocation, focus constituents and wh-phrases in Kusaal can either be ex-situ in which instances they are moved to the left of the entire constructions and marked by their respective morphological particles in a way identical to topic constituents or they can be in-situ in which instances they are left clause internal and either marked overtly or remain bare without any particles for varied discourse interpretations and grammatical functions.

In the second and third layers of the figure above, I illustrate the various subtypes of the major forms of constructions under discussion. Unlike topic constructions which do not show major distinctions in terms of subtypes, focus constructions are grouped into information focus and contrastive focus whilst wh-phrases are also categorized into focused wh-phrases and non-focused wh-phrases. Non-focused wh-phrases on the contrary cannot be fronted. This is because fronted wh-phrases automatically receive contrastive focus interpretation. Non-focus wh-phrases are morphologically null in a way identical to information focus constituents.

The various elements from topics to focused *wh*-phrases are then mapped to their respective morphologically identifying particles which further show two divisions: particles restricted to ex-situ constructions and those restricted to in-situ constructions. Shaded columns mean impossible utterances. Topic as can be seen is only ex-situ with the optional phrase *yaa an*…. Topicalized phrases cannot be left in-situ except to talk of the fact that they are always accompanied by the use of a resumptive pronoun. Information focus constituents are also formed in-situ without any overt particle. Contrastive focus on the other hand can either be ex-situ with the particle *kà* or it can be in-situ with the particle *ń* and *né*. Just like contrastive focus constituents, focus wh-phrases can also be ex-situ marked with *kà* or in-situ marked with *né* for non-subject constituents.

The next chapter will focus on giving a formal account of information structure as it occurs in Kusaal using the Lexical-Functional Grammar framework.

Chapter 5

Information Structure and the Lexical-Functional Grammar Framework

5.0. Introduction

In chapter four, I have given accounts of topic constructions, focus constructions and question formation in Kusaal. In doing so, I have made mention of various forms of elements that can either be displaced to clause initial positions or be left clause internal in Kusaal for multiple discourse functions and grammatical purposes. What is intended in this chapter is to explore a formal analysis of Information Structure which basically includes topic and focus constructions[31]. The Lexical-Functional Grammar (LFG) architecture is premised on multiple levels of representation mediated through mapping. One such level of representation for information Structure is the i(nformation)-structure (King 1997). Existing analyses of focus constructions in the i-structure projection will be shown to be insufficiently resourced to express correctly the statuses of given notions. The i-structure projection as it stands does not have any distinguishing mark between information focus constituents and contrastive focus constituents although the c-structure from which the i-structure is mapped may have overt morphological markings for distinguishing various subtypes of focus i.e. in the case of Kusaal and several African languages. The mismatch between the c-structure and the i-structure makes the latter incomplete as well as under specified in expressing the exact notion conveyed in the c-structure most especially in instances involving contrastive focus which often times results in ambiguity. Ambiguity because the same i-structure is projected for both information focus and contrastive focus as will be detailed soon. As a result, my aim, in this chapter, is to indicate some gaps within previous proposals for information structure in LFG and further make suggestions as to how these problems can be resolved.

The discussion in this chapter is divided into four sections. After this section, section (5.1) will explore previous analyses of focus and topic constructions within the literature of LFG. I will illustrate problems in these proposals with data from Kusaal. This will be followed by section (5.2) which will propose the introduction of additional features in the i-structure in an attempt to solve the problems raised in section two. I further discuss how this proposal can be made universal to accommodate other languages whether discourse notions are expressed phonologically, syntactically, morphologically or by combination of two or more of these

[31] Although question formation in Kusaal was exhaustively discussed in the last chapter, I intend to exclude an analysis of it in this chapter since the available literature is exhaustive on this and any attempt to do so here will merely be a rendition of reviews of existing works. Readers are therefore encouraged to see (Bresnan et al 2016, Kaplan and Zaenen 1989, Falk 2001:149-172 and Bresnan and Mchombo 1987).

strategies. Section (5.3) provides sample analysis using the proposed features in the i-structure for topic and focus constructions. Finally section (5.4) gives a summary of the chapter.

5.1. Previous analyses of information structure in LFG

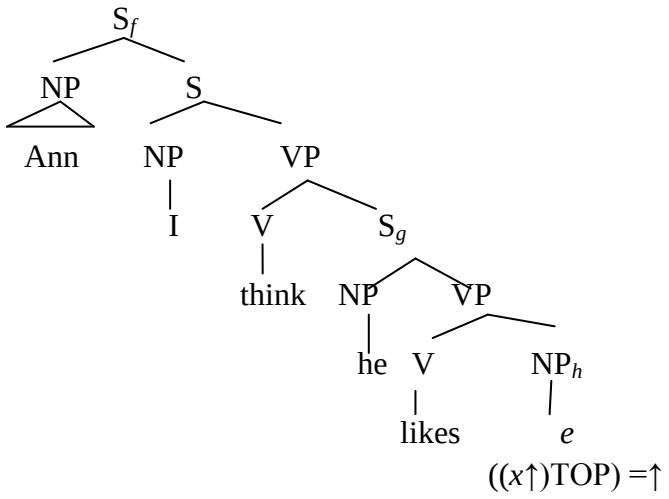
This section begins by looking at the explanation of information structure offered by Bresnan and Mchombo (1987) followed by King (1997)'s idea of linking information discourse functions to phrase position and further representing discourse notions in the i-structure. After this, I will look at the proposal of Choi (1996) who builds on the work of Vallduví (1992) and King (1997) and further suggests two discourse features: NEW and PROM.

In recent years, the literature in LFG has seen several proposals all in attempts to explain concepts and notions relating to grammatical and discourse functions. A quick recap of basic ideas will be helpful. Following Falk (2001:58-59) and Bresnan Mchombo (1987:757) grammatical function, as previously explained in chapter two, is the underlying concept behind the f-structure in LFG. Grammatical functions are split into ARGUMENT FUNCTIONS like SUBJ, OBJ, and OBL(LIQUE), and NON-ARGUMENT FUNCTIONS, like TOP, FOC, and ADJUNCT. This division is identical to A-position and A-bar position respectively in GB (Falk 2001). Argument functions (and the function of ADJ) represent the clause internal aspect of syntactic elements. Thus, argument functions are directly mapped onto semantic or thematic roles in lexical predicate-argument structures. They provide a uniform way of designating the participants in the events, actions, and situations which are depicted by various subclasses of lexical predicators (Simpson 1983; Bresnan and Mchombo (1987:757). In contrast non-argument functions, by the extended coherence condition, must be linked to other grammatical functions (or, in the case of adjuncts, must occur with a PRED attribute); hence non-argument functions are only indirectly associated with predicate-argument structure. They serve to structure the information content of an utterance so as to facilitate communication between the speaker and the hearer. Argument functions must be unique in their clauses, while non-argument functions may admit of multiple instances.

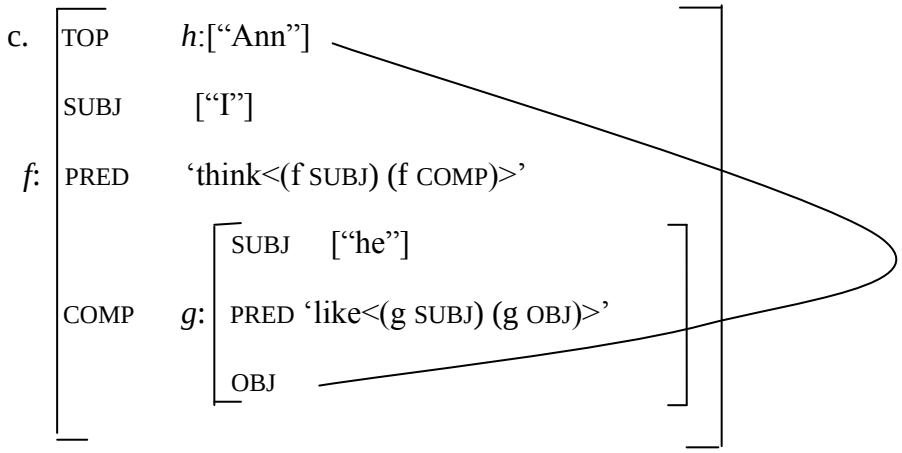
Syntactic elements can simultaneously perform both grammatical and discourse function. This has served as the main motivation behind the representation of both grammatical and (grammaticalized) discourse functions in the f-structure. The object of the sentence in (1) doubles as the topic. Discourse notion is expressed in the projected f-structure (see Bresnan et al 2016: 67-69).

(5.1) a. S: Ann, I think he likes her

b.



c.



Bresnan and Mchombo (1987) following the proposals of Zaenen (1980) and Fassi-Fehri (1984) also indicate that the grammaticalized discourse functions FOC and TOP must universally satisfy an EXTENDED COHERENCE CONDITION. This requires that these elements are linked to the semantic predicate argument structure of the sentence in which they occur, either by functionally or anaphorically binding an argument. They further make more precise their version of this proposal by showing that the extended coherence condition requires that all functions in f-structure be BOUND. An argument function (i.e. a subcategorizable function like SUBJ, OBJ, OBL) is bound if it is the argument of a predicator (PRED). An adjunct is bound if it occurs in a f[unctional]-structure which contains a PRED. Lastly, a topic or focus is bound anytime it is functionally identified with, or anaphorically binds, a bound function.

Next is a discussion on discourse domain as explained by King (1993/1995).

Examining the interaction that goes on between syntax, prosody and by extension morphology in encoding discourse functions in both configurational languages like English and Kusaal and non-configurational languages like Russia, King (1993/1995) and Choi (1996) opine that the separation of constituent structure from functional structure in addition to the possibility of introducing an information (discourse function) structure puts LFG in a better position to account for these interactions. As will be observed later, I equally subscribe to this position but aim to make further suggestions to resolve identified issues of under specification of discourse functions in the i-structure.

King (1997) explores structural encoding of discourse function in Russian. Discourse function can be captured via annotations on the c-structure which provides both a discourse function and a grammatical function to the constituents. In the example in (5.2), YP has the discourse function DF (e.g., TOPIC or FOCUS) which is identical to some grammatical function shown by the uncertainty equation BODY BOTTOM (Kaplan and Zaenen 1988, 1989).This indicates the sharing of information between the discourse function and the grammatical function.

(5.2) XP → YP X
(↑DF)=↓
(↑DF) = (↑BODY BOTTOM)

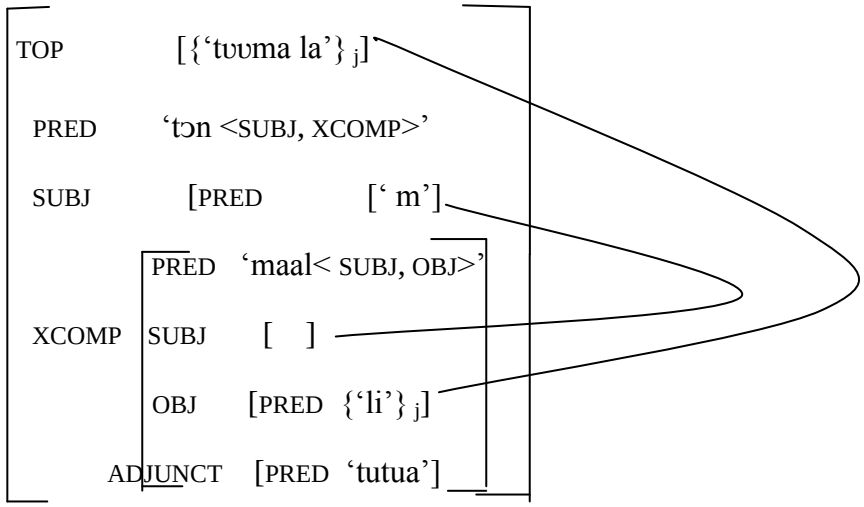
Putting this in context, Huang (1992:112) proposes the equation in (5.3) for topicalization in English which is further represented in an F-structure configuration in King (1995:3).

(5.3) S' → XP S
(↑TOP) =↓ ↑=↓
(↑TOP) = (↑ {COMP, XCOMP}* (GF-COMP))

The left dislocated XP is assigned the TOP discourse function. The TOPIC function is related with other grammatical functions other than COMP (i.e., GR – COMP) at any level of COMP or XCOMP (i.e. {COMP, XCOMP}*). The TOPIC in the Kusaal example in (5.4) is the object of the XCOMP represented by the resumptive pronoun which has an anaphoric relationship with the TOP.

(5.4) a. Túúmá lá, m̀ tɔ̃n māāl lí tútúá.
work DEF, 1SG can do it perfectly
'The work, I can do easily.'

b.



In the following example, I illustrate an instance where the constituent following the Q-word is the focus element in the sentence. The c-structure rule in (5.5) places the fronted constituent in Q-FOC and equates it with a grammatical function from any number of XCOMPs (see King 1997:3 for details and examples from Russian).

(5.5) CP→ XP C'

↓=(↑Q-FOC) ↑=↓

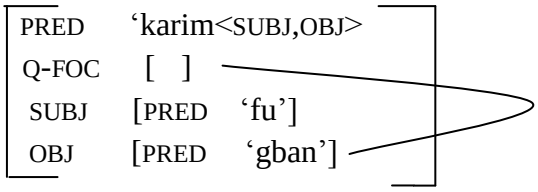
(↑XCOMP* GF)=↓ (King 1997)

(5.6) a. Gbán-kánɛ́ kà fʊ̀ sà kárím?

book Q FOC you PAST read

'Which book did you read yesterday?'

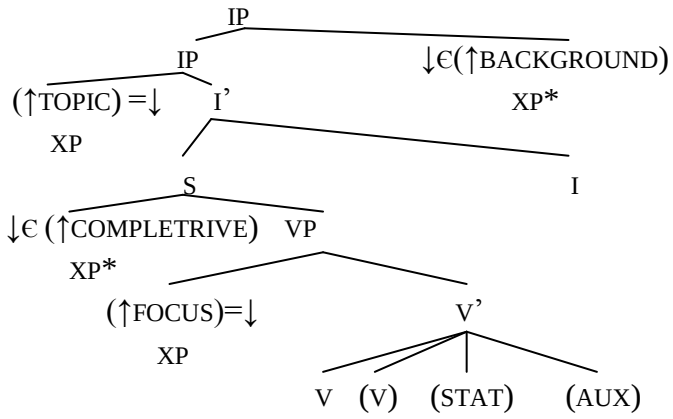
b.



In a closely related development and arguing from the point that certain phrase structure positions are associated with particular discourse functions via functional uncertainty, Butt and King (1996) illustrate the correlation between the word order and discourse function in Urdu and Turkish as in (5.7). They argue that the association of particular phrase structure positions with discourse functions captures the intuition that word order reflects the discourse function of

constituents (Butt and King 1996). Syntactic discourse positions act as licensers: thus for a constituent to receive a particular discourse interpretation, it must appear in the appropriate position. These positions are usually specifier positions. Specifier positions are syntactic function positions: SpecIP for topic and SpecVP for focus.

(5.7)



The Turkish sentence below contains a preverbal focus, *Funda'nin topunu* 'Funda's ball', the indirect object, *kediye* 'cat', is backgrounded. There is no overt topic and the pro-dropped subject is the understood topic (see Hoffman 1995).

(5.8) a. yok, [Funda'nin top-u-nu]$_{F}$ ver-me-m [kedi-ye]$_{Back}$
no, Funda-Gen ball-Poss3-Acc give-Neg-1Sg cat-Dat
'No, (I) won't give Funda's ball to the cat.' (Turkish) (Butt and King 1996)

b.
PRED 'give<SUBJ,OBJ,OBL>'
TOP [PRED 'PRO']
SUBJ [ ]
FOC [PRED 'BALL']
OBJ [ ]
BACK { [PRED'CAT']}
OBL [ ]

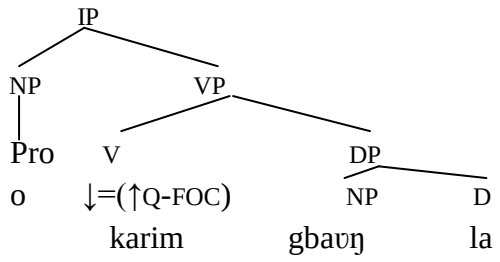
From the various examples illustrated above, it is obvious that encoding discourse function via annotations on the c-structure tree is relatively efficient for simple arguments and adjuncts, assigning them both a grammatical function and a discourse function in the f-structure. The set back to this approach as noted by King (1997) arises when assigning discourse function to f-structure heads. Discourse function is encoded in the f-structure via annotations on the c-structure. The f-structure of a head is usually specified to be identical to that of its mother (↑=↓). It becomes difficult to distinguish between different levels of the head projection when assigning a discourse function to f-structure heads; one cannot indicate that only the lexical head is focused (Meurers and De Kuthy 2005). As a result, when these heads receive discourse function role,

everything within the sub-f-structure containing the head automatically receive discourse function interpretation. Although there are instances when this gives the correct scope of discourse function, it often times results in wider scope than desired. Thus more elements get topicalized or focused than intended. King (1997) illustrates this problem using three different focus assignments in Russian[32] which will be substituted using data from Kusaal. Neutral yes-no question receives the correct wide scope interpretation although it results in a circular f-structure. On the contrary, contrastive focus on verbs and information focus (new focus) on the VP cannot receive the correct discourse assignment using this approach.

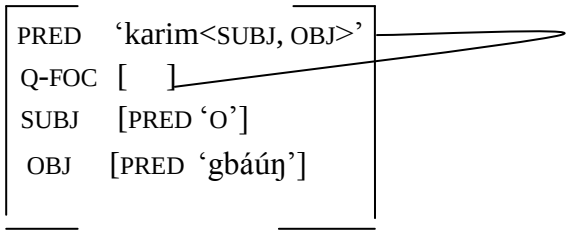
In the yes/no question in (5.9a-c) below, focus is on the entire clause and represented on the predicate. The polar question in (5.9a) is marked using rising intonation with extra stress falling on the terminal lexical item.

(5.9) a. Ò kārīm gbáúŋ láá?
3SG read book DEF
'Has s/ he read the book?'

b.



c.



The problem in the f-structure in (5.9c) as noted by King (1997:5) is that although the entire event is contained in the Q-FOC, circularity is created in that Q-FOC contains itself.

Contrastive focus in Kusaal singles out one element as new information among other alternatives. Contrastive focus as discussed in the previous chapter is expressed either ex-situ with the particle *kà* or in-situ with the particle *nɛ́* in Kusaal. In the example below, *kārīm* 'read'

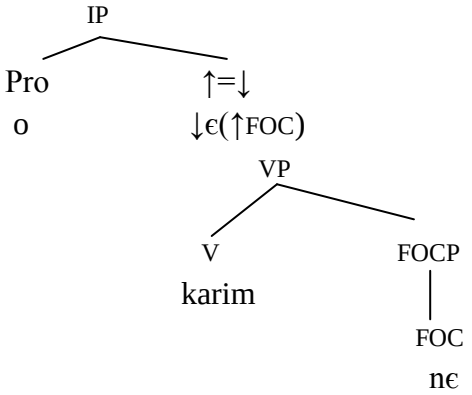
[32] See (King 1997:4-7) for analysis with data from Russian.

is contrastively and exhaustively focused using the particle *né* whilst the subject serves as background information in answer to the question 'What did he do?

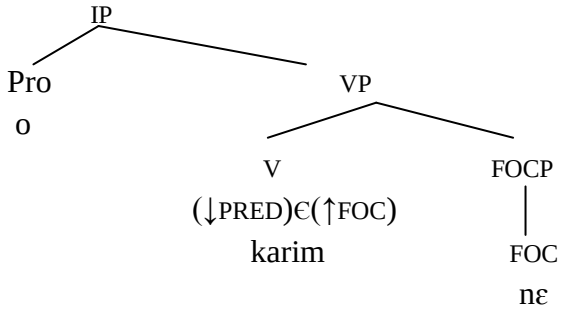
(5.10) a. Ò kārīm né.
3SG read FOC
'It is reading that he did (not for example *sleeping*)'

Contrastive focus can be captured by annotating the c-structure node containing the focused material using the following two possible annotations on the verb *kārīm* 'read'.

b. i ↓Є (↑FOC)



ii. (↓PRED)Є(↑FOC)



Both annotations thus (5.10bi-ii) result in over scoping of the focus domain as illustrated in the f-structure in (5.10c).

c. $\begin{bmatrix} \text{PRED} & \text{'karim<---->'} \\ \text{FOC} & [\ ] \\ \text{SUBJ} & [\text{PRED}\ \text{'o'}] \end{bmatrix}$

The problem is that by focusing the head 'read<SUBJ>' both the core meaning of the PRED and its argument get included in the focused domain. On the contrary, the interpretation of contrastive

focus in this sentence excludes all other constituents but the verb *kārīm* ‘read’. The subject now receives an additional discourse function which does not correspond with its original function in the c-structure.

Similarly, focusing the predicate in the information focus sentence in (5.11) below results in similar over scoping problem as identified for contrastive focus. Information focus is marked prosodically where the focused constituent receives extra stress as against all other constituents in the sentence. The scope of focus in answer to the question in (5.11) is different from the scope of focus in answer to the question in (5.12). Whilst the scope of focus is on both the verb and its object in (5.11) the scope of focus in (5.12) is only on the verb. However both (5.11) and (5.12) seem to have an f-structure which is almost alike with focus scoping well beyond the desired interpretations. In all situations, the predicate *kārīm* ‘read’ always contains its arguments: the subject and the object. Focusing the predicate and the object as in (5.11) indirectly scopes over the subject and in (5.12) both the subject and the object are equally focused when the intention is to focus only the predicate.

(5.11) a. What did he do?

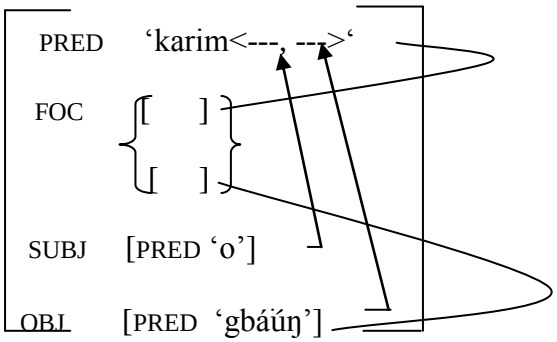
Ò *kārīm* gbáúŋ lá.

3SG read book DEF

‘HE READ THE BOOK.’

Focus =read the book

b.



(5.12) a. What did he do to the book?

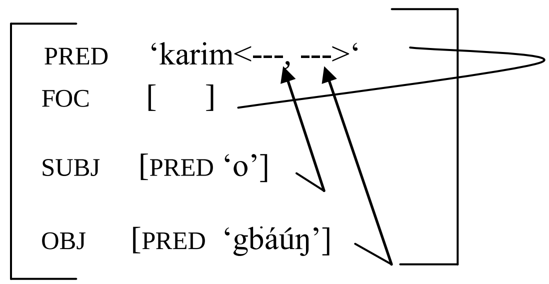
Ò *kārīm* gbáúŋ lá.

3SG read book DEF

‘HE READ the book.’

Focus =read

b.

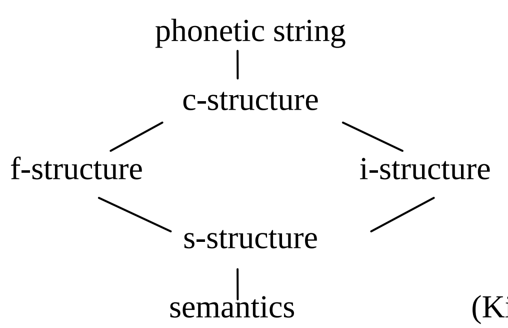


In finding a solution to the problem of over scoping, King (1997) suggests an approach which involves two basic parts. The first is to posit an i(nformation)-structure projection distinct from that of f-structure. The second is to remove the argument structure of the predicate, thus employing only the core grammaticalized discourse meaning in the i-structure. This means that the i-structure should refer to just the core meaning of the predicate excluding its arguments.

5.1.1. The I-Structure

In a sentence with discourse interpretation, every lexical item has a grammaticalized discourse function (topic, focus, background, etc.) derived from the utterance context. The discourse function constituents mostly do not overlap with the f-structure constituency. Based on this, information should be projected from the c-structure into a distinct i(nformation)-structure, accessible by the s(emantic)-structure as illustrated below.

(5.13)



(King 1997)

Using the figure above, King (1997) explains that the mapping between i-structure and s-structure serves dual roles. It permits the semantic access to discourse function information as desired. It also allows all lexical items with PRED values to be assigned discourse function role which can be checked: an item with a semantic predicate must have a corresponding i-structure role. King (1997) argues that this effectively ensures completeness of the i-structure.

5.1.2. Core Predicate Meaning

The major problem so far has been the inclusion of the arguments of the verb in the focused domain instead of focusing just the basic meaning of PRED, i.e. the functor of the PRED. Kaplan

and Maxwell (1996) refer to this functor as PRED FN. The verb 'read' is used for illustration in (5.14) below.

(5.14) PRED 'read'<SUBJ, OBJ>'

PRED FN read

The elimination of the arguments of PRED by PRED FN ensures the placement of the relevant core PRED in the FOC of the i-structure. King (1997:9) suggests that both contrastive focus elements and new information leaf nodes be annotated with the (↓PRED FN) Є(↑$_I$ FOC) [33]. Additional annotations can be used to indicate subtypes of discourse functions e.g., prominence for contrastive focus and default falling intonation for new information though this is not captured in the formalization in (King 1997).The intervention for subtypes of discourse function serves an important point upon which this chapter is built. This shows that attempts are made to ensure that the c-structure gives a complete account of the discourse status of elements. Placing Kusaal in the position of Russian, there is no need for prosodic intervention since subtypes of discourse functions are distinguished morphologically. Contrastive focus and information focus have distinct c-structure projections by virtue of the presence of focus particles in the former which is absent in the latter. The questions which will be addressed at the end of this section are (1) what is the resulting effect(s) of resourcing the c-structure for subtypes of discourse functions when same is not transferred/mapped to the i-structure? (2) How complete is the i-structure when subtypes of discourse functions are only visible in the c-structure?

I will demonstrate the applicability of using (↓PRED FN) Є(↑$_I$ FOC) annotation in addition to an i-structure projection in solving the issues raised in examples (5.10-12). This is followed by a short description of the problem identified when the i-structure is under specified for subtypes of discourse functions. Readers are encouraged to see King (1997:9-12) for analysis on Russian and Butt and King (2000:11) for similar analysis on Hindi/Urdu.

Following King, contrastive focus elements are annotated with (↓PRED FN) Є(↑$_I$ FOC). This ensures that the relevant core PRED is what receives FOC in the i-structure. It is important to add that all constituents that are not assigned discourse functions are designated as BACKGROUND (BGD). The sentence with contrastive focus in (5.10) is repeated here as (5.15) followed by steps on how to remedy the problem.

(5.15) a. Ò kārīm nέ.

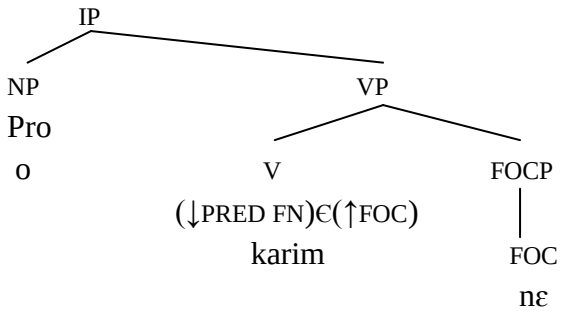
3SG read FOC

'It is reading s/he did (not for example *sleeping*)'

Since the verb is the only element with a discourse function, the focus rule assigns a value PRED FN to the focused verb as illustrated in (5.15bi).

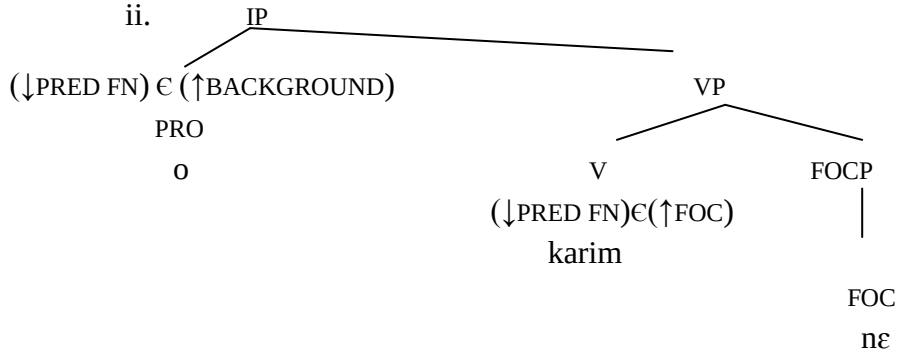
[33] ↑$_i$ refers to what Kaplan and Maxwell (1996) has as M* thus 'its mother.

b.i.



The subject now receives an i-structure annotation PRED FN with a value BGD in (5.15bii).

ii.



The f-structure of the sentence is illustrated as in (15c) and (15d) is a projection of its i-structure where the various grammaticalized discourse function of each constituent is specified.

c. F-structure

$$\begin{bmatrix} \text{PRED} & \text{'karim<--->'} \\ \text{FOC} & [\ ] \\ \text{SUBJ} & [\text{PRED} \quad \text{'o'}] \end{bmatrix}$$

d. I-structure

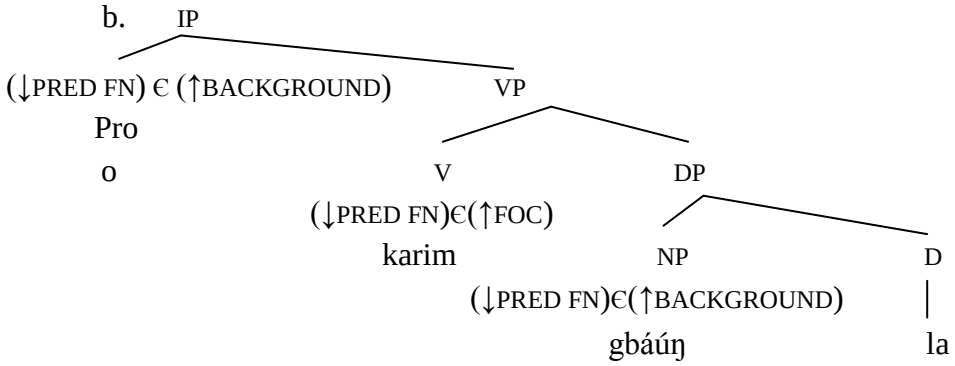
$$\begin{bmatrix} \text{FOC} & \{\text{karim}\} \\ \text{BGD} & \{\text{o}\} \end{bmatrix}$$

The sentences in (5.16) and (5.17) are examples of VP focus. In (5.16) only the verb is focused.

(5.16) a. Ò kārīm gbáúŋ lá.
3SG read book DEF
'HE READ the book.'
Focus= read

In the c-structure of this sentence, the PRED FN value of focus is assigned to only the verb whilst both arguments are assigned the PRED FN value of BACKGROUND. These annotations together with the grammatical functions on the c-structure in (5.16b) lead to the f-structure (5.16c) and the i-structure (5.16d) projections.

b.



c. F-structure

PRED	'karim<SUBJ, OBJ>'
FOC	[ ]
SUBJ	[PRED 'O']
OBJ	[PREĐ 'gbáúŋ']

d. I-structure

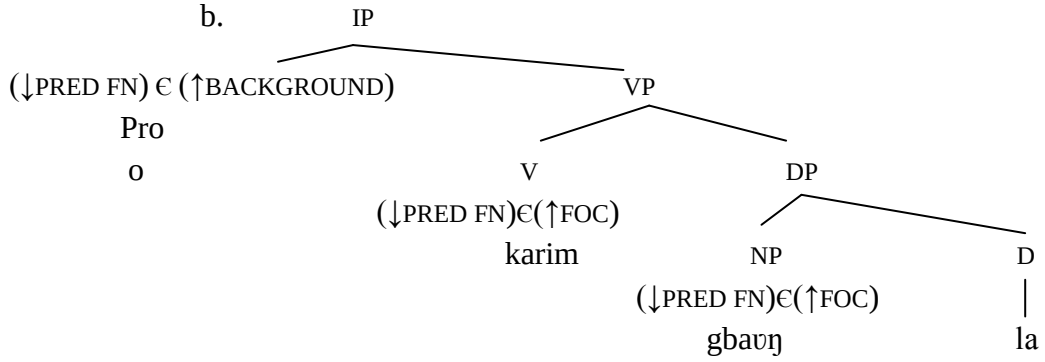
FOC	{karim}
BGD	{gbáúŋ }
BGD	{o}

In the sentence in (5.17) both the verb and the object are new information.

(5.17) a. Ò kārīm gbáúŋ lá.
3SG read book DEF
'He READ THE BOOK.'
Focus =read the book

For this sentence, the c-structure will first have a PRED FN value of focus on both the predicate and the object whilst the subject receives a value corresponding to background information (5.17b).

b.



The annotations together with the grammatical functions on the c-structure in (5.17b) lead to the f-structure in (5.17c) and subsequently the i-structure in (5.17d). The predicate in the i-structure unlike the f-structure does not subcategorize for the various arguments which resolves the scope of overgeneralization of focus.

c. F-structure

$$\begin{bmatrix} \text{PRED} & \text{‘karim<SUBJ, OBJ>’} \\ \text{FOC} & \left\{ \begin{bmatrix} \quad \end{bmatrix} \\ \begin{bmatrix} \quad \end{bmatrix} \right\} \\ \text{SUBJ} & [\text{PRED ‘o’}] \\ \text{OBJ} & [\text{PRED ‘gbaʊŋ’}] \end{bmatrix}$$

d. I-structure

$$\begin{bmatrix} \text{FOC} & \{\text{karim}\} \\ \text{FOC} & \{\text{gbaʊŋ}\} \\ \text{BGD} & \{\text{o}\} \end{bmatrix}$$

Using the same procedure as in (5.17a-d), the sentence in (5.18) is used for the purpose of creating a parallel picture between an information focus construction (5.17) and a contrastive focus construction (5.18). Emphasis is on the c-structure (5.17b) and the i-structure (5.17d) in comparison with the c-structure in (5.18b) and the i-structure in (5.18d). I will run a commentary on this soon.

(5.18) a. What did he do?

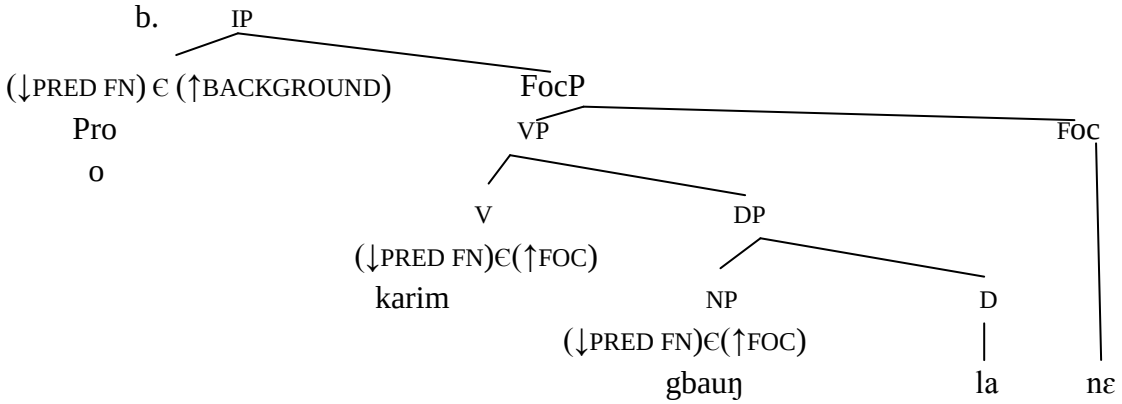
Ò kārīm gbáúŋ lá né́.

3SG read book DEF FOC

'HE READ THE BOOK (as opposed to him selling the paper for instance)'

Contrastive Focus =read the book

b.



c. F-structure

$$\begin{bmatrix} \text{PRED} & \text{'karim<SUBJ, OBJ>'} \\ \text{FOC} & \left\{ \begin{bmatrix} \quad \end{bmatrix} \right\} \\ \text{SUBJ} & [\text{PRED 'o'}] \\ \text{OBJ} & [\text{PRED 'gbauŋ'}] \end{bmatrix}$$

d. I-structure

$$\begin{bmatrix} \text{FOC} & \{\text{karim}\} \\ \text{FOC} & \{\ \text{gbauŋ}\ \} \\ \text{BGD} & \{\text{o}\} \end{bmatrix}$$

5.1.3. Problem one: Ambiguity in i-structure

Notice that the i-structures for all the sentences are underspecified for the focus category they each express. While *kārīm* 'read' in (5.17d) is information focus *kārīm* 'read' in (5.18d) is contrastive focus and yet there are no specifications to facilitate the correct interpretation of each focus type. The i-structure, from this observation, lacks the resources to accurately account for the differences in the information status of constituents though this is spelled out in the c-structure. The argument here could be that the purpose of creating the i-structure is to address the issue of over scoping of focus domain on otherwise non-focused constituents. Consequent to this then is the issue of under specification of the focus status of constituents mapped from the c-structure to the i-structure since the focus phrase in Kusaal for instance specifies the category of focus constituents that occur at it Spec FocP in instances involving contrastive focus. There is what I term 'discourse status under-specification' between the information in the c-structure and what is projected in the i-structure. To ensure a complete mapping of subtypes of discourse functions from the c-structure to the i-structure, it is important that the latter projection should reflect the exact discourse type in the well-resourced c-structure for maximum discourse effect and interpretation. This observation is not unique for predicate focus. Consider the i-structures in (5.19b) and (5.20b) for the focused DPs in the answers to the questions in (5.19ai) and (5.20ai) respectively.

(5.19) a. i. Q: Ò kārīm bɔ́?
3SG read what
'What did s/he read?'

ii.Ans.: Ò kārīm gbáúŋ lá.
3SG read book DEF
'S/he read the book.'

b. i-structure

FOC	{gbauŋ}
BGD	{karim}
BGD	{o}

(5.20) a. i. Q: Ò kārīm nɛ́ bɔ́?
3SG read FOC what
'What (specifically) did s/he read?'

ii.Ans.: Ò kārīm né gbáúŋ lá.
3SG read FOC book DEF
'It is the book that s/he read.'

b. i-structure

FOC {gbauŋ}
BGD {karim}
BGD {o}

Since all projections in LFG mediated by mapping, are independent structures, the i-structure does not efficiently express the desired discourse interpretations between contrastive and information focus since these two have the same structure. To address the ambiguity between (5.19b) and (5.20b), I will suggests ways of introducing a discourse predicate in the i-structure with a corresponding value later on in the chapter.

Another well acknowledged proposal on discourse information in LFG is the work of Choi (1996) who builds on the proposal of Vallduví (1992, 1993). As a way of mitigating what is assumed to be a confusion based on the proliferation of terminologies in studies of Information Structure where discourse notions are identified as *topic-focus*, *theme-rheme*, *old-infomation-new informattion*, Vallduví (1992) defines the important notions in new terms. The information structure of a sentence according to Vallduví (1992) should be seen as an instruction to the hearer on how to update his/her knowledge store. He defines the concept of a knowledge store in terms of Heimian collection of file-cards (Heim 1982). The FOCUS part of a sentence can be seen as an instruction to update a given file-card or to add an entirely new one. The GROUND refers to already known information. However, a difference is drawn between information that represents a LINK and the kind that is contained in a TAIL. While the link directs the hearer to the file card that is to be updated, the tail further specifies how the new information fits onto the given file card (see Butt and King 1996:1-2). Butt and King (1996) refer to the link as TOPIC and the tail as BACKGROUND.

Choi (1996) builds on the work of Vallduví (1992) to propose a four way distinction using two primitive distinctions in information structure [±New] and [±Prominent]. Vallduví (1992) divides information structure into *focus* and *ground*. He further subcategorizes *ground* into *link* and *tail* where elements in the former are assumed to be more prominent than elements in the latter. Vallduví (1992) does not divide focus into subgroups. Building on this proposal, Choi (1996) divides focus into *contrastive focus* and *completive focus* where contrastive focus is assumed to be 'more prominent' compared to completive focus.

(5.21) S=focus, ground

Focus [+New] = contrastive [+Prom]
completive [-Prom]
ground [-New] = topic [+Prom]
background [-Prom]

Choi (1996)'s four way distinction of information structure is captured in (5.22) below.

(5.22)

	+Prom	-Prom
-New	Topic	Tail
+New	Contrastive Focus	Completive Focus

From the diagram, topic and focus share the identical feature [+Prominent] distinguishing them from their less prominent counterparts tail (Background) and completive focus. Completive focus and contrastive focus share the same feature [+New] since they both introduce new referent into the discourse and what distinguishes the two is 'prominence'. In addition, completive focus is equivalent to information focus, or presentational focus[34]. Completive focus is the type of focus that fills in the information gap between the speaker and the addressee whilst contrastive focus involves some kind of presupposed alternatives. Researchers such as Dik et al (1981); Herring (1990:164); Richemont (1986) and Culicover (1990) share the common view that contrastive focus is not entirely 'new' compared to presentational or completive focus because a contrastive focus element is compared with or even opposed to something else where the (comparison or opposition may be either explicit or implicit or stated or predicted (Halliday 1967) cf Choi 1996:97).

To determine her input candidates, Choi (1996) follows Brenan (1996:8 cf Choi 1996:133) and argues that an input is a set of lexical heads (including adjuncts) which she illustrates in an underspecified or skeletal f-structure showing how the heads are related to each other. To ensure that input candidates are assigned the correct discourse information status, Choi (1996) proposes that each element in the skeletal f-structure is marked with the discourse features [New] and [Prom] according to its information status. The following is used as illustration (Choi 1996:138-9).

(5.23) a. Was hat Hans dem Schüler gegeben?
what has Hans the student(Dat) GIVEN
'What has Hans given to the student?'

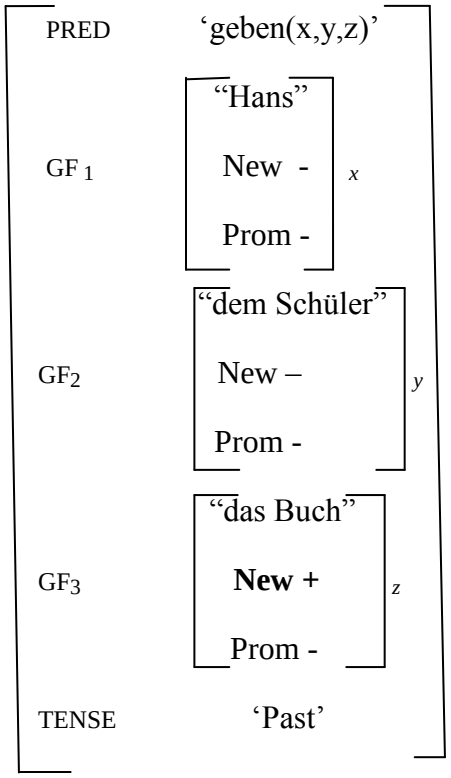
b. Hans hat dem schüler das BUCH gegeben.
Hans has the student(Dat) the book(Acc) given

[34]For the sake of terminological consistency with previous chapters, I will use the term 'information focus' more often than 'completive focus' in this chapter.

‘Han gave the student the book.’

The answer to the question in (5.23a) thus (5.23b) is represented in the skeletal f-structure as in (5.24)[35].

(5.24)



According to Choi (1996:139) this sentence is partitioned into old/given part and the informative/new part (Halliday 1967) as answer to a question like (5.23). The direct object *das Buch* ‘the book’ in (5.24) is new information since it is the part that corresponds to the wh-phrase in ((5.24a) whilst the rest of the sentence is the given or old information. Therefore the former is marked [+New] and the latter [-New]. Additionally, since no item is presented as prominent, nothing is marked [+Prom]. Choi (1996:138) in a footnote acknowledges that the features [Prom] and [New] should be considered as primitive features in the i-structure though how this will be carried out remains an exercise for future research.

It is clear that the need to have a feature specification for discourse status in the i-structure remains a long standing issue hence one that needs attention. The proposal from Choi (1996) will be helpful if further incorporated in the i-structure as a means of distinguishing between

[35] The discourse features are marked under each lexical item for ease of presentation (Choi 1996:138).

completive focus[36] and contrastive focus in languages like German, English and Russian. Unless a mechanism is developed to check the ambiguity in the i-structure, information focus/completive focus and contrastive focus will have the same projection which defies their discourse interpretations. Proposing to represent the features [Prom] and [New] in the i-structure will not be a major issue but the question is as to whether this can serve a cross linguistic purpose. As illustrated at the end of chapter four, all discourse notions whether topic, information focus or contrastive focus are [+ Prom] in Kusaal and all focus types are also [+New].

5.1.4. Problem two: Prominence not a universal distinguishing feature in discourse notions

Prominence is not an exclusive feature of contrastive focus in Kusaal. It can as well be realised on information focus constituents as illustrated in (5.25b-d) following the context in (5.25a).

(5.25) a. Context: Assuming a context where a child is beaten but the culprit is not known. Whilst A in (5.25b) thinks *the woman beat the child*, B in (5.25c) thinks *Aduku beat the child* and C in (5.25d) corrects both A and B by indicating that *it is the man who beat the child*. The use of the long form of the noun *Aduku* instead of *Aduk* is a mark of emphasis accompanied by strong prominence. It was shown in chapter three that Kusaal has long and short forms of lexical items and that the long forms are always used for emphasis. Though *Aduku* in (5.25c) is an example of information focus, it is as prominent as *dau la* 'the man' in (5.25d) which is an example of contrastive focus marked using the subject focus particle *ń*.

b. A: [Pú^{l}á lá]$_{+N-P}$ bʊ̄^{l} bííg lá.
woman DEF beat child DEF
'The woman beat the child.

c. B: [Àdúk.ú]$_{+N+P}$ bʊ^{l} bííg lá.
Aduk.Emph. beat child DEF
'Aduku beat the child.

d. C. Àyéí, [dáú lá]$_{+N+P}$ ń bʊ̄^{l} bííg lá.
no man DEF FOC beat.perf. child DEF
'No, it is the man who beat the child (not the woman, not Aduk)

Prominence as demonstrated can be a feature of both information focus and contrastive focus in Kusaal. It is not a preserve of only a subtype of focus status. The difference between information

[36] Completive focus is generally referred to in this work as information focus (É. Kiss 1995)

focus (5.25b-c) and contrastive focus (5.25d) is morphologically encoded in the presence of the particle *ń* in the case of the later whilst same is not in the case of the former.

Finally, it is important to add that Marfo and Bodomo (2005) following Choi (1999; 2001) and Lee (2001) use the profile in (5.26) to describe the similarities between Q-words and focused constituents in Akan.

(5.26) Focus $\begin{bmatrix} \text{NEW} + \\ \text{PROM} + \end{bmatrix}$ Q-word $\begin{bmatrix} \text{NEW} + \\ \text{PROM} + \end{bmatrix}$

They argue that the two have identical c-structure and f-structure but they differ in the i-structure. To distinguish the focus type in wh-fronting and contrastive focus construction in the i-structure, they use the terms 'F-TYPE NEUTRAL' and 'F-TYPE CONTRASTIVE' for wh-fronting and contrastive focus respectively (see Marfo and Bodomo 2005:199).

The aim of the current proposal looks at subcategories of discourse notions thus subtypes of focus constructions, topic constructions and for future extension focused and non-focused wh-questions. The objectives as well as the approach adopted in this chapter are therefore not the same as what is done in Mafo and Bodomo (2005) where the main analytical tool is OT-LFG.

5.1.5. Summary of problems

The representation of discourse status via annotations in the c-structure for simple arguments and adjuncts which are further assigned discourse function in the f-structure is observed to work relatively well as also observed by King (1997). The problem that arises with this strategy concerns the issue of over-scoping of discourse notions mostly in instances involving predicate focus. In an attempt to solve this King (1997) proposes the i-structure as an independent projection for discourse information. This proposal has proven to be an improvement on the analysis of information structure in LFG. However there appears to be a kind of setback for this proposal requiring further development. It has been shown with examples that the i-structure lacks the needed resources to fully account for subtypes of discourse categories. There is ambiguity in the i-structure as a result of its under specification for either information focus or contrastive focus. This brings us to the proposal of Choi (1996) where the features [NEW] and [PROM] are used to differentiate between information focus and contrastive focus in some selected European languages like German, English and Russian. Though Choi (1996) represented these features in what she terms 'the skeletal f-structure', it serves an important point of beginning where further suggestions can be made. The main problem with Choi (1996)'s suggestion looking at the data in Kusaal is that, the primitive features [NEW] and [PROM] lack 'universal exhaustivity'. Thus, they are applicable to a set of languages and not to other set of languages. Prominence and newness are not exclusive to either information focus or contrastive focus in Kusaal. All focus types are [NEW] and [PROMINENT]. In the following subsection (5.2), I

will suggest the introduction of additional discourse features in the i-structure to solve the issue of ambiguity. This proposal also suggests a path where language specific discourse strategies for various information structure notions can be captured in the i-structure. The proposal makes these new interventions by building on a combined approach of King (1997) and Choi (1996).

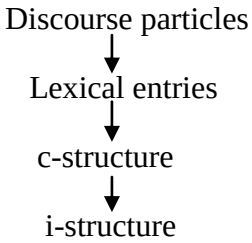
5.2. Towards a solution

Since discourse particles are meaning distinguishing morphemes, it is paramount to include them in the i-structure to distinguish subtypes of discourse functions in a way close to the use of [+New, +Prom] by Choi (1996) to account for the various discourse notions in selected European languages: German, Russian, and English in the 'skeletal f-structure'.

African languages are predominantly particle-centred when it comes to the expression of discourse notions. These particles, generally referred to as discourse particles, cannot be excluded from a projection purposely designed to express the discourse statuses of constituents. Just as TENSE is primitive to the PREDICATE, thus the verb, so are these particles to discourse constituents such as focus and topic constituents. For this reason there is the need to find a way to treat them uniquely instead of considering them at par with functional particles and eliminating them entirely from both the f-structure and the i-structure. Since the i-structure is the projection designated for discourse function, discourse particles should be added to the i-structure.

In general, information in the i-structure becomes ambiguous if it is not adequately resourced to completely map with the discourse notion in the c-structure especially in instances involving languages where discourse notions are expressed morphologically. Below is a suggestion of how these particles should be integrated from inception to finish in any analysis involving information structure.

(5.27) Suggested path for discourse particles[37]



All discourse particles should be adequately captured in the lexical entries, represented in the c-structure and further mapped on to the i-structure. This ensures that discourse particles are fully

[37]The a-structure is not included in this path since its function does not overlap directly with grammaticalized discourse function. The f-structure is also left out because of the issue of over-scoping of discourse domain discussed previously following (King 1997). However, the f-structure maintains the value for discourse function which is subsequently projected in the independent i-structure.

accessible to the i-structure for a holistic discourse interpretation and a complete mapping between c-structure and i-structure. The introduction of discourse particle in the i-structure should be viewed as parallel to the use of PRED value TENSE in the f-structure which may have values like [PAST, PRESENT, FUTURE etc]. Tense can further be broken down into finer grains in Kusaal showing the remoteness of an activity or event. To mark an event as past in most Mabia languages will further require additional details indicating the depth of remoteness of the said activity or event. As discussed in chapter three, the 'PAST' in Kusaal, and indeed in several Mabia languages, use particles that mark an event as: a day old, 2 days old but less than a year, and a year and beyond. For instance the sentence in (5.28a) has the f-structure in (5.28b).

(5.28) a. Ò sà dī dííb lá.
3SG PAST eat food DEF
'S/he ate the food (yesterday).

b. F-structure

PRED 'di<SUBJ, OBJ>'
SUBJ [PRED 'o'; PRO 3; NUM SG]
OBJ [PRED 'diib'; DEF +]
TENSE 'PAST'
TIME DEPTH 'A day old'

The same is applicable to discourse particles in this language. The particles *kà, ń* and *né* have finer grained interpretations in connection with the constituents they co-occur with as indicated fully in the previous chapter and will be further shown soon.

I propose the introduction of a predicate in the i-structure referred to as Discourse Type (DTYPE). DTYPE will have attributes that provide finer grained details of the discourse subtype: contrastive focus, information focus and topic. The value for DTYPE will conform with the discourse status of the constituent in question together with the corresponding particle if any or the feature specification of the said discourse status determined by the language in question. For instance a DTYPE can have the value {contrastive focus: nɛ́} for Kusaal and {contrastive focus: +NEW +PROM} for German. This is mainly aimed at distinguishing subcategories of focus and topic. Even though this study has not gone into identifying subcategories of topic for Mabia languages,

two subtypes of topic constructions: contrastive topic and familiarity topic, are identified for Kusaal. Ermisch (2006:52-53) also discusses subtypes of topics which include: contrastive topic, aboutness topic, familiar/Familiarity topic and frame topic.

The value of DTYPE may be morphologically, phonologically, or syntactically encoded in the particle used or the phonological features associated with the said notion. The most important thing is that a DTYPE value should be meaning contributing. This will also be entirely language dependent. Different languages have different discourse particles that may also be tied to specific discourse strategies. The use of the value {contrastive focus: kà} in Kusaal also signals that the strategy involved is ex-situ. This approach is intended to make the i-structure a complete, a comprehensive and an independent projection capable of disseminating full discourse interpretation of constituents.

The rule below serves the purpose of identifying values of DTYPES on language specific basis.

(5.29)

	Value
DTPYES	{information focus: α}
	{contrastive focus: x}
	{familiarity topic: φ}
	{contrastive topic: q}
	etc

(where α,x, φ, and q are particles if any or features such as [±New] or [±Prom] or others)

To illustrate the applicability of the rule, I provide values for DTYPES in (5.30) Kusaal, (5.33) Dagaare and (5.34) German, English and Russian.

(5.30)

Kusaal	Value	Additional implicit interpretations
DTPYES	{information focus}	in-situ focus
	{contrastive focus: n}	in-situ subject
	{contrastive focus: nɛ}	in-situ non-subject
	{contrastive focus: ka}	ex-situ non-subject
	{familiariy topic:-N, +Prom}	
	{contrastive topic: yaa an, -N,+Prom}	

The rule for Kusaal in (5.30) implies that information focus is morphologically null, there are no corresponding particles for that slot in the value of DTPYES. It is infelicitous to use the features [+New] and [+Prom] since the same features apply to contrastive focus in Kusaal. On the other hand, contrastive focus has different particles for its subtypes: in-situ subject focus, in-situ non-

subject focus and ex-situ focus. These particles have each been included for finer grained elaboration of the discourse status of a given constituent. Topics are also subcategorized into two: familiarity topic and contrastive topic. These are further distinguished by the absence of the special topic phrase in the former while the later has the said phrase. Topics are further qualified by the discourse features [-New] and [+Prom].

To ascertain the values for DTPYES in Dagaare, consider the information focus constructions in (5.31b) which is an answer to the question in (5.31a) and the contrastive focus construction in (5.31c) which is a correction to the wrong answer given in (5.31b) for the question in (5.31a).The sentence in (5.32) is a topic construction.

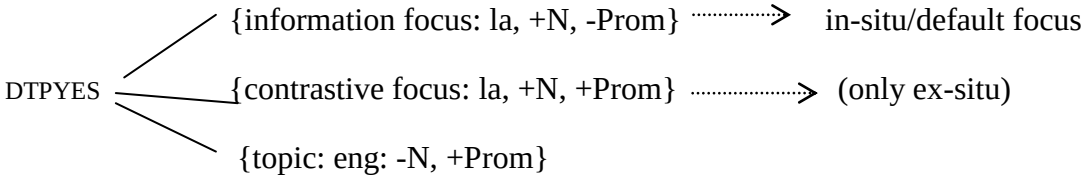
(5.31) a.Q: Bòng lá kà à bíírí dí?[38]
what FOC COMP DEF children eat
'What did the children eat?'

b.Ans1: À bíírí ɔ̀ɔ̀ lá [séngkááfâ] $_{+N-P}$.
DEF children chew FOC rice
'The children ate rice.'

c.Ans2:[Nénè] $_{+N+P}$ lá kà à bíírí ɔ̀ɔ̀.
meat FOC COMP DEF children chew
'It is the meat that the children ate.'

(5.32) À bíírí éng, bà dí lá sáábó.
DEF children TOP 3PL eat FOC TZ
'As for the children, they ate TZ.'

(5.33) Dagaare Value Additional implicit interpretations

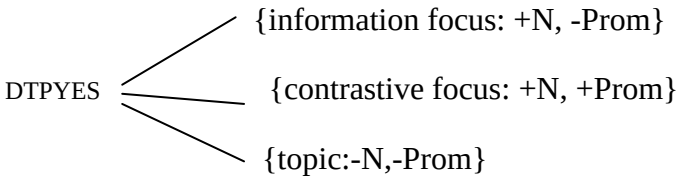


The default particle *la* is used for focus marking in Dagaare. The same particle is used for both contrastive focus and information focus. The decision to include it is based on the fact that focus is not morphologically null in the said language. Omitting *la* will indirectly imply there are no discourse particles which will put Dagaare on the same level as some European languages as in

[38] All Dagaare data here are from personal communication with Adams Bodomo, University of Vienna.

(5.34). The various discourse particles in Dagaare are therefore used in addition to the features [±NEW] and [±PROM].

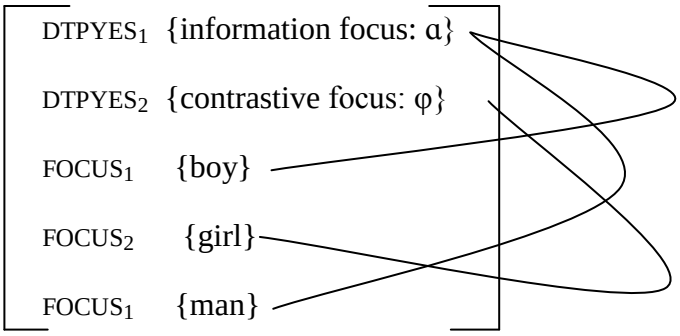
(5.34) English, German, Russian Value



In the absence of overt morphological markings, the features [±NEW] and [±PROM] are used to set apart the differences between contrastive focus, information focus and topic in English, German and Russian (see Choi 1996).

If a language has multiple foci, each focus element should be numbered corresponding to an identical number on a DTPYES. These show instances where two or more attributes may have the same DTPYES value.

(5.35) i-structure



The focused elements {boy} and {man} are assigned the number 1 corresponding to $DTPYES_1$ meaning they subcategorize as information focus constituents. The focused element {girl} is assigned the number (2) matching with $DTPYES_2$ which means it subcategorizes as contrastive focus.

In this section, I have proposed that the predicate DTPYES be introduced in the i-structure with a value that subcategorizes the status of a discourse constituent. I have indicted how languages can apply the rule in generating the needed mechanism to disambiguate discourse constituents in the the i-structure. In the next section, I will focus on providing an analyses of both focus and topic constituents in Kusaal.

5.3. Sample analyses

In this section, I intend to provide sample analyses demonstrating the implementation of the proposed suggestion in section two. The analyses are in three categories. The first set involves

sentences with argument focus. This will be made up of both information focus and contrastive focus constructions. The second category involves sentences with VP focus and IP focus in Kusaal. The final category will illustrate how to deal with subtypes of topics and their projections based on the proposed suggestion in the i-structure.

For each analysis I will begin from the lexical entry to the c-structure followed by the i-structure.

5.3.1. Category one: Argument focus

In answer to the question in (5.36), the sentence in (5.37) is information focus construction and that in (5.38) is contrastive focus construction.

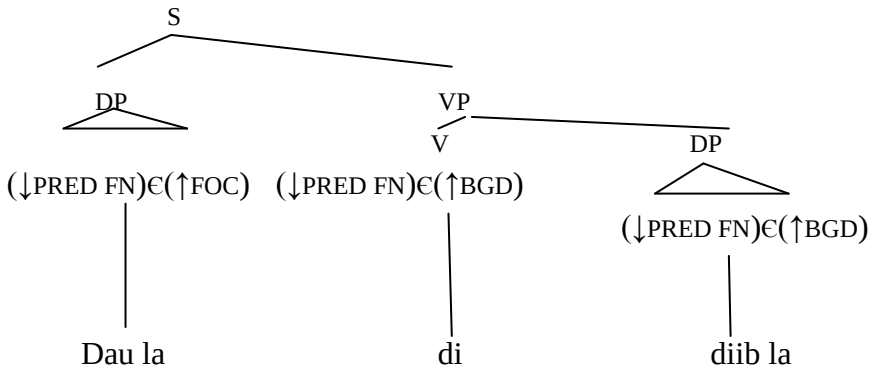
(5.36) Ànɔ́ˈɔ́n dī dííb lá?
who eat food DEF
'Who ate the food?'

(5.37) a. Dáú lá dī dííb lá.
man DEF eat food DEF
'The MAN ate the food.'

b. Lexical entries: Dáú lá dī dííb lá.

Dau	N(↑PRED) = 'dau'
	(↑NUM) =SG
	(↑DEF) =+
	(↑DTYPE) = INFORMATION FOCUS
Di	V(↑PRED) = 'di<(↑SUBJ) (↑OBJ)>'
	(↑TENSE) = PERFECTIVE
Diib	N(↑PRED) = 'diib'
	(↑DEF) = +

c.



d. I-structure

DTYPE	{information focus}
FOC	{dau}
BGD	{di}
BGD	{diib}

The discourse status of *dáú* 'man' is explicitly expressed from the lexicon to the i-structure. The value of DTYPE specifies that the focused constituent in question *dáú* 'man' subcategorizes as an information focus constituent in this sentence. Each level of the architecture independently expresses this status which is mapped from one projection to the other. Consider the contrastive focus construction in (5.38).

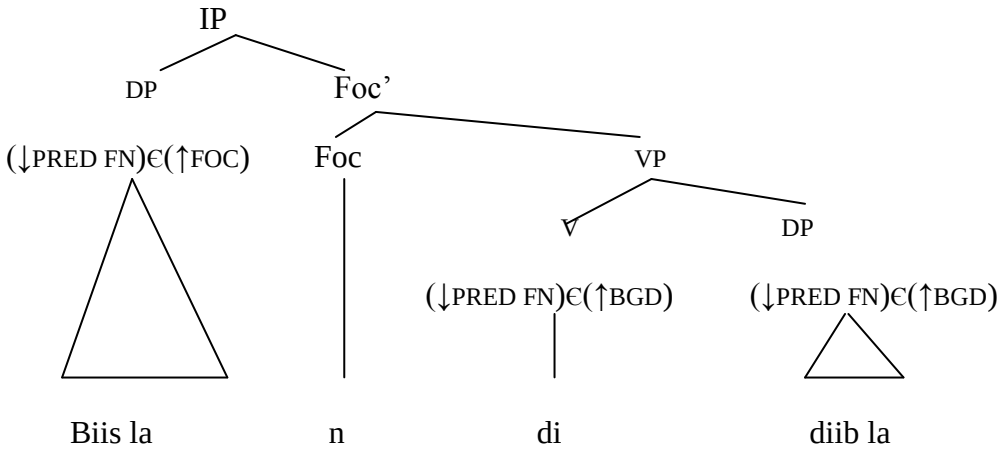
(5.38) a. Àyéí, bíís lá ń dí dííb lá.
no children DEF FOC eat food DEF
'It is the children that ate the food.'

b. Lexical entries

Biis N(↑PRED) = 'biis'
(↑NUM) =PL
(↑DEF) =+
(↑DTYPE) = CONTRASTIVE FOCUS

	(↑F-STRATEGY)[39] =IN- SITU
	(↑PARTICLE) = 'n'
Di	V(↑PRED) = 'di<(↑SUBJ) (↑OBJ)>'
	(↑TENSE) = PERFECTIVE
Diib	N(↑PRED) = 'diib'
	(↑NUMBER) =UNCOUNTABLE NOUN
	(↑DEF) = +

c. C-structure equation



d. I-structure

DTYPE	{contrastive focus: n}
FOC	{biis}
BGD	{di}
BGD	{diib}

[39] F-STRATEGY refers to Focus strategy

From the lexical entry through to the c-structure and subsequently the i-structure, the subtype of the discourse status of the focused constituent is clearly specified as contrastive focus. Unlike the c-structure in (5.37c), the c-structure in (5.38c) has a projection for a focus particle which hosts the focused subject at the specifier of FocP. The focused particle *ń* which is listed in the lexical entries conveys relevant information regarding the focused constituent. The same information is inherently mapped on to the i-structure by the presence of the said particle as an additional value to DTYPE. Finally, the focused constituent *bíís* 'children' in the i-structure can be argued to have all the necessary resources that fully identify its discourse subcategory with additional information on its discourse strategy.

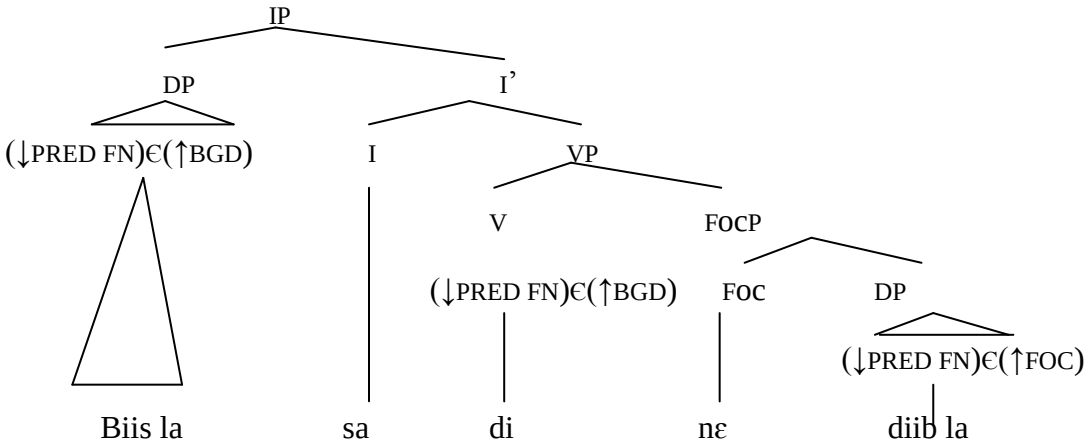
Having considered an example involving in-situ contrastive subject focus in (5.38), the example in (5.39) is a demonstration of in-situ contrastive focus with object.

(5.39) a. Bíís lá sà dí né dííb lá.
children DEF PAST eat FOC food DEF
'It is the food that the children ate (yesterday).'

b. Lexical entries

Biis	N(↑PRED) = 'biis'
	(↑NUM) =PL
	(↑DEF) =+
Di	V(↑PRED) = 'di<(↑SUBJ) (↑OBJ)>'
	(↑TENSE) = PAST
	(↑TIME DEPTH) = A DAY OLD
	(↑PARTICLE) = 'sa'
Diib	N(↑PRED) = 'diib'
	(↑DEF) = +
	(↑DTYPE) = CONTRASTIVE FOCUS
	(↑F-STRATEGY) =IN- SITU
	(↑PARTICLE) = 'nɛ'

c. c-structure



d. I-structure

DTYPE	{contrastive focus: nɛ}
FOC	{diib}
BGD	{di}
BGD	{biis}

Similarly the status of the focused element *dííb* 'food' is specified as contrastive by virtue of the particle *né*. The representation of this particle from the lexical entries through to the i-structure ensures full specification and coherent discourse interpretation in the various projections. The presence of the particle *né* in the i-structure inherently specifies the discourse strategy as in-situ non-subject focus. Example (5.40) is an illustration involving ex-situ non-subject focus.

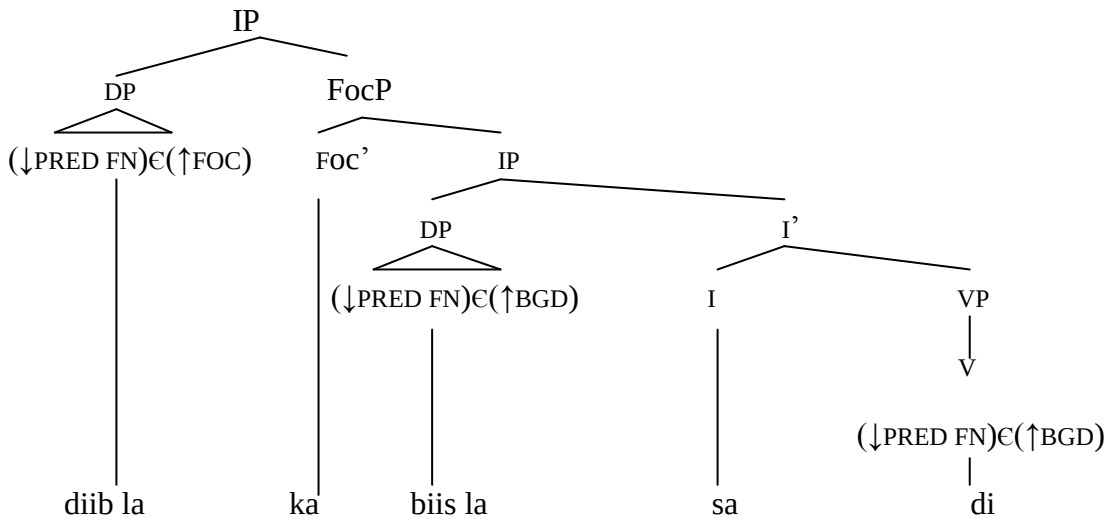
(5.40) a. Dííb lá ká bíís lá sá dī.
food DEF FOC children DEF PAST eat
'It is the food the children ate.'

b. Lexical entries

Diib N(↑PRED) = 'diib'
(↑DEF) =+
(↑DTYPE) = CONTRASTIVE FOCUS

	(↑F-STRATEGY) =EX- SITU
	(↑PARTICLE) = ‘ka’
Di	V(↑PRED) = ‘di<(↑SUBJ) (↑OBJ)>’
	(↑TENSE) = PAST
	(↑TIME DEPTH) = A DAY OLD
	(↑PARTICLE) = ‘sa’
Biis	N(↑PRED) = ‘biis’
	(↑NUMBER) = PL
	(↑DEF) = +

c. c-structure



d. I-structure

DTYPE	{contrastive focus: ka}
FOC	{diib}
BGD	{biis}
BGD	{di}

This is a demonstration of a fronted focused DP. From the lexical entries through to the c-structure and to the i-structure, specific detail information is recognized on the status of the focused element. The focus particle *kà* is included in all the projection providing finer grained information. Again the value of DTYPE in the i-structure gives specific information of the status of the focused DP *dííb* 'food'. The presence of the particle *kà* is implicitly informative enough by encoding further finer details on the focused item. It shows that *dííb* 'food' is an ex-situ focus constituent as well as contrastive.

5.3.2. Category two: VP and IP focus

So far the analysis has concentrated on argument focus. I intend to demonstrate how both VP and IP focus can also be analysed using the same criteria in Kusaal. It is important to remember that, the focused particle *nέ* occurs after the focused VP or IP thus at clause internal right periphery. The sentences in (5.41) and (5.42) are used as demonstrations of VP focus and IP focus respectively.

(5.41) a. i. Q: Did the children *drink the water*?

ii. Ans: Bíís lá sà [dī dííb lá né]$_F$

children DEF PAST eat food DEF FOC

'The children *ate the food* (yesterday)/*It is eating the food* that the children did.'

b. Lexical entries

Biis N(↑PRED) = 'biis'

(↑NUM) =PL

(↑DEF) =+

Di V(↑PRED) = 'di<(↑SUBJ) (↑OBJ)>'

(↑TENSE) = PAST

(↑TIME DEPTH) = A DAY OLD

(↑PARTICLE) = 'sa'

(↑DTYPE) = CONTRASTIVE FOCUS

(↑F-STRATEGY) =IN- SITU

Diib N(↑PRED) = 'diib'

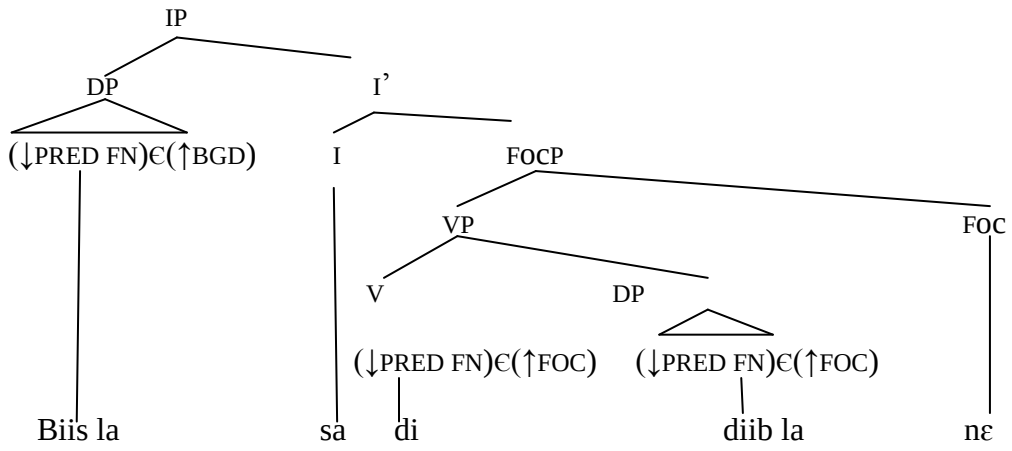
(↑DEF) = +

(↑DTYPE) = CONTRASTIVE FOCUS

(↑F-STRATEGY) =IN- SITU

(↑PARTICLE) = ‘nɛ’ (for entire VP)

c. c-structure



d. I-structure

DTYPE	{contrastive focus: nɛ}
FOC	{di}
FOC	{diib}
BGD	{biis}

The various projections follow the steps used in the analysis involving argument focus. In the lexical entries the discourse statuses of the focused verb and its object are specified and further supported by the focus particle *né*. This is further shown in the c-structure where *né* modifies the VP. In the i-structure, the value of DTYPE also indicates the subcategory of focus for the constituents: *dī* ‘eat’ and *dííb* ‘food’ as contrastively focused against the only background constituent *bíís* ‘children’. The focus particle as usual compliments the value {contrastive focus} with inherent finer grained details on both strategy and category. The sentence in (5.42aii) is an example involving IP focus.

(5.42) a. i. Q: What happened?

ii. Ans: [Bíís lá sà dī dííb lá nέ]$_F$

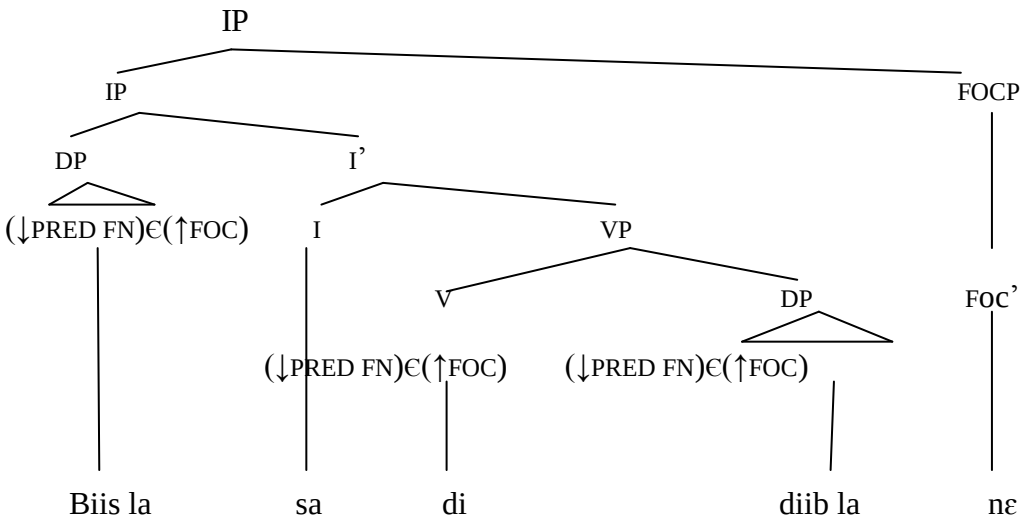
children DEF PAST eat food DEF FOC

'THE CHILDREN ATE THE FOOD (yesterday).'

b. Lexical entries

Biis	N(↑PRED) = 'biis'
	(↑NUM) =PL
	(↑DEF) =+
	(↑DTYPE) = CONTRASTIVE FOCUS
	(↑F-STRATEGY) = IN-SITU
Di	V(↑PRED) = 'di<(↑SUBJ) (↑OBJ)>'
	(↑TENSE) = PAST
	(↑TIME DEPTH) = A DAY OLD
	(↑PARTICLE) = 'sa'
	(↑DTYPE) = CONTRASTIVE FOCUS
	(↑F-STRATEGY) =IN- SITU
Diib	N(↑PRED) = 'diib'
	(↑DEF) = +
	(↑DTYPE) = CONTRASTIVE FOCUS
	(↑F-STRATEGY) =IN- SITU
	(↑PARTICLE) = 'nε' (for entire IP)

c. c-structure



d. I-structure

$$\begin{bmatrix} \text{DTYPE} & \{\text{contrastive focus: nɛ}\} \\ \text{FOC} & \{\text{biis}\} \\ \text{FOC} & \{\text{di}\} \\ \text{FOC} & \{\text{diib}\} \end{bmatrix}$$

Finally the i-structure shows that the entire IP is focused. Every constituent in this structure is contrastively focused as they all share the single DTYPE with a contrastive focus value. Similar information is traceable from the lexical entries through to the c-structure and finally to t hi-structure.

The second category involving VP and IP has equally demonstrated the applicability of the proposed suggestion of having particles take central stage in accounting for the discourse status of focused constituents where applicable in all levels of projections in LFG in instances involving discourse information. More importantly the introduction of DTYPE in the i-structure has also helped in curbing instances of ambiguity in the i-structure.

5.3.3. Category three: Subcategories of topics and the i-structure

On subcategories of topic constructions in Kusaal and other Mabia languages, I have identified two types of topic constructions in Kusaal with possible extension to other Mabia languages. The subcategorization of topic constructions in the language is primarily based on pragmatics which is further enhanced by morphology. While topic constituents that are qualified by the special topic phrase are classified as contrastive topic those without the topic phrase are categorized as familiarity topic. With this background, the analysis in this subsection is based on the two subcategories of topic constructions in Kusaal.

Looking at topic constructions and how well it can be accommodated within the new proposal, DTYPE is either valued as {contrastive topic: yáá án} or {familiarity topic:ø} for Kusaal. Other identified subcategories in other languages: aboutness topic, frame topic etc (Ermisch 2006) can be substituted where need be. Below are illustrations involving familiarity topic (5.43) and contrastive topic (5.44) in Kusaal.

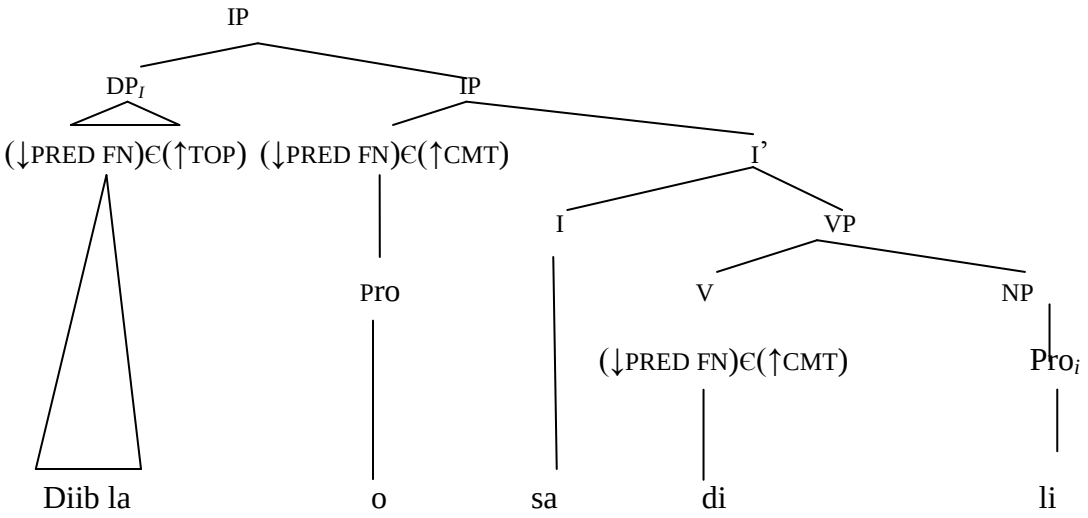
(5.43) a. Dííb lá, ò sà dī lì.
food DEF 3SG PAST eat it
'The food, s/he ate it (yesterday).'

b. Lexical entries

Diib	N(↑PRED) = 'diib'
	(↑DEF) =+
	(↑DTYPE) = FAMILIARITY TOPIC
Di	V(↑PRED) = 'di<(↑SUBJ) (↑OBJ)>'
	(↑TENSE) = PAST
	(↑TIME DEPTH) = A DAY OLD
	(↑PARTICLE) = 'sa'
O	PRO (↑PRED) = 'o'
	(↑NUMBER) = 3SG
	(↑ANIMACY) = +
Li	ANAPHORIC PRO (↑PRED) = 'li'
	(↑NUMBER) = 3SG

(↑ANIMACY) = -

c. c-structure



d. I-structure

DTYPE	{familiarity topic: ø}
TOP	{diib}
CMT[40]	{m}
CMT	{di}
CMT	{li}

DTYPE is valued as familiarity topic. Without the special qualifying phrase, it is marked as null though this feature can be left out just as in instances involving information focus.

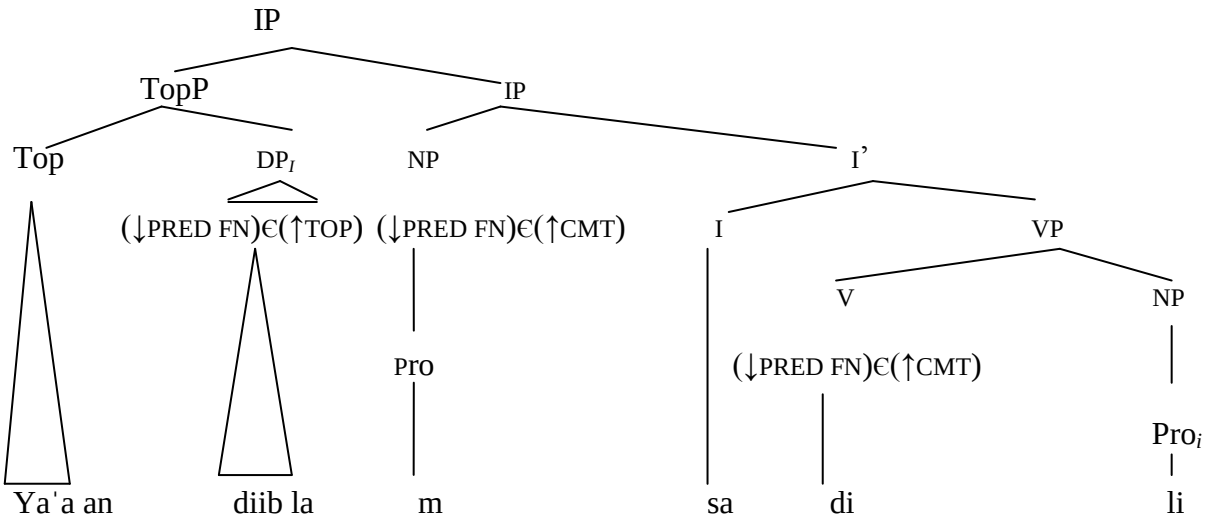
(5.44) a. Yáˈá án dííb lá, ò sà dī lì.
if COP.be food DEF 3SG PAST eat it
'As for the food, I ate it (yesterday).'

[40] CMT:Comment

b. Lexical entries

Diib	N(↑PRED) = ‘diib’
	(↑DEF) =+
	(↑DTYPE) = CONTRASTIVE TOPIC
	(↑PHRASE) = ‘yaˈa an’
Di	V(↑PRED) = ‘di<(↑SUBJ) (↑OBJ)>’
	(↑TENSE) = PAST
	(↑TIME DEPTH) = A DAY OLD
	(↑PARTICLE) = ‘sa’
O	PRO (↑PRED) = ‘o’
	(↑NUMBER) = 3SG
	(↑ANIMACY) = +
Li	ANAPHORIC PRO (↑PRED) = ‘li’
	(↑NUMBER) = 3SG
	(↑ANIMACY) = -

c. c-structure



d. I-structure

DTYPE	{contrastive topic: yaa an}
TOP	{diib$_i$}
CMT	{m}
CMT	{di}
CMT	{li}

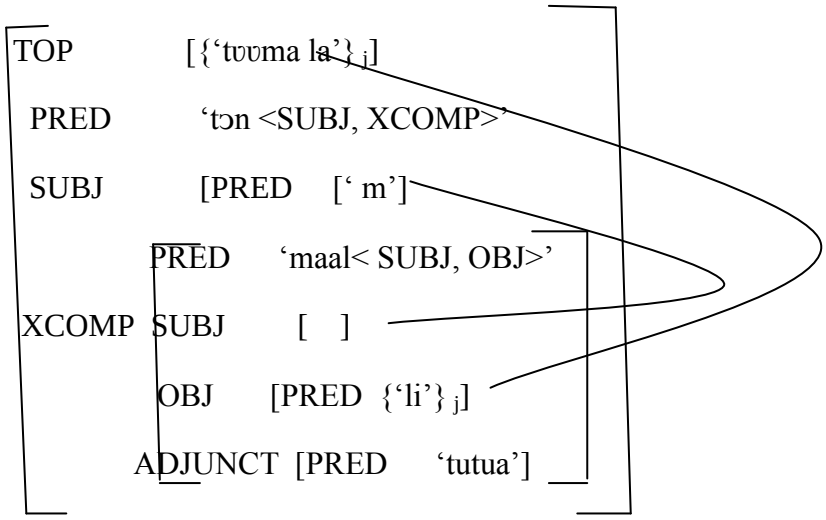
Comparing the i-structure in (5.44d) to the previous i-structure in (5.43d), the difference has to do with the presence of the topic phrase in the later which is absent in the former. The i-structure is therefore able to set the difference between a familiarity topic construction which is without the topic phrase and contrastive topic construction with the topic phrase by virtue of the values of the various corresponding DTYPEs.

It is important to add that previous analyses of topic in LFG (Bresnan et al 2016, Bresnan and Mchombo 1987, Falk 2001, Huang 1992 etc) where the f-structure hosts discourse notions in furtherance of the extended coherence condition accurately captures the notion of topic as it occurs in Kusaal. However, the subcatogorization of topic notions into contrastive topic, familiarity topic etc where particles and phrases are used as meaning distinguishing features will pose as a challenge. For instance, the familiarity topic construction in (5.45) and the contrastive topic construction in (5.46) will have the same f-structure in (5.47).

(5.45) Túʊ́má lá, m̀ tūnˈé māāl lì túútúá.
work DEF 1SG can do it perfectly
'The work, I can do easily.'

(5.46) Yáˈá án túʊ́má lá, m̀ tūnˈé māāl lì túútúá.
if COP.be work DEF 1SG can do it perfectly
'As for the work, I can do easily.'

(5.47) F-structure



5.4. Chapter Summary

In this chapter, I set out to explore a formal account of information structure in Kusaal using the Lexical Functional Grammar framework. The main purpose has been to point out issues in previous analyses of focus constructions in the i-structure projection and to suggest possible ways of addressing the problem(s).

Generally, it was found that the i-structure is inadequately resourced to account for the various subcategories of discourse notions; more specifically the difference between information focus and contrastive focus. These two major subtypes of focus are observed to have identical i-structures although their c-structures may be different especially with languages where overt morphological particles play important roles in expressing the discourse statuses of constituents. The impossibility of differentiating between subtypes of focus in the i-structure results in ambiguity and under specification of discourse interpretations.

In addressing the above problem, I made the suggestion that an additional predicate attribute, DTYPE, with a value that subcategories subtypes of focus and topic notions be introduced in the i-structure. DTYPE can have a value for example {contrastive focus} or {information focus}. The appropriate value may be further elaborated by features such as [±New] or [±Prom] for some European languages or morphological features such as *n*, *nɛ* or *ka* for Kusaal, *la* for Dagaare. Citing Kusaal as an example, the value {contrastive focus: nɛ} further identifies the focused constituent as non-subject and in-situ. The value of DTYPE is supposed to be language specific with the rule below serving as a parameter.

(5.48)

	Value
DTYPE	{information focus: ɑ} {contrastive focus: x} {familiarity topic: φ} {contrastive topic: q} etc

(where ɑ,x, φ, and q are particles if any or features such as [±New] or [±Prom] or others)

This chapter has further applied the proposed analysis to two subcategories of topic constructions in Kusaal: familiarity topic and contrastive topic. The difference between these two are argued to be based on pragmatics which is further encoded in the absence of the topic phrase in the former and the presence of the said phrase in the later. DTYPE is therefore given a value corresponding to the subcategory of topic construction in the i –structure to ensure completeness and discourse status coherence between the various levels of projections within the Lexical-Functional Grammar framework.

Chapter 6

Conclusion and Summary

6.0. Conclusion

This dissertation has investigated two broad areas with respect to the grammar and information structure encodings in Kusaal. It has examined various aspects of Kusaal Grammar with particular attention devoted to the Phonology, Morphology and Syntax. Further, on Syntax and Information Structure, the dissertation has looked at focus constructions, topic constructions and question formation in the language. In addition to these, the work has again provided a theoretical analysis of focus and topic constructions using the Lexical-Functional Grammar framework. It has proposed the adoption of additional features in the i-structure to resolved issues of mismatches and ambiguity between the c-structure and the i-structure in the interpretations of subtypes of discourse notions. I will begin by summarizing the conclusions reached in this dissertation and discuss some areas that require future research.

6.1. Summary and Concluding Remarks

The discussions on phonology, morphology and syntax have given broad analyses on several aspects of the grammar of Kusaal. Some of these investigations were only superficial whilst others receive detailed account. One phonological feature worthy of mention is the number of tones in Kusaal. The general observation points that Kusaal has three level tones: High, Mid and Low. However instances of three minimal pairs are not overwhelmingly observed. This leads to the assumption that the language is gradually shifting from a three –toned to a two-toned language. Among other observations, Kusaal is said to have a system of noun classes mainly characterized based on morphological affixes, semantic affiliation and phonological processes (also see Abubakari 2016b). In all 11 nominal classes are outlined.

Kusaal has the word order below:

(6.1)

Subject NP	preverbal particles-main verb- (postverbal particle)	Object NP

It is generally observed that Kusaal marks the remoteness of activities using preverbal particles. Aspect on the other hand is marked using suffixes: *ø/-ya* for the perfective aspect and *-t/-d* for the imperfective or *-tnɛ/-dnɛ* for habitual. Unlike the imperfective and the habitual morphemes, the perfective *–ya* morpheme blocks objects in transitive and ditransitive as well as in negative constructions. It also blocks adverbs from occurring after it. However, it does not replace an object because *-ya* occurs with intransitive verbs.

The seeming sameness between the connectives *nɛ́* ‘and’, and *ká* ‘and’ on one hand and the contrastive focus particles *nɛ́* and *kà* on the other hand compared to the copula verbs *ànɛ́* ‘to be’

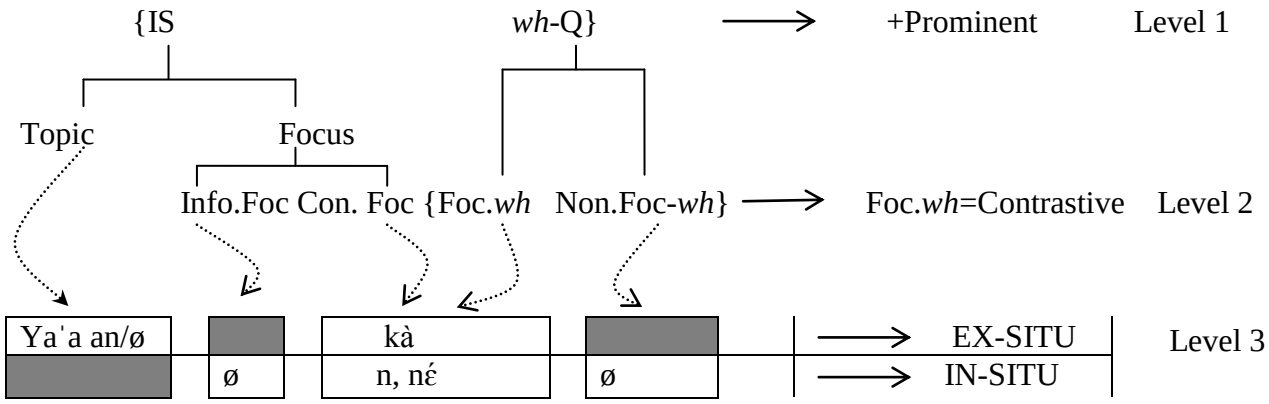
and *káˈá* 'to be not' smacks of some kind of relationship that could be linked to grammaticalization. It is suggested that the contrastive focus particles are grammaticalized from the copula verbs *àn(ɛ)* 'to be' and the negative polarity copula verb *kaˈˈaˊ* 'to be/have not'. The table below shows the pattern of grammaticalization:

(6.2)

Lexical items	Copula >Conjunction > Complentizer > Focus Particle			
Copula 'to be'	àn(ɛ́)	nɛ́	nɛ́	ń, nɛ́
Copula+Neg 'to be/have not'	káˈá	ká	ká	kà

On information structure and syntax in Kusaal, the dissertation examined important concepts in focus constructions, topic construction, and *wh*-question formation in Kusaal. The discussions on these topics conclude on the use of common phonological, morphological and syntactic modes of expressions that characterize these notions. The diagram below explains the interconnectedness of these concepts in Kusaal.

(6.3)



From the figure above, information structure constituents, here referring to topic and focus constituents and *wh*-phrases are observed to be closely related prosodically, morphological and syntactically. Prosodically, marked in level 1, these elements are inherently prominent relative to other constituents in any given constructions where they are used. Prominence encodes emphasis in the interpretation derived from these constructions. Level 2 exhibits the various subtypes of focus constructions and *wh*-phrases thus information focus versus contrastive focus and focused *wh*-phrases versus non-focus *wh*-phrases respectively. Additionally, since all *wh*-phrases are focused, a focused-*wh*-phrase refers to a *wh*-phrase that encodes contrastive/exhaustive focus interpretation on its constituent. Level 3 demonstrates the possible syntactic modes used in expressing any of the concepts under discussion. It further shows the various particles or phrases used in qualifying topic and focus constituents in Kusaal.

Still on the interface between syntax and information structure, chapter five delves deeper by examining ways in which the c-structure and the i-structure can synchronize notions and ideas expressed in utterances for maximum discourse interpretation. The chapter identifies some inconsistencies in the representations of contrastive focus constructions in the c-structure with their corresponding representations in the i-structure. It was generally observed that the i-structure is under-resourced in accounting for the different subtypes of focus construction: information focus and contrastive focus.These two major subtypes of focus are observed to have identical i-structures, in previous analysis (King 1997), although their c-structures may be different depending on whether a language uses overt morphological particles in expressing the discourse statuses of elements or not. The impossibility of differentiating between subtypes of focus in the i-structure results in ambiguity and under specification of discourse interpretations. In addition, the i-structure becomes independent and needs to rely on other levels of representations to identify its full interpretation.

To this effect, it is argued that discourse notions that are expressed in the c-structure must accurately be mapped onto the subtype of discourse notion in the i-structure. For this reason, an additional predicate attribute referred to as Discourse Type (DTYPE) is proposed with a value subcategorizing various subtypes of discourse notions: contrastive focus, information focus, aboutness topic, contrastive topic etc. The value of DTYPE is supposed to be language specific with the rule below serving as a parameter.

(6.4)

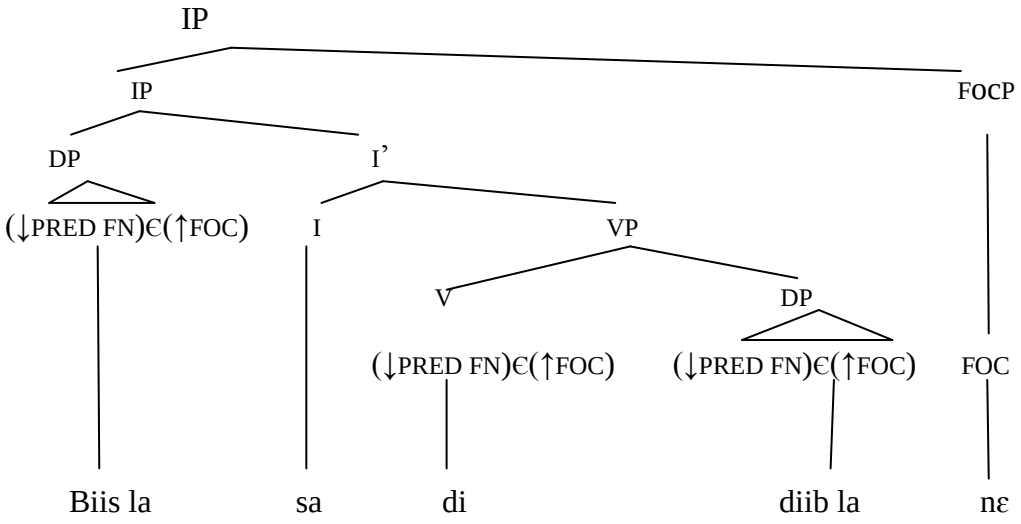
$$\text{DTYPE} \left\langle \begin{array}{c} \text{Value} \\ \left\{ \begin{array}{c} \{\text{information focus: } \alpha\} \\ \{\text{contrastive focus: x}\} \\ \{\text{aboutness topic: } \varphi\} \\ \{\text{contrastive topic: q}\} \\ \text{etc} \end{array} \right\} \end{array} \right\rangle$$

(where α,x, φ, and q are particles if any or features such as [±New] or [±Prom] or others)

The c-structure of the sentence in (6.5), where the entire IP is focused, is represented in (6.6) and the i-structure is also as in (6.7).

(6.5) [Bíís lá sà dī dííb lá né]$_f$.
children DEF PAST eat food DEF FOC
'THE CHILDREN ATE THE FOOD (yesterday).'

(6.6) c-structure



(6.7) i-structure

DTYPE	{contrastive focus: nɛ}
FOC	{biis}
FOC	{di}
FOC	{diib}

6.2. Further Investigations

This dissertation is one of the pioneering researches on Kusaal and can certainly not be said to be exhaustive on all aspects of the language. The various aspects of the grammar thus phonology, morphology and syntax that have been discussed only serve as fundamentals for further research in the language. In all the discussions, little attention is devoted to semantics though the language has several concepts that will be of interest to theoretical semanticist. Considering the various ways syntax, morphology and information structure combine in expressing certain discourse notions, it will be interesting to see how semantic theories can be used to explain these notions and concepts.

Within the phonology, the issue regarding the diachronic and synchronic number of tones in Kusaal needs further attention. This is to clearly establish whether Kusaal is in between three-toned Mabia languages such as Buli or two-toned Mabia languages such as Dagaare or further

still whether it is unique and stands in the middle as a three-toned language with minimal instances of three minimal pairs.

The ungrammaticality of using an object NP, a temporal adverbial as well as a negative polarity item in the environment of the perfective aspectual suffix *–ya* also requires further investigation. It will be more interesting to find out if this is characteristic of only Kusaal or it is a typological trend traceable in other Mabia languages.

Again, what remains unclear in this dissertation is the issue as to whether subject focus with the particle *ń* is an instance of in-situ focus or ex-situ focus. I assume the stand that subject focus is an instance of in-situ focus on two grounds: (1) the main theoretical framework adopted in this work is not premised on movement triggered by other features and (2) there is no immediate proof suggesting that subject focus in this language is ex-situ focus leading to the suggestion that, what is happening could be explained using the Vacuous Movement Hypothesis (Chomsky 1986). However, it has also been shown that close sister languages that have subject focus similar to what is used in Kusaal do not show any restriction(s) regarding the co-occurrence of the said particle with wh-phrases. This then prompts the need for further investigation as to whether subject focus can be considered as ex-situ focus where the focus particle is deleted in Kusaal. Possible arguments for this position among others serve the basis for further investigation into this topic. This is important because the finding in such investigation could be another potential pointer of divergence or close similarity between Kusaal and these sister languages (Gurenɛ and Dagbani).

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