A MINIMALIST PERSPECTIVE OF THE PRINCIPLES AND PARAMETERS IN KİKAMBA MORPHO-SYNTAX

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A dissertation submitted in fulfilment of the requirements of the degree of Doctor of Philosophy in Linguistics, University of Nairobi.

DECLARATION

This Dissertation is my original work and it has not been presented for a degree in any other University.

LILLIAN KATŨNGE KAVITI

This dissertation has been submitted for examination with my approval as a Supervisor.

Prof. D. OKOTH OKOMBO
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PHI-features – Principles of full interpretation features
ABSTRACT

This dissertation examines the morpho-syntax of Kikamba (a Bantu language) within the Principles and Parameters framework as defined by the Minimalist Program. The Research Problem focussed on investigating the importance of the functional categories: DET (Determiner), INFL (Inflection), and those contained within INFL, namely, AGR (Agreement), NEG (Negation) and TNS (Tense).

Under Minimalist assumptions, all these categories are understood to be the primary determinants of the parametric settings any given language selects for each of the parameters of Universal Grammar. This position stems from the recent recognition in Linguistic Theory that any comprehensive syntactic analysis of the grammar of a natural language should be concerned not only with principles which determine the formation of words, phrases and sentences (the syntax), but also with the features and principles that govern the interpretation of lexical categories.

This, in effect, constitutes a recognition of the role of the morphological component operating within the syntax, as well as the principles governing the assignment of meaning to various construction types. Accordingly, within the scope of this research concern, the parameters analysed in the present study were: the Null Subject Parameter, the Head Parameter, the NEG Parameter, The TNS/AGR Parameter and the Det (erminer) Parameter.

The aim of investigating the aforementioned parameters was to establish, using empirical data from Kikamba, whether or not each of the
parametric values selected was influenced by one of the specific functional categories mentioned earlier.

We also sought to examine the relevance of ‘Feature-Checking’, considered to be the morphological angle of the Minimalist Program, which eliminates the need to have the traditionally separate S-structure and D-structure syntactic accounts in a language such as Kikamba.

The field research was conducted in Mang’auni, Muputi Location of Machakos District. Our data analysis was based on the structure of the Kĩ-Masakũ dialect spoken in this area. Ten adult informants (5 Males and 5 Females) were selected through purposeful sampling techniques. The collection of data took approximately three months. The field research was motivated by the need to draw inferences on the competence of the selected native speakers of Kikamba. The selected ten informants not only generated data, but also gave insight into the concordial agreement patterning and the corresponding semantic implications of each of the Noun-classes of Kikamba.

The first method used to generate data was introspective, based on the Researcher’s own personal (native-speaker) intuitions on the structure of Kĩkamba morphology and syntax. Moreover, this introspective data was checked against the intuitions of the ten informants. A deliberate attempt was made to ensure that at every stage of analysis, all generalizations made on the language’s structure were verified against a corpus of independently collected data from the selected native speakers of Kikamba. This data, (together with the
Researcher's introspective evidence provided a rich source of objective as well as authentic information on the Morpho-Syntax of Kikamba.

The next step was an analysis of the nominal and verbal constituent structure of phrases and sentences in Kikamba. This included testing the 'correctness' or accuracy of certain linguistic operations and principles previously identified in the Research Literature in order to verify the applications of certain principles/operations/constraints assumed to operate in other languages but which were actually 'counter-intuitive' to both the Researcher (and the informants) as native speakers of Kikamba. In addition, observations were made on the informants' judgements about grammatical and ungrammatical structures, and the relatedness of sentence structure.

The overall conclusion of this Research was that functional categories are typologically significant, in the sense that they play a role in determining the order of substantive (lexical) categories such as the Subject-Verb-Object structure found in Kikamba. This was consistent with the Study's theoretical assumptions that the agglutinative nature of a Bantu language such as Kikamba makes it difficult, if not impossible, to provide an adequate account of its syntactic properties without appealing to the Morphology of the language.

The research activities and findings just summarized are discussed in the seven chapters of this dissertation. Chapter One gives general background information on Kikamba and in addition, includes a detailed description of the Research Problem and Objectives of the Study.
Chapter Two concentrates on the main tenets of the Minimalist Program and the Principles and Parameters framework under which the analyses of this Investigation are based. Chapter Three outlines the Literature Review of benefit to this investigation as well as the Methodology used to carry out the field research. Chapter Four provides an in-depth morphological description of the Kīkamba nominal structure from a Minimalist perspective. For comparative purposes, the chapter makes reference to the structure of the typical Bantu nominal structure. Chapter Five examines the Kīkamba DP structure and its modifying elements. Chapter Six concentrates on specific functional categories and the parametric settings adopted in the Kikamba Verbal complex. The significance of AGR as a functional category is spelt out in great detail in this section. Chapter Seven examines the applicability of the Feature Checking theory and its relevance to Kīkamba morph-syntax.

Finally, Chapter Eight provides the a summary of the Research findings and conclusions by revisiting the Research problem, objectives and hypotheses in the light of the insights and observations made in the body of the dissertation.
CHAPTER ONE
BACKGROUND TO THE STUDY

1.0: Introduction

This Chapter starts with general background information on the Kïkamba language, the historical origins of the Akamba (the speakers of the language under scrutiny), the Research Problem under investigation, as well as the major tenets of the Minimalist Program. In addition, the chapter seeks to provide general introductory comments on the position of Kïkamba within the Bantu language family, as well as the geographical areas predominantly inhabited by the Akamba in present-day Kenya. This information is important, in so far as it provides some insights into the linguistic and socio-cultural situation of the research area of relevance to this study.

1.1: The Akamba People and the Research Area

The Akamba are a Bantu community found predominantly in Kenya’s Eastern Province, with Machakos, Kïtuï, Mwingï and Makuenï as their home districts. They are correctly referred to as the A-kamba (sg. -Mu-
kamba), though this is frequently ‘Swahilisized’ and as a consequence, the community is often referred to as the Wa-kamba. The language spoken is referred to as Kï-kamba. Ú-kamba or Ú-kamba-nï is the native term for the region inhabited by the Akamba, which is divided into two sections by the
River Athi (a nativized form of the phrase ‘Earthy River’, coined by a European explorer to describe the river’s silt-filled state).

On one side of the River (the Western end of Eastern Province), we have Machakos and Makueni districts, while on the other side of the Athi are Kitui and Mwingi districts, located in the Southeastern part of the region. Map 1 shows the districts that the Akamba predominantly occupy in present-day Kenya. The Athi River therefore, can be said to have geographical as well as dialectal significance, in the sense that it acts as both a physical and communicative barrier between Machakos and Makueni on one end, and Kitui and Mwingi districts on the other end. The Gikuyu, Embu, Mbeere and Tharaka communities neighbour Ukambani on the Western side.

A cursory glance at Map 1 reveals that the Akamba predominantly live in the hilly area South-East of Nairobi, on both sides of the Yatta Plateau, up to the boundaries of Tsavo National Park. Machakos or Masakâ (as the district is fondly referred to in the native tongue of the Akamba) extends West of the Yatta Plateau. In the North, it reaches the area between Nairobi and Thika. In the West, it borders the Maasai district of Kajiado.

In Administrative terms, the western half of Ukambani is known as Machakos District. It is important to note that the landscape of Machakos is higher than the rest of Ukambani, with an altitude ranging from between 5000 to 6000 feet above sea level. For this reason, Machakos was traditionally referred to as Ŭlû from the Kikamba word tûlû meaning high.
Hence, as we shall discuss more comprehensively in a later section, the Machakos variety of Kikamba (directly relevant to this study) occasionally was referred to as Kikamba kya üülù (the Kikamba spoken in the high place).

Map 1 reveals that Machakos district is divided geographically into three distinct physical regions, namely:

a) The Lowlands - stretching Southwards to Mtito-Andei on the boundary of the Coast Province;

b) The Highlands – covering the North-western portion bordering Nairobi and Central provinces;

c) The Yatta Plateau – This is a recent settlement and as a consequence, there is much movement and migration both within and into the region. This is a highly productive area in terms of agricultural potential.

(The township of Machakos is about 70 kilometres, South-East of Nairobi).

The region on the Eastern bank of the River Athi administratively consists of Kítuui and Mwingí districts. Northwest of Machakos district we have the newly created Makúnení district encompassing the Mbooní and Kilungí Hills.

1.1.1: Historical origins of the Akamba

The Akamba have been discussed in numerous anthropological accounts written by (among others), C.W. Hobley, J.L. Kraph, and Lindblome (1926) in their pioneering works on East Africa as well as in the works of scholars of Akamba origin, such as Mbiti (1959).
There are various opinions on the exact origin of the Akamba. One theory implies that the community moved westward from the East African coast into the interior, whereas another view suggests that they were originally a nomadic tribe from Mt. Kilimanjaro region, from whence they were driven by the Maasai into the hills of Machakos, where lack of grazing land forced them to become agriculturalists (Guthrie 1948). Machakos was the part of the country first inhabited by the Akamba, after which a section of the group crossed the River Athi and settled in Kitui, thereby driving off the Galla group across the River Tana.

Oral traditions stipulate a common origin with the Agĩkũyũ community. According to this school of thought, the Akamba settled in the lowlands adjoining the Kyũũũũ hills, which were suitable for animal grazing (since, according to this theory, they could have traditionally been pastoralists), whereas the predominantly agriculturalist Agĩkũyũ travelled further inland, finally settling on the highlands. The Akamba later dispersed in groups, moving in different directions from the lowlands. The first group went through Kibwezi areas and crossed the Athi River to the present-day Kitui district. Two other groups moved into two different parts of Machakos district in the following order:

a) The first group moved Westwards into Kĩlũngũ Hills;

b) A second larger group moved North-Westwards into Mbooni Hills;
c) The latter group spread over the present Machakos district, first moving to Iveti Hills, Mitavoni, and Yatta plateau.

Akamba Oral Tradition further claims that the Mbeere people, (who had migrated out in the face of the Akamba encroachment), occupied much of the land that the Akamba presently occupy today. (Viz. Map 2). It is interesting to note that although Machakos was the part of the country first inhabited by the Akamba, they are now found all over East, (and possibly Central) Africa.

According to historical accounts and oral traditions, the Akamba were originally hunters with a high reputation for their skill in hunting elephants, solely for their worth in ivory, which they later traded at the coast with Arabs, in exchange for beads and cloth. During the nineteenth Century, Akamba traders left their home districts to traffic in goods from the coast into the hinterland. They carried ivory from the mainland to the coast.

Between the 1850's and 1960's, together with the Miji-Kenda people of the Eastern coast, the Akamba helped in the transportation of goods in caravans from Mombasa to Lamu. It is not surprising therefore, that there are small Akamba settlements scattered over parts of Kenya and Tanzania as a result of migrations also caused by perpetual drought in Ųkambanî. The Akamba settlement close to Mariakani and Shimba hills (Coast Province) for instance, took place during the Great Famine of 1836.

Interestingly, although the Akamba are located only a few kilometres from Kenya's main capital city, Nairobi, their traditional affinity
to the Coast province is greater than it is to Nairobi. Indeed, by the early 1950’s, there were large Akamba populations in towns located around the East African coast such as Arusha, Mombasa and Mtito-Andei.

1.2: The Language and its dialects

As stipulated in Section 1.1, Kikamba is the language spoken by the Akamba community. Etymologically, the word ‘Kikamba’ consists of two morphemes, namely: {Ki-}, a Class-7/8 prefix, and {-kamba}, the stem. We also pointed out that although there are pockets of Akamba settlements all over East Africa, the speech community is predominately found in Kitui, Mwingi, Machakos and Makueni districts. A significant number have also settled in Mwea division of Embu and Kirinyaga districts, Ithanga and Makuyu divisions of Muranga district, Shimba Hills, Kilifi and Kwale districts of the Coast province of Kenya.

Guthrie (1948) describes the Akamba as...A Bantu-speaking group found in Kenya’s Eastern Province. Accordingly, Kikamba belongs to the Central branch of the Bantu languages of Kenya, together with the Gikuyu, Meru, Tharaka, Embu and Mbeere languages. In more precise (yet somewhat technical) terminology, according to Guthrie’s classification of Bantu languages, Kikamba is categorized as:

Bantu Language E55 - referring to Bantu language - Zone E - Group 50 - No. 55. (Guthrie 1948).

Heine and Möhlig (1979) in Language and Dialect Atlas of Kenya, recognize five major areal groups of Bantu languages in Kenya, namely:
(1) The Coastal group  (2) The Taita group
(3) The Central Kenya group  (4) The South Nyanza group
(5) The Luhya group.

The rationale used in this grouping is based on geographical and synchronic dialectal proximity. Each of the groups occupies its own area, which is geographically separate from those of the other Bantu groups in Kenya. Within the groups we find the typical aspects of dialect continua. This in effect means that in most cases, clear-cut dialectal boundaries are not explicit and in some cases could actually be said to be lacking.

According to Heine and Möhlig's survey of areal groupings in Kenya, Kikamba is classified under what they refer to as the 'Central-Kenya' Group, whose composition is as follows:

3) CENTRAL KENYA GROUP

3.1 KAMBA-GIKUYU
(1) KAMBA
   Masaku
   South Kitui
   North Kitui
   Mumoni
(2) EMBU
(3) GIKUYU
(4) CHUKA

3.2 MERU-THARAKA
(1) MERU
   IGOYI
(2) NITHI
(3) THARAKA

(Adapted from Heine and Möhlig 1979:9)
Map 2 provides a spatial view of the Central-Bantu communities and their geographical proximity to each other. (In the next Section, we will examine the features that Kikamba manifests that justify its inclusion into the Bantu language Group).

Although Kikamba, in comparison to the other Central-Kenya Bantu languages, is often (wrongly) assumed to structure as one single homogeneous language, Kikamba is in fact, a dialect cluster of at least four different dialects, namely:

a) Masakă dialect
b) Southern Kıtūi dialect
c) Northern Kıtūi dialect
d) Mûmonî dialect.

The above dialectal distinctions are recognized in Möhlig and Heine (1979). However, it is pertinent that we emphasize that different studies on Kikamba grammar adopt subtle variances to the above categorization of dialects. For instance, Lindblome (1926) was one of the first linguists to recognize two main dialects spoken in Kitui and Machakos districts respectively. (Keep in focus the communicative isolation brought about by the physical division of the two districts by the River Athi).

With respect to this factor, native speakers of Kikamba clearly distinguish two main dialects that they refer to as: Kikamba kya iũlũ (Kikamba spoken in the high place), or alternatively, Kikamba kya Malela' (The Kikamba of the Malela', a word with no obvious denotative meaning.
commonly used by the Kítui- Akamba in reference to the Machakos-Akamba).

The Machakos–Akamba, on the other hand, refer to the dialect of their Kítui brethren as: Kikamba kya Athaisū (The Kikamba of the Athaisū, again, a term with no obvious denotative meaning). Native speakers of Kikamba further distinguish a third dialect spoken in Kilungū area, which they simply refer to as: Kikamba kya Kilungū (Kikamba spoken in Kilungu). Based on these observations, we can make a generalization of three main dialects of Kikamba, namely, the Machakos variety (or Kí-Masaku), the Kítui variety (or Kí-Kítui) and the Kilungū variety (Kí-Kílungū, respectively).

As can be seen in Map 2, the long, Western boundary roughly parallels the course of the Athi River, right up to Tsavo National Park in the South. This is the only distinct boundary formed between the Masakú dialect and the other dialects of Kikamba. In addition, it is dialectologically well marked by bundles of isoglosses. (It should be emphasized that a detailed exposition of these dialectal idiosyncrasies falls outside our Research scope).

South Kítui is the dialect area adjacent to Masakú in the East. The uninhabited area of the Tsavo National Park defines its southern boundary. The Eastern boundary, towards the Cushitic speaking Orma people is not clearly defined. This is because between the Orma and the Akamba, there is
a vast field of dry bush land, which is used as grazing area by both communities.

South Kītūi and North Kītūi are connected by a broad, dialect continuum, with many local varieties. This makes the Kītūi dialects appear much less homogenous than the Masakū dialect. The Northwestern boundary of the Kītūi dialects follows the course of the upper Tana River. It is dialectologically well marked towards the Mbeere and Tharaka dialects. Because of its dialectal divergence, the areal tongue, which extends in the vicinity of Mumonī and the Mūvaroa Mountain range, is considered to be a separate dialect. The Akamba refer to this dialect as Mumonī.

According to Maundu (1986), Kīkamba can be further classified into five major varieties. Three of these dialects are spoken within Kītūi district and the other two in Machakos and Makūnē districts respectively. These are:

a) The Kītūi-North variety referred to by the speakers of the language as Kīkamba kya Kītūi Kya ụlụ 'The Kikamba spoken in the high part of Kītūi). This dialect is spoken in the Northern part of Kītūi district from Mwingī division or Tseikūlū location of Kyuso division;

b) The Central-Kītūi variety spoken in the central part of Kītūi and Mwingī districts;

c) Eastern and Southern Kītūi varieties;

d) Kīlụngū and Makūnē varieties spoken with minor phonological variations in the newly established Makūnē districts;

e) Machakos variety occasionally referred to as: ‘Kī-Masakū, (The dialect of Masakū). This variety is spoken with minor variations
in the Kathiani, Mwala, Mbooni, Yatta, and Kangundo divisions of Machakos district.

Mwove (1987:5) on the other hand, argues that these dialects are not on the same level. Her observations are that Kikamba actually has two main dialects, namely, the Kitui dialect (Kî-Kitui) and the Machakos dialect (Kî-Masaku'). Each of these has two sub-dialects, which she classifies as follows:

1) Kitui dialect (Kî-Kitui)
   Sub-dialects include:
   a) Kitui-North variety
   b) Central, Eastern, Southern Kitui varieties

2) Machakos dialect (Kî-Masaku)
   Sub-dialects include:
   a) Kilungu and Makueni varieties
   b) The Standard Machakos Variety.

According to an investigation carried out in 1981 by the Institute Of African Studies (University of Nairobi) entitled: Machakos District-Socio-Cultural Use Of Language Among The Akamba, Machakos district (our primary area of concern) can be divided into three distinct dialectal areas. The most widely distributed variety recognized is the dialect in print commonly used as the medium of instruction in schools, and in religious texts such as the Bible, and religious hymn books. The
investigation identifies this dialect, (in terms identical to Mwove 1987) as
the **Standard** Kikamba Dialect.

According to these investigations, this **Standard** dialect is spoken
with slight (largely phonological) variations mainly in the Northern,
Central and Eastern divisions of Machakos District. These dialectal zones
correspond to the divisions of Kangundo, Iveti, Mbooni and the adjoining
locations.

The second dialect is spoken in Makueni district with minor variations
concerning to the Kifungu, Mukaa and Kikumbulyu locations, respectively. The third dialect (with strong resemblances to the Kitui
dialect) is spoken in the Southern part of the district.

It is important to emphasize that the most pertinent differences between
the dialects of Kikamba are mainly lexical and phonological, and in
particular, tonal (cf. KItavi 1992, Maundu 1986). Differences in the
pronunciation of words, intonation patterns and assimilatory processes are
found both at the segmental and supra-segmental levels. At the tonal level,
however, the differences are distinctly marked particularly between the
Kitui dialect and the Machakos dialects. Consequently, at the tonal level, the
Southern (Kitui) dialect, even to the ears of a native speaker with no
linguistic training, stands distinctly separate from the rest of the dialects of
Kikamba.

The existence of the Standard variety in print suggests prolonged contact
with Western culture. The missionaries who were responsible for reducing
African languages into orthographic systems (with the primary aim of propagating Christianity) settled around the Machakos dialectal area initially and, we might add, for a considerable period of time.

The dialect of interest to this research is the Machakos variety. We have mentioned that grammatical differences do manifest themselves distinguishing each of the dialects mentioned earlier. However, all the studies carried out on the dialects of Kīkamba limit these differences mainly to phonological and lexical (vocabulary) aspects.

Of great relevance to the implications of this study is the recognition that although the dialectal differences in Kīkamba result in significant lexical and phonological differences, these are not usually structural. Hence, they are not likely to have significant effects on either the morphology or syntax of the language. As such, although our investigation will be on the Standard Machakos dialect, inferences made will, in effect, be generalized to the entire Grammar of Kīkamba.

1.3: Research Assumptions

Since the Minimalist Program (the framework adopted in this investigation) is a fairly recent formalization, it is important that we clearly indicate the underlying theoretical and working assumptions that have led to the generalizations made in this study. This section seeks to explain why the present study seems to be rather ambitious in assuming morphology and syntax as indivisible components. It is worth mentioning that the exact place
of morphology in earlier Generative Grammars such as the Standard Theory was unclear. Some aspects of the morphology (for instance, tense and aspect features) were handled within the syntax, whereas phonological properties were handled by the phonological component through morphophonemic rules. These then applied to the syntactic surface structure.

According to Chomsky’s Minimalist Program, languages are based on simple principles that interact to form structures. The consequences of this view are that Universal Grammar is believed to:

...Provide a fixed system of principles and a finite array of finitely valued parameters. The language-particular rules [thus] reduce to choices of values for these parameters [of Universal Grammar'.

(Chomsky 1993:2)

As the above statement reveals, the Principles and Parameters framework is a sharp departure from Traditional Generative Grammar because it categorically states that there are absolutely no rules for constructions. All that it allows are Universal Principles, which are considered to form part of what is referred to as ‘the Initial State’ (i.e. the content of the language Faculty in the absence of exposure to the primary linguistic data of any human language).

However, human languages obviously are not identical in structure. The theory deals with this issue by stating that these principles have possibilities for variation, which is what gives rise to different languages. (The tenets of the Minimalist Program and the Principles and Parameters approach will be comprehensively discussed in Section 1.8).
From a theoretical perspective, our research assumption is that the agglutinative nature of a Bantu language such as Kikamba makes it difficult (and perhaps impossible) to provide an adequate account of its syntactic properties without appealing overtly to the morphology of the language.

1.3.1: Preliminary Assumptions on Bantu Morphology

As mentioned previously in Section 1.1, according to Guthrie’s (1948) classification of Bantu languages, Kikamba is categorized as: *E55’ (i.e. Bantu language -ZONE E-GROUP 50- NUMBER 55).* Guthrie proposed five guiding principles on how to recognize a language as either genuinely Bantu or merely ‘Bantoid’ (i.e. sharing a few features of Bantu languages). This includes the following criteria:

1) A system of Grammatical Genders, usually at least 5 with these features: -

   a) The sign of Gender is a Prefix by means of which words may be assorted into a number of classes varying roughly from 10-20.

   b) There is a regular association of pairs of classes to indicate the singular and plural of the Genders. In addition to these 2-class Genders, there are also one-class Genders where the Prefix is sometimes similar to one of the singular prefixes occurring in a 2-class Gender, and sometimes similar to one of the plural prefixes.
c) When a word has an independent prefix as the sign of its class, any other word, which is subordinate to it, has to agree with it as to class by means of a dependent prefix.

d) There is no correlation of the Genders with sex reference or with any other clearly defined idea.

e) A vocabulary, part of which can be related by fixed rules to set of hypothetical common roots.

(Other subsidiary criteria include:)

f) A set of invariable cores or radicals from which almost all words are formed by an agglutinative process, the cores having the following features: -

1) They are composed of Consonant-Vowel-Consonant.

2) When a grammatical suffix is attached to the radical there is formed [sic] a 'base' on which words identifiable as 'Verbal' are built.

3) When a non-grammatical or Lexical suffix is attached to the radical, there is formed [sic] a 'stem' on which words identifiable as Nominal are built. When a Nominal belongs to a 2-Class gender, the sounds and tones of the stem are the same in both Classes.

4) A radical may be extended by an element found between it and the Suffix. Such elements, termed as 'extensions'.
are composed either of Vowel-Consonant or a single Vowel.

5) The only case of a radical occurring without a prefix of any kind occurs in verbal used as Interjections.

(Guthrie 1948: 11-12)

The whole purpose of outlining all of the above criteria in totality is solely for purposes of laying bare the empirical claim that we are alluding to in this study: that it is impossible for one to give a comprehensive analysis of the syntax of any Bantu language (Kikamba included) without inevitably making references to the Morphology of the language. The analysis of the Bantu NP is further complicated by the effects of factors such as the necessity for Concordial agreement between the head noun and its modifiers.

In addition, Kikamba manifests the typical Bantu agglutinative structure where the nominal can function like a complete sentence. There is also a wealth of tense forms, and it is therefore possible, for instance to refer to up to four different periods of past time and an equal number of future time using a single verb stem and affixes, totally without the use of any ‘time’ words!

Suffice it to say; therefore, that an analysis of Kikamba phrasal and sentence structure would be incomplete without relating it to the morphology, hence the term used in this research will be Morpho-syntactic, rather than purely syntactic investigation of Kikamba.
1.3.2: Implications of the union-motivation between Syntax and Morphology for the present investigation

As mentioned in the last section, the assumptions of this work are that an understanding of the word-formation processes (and particularly the Inflectional processes) is indispensable if we are to effectively explain any syntactic phenomenon in Kikamba. This, in effect, means that we are categorically stating that word-formation processes will be expected to apply in the syntax of Kikamba, rather than being exclusively restricted to the Lexicon. We therefore seek to demonstrate that Morphological processes and syntactic processes apply albeit to different domains of constituent representation.

To use the words of Ouhalla (1991:48), on the union motivation between Syntax and Morphology:

...The domain of Morphology is $X^0$ level, while the domain of Syntax is the $X^1$ and $X^{II}$ level of constituent representation.

What this means is that, whereas Morphology concerns itself with word-formation, Syntax is concerned with Phrase and Sentence formation. In the analysis of an agglutinating Kikamba NP, both must be taken together. Grammatical phenomena inevitably will have morphological implications.

There is a further respect in which the present work not only shares the view that morphology is intimately linked with syntax, but also that it can actually be collapsed under it. The implications of this assertion have
far-reaching effects. As we shall demonstrate in our analysis of empirical data, not only do the two levels interact with each other in significant ways, but also that, perhaps, some general principles of morphology can ultimately be reduced under more general principles of syntax.

This indeed, has been a primary goal of any Linguistic Theory, to come up with a Grammar that is ultimately simple in terms of reducing to a minimum the number of rules (or Principles) characterizing the Grammar of a specific language.

The implications of our position will be seen to have far reaching effects. If the role played by certain principles attributed to Morphology can legitimately be taken up by general principles of Syntax and Universal Grammar, there surely are no justifiable grounds on which one can maintain the existence of Morphology as a distinct or separate module of Language. This claim will be empirically validated in this investigation using data from the grammar of Kikamba.

1.4: The Research Problem

The Minimalist approach to linguistic theory is predicated on the theory of Principles and Parameters, and in particular, on principles of economy of derivation and representation. Consequently, within this framework Universal Grammar is assumed to provide a unique
'Computational system' with derivations driven by morphological properties that serve to restrict the possibilities for syntactic variation in natural grammars.

The Minimalist Program proposes that any comprehensive syntactic analysis of a language should be concerned, not only with the principles that determine the formation of phrases and sentences, but also with the principles which govern the interpretation of lexical categories. This raises one's curiosity about the role played by the morphological component operating within the syntax of Kikamba. It is in keeping with this Minimalist orientation that our Research concern is to investigate the significance of functional categories and their role in the Morpho-syntax of Kikamba.

The Research Problem entails investigating exactly what role functional categories have in influencing the setting of parameters in Kikamba. Research on the grammars of different natural languages suggests that functional categories are typologically significant in view of the fact that they are the primary determinants influencing parametric settings. We would be interested in establishing whether indeed this is an accurate assumption when applied to the grammar of Kikamba.

A related aspect of our Research Problem is to investigate whether morphological affixation processes mirror syntactic phrase structure in Kikamba. Stated differently, does each of the morphological (affixed)
elements represented in the morphology of Kikamba constitute an independent syntactic category? To illustrate the possibility of this interplay between morphology and syntax, consider the following example from Kikamba:

1a) Tū-ka-som-a ma-vuku.
   Pro (1stpsn.pl) AGR-TNS(fut)-read-sfx C6-book
   ‘(We) will read books’.

Our focus is on the morphological structure of the Kikamba verbal complex [AGR+TNS+V stem] that consequently gives us the following phrase structure:

\[(1b)\]

\[
\text{AGR P}
\]
\[
\text{AGR} \\
\text{TNS P}
\]
\[
\text{TNS} \\
\text{V} \\
\text{VP}
\]
\[
\text{tu} \\
\text{ka} \\
\text{som-a} \\
\text{read-sfx.}
\]
\[
\text{ma-vuku} \\
\text{C6-book}
\]

‘(We) will read books’.

The fact that TNS attaches itself to the verb-stem ‘-soma’ before the AGR affix possibly follows from certain parametric constraints of Universal Grammar whose universal applicability we intend to verify using further data from Kikamba. For instance, with reference to the example just provided on the Kikamba verbal complex, the TNS affix must attach itself to the Verb stem before the AGR affix gets the chance to do the same. This assumption follows from particular UG constraints that prohibit syntactic
‘lowering’ operations. As a consequence, the only derivation permissible is one where the Verb is raised, firstly to TNS and subsequently to AGR, hence the grammatical order of:

2a.) Ka-ana nī-ke- (k)ū-som-a.

C12-child PrePfx.-12AGR-TNS(Prst.cont.)-read-sfx.

'The little child is reading'.

[PrePfx. + AGR + TNS + Verb-stem].

And not the converse (ungrammatical) order of:

2b.) *Ka-ana nī-(k)ū-ke-som-a

C12-child PrePfx.-TNS(prst.cont.)-12AGR-read-sfx.

'The little child is reading'.

* [PrePfx. + TNS + AGR + Verb-stem]

The example in (2b) is ill-formed simply because the Verb-stem moves directly to AGR, (that is, across TNS) followed by TNS movement to AGR, which gives rise to a different order of affixation. It is excluded since it clearly involves a morpho-syntactic violation (that we will expound on in the body of our study). Interestingly, although the order in (2b) is ill formed in the morpho-syntax of Kikamba, it is actually a permissible order manifested in the structure of other natural grammars. Our concern is whether this is actually the effect of a parametric setting selected in Kikamba with respect to the position of functional elements in either the verbal or nominal phrase.
Suffice it to say at this preliminary stage of our investigation that our research concern is motivated by the need to investigate whether or not morphological affixation processes in the morpho-syntax of Kikamba directly correspond to the syntactic operations. To demonstrate our suspicions on this morpho-syntactic interaction, consider the following Kikamba verbal complex:

3) (Nyie) nǐ-n-a-som-a t-vuku.
   (Pron.1stPsn.sg.Nom.) PrePfx.-AGR(1st Psn.sg.)-TNS (Pst.Pft)-(I)
   ‘(I) have read a book.’

Notice that the Verbal complex manifests the morphological structure of:

[PrePfx. +AGR+TNS+Verb-stem].

If indeed, the morphological structure just presented is mirrored by the syntactic phrase-structure of the same, then our predictions are that the functional category TNS will attaches to the Verb stem prior to the attachment of AGR to the derived complex. As far as the inflectional elements are concerned, this should follow independently as a consequence of a specific parametric setting as well as from particular constraints of Universal Grammar.

The parameters of interest to this study are: The Det (erminer) parameter, Null-Subject parameter, Head-parameter, Negation parameter, and TNS/AGR parameter. Our key aim in determining the Kikamba settings for the aforementioned parameters is to test (using empirical data from Kikamba) whether or not each parametric value selected will be directly
influenced by the functional categories of determiner (DET), inflection (INFL), Agreement (AGR), Negation (NEG) and Tense (TNS).

If this is indeed the case, (as assumed by previous researchers on other languages) then the parametric values manifested in the morpho-syntax of Kikamba reduce to variations only in the selectional properties of the functional categories involved, which interact with principles of Universal Grammar to produce the surface structures manifest both inside the grammar of Kikamba and across language types.

As part of the Research Problem, we also seek to test the applications of the Feature Checking theory, considered to be the morphological angle of the Minimalist Program. The Theory predicts that movement of categories (lexical or functional) will always be forced by the needs for formal ‘checking’ of features on lexical items. Hence a relevant aspect of our research concern is to verify if phrases and sentences in Kikamba are built up from a set of lexical resources in a step-wise fashion motivated purely by feature checking.

The primary objective of Feature-Checking within the syntax is basically to consider the morphological features of words, and in so doing, it simplifies the grammatical description of a language by restricting syntactic movement only for purposes of feature checking. We would want to verify this claim using empirical data from Kikamba morpho-syntax.
Accordingly an attempt will be made to establish whether or not phrases and sentences in Kikamba are built up from a set of lexical resources in a step-wise fashion motivated purely by Feature-Checking. If indeed this is the case, then movement will only take place in the syntax of Kikamba purely for purposes of feature checking. Our tentative predictions are that the Economy Principle postulated within the Minimalist theory does, in effect, constrain movement of categories in the syntax of Kikamba, and that movement will only take place for purposes of feature checking.

1.4.1: Objectives of the Study

According to Carstens (1997), the Kiswahili Noun Phrase is actually a DP (Determiner Phrase) since the Noun must be raised to Determiner °. Abney (1987) also follows this line of thought by stating that a DP is required to capture certain similarities between sentences and NPs. The first Objective is therefore:

1) To investigate whether the Kikamba NP is actually a DP and further, whether there are any structural similarities between sentences and NPs in Kikamba.

According to the Principles and Parameters framework, a language is defined as a particular choice of values of Parameters. The second objective therefore is:
2) To investigate whether it is Lexical or Functional categories responsible for determining the range of Parametric values for selected parameters in Kikamba.

According to Minimalist assumptions, Movement is always forced by the need for formal ‘Feature-Checking’ of lexical items. The principle of Economy further stipulates that movement should take place only when necessary for the purpose of Case-checking. In addition, a study by (Pollock 1989) on Movement in English and French, whether or not a language will have overt movement is related to the ‘strength’ of the features of AGR. Bearing all this in mind, therefore, the third objective of this investigation is:

3) To investigate whether the Economy Criterion of movement (only for purposes of Feature checking) constrains movement in Kikamba.

4) To establish whether movement of lexical and functional categories in Kikamba is constrained by the strength or weakness of AGR features or a ‘checking’ principle.

According to Mugane (1997) on the analysis of the Kikuyu NP, The Bantu NP provides problems for the X-Bar Endocentric requirement, which insists that all phrases must be headed by an element of the same category particularly since the head noun is, in most cases, optional. Hence our fifth objective is:
5) To establish whether Nominal elements in Kikamba can be referential and optional, including the head-Noun. (This, if permissible, would, in effect, be a clear violation of the Endocentric requirement).

It is our hope that we will provide a comprehensive investigation, which will, in effect, exhaustively explore each of these objectives and in so doing, will, in effect, authenticate our thesis.

1.4.2: Hypotheses

The following Hypotheses have been construed directly from the Objectives outlined and the thesis of this investigation. These are:

(On Parametric settings)

1) Parametric values in Kikamba Morpho-Syntax are exclusively determined by Functional categories and not lexical categories.

(On the similarity between phrases and sentences)

2) Functional categories, which generally appear as affixes attached to the verb or Noun, are actually syntactic categories in their own right.
(On Movement constraints)

3) In agreement with the Economy Principle, Movement of Nominal and Verbal elements will only take place for purposes of Feature-Checking.

4) Kikamba has weak WH-features that restrict overt movement of the interrogative word only for purposes of Focus, Topicalization or Emphasis.

(On the internal structure of nominal elements)

5) The Kikamba NP is actually a DP and a consequence of the noun been raised to \( \text{D}^0 \).

6) Nominal elements in the Kikamba NP are optional and the prefixed morphology of nominal modifiers is identical to the subject prefix, which occurs on verbs.

7) While the Phrase-structure in Kikamba takes the Head-initial setting, the preferred placement of the Demonstrative (head of DP) is after the Noun.

1.4.3: Operational and conceptual definitions

Bearing in mind that this is a fairly recently formulated Theoretical framework, it is important that we provide working definitions of key terms and definitions which have a bearing on the overall interpretation of this
work. Some of these definitions will be elaborated on in the theoretical framework; hence it would be redundant to explain their meanings here. These include the following:

a) **Minimalism**

b) **Principles and Parameters**

c) **Parametric variation**

d) **Functional and Lexical categories**

e) **Overt versus Covert Movement**

We will, however, discuss the following terms in this section:

f) **Strength versus Weakness**

According to Chomsky’s 1995 *Minimalist Explorations*, the only property that is parameterised is “*Strength*” meaning whether the formal functional features are pronounced or just computed into the derivations unrealised phonetically. For instance, in Latin, Case is overt and therefore pronounced whereas in English (which in its development lost its extensive Case-marking), Case remains Covert, meaning it is not pronounced in a derivation.

In addition, according to Pollock (1997), Strength or Weakness is quantified by the richness of the Verbal Morphology; this means that if the AGR is morphologically rich enough (or transparent enough), then it allows
the transmission of Theta-role assignment as well as the omission of the head noun or Subject of the sentence. A 'weak' AGR on the other hand, will not allow the transmission of Theta-roles since the AGR is morphologically opaque.

**g) Feature-checking**

Chomsky's Minimalist Program incorporates a distinct morphological component. Words therefore emerge fully derived and inflected in the Syntax but must be 'checked' (verified and crossed off if they agree) against the functional categories of Logical form (LF) within their checking domain (generally assumed to refer to the Specifier-Head relation).

**h) "Converging" versus "Crashing"**

According to Minimalist assumptions, a derivation 'converges' (or is proved to be grammatical) at an Interface levels LF and PF (Logical Form and Phonological Form respectively), if it is interpretable at that level. This will be determined by the specific grammar of the language in question. A derivation must converge at both PF and LF separately.
A derivation 'crashes' if it is not interpretable (read ungrammatical) at any of the aforementioned Interface levels. Remember that there is no interaction between the two interface levels.

i) The *Mirror Principle*-MP (Baker 1985a) states that:

*Morphological derivations must directly reflect syntactic derivations (and vice versa)’.*

The above Morphological principal effectively summarizes the standpoint of this work whereby the surface arrangements of affixes is expected to mirror the order in which the processes, which derived them, applied.

j) The 'Stray Affix Filter'-SAF (Baker 1988) also known as 'The Affix Principle' (Ouhalla 1988c) or 'Lasnik's Filter' (Pesetsky 1989). This Principle, drawn largely from morphologically based investigations states the following:

"*X if X is a lexical item whose morphological sub categorization frame is not satisfied at S-structure’.*

This Morphological principle, as we shall see, can actually be collapsed under a more inclusive principle constraining syntactic structures referred to as: The *Generalized Projection Principle'-GPP which states that:

*The selectional properties of lexical items must be satisfied at the relevant levels of representation.* (Ouhalla 1991:25),
As can be seen, the GPP captures the fact that morphological requirements are actually lexical selectional properties (similar to the categorical and semantic requirements) and therefore can be regulated by the same principle. And after all, isn't this in keeping with the Economy orientation of modern generative grammars, of reducing to a bare minimum the number of rules and principles contained in Universal Grammar!

k) **Economy Criterion**

This principle, (as alluded to above) restrains the generative potential of derivations and representations in a grammar. It categorically states:

*No extra steps in derivations, no extra symbols in representations, no representations beyond those that are conceptually necessary*. (Lasnik 1995).

This principle explains the orientation away from rule systems that characterized earlier Traditional Generative Grammar frameworks. Its emphasis is on the learnability of a grammar and the task faced by a child acquiring the core grammar of any language.

1.5: **Rationale for the Research**

As mentioned in Section 1.2.2, the consideration of Morphological factors within the Syntax is mainly reinforced by data from agglutinative languages (such as Kikamba) and polysynthetic languages, where
grammatical phenomena tend to have morphological implications. Basically, our thesis alludes to the claim that there is a need to demonstrate (using empirical data from Kikamba) that certain grammatical phenomena are best explained if word-formation processes are allowed to apply in the syntax.

The findings of this investigation, in so far as they allude to parametric variation and Principles of Universal Grammar, will have significant implications for the content of the Language Faculty, and what Linguists often refer to as the ‘Logical problem of Language Acquisition’. In addition, the thesis has major implications for the phenomena of language variation, and the attempt to account for it in a principled (and Explanatorily adequate way) the typological differences between languages in terms of parametric values.

As observed in Section 1.3.1, Bantu languages bear strong resemblances in structural and lexical features, for instance in their Gender classes and Concordial agreement prefixes. Hence our findings on Kikamba Morpho-syntax will have far reaching applications to the whole spectrum of studies in Bantu Grammar.

According to Chomsky (1995), ‘the narrower and more restrictive you can show the Parameterised features to be, the easier it is to deal with the problem of Explanatory Adequacy.’ What this amounts to therefore, is that the typological differences in languages reduce entirely to the question
of the various combinations of Parameters and the unique ways in which each parametric value accesses the computational system. Using data from Kikamba, we seek to demonstrate that the choices governing different typological varieties lies in the strength of formal features, that is, the properties of functional categories since only these are subject to Parametric variation.

It is believed that our thesis has strong implications in so far as it contributes to our understanding of the content of the Language Faculty and as well as providing concrete evidence for the operations of the Universal principles subsumed under the Principles and Parameters framework and the Minimalist Program.

In summary of this section, this investigation is an attempt to make sense, in the context of Minimalism and the Principles and Parameters framework, the traditional idea that functional categories (grammatical categories, as they were previously known) are the “Flesh and Blood” of Grammar. (Cf. Ouhalla 1991).

1.6: The Research scope and limitations of the Study

In our attempt to demonstrate the union motivation between Morphology and Syntax in Kikamba, we will only focus on selected Morphological aspects that influence the behaviour of Phrasal categories. More to the point, we will concern ourselves exclusively with Inflectional
Morphology and its influence on syntactic constructions. By Inflectional system, we are referring to a set of functional categories and bound morphemes with a number of lexical categories associated with them.

It should be emphasized however, that this investigation will exclude any analysis of rule systems for particular derivations either syntactically or morphologically derived, in keeping with Minimalist assumptions, which allow a morphological component to characterise the Lexicon.

The investigation is intended to shed light on the nature of the parameters responsible for constraining movement and phrasal structure (particularly Nominal structure) in Kikamba. We will however, limit our analysis to only the following Parameters:

a) The Head Parameter (responsible for the order of Specifier-Head-Complement order within a Noun Phrase);

b) The Verb Movement Parameter (responsible for Movement of Predicative elements or those contained within Verbal categories)

c) AGR 'Strength' features (responsible for predicting whether a language will allow overt movement in the construction of interrogatives or even the optionality of Nominal elements.

d) The NEG Parameter that determines firstly, the position of the NEG affix vis a vis the Verb-stem, and secondly, whether or not the NEG morpheme is a free or bound form.
e) *The DET (erminer) Parameter, which* determines whether or not a Determiner can co-occur with an AGR element in a Nominal Phrase.

Although the Interface levels of Minimalism include an understanding of the Logical Form (Semantic interpretation) and the Phonological Form (Phonetic realization), we will not attempt to explain any phonological phenomena since this falls beyond the scope of our research concerns. Hence, we have deliberately ignored any analyses of underlying morphemic forms that exist in Kikamba prior to the applications of morphophonemic rules. Consequently, the majority of forms presented throughout the dissertation are the 'surface structures' (rather than underlying morphemic forms) that are realized in actual speech.

We conclude by stating that although our scope excludes a comparative study of parametric variation in different languages or the processes of Language Acquisition, inferences made in this study will, in effect be generalizable, not only to Bantu languages but to the general processes involved in predicting the content of Universal Grammar and Language Acquisition.
2.0: Introduction

This section is intended to provide a background to the motivations for the formulation of the Minimalist Program and its relation to the Principles and Parameters approach to Generative Grammar. We seek to outline the main tenets of the Principles and Parameters framework as articulated within the Minimalist Program, formulated and developed by Noam Chomsky (1991, 1993a, 1993b, 1995, 1997). All the data relevant to our investigation has been analysed within the constraints proposed by these two approaches to Generative Grammar, which, as we shall see, complement each other without any internal conflicts or contradictions.

To make the technical issues discussed accessible to the broadest possible range of readership, the formalism (so characteristic of Chomsky) will be kept to a minimum, without (hopefully) compromising the basic principles herein. In addition, for the same reason, only those aspects of the theory, which bear directly on the analyses in the dissertation chapters, will be mentioned and discussed.
2.1: The Minimalist Program

As we stated before, this dissertation analyses empirical data from Kikamba within the Principles and Parameters Framework, specifically contained in Chomsky’s Minimalist approach to Universal Grammar. It is important that we discuss the basic tenets of these two approaches separately before we can understand the union motivation between them.

From the early 1990's, Noam Chomsky and his associates have developed an approach to Syntactic theory known as ‘Minimalism’. The Minimalist Program has its roots in the Principles and Parameters framework (or PPF) that dominated syntactic research throughout the 1980’s. The Minimalist Program for Linguistic theory is a fairly recent formulation of Chomsky (1995c). It provides a sharp departure from traditional Generative Grammars and is built on the theory of Principles and Parameters, and in particular, on principles of ‘Economy’ in derivation and representation.

Basically, what this means is that the Minimalist framework regards Universal Grammar (the principles believed to characterize the structure of all natural languages) as providing a unique ‘Computational system’ with derivations driven by Morphological properties to which the syntactic variation of languages is restricted. The issues that motivated the development of this theory include the following questions:
• How is knowledge of one's idiolect (or what Chomsky refers to as I-Language) represented in the mind/brain?

• How do children acquire such knowledge?

In both the Principles and Parameters and Minimalist approaches (Chomsky 1981, 1986, 1993, 1995), linguistic knowledge or, in Chomsky's words, the I-Language (Internalised language or Competence) is identified as just a set of parameter choices with two components, namely:

• A language-specific lexicon;

• A computational procedure that is subject to an innate set of formal constraints partitioned into Principles and Parameters. (The Computational system is where operations generate sets of structural descriptions).

The interesting question here is how these two systems interact. Apparently, the Computational system takes lexical items, carries out a computation in a uniform way and thus, ends up forming what are referred to as 'Interface representations' known as Logical Form and Phonetic Form. The Minimalist framework has the following assumptions about language and the parameters of Universal Grammar:

'Languages are based on simple principles that interact to form intricate structures'. (Chomsky 1993:2)
Universal Grammar is seen to provide a fixed system of principles and a finite array of 'finitely valued' parameters. According to Chomsky, therefore, language-particular differences reduce to choices of values for these parameters. (Chomsky 1993:4).

Within this framework, linguistic expressions are generated by what Chomsky refers to as 'Optimally efficient derivations'. This simply means that sentences in the language must satisfy the conditions that hold at the levels of linguistic representation. In a sharp departure from the traditional levels of structure, (Deep and Surface Structures, respectively), Minimalism proposes what it refers to as 'Interface' levels of linguistic representation. These levels are:

1) The Logical Form level (henceforth LF), also referred to in sensory-motor terms as 'Conceptual-Intentional'

2) The Phonetic-Form level (henceforth PF), also referred to in performance-terms as 'Articulatory-Perceptual'. (Chomsky 1991).

All syntactic conditions therefore, express properties of these Interface levels, thereby reflecting the interpretive requirements of a language, and also keeping to very restricted conceptual resources. Derivations are assumed to 'converge' at an Interface level, meaning that the structure is interpretable at that level. If not, it 'crashes' at that level or it is deemed to be ungrammatical. It is important to state that a derivation must 'converge'
at LF and PF separately. Note that there is no interaction between the two Interface levels of the Grammar.

With reference to the operations of the Minimalist Program's structure building mechanism, starting from a set of lexical resources, syntactic structures are built up in a step-wise, (bottom-up) fashion by specific operations. However, it should be emphasized that movement of any syntactic elements is always forced by the need for the formal Checking of features on lexical items. These mechanisms play a central role in accounting for the grammatical function and distribution of both Lexical and Functional categories. It must be emphasized that the 'Principle of Economy' which assumes that syntactic movement should take place only when necessary for the purpose of Case Checking primarily drives the theory. It is also concerned with the expansion of syntactic structures in terms of the X-BAR theory, where functional categories are given full categorical status within the grammar of a language.

2.2: The Principles and Parameters Framework

The Principles and Parameters framework is a significant departure from traditional grammar since it states that there are absolutely no rules or constructions in the grammar of a language. What the framework proposes are Universal principles, which are believed to be part of the initial state of
the language faculty (initially referred to as the Language Acquisition Device). These principles have possibilities for variation called parameters. In other words, the principles are universal, but languages will differ in the parametric values they select for each parameter in question.

According to the Principles and Parameters framework, linguistic knowledge includes:

a) A language-specific lexicon

b) A computational system that is subject to an innate set of formal constraints portioned into what are referred to as Principles and Parameters.

The principles of Universal Grammar are considered to be Universal; in essence, they formalize constraints obeyed by all languages. In recognition of the obvious fact that natural languages differ in structure, alongside these universal principles, what allow for the diversity in the typology of natural languages are the Parameters. These parameters constitute an innate and finite set of ‘switches’ each with a predictable range of settings. These switches then give the language learner a restricted number of options in determining the complete shape of the attained competence of the language in question or what Chomsky refers to as I-language.

Within this framework, syntactic acquisition is reduced to fixing the values of parameters on the basis of exposure to the grammar of a specific
language or what Chomsky refers to technically as Primary linguistic data (PLD). Hence, taken together, principles and Parameters provide a solution to what is referred to as ‘...the Logical problem of language acquisition.’

We need to be clear at this point about whether all aspects of a language’s grammar are actually subject to parametric variation. Further it is important that we understand if parametric settings affect either lexical or functional categories.

According to Chomsky (1995), parameters are almost entirely restricted to the lexicon and the Strength or Weakness of formal functional features or categories; for instance, features like Agreement (AGR), Tense (TNS), and Complementizer (COMP). This brings us to the issue of whether a formal functional feature will be pronounced (i.e. overtly realised) or computed unpronounced (covertly realized).

For instance, in Latin, Case features are Overt whereas in English, Case is rarely realized except in the inflection of some pronouns. However in Latin, case will be marked overtly in the form of suffixes attached to Noun stems. It seems plausible to conclude therefore, that within the Principles and Parameters framework, functional categories play a significant role in so far as parameter setting is concerned.

Hence, we can safely predict that even in the Grammar of Kikamba these categories will influence various morpho-syntactic phenomena. Hence, in our analysis, functional categories such as COMP, INFL, and
AGR are assigned a crucial role in determining movement processes, for instance:

a) Movement of WH-phrases to SPEC of CP in WH-questions;

b) V-MOVMT to COMP in Interrogative sentences;

c) NP-MOVMT to SPEC of IP in raising and Passive constructions.

The idea that only functional categories are subject to parametric variation is effectively summarized by Chomsky (1988:2) in the assertion that:

...If substantive [lexical] elements are drawn from invariant universal vocabulary, then only functional elements will be parameterised.

The implication this has on the typological differences between languages is profound. In a theory where language variation is accounted for in terms of variation, the values of given parameters will have wide ranging implications on firstly, the initial state of the language faculty and secondly, the typological differences between languages. The Principles and Parameters framework reduces the typological variety of languages entirely to the question of the various combinations of parameters and the way the unique (invariant) computational system is accessed.

According to Chomsky (1995):

*All typological variety is in the strength of formal features [functional categories]. Only Functional categories/ features are parameterised.*
For instance, the systematic differences between the grammar of French and English boils down to whether overt movement is allowed or disallowed due to the strong or weak feature of AGR. (Williams 1994). This single parameter yields different word orders as exemplified by the grammars of English and French respectively. In negation, English verbs overtly move out of their initial position, whereas in French, the main verb remains insitu. In summary, parametric variation introduces a variety of possibilities in the typological differences between languages.

2.3: Lexical and functional categories

The Minimalist Program presupposes a well-defined set of functional categories, given the crucial role they are assigned in determining grammatical processes as well as parametric variation. The theory also presupposes a well-defined set of lexical properties, which characterise functional categories and thereby, determine the range of possible variation between languages.

In a nutshell, the Theory recognizes a clear-cut distinction between functional (grammatical) categories and lexical (substantive) categories, distinguished in terms of their lexical properties. This distinction makes it possible for us to identify functional categories on the basis of a set of distinctive lexical properties. The lexical properties are the parameters, which define the range of possible parametric variation between languages.
In terms of the traditional division of grammar into Morphology and Syntax, whereas Morphology concerns itself with the formation and interpretation of words, Syntax is primarily concerned with the formation and interpretation of phrases and sentences. The question begged however, is whether these two modules of grammar are mutually exclusive or actually have a considerable degree of overlap in so far as interpretation of categories in a language is concerned.

The traditional grammatical categories include Nouns, Verbs, Adjectives, Adverbs, and Prepositions. These words have been described as 'Contentives', meaning that they have idiosyncratic descriptive content. One test of establishing whether we are dealing with Content word is to see whether the word has an antonym. Because of their descriptive content, Contentives in most cases have direct antonyms (e.g. male-female, under-over, quickly-slowly, old-young, etc). In addition, Contentives have lexical content, meaning that in a sentence, they will contain the nuclei of meaning and are therefore, indispensable for the correct interpretation of a sentence.

On the other hand, we have what are referred to as ‘Functors’. These are words which serve primarily to carry information about the grammatical function of particular types of expressions within a sentence, for instance, number, gender, person, case, agreement features, etc. They are also known traditionally as functional or grammatical words and have purely functional content. These include Particles, Auxiliaries, Determiners, Pronouns and
Complementizers. Determiners function to 'determine' the referential or Quantificational properties of the noun words they modify.

We have quantifying determiners (e.g. all, some, etc.) and referential determiners (e.g. the, this, that, my, etc.). In the Minimalist Program and the Principles and Parameters approach, these Functors are considered to be the most important categories in so far as they influence parametric variations between languages.

We have emphasized that the Minimalist framework takes Universal Grammar as providing a unique computational system with derivations driven by none other than Morphological properties to which syntactic variation of languages is also restricted. We have also highlighted the fact that under the X-Bar Theory, functional categories are given full categorial status. In addition, bound morphemes, for instance, those marking negation or Concordial agreement (In the case of agglutinating languages such as Kikamba) are defined in terms of "spell-out" operations.

As has been stated previously, the Minimalist Program recognizes a Lexicon within the syntax. Each of the lexical items is believed to have a complex set of features. There are three distinguishable features in the lexicon, namely:

1) Phonetic features: Those interpreted at the phonetic level (PF). These features will be accessed at the phonetic Interface.
2) Semantic features: Those features accessed at the Semantic interface or the level of Logical Form (LF)

3) Formal features: Those features accessed by the Computational system itself, namely, formal/grammatical level.

The above three sets overlap in various ways. However, Phonetic features are considered to be a separate set disjoint from the union of the other two sets. For instance, we have the semantic-formal relationship structured as follows:

```
   Lexical features
      \                     /
        \                   /
         \                 /
          \               /
           \             /
            \           /
             \         /
              \      /
               \    /
                \   /
                 \ /
     Semantic-features "-----------------" Formal/Grammatical features
                  \                       /                 \\
                   \                     /               \\
                    \                   /             \\
                     \                 /         \\
                      \               /       \\
                       \             /     \\
                        \           /   \\
                         \         /  \\
                          \    /  \\
                            \  /  \\
                             \_/  \\
                                \   \\
                                 \  \\
                                  \ \\
                                   \ \\
                                    \
```

Nouns, for example, have what are referred to as 'PHI'-features (Principles of Full interpretation Features') of number, gender, and person, case features that get interpreted at the interface levels. It must be emphasized, however, that interpretable features cannot be erased in the course of a computation. On the other hand, un-interpretable features must be erased in the course of a computation because they will have no interpretation at the output.
2.3.1: Functional categories and parametric variation

The Minimalist Program holds that parametric differences between languages are determined solely by functional categories. The general implication of this is that natural grammars differ only in the properties that each language selects for their functional categories. As a reminder, functional categories mark grammatical meaning (features such as Person, Number, Gender), but have little (if any) semantic content.

According to the assumptions of this theory, parameters only occur among the formal features. Hence, phonetic and semantic features will not be subject to parametric variation. According to Chomsky (1995), the only elements that are parameterised are the formal features, and in particular, functional categories. These exclude Verbs, Adjectives and Nouns, in a nutshell, all words heavy in lexical content. ‘Strength’, therefore, is reducible to the ‘need’ property of formal features of functional categories.

On the other hand, Lexical categories such as nouns, verbs and adjectives are assumed to be universal across languages. In addition, they are ‘thematic’ elements in that they have descriptive content; they refer to entities, and hence, have referential or denotative meaning. The syntactic significance of this is that lexical categories function as heads, and thus, and have a range of possible complement types.

Functional categories, in contrast to lexical categories, mainly play a role in establishing dependencies between parts of a sentence. It is also
important to observe that lexical categories form open classes, and therefore have numerous words within their membership. On the other hand, functional categories like Complementizer, Tense, Agreement, form a closed class, in the sense that they are limited in number.

The Minimalist Program proposes what is referred to as the ‘Functional Parameterisation Hypothesis’ which holds that, not only do parametric differences belong solely to functional categories, but also that the parametric differences between languages are limited to differences within the lexicon. The implication of this hypothesis is that the grammatical differences between languages can be narrowed down specifically to contrasts in the features of the lexical elements that occupy the functional category nodes.

According to Minimalist assumptions, functional categories are viewed either as ‘strong’ or ‘weak’ with respect to visibility at the PF (Phonetic Form) interface. For instance, ‘strong’ agreement features are visible at PF if they are not checked off before the interface. (For further clarification on this issue, see Chapter Six).

The Minimalist Program further postulates that Nouns and Verbs are taken from the lexicon fully inflected, bearing inflectional affixes. The functional nodes in the syntax are therefore not associated with affixes, but simply with features such as Tense, Agreement (Person, Number, Gender) or Case. The following structure illustrates this relation in its representation of the Nominal functional structure of the Kikamba DP:
Some of the well-known typological word-order differences in natural grammars can be accounted for in a principled way, in terms of minimal, parametric differences, involving the lexical properties of certain functional categories.

From a Minimalist perspective, any typological classification of a language should take into consideration the properties of functional categories, rather than lexical categories (also referred to as substantives). This is probably because the surface order of substantives has been demonstrated to be determined directly by the order of the functional categories, which are in turn, determined by the c-selectional properties.

The analyses in this investigation rely crucially on the assumption that each of the inflectional elements heads its own X-Bar projection within
the clause-structure. In so far as such analyses are successful in explaining
the mechanisms responsible for the word-order variations (namely, the order
of the Subject in relation to the Verb and Object), our findings can therefore,
legitimately be understood as additional evidence for the X-Bar status of
inflectional elements, as well as the central role given to functional
categories as a whole.

One of the parameters concerned with functional elements that have
generated a tremendous amount of theoretical and applied studies is referred
to as the Verb-movement parameter. (cf. Haegerman 1997, Lightfoot and
Homsten 1994, Pollock 1989). It is alternatively referred to as ‘The V-
Raising Parameter’ (viz. Culicover 1997), The ‘V-to-I parameter (Deprez
1994) or the ‘Strength of AGR Parameter’ (Williams 1994).

In the present study, we choose to refer to it as the ‘AGR/TNS’
Parameter. Our justification for this choice is that, whether or not a finite
verb undergoes overt movement in Kikamba depends entirely on the
strength or weakness of AGR, as well as the position of the TNS element vis
a vis the Verb. (Chapter Five discusses this in detail).

The relevant literature reveals that the order of AGR and TNS in a
derived verbal complex differs from one language to another. In this respect,
languages tend to divide into two typological groups, depending on whether
AGR is inside or outside TNS. For instance, studies on Semitic languages
such as Arabic or Berber reveal that the AGR category falls inside the TNS.
(cf. Ouhalla 1988).
2.4: Theoretical assumptions on Nominal phrase-structure

In reviewing the main tenets of our Theoretical Framework, we highlighted one of the standard assumptions of the Minimalist Program, where the grammar of a language consists of two components: a Lexicon and a Computational system. The Lexicon specifies the items that enter into the Computational system, with their idiosyncratic properties. Thereafter, the Computational system uses these elements to generate derivations and structural descriptions. The derivations of a particular linguistic expression, therefore, involves firstly, a choice of items from the Lexicon and secondly, a Computation that constructs the pair of interface representations, namely the PF and LF levels.

The computational system is assumed to take representations of a given form and modify them. Accordingly, UG must provide means to present an array of items from the lexicon in a form accessible to the computational system. We may take this form to be a version of X-bar theory. The concepts of X-bar theory are therefore believed to be fundamental in so far as syntactic phrase structure is concerned.

In a Minimalist theory, the crucial properties and relations of phrases and sentences are stated in terms of X-bar theory. The present investigation therefore seeks to analyse the Morpho-Syntactic relations within the Kikamba Nominal Phrase using the descriptive tools provided by the X-bar theory.
In works by Abney (1987), it has been proposed that the projection of the functional category ‘Determiner’ (henceforth, D) is required to function as the head of an NP. We will attempt to verify this claim through an analysis of the nominal structure of the Kikamba nominal structure. Further to this, we also need to validate whether there is need for a functional category to capture parallel relationships between CP-IP-VP at the sentence level, and DP-NP- at the NP level.

It should be noted that Noun phrases instantiate a number of inflectional categories which parallel those found in sentences, implying that there is a structural similarity between the two constructions, as has been widely recognized in the literature. Hence, the expression ‘Noun-phrase’ is used broadly to refer to constructions that categorically may be Determiner-Phrases (henceforth, DPs) or Agreement-Phrases (henceforth, AGRPs).

It is important that we state from the onset exactly what we mean by ‘functional categories’. Two types of word categories are distinguished in the relevant Literature. These are lexical and functional categories. Unlike lexical categories, Functional categories lack descriptive content and merely serve to mark grammatical properties such as Number, Person, Tense, etc. Determiners constitute a functional category, since they impose restrictions on the type of expressions they can modify.

Other types of functional categories relevant to this study are Complementizer (henceforth COMP), Agreement (AGR), and Inflection
(INFL). It will be prudent for us to examine the main tenets of the X-bar theory as revised within the Minimalist Program.

2.4.1: The DP Hypothesis

There has been a growing recognition among linguists in recent years of the significant parallels between the syntax of clauses and that of nominal arguments, in the sense that, just as verbs have an extended projection into IP (or CP), so too nouns must have an extended projection into DP, with the Det (erminer) elements as the head of the Noun Phrase.

Briefly, the arguments that have led to this perspective fall into two groups that complement each other in significant ways. The first group relies generally on the distributional and grammatical properties of Determiner elements, while the second relies on certain parallelisms traditionally drawn between NPs and sentences. These relate to both their structural properties and the grammatical relations between their constituents.

Among the arguments directly significant to this investigation is the recognition that Determiner elements bear the number/Gender morphology, which crucially determines the agreement relation with the AGR element associated with the Verb. To illustrate this point, consider the determiner elements in the following English examples:

1.a) This book is ugly.
1.b) These books are ugly.
1.c) *This books is ugly.

1.d) *These book are ugly.

On the assumption that it is generally heads of constructions which enter into agreement relations, the ungrammaticality of (1c) and (1d) implies that the Determiner element (in this case, the referential ‘this’ or ‘these’) rather than the Noun is not only the head of the NP, but also must be consistent with the AGR features of the Verb. Generally speaking, Determiner elements behave as if they were the heads of phrasal constructions, including bearing the Case features assigned to the subject-nominal.

Explained in greater detail, there has also been a desire to assign NPs a structure which parallels that of sentences. According to Abney (1987), there are striking similarities between the internal structure of NPs and clauses. Chomsky (1986:169) expresses the similarity between the two structures in terms of the notion: ‘Complete Functional Complex’ (CFC), defined as the category in which, ‘...all grammatical functions compatible with its head are realized in it.’

Based on this similarity, NPs can display subjects and objects of a substantive head in ways that parallel sentences. We will attest this claim in our analysis of the Kikamba nominal phrase structure. We will also investigate whether the functional category (Det) is needed to capture parallel relations between sentences and NPs.
Chomsky (1986) proposed a revision to the phrase-structure of a clause, with the traditionally labelled $S^1$ node changed to a CP node, while the traditionally labelled S node changed to an IP node. The following structure represents the revision of clause structure:

```
CP
  / \  /
SPEC C
  / |  \
C  IP
  |   /  |
SPEC I
  | |   |
I  VP
  | |   |
Modals AGR SPEC
  | |   |
V  XP
```  

To complicate this issue further, Speas (1995) also proposed a related constraining principle known as the 'No Content less-Projections-Constraint', to the effect that Universal Grammar does not licence content less projections (i.e. projections whose Head and Specifier have no independent content of their own). Based on this observation, one may be
led to believe that the Kikamba DP analysis of bare nominals contradicts these two principles limiting unnecessary projections on phrase structure.

However, this is not the case. This is because the null determiner $\phi$, although lacking phonetic content, still has clear semantic and grammatical properties of its own, and thus has intrinsic content.

2.5: The X-bar Theory and Minimalism

An X-bar structure is composed of projections of heads selected from the lexicon. Basic relations, therefore, will inevitably involve the head as one term. Furthermore, the basic relations are assumed to be ‘local’. The two local relations are:

a) The Specifier-Head relation;

b) The Head-Complement relation

The following structure represents these two relations:

```
XP
   /
  /  
/   
Specifier X
      /
      /
      (Head) X
      \
      \ 
      
Complement
```

The Head-complement relation is considered to be both the core local as well as fundamental relation, in so far as thematic ($\theta$-) relations are concerned. The Specifier-Head relation, to use Chomsky’s own terminology, falls in the “elsewhere” category. It must be stated at this
point, that languages will differ in the order within which the Specifier-Head-Complement categories are arranged. This will depend on the particular parametric value selected by a specific language. (We will explain this in greater detail in the next Chapter).

According to Chomsky (1995), X-bar structures are restricted to the form presented above; in essence, only local relations are considered; Hence there will be no relation between, say, X (the Head), and a word included within the Specifier or the Complement. In addition, the Head-Complement relation is believed to be the core local relation. A further admissible local relation is the relation of a Head to another Head, for instance, the relation of a verb to the head of its Noun-phrase complement. The Minimalist Program requires that we maintain only relations of these kinds, and in the words of Chomsky (1995:6):

"...dispensing with such notions as government by a head (and head government). But head government plays a critical role in all modules of grammar; hence, all of these must be reformulated, if this program is to be pursued."

As discussed in Chomsky (1991a), the basic structure of the clause is presented with the following revisions:
In the structure above, AGR_s and AGR_o distinguish the two main functional roles of AGR. This functional category is assumed to be a collection of φ-features marking gender, number, and person. However, it is significant to note that different languages, depending on their parametric inclinations, may have different AGR selectional restrictions, just like two verbs or nouns may differ in terms of their sub-categorization features.

The structure presented also has implications on both Structural Case assignment and agreement as manifestations of the Spec-head relation (NP-
AGR). We will not discuss the principles involved in Case assignment, since this falls outside the scope of the present work. However with regard to Agreement, the basic assumption is that there is symmetry between the subject and the object inflectional systems. This is because in both positions, agreement is determined by the \( \phi \)-features of the AGR head of the AGR complex.

Hence, an NP in the Spec-head relation to this agreement complex bears the associated agreement features. Consequently, the Spec-Head and Head-Head relations are the core configurations that form inflectional morphology. The structure of a clause under Minimalist assumptions is constrained by properties of UG.

2.5.1: Basic assumptions of the 'I'-analysis

Chomsky (1986b) extends the principles of X-Bar theory to cover, in addition to the lexical categories V, N, A, and P, non-lexical categories such as 'I' (inflection) and COMP (lementizer). As a direct consequence of this, the structure of a simple Tensed (Finite) clause is assumed to have the form represented as follows:
Notice that in this revision of the sentence-structure, 'I' dominates the two inflectional elements of AGR and TNS. According to Chomsky (1988) and Pollock (1989), the merger between the Verb and the 'I' elements are the consequence of V-Movement to 'I', or conversely, 'I'-lowering to V, depending on certain language-specific properties, which we will not go into at this point.

In addition, 'C' is assumed to be the position where the Complementizer appears in embedded Declarative clause, as well as being the position to which the auxiliary, (for instance, in the formation of the English interrogative clause), moves. The Spec of 'CP', on the other hand, is the position occupied by moved WH-Phrases in languages that apply this movement feature.

In summary, the attempt to extend the principles of X-Bar theory to the analysis of 'C' has both empirical and theoretical advantages. Firstly, it accounts for the fact of the hierarchical as well as specific lineal order of elements in a clause. As we will demonstrate in our analysis, by assuming the structure of 'C', the word-order facts manifested in a language follow in
a straightforward way. In addition, the structure of ‘CP’ which conforms to the principles of X-Bar theory, account in a natural and economic way for a number of empirical phenomena in various languages, including Kikamba.

2.6: Morphological aspects of the Minimalist Program

Chomsky’s Minimalist Program incorporates for the first time, a distinct morphological component. In order for the lexicon to generate derivationally and inflectionally pre-formed words, it must contain a morphological component which ‘knows’ how to attach affixes (prefixes, suffixes, infixes) and how to generate reduplicated and re-vowelled forms. Bound and free grammatical morphemes continue to be listed as regular lexical items in the dictionary since, without grammatical functions in the lexical –feature inventory, there will be nothing to ‘check’ a derivation at LF against. Such a Morphological component will grossly ‘over-generate’, however, making it necessary to have a filter of sorts.

The Checking theory is considered to be such a filter, in the sense that it will contain all the paradigmatic relations of a genuine Morphological component. It is important to note that all words in a language belong to a restricted set of grammatical categories. A grammatical category can be defined as:

...A class of expressions, which share a common set of grammatical properties'. (Radford 1999).
For instance, the words: ‘boy’, ‘man’, ‘cup’ or ‘cat’ belong to the grammatical category of Nouns. These all share morphological properties in common, for example:

a. They all can inflect for plurality through addition of the plural suffix {-s};

b. The syntactic property of being able to be pre-modified by the Determiner or pre-modifier ‘the’.

Hence, the evidence in support of postulating that words belong to categories is actually Morpho-Syntactic in nature. This interrelationship can be exemplified as follows:

<table>
<thead>
<tr>
<th>Morphological evidence</th>
<th>Syntactic evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Inflectional and derivational properties of words.</td>
<td>Assigns words to categories; relates to the fact that different categories of words have different distributions (i.e. occupy a different range of positions within phrases or sentences</td>
</tr>
<tr>
<td>Inflectional-Plurality, number, etc.</td>
<td></td>
</tr>
<tr>
<td>Derivational processes by which a word can be used to form a different kind of word by the addition of another morpheme e.g. good-ness.</td>
<td></td>
</tr>
<tr>
<td>Regular vs. irregular nouns, countable vs. uncountable nouns and the implications on the morphologically conditioned irregular inflections.</td>
<td>Which words modify others, which words can be used in combination within phrasal categories e.g. adjectives, adverbs, prepositions and their relationship to nouns and verbs in a phrase or sentence.</td>
</tr>
<tr>
<td>Verb inflections for Tense, irregularities in past and perceptive forms.</td>
<td>Relationship with adverbial modifiers and prepositional phrase within a sentence</td>
</tr>
</tbody>
</table>
Briefly stated, with reference to grammatical categories, it is not possible to provide a systematic account of a language’s syntax unless we posit that words belong to specific grammatical categories, and further, that a specific type of inflection attaches only to a specific category of a word. This is largely information from the Inflectional morphology of a language.

Similarly, we must use information from the derivational morphology of a language in order to understand the processes by which words are derived from words of other categories. Particular derivational affixes can only be attached to words belonging to a specific grammatical category. For instance, in English, the negative prefixes {un-} and {in-} can only be attached to adjectives to form a corresponding negative adjective. However, these cannot be attached to Verbs or Nouns (cf. the ungrammaticality of *un-go or *incat). Derivational affixes, too, have categorical properties, and any principled account of derivational Morphology will clearly recognize this fact.

In summary, given that different categories have different morphological and syntactic properties, we must appeal to both the morphological and syntactic properties of a word to determine its categorization. The morphological properties of a word provide a guide to its categorical status (i.e. a word’s inflectional and derivational properties.)

However, given the potential problems, which arise particularly with reference to unpredictable, morphologically conditioned words, we cannot
rely solely on morphological evidence in determining the categorical status of a word. Rather, we should use morphological criteria in conjunction with syntactic criteria (information relating to the range of positions that words can occupy within phrases and sentences). Morphological evidence is suggestive rather than conclusive, and therefore must be checked against syntactic evidence.

2.6.1: Functions of the Checking Theory

The function of the Checking theory is to review words already generated in the lexicon and compare the affixes therein with the conditions the language imposes on the occurrence of these affixes; conditions which will appear as features in the projection above it.

Checking theory, thus, concedes the presence of an autonomous Morphological component. Furthermore, it distinguishes lexemes from grammatical morphemes as well as distinguishing affixation from the conditions on affixation.

With reference to the relationship between Minimalism and Morphological theory, the Minimalist approach posits Inflectional Morphology as being present in the lexicon. What this means, in practical terms, is that fully inflected words are derived in the lexicon suggesting that the morphological module is actually incorporated in the lexicon itself,
rather than being a separate module of Grammar (as previously assumed within linguistic theory).

The reason for adopting the Feature-Checking approach has been mainly 'theory-internal'. For instance, it is used to abolish the level of what was traditionally referred to in Generative circles as S-structure. As an introductory note, it can be considered to be a 'mixed' approach, in the sense that it allows both lexical and syntactic information in the construction of words, and hence, is appropriately considered to be a mixed lexical-syntactic approach to grammatical analysis.

Within the Feature-Checking approach, the licensing of the inflectional features of affixes is achieved when a lexical stem (in Kikamba, it usually will be a verb-stem) raises and adjoins, overtly (or at LF) to various functional heads, thereby 'checking-off' its features, until none remains. Chapters Two and Three of the present study provide an in depth account of the nature and function of nominal affixes in Kikamba. On the other hand, verbal affixes attached to the Kikamba verbal complex will be seen to encode functional notions of Tense, Mood, Aspect, etc.

Within the Checking-theory (as expressed by the Minimalist Program), the functional heads dominate bundles of features, rather than concrete morphemes, which are quite consistent with Minimalist assumptions, that allow the construction of inflected words within the syntax.
The discussion in this area has centred around the role of functional categories like TNS, Voice (Passive, Causative) and AGR, all of which correspond to morphological categories traditionally classified as, 'Inflectional'. A similar approach can be maintained in the area of Nominalization, which corresponds to a morphological category traditionally classified as, 'Derivational', in the sense that it is, in most cases, category-changing.

In brief, the Minimalist Program’s approach to word formation, allows for both lexical and syntactic construction of words so as to easily and elegantly characterise between certain systematic differences between word-formation processes and syntax. The Checking theory as subsumed under Minimalist assumptions, allows for both lexical and syntactic word-formation processes, provided that the derived words are ‘transparent’ enough, so as to ‘check-off’ both nominal and verbal features within the syntax. In this study, we will seek to explain some of the fundamental operations of the Checking theory as applies to the Morpho-syntax of Kikamba.

2.6.2: Checking Theory: Interpretable and Un-Interpretable Features

Within the Checking Theory, grammatical features entail the phonetic, grammatical, semantic properties of words that must be checked, if the derivation is to be grammatical. These grammatical properties can be described in terms of sets of features. Grammars of natural languages are
assumed to generate two types of structural representations for sentences, namely, PF and LF representations. The sentence-structures formed by successive merger operations must ultimately be converted into these two different types of structural representation for each sentence.

These are referred to as the two 'interface' levels in the grammar, since they are the levels at which the grammar interfaces or connects with the other systems, which lie outside the domain of the theory of grammar. For instance, the PF representations serve as input to the Articulatory-Perceptual systems, whereas the LF representations serve as input to Conceptual-Intentional systems.

The phonetic, grammatical and semantic properties of words are described in terms of sets of features. It is in the nature of PF representations that they contain only phonetically interpretable features and in the nature of LF representations that they only contain semantically interpretable features. This requirement is imposed by a Universal Grammar constraint known as 'The principle of Full Interpretation' (henceforth, PFI). This specifies that a representation for any given sentence must contain all and only those elements, which contribute directly to its interpretation at the relevant level.

According to Chomsky (1995b), grammatical (or formal features) determine the morphological form of items within the grammar of a language. These features play a role in grammatical (Morpho-Syntactic) processes. Grammatical features include:
a) Number features (Singular or Plural) since these play an obvious role in the syntax of agreement in a most natural languages (for example, ‘This book vs. These books’);

b) Gender features since these play a role in the syntax of reflexive anaphors (for example, ‘He/she/it turned himself/herself/itself into an ogre’.)

c) Person features, which play a role in the syntax of Subject-Verb agreement (for example, He/I/we like/likes food.’)

d) Features, which determine the morphological form of items, for instance, the case features of pronouns like He/him, I/me, She/her, we/us, as well as determining the inflectional features of verbs, for instance, She has gone/going.

It must be emphasized that these features do not include features having no morpho-syntactic correlates, for instance, purely semantic features which play no role in grammatical processes, and hence, cannot be grammatical (or formal features). Nevertheless, it is significant for us to point out that in Kikamba morpho-syntax, the distinction between grammatical and semantic features is not always obvious because many grammatical operations actually make an appeal to semantic content within the grammar.

In addition, Kikamba, being a tonal language, will inevitably have some features that are purely tonal or phonological; hence an appeal to information outside the morpho-syntactic domain. Some of the grammatical features of words are interpretable at LF (thus contributing to meaning)
whereas others are un-interpretable at LF (and therefore make no contribution to meaning). As a consequence of the PFI, LF representations contain only semantically interpretable features. Un-interpretable features are eliminated in the course of deriving a LF representation in order to ensure that the derivation converges at LF.

At this point, we must realize that grammatical features pose two sets of problems. Firstly, how do we eliminate un-interpretable grammatical features from LF representations? Secondly, how do we deal with grammatical restrictions, which heads impose on their choice of Specifier and complements? To be more specific, how do we ensure that Specifier and complements carry the appropriate features for a given type of head? (The Minimalist theory predicts that words impose morpho-syntactic restrictions on the complements they can co-occur with).

These two problems are dealt with in a unified way within the 'Feature-Checking' theory. The theory assumes that word categories carry three different sets of grammatical features, namely:

a) Head features- which determine the intrinsic grammatical properties of lexical categories;

b) Specifier features-which determine the kind of Specifier which lexical categories permit;

c) Complement features-, which determine the kind of complements that lexical categories, co-occur with.
According to Chomsky (1995b), all un-interpretable features must be checked in the appropriate checking configuration within an appropriate checking. Conversely, the checked, un-interpretable features are erased. Bobaljik (1995) argues further, that a head checks features of its Specifier and its complement. All Specifier and complement features are assumed to be un-interpretable, just like purely formal head features (specifically those with no intrinsic semantic content). The theory predicts that Universal Grammar specifies which head features are interpretable, and conversely, those that are not. For instance, Number features are believed to be interpretable, while case features are not.

The Specifier features of a head are checked against the head features of its Specifier. In a similar fashion, the complement features of a head are checked against the head features of its complement. If there is compatibility between the ‘checker’ and the ‘checked’ in respect of a given feature, the relevant Specifier or complement feature is erased (since Specifier and Complement features are un-interpretable) The corresponding head features are then erased if they are purely formal and therefore, un-interpretable. They are not erased if they are interpretable in the specific grammar in question.

If there is incompatibility between the checker and the checked word, in respect of a particular feature, the relevant feature then cannot be erased from either of the words. The only grammatical features, which survive at LF, are interpretable head features.
If all the features are interpretable, the derivation then satisfies the Principle of Full Interpretation (PFI), and thus converges at LF. However, if all of the un-erased features are un-interpretable grammatical features, then the resulting representation violates the PFI, thereby, causing the derivation to 'crash' at LF.

2.6.3: Feature - checking and overt Verb movement

We have emphasized that under the Minimalist Program, movement is a 'last resort' mechanism, through which lexical heads can check their features (particularly morphological), which would otherwise remain unchecked, thereby, leading the derivation to 'crash' at either the LF or PF interface levels. In addition, the feature-Checking approach suggests that movement of the inflected word occurs in a way that matches its internal morphological structure to that of the hierarchy of the syntactic structure.

This is possible in Kikamba, since the inflected words, indeed, have a morphological structure transparent enough to the syntactic component. (Keep in mind the largely agglutinative structure of the Kikamba inflectional and derivational system).

The reason for adopting the Feature-Checking approach has been mainly 'theory-internal'. For instance, it is used to abolish the level of what was traditionally referred to in Generative circles as S-structure. As an introductory note, it can be considered to be a 'mixed' approach, in the
sense that it allows both lexical and syntactic information in the construction of words, and hence, is appropriately considered to be a mixed lexical-syntactic approach to grammatical analysis.

It is noteworthy for us to underscore the fact that the Minimalist Program adopts the option of letting the morphological component construct the complex word and then having the inflectional markers be licensed within the syntax.

Within the Feature-Checking approach, the licensing of the inflectional features of affixes is achieved when a lexical stem (in Kikamba, it usually will be a verb-stem) raises and adjoins, overtly (or at LF) to various functional heads, thereby 'checking-off' its features, until none remains.

It must be taken into account that Chapters Three and Four of the present study will provide an in-depth account of the nature and function of Nominal affixes in Kikamba. On the other hand, the Verbal affixes attached to the Kikamba verbal complex mainly encode functional notions of Tense, Mood, Aspect, etc. (we will explain this in greater detail in Chapter Four).

Within the Checking-theory (as expressed by the Minimalist Program), the functional heads dominate bundles of features, rather than concrete morphemes, which are quite consistent with Minimalist assumptions, that allow the construction of inflected words within the syntax.
The discussion in this area has centred on the role of functional categories like TNS, Voice (passive or causative) and AGR, all of which correspond to morphological categories traditionally classified as, 'Inflectional'. A similar approach can be maintained in the area of Nominalization, which corresponds to a morphological category traditionally classified as, 'Derivational', in the sense that it is, in most cases, category-changing.

In brief, the Minimalist approach to word formation allows for both lexical and syntactic construction of words so as to easily and elegantly characterise between certain systematic differences between word-formation processes and syntax. The Checking theory as subsumed under Minimalist assumptions, allows for both lexical and syntactic word-formation processes, provided that the derived words are 'transparent' enough, so as to 'check-off' both nominal and verbal features within the syntax.

2.7: Points of departure between the Minimalist Program and traditional Generative Grammar Frameworks

Minimalism, as stated before, is the most recent of Chomsky's Generative Grammar frameworks; hence it is necessary for us to outline the main points of departure between Minimalism and Principles and Parameters theories on one hand, and the earlier Generative Grammars on the other. It is important that we recognize Minimalism as an offshoot of
Transformational Generative Grammar first developed by Noam Chomsky in the 1950's and successively modified in the five decades since.

The fundamental idea was (and continues to be) that a sentence is the result of what Chomsky now refers to as 'a computation' that produces a derivation, beginning with an abstract structural representation, sequentially altered by structure-dependent transformations. The Minimalist Program however maintains that these derivations and representations must conform to an 'Economy Criterion'. What this means is that derivations must be 'minimal' in the sense that they are constrained by principles of the language faculty. As stated previously, The Economy Criterion suggests that there be:

...*No extra steps in derivations, no extra symbols in representations, no representations beyond those that are conceptual necessary.* (Lasnik 1995).

Linguistic theories are expected to provide grammars that make use of the least, or minimal number of rules or principles in order to provide a descriptively adequate characterization of linguistic phenomena. Simply stated, grammatical descriptions are expected to be as simple as possible, because this has implications on the learnability of a language. The less the number of rules, the simpler the grammar will be, and by extension, the easier it will be for a child to acquire the language.

However, much of the work in syntax particularly in the 1980s involved the postulation of even more complex structures and principles. As
a reaction to the excessive complexity of these generative theories, Chomsky in the 1990’s made the criterion of minimalism the cornerstone of linguistic theory. What this alludes to, in essence, is the requirement to reduce to a minimum the theoretical and descriptive apparatus used to describe the grammars of languages. Hence, the Minimalist approach to linguistic theory was motivated to a large extent by the desire to minimize the acquisition burden placed on the child acquiring a language, and thereby, maximizing the learnability of natural language grammars. (Viz. Radford 1997:7).

The earlier Generative Grammars proposed rules specific to particular languages and even to particular constructions in particular languages. For instance, early Generative Grammars had a rule for forming passives in English, another rule for forming the relative clause in Italian, a separate rule to allow the ‘dropping’ of nominal subjects in Bantu languages such as Kikamba and so on.

The Principles and Parameters approach, as contained in Minimalism is a sharp departure from traditional Generative Grammar since it states that there are absolutely no rules or constructions. All that the framework allows are Universal principles, which are assumed to be part of the initial state of the language Faculty (i.e., before exposure to data from any language). These principles, as mentioned before, have possibilities for variation referred to as parameters; in other words, the principles are
universal but languages differ in the parametric values they select for each of the parameters.

A language therefore, is not defined, as earlier Generative Grammars defined it as a set of rules characterizing grammatical and ungrammatical frames. On the contrary, a language is defined as a particular choice of values of parameters. This is considered to be the content of one’s internal knowledge (or competence) of a language.

Whereas Traditional Generative Grammars concentrated on grammaticality, (i.e. on telling you the rules on how to form grammatical phrases and sentences), contemporary theories on Grammar focus more on explaining ungrammaticality, and in particular, on explaining why certain types of structures are ungrammatical.

A further point of departure from earlier Generative theories is with reference to the levels of linguistic representation in the grammar. Previously, we had levels such as Deep structure (D-Structure) and Surface Structure (S-Structure). Within the Minimalist approach, the only levels of linguistic representations permitted are what are referred to as the ‘Interface’ levels’ of Phonetic Form (PF) and Logical Form (LF).

The theory categorically states that there are no structural relations other than those forced by the Interface conditions; in essence, there is no Government or Binding theory attributable to the language faculty. A language therefore is defined under Minimalism as a particular choice of
values for parameters. This is what characterizes a speaker’s grammatical competence of a language.

In Government/Binding theory, we had what was referred to as MOVEα, which simply meant ‘move anything anywhere’. The earlier Generative frameworks also allowed largely unrestricted movement of phrasal categories to different positions both within and out of a sentence, for instance, in interrogatives, negation etc.

However, Minimalism only allows overt movement when a ‘strong’ feature motivates it. To give an example of this application, a language with ‘weak’ wh-features will not have overt movement in the formation of questions. Kikamba, as we shall see in this investigation, falls under this category of languages. Further, the Theory predicts that there should be no instances of what was previously known in earlier theories as ‘optional movement’. (Denham 1997). This is because a phenomenon such as Wh-movement is a parameterised fact about a language.

Hence, whether a language has overt or covert wh-movement is not variant. Minimalist assumptions rule out optionality and state an ‘either-or’ situation in keeping with the parametric variation assumptions. The main departure point with the earlier Generative Grammars has to do with the Base Phrase structure, Feature Movement, and the theory of Case and Agreement.
CHAPTER THREE
LITERATURE REVIEW AND METHODOLOGY

3.0: Introduction

The initial part of this chapter provides a critical review of the literature available on the applications of the Minimalist approach, the Principles and Parameters framework and studies on specific Bantu languages. The benefits of this are numerous. Firstly, it provides us with the needed background information on the descriptive and explanatory power of the Minimalist and Principles and Parameters approach when applied to empirical data on different natural languages.

Secondly, it has proved useful in the formulation of our Thesis the substantiation of the arguments presented in our analysis of Kikamba. Finally, the review gives some idea on the quality and quantity of previous research particularly in the area of Bantu grammar as well as aiding us on the methodology to be used in the light of the success and failure of previous methodologies used to investigate Generative grammars.

3.1: Research applications on the Minimalist Program


The Massachusetts Institute of Technology (MIT) has to date carried out numerous studies based on the Minimalist framework as it applies to real language data. These include a study by Bobaljik (1995), entitled: *Morpho-Syntax: the Syntax of Verbal Inflection*, and Carrie (1995): *Non-Verbal Predication and Head Movement*. Koizumi (1995) in a thesis entitled: *Phrase Structure in Minimalist Syntax* examines clause structure within the Minimalist framework. He draws a comparison of Object positions in typologically and genetically different languages and observes that all possess Agreement Phrases for Objects (AGRoP). His observations are that apparently, the presence of AGRoP is not learnable from the linguistic data available to children. Hence, he concludes, it must be contained in Universal Grammar. In his argument, every language has Agreement features, which he summarizes as 'The Universal AGR Hypothesis'.

This study is significant in so far as it provides insights into phrase structure analysis within the Minimalist framework as well as drawing parallels with principles of Universal Grammar that are assumed to characterise the grammars of all natural languages.
Runner's (1995): *Noun Phrase Licensing and Interpretation* is a dissertation that examines the syntax of Direct Object Noun Phrases in English within the Principles and Parameters contained in Chomsky's Minimalist approach to Generative Grammar. The main focus is on the phrase structural positions of object noun phrases at the various levels of representation, and also, on the relationship between structural position and semantic interpretation. Supported by a variety of empirical and conceptual arguments, the central claim of the dissertation is that direct object noun phrases in English surface in a VP-external position. His study is significant in so far as it draws parallels in the relationship between structural positions and semantic interpretation.

Bhattacharya (1999), in a thesis entitled: *The Structure of the Bangla DP* offers a descriptive analysis of the Determiner Phrase (DP) in Bengali language within a Minimalist framework. The thesis re-establishes the dominant theme in the DP literature of showing the syntactic equivalence between the structure of the clause and that of the DP. It is significant to this study in so far as it provides insight into Determiner and Nominal structure in language analysis.

Naude (1996) looks at: *Independent Personal Pronouns in Qumran Hebrew Syntax*. This is a syntactic account of independent personal pronouns in Hebrew developed within the framework of the Minimalist program. It concentrates on the operations of the Minimalist program's
structure -building mechanism. Naude’s conclusions are that movement is always forced by the ‘needs’ for formal ‘checking’ of features on lexical items. These mechanisms are seen to play a central role in accounting for the grammatical function and distribution of independent personal pronouns.

Caink (1998), in a Thesis entitled: *The Lexical Interface: Closed Class Items in South Slavic* argues for a Minimalist perspective of what he refers to as ‘dual lexicalisation.’ The study presents a unified analysis of South Slavic and English auxiliaries and accounts for the distribution of South Slavic clitic clusters. The analysis places minor cross-linguistic variation out of the syntax into the lexicon and the Interface level of Phonological Form.

Tsuijoka (2001) in a dissertation entitled: *The Syntax of Possession in Japanese* investigates the syntax of possession in Japanese within the framework of the Minimalist Program. The primary focus is on the question of how possessive semantics is represented in syntax at the sentential level when there seems to be no designated verbs of possession.

JunMo Cho (2000) presents an investigation on: *The Nature of Legibility Conditions in Korean.* The thesis investigates the nature of Legibility Conditions within the Minimalist Program. In this analysis, Legibility Conditions are considered to be a set of general ‘well-forkedness’ conditions holding at PF and LF interfaces. Thus, they control not only the erasure of ‘un-interpretable’ features, but also ‘non-feature-related’
phonological/semantic 'well-formedness'. The study demonstrates that Legibility Conditions have the property of filtering out certain derivations, which would otherwise be convergent, as far as formal feature checking is concerned.

Grohmann (2000) dissertation entitled: *Prolific Peripheries- A Radical View from the Left* presents a dissertation that concentrates on movement dependencies under Minimalist assumptions. He suggests that just like there are constraints on elements moving too far from their initial positions, (standard locality), there also exists constraints on movement 'too close'.

Nunes (1995) presents: *The Copy Theory of Movement and Linearisation of Chains in the Minimalist Program*. This dissertation is concerned with movement operations within the Minimalist Program (Chomsky 1995). Exploring the Copy theory of movement, the analysis focuses on two issues namely: (i) why can traces not be phonetically realized? And (ii) what is the theoretical status of the operation 'Move' in a system where syntactic objects are derivationally assembled?

further discusses word order in MG and makes a brief review of semantic theories of tense in the literature.

As can be inferred from the above investigations, there is a need to test the Minimalist approach in so far as it gives a descriptive and explanatorily adequate account of data from an African language and specifically as it applies to the grammar of Kikamba.

3.2: Research applications on the Principles and Parameters framework

Studies on Parameters within the Minimalist framework include a study by Ayoun (1997) entitled: *Verb Movement in French L2 Acquisition*. Complementary studies on the Verb Movement Parameter refer to it as the V-Raising Parameter (Culicover 1997), or the AGR Parameter (Williams 1995). All these studies concur that Parameters are almost entirely limited to the Lexicon and in particular, to the strength/weakness of Functional elements. These have been identified in Literature to include categories such as Agreement (AGR), Tense, and Complementizer (COMP), in essence, the functional Category system.

Further, these studies reveal that systematic differences between languages depend on whether overt Verb movement is allowed or disallowed due to the [– or + strong] feature of AGR. Lightfoot and Hornstein (1994) argue that Verbs raise to various positions in order to
check (pick up) inflectional features. They see strong verbal features (characterizing overt movement) as having a correlation with a rich morphological agreement between subject and Verb.

Denham (1997) provides an investigation entitled: *A Minimalist Account of Optional WH-Movement*. Wh-movement has been assumed to be a parameterised fact about language, and, thus, whether a language has overt wh-movement or not has been assumed to be invariant within a language. Also, Chomsky's recent Minimalist Program only allows overt movement that is motivated by the presence of a strong feature. An observation made in Denham's study is that languages with weak WH-features will not have overt wh-movement. Under this version of the theory, therefore, there should be no instances of optional wh-movement within a language.

Ouhalla (1991) in a thesis entitled: *Functional Categories and Parametric Variation* attempts to make sense, in the context of the principles and Parameters framework of the traditional idea that functional categories determine the major grammatical processes as a result of an interaction with the general principles of Universal Grammar. This study is significant, in so far as it provides a principled account for language variation in terms of a theory of parameterisation, and specifically, the role of functional categories in determining language variation. (Cf. Chomsky 1988, Ouhalla 1988c, Pollock 1989). Of more significance to our study, however, is Ouhalla's assertion that Morphology is intimately intertwined
with Syntax and, perhaps could actually be collapsed into a single module of linguistic analysis.

Kaviti (1993) in a Thesis entitled: *Principles and Parameters in the Acquisition Of English as an Additional Language*, attempts to explain the potential conflict that children acquiring languages in multi-lingual settings face as a consequence of differences in parametric values adopted by the syntax of Kikamba, Kiswahili and English, respectively. The investigation provides the basic foundation for the present investigation. It must be noted, however, that the analysis is within a Government/Binding framework, which has received a lot of criticism within Minimalist circles as a result of being highly complex in so far as providing a credible and explanatorily adequate account of the content of Universal Grammar.

3.3: Studies on Bantu Grammar (Morphology and Syntax)

The purpose of drawing a comparative review of other Bantu languages is because these languages, by virtue of their genetic affiliation, bear strong resemblances particularly with reference to their basic core vocabulary as well as structural aspects their grammars. A case in point would be the similarities in Noun classes and Concordial agreement affixation processes.

Guthrie (1948, 1970) classification and comparative study on Bantu languages is important in so far as it guides us in the identification of
Kikamba as a genuine Bantu language and in addition, the criteria used to identify the typical patterning of morpho-syntactic phenomena in the Bantu language family.

Studies on Bantu grammar relevant to the present investigation include a study by Mugane (1998) entitled: Gikuyu NP Morpho-Syntax. According to Mugane’s analysis, the effects of lexical specifications, morphological marking, prosodic inversion and morphological splits all serve to complicate the analysis of Bantu NP syntax. For these reasons, it poses problems for the X-BAR theoretical principle of Endocentricity, which demands that all phrases are headed by elements of the same category. His observations are that all nominal elements (including the head noun) are optional. Mugane’s conclusion therefore, is that one must rely on the lexical specification of nominal elements, combined grammatical factors such as constituent structure, as well as functional, syntactic structure. Mugane’s analysis is significant to this investigation, particularly in the way in which it relates the domains of syntactic factors such as concordial agreement with the idea of morphological factors such as lexical integrity.

Other studies on Bantu NPs include: Myers (1987), and Fortune (1985) on Shona Word Structure, Mchombo (1978, 1993) examines The Swahili NP, while Bresnan and Mchombo (1995) analyse Chichewa Syntactic Structure. However, Myers (1987) does not recognise the fact that in the majority of investigated Bantu languages, APs receive noun-class
morphology whereas quantifiers and demonstratives get verbal SP morphology.

Carstens (1991), in a study on *Nominal Morphology and DP Structure in Kiswahili* observes that in the Bantu nominal system, whereas grammatical gender is a lexical property of nouns, number is attributable to the functional head, whose features spell-out as the gender-specific class prefixes. In this sense it is the functional head that selects NP complements. Carstens' analysis makes possible a uniform treatment of number morphology, on one hand, and Independent number words on the other (cf. Dryer 1989). Her observations are significant since she claims that the Kiswahili NP is actually a Determiner Phrase (DP).

Most of the above studies, (with exception to Mugane's analysis), overlook the notion of 'lexical integrity' as being important in the analysis of Bantu noun-class markers. According to Bresnan and Mchombo (1995), in Bantu, the morphology of words is subject to lexical integrity and is therefore inaccessible at the level of the constituent structure where syntactic processes of Phrase-structure take place.

What is of relevance to us is their conclusion that it is at the level of functional structure in the syntax that the morphological component makes a contribution. The lexical integrity principle is based on the concept that words are built out of different structural elements and by different principles of composition other than syntactic phrases. (Chomsky 1970,
Bresnan and Mchombo 1995). Mchombo (1978) on Bantu Verbal categories proposes that for Chichewa and Kiswahili, Verbs are nominalised by the suffixed morphemes added to them through the derivational morphology of the languages.

Malete (2001) in a dissertation entitled: *Negation In Sesotho* focuses on the implications of the empirical data on Negation within the framework of the Minimalist Program. His observations were that the Principle of Economy, which entails that movement, should take place only when necessity drives syntactic movement; in other words, only for the purpose of 'Case-Checking'. His conclusions on the morphology of negation are that bound grammatical morphemes (for instance, those marking Negation) are defined in terms of morphological 'spell-out' operations. His findings are relevant to this study, especially the descriptions of syntactic structures in terms of X-BAR theory, where functional categories (like AGR, COMP) are given full categorical status.

Bakari’s (1982) dissertation entitled: *Morphology of Kenyan Swahili dialects* provides a descriptive account of the morphological structure of Kiswahili dialects along the Kenyan coast. His study is significant in so far as it gives the key identifying features of dialectal differences in Morphology.
Gathenji (1981) in a Thesis entitled: *The Morphology of Verbal Extension in Gikuyu* is relevant to our investigation in so far as it adds to our understanding of verbal morphology in Bantu Languages.

Marete (1981) presents a thesis on: *A Study of Grammatical Agreement in Ki-Meru Syntax*. The relevance of his findings to the present investigation is that it provides us with a scholarly account of concordial agreement in Bantu as well as forming a link between the modules of Syntax and Morphology.

Kithaka wa Mberia’s (1979) thesis entitled: *The Morphology of the Kitharaka Nominal word* as well as his dissertation on: *The Morphophonemics of Kitharaka* are extremely relevant in so far as they give us an in-depth account of the Nominal classes and agreement features subsumed under the NP and DP structure of Bantu languages.

Kanyoro (1983) in his investigation of Abaluhyia dialects provides an important Morpho-syntactic description on the structure of the Luhya language in terms of Tense aspects and general syntactic structure. The framework used however, is the Standard theory, which has been observed to have explanatory limitations in terms of the numerous rule systems generated by the grammar.
3.4: Studies on the Grammar of Kikamba

Lindblome (1914), Guthrie (1948, 1970), Mohlig and Heine (1980), are significant to the present study in so far as they provide us with some background information of the position of Kikamba within the Bantu language family.

Whitely and Muli (1962) in: *Introduction to Practical Kikamba* provides an in-depth analysis of the Nominal and Verbal morphology of Kikamba. The study, however, is purely descriptive with no attempt to relate the grammatical phenomena with syntactic or morphological theoretical principles. It is nevertheless a rich source of empirical data on Kikamba.

A Report by the Institute of African Studies on Machakos District (1981) gives an important Socio-linguistic account of the Research area of Machakos district as well as the people under investigation. The analysis of Kikamba, however, does not provide a linguistic analysis and but instead a approaches the language from a purely anthropological point of view.

Mwove (1987) studies the structure of the Kikamba NP and movement rules in the Kikamba sentence within the Extended Standard Theory (EST.). Mutisya (1986) compares concordial agreement in Kikamba and Kiswahili. This study provides a detailed account of the similarities and differences in noun-class agreement patterns in the two languages. Her
structuralist analysis of Government by the head-noun however, falls outside the boundaries of Minimalist assumptions.

Maundu's (1986) thesis on: *Sound Change and Reconstruction of Kikamba* is significant to this study in so far as it provides us with background information on the dialects of Kikamba. Kitavi (1992) in a thesis entitled: A comparative study of The Machakos and Kitui-North dialects draws a detailed comparative analysis of the dialectal variation that exists in Kikamba. Together with Mwove (1987), Maundu (1986), we are led to believe that the main dialectal differences in Kikamba will be manifested at the phonological and lexical level, rather than structural (grammatical and morphological levels).

As can be concluded from the above Review, to the best of our knowledge no study has been done to analyse the grammar of Kikamba within the Principles and Parameters and Minimalist Program. The present investigation is an attempt to test the theoretical assumptions of this framework using data from Kikamba.

3.5: Methodology

This section seeks to give a descriptive account of the procedures used in the gathering and processing of empirical data pertinent to this investigation. To achieve our Research objectives, a number of techniques
were used. For expository purposes, we have divided this section into the following sub-areas:

1) The Research Area and the Sample selection
2) Data elicitation Techniques
3) Data analysis

With a clear understanding that the sampling strategies used in this linguistic investigation may be deemed to be questionable within the Social Sciences in so far as reliability and validity of the findings are concerned, we will also justify the techniques adopted by making an appeal to specific authorities in the literature of language-based research.

3.5.1: The Research Area

The field research was conducted in Mang’auni, Muputi Location of Machakos district. As we indicated in the background to this investigation, our focus was on the *Ki-Masaku* dialect spoken in Machakos district. Our reason for the choice of this variety was governed by the fact that this is generally considered to be the *Standard* dialect of Kikamba, and is therefore, not distinctly ‘marked’ in terms of regional features; hence, the potential likelihood that we could, possibly generalize our findings onto the entire grammar of Kikamba. In addition, dialectal differences in Kikamba
have been observed to be mainly phonological and lexical rather than grammatical. (Cf. Maundu 1986, Mwove 1992, Kitavi 1997).

10 adult informants (5 male and 5 female) were selected through purposeful sampling within the Research Area. No undue attention was given to the selection of informants. The only criteria used in the selection were that:

a) The informants were ‘authentic’ local native speakers of Kikamba (having being born and brought up in the Research area);

b) They had limited formal education (The majority had not gone beyond secondary school education);

c) They were all over 40 years of age, and had lived in the research area for the greater part of their lives (a deliberate attempt was made to exclude younger speakers, who, because of their impressionable tendencies may have provided ‘tailor-made data to suit what they think the investigator wanted to hear);

d) They had received comparatively limited contact with speakers of other languages (it must be noted, however, that the average speaker of Kikamba will have some basic competence of Kiswahili in addition to his native language).

e) They had received limited contact with speakers of other languages (or even other dialects of Kikamba).

The keen Social-Science Researcher may have noted the conspicuously small-sample size with no mention of random-sampling strategies or sample-representativeness. It must be emphasized that the available
Literature in linguistic research warns against using large sample sizes in language surveys, because these tend to be impractical, redundant and on the whole, unnecessary. This is because linguistic behaviour, (though not entirely uniform), is generally more homogeneous than most other types of human behaviour. In the words of Sankoff (1980:52):

...Even for quite complex [linguistic] communities, big samples tend to be redundant, bringing increasing data-handling problems with diminishing analytic returns.

Hence, for practical considerations, the highly analytical data involved in this Morpho-Syntactic analysis forced us to deliberately limit our sample-size to a manageable level. In any event, competence features of a language are largely generalizable to wider sections of the speakers of the language. After all, this is what makes communication between speakers of the same language possible.

The duration of the data collection was three months. However, even after the initial collection of data, frequent visits were made to the Research area to compare or verify generalizations made against the intuitions of the selected informants.
3.5.2: Data elicitation techniques

The data-collection methods used in this investigation were:

1) The Introspective Method;
2) The Analytic Method;
3) The Experimental Method.

1) Introspective evidence

The first method used meant relying on my personal intuitions about the structure of Kikamba morphology and syntax. I am aware that good practice in the Sciences distrusts the idea that an investigator can generate data, and then proceed to draw reliable generalizations from the same corpus. This data is usually deemed to lack objectivity, since researchers may (either consciously or unconsciously) generate only data that fits their research hypotheses.

However, this methodological strategy has gained positive support from the great successes of generative grammarians in discovering new facts about the grammars of different languages as well as uncovering deeper theoretical issues on language structure. Chomsky, in particular, has repeatedly stated that the intuitions of the linguist form the proper and predominant subject matter of linguistics. On this he categorically states:

...the necessity for present-day linguistics to give priority to introspective evidence and to the linguistic intuitions of native speakers.' (Chomsky 1965:20)
From this, we can infer that important facts about the linguistic structure and organization of a language are accessible through introspections. However, to rule out subjectivity of any kind, my introspective self-generated data was checked against the intuitions of other native speaker of Kikamba.

2) Analytic Evidence

As a way of controlling the natural human tendency that may lead an investigator to emphasize only those examples that support their initial hypotheses on the language, the Researcher selected ten native-speakers of Kikamba who, not only generated data, but also assisted in the analysis of the language structure. This was through participant observation sessions. This helped ensure that the all generalizations made were based not only on personal intuitions, but also on a corpus of independently collected data from other native speakers of Kikamba. This, together with the introspective evidence, provided a rich source of verifiable information on the Morpho-Syntax of Kikamba. Tape recordings of the informants complemented the transcriptions of raw data.

f) Experimental Method

The term ‘Experimental’ here is used in a broad sense to refer to:

‘...Any method, which entails the direct manipulation of an informant’s responses.’ (Labov 1981).
Since the focus of the investigation was mainly on isolating Morpho-Syntactic aspects of the grammar, I occasionally used conversational strategies of eliciting data in a deliberate way so as to get the informants grammatical judgements on the constituent structure of phrases and sentences.

The informants were occasionally requested to produce words, phrase and sentences exactly as they would be used in normal, every-day interactions, rather than in specific contexts or registers (such as the religious register used in church, or the highly elevated language characterizing highly ceremonial occasions).

3.5.3: Data analysis procedures

The intuitive data upon which our analysis was based on consisted primarily of:

1) The constitution structure of phrases and sentences in Kikamba;

2) Similarities among constituents in a sentence or phrase;

3) Intuitions about marked or idiosyncratic morphological and syntactic structures;

4) Intuitions about the ‘correctness’ or accuracy of certain linguistic operations and principles identified in research literature (This was done in order to verify the applications of certain
principles/operations/constraints assumed to operate in other languages but which are actually 'counter-intuitive' in so far as our findings are concerned).

5) Judgements of grammaticality and ungrammaticality;

6) Recognition of ambiguity;

7) Recognition of Synonymy, Paraphrases, and relatedness of sentence structure.

As proposed by Chomsky (1967:61) on the reliability of judgements on generated linguistic data, the Researcher incorporated a qualitative scale of 'Acceptability'. This term should be understood in this context to indicate the subjective responses of native speakers on the grammaticality of sentence structure. The qualitative scale used was designed for generative linguists who have to rely upon their own intuitions to generate data. A number of intermediate levels were used in the analysis of Kikamba data. The following examples from English demonstrate the application of this Reliability test. The ranking was done as follows:

a) Completely unacceptable - *
   (e.g.- * He figured out it.)

b) Barely acceptable -? *
   (e.g.-? * He figured out Father.)

c) Not quite fully acceptable. -?
   (e.g.-? He figured out something.)
d) Completely acceptable. – Absence of a mark.

(e.g.- He figured out the answer.)

These tests were seen to be a way of generating more reliable and valid generalizations about the grammar, especially after the Researcher compared her grammaticality judgments against those made by my informants and establishing that the profiles of acceptability matched. The Interview technique was used as a means of directly drawing on the informants’ opinions on grammatical and ungrammatical constructions.

The focus was primarily on drawing inferences on the competence of the selected native speakers of Kikamba. Since language performance is subject to individual variations, an attempt was made to limit any reliance on performance ‘idiosyncrasies’ and concentrate only on those grammatical aspects for which there was general agreement about as concerns grammatical behaviour in Kikamba.
4.0: Introduction

The concern of this chapter is predominantly with the principles that determine the morphological form of the nominal in the morpho-syntax of Kikamba. It must be remembered that one of the significant assumptions of Minimalist thinking is that the morphological properties of words will be characterized in terms of sets of grammatical features, or what Chomsky (1995b) refers to as 'Formal features', since such features will determine the morphological form of items. Under the Theory, these grammatical features of words must be checked in an appropriate manner.

However, before we can examine the Checking operations in Kikamba morpho-syntax, it is important for us to relate the content of this chapter to our research objectives. The chapter is primarily morphological in orientation, with the intention of providing a detailed analysis of the Kikamba nominal structure. We then can be in a reliable position to conclude on whether the Kikamba nominal is best analysed as an NP or a DP and further, whether there are any similarities between sentences and NPs in Kikamba.
Prior to making any such conclusions, it is necessary for us to also examine the structure of the Kikamba system of concordances, which in effect, will force us to relate our morphological analysis to a syntactic one. As one of our hypotheses states, certain nominal elements in the Kikamba NP will be seen to be optional, with the prefixed morphology of nominal modifiers being identical to the subject prefix which also occur on the verbal complex.

We will also consider the preferred placement of demonstratives and other modifiers in the Kikamba nominal as basis for the analysis of the Head-initial parametric setting adopted by the grammar. Lastly we intend to examine the rules of concordial agreement between the head noun and other elements in the sentence as a way of establishing whether movement of lexical and functional categories in Kikamba is constrained by the strength or weakness of AGR features or a checking principle.

The Chapter concentrates on the nominal morphology of the language, which, (as is typical of Bantu languages) controls significant aspects of the syntactic structure of other lexical and functional elements within the sentence. We will adopt a deductive approach by beginning with a preliminary analysis of Bantu nominal structure, with deliberate emphasis on the unique morphological features so typical of this language family, namely, the Noun-Class prefixes and the corresponding concordial agreement system, within both the clause and phrasal structure of Bantu languages. The aim of this is to provide a basis for our investigation of
morpho-syntactic phenomena in Kikamba, which we must remember, has been classified as a Bantu language.

The morphology and syntax of Kikamba conform quite rigidly to the general Bantu grammatical pattern. Firstly, Kikamba manifests the typically agglutinative structure of Bantu languages, where the lexical categories (Nouns, Verbs, Adjectives, etc) are quite elaborate in structure, bearing affixed elements that are easily distinguished from the root or nucleus of the lexical item in question.

Secondly, as is the case in most other Bantu languages, the main morphological processes in Kikamba are prefixation and suffixation. The structural order of elements in the clause or phrase is also important, in so far as certain syntactic relationships are concerned. Accordingly, nouns in Kikamba are principally composed of two main elements, namely, a prefix and a stem. (We will analyse this basic structure in greater detail in the various sections of this Chapter).

It is for these reasons that we thought it useful to start our discussion with an examination of the typical morphological patterning of elements in Bantu languages, as a springboard from which we will better approach the grammatical structuring of elements in the Kikamba nominal system.

We will highlight a few aspects of the tenets of the Checking theory, with Chapter Five of the present work examining the applications of the theory in greater detail. However, it should be emphasised that work on the
Checking Theory is yet in its infancy, and so the analyses proposed in this chapter should be considered as inevitably tentative, rather than conclusive.

4.1: Preliminary assumptions on formal features

A less abstract term to describe formal features is grammatical features, in the sense that they play a role in processes that determine grammatical (morphological and syntactic) forms. These include the following features of words:

1) Number features - These features indicate whether a word is categorized as singular or plural. The grammatical significance of these features is that they play a role in the syntax of agreement in a language.

2) Gender features: - These features play a role in the syntax of reflexive anaphors in languages such as English. It will be demonstrated later within this chapter that there are different forms that the feature ‘Gender’ assume. Our concern will be with the morphological aspect of noun-class Gender in Kikamba, rather than the Gender variant found in most Indo-European languages, which categorizes nouns as masculine, feminine or Neuter.

3) Person Features - These features play a role in the syntax of subject-verb agreement in a language.

4) Other morphological features – These features determine the morphological forms of both lexical and functional categories of
words. This includes Case features of pronouns (for instance, whether a pronoun is in Nominative or Accusative form) or the inflectional features of verbs.

It is important to note that these features do not include any features which have no morphological or syntactic correlates, or in other words, purely semantic or phonological features of words. To explain this discrimination, consider the following Kikamba nominal forms and the corresponding semantic features:

1a) Mū-tumīa /muː tuː mía/ [+ANIMATE, +HUMAN, +SG]
   C1-old man

1b) A-tumīa /a-tumía/ [+ANIMATE, +HUMAN, +PL]
   C2-old man (pl)

2a) Mū-tūmi /muː tuː miː/ [+ANIMATE, +HUMAN, +SG]
   C1-neighbour-agt.sfx

2b) A-tūmi /atuː miː/ [+ANIMATE, +HUMAN, +PL]
   c2-neighbour(pl)-sfx

3a) Mu-anake /mwaː nake/ [+ANIMATE, +HUMAN, +SG]
   C1-young man

3b) A-anake/a:nake/ [+ANIMATE, +HUMAN, +PL]
   C2-young man(pl)

4a) Mu-nūtu /mwiː tuː/ [+ANIMATE, +HUMAN, +SG]
   C1-girl

4b) (A-iitu) e-etu/eːtuː/ [+ANIMATE, +HUMAN, +PL]
   C2-girl(pl)
5.a) Mu-ndū /mu:ndu:/ [+ANIMATE, +HUMAN, +SG]  
C1-person

5.b) A-ndū /andu:/ [+ANIMATE, +HUMAN, +PL]  
C2-person(pl)

With reference to the data presented, grammatical features do not include features with no morphological or syntactic correlates. Hence, although all the nouns above share the semantic features of being [+ANIMATE, +HUMAN], these are a purely semantic features, assumed not to play a role in any grammatical processes. Similarly, the phonetic features, consisting of the pronunciation of the nouns, or any other purely phonological features that play no part in determining the syntax or morphology of a language are not treated as grammatical or formal features. (By convention, features are enclosed in square brackets, and written in capital letters).

However, we must admit that in the analysis of the nominal structure of a Bantu language such as Kikamba, it is arguable whether the distinction between grammatical and semantic features is not always clear-cut. This is because in the development of the Bantu noun-class system, some of the grammatical features of noun-classes have assumed semantic content, as the following Kikamba sentences illustrate:

6) Mu-ńtu ń-ya a-ka-thi ŋū.  
C1-girl 1AGR-that 1AGR-TNS(fut.)-go tomorrow.  
'That young girl will go tomorrow'.
7) We a-ka-thi únf.
Pron.3rd Psn.sg. AGR (3rd Psn.sg.)-TNS (fut.)-go tomorrow.
She will go tomorrow.

8) pro a-ka-thi únf.
pro AGR (3rd Psn.sg.)-TNS(fut.)-go tomorrow.
*pro (She) will go tomorrow.

Notice that the grammatical feature of the subject ‘Mu-iitu’ (‘girl’) dictates that it can only be replaced by the pronoun ‘We’ (‘She/He’)- Note that Kikamba does not discriminate between masculinity and femininity in pronominal forms). Interestingly, the grammatical features of the pronoun indicate that it is a 3rd Person singular, Nominative determiner. With reference to (8), we shall discuss the null Subject ‘pro’ phenomena in Chapter Four; suffice it to say that the ‘pro’ null subject must, just like an overt pronoun, carry the grammatical features of the noun, which are predictable from the AGR prefix attached to the verbal complex.

This leads us to the main point of this exemplification: although purely semantic features are considered to be irrelevant in so far as grammatical processes are concerned, in Kikamba, the AGR affix on the Verb, the Determiner, as well as all the modifiers of the noun do point to the fact that the only pronominal or null subject that can replace this overt subject must not only be 3rd Person singular, but also Animate, Human and of a particular Noun Class, namely, Class 1, which characterizes mainly the
class of humans. Hence, we need to have some room in our analyses for the overlap between semantic and grammatical features.

It must be remembered that under Minimalist assumptions, only two levels of grammatical analysis are recognized, namely the Logical Form level (henceforth LF) and Phonetic Form (henceforth PF). Some of the grammatical features we highlighted earlier are interpretable at LF, in the sense that they have semantic content, and thus, play a role in determining meaning. Other features remain un-interpretable at LF, in the sense that, they have no semantic content, and as a consequence, make no contribution to meaning. Consider the features listed for the following pronoun:

9) We ‘He/she’
   [3rd Psn.sg. SUBJECT]

The features [3rd PERSON, SINGULAR] are interpretable at LF, since they tell us that ‘We’ can refer to any noun with an ‘animate’ singular aspect (e.g. Class 1) but not to a plural or inanimate noun (e.g. chair, people, food, etc) By contrast, the fact that the pronoun ‘We’ (He/she’) has a [+NOMINATIVE] element does not play a role at LF, because the same pronominal form can occur in object position OR [+ACCUSATIVE].

Consider the examples below:

10.a) Wé ní-w-a-ya lìu.
Pron. (3rd Psn.sg.) PrePfx. -AGR (3rd Ps.sg.)-TNS (prst.pft.)-eat food
   ‘He/She has eaten food.’
10.b) Nyie n-di-(ku)end-a kū-kun-w-a (mī wē).


'I don’t want to be beaten (by him/her).

The point we wish to make based on the data just presented, is that the feature of ‘Case-marking’ does not seem to play a role in our interpretation of meaning in 10.a-b above. The fact that the pronoun maintains the same form (irrespective of its position) suggests that Case in Kikamba is an un-interpretable feature at LF. In addition, the pronoun, either in Subject or object position is not mandatory; it could actually be left out since it is predictable from the rich agreement feature affixed to the verbal stem.

Accordingly, we suggest that the Case features of pronouns in Kikamba have no role to play in semantic interpretation, and thus, must be purely formal features.

In addition, the fact that both a null subject ‘pro’ and an overt lexical pronoun can play the same semantic role in sentences, leads us to draw the conclusion that Case is an un-interpretable feature in Kikamba. (Having brought up the issue of Case for illustrative purposes, we shall not pursue it any further in the present investigation).

On the other hand, Agreement (henceforth AGR) seems to have a role to play at LF, since in the absence of the subject, it helps one predict the grammatical (and to some extent) semantic features of the null subject. We will look at the rich inflectional morphology of Kikamba in a later Chapter.
What we can reasonably conclude, from the discussion so far, is that, whereas some of the grammatical features of words in the grammar of Kikamba are interpretable at LF (by contributing to meaning), others are uninterpretable at LF, and hence do not contribute significantly to meaning.

4.2: The Kikamba Nominal structure in relation to the typical Bantu Noun-Class System

We have seen that Bantu nouns are composed primarily of a root and clearly distinguishable affixes. For instance, the nouns prefixes indicate mainly number, and together with the concordial agreement prefixes, constitute morphological systems, which divide the nouns into several classes or class genders.

Bleek (1962) introduced the method of classifying nominals in Bantu languages by means of their concord prefixes, and thereafter, assigning a number to each class so constituted. This method, to date, has been the accepted practice in Bantu linguistic studies. The numbering of the classes is, however, more precisely a means of labelling the different sets of concord prefixes that operate the grammatical agreement in any given Bantu language. Table 1 provides a summary of the nominal prefixes of the noun classes reconstructed from existing Bantu grammars.

Proto-Bantu is assumed to have had 23 noun class prefixes. Kikamba, (as presented in the table), only retains 17 of these prefixed forms.
Moreover, a number of these prefixes have undergone some morphophonemic changes. (We must point out that as interesting as these morphophonemic processes are, a discussion of them falls outside the scope of the present investigation).

The following data presents the prefixes existing in Kikamba in close proximity with the reconstructed Proto-Bantu forms for an easy comparison of the structural similarity between the Proto language and its Daughter language (Kikamba): Table 1 on the next page exemplifies this clearly.
Table 1-A Comparison of the Nominal-prefix forms in Kikamba and Proto-Bantu

(The Proto-Bantu prefixes are adapted from Welmers (1973:165).

<table>
<thead>
<tr>
<th>Noun Class</th>
<th>Proto-Bantu Prefix</th>
<th>Kikamba Prefix</th>
<th>Noun Class</th>
<th>Proto-Bantu Prefix</th>
<th>Kikamba Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (sg.)</td>
<td>mo-</td>
<td>mū-</td>
<td>11 (sg.)</td>
<td>lo-</td>
<td>Ü-</td>
</tr>
<tr>
<td>1.a. (sg.)</td>
<td>Ō-</td>
<td>n.a.</td>
<td>12 (sg.)</td>
<td>Ka-</td>
<td>ka-</td>
</tr>
<tr>
<td>2 (pl.)</td>
<td>van-</td>
<td>a-</td>
<td>2b. (pl)</td>
<td>o-</td>
<td>n.a.</td>
</tr>
<tr>
<td>2a. (pl)</td>
<td>o-</td>
<td>n.a.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 (sg.)</td>
<td>mo-</td>
<td>mū-</td>
<td>13 (pl/nt.)</td>
<td>to-</td>
<td>tū-</td>
</tr>
<tr>
<td>4 (pl)</td>
<td>me-</td>
<td>mī-</td>
<td>14 (sg/pl/nt.)</td>
<td>Vo-</td>
<td>Ü-</td>
</tr>
<tr>
<td>5 (sg.)</td>
<td>Le-</td>
<td>i-</td>
<td>15 (nt.)</td>
<td>Ko-</td>
<td>kū-</td>
</tr>
<tr>
<td>6 (pl)</td>
<td>ma-</td>
<td>ma-</td>
<td>16 (nt.)</td>
<td>Pa-</td>
<td>va-</td>
</tr>
<tr>
<td>6a. (nt.)</td>
<td>ma-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 (sg.)</td>
<td>ke-</td>
<td>kī-</td>
<td>17 (nt.)</td>
<td>Ko-</td>
<td>kū-</td>
</tr>
<tr>
<td>8 (pl)</td>
<td>i-</td>
<td>i-</td>
<td>18 (nt.)</td>
<td>Ko-</td>
<td>n.a.</td>
</tr>
<tr>
<td>8x (pl)</td>
<td>li-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 (sg)</td>
<td>ne-</td>
<td>n-</td>
<td>19 (sg/pl)</td>
<td>pi-</td>
<td>n.a.</td>
</tr>
<tr>
<td>10 (pl)</td>
<td>li-/ne-</td>
<td>n-</td>
<td>20 (sg)</td>
<td>Go-</td>
<td>n.a.</td>
</tr>
<tr>
<td>21 (sg)</td>
<td>gi-</td>
<td>n.a.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 (pl)</td>
<td>ga-</td>
<td>n.a.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 (nt.)</td>
<td>ge-</td>
<td>n.a.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Concerning the data on Table 1, we must recognize that the classification of nominals by means of the prefixes (and thereafter assigning numbers to the classes so constituted), entails certain consequences. Admittedly, the class numeration is a valuable method of reference to the grammatical behaviour of independent nominals within the concord system, correlated as it is with the shape of the prefixes of these nominals. It would be reasonable for one to conclude, therefore, that the class is an integral characteristic of the independent nominal. Hence, it is a standard assumption in Bantu language studies that each nominal must be assorted into a specific Noun class.

Prior to describing the classes, it is important that we discuss some aspects of the nature of nominal prefixes. The term 'Prefix' is normally understood in Bantu linguistic studies to refer exclusively to concord elements in both nominals and verbals. According to Guthrie (1970:41): ‘...a Prefix has the restricted sense of the concord element of an independent nominal.’

Let us reflect briefly on what Guthrie means by the term ‘Independent nominal’. Based on our analyses on Kikamba and indeed, other Bantu languages like Kiswahili, we prefer to interpret Guthrie’s sense of prefix to concord elements only. This view, would, in effect, ignore prefixes that appear on the independent nominals themselves. The issue of concern is that concord elements are not always reflected on the
independent nominal itself. Consider the Kiswahili expression ‘Kondoo m-
zuri’ (‘good sheep’ sg). Here, the concord element {m-} is never realized as
a prefix on the independent nominal ‘kondoo’ (‘sheep sg’). Moreover, in
some cases, the prefix on the independent nominal may be different from
the concord element (which seems to be based on semantic features). An
example, again from Kiswahili is the phrase ‘Ki-jana m-zuri’ (‘good boy’),
‘Vi-jana wa-zuri’ (‘good boys’). Here, the nominal prefixes {ki-/vi-} are
quite different from the concord elements {m-/wa-}.

The following data provides a preliminary analysis on the system of
grammatical (concordial) agreement of elements in Bantu grammars. (Note
the changing forms of the prefixed elements):

(Root of the Noun: -ndu ‘human being/person’)

11.a) 
Mū-ndū ṛ-ya mū-seo nī-w-a-thi.
C.1-person 1AGR-that 1AGR-good PrePfx.-1AGR-TNS(Prst. Pft)- go.

‘That good person has gone.’

11.b) 
A-ndu a-ya a-seo nī-m-a-thi.
C.2-person 2AGR-that 2AGR-good PrePfx-2AGR-TNS (Prst. Pft)-go.

‘Those good people have gone.’
The data provided in 11(a-f) reveals that in Kikamba, the lexical categories seem to share certain morphological properties in the form of agreement prefixes attached to the Noun-stem, Verb-stem and adjectival stem respectively. The stem, in this investigation is understood to refer to
that portion of the noun to which the affixes are appended. In Kikamba, it is generally a constant element, although subject to tonal variations and various surface phonetic manifestations due to assimilatory phenomena (which we have deliberately ignored since phonemic changes fall outside the scope of the present work). In addition, the root also expresses a basic and concrete semantic concept.

With reference to the same data, it is significant to note that in Kikamba, noun prefixes can be employed to function both inflectionally (to indicate singularity or plurality), as well as derivationally, to form words with new meanings, frequently (but not obligatorily), with a change in the lexical category of the word in question. For purposes of this investigation, we have focussed mainly on inflectional affixes in Kikamba. (Hence, any reference to derivational categories will only be in cases of absolute necessity for an accurate interpretation of the structure in question).

Suffice it to say, at this preliminary stage of analysis, that there is an inherent relationship between the Noun class and the grammatical agreement pattern it imposes on all the other elements within phrases and sentences in Bantu languages, and specifically in Kikamba. We will revisit this phenomenon in greater detail in the next section.

To explain this further, the literature on Bantu languages reveals that there are typically two types of words, namely:
a) Those that control the agreement of other words. These are referred to as ‘Independent Prefix words’ (IP). These words will always be Nominal.

b) Those whose agreement is controlled by an Independent Prefix word. These words could be Nominal, Verbal, Adjectival or even Quantifiers of different types.

In view of this, we can state that a class of nominals will be made up of those words that have similar prefixes, which in turn form part of a set of concord elements operating a distinct pattern of agreement.

4.3: Gender-marking and concordial agreement in Kikamba

In order to understand the nominal system of Kikamba, it is necessary for us to elucidate the principles of Concord, which, indeed, has been considered to be the most outstanding characteristic feature of Bantu languages. In greater detail, concord refers to a syntactic technique of uniting the basic elements of a sentence to each other by a formal expression of their relationship (relational concepts) within the sentence. This system of concordances serves as a formal bond of relationship between the various constituents of the sentence, leaving no doubt as regards the relational pattern. Consider the following sentences:

12.a) n-yumba y-akwa nī n-thuku.

C9-house 9AGR-my is 9AGR-bad.

‘My house is bad.’
12.b) n-yômба sy-akwa nī n-thūk-u.

C10-house(s) 10AGR-my are 10AGR-bad-sfx.

‘My houses are bad’.

12.c) ma-n-yômба m-akwa nī ma-thūku.

C6 (aug.)-C10-house 6AGR-my are 6AGR-bad.

‘My huge houses are bad’.

12.d) ka-s-ümба/ ka-n-yômба k-akwa nī ka-thūku.

C12(dimin)-C9-house 12AGR-my is 12AGR-bad.

‘My little house is bad’.

12-e) tū-s-ümба/ tū-n-yômба tw-akwa nī tū- thūku.

C13(dimin)-C9-house 13AGR-my are 13AGR-bad.

‘My little houses are bad’.

Notice how the subject-agreement prefix attached to the Adjective, Verb and Determiner changes its form depending on the Noun-Class of the subject-nominal. As we emphasized in the discussion of Bantu Nominal class systems, the class label or prefix in its various concordial agreement forms may or may not appear on the subject of discourse (the subject Noun). Note that the subject of discourse (appropriately called the topic) is not always the same as the grammatical subject of the sentence. Nevertheless,
it must appear as a form of ‘relational index’ for the other elements of the sentence.

Based on the data in 12(a-e), the inference we make is that we cannot regard the prefix, or its absence as the sole, or even primary determinant of a Noun class. In agreement with Watkins (1966:22), it is actually the whole system of concordances, which may (or in some cases, may not) include such prefixes that must be taken, in totality, as the ultimate basis for Nominal classification.

The system of concordances does, in effect constitutes a clear external justification as to why we cannot avoid an examination of both the morphology and syntax of Kikamba, if we hope to provide a principled as well as comprehensive account of grammatical operations in the language.

To start with, let us look at how the concordial system forms a union between the Morphology and Syntax in the grammar of Kikamba. All the elements, which belong together, or are similarly related to the subject of discourse are labelled with identical (or more significant to our investigation, functionally equivalent) affixes.

As we mentioned in the previous section, Bantu words can be distinguished into the Independent-Prefix words (Nominals) and the Dependent-Prefix words (Verbals, adjectivals, quantifiers, etc). When all the Independent-Prefix nominals of a Bantu language have been assorted into classes according to the Prefixes and agreement patterning, a certain
correlation between various classes can be observed. This is due to the fact that, among Independent-Prefix nominals, may be found definite sets of two or more prefixes with identical stems, which give rise to regular short series of words. Such a series is what is commonly referred to as a 'Gender'.

The term Gender, as it is used to describe Indo-European languages differs from its application in Bantu grammars. Generally, in Indo-European linguistic studies, Gender is based on grammatical Sex-gender. Hence, in these languages, lexical and functional categories are distinguished in terms of masculine, feminine or neuter aspects. For instance, the French adjective 'new' has two forms, namely, 'nouvelle (feminine) and 'nouveaux' (masculine). These are then used with the corresponding masculine or feminine nouns. However, unlike in the case of Bantu class Gender systems, the sex-gender adjectives and other non-nominal elements have their own gender-based shapes before they are placed in any noun-controlled expression.

On the other hand, in Bantu languages, Gender is predominantly a feature controlled by the nominal lexical category. The implications of this are that only nouns have the ability to control grammatical agreement in a phrase or sentence. Other constituents acquire their gender-concord from the relevant nouns by the syntactic rules of obligatory grammatical agreement. Accordingly, we distinguish between 'Inherent-Gender' (a feature of the
noun) on one hand, as compared to 'Derived-Gender' (acquired by other non-nominal categories).

We must also point out that Gender, as it applies to Bantu grammar, is based purely on the morphological classification of nouns according to the singular or plural prefixes attached to the stem. In addition, from a syntactic standpoint, other than merely forming the basis for noun classification, Gender refers not only to the noun prefix, but also the concordial form of the classes in which the specific noun belongs.

The relevance of gender to this investigation cannot be overlooked. It assumes a degree of grammatical agreement, which is actually a syntactic feature of co-occurrence restrictions, determining the affixation and realization of concordial forms, not only on the nominals, but also on all the syntactic constituents of a sentence, which, (at least in Kikamba), must always bear agreement features.

Just as the noun-classes are identified by means of the prefixes of the Independent-Prefix nominals attached to them, so too, the genders may be classified by means of the prefixes of IP nominals forming the series. A number of investigations on Bantu languages reveal that the most common type of gender is one that consists of 'Two-Class' genders (cf. Guthrie 1948) The following data from Kikamba illustrates this type:
a) *Two-Class Genders*

**CLASS 1 / 2 (mu-/a-)**

13.a) **mũ-kamba** — **a-kamba**  
C.1-kamba 'kamba person'  
C.2-kamba 'kamba people'

**CLASS 5/6 (i-/ma-)**

13.b) **t-londu**  
ma-londu  
C.5-sheep(sg)  
C6-sheep (pl)

**CLASS 12/13 (ka-/tu-)**

13.c) **ka-ana**  
tu-ana / tw-ana  
C12(Dimin.)-child (small child)  
C13(Dimun.) child (small children)

As the data in 13(a-c) demonstrates, this type of gender as it is manifested in Kikamba, reveals that the 'singular/plural' discrimination is often correlated with the alternation of prefixes between the two classes in a gender. Hence, some classes are labelled 'singular' and others, 'plural'. It must be stated however, that one class may serve as the plural form for two different genders. For example, in Kikamba, Noun Class-6 serves as the plural for both Class 5 and Class 15. The following forms exemplify this:

14a) **Kũ-tũ**  
C.9-ear  
14.b) **ma-tũ**  
C6-ear (s)
Notice that Class 6, serves as the Plural Prefix for two different Noun classes, namely, classes 5 and 15 respectively. In addition, as shall be demonstrated in example 23 in the present Chapter, this prefix can, in certain contexts, have an augmentative or derogatory connotative value. The implications of this for our analysis of Kikamba are significant. Generally, in Bantu languages, the concordial prefix series serve as:

a) A gender sign

b) To distinguish between plural and singular forms.

Words can therefore be classified with reference to the occurrence of grammatical concord. One kind of classification of a noun-class consists of all those words that display a particular set of agreement pattern. In Kikamba, for instance, grammatical concord is operated by means of prefix agreement- a fact treated in this work as one of the criteria used to determine whether or not a given language is genuinely Bantu or not. It is therefore, necessary for us to examine certain features of the class system and use of concord in Bantu grammar.

In examining the characteristics that determine which words go into the same classes, two things must be considered:

a) The Prefix of the Independent-Prefix word;
b) The various agreements displayed by the Dependent-Prefix words (a) above may control.

We need to explain the reasons we found it necessary to take into account both of the above prefixed forms in determining noun-classes instead of only considering the prefix on the noun itself. This is simply because some Independent-prefix words, bearing morphologically similar prefixes, may control different sets of agreement patterns. Consider these examples from the Kikamba noun-class system:

15.a) Mũ - tũi (neighbour)  15.b) a - tũi (neighbours)
    C.1 - neighbour               C.2 -neighbour
15.c) Mũ-omo (door)            15.d) Mĩ - omo (doors)
    C.3-door                    C.4 -door

As can be seen from the data above, similarity in the prefix of the nominal form is not a guarantee that the nominals will be assorted into the same Nominal class. Notice the different inflectional patterns that each of the nominals adopt, particularly in the plural forms.

Conversely, some Independent-Prefix words, bearing different prefixes, may control identical agreement patterns. In some instances, the dependent-prefix words have identical agreement patterns, and yet belong to different classes. Notice this pattern in the following data:

C3-door 3AGR-that is 3AGR-good.

‘That door is good’.


Cl-old man 1AGR-that is –1AGR-good

‘That old man is good’.

As can be seen, the two subject nouns belong to different noun classes, and yet manifest identical agreement patterns on the dependent Prefixed forms that they control. The implication therefore, is that the classification of words according to prefixes arises, not only from the prefixes attached to the nominal words, but also out of the concord system. This, in effect, means that when noun classification s based on concord, words that control different agreement patterns (syntactic patterning) cannot be placed in the same class, irrespective of whether they have identical prefixes attached to them or not.

A final reason why we must consider both the syntactic agreement patterning as well as the forms of the Independent prefixes words is that in Bantu languages, we may have the occurrence of a ‘Zero-Prefix’ attached to the Nominal. This would mean that a particular noun class has no overt manifestation of a prefix where we would normally expect the Independent-Prefix to occur. We will examine more instances of this in the next section. The following example illustrates this:
17a) N-yūmbo t-i-no nī-n-dune.
C9 (sg.)-house this PrePfx. -9AGR-red
‘This house is red’.

17b) N-yūmbo ithi nī-n-dune.
C10 (plŌ) these PrePfx. -10AGR-red.
These houses are red’.

We can, however, infer the existence of the manifestation of the Zero-Prefix on the Independent nominal since it controls a different set of agreement patterns on the Dependent Prefixes in the sentence. The implications of this for our investigation of Kikamba grammar are significant. If we were to attach the label ‘plural’ to a class, then a sentence consisting of nouns within this class should always indicate a plural meaning, whether the Independent Prefix nominal is present or not.

This assumption will become crucially relevant in our analysis of the Null subject Parameter in Chapter 4. In addition, where two kinds of IP nominal control the same agreement pattern, one of them will form the singular member of one gender, whereas the other forms the plural member of another class. For instance:

18.a) t-via ma-via
C.5(sg) –stone C6(PI) –stone(s)
b) One-Class Genders

A common feature of Bantu languages is the occurrence of genders that consist of only one class. Two types of 'One-class gender' occur, namely:

i) Uncountables

These are IP nominals that do not belong to any series in which the other members have identical stems. In addition, counting words cannot be used to modify these nouns, for instance:

19.a) Kītoo - dust
19.b) kiwū - water
19.c) mūthanga - soil
19.d) ūtoonu - meanness/selfishness
19.e) kyūa - anger

It is interesting to observe that the class of these words is in some cases, the same as that of the singular member of a two-class gender, and in other cases, it is the same as that of the plural member of another class. Compare the following forms:
### Countables

These are a less common type of 'One-class' gender, which basically contain IP nominals that can be used with counting words. This means that one and the same class serves to indicate both singular and plural forms.

<table>
<thead>
<tr>
<th>20.a) kītoo</th>
<th>kī-atu</th>
<th>20.b) kīwu</th>
<th>kī-kombe</th>
<th>20.c) mūthanga</th>
<th>mū-tui</th>
</tr>
</thead>
<tbody>
<tr>
<td>dust</td>
<td>C.7(sg) -shoe</td>
<td>water</td>
<td>C.7(sg)-cup</td>
<td>soil</td>
<td>C.1(sg)-neighbour</td>
</tr>
<tr>
<td>20.d) útoonu</td>
<td>-ū-imi</td>
<td>meanness</td>
<td>C11(sg)-tongue</td>
<td>20.e) kyūa</td>
<td>- ky-aa</td>
</tr>
<tr>
<td>meanness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger</td>
<td>C.7 (sg)-finger</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>21.a) n-yūmba</th>
<th>C9/10-house</th>
<th>21.b) n-zou</th>
<th>C9/10-elephant</th>
<th>21.c) n-g'ombe</th>
<th>C9/10-cow</th>
</tr>
</thead>
</table>

The words above are neither singular nor plural. Without a counting word, it is impossible to tell whether words in this type of gender are expressing a singular or plural idea. Only the context of discourse or a
counting word will indicate discrimination between singularity and plurality.

c) **Multi-Class Genders**

In Bantu languages, and by extension, in Kikamba, we have multi-class derived gender distinctions, consisting of series of more than two classes. This is actually an extension of the singular-plural discrimination. However, the gender goes further in expressing other concepts, than mere number, which are largely derivational in meaning. For instance in Kikamba, we can have the following distinctions. Note the derivational changes in lexical categories:

22.a)

mũ - / a- / ū- (C1 / C2 / C14)

Mũ-see / a-see / ū-see

C.1(sg)-old person/ C.2(Pl)-old person(s)/C14-old age

Mũ-kamba /a-kamba / ū-kamba

C.1(sg)-kamba person / C2(pl.) – kamba person(s) / C14-land of the kamba people

22.b)

mu-ana / sy-ana / w-ana

C.1(sg)-child / C.8(pl)-child(ren)/ C14-child(ishness)
As these examples reveal, Kikamba, like most Bantu languages, combines different genders to express:

- a singular/plural distinction with respect to persons;
- The qualities that characterize them.

Another common strategy of 'multi-class gender serves to indicate relative size with or without a singular /plural discrimination. Consider the following forms:

(23.a) (23.b)

Ki-vila ‘chair’ mu-iitu ‘girl’
C7-chair C1-girl

I-vila ‘chairs’ eetu (a-itu) ‘girls’
C8-chair C2-girl

Kai-vila ‘little chair’ ke-l-iitu (ka-i-l-itu) ‘little girl’
C12(Dimin.)-chair C12(Dimin.)-infx.-girl

Tu-vila ‘little chairs’ tu-i-l-iitu ‘little girls’
C13(Dimin.)-chair C13(Dimin.)-infx.-girl

Ma-vila ‘big/ugly chairs’ yi-l-iitu ‘uncouth girl’
C6-chair C5(derog./aug.)-infx.-girl
me-1-itu (ma-i-l-itu) 'uncouth girls'

C6(derog./aug.-infx-girl

In summary of the data just given, we can state that a nominal in a given class behaves in a predictable grammatical pattern, regardless of whether it is one member of a 'Two-class' gender, or is the sole member of a 'One-class' gender. This demonstrates conclusively that while Classes are an integral part of Bantu nominal structure, the genders are really outside it. The assortment of the noun classes into gender is actually part of the morphological and lexical component of the language.

4.4: General correlations between selected Bantu Noun-classes, NP categories and semantic values.

Research in the area of Bantu linguistic studies suggests that certain NP categories actually do provide a semantic grid for Noun-class systems, in as much as they serve as the grammatical basis for many of the categories encoded by different Nominal classes. (cf. Spitunik 1987).

Apparently, some Noun classes are assumed to be more 'grammatically conditioned' than others, in the sense that certain noun classes have a higher degree of correspondence with NP categories. This grammatical conditioning is believed to be most obvious within the [+HUMAN/ PERSONAL] category, and usually, Classes 1/2. Table 2 on the next page provides a summary of the major correlations between Noun-
classes and NP categories based on generalizations made from investigations on different Bantu languages cf. Spitunik 1987):

**TABLE 2-Semantic Correspondences between Noun-class prefixes and Semantic values in Bantu languages.**

<table>
<thead>
<tr>
<th>NOUN CLASS</th>
<th>NOUN-PHRASE CATEGORY</th>
<th>SEMANTIC VALUES</th>
<th>AFFECTIVE MEANINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 / 2</td>
<td>Personal</td>
<td>[Personal, human, animates]</td>
<td>'Human', 'socially designated person'</td>
</tr>
<tr>
<td>3 / 4</td>
<td>Agentive/extended</td>
<td>[plants, plant-parts, natural phenomena, foods, non-paired body parts, miscellaneous]</td>
<td>'potent/volitional/extending over space/ time/ in ground or water'</td>
</tr>
<tr>
<td>5 / 6</td>
<td>Collective</td>
<td>[fruits, paired body-parts, inanimates, miscellaneous]</td>
<td>'Non-individuality'</td>
</tr>
<tr>
<td>7 / 8</td>
<td>Inanimate</td>
<td>[miscellaneous inanimate]</td>
<td>'Thing despised/enumerable entity, large/gross/exaggerated'</td>
</tr>
<tr>
<td>9 / 10</td>
<td>Animate</td>
<td>[wild animals, miscellaneous inanimate, few humans]</td>
<td>'hunter' /'edible animal'</td>
</tr>
<tr>
<td>11 / 10</td>
<td>Extended</td>
<td>[long objects, abstract entities, miscellaneous inanimate]</td>
<td>'extending over space/long objects'</td>
</tr>
<tr>
<td>12 / 13</td>
<td>Small/diminutive</td>
<td>[small objects, birds]</td>
<td>'small/endeared/quick/cunning'</td>
</tr>
<tr>
<td>14</td>
<td>Mass/state/locative</td>
<td>[abstract qualities, states, masses, collective nouns]</td>
<td>'potent mass/state of being/quality'</td>
</tr>
<tr>
<td>14 / 6</td>
<td>Stationary</td>
<td></td>
<td>'flat surface'</td>
</tr>
<tr>
<td>15 / 6</td>
<td>Motion</td>
<td></td>
<td>'target of motion/adherence'</td>
</tr>
<tr>
<td>5 / 6</td>
<td>Collective</td>
<td></td>
<td>'non individuality'</td>
</tr>
<tr>
<td>6</td>
<td>Mass</td>
<td>[Mass nouns]</td>
<td>'mass'</td>
</tr>
<tr>
<td>15</td>
<td>Activity</td>
<td>[nominal infinitives]</td>
<td>'activity, target of motion'</td>
</tr>
<tr>
<td>16</td>
<td>Locative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Locative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Locative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From the table, we see that the semantic value of each class is encoded explicitly onto the prefix-forms. More significantly, there are both derived and inflectional forms in each of these nominal classes as a result of analogical extensions from the basic, original meaning of the prefix.

However, it is important to note that a few of the semantic values presented above may not have the exact meaning in the grammar of Kikamba. A case in point is the affective meaning given in the table for Class 7/8 as ‘thing despised/ large/ gross / exaggerated’. In Kikamba, this meaning is best expressed using Class 5/6 which brings in the augmentative meaning, for instance:

24a) mū-ndū
Cl-person

b) a-ndū
C2-person(pl)

c) i-mū-ndū
C5(derog/aug)-Cl-person

‘Huge/ugly/ despicable person’

d) ma-mū-ndū
C6(derog/aug)-Cl-person(pl)

‘huge/ugly/despicable people’.

Class 5/6 Prefixes derive both Augmentatives (oversized or unpleasant concepts) as well as the analogical extensions of indistinct entities, both animate and inanimate. It should be pointed out however, that
most of these semantic values stem from morphological processes that may no longer be productive, particularly with reference to the nominal system of Kikamba.

In addition, as we emphasized in Section 2.1, under Minimalist assumptions, features that are purely semantic, the implication being that they have no grammatical (morphological and syntactic) correlates, are ruled out from being formal features, irrespective of their semantic worth. Nevertheless, it is important that we analyse the relationship between the noun-class system and the meaning of nouns in these classes before we can completely rule out the role of the semantic features in predicting the nominal structure of Kikamba.

4.4.1: Morphological and semantic correspondences in the Noun-classification system of Kikamba

One of the critical factors of the Kikamba Noun-classification rests on the syntactic patterns which nominals of each noun class displays. Other factors of equal importance are the Noun-class prefixes themselves, as well as their semantic dimensions of number, animacy, shape, size and location. All these factors overlap in the determination of the noun-class membership of any particular noun in Kikamba, and thereby, contribute to the structuring of the noun-class system of Kikamba grammar.

It is imperative that we point out that the Independent-Nominal prefixes (which we said are the overt formal markers of class membership) are not 'empty' (or purely functional) markers. On the contrary, most of the
prefixes have some residues of identifiable semantic values. Every class prefix, we have seen, distinguishes number categories (singular, plural, countable, non-countable, and so on). To add to this, some prefixes in Kikamba have additional semantic values, often as a consequence of their overt derivational functions. Their agreement prefixation attached onto an adjective, Verb or Noun-stem derives a noun, which is semantically compositional.

It is important for us to consider the semantic and morphological similarities of nouns, which are classified, in the same class. The following data exemplifies the various Noun-classes found in Kikamba:

**NOUN CLASSES 1 / 2**

Prefix clusters: CLASS 1-[mʊ-] / [+ consonant], [mw-] / [+vowel]
CLASS 2 – [a-]

<table>
<thead>
<tr>
<th>CLASS 1</th>
<th>CLASS 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mu-ndū ‘person’</td>
<td>a-ndū ‘people’</td>
</tr>
<tr>
<td>C1 (sg)-person</td>
<td>C2 (Pl)-person</td>
</tr>
<tr>
<td>Mu-anake/mw-anake ‘young man’</td>
<td>a-nake ‘young men’</td>
</tr>
<tr>
<td>C1 (sg)-young man</td>
<td>C2 (pl)-young man</td>
</tr>
</tbody>
</table>

In the scholarship on the reconstruction of Proto-Bantu, these classes (together with CLASSES 7/8), are assumed to represent the extreme poles of the semantic dimension of Animacy. Hence, this is referred to as the ‘Personal’ class. In addition, the Nouns found in this class are assumed to have ‘maximum semantic homogeneity’ in terms of their denotative
references. It must be noted, however, that in Kikamba, these classes contain many ‘non-personal’ nouns.

In addition, many other noun classes refer to a variety of human forms. However, we can suggest that these Noun classes as they appear in Kikamba still bear some residues of personal semantic meaning. Within the derivational and inflectional nominal system of Kikamba, these classes have highly productive prefixes, and further, correlate closely with Noun-Phrase categories. The Class 1 / 2 Prefixes [mu-/a-] derive nouns and adjectives, whereas the Class 7/8 prefixes derive Nouns to refer to inanimate, enumerable entities.

**NOUN CLASSES 3 / 4**

Prefix Clusters: CLASS 3-[mũ-] ~ [mw-]
CLASS 4- [Mi-]~ [mj-]

<table>
<thead>
<tr>
<th>CLASS 3</th>
<th>CLASS 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mũ-tí/mw-tí 'body'</td>
<td>Mi-tí mj-tí 'bodies'</td>
</tr>
<tr>
<td>C₃(sg)-body</td>
<td>C₄(pl)-bodies</td>
</tr>
<tr>
<td>Mũ-ei/mw-ei 'moon'</td>
<td>mĩ-ei/mj-ei 'moons'</td>
</tr>
<tr>
<td>C₃(sg)-moon</td>
<td>C₄(pl)-moon</td>
</tr>
<tr>
<td>Mũ-tí 'tree/stick'</td>
<td>mĩ-tí 'trees/sticks'</td>
</tr>
<tr>
<td>C₃(sg)-stick</td>
<td>C₄(pl)-stick</td>
</tr>
</tbody>
</table>

(Notice the glide-formation rule that gives rise to different allomorphic variants of the Nominal Prefixes).
From the reconstruction of Proto-Bantu, nouns of Class 3/4 are notationally ‘agentive’ or ‘living’. It appears that the similarity derives partly from the common historical origins of Bantu Classes 1 and Class 3 in classifying animate things. In addition, in a number of Bantu languages, these classes also denote spiritual beings, natural forces, vital body parts, plants, young animals, and animals in ground or water. Further to this, the ‘agentive’ reference has developed stereotypical, associative connotations of potency, vitality, growth or extension over time.

However, in Kikamba, although Class 3 shares a morphological similarity to Class 1, ([mu-/mu-] respectively), Class three also denotes inanimate objects. For instance, ‘door’ is ‘mu-omo’, with a class 3 prefix attached to the stem. Further, many words denoting concepts listed under this class in Proto-Bantu are actually found in other nominal classes in Kikamba.

**NOUN CLASSES 5 / 6**

Prefix Clusters: CLASS 5 [t-], [j-]

CLASS 6 [ma-], [ø]

<table>
<thead>
<tr>
<th>CLASS 5</th>
<th>CLASS 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>tl-londu</td>
<td>ma-londu</td>
</tr>
<tr>
<td>C5(sg)-sheep</td>
<td>C6(pl)-sheep</td>
</tr>
<tr>
<td>tl-indū/ j-indū</td>
<td>(ma-indū) me-ndū</td>
</tr>
<tr>
<td>C5 (sg)-thing (derogatory)</td>
<td>C6 (pl)-things (derogatory)</td>
</tr>
</tbody>
</table>
These classes include mainly inanimate objects but with a few animals and unusual human beings. Augmentatives for all of the other noun classes can be derived from these classes in their singular and plural forms respectively. It should be noted that some Class 5 words have no corresponding plural forms. Conversely the same applies for some Class 6 words. For the cases of Augmentative nouns, the Nominal prefix commonly occurs in addition to the class prefix, which may or may not change. For instance:

25.a) ṭ-mù-ndù ‘a huge man/giant’ ma-mù-ndù ‘huge men’
    C5(sg)-C1(sg)-person C6(pl)-C1(sg)-person(s)

25.b) ṭ-kù-la ‘ugly garment’ ma-kù-la ‘ugly garments’
    C5(sg)-C9(sg)-dress C6(pl)-C9(sg)-dress

In pronto Bantu, this class had no specific semantic meaning, but referred in general, also to things not definitely conceived. However, in Kikamba, both Classes, and particularly Class 6 has some degree of Semantic application in the sense that it can be applied in a derivative manner, constituting what may be characterized as a ‘Derogative-Augmentative’ reference.
NOUN CLASSES 7 / 8

Prefix Clusters: CLASS 7-[kĩ-], [kj-]
CLASS 8-[ĩ-], [sj-], [k-]

CLASS 7
Ki-ndũ ‘something’
C7(sg)-‘thing’
Ki-vïla ‘chair’
C7(sg)-chair
Ki-atũ/j-atũ ‘shoe’
C7 (sg)-shoe

CLASSES 8
sy-ïndu ‘things’
C8(pl)-things
i-vïla ‘chairs’
C8(pl)-chairs
i-atũ/y-atũ
C8 (pl)-shoes

These nouns in reconstructed Bantu grammar included a wide range of generally inanimate nouns. In addition, the classes have the general meaning of referring to a ‘thing’ or ‘discrete or endurable entity’.

NOUN CLASSES 9 / 10

Class Prefix [n-]

The Prefix representing these two classes remains unchanged. Hence, there is no distinction in the Singular and Plural forms for the Nouns in these Classes.
In proto-Bantu, Class 9/10 nouns are ‘animate’ with a great number denoting wild animals. However, these semantic values cannot be linked to any particular derivational function of class prefixes.

As can be observed from the Kikamba data provided, these nouns include both animate and inanimate objects. The distinction between the Nouns of either class can only be distinguished by examining their concordial patterns or from discourse context.
ū-sīa  ‘foot-path’  n-zīa  ‘roads/paths’
ū-imī  ‘tongue’  n-imī  ‘tongues’

From reconstructed Proto-Bantu, these nouns could be related by analogy to refer generally to things extending over a long duration of space’, or denoting elements belonging to animate creatures, for instance, a horn or rib. Notice the relation in terms of long and slenderness.

NOUN CLASSES 12 / 13

Prefix Clusters: NOUN CLASS 12-[ka-]

NOUN CLASS 13 [tu-], [tw-]

**CLASS 12**

<table>
<thead>
<tr>
<th>NOUN CLASS 12-[ka-]</th>
<th>CLASSES 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ka-ana  ‘little child’</td>
<td>tū-ana/tw-ana  ‘little children’</td>
</tr>
<tr>
<td>C12(sg)-C1(sg)-child</td>
<td>C13(pl)-C1(sg)-children</td>
</tr>
<tr>
<td>Ka-li-itho  ‘little eye’</td>
<td>tū-li-itho  ‘little eyes’</td>
</tr>
<tr>
<td>C12-C5-eye</td>
<td>C13-C5-eyes</td>
</tr>
<tr>
<td>Ka-nilu, ke-nilu  ‘small girl’</td>
<td>tw-nilu  ‘little girls’</td>
</tr>
<tr>
<td>C12-C1-girl</td>
<td>C13-C1-girl(s)</td>
</tr>
<tr>
<td>Ka-mū-sūngū  ‘little Caucasian’</td>
<td>tū-mū-sūngū  ‘little Caucasians’</td>
</tr>
<tr>
<td>C12-C1-Caucasian</td>
<td>C13-C1-Caucasian(s)</td>
</tr>
</tbody>
</table>
As can be seen from this data, most nouns in Kikamba may be put in these classes, which designate Diminutives. Notice the possibility for the occurrence of 'Double-Prefixation':

26a) Ka-mű-tů

C12-C3-stick (little stick)

26.b) tů-mű-tů

C13-C4-stick (little sticks)

26.c) ka-ků-tů

C12-C15-ear (little ear)

26.c) tů-ma-tů

C13-C16-ear (little ears)

As can be seen from the above examples, in formal application and regular use, these two classes have a common semantic reference of diminutive, and sometimes, even derogatory diminutive, implying a degree of wit, cunningness, speed or as a term of endearment.

NOUN CLASSES 15 / 6

Prefix Clusters: CLASS 15-[ků-], [kw-] CLASS 6 – [ma-]

CLASS 15

Ků-tů ‘ear’

ma-tů ‘ears’

C15-ear

C6-ear(s)

Ků-ū ‘leg’

ma-aů ‘legs’

C15-leg

C6-leg(s)

Ku-oko, kw-oko ‘hand’

(ma-oko) mo-oko ‘hands’

C15-hand (sg)

C6-hand (pl)
Except for the above three nouns, the stems of the Nouns in this class can be proved to be cognates of Verbal root-forms. Hence, these nouns associated with verbal roots can be described as ‘Nominal-Verbal’ (Whiteley 1962). The ‘Nominal’ part of the term describes their grammatical behaviour similar to nouns in controlling agreement, and the ‘Verbal’ part recognizes that an Object-Infix may be inserted within the stem. This aspect distinguishes this class from other nominal forms.

Examine the data below:

<table>
<thead>
<tr>
<th>Nominal form</th>
<th>Verbal stem</th>
<th>root</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.a) kū-semb-a ‘to run’</td>
<td>semb-a ‘run’</td>
<td>-semb-</td>
</tr>
<tr>
<td>C15-run-sfx</td>
<td>run-sfx.</td>
<td></td>
</tr>
<tr>
<td>27.b) kū-som-a ‘to read’</td>
<td>som-a ‘read’</td>
<td>-som-</td>
</tr>
<tr>
<td>C15-read-sfx.</td>
<td>read-sfx.</td>
<td></td>
</tr>
<tr>
<td>27.c) kū-valūk-a ‘to fall’</td>
<td>valūk-a ‘fall’</td>
<td>-valūk-</td>
</tr>
<tr>
<td>C15-fall-sfx.</td>
<td>fall-sfx.</td>
<td></td>
</tr>
</tbody>
</table>

In Kikamba nominal morphology, we have the Noun-prefix of Class 15 /ku-/ , which, when attached to verbs, changes the category to a noun. Consider the example below:
27.d) Mutua nř-w-a-thek-a.

Mutua PrePfx.-AGR(3rd Psn.sg.)-TNS (prst.pft.)-laugh-sfx.

‘Mutua has laughed’.

27.e) Kũ-thek-a kw-a Mutũa...

C15-laugh-sfx. 15AGR-of Mutua...

‘Mutua’s laughter…’

It must be noted that these nouns do occur as subjects of sentences like the nouns in other classes. For example:

27.f) Kũ-semb-a ku-ake...

C15-run-sfx. 15AGR-his

‘His running…’

27.g) Kũ-valūk-a ku-akwa...

C15-fall-sfx. 15AGR-my

‘my falling…’

The same nominal forms also occur as Infinitives following Verbal forms, for instance:

28.a) pro nř-me- (k) ü-som-a?

Pro PrePfx-AGR (3rd Psn. Pl.)-15 (infin.) to- read sfx.

‘Are they reading?’
The Nominal form could also follow a Possessive or -A- Link:

28.b) N-gũa sy-a (k) ū-kom-a.

C10-clothes 10AGR-for C15 (infin.) to-sleep-sfx
‘sleeping clothes’/Clothes for sleeping’.

28.c) Ki-ndũ ky-a (k) ū-ta.

C7-thing 7AGR-for C15 (infin.) to-sell
‘something for selling’/something to sell’.

(The above Nominal form is an extremely common usage, particularly useful for translating adjectives for which there is no directly equivalent words in the Kikamba lexicon).

Notice the category change when Noun-class Prefix 15 /ku-/ is attached to the verb-stem ‘-thek-a’ (‘laugh’). The verb changes to a noun to express the possessive meaning of ‘Mutua’s laughter’. Traditional grammatical analysis would consider the structure just presented as falling outside the scope of syntactic analysis, and thus, would be better explained within the morphological level of analysis. However, in the present work, we beg to differ.

The issue at hand now is not whether the above derivation can be handled within the syntax; there is no compromise about that. The problem we have to deal with is whether such forms are constructed in the syntax, in a representation with nominal functional categories dominating verbal functional ones (as proposed in Borsley and Kornfilt 1989), via head-movement.
Alternatively, is the possibility that these forms are inserted into such syntactic structures as fully formed complex words and thereafter undergoing movement in the syntax, and in the process, having their features 'checked' off. We opt for this latter view, which is in conformity with the tenets of the Minimalist Program.

**NOUN CLASS 16/17**

Prefix forms: CLASS 16-[va-] CLASS 17-[kū-]

**CLASS 16**

\[\text{Va-ndū 'place'}\]

**CLASS 17**

\[\text{kū-ndū 'place'}\]

C16-place (specific) C17-place (general)

The main locative Bantu Noun-class Prefixes are assumed to belong to Class 16, Classes 17 and 18. Other classes include: Class 14-('Flat surface'), Class 15 ('target of Motion'), Class 3 ('In ground or water'). According to Bantu linguistic studies, the three main locative prefixes (Classes 16, 17, 18) found in most present day Bantu languages have played a historical role in the classification of certain nouns, and perhaps, also in establishing certain overall patterns of classification.

While these locative prefixes are sometimes considered as 'secondary' prefixes, in Kikamba, they are similar in shape and agreement-marking-patterns to the other Noun class prefixes in the language.

At this point, we need to explain how the meaning of a class prefix in Kikamba contributes to the overall semantics of the noun-class of which...
it is a marker. The first obvious feature is number. Kikamba noun class system can be described in terms of the category of number, which is indicated through the opposition of nominal prefixes. In Kikamba, as will be seen in the following pages, we have singular/plural distinction, non-countable/countable nouns, as instances of how number is manifested in the nominal system.

However, in reality, the semantic coherence or homogeneity of a noun-class will depend on how ‘tightly’ or ‘loosely’ the noun-class is structured by both semantic and functional Noun-phrase categories. Related to Kikamba, on one level, the semantic homogeneity of a given class will be seen to depend to a great extent, on the productivity of its class prefixes. Thus, all of the nouns derived by a certain class prefix tend to have a shared meaning: namely that which belongs to that prefix.

On another level, the meanings of prefixes extend into other formal or semantic values. For instance, some of the noun-class prefixes in Kikamba have acquired affective connotations. Class 6 prefix [ma-] has the notion despised, or derogatory associated with the augmentative aspect. Classes 12/13 also have the connotations of ‘cunningness, speed or wit’ associated with the diminutive aspect.

The fundamental issue we are raising here in determining the semantic nature of Kikamba noun-classes rests on the extent to which distinct morphological categories align themselves with semantic features.
Stated differently, we need to establish whether semantic information is relevant in so far as noun-class organization is concerned.

As a matter of fact, this question of how to approach the semantic nature of the Bantu noun-classes has intrigued researchers on Bantu linguistics for a long time. However, most Bantu scholars argue that, although Bantu noun-class systems are rather elaborate from a formal (morphological) standpoint, they are rather unsystematic from a semantic standpoint. Bantu Noun-classes focus primarily on the type of entities, which the nouns of a class denote. In so doing, such approaches recognize a basic semantic grid common to Bantu noun-class systems.

The following information is a summary (adapted from Spitulnik (1988: 209) on the general semantic scheme of Bantu Noun Class systems:

CLASS 1/2 - [Personal, human, a few other animates]
CLASS 3/4 - [Plants, Plant-parts, natural phenomena, foods, non-paired body-parts, miscellaneous]
CLASS 5/6 - [Fruits, paired body-parts, miscellaneous inanimate]
CLASS 7/8 - [Miscellaneous inanimate]
CLASS 9/10 - [Wild animals, miscellaneous inanimate, a few humans]
CLASS 11/10 - [Long objects, Abstract entities, miscellaneous inanimate]
CLASS 12/13 - [Small objects, birds]
CLASS 14 - [Mass nouns]
CLASS 15 - [Abstract qualities, States, masses, Collective nouns]
One problem we encountered with this approach in the present analysis of the Kikamba nominal system is that the 'meaning' associated with a noun-class is erroneously equated with the typical set of objects it picks out, rather than any morpho-syntactic or structural distinctions. More specifically, such an approach focuses largely on an 'extensional' level of meaning, in terms of sets of objects, rather than dealing with the 'intentional' level or morpho-syntactic level, which would concentrate more on the inherent features of the lexical items themselves.

A second problem we encountered with this approach is the occurrence of nouns in Kikamba, which do not fall neatly into this central semantic categorization of noun-classes. The dilemma is whether or not they should be considered as arbitrarily distributed within the Kikamba nominal system. A case in point is that according to Table 11, CLASSES 9/10 contains animals, miscellaneous inanimate objects and a few humans. However, in Kikamba, the word: 'nyumba' ('house'/ 'room') is also found in this class. What semantic connection could there possible be between the words in this class? In addition, the nouns with the meaning for 'wife' as well as the (derogatory) term for a young (uncircumcised) boy are:

25.a) Ki-veti ‘wife’
     C7-wife
b) I-veti ‘wives’
     C8-wife

26.a) Ki-visī ‘(derog). Young boy’
     C7-boy
b) I-visī ‘(derog) young boys
     C8-boy
27.a) Ki-vīla ‘chair’
   C7-chair

b) l-vīla ‘chairs’
   C8-chair

Notice that the Nouns ‘wife’ and ‘young boy’ are undisputedly [+ANIMATE, +HUMAN]. As such, based on this semantic criteria, we would have expected them to occur in Classes 1/2, the predominantly [-ANIMATE, -HUMAN] nominal category. On the contrary, these ‘human’ nouns are classified under the largely ‘inanimate’ Classes 7/8, perhaps indicative of the cultural attitudes towards these beings!

What our argument is leading to is this: in view of this somewhat unpredictable semantic configuration, in order to capture the richness of the Kikamba nominal system, (and the grammar in general), what is needed from the onset, is a clear recognition of the formal features, as well as functional categories associated with each noun class. This will, in effect, clearly define classes of linguistic forms, which have common grammatical properties. For example, for the Nouns of Class 1/2 we could have the subcategorization features within the morphological component of the lexicon as:

CLASS 1/2 -[+NOMINAL, +COUNT, +ANIMATE]

An alternative proposal to solve this semantic stalemate is that, classes of nouns, which control distinct agreement marking patterns, could be analysed, not from a semantic standpoint, but purely from a morpho-syntactic perspective. Following this line of thought, therefore, notational categories would be included within the morphological component of the
lexicon, which would then be based on conceptual distinctions relating to the actual meanings of the nominal forms (for instance, activity, thing, abstract object, smallness, oversized element, etc). This would then give nouns distinctive lexical and sub-categorization properties that are part of one's acquired competence in Kikamba. For instance, the lexical features of the following Kikamba nouns are stated as indicated:

28.a) Ka-mū-ndū ‘small man/fellow’
   C12-C1-person
   Nominal Prefix concord
   [Ka-] C12- [+singular, +diminutive/+cunning/sly/derogatory]
   [Mū-] C1 [-+singular, +personal/+human]

28.b) Ma-mū-ndū ‘big huge men’
   C6-C1-person
   Nominal prefix concord
   [Ma-] C6- [+plural, +augmentative, +indistinct thing/unusual personality, +derogatory]
   [Mū-] C1 [+human/+animate/personal]

This information is assumed in this investigation to be subsumed in the morphological sub-categorization features for each noun class prefix. Noun classes therefore, are viewed as an intersection of the many different categories associated with individual nouns that occur in each specific class. More significantly there now will be a greater degree of overlap between morphological and syntactic features since both are involved in processes of word and sentence formation in Kikamba.
We therefore need to address the following issues:

a) Is there any systematic strategy or motivation for Noun-class membership in Kikamba? At what levels does it manifest itself?

b) How is the semantics of Kikamba noun-class system typically understood? Does it have parallels to the typical proto-Bantu classification?

c) What are the crucial semantic/morphological/syntactic factors operating within the Kikamba Noun-class system?

In the previous section, we provided a table on the existing Noun-class system of Kikamba. We also pointed out that the language has undergone a number of morphophonemic processes in its divergence from other Bantu languages. Hence, although most of the IP nominal prefixes bear resemblances to Proto-Bantu forms, a few may be dissimilar in one way or other. However, it is beyond the scope of the present study to explain these morphophonemic changes to the prefixed forms.

At this juncture it is important for us to emphasize that we do not regard the Nominal prefix to be the sole determinant of a Noun class. If we did, we would encounter problems explaining the concordial agreement of Nouns with no overt Noun class prefixes, and yet still go ahead to manifest concordial agreement patterns like other nouns with overt prefixes.

An additional factor that would work against a classification that focuses on the noun-class prefixes is the existence of many nouns with
identical prefixes (or lack of prefixes) that would, as a consequence, require different concordial systems.

It is for these reasons that the Noun-class systems have been analysed as formal categories with the ability to manipulate the morphological and syntactic behaviour of other elements within the sentence.

4.5: Summary

This Chapter of necessity has been largely morphological in orientation, so as to set the basis for us to analyse the effect of the nominal morphology on the phrase-structure of clauses in Kikamba. It is important that we reiterate that, in the analysis of Kikamba Noun Class markers, the morphology of words is constrained by the UG principle of 'Lexical Integrity'. This means that the morphology of words is inaccessible at the level of constituent structure where syntactic processes of phrase formation take place as discussed by Bresnan and Mchombo (1995), in their analysis of Chichewa. It is at the level of functional structure in the syntax that the morphology makes a contribution (Bresnan 1995).

In addition, the chapter has set the base required to exemplify how Kikamba, and generally, Bantu syntax is complicated by the effects of lexical specifications, morphological marking, as well as morphological
splits, as we will see, a consequence of two distinct domains in the analysis of Kikamba morpho-syntax; the concordial and the lexical domains.

We have examined the classification of nominal segments according to their behaviour within the system of grammatical agreement, so typical of Bantu grammars. This entailed the differentiation of the concordial elements into, on the one hand, the Independent elements (IP) that controls the agreement pattern, distinguished from the dependent categories, which could be regarded as the overt sign of a word agreeing with the Subject Nominal. This is what has led Bantu grammarians to classify Nominal segments according to the Number feature and nature of the concordial elements within a sentence and phrase.

From our discussion so far, it is clear that the term 'Gender' ought to be understood in a special sense, when applied to Bantu language studies, such as the present one. Although the investigation of Number-marking has been closely linked with that of Gender-marking, it is, as we have demonstrated, both a morphological and semantic discrimination well. The expression of 'person' on the other hand, is normally achieved by the use of special prefixes, to be highlighted in the next Chapter, and proves to be an integral part of the grammatical structure of Kikamba.

From these observations, it is evident that the classifying of nominals by means of their prefixes, and thereafter assigning number to the classes so constituted, entails certain consequences in the lexicon. In
general, we have argued that the class numeration is a valuable method of reference to the grammatical behaviour of independent nominal within the concord system, correlated, as it is with the shape of the prefixes of these nominals.

Nevertheless, we will demonstrate in the next Chapter, that the analysis of Gender and its AGR correlation, is better explained when we analyse the gender properties to be, in fact, part of the lexical, base-generated categorical features of the Noun, rather than been a prerogative of the Noun-class Prefix, as traditionally assumed in the majority of traditional Bantu linguistic studies.
CHAPTER FIVE
THE DP STRUCTURE IN KIKAMBA

5.0: Introduction

In the previous chapter, we examined the classification of nominal segments according to their behaviour within the system of grammatical agreement in Kikamba. This entailed the differentiation of the concordial elements into, on the one hand, the Independent elements (IP) that controls the agreement pattern, distinguished from the dependent categories, which could be regarded as the overt sign of a word agreeing with the Subject Nominal.

It is important for us at this juncture to relate the analyses to be provided in this chapter to our research objectives and research hypotheses. Using data from Kikamba, we will investigate whether the Kikamba NP is actually a DP and further, whether there are any similarities between the IP (sentence) and NP structure in Kikamba.

We also intend to verify the parametric value the morpho-syntax of Kikamba adopts for the Det (erminer) parameter, and whether it is influenced by the categorical status of the functional category DET. It must be remembered that in the exposition of our research problem, our position was that parametric settings are exclusively determined by functional categories and not lexical categories.
The hypothesis on whether it is correct to assert that functional categories which appear as affixes attached to the verb or Noun, are actually syntactic categories in their own right will be put to test in this Chapter. In addition, the hypothesis that the Kikamba NP is actually a DP and a consequence of the noun been raised to D⁰ be verified in this chapter.

The present chapter will moves a step further than Chapter Three in the investigation of the morpho-syntax of Kikamba by providing a Minimalist phrase-structure account of Kikamba nominal constituents. In the context of the present investigation, we have used the term ‘Nominal’ to refer generally to the Noun, so that, in principle, a nominal (or nominal-constituent) refers to any expression headed by a noun. In the literature, the term is often extended to mean: ‘...an expression which is a projection or extension of a noun or pronoun.’ (Radford 1999:187).

In the last Chapter, we presented an in-depth description of the Gender-marking and concordial agreement system manifested by the Kikamba-Nominal. However, in order to provide a comprehensive Morpho-syntactic account of the grammar, we must go beyond a structural morphological analysis of the nominal system and provide an underlying structure from which the LF and PF interface levels are accounted for, particularly with reference to the role of Functional categories in determining the Parametric values selected by the grammar of Kikamba. This chapter therefore, seeks to relate the morphological analysis of the
previous chapter with a Minimalist account of the syntax of structures related to the nominal.

We mentioned that Gender is actually a lexical feature unique to nouns alone. In essence, only the controlling nominal has Inherent Gender. The other constituents of a Kikamba sentence will show evidence of the gender of the controlling nominal. However, this is derived gender, quite different from the inherent gender marking on the nominal.

Related to this observation, the term 'Nominalization' refers to a process by which a category is converted into a nominal or 'Noun-expression. In a number of natural languages, the process will be some form of derivational affixation process that ultimately results in a category change. In addition, we recognize what are sometimes referred to in the literature as: 'de-verbal' nominals (or 'derived' nominals) whose morpho-syntactic features project through an entire extended projection.

Incidentally we were, for the most part, cautious in our investigation of this specific nominal category; since our preliminary analysis revealed that an improper combination of functional heads relating to this category could easily violate certain 'consistency' requirements proposed in Radford (1999), concerning well-formed projections. This includes the following criteria:

a) All heads must be of the same category;
b) Heads must be morpho-syntactically consistent;
c) Only one instance of each functional head-type can be included.
In a number of current linguistic studies, Noun-Phrase (henceforth, NPs), are analysed as Determiner-Phrases (hereafter, DPs), and therefore, are not strictly nominal, if by nominal, we mean: 'an expression headed by a noun'. However, if we understand the term DP to be an extended projection of the noun, we can nevertheless, still refer to the DP as a nominal. It should therefore be clear, that what we now analyse as DPs in current linguistic works would traditionally have been analysed as NPs.

It is with this background in mind that we consider it prudent to start off with an exposition of the DP analysis and the motivation for its choice over the NP analysis. We should point out, however, that not all instances of the Kikamba nominal would be considered to be a DP. We will point out an alternative analysis to the DP hypothesis in this Chapter.

5.1: Applications of the DP hypothesis on the Morpho-syntax of Kikamba

The traditional labelling of $S^1$ and $S$ posed problems for a condition on the $X^1$ theory that stipulates that every XP must have an X as its head. In the following structure, no such problem is encountered since CP, IP, VP have COMP, INFL, and V respectively as phrasal heads. To derive an NP counterpart of the above clause structure, Abney proposed the following revision on NP phrase-structure:
Under this approach, like the modals of AGR contained in the INFL of a clause, Determiners and AGR are also found in the D of an NP. The following Kikamba phrase structure exemplifies this similarity:

la)

```
DP                        DP
  SPEC                     SPEC
    DI                     DI
      D                    D
       NP                  NP
         ñ-vuku            ñ-vuku ñ-su
C5-book 5AGR-that  C5-book that 5AGR 5AGR-my

```
According to the assumptions of Abney (1987), such a DP analysis captures certain parallel relationships between DP-NP at the NP level, and IP-VP at the sentence level. Abney further suggested the necessity of having two distinct SPEC positions within the NP, to represent:

a) The Possessor and external argument
b) The measure/Quantifier phrase.

Hence following his analysis, a DP structure is assigned to a head noun with a possessor and a measure phrase presented in the following way:
Further to the above revision on the syntax of nominal structures, (Abney 1987, Longobardi 1994) argue for a uniform characterization within the syntax of the nominal. Hence, all nominals are assumed to be projections of a Head Determiner constituent. This includes even the cases of ‘bare’ nominals (i.e. noun expressions without any modifying determiner). Such nominals are actually DPs headed by what Radford (1997) refers to as:’ Null determiners’ symbolized as Ø. The following structure of the Kikamba nominal illustrates this:

2a)
In (2a) we have an example of a bare nominal containing a null determiner, whereas in (2b), the determiner slot is filled with an overt determiner. This assumption that bare nominals contain a null determiner suggests that empty categories in Kikamba play just as central a role in the syntax of nominals as they do in the syntax of clauses. In other words, just as auxiliary-less finite clauses are considered to be IPs headed by an empty INFL, so too bare nominals are actually DPs headed by an empty determiner.

However, an important question we need to postulate at this point concerning the empty-determiner analysis of bare nominals is this: Is this really consistent with the Minimalist approach to Universal Grammar, which posits the ‘Economy Principle’, prohibiting superfluous projections?

According to Chomsky’s (1989:69) Economy Principle:

"...Derivations as representations ...are required to be minimal...with no superfluous symbols in representations'.

('Minimal' in this context means as economical or as short as possible).
In the syntax of Kikamba, we assume that empty categories (categories which have no overt phonetic form) play as significant a role within the grammar of the language as do overt forms. To illustrate some of the semantic properties of the null Determiner Ø in Kikamba, consider the interpretation of the italicised bare nominals in the following sentences:

3a) \textit{M-bemba i-su ni n-zeo.}
C10-maize 10AGR-those TNS(prst.)-are 10AGR-good
'Those (cobs of) maize are good.'

3b) \textit{N-yama i-no ni n-zeo.}
C9-meat 9AGR-this TNS(prst.)-is 9AGR-good
'This meat is good.'

3c) \textit{M-bemba Ø ni n-zeo.}
C10-maize Ø TNS(prst.)-is 10AGR-good
'Maize is good.'

3d) \textit{N-yama Ø ni n-zeo.}
C9-meat Ø TNS(prst.)-is 9AGR-good
'Meat is good.'

3e) Wavinya ni-w-a-ya \textit{m-bemba Ø na n-yama Ø.}
Wavinya PrePfx.-AGR(3rd Psn.sg)-TNS(Prst. Pft.)-eat C9-maize Ø and C9-meat Ø.
'Wavinya has eaten (some) maize and (some) meat.'
In (3c) and (3d) above, the nouns ‘maize’ and ‘meat’ are assumed to have a generic interpretation, and hence, are interpreted as meaning *maize* and *meat* in a general sense. However, in (3.e), the nouns have an existential interpretation, that we can paraphrase to mean *some maize and some meat*. Since we share in the assumption that bare nominals are DPs headed by a null generic/existential Determiner $\emptyset$, then the semantic properties of $\emptyset$ determine that the bare nominals will be interpreted as generically or existentially quantified. The same Generic quantification is reflected in the sentences below:

4)

a) Mu-ana ū-su nī-wa-ya î-tumbī.
   C1-child 1AGR-that PrePfx-1AGR-TNS(Prst Pft.)-eat C5-egg.
   ‘That child has eaten an egg.’

b) Mu-ana $\emptyset$ nī-wa-ya î-tumbī.
   C1-child $\emptyset$ PrePfx-1AGR-TNS(prst.pft.)-eat C5-egg.
   ‘(The) child $\emptyset$ has eaten an egg’.

c) Sy-ana i-su nī-sy-aya ma-tumbī.
   C8-child 8AGR-those PrePfx-8AGR-TNS(prst.pft.)-eat C6-eggs.
   ‘Those children have eaten the eggs.’

d) Sy-ana $\emptyset$ nī-sy-aya ma-tumbī.
   C8-child $\emptyset$ PrePfx. 8AGR-TNS(prst.pft.)-eat C6-eggs.
   (The) children $\emptyset$ have eaten the eggs’. 

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Notice that when we have an overt determiner, the reference is to a specific ‘child’ or ‘children’. However, in the cases where the determiner is null, the meaning is assumed to have a generic interpretation or generalized interpretation or when the subject reference is obvious in the discourse.

In addition, in Kikamba, there is evidence to suggest that the null determiner also carries person and number properties. In our analysis later on in this chapter, we will explain how features of the head determiner affect the ‘person’ and ‘number’ properties of the DP.

Further to this, in addition to having quantificational and person properties, the null determiner is recognized to have specific complement-selection properties, as is typical of any other overt determiner. This strengthens our case for positing the existence of a null determiner in the Kikamba nominal structure, and for analysing bare nominals as DPs headed by a null determiner.

5.2: Modifying elements in the Kikamba Nominal

The purpose of this section is to give a syntactic analysis of the structure of these lexical elements of the Kikamba sentence and highlight the crucial role of functional categories in determining parametric values in the grammar of Kikamba, as well as the syntactic properties of gender and its function in Kikamba.

In Chapter Two, we explained in great detail that AGR affixes in Kikamba consist of two main sets of prefix series, namely:
a) Nominal prefixes – Characterizing the prefixes attached to Nouns and Adjectives

b) Verbal prefixes – These characterize the prefixes attached to Demonstratives, Possessives and Verbal complexes.

It is important for us to point out that, although Nouns and their Adjectival modifiers are associated exclusively with (a), some adjectives such as numerals and determiners equivalent in meaning to: ‘all’, ‘other’, ‘few’, etc. are associated with the Verbal prefixes.

In Kikamba, the scope of grammatical agreement affects all the syntactic constituents of a sentence. The nominal must agree with the verbal, adjectival, numerals as well as all other modifies of the sentence. Adjectival Phrases (APs) get Noun- Class morphology, whereas Quantifiers and Demonstratives get Verbal SP morphology. These are the elements hypothesised to be base-generated.

The following examples demonstrate this scope of grammatical agreement on the entire sentence.


‘This bad child will (one day) touch fire, and pro get burnt.’

5b) pro ka-ka-kuat-a mu-aki, na pro ka-iv-ya. pro 12AGR-TNS(fut.)-touch-sfx C3-fire, and pro 12-burn-sfx.

*pro(the child) will (one day) touch fire, pro and get burnt’.
5.c) Mũ-ndũ mũ-thûk-u a-k(a)-os-a mu-ana.
C1-person lAGR-bad-sfx. 1AGR-TNS(fut.)-take C1-child
The bad man will take the child'.

5.d) pro a-ka-mu-os-a.
pro lAGR-TNS(fut.)-1AGR.obj.-take.
'pro will him/her take.-Someone will take him/her.'

From the examples just provided, in Kikamba the verb must agree with
the Subject-Noun’s Gender marking, even when the subject noun is covert
as in (5b) and (5d) above. (We will explain the Null-subject Parameter later
in this chapter). In addition to the Subject-Noun agreement, we also have
Object-Noun and Verb agreement even when the Object is absent. There
also is agreement between the Subject Noun and the Adjectival within the
nominal phrase.

It would be misleading for us to put forth the impression that all the
categories in the Kikamba sentence manifest agreement prefixes, whether,
Verbal or nominal. There is a third group of what we shall refer to as
‘Invariable words’, so called because they are usually not associated with
any prefix series. Consequently, they are best analysed as falling outside the
whole system of grammatical agreement, which characterizes all other
lexical, as well as functional categories. These include the following
categories:

1) Conjunctions
2) ‘Time’ Adjectives
3) Manner Adjectives or Intensifiers
4) ‘Place’ words

5) Some Nouns, in specialized contexts

The following examples exemplify each of the above categories, in relation to the concordial agreement pattern of the rest of the elements that bears an AGR prefix:

6a) Mu-tumia ū-ya mū-asa a-ka-thi ūnī na n-gali y-a mu-aki.
   C1-old man 1AGR-that 1-AGR-tall 1AGR(3rd Psn.sg.)-TNS(fut.)-go tomorrow with C9-car 9AGR-of C3-fire.
   ‘That tall old man will go tomorrow with/by train.’

6b) A-tumia a-ya a-asa ma-ka-thi ūnī na n-gali y-a mu-aki.
   C2-old men 2AGR-those 2AGR-tall 2AGR-TNS(fut.)-go tomorrow with 9AGRcar-of-C3-fire
   ‘Those tall, old men will go tomorrow by train’.

(Note that the Conjunction /na/ ‘and’, as well as the ‘Time’ adjective /ūnī/ ‘tomorrow’, have no prefixes attached to them, and clearly fall outside the agreement pattern manifested by the other categories in the sentence).

7a) [Ithyī tu-a-ya liu mîtūki [nūndū pro tw- end-a kū-min-a wīa tene]].
   [Pron.(1stPsn.pl.) AGR(1stPsn.sg)-TNS(Prst.pft.)-eat food quickly [because pro AGR(1stPsn.pl.)-TNS(Prst.)-want-sfx C15to-finish-sfx. C15to-finish-sfx. work early]].
   ‘We ate (our) food quickly because we want to finish work early’.

7b) [Mo ma-ya liu mîtūki [nūndū pro m-end-a kū-min-a wīa tene]].
   [pron.(3rdpsn.pl.) AGR(3rdpsn.pl)-TNS(Prst Pft.)-eat food quickly [because pro AGR(3rdPsPl.)-TNS(prst.)-want-sfx C15-finish-sfx. work early]].
   ‘They ate (their) food quickly because they want to finish work early’.
From the data just presented, it should be noted that the following words do not bear any AGR prefixes, and thus, are not affected by the nominal concordial agreement pattern of the sentence:

- the nouns /lụ/ ‘food’, and /wụa/ ‘work’;
- the intensifier or adverb /mìtụkị/ ‘quickly’;
- the conjunction /nụndụ/ ‘because’;
- the ‘Time’ adjective, /tene/ ‘early’.

(It must be pointed out that some of the above nouns, which in some specialized contexts do not participate in the concordial agreement, in different contexts, behave just like other nouns do, in essence, controlling the agreement pattern of the sentence or phrase.

Other than the noun, an NP may consist of different modifying elements that include a number of both lexical as well as functional categories. The word ‘Determiner’ (Det.) is a cover term used to refer to a fixed set of grammatical (or functional) words which primarily give information relating to definiteness and indefiniteness, generally, whether the thing referred to by the Noun is familiar to both the Speaker and the hearer, or not. It also gives information about quantity and proportion. In some analysis, the determiner has been described as modifying the Noun, though a more accurate term would be that they ‘determine’ it.

The lexicon of Kikamba does not contain what are generally accepted to be the basic determiners, namely, the definite and indefinite articles (equivalent to the English ‘the’ and ‘a’, respectively). However we will go by Robert (1989:138) broad definition of exactly what counts as a
determiner, namely that: "...any expression that occupies the same position in NP structure as an article counts as a determiner".

Using this as a working definition, although Kikamba does not possess definite or indefinite articles, there are a small set of words, which seem to perform the same function as the articles within the Kikamba nominal. We will therefore consider them to be determiners. These include:

- Demonstratives (Dem)
- Some Quantifiers (Q)
- Possessives (Poss.)
- WH-Determiners

Other than the above Determiner types, the Kikamba nominal clause could contain the following lexical and grammatical elements:

Adjectives
- Adjectives
- Other Nouns
- Numerical modifiers
- Ordinals
- -A- Link Modifiers or Possessives
- Relative clauses
- Sentential complements
- Prepositional phrases

In Chapter Two, we mentioned that in any given phrase or sentence in Kikamba where a noun appears, it proceeds to impose agreement features
characteristic of its noun-class on all the other elements of the sentence. We also pointed out that even in the absence of the controlling nominal, the other elements of the sentence will still bear features of gender marking affixed to their stems.

As a reminder of this, a sentence in Kikamba can be divided into two categories. The first group contains the Independent Prefix words, which we said would be the Nominal that controls the agreement features imposed on the other elements in the sentence. These, we identified to be always Nominal. In the second group, we have the Dependent-Prefix words, which consist of those words, which have Subject or Object agreement affixes attached to them. These words will be adjectives, verbs, quantifiers or demonstratives.

5.3: Demonstratives

Demonstratives in Kikamba are typically placed after the noun with which they are associated, and in addition, will be required to take the concordial shape of the Noun-class with which they are associated. Further, in cases where both a demonstrative and adjective are present the demonstrative will be placed between the noun and adjective where both occur. The three main demonstratives could be translated as follows (we have used the agreement demanded by Noun-Class 1 for illustrative purposes):
a) 'ū-ū’ –
This could be translated to mean ‘this here’. This demonstrative will be formed from the appropriate verbal prefix, with the prefix vowel reduplicated.

b) ‘ū-ya’ –
We could translate this to mean ‘that here’. This demonstrative is formed from the stem [-ya], with the appropriate verbal prefix.

c) ‘ū-su’ -
This form could be translated to mean ‘the aforementioned’ or simply, ‘there, this, that’ depending on whether reference has previously been made to the concept in question in discourse. This is formed from the stem [-su], but realized as [-ūū] in Noun-Classes 5 and 7.

The following Table presents a summary of the different shapes the demonstrative assumes depending on the nominal class:
<table>
<thead>
<tr>
<th>Noun-Class</th>
<th>Demonstratives (I) / (ii) / (iii)</th>
<th>Sample phrase</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-[mũ-]</td>
<td>U-ũ / ū-ya / ū-su</td>
<td>Mu-ndũ ū-ũ / ū-ya / ū-su</td>
<td>Person this here/that there/the aforementioned</td>
</tr>
<tr>
<td>2-[a-]</td>
<td>A-a / a-ya / a-su</td>
<td>A-ndũ a-a / a-ya / a-su</td>
<td>People these here/those there/the aforementioned</td>
</tr>
<tr>
<td>3-[mũ-]</td>
<td>U-ũ / ū-ya / ū-su</td>
<td>Mũ-tũ ū-yũ / ū-ya / ū-su</td>
<td>Tree this here/that there/the aforementioned</td>
</tr>
<tr>
<td>4-[mi-]</td>
<td>I-i / I-ya / I-su</td>
<td>Mũ-tũ i-i / i-ya / i-su</td>
<td>Trees these here/those there/the aforementioned</td>
</tr>
<tr>
<td>5-[I-]</td>
<td>Yi-i / yi-ya / yi-u</td>
<td>I-vula yi-i / yi-ya / yi-u</td>
<td>Blanket this here/that there/the aforementioned</td>
</tr>
<tr>
<td>6-[ma-]</td>
<td>A-a / a-ya / a-su</td>
<td>Ma-vula a-a / a-ya / a-su</td>
<td>Blankets these here/those there/the aforementioned</td>
</tr>
<tr>
<td>7-[ki-]</td>
<td>Kĩ-i / kĩ-ya / kĩ-u</td>
<td>Kĩ-vũla kĩ-i / kĩ-ya / kĩ-u</td>
<td>Chair this here/that there/the aforementioned</td>
</tr>
<tr>
<td>8-[I-]</td>
<td>I-i / I-ya / I-su</td>
<td>I-vũla i-i / i-ya / i-su</td>
<td>Chairs these here/those there/the aforementioned</td>
</tr>
<tr>
<td>9-[n-]</td>
<td>I-i / I-ya / I-su</td>
<td>N-gombe I-i / i-ya / i-su</td>
<td>Cow this here/that there/the aforementioned</td>
</tr>
<tr>
<td>10-[n-]</td>
<td>I-i / I-ya / I-su</td>
<td>N-gombe i-i / i-ya / i-su</td>
<td>Cows these here/those there/the aforementioned</td>
</tr>
<tr>
<td>11-[ũ-]</td>
<td>U-ũ / ū-ya / ū-su</td>
<td>U-lii ū-ũ / ū-ya / ū-su</td>
<td>String this here/that there/the aforementioned</td>
</tr>
<tr>
<td>12-[ka-]</td>
<td>Ka-a / ka-ya / ka-u</td>
<td>Ka-mũ-ndũ ka-a/ka-ya/ ka-u</td>
<td>Little person this here/that there/the aforementioned</td>
</tr>
<tr>
<td>13-[tu-]</td>
<td>Tũ-u / tũ-ya / tũ-u</td>
<td>Tũ-mũ-ndũ tũ-u / tũ-ya / tũ-u</td>
<td>Little people these here/those there/the aforementioned</td>
</tr>
<tr>
<td>14-[u-]</td>
<td>Ū-ũ / ū-ya / ū-su</td>
<td>Ū-toonu Ū-ũ / Ū-ya / Ū-su</td>
<td>Selfishness this here/that there/the aforementioned</td>
</tr>
<tr>
<td>15-[kũ-]</td>
<td>Kũ-u / kũ-ya / ku-u</td>
<td>Kũ-valũk-a kũ-ũ / kũ-ya / ku-u</td>
<td>Falling this here/that there/the aforementioned</td>
</tr>
<tr>
<td>16-[va-]</td>
<td>Va-a / va-ya / va-u</td>
<td>Va-ndũ va-a / va-ya / va-u</td>
<td>Place (specific) this here/that there/the aforementioned</td>
</tr>
<tr>
<td>17-[kũ-]</td>
<td>Kũ-u / kũ-ya / ku</td>
<td>Kũ-ndũ kũ-u / kũ-ya /kũ-u</td>
<td>Place (general) this here/that there/the aforementioned</td>
</tr>
</tbody>
</table>

Notice the position of the demonstrative in relation to the Head nominal of the phrase. Kikamba, as we shall see, places the modifier consistently after the lexical category, unlike English, where modifiers appear before the category they modify. This is a direct consequence of a parametric setting that we shall discuss later on in this chapter.
Related to demonstrative placement in the Kikamba DP, consider the following phrases:

8a)  Mũ-tũi ū-yū mũ-seo.
     C.1-neighbour 1AGR-this here 1AGR-good.
     'this good neighbour'.

8b)  Ka-ana ka-ya ka-thūk-u.
     C12-child 12AGR-that there 12AGR-bad .
     'that bad child.'

8c)  Ki-kavũ ky-u ki-nene
     C5-basket 5AGR-(the aforementioned) 5AGR-big
     'That big basket'.

8d)  Mu-įtu ū-su mũ-asa
     C1-girl 1AGR-the aforementioned 1AGR-tall
     'That tall girl.'

It should be clear that the demonstrative form relates directly to the nominal class of the subject Nominal. In addition, in a situation where both an adjective and demonstrative modify a noun, both the adjective and the demonstrative follow the noun, with the demonstrative occurring between the noun and the adjective.

5.3.1: Possessives and Adjectives

The following Table provides a summary of the different agreement patterns assumed by the adjective stem [—seo] ‘good’ and the personal possessive stem: - [-aku] ‘your’, depending on the nominal prefix:
### TABLE 4-Features of Adjective-Nominal Agreement in Kikamba

<table>
<thead>
<tr>
<th>Noun C.</th>
<th>Poss.</th>
<th>Adj.</th>
<th>Sentence</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-[mũ-]</td>
<td>Wa-</td>
<td>Mũ-</td>
<td>Mũ-eni wa-ku mũ-seo</td>
<td>Guest yours good (Your good guest)</td>
</tr>
<tr>
<td>2-[a-]</td>
<td>Ma-</td>
<td>A-</td>
<td>A-eni ma-ku a-seo</td>
<td>Guest yours good (Your good guests)</td>
</tr>
<tr>
<td>3-[mũ-]</td>
<td>Wa-</td>
<td>Mũ-</td>
<td>Mũ-tĩ wa-ku mũ-seo</td>
<td>Tree yours good (Your good tree)</td>
</tr>
<tr>
<td>4-[mi-]</td>
<td>Ya-</td>
<td>Mi-</td>
<td>Mi-tĩ ya-ku mi-seo</td>
<td>Trees your good (Your good trees)</td>
</tr>
<tr>
<td>5-[tũ-]</td>
<td>Ya-</td>
<td>Tũ-</td>
<td>I-londu ya-ku tũ-seo</td>
<td>Sheep good (Your sheep)</td>
</tr>
<tr>
<td>6-[ma-]</td>
<td>Ma-</td>
<td>Ma-</td>
<td>Ma-londu ma-ku ma-seo</td>
<td>Fruits your good (Your good sheep (pl))</td>
</tr>
<tr>
<td>7-[ki-]</td>
<td>Kya-</td>
<td>Ki-</td>
<td>Ki-vũla kya-ku ki-seo</td>
<td>Chair your good (Your good chair)</td>
</tr>
<tr>
<td>8-[I-]</td>
<td>Sya-</td>
<td>N-</td>
<td>I-vũla sy-aku n-zeo</td>
<td>Chairs your good (Your good chairs)</td>
</tr>
<tr>
<td>9-[n-]</td>
<td>Ya-</td>
<td>N-</td>
<td>N-g'ombe ya-ku n-zeo</td>
<td>Cow your good (Your good cow)</td>
</tr>
<tr>
<td>10-[n-]</td>
<td>Sya-</td>
<td>N-</td>
<td>N-g'ombe sy-aku n-zeo</td>
<td>Cows your good (Your good cows)</td>
</tr>
<tr>
<td>11-[ũ-]</td>
<td>Wa-</td>
<td>Mũ-</td>
<td>Û-lii wa-ku mũ-seo</td>
<td>String your good (Your good string)</td>
</tr>
<tr>
<td>12-[ka-]</td>
<td>Ka-</td>
<td>Ka-</td>
<td>Ka-mũ-ndũ ka-ku ka-seo</td>
<td>Small person your good (Your small good fellow)</td>
</tr>
<tr>
<td>13-[tũ-]</td>
<td>Tũ-</td>
<td>Tũ-</td>
<td>Tũ-mũ-ndũ tu-aku tũ-seo</td>
<td>Small people your good (Your small good fellows)</td>
</tr>
<tr>
<td>14-[ũ-]</td>
<td>Wa-</td>
<td>Mu-</td>
<td>Û-toonu wa-ku mũ-seo</td>
<td>Selfishness your good (Your good selfishness)</td>
</tr>
<tr>
<td>15-[kũ-]</td>
<td>Kua-</td>
<td>Kũ-</td>
<td>Kũ-thek-a ku-aku kũ-seo</td>
<td>Laughing your good (Your good laughing)</td>
</tr>
<tr>
<td>16-[va-]</td>
<td>Va-</td>
<td>Va-</td>
<td>Va-ndũ va-ku va-seo</td>
<td>Place (sp) yours good (Your good place)</td>
</tr>
<tr>
<td>17-[kũ-]</td>
<td>Kua-</td>
<td>Kũ-</td>
<td>Kũ-ndũ ku-aku kũ-seo</td>
<td>Place (general) yours good (Your good place)</td>
</tr>
</tbody>
</table>

As can be inferred from the table just presented, within the Kikamba DP, adjectives are consistently placed after the noun with which they are associated, and in addition, must agree with the noun by means of an agreement prefix, which is commonly similar to the nominal prefix itself.
Phonological processes, however, may obscure this similarity. Adjectives in this sense are may be termed as dependent words in the sense that their prefixed form is predictable from the nominal class they modify. It must be noted, however, that there could be a few exceptions to the rule. (We will not go into these exceptional cases at this point).

In the case of possessives, the stem [-a] occurs with the appropriate verbal prefix, and can be translated as having the meaning close to the word: ‘of’. These are also referred to as –A-links. For example:

9a) Mũ-tĩ w-a mũ-ndũ.
   C3-stick 3AGR-(poss.)-of C1-person
   ‘Someone’s stick’.

9b) Tu-ana tu-a a-tũi.
   C13-children 13AGR-(poss.)-of C2.-neighbour
   ‘(The) neighbour’s little children’.

9c) Ma-tumbĩ m-a n-zoka.
   C6-eggs 6AGR-(poss.)-of C9-snake
   ‘Snake’s eggs.’

9d) N-yũmba y-a (k)ũ-kom-a.
   C9-room 9AGR-(poss.)-of C15-sleep-sfx.
   ‘A sleeping room/Bedroom.’

9e) I-ũila sy-a ky-ũma.
   C8-chair(s) 8AGR-(poss.)-of C7-metal
   ‘Chairs of metal/metallic chairs’.
Notice from the above data that the possessive -A-link must bear the concordial agreement pattern imposed by the subject noun. In addition, this is one of the productive word-formation processes that Kikamba has used to add to its stock of descriptive adjectivals particularly to describe novel objects.

5.4: Overt pronominal forms in Kikamba

Kikamba has six (Nominative Case) personal pronouns, as well as pronominal forms for Classes 12/13 and 5/6, which represent the diminutives and augmentative classes respectively. These can be represented as follows:

<table>
<thead>
<tr>
<th>PERSON</th>
<th>SINGULAR</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Person</td>
<td>/nyie/ ‘I’</td>
<td>/Ithyi/ ‘We’</td>
</tr>
<tr>
<td>2nd Person</td>
<td>/We/ ‘You (sg.)’</td>
<td>/Inyui/ ‘You’ (pl.)</td>
</tr>
<tr>
<td>3rd Person</td>
<td>/We/ ‘He/she’</td>
<td>/mo/ ‘They’</td>
</tr>
<tr>
<td>Diminutive</td>
<td>/Ko/ ‘small/sly’</td>
<td>/two/ ‘small/sly’</td>
</tr>
<tr>
<td>Augmentative</td>
<td>/Yo/ big/derog.(sg.)</td>
<td>/mo/‘big/derog(pl.)...’</td>
</tr>
</tbody>
</table>

Compare the Pronoun effect on the concordial agreement pattern of the sentences:

10a) Nyie nǐ-mū-nou.

1st Psn.sg. AGR (1st Psn.sg)-TNS-am 1AGR-fat.

‘I am fat’.
10b) We wi-mu-nou.
Pron.(2\textsuperscript{nd} Psn.sg.) AGR(2\textsuperscript{nd} Psn.sg.)-TNS(prst.) am C1AGR-fat
‘You (sg) are fat’.

10c) We nĩ-mu-nou.
Pron.(3\textsuperscript{rd} Psn.sg.) AGR(3\textsuperscript{rd} Psn.sg) –TNS(prst.)-is C1AGR-fat.
‘He/she is fat’.

10d) Ithyĩ tuĩ-a-nou.
Pron.(1\textsuperscript{st} Psn.pl.) AGR(1\textsuperscript{st} Psn.pl.)-TNS(prst.)-are C2-AGR-fat.
‘We are fat’

10e) Inyuĩ mwi-a-nou.
Pron.(2\textsuperscript{nd} Psn.pl.) AGR(2\textsuperscript{nd} Psn.pl.)-TNS(prst.)-are AGR-fat
‘You(pl) are fat’.

10f) Mo nĩ-a-nou.
3\textsuperscript{rd} Psn.pl. AGR(1\textsuperscript{st} Psn.pl.)-TNS-are C2-fat.
‘They are fat’.

10g) Ko nĩ-ka-nou.
C12(Dimin.) 12AGR –TNS(prst.)-is 12AGR-fat.
‘The small (person/child) is fat’.

10h) Yo nĩ-ĩ-nou.
C5(aug.) 5AGR-TNS(prst.)-is 5AGR-fat.
‘The huge (person, animal/thing is fat’.

From the data it is clear that in Kikamba, sentences with overt
Pronominal subjects pattern just like sentences with nouns in the sense that
they instantiate or control the concordial agreement pattern on the other
elements in the sentence. In the next Chapter, we will attribute this to the fact that the overt pronoun is a topic or adjunct which is co-indexed with the AGR element, thus accounting for the apparent agreement relation between the Subject-pronoun, and all the other dependent categories in the sentence, including the Verb.

That this position is true is well validated by the fact that in Kikamba, overt pronouns in Subject position, such as the ones tabled above, behave quite differently from those in, for instance, English. Their overt manifestation is largely for emphatic purposes, or when a speaker wants to draw particular attention to the importance of the doer of an action.

This fact has led some researchers to the conclusion that overt pronouns in Null-subject languages such as Kikamba actually occupy Topic or Adjunct positions hence, their presence or absence will not play a primary role in the grammaticality of a sentence. (We shall go into greater detail of this in Chapter Five). Suffice it to say at this point that in Kikamba, these overt pronominal subjects are intrinsically emphatic, and their use assumes a degree of 'double-marking' and redundancy, since their nominal features are predictable from the AGR prefix attached to the Verb.

5.5: The Kikamba DP Structure

As a brief reminder, in the context of the DP hypothesis, NPs are assumed to be DPs headed by a Det(erator) element, with NP serving as
its predicate complement. The significant implication of this to our analysis is that, a predicate phrase is now headed by a functional category (Determiner), rather than by a substantive element. However, it is important to note that, although the DP is headed by a functional category, it does contain a substantive element, namely, the Noun. Hence, the Determiner element can be said to 'inherit' the semantic properties of its NP complement.

In Kikamba, the Number-feature could be reflected either through independent numeral adjectives, or through number prefixes attached to the Noun. Consider the phrase structure for the following Kikamba DP phrase-structure:
Looking at the structure above, we have analysed the Kikamba NP to be a DP with an empty $D^0$ node, to which nouns raise. Number, being the functional category $\#$, then projects $\#P$, which is the complement to $D^0$. Nouns in Kikamba are raised to $\#$ from NP positions to collect number features, and then rise further to $D^0$ in order to account for the linear order
of: [N-Pronoun-X]. Hence, the noun-class marker can be considered to be an allomorph of $^0#$. 

According to Carstens (1987), data on Bantu languages does not provide any special motivation for either a phrasal or sub $X^0$ level treatment of number morphology. Yet cross-linguistic considerations argue for a syntactic representation of number as part of Universal Grammar. Hence, if number is analysed as a syntactic category, then a unified account can be provided for both number words (numerals) and number morphology.

In agreement with Carstens (1991) analysis of the Kiswahili DP, our conclusion for the Kikamba Nominal is that number is a functional head, which selects NP as its complement. The projection of number is the complement of the determiner. This is consistent with the relative ordering of Determiners and nouns bearing number morphology in a number of natural languages identified in the literature. Consider the following phrase-structure:

```
DP
 /\   
 |   |
 D  #P
 /\   /\   
|   |   |   |
#  #   NP
```

The two boxes

(# Number $^0$- the Extended NP)
One problem we encountered with Carstens’ DP analysis is in relation to the formation of nouns with pre-prefixes or the ‘stacking’ of gender markers onto a single nominal form. The following data exemplifies the concept of ‘stacked’ gender markers or pre-prefixes in Kikamba:

12a) ka-k-ovila
    C12 (dimin.)-C9-hat
    ‘little hat.’

12b) tu-k-ovila
    C13 (dimin.)-C9-hat
    ‘Little hats’

12c) ma-k-ovila
    C6 (aug)-C9-hat
    ‘huge/ugly hats.’

12d) ì-k-ovila
    C5-C9-hat
    ‘huge/ugly hat’.

12e) ka-mu-tl
    C12 (Dimin.)-C3-stick
    ‘small stick/twig/herb.’

12f) tu-ml-tl
    C13 (dimin.)-C4-stick
    ‘small sticks/twigs/herbs.’
The stacked gender markers or pre-prefixes require phrase structure functional projections (#P) inside of the morphology, thereby violating the Principle of 'Lexical Integrity', (McCarthy 1992), which states that:

No syntactic rule can refer to an element of morphological structure.'

The essence of this principle is that syntax is blind to the internal structure and composition of words and cannot affect it, except in the sense in which syntax necessarily affects inflectional morphology.

Let us assume that nouns with a single prefix structure as follows:

13a) Mū-twe

C3-head

[Diagram]

D

SPEC

DI

D

#P

NP

#

NP

mū-

-twe

C3-

head
It follows therefore that the following Kikamba noun-stem bearing pre-prefixes will require an additional phrasal source to cater for the pre-prefix:

14a) ka-mū-twe
   C12 (Dimin.)-C3-head
   ‘small head’

14b) tū-mī-twe
   C13-(dimin)-C4-head
   ‘little heads’.

In addition, if we assume that the analysis of the DP is correct for a noun with a single prefix, then, in agreement with Bresnan and Mchombo (1995), we should be able to find both outer and inner concords alternating freely.

Consider the following examples:
15a) Ka-[kūla] ka-seo.
   C12 (Dimun.) [C9-dress] 12AGR-good.
   'a small good garment.'

15b) *Ka- [ kūla n-zeo ].
   C12 (Dimin.) [C9-dress 9AGR-good].
   'a small good garment.'

15c) Ma-[ kūla ] ma-thūk-u.
   C6 (derog.)- [ dresses] 6AGR-bad.
   'bad/ugly garments.'

15d) Ṭ-[kūla] ṭ-thūku.
   C5 (derog.)- [C9-dress ] 5AGR-bad.
   'a bad/ugly garment.'

15e) *Ṭ-[ kūla n-thūk-u ]
   C5 (derog.)- [C9 garment 9AGR-bad].
   'a bad/ugly garment.'

15f) *Ma-[ kūla n-thūk-u ]
   C6 (derog.-)[ C10-garment 19AGR-bad ].
   'bad/ugly garments.'

From the above examples, we can conclude that in Kikamba DP structure, only outer concords are permitted. Carstens (1991) DP analysis offers no explanation as to why 15(b, d and e) are consistently ruled out within the DP structure of the language. To solve this problem, we suggest a left-branching structure to capture the composition of adjuncts (Adjectival Phrases and
other Optional Phrases associated with the nominal), which can be stacked to form strings of arbitrary length. Each adjunct will then have the capacity to modify everything to its left. Consider the following structures:

(16a)

```
DP - (Concordial elements)

SPEC

(D) (Lexical elements)NP

Ka- mū-twe

C12 C3-head 12AGR-that...

'That small head...'
```

(16b)

```
DP - (Concordial elements)

SPEC

(D) (Lexical elements)NP

tü- mī-twe

C13 C4-head 13AGR-those...

'Those small heads...'
```
Notice how the pre-prefix imposes its concordial agreement pattern on the rest of the nominal elements, and indeed on the whole sentence, including the verbal complex.

The analysis we have just presented makes a morphological distinction between the noun and its modifiers. Hence the NP has two domains namely:

a) The lexical domain (the NP level)

b) The grammatical domain (the DP level)

Based on this division, elements occurring within the NP are non-concordial, whereas those appearing outside in DP projections are the concordial modifiers. Thus, all nominal modifiers (i.e. demonstratives, quantifiers, etc) will take concordial subject-prefix morphology. It must be remembered that these are all non-referential elements, which must concord with the head noun (which they modify) for the NP to be well formed.

Consider the ungrammaticality of 17(a, b) as a result of no agreement between the noun and its modifiers in either the lexical or grammatical domain:

17a) *Tū-mū-ndū -ya ...
*C13-C1-person those
*‘those little/crafty people.’

17b) *Tū-mū-ndū ū-ya ...
*C13-C1-person 1AGR-that
*‘those little/crafty people’.

Now consider the grammaticality of (17c), once the concordial subject-prefix morphology is included:
From a syntactic standpoint, the class of concordial elements projects DP.
These elements occurring within NP then take Noun Class morphology and further, consist only of referential entities. The split between the lexical and grammatical domain helps to explain demonstrative placement either in the preferred position after the head-noun or initial to the head in cases of focus or topicalization. The Noun-class then combines with the stem to form a nominal.

As we have seen, while all nouns in Kikamba are made up of the affixation of the noun-class markers to noun-stems, nominal modifiers bear concordial marking. Though a detailed analysis of verbal structure falls
outside the scope of this chapter, it would be significant to highlight a few significant facts about the status of subject prefixes on the verb form in Kikamba. Observations made in a study by Bresnan and Mchombo (1987) on the status of subject prefixes can also apply to the syntax of Kikamba. These include the following observations:

a) The subject-prefix (henceforth, SP) is obligatory in finite verbs

b) The SP is used for grammatical and anaphoric agreement

c) Pronominal interpretation of SP arises ONLY in the absence of the subject NP

The following examples exemplify the above observations:

18a) Kĭ-veti ky-akwa nĭ ky-a-thi.
C3-wife 3AGR-my PrePfx.-3AGR-TNS-(prst.pft.) gone
‘My wife has gone.’

18b) K-aná k-akwa nĭ k-a-thi
C12-child 12AGR-my PrePfx.-12AGR-TNS-(Prst. Pft.) gone
‘My little child has gone.’

18c) I-veti sy-akwa nĭ sy-a-thi.
C4-wives 4AGR-my PrePfx.-4AGR-TNS(Prst. Pft.) gone
‘My wives have gone.’

18d) Tu-aná tu-akwa nĭ tu-a-thi.
C13-children 13AGR-myPrePfx.-13AGR-TNS(Prst. Pft.)- gone
‘My little children have gone.’
Notice that in all of the above sentences, there is the obligatory presence of the SP for both grammatical and anaphoric agreement. Notice also that pronominal interpretation of the SP arises only in the absence of the subject NP, which is possible since Kikamba allows null subjects. For example each of the examples previously provided could be stated without an overt Subject NP and still be grammatical,

19a) pro nĩ-ky-a-thi.
pro PrePfx.-3AGR-TNS(Prst. Pft.)- gone
‘*pro has gone’.

19b) pro nĩ-ka-a-thi.
Pro PrePfx.-C12Pron.- has gone
‘pro has gone’.

19c) pro nĩ-sy-a-thi.
pro PrePfx.-C4Pron.- have gone
‘*pro have gone’.

19d) pro nĩ-tu-a-thi.
pro PrePfx.-C13Pron.-have gone
‘pro have gone’.

As can be seen from the above data, the Noun-class is predictable from the pronominal subject prefix attached to the verbal complex. Not so in English, as can be seen from the un-interpretable English translations of the Kikamba sentences. (We will discuss the ‘Null-Subject’ phenomenon comprehensively in Chapter 5).
5.5.1: The Category DP in Kikamba

As we saw in Chapter Three, demonstratives in the Kikamba DP could have either, a deictic function, or a referential/anaphoric function. The referential/anaphoric demonstrative ‘refers back’ to some entity previously mentioned in the discourse. In addition, the demonstrative could contain the ‘definitizing’ root. The core feature of the root is that of definiteness (rather than deictic) proximity for the following three positions (we have used the Class concord to illustrate the form of the demonstrative:

20a) Va - a – ‘here’
    Va-ndu va-a.
    C16-specific place this here.
    ‘This place here’.

20b) Va-u – ‘There’
    Va-ndu va-u.
    C16-specific place that there.
    That place there’.

20c) Va-ya – ‘over there/yonder’
    Va-ndu va-ya.
    C16-specific place that over there/yonder
    ‘That place over there’.

With reference to the above forms it must be noted that translating forms from Kikamba into English sometimes gives forms that would look grammatically inappropriate or senseless as can be seen from the English ‘equivalent’ expressions.
As is to be expected in a typical Bantu language such as Kikamba, the demonstrative will change its form depending on the noun class of the nominal it modifies. TABLE 5 summarizes the different forms the demonstratives take depending on the Noun-class in question:

**TABLE 5-Determiner-Phrase Inflection in Kikamba**

<table>
<thead>
<tr>
<th>Determiner-Phrase 1-</th>
<th>Determiner-Phrase 2-</th>
<th>Determiner-Phrase 3-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>'This/these'</strong></td>
<td><strong>That/those'</strong></td>
<td><strong>'Over yonder'</strong></td>
</tr>
<tr>
<td>Mu-tumia u-yu/u-ya</td>
<td>Mu-tumia u-su</td>
<td>Mu-tumia u-ya</td>
</tr>
<tr>
<td>C1-old man this</td>
<td>C1-old man that</td>
<td>C1-old man that (yonder)</td>
</tr>
<tr>
<td>A-syai a-a/a-ya</td>
<td>A-syai a-su</td>
<td>A-syai a-ya</td>
</tr>
<tr>
<td>C2-parents these</td>
<td>C2-parents those</td>
<td>C2-parents those (yonder)</td>
</tr>
<tr>
<td>Mu-iko u-u/u-yu</td>
<td>Mu-iko u-su</td>
<td>Mu-iko u-ya</td>
</tr>
<tr>
<td>C3-ladle this</td>
<td>C3-ladle that</td>
<td>C3-ladle that (yonder)</td>
</tr>
<tr>
<td>Mi-iko i-ithi</td>
<td>Mi-iko i-su</td>
<td>Mi-iko i-ya</td>
</tr>
<tr>
<td>C4-ladles these</td>
<td>C4-ladles those</td>
<td>C4-ladles those (yonder)</td>
</tr>
<tr>
<td>Ki-iko ki-i</td>
<td>Ki-siko ky-u</td>
<td>Ki-siko ki-ya</td>
</tr>
<tr>
<td>C7-spoon this</td>
<td>C7-spoon that</td>
<td>C7-spoon that (yonder)</td>
</tr>
<tr>
<td>I-siko i-ithi/i-i</td>
<td>i-siko I-su</td>
<td>i-siko i-ya</td>
</tr>
<tr>
<td>C8-spoons these</td>
<td>C8-spoons those</td>
<td>C8-spoons those (yonder)</td>
</tr>
<tr>
<td>Ka-ana ka-a</td>
<td>Ka-ana ka-u</td>
<td>Ka-ana ka-ya</td>
</tr>
<tr>
<td>C12-child this</td>
<td>C12-child that</td>
<td>C12-child that (yonder)</td>
</tr>
<tr>
<td>Sy-ana l- ithi/i-i</td>
<td>Sy-ana i-su</td>
<td>Sy-ana i-ya</td>
</tr>
<tr>
<td>C13-children these</td>
<td>C13-children those</td>
<td>C13-children those-yonder</td>
</tr>
<tr>
<td>Va-ndu va-a</td>
<td>Va-ndu va-u</td>
<td>Va-ndu va-ya</td>
</tr>
<tr>
<td>C16-specific-place this</td>
<td>C16-specific-place that</td>
<td>C16-specific-place that</td>
</tr>
<tr>
<td>Kū-ndū kū-u</td>
<td>Kū-ndū kū-u</td>
<td>Kū-ndū ku-ya</td>
</tr>
<tr>
<td>C17-general-place this</td>
<td>C17-general-place that</td>
<td>C17-general-place that</td>
</tr>
</tbody>
</table>

Secondly, we have the adjectival modifier whose typical inflectional morphology consists of an agreement morpheme, which corresponds to the noun class prefix. Adjectival stems include: numerals, (usually, 1-5), colour
terminology as well as descriptive terms such as: ‘bad, good, ugly, big, small, long, short, etc. The following data illustrates this:

(21)

<table>
<thead>
<tr>
<th>Stem</th>
<th>Determiner-Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>[tatu] Tū-mū-ndū tū-ya tū-tatu.</td>
</tr>
<tr>
<td>[Three]</td>
<td>13-C1-person 13AGR-those 13AGR-three</td>
</tr>
<tr>
<td></td>
<td>‘Those three, small people’.</td>
</tr>
<tr>
<td>b)</td>
<td>[tune] N-gūa ii-ya n-dune.</td>
</tr>
<tr>
<td>[red]</td>
<td>C10-clothes 10AGR-those 10AGR-red</td>
</tr>
<tr>
<td></td>
<td>‘Those red clothes.’</td>
</tr>
<tr>
<td>c)</td>
<td>[seo] Kī-veti kī-ya kī-seo.</td>
</tr>
<tr>
<td>[good]</td>
<td>C7-wife 7AGR-that 7AGR-good</td>
</tr>
<tr>
<td></td>
<td>‘That good woman’.</td>
</tr>
<tr>
<td>d)</td>
<td>[nene] Ma-sungwa a-ya ma-nene.</td>
</tr>
<tr>
<td>[big]</td>
<td>C6-oranges 6AGR-those 6AGR-big</td>
</tr>
<tr>
<td></td>
<td>‘Those big fruits’.</td>
</tr>
<tr>
<td>e)</td>
<td>[asa] Mū-tū ū-ya mū-asa.</td>
</tr>
<tr>
<td>[long]</td>
<td>C3-tree 3AGR-that 3AGR-long</td>
</tr>
<tr>
<td></td>
<td>‘That long tree’.</td>
</tr>
</tbody>
</table>

Thirdly, we have the nominal relative clause, whose typical inflectional morphology consists of the relative clause (a demonstrative-pronoun or Complementizer), which must agree with the head of the relative
clause (its antecedent). The subject-agreement prefix (SP) must occur with the relative verb as can be observed in the data following:

(22)

<table>
<thead>
<tr>
<th>Class of Relative clause</th>
<th>Relative clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>head/antecedent</td>
<td></td>
</tr>
<tr>
<td>1-</td>
<td>Mū-see û-l(a) û-nyu-sa üki...</td>
</tr>
<tr>
<td></td>
<td>C1-old-man 1AGR-who 1AGR.-drink-sfx. beer...</td>
</tr>
<tr>
<td></td>
<td>‘The old man who drinks beer...’</td>
</tr>
<tr>
<td>2-</td>
<td>A-see a-la ma-nyu-sa üki...</td>
</tr>
<tr>
<td></td>
<td>C2-old-men 2AGR-who 2AGR-drink-sfx. beer...</td>
</tr>
<tr>
<td></td>
<td>‘The old men who drink beer...’</td>
</tr>
<tr>
<td>7-</td>
<td>Kī-ng’ei kī-la kī-nyu-sa üki...</td>
</tr>
<tr>
<td></td>
<td>C7-thief 7AGR-who 7AGR-drink-sfx. beer...</td>
</tr>
<tr>
<td></td>
<td>‘The thief who drinks beer...’</td>
</tr>
<tr>
<td>8-</td>
<td>I-ng’ei i-la syī-nyu-sa üki..</td>
</tr>
<tr>
<td></td>
<td>C8-thieves 8AGR-who 8AGR-drink-sfx. beer...</td>
</tr>
<tr>
<td></td>
<td>‘The thieves who drink beer...’</td>
</tr>
<tr>
<td>12-</td>
<td>Ka-mū-ndū ka-la ka-nyu-sa üki...</td>
</tr>
<tr>
<td></td>
<td>C12-C1-person 12AGR-who 12AGR-drinks beer...</td>
</tr>
<tr>
<td></td>
<td>‘The little/crafty man who drinks beer...’</td>
</tr>
<tr>
<td>13-</td>
<td>Tū-mū-ndū tū-la tū-nyu-sa üki...</td>
</tr>
<tr>
<td></td>
<td>C13-C1-persons 13AGR-who 13AGR-drink beer...</td>
</tr>
<tr>
<td></td>
<td>‘The little/crafty men who drink beer...’</td>
</tr>
</tbody>
</table>
Although the grammatical operation of Feature-Checking will be addressed in Chapter Five, we see the need to mention that the morphological and semantic features carried by determiners, attributive adjectives and nouns must be 'checked'. This means that all attributive adjectives and determiners (including the null determiner) carry person, gender and number properties, which, as has been extensively demonstrated, must agree in number and gender with the nouns they modify.

One way of ensuring that this happens is to suppose that the number and gender features carried by the subject-noun or pronoun percolate up to the head of the AP phrase containing the Adjective, and from there in a similar way, percolate to the head D constituent of DP. We will discuss feature checking and exactly what we mean by the term 'percolation of features in Chapter Five. Suffice it to say that the Checking approach provides a principled syntactic account of exactly how the morphological,
grammatical and semantic features of the head nominal are passed on to all the concordial elements in the Kikamba sentence.

5.6: Morpho-syntactic correlations: diminutives and augmentatives as syntactic affixes in Kikamba

In Kikamba, we identified Classes 12/13 prefixes as forming diminutives, while classes 5/6 form augmentatives. These prefixes apparently trigger agreement distinct from that of any other noun-classes. This is because the prefixes involved are possibly attached outside of those corresponding to the stem's lexical gender. Consider the data below:

23a) ke-litu ka-aku.
C12 (Dimun.)-girl 12AGR-your
‘Your little girl.’

23b) Tu-ilitu tu-aku.
C13 (Dimun.)-girls 13AGR-your
‘Your little girls.’

23c) yi-litu y-aku.
C5 (derog.)-girl 5AGR-your
‘Your huge/ugly/immoral girl.’

23d) Me-litu m-aku
C6 (derog.)-girl 6AGR-your
‘Your huge/immoral girls.’

In Kikamba, the null diminutive noun is actually a syntactic affix, which then selects a DP complement. According to Carstens (1991), some
natural languages allow null nominal affixes with the meanings of [+diminutive] or [+augmentative] which attach to noun-stems in the following way:

(24a)

\[
\begin{array}{c}
\text{N [Gender-12/13]} \\
\text{N-stem} \quad \text{N} \\
\text{Mu-anake} \quad \text{[+diminutive]} \\
\end{array}
\]

C1-young man

To satisfy this affix’s morphological requirement of a noun-stem ‘host’, the noun-stem ‘mu-anake’ must raise to the prefix and thereby, incorporate it in the following way:

(24b)

In the above structure, only agreement with the diminutive class is possible. This restriction is evidence that no syntactic projection of the noun is present. If it were, it would be free to control modifiers of the noun, and
in addition, nothing would prevent the noun from transmitting its features to its modifiers, thereby generating the following ungrammatical derivations as its agreement features:

25a) *Ka-mù-ndü w-aku  
C12-C1-person  
12AGR-your (your person)

25b) *Tù-mù-ndü m-aku  
C13-C1-people  
13AGR-your (your people)

We can account for the above ungrammaticality by using the Minimalist assumptions that, following incorporation into the diminutive morpheme, the ϕ-feature of the noun cannot percolate. This is because the two subparts of the nominal derivation are differently specified for number and gender. Further, since the diminutive affix is the head, the derived noun can only inherit features of the head. Hence, diminutive or augmentative agreement on any modifier of either the diminutive ϕ-affix or 'mu-ndu' is expected.

In summary, diminutives and augmentatives in Kikamba are formed, not by the attachment of overt Noun-class prefixes, but by zero affixation. The zero morphemes are specified for gender and therefore, give rise to prefixation and agreement, with a gender distinct from the actual lexical gender of the noun-stem.
5.6.1: The Lexical-Integrity Principle and Structure-Function Association in Kikamba

Although our concern is predominantly with inflectional morphology, this proposed structure would also help explain the structure of a noun derived from a verb in the following way:

26a) kū-sya-a
   C15-give birth-sfx
   ‘To give birth’

b) Mū-sya-i
   C1-give birth-agt.sfx.
   ‘parent’

c) A-sya-i
   C2-give birth-agt.sfx.
   ‘parents’

d) Kū-ūū-(w)a
   C15-cook
   ‘To cook’

e) Mū-ūū-(w)i
   C1-cook-agt.sfx.
   ‘cook/chef’

f) A-ūū-(w)i
   C2-cook-agt.sfx.
   ‘cooks/chefs’
g) Ku-tū- (w) a  
C15-stay-sfx  
‘To stay (in a place)’

h) Mū-tū-(w)i  
C1-stay-agt.sfx.  
‘Neighbour/resident’

i) A-tū-(w)i  
C2-stay-agt.sfx.  
‘neighbours / residents’

Contrary to what one might assume, the nominalizing morpheme is actually the suffix and not the prefix attached to the noun-stem. To explain this in greater detail, consider the phrase-structure provided for the following derived nominals:

(27a) mū-thīnz-i  
C1-slaughter-agt.sfx.  
‘Slaughterer’
(27b) a-thînz-i
C2-slaughter-agt.sfx.
'Slaughterers'

(27c) Mû-thûkûm-i
C1-work-agt.sfx.
'worker'
From this data the observation we make is that in the Kikamba, verbs become 'nominalised' through two morpho-syntactic processes, namely:

-Through the Noun-class prefix;

-through the addition of a suffix morpheme.

With reference to the latter point, consider the following forms for the root verb 'thǐnz-' - 'slaughter':

28.a) kū-thǐnz-a
C15-slaughter-sfx.
'To slaughter'

b) Mū-thǐnz-i
C1-slaughter-agentive morph.
'Slaughterer'

c) Mū-thǐnz-u
C1-slaughter-Participative morph.
'Which is slaughtered'
d) mū-thînz-e
C1-slaughter-patientive morph.
‘That who is slaughtered’

e) A-thînz-i
C2-slaughter-agentive morph.
‘Slaughterers’

The above examples provide evidence that indeed, the ‘Nominalizer’ is a suffix, and in addition, it is the suffix material that changes as various types of nominalizations are derived. By changing the suffix morpheme, we get the agentive, participative and the patientive nominalizations respectively.

Hence in the Kikamba nominal, the category is determined by the suffix, with NP structure having the Head-initial parametric setting. The Noun-class combines with a root noun to derive the following Nominal structure:
The nominal category seems to be controlled by the class marker. However, the suffix does play a significant role in controlling the final derivative category.

Nominal modifiers, (in contrast to the head-nouns), are formed by prefixing the subject prefix (SP) to the modifier stems. Thus, SP is attached to D-stems to form concordial demonstratives that will agree with the noun. It must be remembered that while all Kikamba nouns are made up of the
affixation of the noun-class markers to noun-stems, nominal modifiers bear concordial marking.

With respect to the constituent structure, the SP on the modifiers and verbal forms contributes pronominal information in the functional structure. This would explain why modifiers in the Kikamba nominal can be referential in the absence of the head noun and why everything in the NP is optional.

On the other hand, nominal modifiers, in contrast to nouns, are formed by prefixing the subject-prefix (SP) to the modifier stems. Thus SP is attached to demonstrative stems or adjectival stems to give a well-formed derivation.

In accordance with Minimalist assumptions, in X-bar theory, Functional projections (henceforth, FP) are distinguished from lexical projections (henceforth XP).

The distinction results from structural endocentric requirements, which involve universal structure-function association principles. (Cf. Kroeger-1991, Bresnan-1995). In addition, in keeping with the Lexical Integrity Principle, words are built out of different structural elements and by different principles of composition as compared to syntactic phrasal categories. (cf. Chomsky 1970, Bresnan and Mchombo 1995).
5.7: Problems associated with the DP analysis of the Kikamba Nominal

We will assume that an AGR P will inevitably contain an AGR element as head, whereas a DP will contain a Det (erminer) category as head of the phrase. Applied to Kikamba, this observation would yield the following derivations:

30a) İ-vuku y-a Mumo.
   C5-book 5AGR-of Mumo
   ‘Mumo’s Book’.

30b) Kū-thek-a ku-aku ti-kū-seo.
   C15-laugh-sfx. 15AGR-your NEG-C15-good.
   ‘Your laughing/laughter in not good.

30c) N-yūmba y-a N-gai.
   C9-house 9AGR-of 9-God.
   ‘God’s House’.

30d) i-tanda sy-a ky-ūma.
   ‘Metallic beds/Beds of metal.’

The inference that we make based on the data is that the highlighted nominals in these examples are better analysed as AGR-P NPs rather than DPs, simply because they contain an AGR or POSS. feature. These are what are termed as Genitives or possessives.
On the other hand, we have undisputable Kikamba DPs, which are easily discerned as those nominals displaying a Det (erminer) element.

Consider the structure for the following phrases:

31a)  I-vuku y-ňi.
     C5-book 5AGR-this.
     'This book.'

31b)  Mũ-thĩnz-i ũ-ya.
     C1-slaughter-Nzer. 1AGR-that (yonder)
     'That slaughterer'.

(Notice the determiner element that was lacking in the first type of nominal structure we proposed).

Based on the empirical distinction just made, our contention is that (contrary to the assumption made by the DP-hypothesis in related literature) not all NPs (or generally, Nominals) in Kikamba are DPs. We have demonstrated that an NP in Kikamba could either be an AGRP or a DP, depending on whether they instantiate an AGR or Det (erminer) element, in the same way that the sentential clauses in an AGR-initial language such as Kikamba (viz. CH Five, on the AGR/TNS. Parameter) may be AGRPs or TNSPs, depending on whether or not they instantiate an AGR element. This is not a totally unreasonable analysis, especially if we assume that Determiner and AGR are two separate categories that project different X-Bar projections.
Contrary to this view, the DP-hypothesis maintains that Det (erminer) and AGR are instantiations of a single syntactic category, namely, ‘D’, in much the same way that the ‘I’-analysis maintains that AGR and TNS instantiate a single syntactic category, namely, ‘I’.

In summary of our discussion so far, with reference to the Kikamba nominal, the decision for us to split ‘D’ into separate syntactic categories is motivated, not only by a desire to maintain a parallelism between the structures of sentences and NPs, but more importantly, by empirical considerations, having to do with the co-occurrence restrictions among the nominal elements.

Keeping in mind our thesis on the important role of functional categories in Kikamba, our supposition is that word-order differences in nominal-structure is largely determined by differences in the lexical properties of the functional categories instantiated (in this case, ‘D’ and AGR), in combination with the general principles of UG. This is because, as we have seen, the c-selectional properties of ‘D’ determine the structural properties of Nominal (NPs) in the sense that they require, either the presence or absence of other functional categories, and in the Kikamba nominal, most notably, AGR.

We need to verify whether this standpoint has any basis in the analysis of the Kikamba nominal. According to Ouhalla (1991), not all NPs can be analysed as DPs. His proposal is that NPs should be analysed as AGR Ps if they contain an AGR element, and DPs if they contain a Det
(erminer) element. This view suggests that there are actually two structural properties of each type of NP, which, no doubt, will have far-reaching implications for the derived order of substantive (lexical) elements in a language.

5.8: The D (et) Parameter

In Kikamba, there seem to be no co-occurrence restrictions on the two categories D (et) and Agreement appearing within the same Nominal phrase. Consider the following examples:

31a) Kî-tanda kî-ya ky-à ky-ûma.
    C7-bed 7AGR-that 7AGR-of metal
    '*Bed that of metal'/ That metallic bed

31b) Kû-û(y)-a k-û ku-aku....
    C15to-cry-sfx. 15AGR-this 15AGR-your
    '*crying this yours / This crying of yours'

31c) M-bathi i-no sy-a N-gai ....
    C10-songs these 9AGR-of C9-God
    '*Songs these of God this / These songs of God…’

31d) Ma-thik-o a-a m-a mu-ana w-ake.
    C6-burial-Nom.sfx. 6AGR-this 6AGR-of C1-child 1AGR-his
    Burial this of his child (‘This burial of his child.’)
Notice that all these possessives or Gerunds can occur with determiners positioned, after the main noun, or after the possessive pronominal form. Placing the determiner as the first element in the phrase, as we would in English, though not totally ungrammatical, would definitely sound 'un-native-like' and thus should be considered as a syntactically 'marked' or un-preferred' position for Determiners in Kikamba DPs.

The assumption that can be made, therefore, is that NPs, which contain an AGR (POSS.) element, can have a DP projection just like ordinary DP without a POSS. form. However, we need to give a principled account of why this is the case.

Let us not assume that all languages behave like Kikamba, in allowing D (et) elements in AGR phrase. Consider the English translations of the examples we provided. In addition, consider the reason for the ungrammaticality of the following English sentences:

40a)*This Njeri's spoiling of our home.
40b)*That Mwikali's metallic bed.
40c)*This God's house

These English sentences sound awkward simply because they are incomplete sections of what would otherwise be grammatical (and perhaps) permissible sentences. Unlike in Kikamba, the co-occurrence restriction on Det. and AGR in English implies that NPs, which contain an AGR element (as seen in all the examples above), lack a DP projection. Conversely, NPs,
which contain a Det element, lack an AGR P projection. Recall that the equivalents of these constructions are well formed in Kikamba.

This specific contrast between English and Kikamba can be accounted for if we make the following assumption, referred to as the ‘D- Parameter’ proposed by Ouhalla (1991) formalized with the following parametric values:

**D-Parameter 1 (Ouhalla 1991:182)**

a) D c-selects NOM/ASP, NEG, NP (e.g. English)
b) D c-selects AGR-NOM, NP (e.g. Kikamba)
c) D c-selects AGR-GEN, NOM/ASP (e.g. Turkish)
d) D c-selects C, NP (Modern Greek)
e) D c-selects C, TNS, NP (Spanish)
f) D c-selects NP (Semitic)

The main concern of this Parameter amounts simply to a list of the categories that the functional category D selects in any given language. From this we infer that its variation is the nature of the elements selected by D, which determines variation in co-occurrence possibilities, we discussed using comparative data from English and Kikamba.

Applied to the examples we provided, the inferences we can make are that in English, D does not c-select AGR, hence a determiner and an AGR(POSS.) element cannot co-occur in the same Genitive phrase. On the other hand, it is possible that in Kikamba, D, c-selects AGR, hence the co-
occurrence of a determiner and an AGR element within the same Gerund structure.

Note that our analysis for English should not be construed to exclude the possibility that some NPs may contain an AGR category at all. What we are proposing is that a D element in English cannot project in a construction, which contains an AGR category. And yet, as we shall see, in Chapter 4, both English and Kikamba can be categorized as instantiating the 'AGR-Initial' parametric setting with respect to the AGR/TNS parameter. We will discuss our reasons for assuming that both the c-selectional, as well as the m-selectional properties of D, as well as other functional categories indeed, play a significant role in the word order of lexical categories in Kikamba sentence structure.

Once again, the fact that the possibilities of the co-occurrence of AGR and D are attested in some languages and not in others points to an underlying Parameter at work, the differences in question being a direct reflection in the c-selectional properties of the D functional category.

5.9: Summary

In this chapter, we concentrated on the syntactic nature of the grammatical category D (eterminer) in Kikamba, as well as its maximal projection, the DP. It is important to note that the grammar of Kikamba, just like any other natural language, has a number of functional categories whose members lack descriptive content, and therefore, serve to mark
grammatical properties of number, person, Tense, Negation etc. In line with our thesis orientation our position is that these functional categories, although lacking in semantic content, do impose significant grammatical restrictions on the lexical categories they modify.

We also examined the behaviour of the functional counterparts of nouns, namely pronouns, which, in Kikamba seem intrinsically emphatic, in the sense that they occur primarily for emphatic purposes, rather than being obligatorily present at LF level. Nevertheless, although these pronouns lack the descriptive content of an overt noun, they still serve to encode functional properties of person, number, gender (Noun-Class features), as well as controlling the agreement pattern of the sentence, whether, or not they are overtly represented in a sentence. The next Chapter provides more information on the rest of these functional categories and their significance, in controlling the word-order of substantives in the clause structure of Kikamba.
CHAPTER SIX
SELECTED PARAMETRIC SETTINGS IN THE KIKAMBA CLAUSE

6.0: Introduction

In the previous chapter, our primary objective was to analyse the syntactic nature of the grammatical category D (determiner) in Kikamba, as well as its maximal projection, the DP. We also discussed the operations of functional categories such as DET (determiner) and 'pro' (null subjects) and their role in the setting of certain parameters affecting the structure of the nominal in Kikamba. In keeping with our thesis, it was argued that these functional categories, although occasionally lacking in semantic content, nevertheless, do impose significant grammatical restrictions on the lexical categories they modify.

The research objectives we seek to address in the present chapter relate to the functional categories of INFL, TNS and AGR and the degree of influence they command in the parametric values selected for the AGR, TNS, and NEG parameters in Kikamba. We seek to determine (and consequently justify our position) using data from the Kikamba verbal structure that even parameters relating to the verbal complex will be exclusively determined by functional, rather than lexical categories.

An additional objective of relevance in this chapter is to establish whether or not movement of lexical and functional categories in Kikamba is
constrained by the strength or weakness of AGR features or alternatively, by a Checking principle.

The chapter further explores the rationale behind some of the parametric settings selected by the grammar of Kikamba for selected parameters of UG. These parametric values will be seen to influence the morpho-syntax of the entire clause structure of Kikamba, including the nominal structure of the verbal complex.

Under the Minimalist framework, the language-particular rules are reducible to a choice of values for parameters. This may not seem like anything novel within recent generative theories. However, what may not be widely recognized is the assumption that parameters of UG are now assumed to be almost entirely limited to the lexicon, and the strength or weakness of functional elements.

The chapter also makes an attempt to examine the operations of four of these functional categories as they apply within the grammar of Kikamba. These are NEG, TNS, AGR and the Head-Specifier elements. (We emphasize that these are not the only functional categories recognized within the theory). In order to carry out a comprehensive investigation of the manifestations of these categories in Kikamba, we have deliberately limited this study solely to the structural phenomena related to them.

As a consequence of the recent recognition of the importance of functional categories in grammar, current experimental studies on the application of the Minimalist Program on empirical data focuses on the
more subtle and certainly, more complex properties of the functional category system (cf. Ouhalla 1994). We therefore will discuss the settings for three different parameters of UG as they manifest themselves in Kikamba, and in so doing, we seek to advance the position that functional categories determine most, if not all aspects of grammatical language variation.

The position we have adopted in our analysis of both parameter settings and the arrangement of elements in sentences and phrases is different from the widely accepted assumption in linguistic scholarship. Our word-order typology is in keeping with Minimalist assumptions, namely that the typological classification of languages is better explained by making reference to the order of functional categories such as TNS, AGR or INFL, which we will demonstrate, play a significant role in the make-up particularly of the Kikamba verbal complex. Generally, the hypothesis we seek to test in this chapter is the idea that parametric values in Kikamba are all determined by functional categories, and by extension, probably all aspects of language variation are determined largely by functional rather than lexical categories.

Although the previous chapter concentrated on the structure of the nominal phrase, it is important that we also discuss the Verbal structure for the sake of presenting a comprehensive discussion of the grammar of Kikamba, as well as the grammatical reasons behind the values manifested by the language for the parameters relevant to this study.
6.1: The X-Bar status of inflectional elements and the Clause-structure of Kikamba

In our exposition of the Minimalist Framework (Section 1.6), we demonstrated that there is sufficient evidence that each of the inflectional elements assumed to belong under the ‘I’-node (or ‘I-analysis’) behaves like an independent syntactic category, in the context of the X-Bar theory. Accordingly, we will assume that Kikamba clause structure is best explained, if each of the lexical and functional elements is analysed as heading its own maximal projection. The Inflectional elements of relevance to this investigation are:

a) NEG (ation)
b) TNS. (Tense)
c) AGR (Agreement)

The conclusions reached are all made on the basis of evidence from the grammar of Kikamba. These may possibly lead to a rethinking of the structural properties of sentences, as well as the distribution of the relevant inflectional properties inside them.

Our hypothesis was that certain parametric settings related to the functional categories of NEG, TNS and AGR could possibly account for specific aspects of typological variation relating to the morphological properties of both lexical and functional categories in Kikamba clause structure. The implication of our position is that the structure manifested in the Kikamba clause, boils down to a distinction in the grammatical features,
or categorical features of the functional categories (previously mentioned) as well as the general principles of UG.

The fact that slight variations in the order of functional categories gives rise to major typological differences in natural grammars, serves to emphasize further the crucial role played by functional categories in determining grammatical processes, and consequently, linguistic variation. In this study we have selected three parameters, to the exclusion of the rest. We will see how each of these selected parameters is determined predominantly by the functional category of AGR in Kikamba.

### 6.2: Tense forms in the Kikamba verbal complex

Kikamba, (as is typical of most Bantu languages), has a variety of tense forms all of which appear as affixed elements within the verbal complex. These will be manifested in declarative, interrogative, and negation sentences. Since our orientation is primarily morpho-syntactic, we will ignore any phonological processes such as vowel coalescence or tonal variation processes all of which (though very significant in bringing about variation in meaning in Kikamba) clearly fall outside our research scope.

Generally, the Kikamba verbal complex consists of a root (sometimes referred to as a ‘radical’), together with a number of ‘pre-root’ affixes, so called because when they occur, they precede the verb root. These include the following affix forms:
a) An invariable Pre-prefix /ni-/.

Note that this affix will not occur with all tense forms. The rules governing its attachment to the verbal complex will be discussed in the body of this discussion;

b) A verbal-prefix that we choose to refer to as ‘AGR’ since it changes its form to reflect concordial agreement with the subject Noun. This verbal prefix, must, of necessity, be in agreement with the subject noun, irrespective of whether the subject is overt or in a null form;

c) An Object infix;

d) A tense marker that for purposes of this study, we refer to simply as TNS.

In addition to the ‘Pre-root’ affixes, the verbal complex also has ‘Post-root’ affixes, sometimes referred to as ‘Verbal extensions’. The four main ‘post-root affixes (or suffixes) include the following:

/-a, -e, -ie, -ite/.

Our emphasis in this section will is not only to explain the different tense forms in Kikamba, but also to examine the order of affixed elements vis-à-vis the verb-roots, for according to Minimalist assumptions, morphological affixation processes must, of necessity, reflect syntactic phrase-structure rules.

As a word of caution, we emphasize that some of the tense-forms found in Kikamba lack direct equivalents in the grammar of English. As a consequence, some of the translations we present should be interpreted as simply close approximations to the English tense forms, rather than being
direct equivalents. The following are the multiplicity of tense-forms found in the grammar of Kikamba:

- Simple Present Tense 1
- Present Tense 2
- Present continuous /Immediate Future Tense
- Future Tense
- 'General Future' Tense
- 'Far Future' tense
- Past Tenses ('Immediate Past', 'Far Past')
- Narrative Tenses and Imperative forms
- Simple /-e/ Tense
- The /-i/ Tense
- Tenses with an additional /-a/ affix
- The /-ki/- tense
- Two word tenses
- Other less common tenses

In addition, Kikamba also has what could be referred to as 'Negative' Tense forms that correspond to some of the 'Positive' tense-forms presented above. The NEG tenses include the following:

- Negative Present Continuous
- Negative Perfect / Negative Immediate Past
- Negative Future
In order to have a comprehensive and thorough analysis of the morpho-syntactic behaviour of the tense element in Kikamba, we have limited our discussion and exemplification of the numerous tense-forms. It is pertinent to note that the Tense-forms dealt with in this chapter are not the only existing tenses in Kikamba.

6.2.1: Present - continuous / Immediate - future tense

This is one of the most commonly used tense-forms in Kikamba, and it has the following structure:

Pre-prefix + AGR + TNS + verb root + sfx

The following data exemplifies this structure:

1a) pro ni - n - gũ -semb - a
   pro PrePfx-AGR (1stpsn.sg)- TNS-run-sfx
   ‘(I) am running/ will run’.

1b) pro ni - me - (k)ũ - semb-a.
   pro PrePfx-AGR (3rdpsn.pl.)- TNS-run-sfx
   (They) are running / will run’.

1c) pro ni - t - (k)ũ - semb - a.
   pro PrePfx-AGR (1st psn.pl.)- TNS-run-sfx.
   (We) are running /will run’.

Notice from the data presented, that the Pre-prefix /ni-/ must occur with this tense, and in addition, remains invariable. On the other hand, the AGR verbal-prefix changes in line with the agreement features of the
subject-noun, even when it appears as a null pronoun. This is the reason why Kikamba allows for null subjects; simply because of the AGR features attached to the verb that mirror the properties of the subject, thus allowing for an element of predictability. The context of discourse will determine whether the tense forms above are to be interpreted as 'Present Continuous' or 'Immediate Future' tense.

6.2.2: ‘Perfect’ / ‘Immediate – perfect’ tense

The closest we can get to an English translation of this tense-form is to translate it as ‘has’ or ‘has just’. Hence, the tense-form could be interpreted to have an ‘immediate’ or ‘general perfect’ meaning. This verbal complex will have the following structure:

Pre-prefix + AGR + TNS /-a:-/ + Verb root + a

Consider the following examples:

2a) pro nī – n – a: - neen- a.
   pro PrePfx-AGR (1st.psn.sg.)-TNS-speak-sfx.
   (I) have spoken/ just spoken’.

2b) pro nī – tu –a:- neen – a.
   pro PrePfx-AGR(1stpsn.pl)-TNS-speak-sfx.
   (We) have spoken / just spoken’.

2c) pro nī – k –a:- neen – a.
   pro PrePfx-C12AGR(dimin)-TNS-speak-sfx.
   (The small child/person) has spoken /just spoken’.
Again just we indicated with the previous tense form, the context of interaction will determine the exact tense interpretation. Although it is beyond our research scope to address phonological issues, it is important to note that another tense of the same shape as the one above, but with a difference in tonal patterns and without the /ni-/ pre-prefix gives rise to a different meaning altogether. The examples below illustrate this:

3a) pro ni- n - a: - ving - a mū-omo.
pro PrePfx–AGR(1stpsn.sg)–TNS (Pft)-close-sfx. C3-door
(I) have closed the door’.

3b) pro n - a: - ving - a mū-omo...
pro AGR(1stpsn.sg.)-TNS-close-sfx C3-door...
‘When (I) close the door…’

Note that the two tenses are similar except for the fact that the second example lacks the pre-prefix, and hence the meaning translates to ‘when I close…’ The difference between the two tenses will correspondingly be marked by tonal differences which are beyond the scope of this investigation.

6.2.3: ‘General - future’ tense

It has already been mentioned that the ‘Present Continuous’ tense, depending on the context of discourse, may also be interpreted as an ‘Immediate future’ tense. Kikamba also has what we will refer to as a ‘General future’ tense to distinguish the two future tenses. This tense form
occurs when talking about events occurring subsequent to the time of speaking up to a period of a few weeks or so (or what we might refer to as 'the recent future'). The verbal complex will have the following structure:

\[ \text{AGR} + \text{TNS} + \text{Verb root} + /a/ \]

Consider the examples below:

4a) pro ā - ka - valūk - a.
    pro AGR(2ndpsn.sg)-TNS-fall-sfx.
    '(You sg.) will fall (down)'.

4b) pro mū - ka - valūk - a.
    pro AGR(2ndpsn.pl)- TNS-fall-sfx.
    '(You pl.) will fall (down)'.

4c) pro a - ka - valūk - a.
    pro AG(3rdpsn.sg)-TNS-fall-sfx.
    (He/she) will fall (down).

In this data, the interpretation is that the act that will take place in the very near future. In addition, in contrast to the previous tenses discussed, this general future tense bears no pre-prefix.

6.2.4: 'Narrative' tenses

Narrative tense (1)

The grammar of Kikamba uses the Narrative Tense 1, marked by the affix /-a/, in the narration of events. It is quite similar to the immediate
perfect tense, only differing in tonal properties. The following sentences illustrate the use of this tense-form:

\[ \text{AGR} + \text{TNS} + \text{Verb root} + \text{Sfx} /-\text{a}/ \]

5a) pro w-a-tat-a mūno.
pro AGR (2\textsuperscript{nd} Psn.sg.)-TNS (Narr.)-Try-TNS. Sfx. very hard.
‘(You) tried very hard.’

5b) pro mu-a-tat-a mūno.
pro AGR (2\textsuperscript{nd} Psn.pl.)-TNS (Narr.)-Try-TNS. Sfx. Very hard.
‘(You pl.) tried very hard’.

5c) pro n-a-tat-a mūno.
pro AGR (1\textsuperscript{st} Psn.sg.)-TNS (Narr.)-Try-sfx. Hard.
‘(I) tried very hard’.

Note the absence of the pre-prefix /ni-/ from the verbal complex.

**Narrative Tense (2)**

A second narrative tense connotes a rather less remote time in the past. It is represented by the affix /-na:-/ and adopts the following structure within the Verbal complex:

AGR + Prefix (-na:) + Verb root + Sfx.

6a) pro na: -tat-a.
pro AGR (1\textsuperscript{st} Psn.sg.)-TNS (Narr)-try-sfx.
‘I tried.’

6b) pro tu- (n) a: -tat-a.
pro AGR (1\textsuperscript{st} Psn.pl.)-TNS (Narr.)-Try-sfx.
‘We tried.’
6c) pro ma-(n)a: -tat-a.
pro AGR (3rd Psn.pl.)-TNS (Narr)-try-sfx.
‘They tried.’
This particular Narrative Tense form, in some contexts, could be interpreted
to as have a ‘Present Perfect’ meaning, as in the first example above.

6.2.5: Past -tense forms

Kikamba has different kinds of tenses that could be interpreted as having
a ‘Past tense’ interpretation. We have limited our discussion to only two of
these forms, namely:

- ‘Immediate Past’ tense: - This form is usually used in reference to an
  action that took place earlier on the day of discourse;
- Recent Past - This Tense-form is used in reference to an action that
  took place on the day prior to the day of discourse, perhaps even a
  week earlier.

Immediate Past Tense

When this tense is attached to the Verbal complex, the verbal
structure manifests as follows:

Pre-prefix + AGR (verbal prefix) + Verb root + /-ie/

It should be noted that a number of variants of the final suffix form occur.
For instance, if the verb root ends in the glide /j/, then the suffix form used
Consider the following examples:

7a) \text{pro n (i)-ū-kom-ie mūno.}
\text{pro PrePfx-AGR(2nd psn.sg)-sleep-sfx a lot.}
(You sg) slept a lot/too much'.

7b) \text{K-ana m-ka-kom-ie mūno.}
\text{C12-child PrePfx-12AGR-sleep-sfx a lot.}
'The little child (has) slept too much/a lot.'

7c) \text{pro nī-n-ūk-ie.}
\text{pro ni - AGR (1st Psn.sg.) - come - TNS (immed.pst.)}
(I) came'.

Although we have not indicated the tense affix in the examples just provided, the Past-tense element is marked simultaneously by the pre-prefix and the suffix element. This is one of the exceptional cases where TNS does not occur in its usual position, namely, between AGR and the verb root.

The ‘Recent Past’ Tense

This tense imposes the following structure in the verbal complex:

Pre-prefix /ni-/ + AGR + na + Verb-root + /-ie/ (or phonologically-conditioned variants of the suffix)

Consider the examples below:

8a) \text{pro nī-ma-na:- tem-iwe nī tū-vyū.}
\text{pro PrePfx-AGR(3rd psn.pl)-TNS-cut-sfx by C13-knife.}
('They) were cut by little knives'.

is /-isyę/. In addition, the pre-prefix /ni-/ will not occur in all instances.
8b) pro nĩ-tũ-na-vik-iyē nesa.
pro PrePfx-AGR(1stpsn.pl.)-TNS-reach-sfx. well
(We) reached well/ safely'.

8c) pro nĩ-tũ-na-tua-i(y)e n-g'ombe mū-syi.
pro ni-AGR(1st Psn.pl.)-TNS(R.Pst.)-take-sfx. C10-cows C3-home.
'(We) took the cows home'.

8d) pro nĩ-ma-na-vand-ie m-boso mū-nda-nĩ.
'(They) planted beans in the garden.'

Notice that unlike the immediate Past tense form where the TNS affix is represented by the suffix, the Recent-Past tense has the TNS affix in its usual position in the Verbal complex between AGR and the Verb-root.

6.2.6: Present - tense forms

Present tense 1 - To 'Be'/'Is'

We have mentioned that the form /ni-/ appears as a pre-prefix attached to some of the verb forms. It is important for us to note that the form /ni/ and its negation counterpart /ti-/ also occur as free forms, which can make all the difference between a complete and incomplete utterance. We therefore could refer to them as 'stabilizers', in the sense that they enable groups of words to stand by themselves as 'stable' (or free) forms. In Kikamba, the following two forms represent present tense:
• /-ni-/ occurs in 'positive' sentences such as declaratives and interrogatives;

• /-ti-/ occurs in 'negative' sentences or in any instance of sentence-negation.

Consider the following examples:

9a) Ka-ana ka-a nĩ-ka-nene.
   C12-child 12AGR-this is 12AGR-big
   'This child is big'.

9b) Tu-ana tũ-ũ nĩ-tũ-nene.
   C13-child 13AGR-these are 13AGR-big
   'These children are big'.

9c) Kĩ-vanga kĩ-ĩ nĩ-kĩ-nene.
   C7-panga 7AGR-this is 7AGR-big
   'This panga (machete) is big'.

If we were to give an interpretation to the tense expressed in the above forms we could interpret the tense to be close to present tense expressed in English by the auxiliary verb 'is'. We will further explain the /ti/ form in our discussion of the NEG tenses of Kikamba.

A significant point needs to be made with reference to the form /ni/. Many different tenses in Kikamba may occur with an initial /ni-/, but it is not obligatory. Sometimes these forms are associated with different meanings and therefore, could be regarded as different tense forms. A few general observations may be made initially: The /ni-/ form never co-occurs
with negative or relative tenses (these will be discussed in a later section),
including the tenses that come after the words: ‘yila’ (‘when’) or ‘undu’
(‘how’) respectively.

In addition, /ni-/ attracts direct attention on to itself and as a
consequence, may occur in a ‘one-verb’ sentence. Conversely, verbal forms
without the /ni-/ affix direct attention on to what follows, and hence, tend to
occur in ‘multi-verb’ sentences. The examples below further illustrate this
tense form:

9d) pro nī-n-ğu-ku-a ḵ-sandukū.
pro PrePfx.-AGR(1stPsn.sg.)-TNS(Prst.cont.)-carry-sfx. C5-suitcase
‘I will carry a suitcase’.

9e) pro n-di-(kū)-ku-a ḵ-sandukū.
pro AGR(1st Psn.sg.)-NEG-TNS(Prst.cont.)-carry-sfx. C5-suitcase.
‘I will not carry a suitcase.’

Notice the absence of the pre-prefix form/ni-/ in the Negative clause
(9e) above. The above forms make a significant and overt difference
between a complete and incomplete utterance. This is the motivation for
using the term ‘Stabilizers’ since they enable groups of words to stand by
themselves as ‘stable’ utterances or sentences. In some contexts, their
absence makes an utterance seem incomplete. The data below illustrates
this:

9f) Mu-anake ū-su nī-mū-tuman-u.
C1-young man C1AGR-that TNS(prst.)-is C1AGR-foolish-sfx..
‘That young man is foolish’.

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9g) Mu-anake û-su ti-mu-tuman-u.
C1-young man C1-AGR-that NEG-not TNS(NEG. Prst.) C1AGR-foolish.
‘That young man is not foolish’

9h) Mu-anake û-su φ mū-tuman-u...
C1-young man C1-that  φ C1AGR-foolish...
‘That foolish young man…’

As can be seen from the last sentence above, the stabilizer forms /ti/ and /-ni/ are necessary in order for the group of words to form a complete sentence. The form above without the Pre-Prefix /ni/ is an incomplete sentence, since it contains only a Determiner-Phrase. Consequently, the listener would expect some extra information for the sentence to sound complete, hence the terms ‘stabilizer’. It is however, important to state that this applies to structures that are just system entities, not related to any discourse. As utterances occurring in a specific situational context, they could be 'informationally' complete, for instance, as responses to WH-questions. For instance:

10a) WH-ques: Mumo ethi nduka-nī na-û-û?
Mumo TNS (pst.cont.) shops-sfx with whom?
(Mumo is going to the shops with whom?)

10b) ANS: Na mu-anake û-su mū-tuman-u.
With C1-young man C1-that C1AGR-foolish
(With that foolish young man.)
Notice that the response given in (10b), though not grammatically complete, is nevertheless, ‘informationally’ complete. We reiterate that the completeness of utterances is different from, that of system sentences, which are based only on the rules of grammar and are therefore predictable even before their use in any particular discourse.

**Present Tense 2 - Present Progressive**

In certain contexts, verbs bearing this tense marking may be understood to express connotations of being ‘habitual’ (or representing a situation where the doer of the action talked about has performed an action many times previously). The following sentences exemplify this tense form structure, vis a vis the Verb root:

Pre- Prefix, /ni-/ + AGR + suffixes - /i: te/, /e : te/, / etye

11a) pro nî-n-zemb-ete .

pro PrePfx. - AGR(1st Psn.sg.) - run-TNS. sfx.

‘(I) am running/have great experience in running.’

11b) pro n(î)-û-n-zemb-etye mûno.

pro PrePfx. –AGR(2nd Psn.sg.)-run-TNS. sfx. alot.

‘(You) are rushing me a lot/too much’.

11c) pro nî-mû-îkalît-e n-thîf.

pro PrePfx-sit-TNS. Sfx. C9-earth/down.

‘(You) are sitting down.’
11d) pro nǐ-ma-nyw-îte mūno.
pro PrePfx. -AGR (3rd Psn.pl.)-Drink-TNS. Sfx. Completely.
‘(They) are really drinking/ are completely drunk’.

11e) pro nĩ-tũ-kîlît-ye ki.
pro Pre-pfx. -AGR (1st Psn.pl.)-keep quiet-(TNS)sfx completely
‘(We) are completely quiet’.

In some instances, (that we will not go into at this point), the Present
Progressive Tense for some verbs, occurs with an ‘Immediate Future’
connotation.

6.2.7: Negative-tense forms in the Kikamba Verbal complex

The negative morpheme in Kikamba is the form /-ti-/ with
allomorph variations depending on the AGR effects of the subject
pronominal. Certain assimilatory processes do occasionally produce a
coalescence of the AGR and NEG affixes respectively. For example:
/-n-ti: > ndi:-/n-tui > -ndwi:-/nde:-/tu- (t) i:- > -twi:-/,
/-mã(t)i:- > mwîi:-/ma(t)iî > -maâî-.

As we have indicated previously, any analysis or discussion of
phonological (assimilatory or tonal) processes in Kikamba fall beyond the
scope of the present study. Suffice it to say that the phonological form of the
NEG affix is predictable form the nominal-subject’s concordial agreement
pattern, as well as other assimilatory processes so common in the grammar
of Kikamba. The following data illustrates the use of some of the Negated sentences:

12a) Nyie nī-n-a-kola n-gewa sy-aku.
    1st Psn.sg. PrePfx.-AGR(1st psn.sg.)-TNS(prst. pft.)-had enough C9-talk AGR(2nd psn Pron)-yours
    ‘I have had enough of your talk’.

12b) Nyie ndi-n-a-kola n-gewa sy-aku.
    1st Psn.sg. –AGR(1st Psn.)-NEG-TNS (Neg. prst Pft.)-had enough C9-talk AGR(2nd psn Pron) yours.
    ‘I have not had enough of your talk’.

12c) We nī-w-a-thi.
    Pron.(2nd Psn.sg.) PrePfx.-AGR(2nd Psn.sg.)-TNS(Prst. Pft.)-go
    ‘You have gone’.

12d) We n-dū-n-a-thi.
    ‘You (sg) have not gone.’

12e) Ithyī nī-tw-a-thi.
    Pron.(1st Psn.pl. PrePfx.-AGR(1st Psn.pl.)-TNS(Prst Pft.)-go.
    ‘We have gone.’

12f) Ithyī tū(tī)-n-a-thi.
    Pron.(1st Psn.pl.) AGR(1st Psn.pl)-NEG-TNS.(Neg.Prst.Pft.)-go
    ‘We have not gone’.
12g) Inyũ nĩ-mu-a-thi.
Pron.(2nd Psn.pl.) PrePfx.-AGR(2nd Psn.pl.)-TNS.(Prst. Pft)-go
‘You(pl) have gone’.

12h) Inyũ mũ(t)ĩ-n-a-thi.
‘You (pl.) have not gone’.

The form of the Negative morpheme is dependent on the relevant noun-class system and its concordial agreement. The bracketed /-t-/ in some of the negative forms is represented in the underlying forms of the morphemes, but has undergone a deletion rule in the Machakos- dialect under investigation. Nevertheless, it is important to acknowledge its presence, for it does manifest itself in certain morphophonemic environments whose manifestation is beyond the limits of the present study. In addition, in some of its occurrences, there seems to be some form of coalescence between the AGR and NEG affixes, respectively.

Kikamba has three main ‘Negative-Tense’ forms, which co-occur with the NEG prefix forms. As is the case in the majority of Bantu languages, the range of meaning covered by negative tenses is broad. In Kikamba, the range of meaning covered by the negative tenses is not always the same as that conveyed by the ‘positive’ sentences; it may be wider or narrower depending on the context. Before dealing with the NEG tenses in detail, it should be noted that the NEG affix is /ti-/ , but in some cases, the /t/ may be deleted, thereby retaining the form /-i-/ as the NEG marker.
With reference to its position in the verbal complex, the NEG affix will occur between the AGR (verbal-prefix) and the TNS marker. It should be noted however, that the AGR affix and the NEG affix sometimes forms a coalesce particularly when used with Noun Classes 1, 3, 9, 11 and 14. (We emphasize again that these phonological processes fall outside our research scope). The NEG tenses will have the following interpretations:

**Tense-form (1)**

1a) Negative Present Continuous

1b) Negative Immediate Future

**Tense form (2)**

2a) Negative Perfect

2b) Negative Immediate Past

**Tense form (3)**

3) Negative Future

Keep in mind that the NEG affix /-ti/- when it occurs will be positioned between the AGR and the TNS affixes. Consider the following examples:

13a.) pro ma – ka – in-a ḳiŋi.

    pro AGR(3rd Psn.pl.)-TNS(fut.)-sing-sfx. again.

    ‘(They) will sing again’.

13b) pro ma - (t) i – ka – in-a ḳiŋi.

    pro AGR(3rd Psn.pl.)-NEG-TNS.(Neg.fut.)-sing-sfx. again.

    ‘pro (they) will not sing again’.
(It should be noted in passing, that the NEG affix /-ti-/ appears to merge or
coaalescence with the AGR prefix in Noun-Classes: 1, 3, 4, 9, 11, and 14. As
we mentioned before, such phonological processes will not be addressed in
the present study). With reference to the NEG tense forms above, note that
there is some degree of complimentary relationship between these tense
forms and the ‘positive’ tense forms presented earlier. For instance:

a) For present tense form represented by the free form /ni/ has the
   corresponding NEG free form /ti/ inserted instead;

b) For Present Continuous /Immediate Future there are two NEG
tenses, namely:
   -Negative Present Continuous
   -Negative immediate Future

b) For Perfect or Immediate Perfect we have a single NEG tense
   translated as Negative Perfect and Negative Immediate Past;

d) For General Future we have what may be translated as ‘Negative
   Future’, differing from the positive tense only by the NEG sign.

Negative Present Continuous Tense

Tense –form 1

a) Negative Present continuous Tense / Immediate future

   This negative tense form is represented by the affix /-ku-/ for
   example:
'(I) will / am not let(ting) you go'.

'The trees are not / will not fall(ing)'.

'This tomato is/will not spoil(ing) soon/quickly.'

'This little boy is/will not play(ing) well'.

(It is important to note the coalescence of the AGR prefix /-n-/ and the NEG affix /-ti-/ in (14a and 14b) above. The combination derives the form /-ndi-/.

In addition, in certain contexts, the tense used in each of the above forms may be understood to refer to the Immediate future Tense. The NEG marker is /-(t)i-/ and the NEG tense affix is /-(k)u-/. The bracketed consonants indicate the possibility of deletion in certain phonological environments that
we have deliberately ignored. As mentioned previously, this NEG tense form complements the Present-Continuous tense as is demonstrated in the following examples:

15a) A-eeni nî - me - (k)û - syok - a mû-syî.  
C2-guests Prepfx-2AGR-TNS(prst.cont.)-return-sfx C3-home.  
(The) guests are returning/will return home.'

15b) A-eeni ma - (y)î - (k)û - syok - a mû-syî.  
C2-guests 2AGR-NEG-TNS(neg.prst.cont.)-return-sfx C3-home  
(The) guests are not returning/ will not return home'.

From the examples provided, note the structure of:

AGR + NEG+ TNS(neg) + Verb Root + suffix

Notice the absence of the Pre-prefix /ni-/ in 15a above.

1b) Negative Immediate Future

Kikamba does not seem to have an overt tense affix for this tense. The only difference between the ‘positive’ and ‘negative’ sentences is that the latter contains the NEG affix and lacks the pre-prefix /ni-. Consider the following examples:

16a) Ithyî nî-tû-(k)û-tho-a m-boka.  
Pron(1stpsn.pl.) PrePfx-AGR(pron)-TNS(im.fut.)-buy-sfx C9-vegetable  
‘We will buy / are buying vegetables’.

16b) Ithyî tû-(y)i-(k)û-thoo-a m-boka.  
Pron(1stpsn.pl.) AGR(pron)-NEG-TNS( im.fut.)-buy-sfx C8-vegetables  
We will not buy vegetables'.
In the examples just provided, notice that although we have the NEG affix /-ti-/,, we lack a complementary NEG tense. As can be observed in the examples, the TNS marker is the same for both the ‘positive’ and the ‘negative’ sentences.

**Negative Perfect /Negative Immediate Past Tense.**

This tense would complement the positive ‘Perfect’ or ‘Immediate Perfect’ tense. The relevant tense affix is /-na-/. Consider the following examples:
17a) Nyie nī - n - a - min - a wīa w-akwa.
Pron(1stpsn.sg) PrePfx-AGR(pron)-TNS(Pft)-finish-sfx work AGR-my.
   ‘I have finished my work’.

17b) Nyie n- di - na-min-a wīa w-akwa.
Pron(1stpsn.sg) AGR(pron)-NEG-TNS(NEG Pft.)-finish-sfx work AGR-my.
   ‘I have not finished my work’.

17c) pro ni-mu-a:- som-a mūno.
    pro Pre-pfx-AGR(2nd psn.pl)-TNS(Pft)-read-sfx hard
    (You pl.) have read hard/thoroughly’.

17c) pro mū-(t)i-na-som-a mūno.
    pro AGR(2nd Psn.pl.)-NEG-TNS(NEG Pft)-read-sfx hard
    (You) have not read hard / thoroughly’.

Notice that the NEG marker /ti-/ in certain phonological environments
undergoes a voicing rule as a consequence of the presence of a nasal to
derive the form /-di/.

Negative Future Tense

This Negative tense form corresponds to the Future Tense. The only
difference is the presence of the NEG affix in the former tense form. The
following examples illustrate this:

18a) Ithyī tū-ka-thi wī(y)a-nī ūnī.
    Pron(1stpsn.pl) AGR(pron)-TNS(Fut.)-go work-to tomorrow.
    ‘We will go to work tomorrow’.
18b) Ithyī tū-(t)ī-ka-thi wī(y)a-nī ūnī.
Pron(1st psn.pl) AGR(pron)-NEG-TNS(Fut.)-go work-to tomorrow.
‘We will not go to work tomorrow’.

18c) pro ū-ka-thi wī(y)a-nī ūnī.
pro AGR(2nd psn.sg)-TNS(Fut.)-go work-to tomorrow.
‘(You sg.) will go to work tomorrow’.

18d) pro n-dū-ka-thi wī(y)a-nī ūnī.
pro AGR(2nd psn.sg)-NEG-TNS(Fut.)-go work-to tomorrow.
‘(You sg.) will not go to work tomorrow’.

Notice that the ‘positive’ and ‘negative’ tense forms are identical, save for the presence of the NEG affix in the Negative Future tense.

**Negative 'Immediate Past' tense**

To negate a verb with the ‘Immediate Past’ tense, the tense marker used is /-na-/. Note that this is the same form used to indicate ‘Negative Perfect’ tense and hence, the context of discourse will be relevant. Consider the examples below:

19a) Mu-ītu n(ī)-ū- manh-ie ma-vūku.
C1-girl Prepfx-1AGR-look for-sfx C6-book.
(The) girl has looked for the book’.

19b) Mu-ītu n-da-na-manth-a ma-vuku.
C1-girl 1AGR-NEG-TNS(NEG Pst.)-look for C6-book
(The) girl has not looked for the book’.
Note that the above sentences could have a 'Perfective' interpretation, for instance, 'The girl has looked for the Book' and 'The girl has not looked for the book'. The context of communication will determine the correct interpretation.

**Negative 'Recent Past' tense**

To negate the 'Recent Past' sentence, we would have the following structure imposed:

\[ \text{AGR} + /-(t)i-/ + \text{nee} + \text{Verb root} + a \]

Consider the Negative correspondents of the examples given above:

20a) pro ma-(t)i- nee-tem-w-a ni tû-vyu.
pro AGR(3rd psn.pl)-NEG-TNS(neg.Rct.pst)-cut-sfx by C13-knife.
' (They) were not cut by little knives'.

20b) pro tû-(t)i-nee-vik-a nesa.
pro AGR(1stpsn.pl.)-NEG-TNS(NegRct.Pst)-reach-sfx. well
(We) did not reach well/ safely'.

To clearly focus the relevant categories under investigation, we have deliberately avoided explaining morphological phenomena not immediately pertinent to the discussion underhand. Hence, we refer to all the affixes indicating the subject agreement with all other elements in the sentence using the cover term, AGR. This, in effect, easily helps us identify the central role of this particular functional category, without being swayed by details of whether it is a verbal-prefix, object-prefix, etc. We will now try to relate the morphological information just presented with the syntactic representation of TNS, AGR and NEG in the Kikamba syntax.
6.3: Morpho-syntactic representation of TNS in Kikamba

Consider the order of affixes in the following present-continuous verbal form: Pre-Prefix + AGR + TNS + Root + Suffix

21a) Ni- tu- (k)u- thek -a
PrePfx. AGR (1st Psn.pl.) Prst.cont. laugh sfx..
‘pro(we) are laughing’.

As a preliminary analysis of the order of elements in the verbal complex let us assume that the structure of the Kikamba verbal complex [AGR+TNS+V stem] has the following phrase structure:

21b) pro ma-ka-ya ma-sungwa.
pro AGR(3rd psn.pl.)-TNS(fut.)-eat C6-oranges.
‘(They) will eat oranges’.

It should be noted that the pre-prefix /ni-/ will not occur in every instance. However, when it appears, it is an invariable affix, unlike the other affixes. In addition, the phrase structure above demonstrates that the pre-prefix does not occur in all verbal complexes.
Below, is another example of an instance when the Pre-prefix is absent, as a consequence of the inclusion of the NEG affix:

21c)

Pre-Prefix + AGR + NEG + TNS + Root + suffix+NP

Φ tu- (t) i ka ku(w)-a n-gũa

Φ AGR(1st Psn.pl.) not NEG TNS. carry sfx. C7clothes

'Pro(we) will not carry clothes.'

Consider the following phrase structure:

21d)

As can be inferred from the structure provided, in Kikamba, all the functional categories discussed (NEG, TNS and AGR) are affixes, unlike in English where the NEG element manifests as a free form. Notice also, the absence of the pre-prefix /ni-/, in the presence of the NEG affix.
6.3.1: Morpho-syntactic representation of NEG in Kikamba

The NEG affix corresponding to the 'Recent Past' Tense has the following structure, with respect to the Verb root:

AGR + /-i-/ + /-nee-/ + Verb root + /-a/

For instance:

22a) pro nī-ma-na-kūn-iyē mu-alimu.
‘They beat the teacher.’

22c) pro ma-(t)i-nee-kūn-a mu-alimu.
‘They did not beat the teacher’.

The order relating to the NEG functional category can be explained on similar lines to the explanation we provided for the AGR/TNS order in the previous section. The position of NEG in Kikamba brings in a new, hitherto not formally recognized, dimension. The relevant literature concerning the position of NEG assumes that the NEG element will either be positioned inside or outside the TNS and AGR categories respectively. They ignore the situation where a language might decide to position NEG in between AGR and TNS respectively. This is the position the NEG element in Kikamba adopts. Hence given the sentence:

23.a) pro tū - (t)i - ka - thi ky-umwa.
pro- AGR(2nd Psn.pl.) – NEG – TNS(Neg.fut.) – go C7-church
‘pro (We) will not go to church’.
As a consequence, the following structure is derived:

```
Pro  tü-  (t)i-  ka-  -thi  ky-umwa
Pro  1st Psn.pl. not  fut.  Go  C7-church
```

23.b) ‘Pro (we) will not go to church.’

As can be inferred from the structure provided, in Kikamba, all the functional categories discussed (NEG, TNS and AGR) are affixes. Therefore, V-movement to TNS, NEG and AGR is obligatory under the GPP (Generalized Projection Principle). In addition, given the structure just provided, the only possible order that can be derived without violating the HMC, is where NEG is placed inside TNS. Generalized further, a principled explanation of these facts relating to the order of NEG in terms of the HMC is a possible explanation, only if NEG is assigned a full categorical status, just like TNS and AGR, in keeping with the X-Bar theory.

It is interesting to note that the literature on the position of the NEG element takes for granted that languages will either have the NEG element inside TNS and AGR or alternatively, outside TNS and AGR. As such, the
fact that English place the NEG element inside TNS and AGR simply follows if the negative clause is assumed to derive from the following underlying structure:

```
        IP
       /   \
  Spec   1
     / \   \
    I   Neg P
   / \     \ \
 AGR   TNS   VP
   \       \   \
    \       V   NP
     \     /   \
      \   Spec
       \ \   \
        \ AGR I
         \     \
          \     V
           \   NP
```

Notice that NEG is positioned lower in the hierarchy than TNS and AGR. In a language having the above structure, V-movement to TNS and AGR, via NEG is obligatory under the GPP (General Projection Principle). In other languages identified in the literature, NEG appears outside TNS and AGR. This order follows if negative clauses are assumed to derive from a structure where NEG is positioned higher than TNS and AGR, as reflected in the following structure:

```
        Neg P
       /   \
  Neg   TNS P
 /     \ \
 TNS   AGR P
 /     \ \
 Spec   AGR I
 /     \
 AGR   VP
 /     \
 V     NP
```

Again, given this structure, the only possible order which can be derived without giving rise to a violation of the HMC would be where NEG is
positioned outside TNS and AGR, as in the case of Berber and Arabic respectively. We emphasize, as we did with respect to the TNS-AGR analysis, that this explanation of the facts relating to the order of NEG in terms of the HMC is possible, only if NEG is assigned a full categorical status in the sense of X-Bar theory.

With reference to the data just presented, it should be emphasized that the position of NEG in relation to the other elements in the verbal complex is fixed, appearing between AGR and TNS:

\[
\begin{align*}
24a) \\
& \text{AGR P} \\
& \text{Spec} \quad \text{AGR}^1 \\
& \quad \text{AGR} \\
& \quad \text{NEG P} \\
& \text{AGR(3rd Psn.pl.)} \quad \text{not} \quad \text{Pst. beat-sfx C1-teacher} \\
& \text{‘pro (they) did not beat the teacher.’} \\
& \text{A change in the order of the elements contained in INFL (AGR, NEG, TNS) will give rise to ill formed structures, for instance:}
\end{align*}
\]
24b) *pro ti-ma-nee-kūn-a mu-alimu.

*pro NEG-AGR(3rdpsn.pl.)-TNS(pst.)-beat-sfx C1-teacher.

(They) did not beat the teacher’.

NEGP

'*Not they beat (their) teacher.’

The ungrammaticality of the above phrase is a direct consequence of the affixed elements going against the fixed order demanded by the morphosyntax of Kikamba. We shall explain this constraint on the order of elements within INFL as a consequence of the parametric value the grammar of Kikamba adopts for the NEG parameter.

The main purpose of this section was simply to verify the underlying position of the TNS feature in relation to the AGR, NEG and Verb-stem so as to have an empirical basis to form valid generalizations on the clause structure and by extension, parameter settings in Kikamba.
6.4: The AGR/TNS Parameter

Consider the following Kikamba DPs. (Note the ordering of the TNS and AGR functional elements):

C2-people 2AGR-these 2AGR- TNS (fut.)-run-sfx. C6-game-sfx.
'These people will run in the games.'

25b) N-yūngū ì-no ì-ka-valūk-a.
C9-water pot 9AGR-this 9AGR-TNS (fut.)-fall-sfx.
'This water-pot will fall down (someday)'.

25c) Ka-ana ka-a nī-ke-(k)ū-thek-a.
C12-child 12AGR-this PrePfx.-12AGR-TNS (cont)-laugh-sfx.
'This small child is laughing'.

C1-person 1AGR-that PrePfx.-1AGR-TNS(Pst.Pft.)-fall-sfx.
That person has fallen down'

25e) Nyie nī-n-a-som-a ì-vuku yī-ya.
1stPsn.sg. PrePfx.-AGR(1st Psn.sg.) -TNS (prst. perfect)-sfx. book
5AGR-book 5AGR-that
'I have read that book.'

As can be seen in each of the above sentences, the subject- (Agreement) prefix always precedes the TNS prefix in the verbal complex. A different (or non-attested) order of these two elements gives rise to ungrammaticality as can be seen in the following expressions:
26a) * Mũ-ndũ ũ-ya nĩ-a-w-valũk-a.
   C1-person 1AGR-that 1AGR-TNS (Pst Pft)-1AGR-fall-Sfx.
   ‘That man has fallen down’.

26b) * Ka-ana ka-ya nĩ-ũ-ke-thek-a.
   C12-child 12AGR-that PrePfx.-TNS(cont.)-12AGR-laugh-sfx.
   ‘That child is laughing’.

26c) * Nyie nĩ-a-n-soma-a ñ-vuku.
    ‘I have read a book’.

Each of the above examples is rendered ungrammatical simply because in each of them, the TNS category precedes AGR. To explain the above phenomenon (keeping in mind that the primary intention of the present work is to merge morphological and syntactic processes in Kikamba), it is pertinent at this point to appeal to Baker’s (1985c) formulation of what he refers to as ‘The Mirror Principle’, which makes the following assertion:

**The Mirror Principle [henceforth, MP]**

*Morphological derivations must directly reflect syntactic derivations (and vice versa).*

Basically, the gist of the MP is that, for a given complex of the form

[Affix 1 + affix 2+Verb], the process which attaches Affix 2 to the Verb applies prior to the process which attaches Affix 1 to the same category. To
demonstrate exactly how morphological derivations reflect syntactic ones (and vice versa) consider the following Kikamba verbal complex:

27) (Nyie) ni-n-a-som-a i-vuku.
   (Pron.1st Psn.sg.Nom.) PrePfx.-AGR(1st Psn.sg.)-TNS (Pst.Pft)-
   'I have read a book.'

Notice that the Verbal complex manifests the morphological structure of:

[PrePfx. +AGR+TNS+Verb-stem].

It is important for us to verify whether indeed, the morphological structure just presented is mirrored by the syntactic phrase-structure of the same. The MP predicts that the functional category TNS attaches to the Verb stem prior to the attachment of AGR to the derived complex. As far as the inflectional elements are concerned, the content of the MP follows from independent principles of the grammar, together with the assumption that each of these elements constitutes an independent syntactic category. To illustrate this, let us assume that the structure of the Kikamba verbal complex [AGR+TNS+V stem] has the following phrase structure:

(28)

```
  AGR P
    AGR
     TNS P
      TNS
       V
        VP
         NP
          ma-vuku
            C6-book
          ma-vuku
            C6-book
   tu-ka-som-a
     Pron.(1st Psn.pl.)Fut. read-sfx.
   'We will read books'.
```

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The fact that TNS attaches to the verb-stem ‘soma’ before AGR, follows independently from the ‘Head Movement Constraint’ proposed by Chomsky (1986b) and revised by Baker (1988), which proposes:

**The Head Movement Constraint [henceforth, HMC]**

A Head category can only move to the Head position immediately preceding it.

With respect to the Kikamba verbal complex, what the HMC implies is that the TNS affix must attach itself to the Verb stem before the AGR affix gets the chance to do the same. This assumption follows independently from the HMC, on the assumption that lowering is not allowed within the syntax of the language. The only derivation permissible by the HMC is the one where the Verb is raised, firstly, to TNS and subsequently to AGR, hence the LF order of:

29a)  
Ka-ana ni-ke-(k)u-soma.  
C12-child PrePfx.-12AGR-TNS(Prst.cont.)-read-sfx.  
'The little child is reading'.  
[PrePfx. + AGR + TNS + Verb-stem].

And not the converse order of:

29b)  
*Ka-ana ni-(k)u-ke-soma  
12AGR-child PrePfx.-TNS(pst.)-12AGR-read-sfx.  
'The little child is reading'.  
* [PrePfx. + TNS + AGR + Verb-stem]

The example in (29b) is ill-formed simply because the Verb-stem moves directly to AGR, that is, across TNS, followed by TNS movement to AGR, which gives rise to a different order of affixation. It is excluded since
it clearly involves a violation of the HMC. In this sense, we can actually conclude that the MP is actually a generalization of a UG principle.

It is worth noting that the evidence we have provided so far identifies Kikamba as a classic example of an SVO language (cf. Greenberg 1966, Baker 1988, etc). At the preliminary level, there seems to be a correlation between the order of AGR/TNS and the surface position of the subject, in the sense that, in languages (like Arabic), where AGR is inside TNS, the Subject appears inside the Verb.

However, in a language such as Kikamba, where, as we have just demonstrated, AGR is outside TNS, the Subject appears outside the Verb, thus deriving a Subject-Verb-Object clause structure. (For ease of analysis, we have left out the morphological details not relevant at this point). For instance:

30a) Ithyĩ tü-ka-ya liu. [S-V-O]
   3rd Psn pl (we) 3rd Psn (pl) SA-TNS (fut.) – eat food.
   ‘We will eat food.’

30b) Tũ-ka-ya liu, ithyĩ. [V-O-S]
   3rd Psn SA-TNS (fut.)-eat food we.
   *‘Will eat food, we.’

30c) ??*Liũ, tũ-ka-ya ithyĩ. [O-V-S]
   Food Pron.(3rd Psn.) AGR-TNS(fut.)-eat we
   *Food will eat we.

30d) ??*Ithyĩ, liu tũ-ka-ya. [S-O-V]
   3rd Psn We food SA-3rd Psn-TNS-eat
   *We food will eat.’
It must be pointed out that examples (30.c) and (30.f) are permissible only under conditions of Topicalization, focus or emphasis, and this will be indicated by the use of a comma after the first word in each of the respective cases. Otherwise, the basic preferred order, before any computations take place is SVO as manifested in (30.a) above.

At this point, we would like to draw a correlation between the order of AGR/TNS and the order of the Subject and the Verb within the Kikamba simple sentence. This can be expressed in terms of the following generalization observed by Ouhalla (1997), that:

In VSO languages, AGR is inside TNS, while in SVO languages, AGR is outside TNS.

With reference to the above observation, we need to emphasize that what we are expressing in this work should be understood in terms of general tendencies, rather than strict conditions. For instance, there may be some rare exceptions when an SVO language such as Kikamba, as we have seen, allows for an alternative VSO (or any other) order, for instance, in question formation or passivization processes. In addition, although the
objectives of the present work do not involve making a comparative study of Kikamba with other languages, it is impossible to describe parametric phenomena without making reference to the grammars of other natural languages.

A second property, which has been identified in the relevant literature to distinguish SVO languages, concerns the structure of Infinitival clauses. An SVO language such as Kikamba, for instance, generally tends to allow non-inflected infinitives, and in particular, infinitival clauses, which do not display an AGR element.

Conversely, according to Ouhalla (1988c), languages with an underlying VSO structure tend to disallow such clauses, and hence all clauses are obligatorily inflected for AGR. It is important that we empirically verify the structure of the infinitival clause for Kikamba at this point. Consider the sentences below:

31a) A-ndū ma-ka-thi [(k)ū-semb-a kī-wanza-nī].
   People 2AGR-TNS (fut.)-go- [C15-to run-sfx. C7-field-in].
   ‘People will go [to run in the field].’

31b) Sy-ana sy-īthi sukulu [kū-soma ma-vuku].
   C8-child 8AGR-TNS (Prst.cont.)-go school [C15-to read C6-books].
   ‘(The) Children are going to school [to read books]’.

31c) Nyie n-غا-thi mū-nda-nī [kū-vand-a m-bemba].
   Pron.(1st Psn.sg.) 1AGR-TNS (fut.)-go C3-shamba-to [C15-to plant C9-maize].
   ‘I will go to the shamba [to plant maize].’
Notice the bracketed non-inflected infinitives. In stark contrast, Chung (1983:235) observes that in languages with a predominantly VSO order (like Chamorro), both infinitives and finite clauses have INFL (ection) that includes AGR (ement). If this difference, with respect to infinitival clauses in VSO and SVO languages expresses a genuine UG generalization, we can reliably conclude that this is, indeed, a Parameter of UG that Ouhalla (1991) referred to as the TNS/AGR parameter. We therefore can formalize the parametric settings as follows:

The TNS/AGR Parameter

<table>
<thead>
<tr>
<th>SVO Language such as Kikamba</th>
<th>VSO languages (as identified in the Literature)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a) Have AGR outside TNS, hence, AGR c- selects TNS.</td>
<td>1.b) Have AGR inside TNS, hence, TNS c- selects AGR.</td>
</tr>
<tr>
<td>2.a) Tend to disallow VSO as an alternative word order</td>
<td>2.b) Allows SVO as an alternative order</td>
</tr>
<tr>
<td>3.a) Allow the occurrence of non-inflected infinitives</td>
<td>3.b) Disallow non-inflected infinitives</td>
</tr>
</tbody>
</table>

With reference to the parametric formalization above, our analysis will reveal that (2) and (3) follow automatically from (1), since as we shall demonstrate, in a while, (2) and (3) are the immediate consequences of the respective values of the positioning of AGR and TNS within the Verbal complex. Hence, since all the properties reduce ultimately to the AGR/TNS parametric setting, to avoid sounding repetitive and redundant we will only
be concerned with discussing the hierarchical positioning of AGR and TNS in the Kikamba clause.

It is significant to note that in the traditional typology of the “Greenberg-ian” tradition, classification relating to word order is based exclusively on the linear order of substantive (lexical) elements, reflected in the terminology of ‘Subject’, ‘Verb’ and ‘Object’. (cf. Edmonds 1985, Sproat 1985, etc). However, in the context of the present work, we recognize classification as being based on clusters of properties reduced to a single (and in our opinion) more fundamental property associated with the relevant functional categories.

It is in this spirit that we propose that the SVO structure of Kikamba is as a consequence of the functional category of AGR being placed outside TNS. Hence, the terminology we will use as we analyse the clause structure (from this point on), makes reference to the order of functional categories in the underlying clause structure, rather than to the derived order of the Subject, Verb or Object.

Translating the AGR/TNS parameter into syntactic terms yields the following structure for the Kikamba Verbal complex. Notice the hierarchical positions of TNS and AGR:

C2-persons 2AGR-TNS(fut.)-go C9-shop-to.
‘People will go to the shops’.
'People will go to the shops'.

Notice the AGR-initial parametric setting of Kikamba, where AGR c-selects TNS, thereby, giving an explanation as to why the AGR affix always comes before (or outside) TNS in the Verbal complex. Although this is not the gist of our analysis at this point, we must indicate that Chomsky’s ‘Projection Principle’ stipulates that all moved elements must leave a trace, which is basically an empty category of the appropriate type, in the position from which a category has moved. The trace acts on behalf of the moved element, with respect to a number of grammatical relations, in the sense that it is construed as the virtual complement of the verb in question.

A moved element and its trace are therefore assumed to form a kind of ‘chain’, where ‘chain’ is understood to be a type of record, encoding the history of movement within the structure.
In this sense, the original trace marks the root (or base-generated) position of the chain, while the moved element marks its head position. In the earlier generative grammars, what was previously referred to as the D-structure could then easily be reconstructed from the S-structure via the chain algorithms. Suffice it to say at this point, that although the Minimalist Program no longer recognizes these levels of grammar, the concept of a trace acting on behalf of the moved element is still relevant to our present analysis.

Although the structure of other languages is really not our concern in this study, it would be interesting to note the alternative possible order of elements as a consequence of the alternative parametric value for the AGR/TNS parameter. Again, notice the difference in hierarchical structure of the AGR and TNS functional categories: Notice the hierarchical structuring of the functional categories of TNS and AGR in the Kikamba phrase:
AGR is placed higher in the phrase-structure than TNS, and hence we infer that in Kikamba morpho-syntax, AGR c-selects TNS. Any change in the order, as we have emphasized before, gives rise to an ill formed derivation.

For instance:
The phrase just presented is ill formed in Kikamba because in this case, AGR falls inside TNS because TNS c-selects AGR instead of the converse order which, as we have demonstrated, is the preferred parametric setting in Kikamba morpho-syntax. Hence, whereas we would refer to Kikamba as an ‘AGR-initial’ language, we would refer to the alternative structure represented above as a ‘TNS-initial’ language.

The terminology we have chosen to use obviously reflects the hierarchical position of AGR vis a vis TNS. AGR-initial languages, like Kikamba will tend to have the subject in the initial position, thus giving rise to a ‘Subject-initial’ LF order. Conversely, TNS-initial languages tend to have a ‘Verb-initial’ LF order, as a consequence of AGR being inside TNS. (Cf. Ouhalla 1991:113).
We emphasize, again, that since this is not a comparative investigation of different languages, what we are expressing are general tendencies rather than conditions; our intention is to explain parametric settings in a single language, hence we will not concern ourselves with verifying the grammatical operations in other natural languages. Nevertheless, the AGR/TNS position forms the basis on which this parameter is formulated in order to account for these tendencies, with respect to each group.

At this point, we need to give a credible explanation for how the phrase-structure we have proposed accounts for the derived order of the AGR and TNS elements in the Kikamba verbal complex. Stated differently, we need to explain how the phrase structure accounts for the derived order of the Subject and Verb in the Kikamba clause.

We demonstrated that in Kikamba phrase-structure, the Verb-stem must first move to TNS before it is raised to AGR. This ‘cyclic’ V-movement to TNS and then to AGR yields the correct order of the inflectional elements in AGR-initial languages. Notice in the structures below, that a different cyclic movement of the Verb, for instance, to AGR initially, and then on to TNS, will yield an ill-formed structure. The example below exemplifies this:

35a) Katanu a-ka-thoo-a kT-sululu.
   Katanu AGR(3rd Ps.sg.)-TNS (fut.)-buy-sfx. C7-bicycle.
   ‘Katanu will buy a bicycle.’
35b) Kī-kombe nī-ky-a-valūk-a nthi.
   C7-cup PrePfx.-7AGR-TNS(Prst. pft.)-fall down.
   ‘(The) cup has fallen down.’

35c) *Katanu ka-a-thoo-a kī-sululu.
    *Katanu TNS(fut.)-AGR(3rd Ps.sg.)-buy-sfx. C7-bicycle.
    ‘Katanu will buy a bicycle’.

35d) *Kī-kombe nī-a-ky-valūk-a nthi.
    *C7-cup PrePfx.-TNS (Prst. Pft.)-7AGR-fall-sfx. down.
    ‘The cup has fallen down.’

The ill-formed order displayed in the derivations (35c) and (35d), is the result of the verb-stem moving directly to AGR, across TNS, followed by a further cyclic movement to AGR. V-movement directly to AGR, however, is clearly in violation of the HMC, since it involves crossing over an intervening head category, thereby giving the following clause structure:
For an AGR-initial language like Kikamba, the derivation of an ill-formed structure of the above verbal complex is excluded in principle, thus accounting for the ungrammaticality of the above example. Further, we can account not only for the order of functional elements in the verbal complex of the AGR-initial structure of Kikamba, but also for the order of the subject in relation to the Verb within the clause. On the assumption that the subject occupies the SPEC of AGR P, V-movement to AGR derives an order whereby the subject precedes the Verb, thus deriving the typical ‘Subject-Verb’ structure typical of AGR-initial languages.
Conversely, we hypothesise that the ‘Verb-Subject’ order displayed by some languages is perhaps due to the fact that the Subject in these languages does not occupy the SPEC position of AGR P. (Having suggested this, however, we will not pursue this any further in the present study).

To summarize our discussion so far, we have identified a parametric difference between AGR-initial languages and TNS-initial languages involving the c-selectional properties of the two functional categories, AGR and TNS, respectively. We have argued that in AGR-initial languages such as Kikamba, AGR c-selects TNS, while in TNS-initial languages, the reverse is expected.

As further evidence for our analysis, we also must make an appeal to Ouhalla’s (1991:14) ‘Generalized Projection Principle’, a revised version of Chomsky’s ‘Projection Principle’. Its relevance to the present work is that it makes reference to all the selectional properties of lexical categories, namely, semantic, categorical and (most significant to this study) morphological.

The Generalized Projection Principle (henceforth, GPP)

The selectional properties of lexical items must be satisfied at the relevant levels of representation.

(Under Minimalist assumptions, we understand these relevant levels of representation to be the two interface levels of grammatical representation, namely, the LF and the PF levels, respectively).
The GPP captures the fact that morphological requirements are part of the lexical selectional properties, (just like the categorical and semantic requirements of a word), and therefore could be regulated under the same principle. The implications that the GPP has for the interplay between the syntax and the morphology of the grammar in Kikamba cannot be ignored. Given the constraint imposed by the GPP on the structural representation of lexical items, the immediate consequence of the c-selectional properties of AGR and TNS, will actually result in a different clause structure altogether, with the difference manifesting itself in the hierarchical ordering of elements.

The advantage of explaining this in terms of a specific parametric choice for the grammar of Kikamba allows for a principled derivation of the correct form of the Kikamba verbal complex. Secondly, it allows us to give a principled account of the derivational order of the Subject-Verb-Object order found in the basic Kikamba sentence. Lastly, it allows for a principled explanation of the ungrammaticality of sentences, which display an ill-formed order of the AGR and TNS functional elements in the Kikamba verbal complex.

The analysis we have presented amounts to the claim that the difference between TNS-initial and AGR-initial languages, (with respect to the word-orders that they allow) is a direct consequence of the difference in their underlying clause structure. The difference in the underlying clause-structure is, in turn, a direct consequence of the parametric difference in the
selectional properties of AGR and TNS, encoded in the AGR/TNS parameter.

6.5: Inflected and non-inflected infinitives

Consider the sentences below. The first of each pair would be categorized as being tensed clauses, whereas the second would be referred to as infinitival:

37a) Tu-ana tu-i-thek-a mana.
   C13-children 13AGR-TNS(Prst.cont.)-laugh-sfx. nothing.
   ‘The little children are laughing for/at nothing.’

37b) [Tu-ana tu-i-end-a [ PRO (k)u-thek-a mana.]]
   C13-children 13AGR-want-sfx. [PRO C15to- laugh-sfx nothing]
   ‘The children want [PRO to laugh at/for nothing].’

37c) Mwikali ni-wa-ku(w)a mu-ana.
   Mwikali PrePfx-lAGR-TNS(Pst.Pft.) carry C1-child.
   ‘Mwikali has carried the child’.

37d) Mwikali enda [PRO (k)u-ku(w)a mu-ana].
   Mwikali lAGR-TNS(rct.pst)[PRO C15-carry C1-child].
   Mwikali wanted to carry the child’.

37e) N-git yi-ya n-yama.
   C9-dog 9AGR-TNS(prst.cont)-eat C9-meat
   ‘The dog is eating meat.’
Sentences 37 (b, d, f) are all examples of infinitival clauses, so called because the second ‘bracketed’ verbs have not been inflected for tense. Notice how the TNS value of the verb: ‘ku-thek-a’ ‘to laugh’, is bound to that of the matrix clause: ‘[Tu-ana tu-end-a...]’ ‘The children want...’ The infinitival clause, can therefore be seen to be embedded under the control verb ‘tu-end-a’ ‘(little children) want-sfx’. The first sentence, on the other hand, has the verb: ‘tu-i-thek-a’ ‘(the little children) are laughing’, which overtly bears a TNS element, inflected for present tense.

In our exposition of the AGR/TNS parameter, we mentioned that one of the parametric consequences of a language adopting an AGR-initial order is that the grammar allows the occurrence of both non-inflected and inflected infinitives. Conversely, a language that adopts a TNS-initial setting only allows inflected infinitives within the grammar. We will not try to verify what happens in the latter category of languages, since this falls outside our research scope. The question we need to answer in this respect is why Kikamba, as an AGR-initial language license the occurrence of non-inflected infinitives within the grammar.

There is a certain degree of controversy in the literature regarding the definition of exactly what infinitival clauses are. According to one school of thought, these are clauses, which lack tense. However, this should
not be interpreted to imply the absence of a TNS category. Rather, it can
only be understood to imply the absence of a deictic or referential tense-
value associated with the TNS category. To emphasize on this view,
according to Ouhalla (1991:122):

‘...all sentential clauses instantiate a TNS category.’

The second way the literature defines infinitival clauses is purely on
distributional or functional grounds. According to this definition, infinitives
are clauses, which appear embedded under a specific class of ‘control’ verbs
and in addition, can function as ‘purpose’ clauses. Under each definition,
‘control’ and ‘purpose’ clauses qualify as infinitival clauses. Furthermore,
the TNS value of these clauses is automatically bound to that of the main (or
‘matrix’) clause.

This, in terms of licensing, assumes that the functional category
TNS is necessary to license all clauses. In Minimalist terminology, for a
derivation to be interpretable, at the LF interface level, it must contain a
syntactically represented TNS category. It is important to note that, in
tensed clauses, TNS has a referential (or deictic) meaning, whereas, in
infinitival clauses, it has an anaphoric meaning. For exemplification
purposes, we repeat the example illustrating infinitival clauses in Kikamba:

38a) [Tu-ana tu- tense-a [ PRO (k)u-thek-a.]]

C13-children 13AGR-want-sfx. [PRO C15to-laugh-sfx].

‘The children want [PRO to laugh].’

The inference we make on this structure is that the infinitival does
not have a syntactically realized TNS category, whose presence is necessary
to explain the derivation. We have highlighted the fact that clauses in both TNS-initial languages and AGR-initial languages must contain a TNS category, for reasons quite independent of the parametric values. However, in an AGR-initial language such as Kikamba, where, as we demonstrated in the last section, TNS does not c-select AGR, TNS can fail to project without giving rise to a violation of the 'Generalized Projection Principle' (GPP). Hence the fact that Kikamba, as an AGR-initial language allows non-inflected infinitives.

To summarise our analysis so far, the fact that Kikamba allows non-inflected infinitives to co-occur in the grammar is a result of an interaction between three elements, namely: the c-selectional properties of TNS, the TNS requirement expressing the fact that all sentential clauses must instantiate a TNS category, and the effects of the GPP. In addition, the AGR-initial parameter setting implies that AGR in Kikamba is not c-selected by TNS. Hence, even if TNS fails to project, the structure will not be in violation of the GPP.

If the conclusion we have drawn here is accurate, we have good reason to believe that the idea that parametric differences reduce to difference in the properties of functional elements is indeed, a legitimate assumption.
6.6: The Parametric setting for the NEG Parameter in Kikamba

Take note of the position the NEG element in the Kikamba clause structure. Given the clause:

39.a) pro tû- (t)i - ka - thi mû-syî.
   pro- AGR(2nd Psn.pl.) – NEG – TNS(Neg.fut.) – go C3-home
   'pro (We) will not go home'.

We derive the following structure:

(39b)

Notice that, although Kikamba adopts an AGR-Initial setting, it adopts a different order for the position for the NEG element, which is positioned in between AGR and TNS respectively. It is acknowledged by a number of researchers in the literature, that certain cross-linguistic differences involving mainly word-order in negative clauses receive a principled
explanation, once we assume the existence of certain minimal parametric differences involving the categorical-selectional (henceforth, c-selectional), as well as morphological selectional (henceforth, m-selectional) properties of the NEG elements. The justification for this view is that lexical properties interact with the general principles of UG to determine the position of the NEG elements in the clause-structure of a language, as well as determining the derived position of the verb. (viz. Ouhalla 1991).

Most of the empirical data in support of this position comes from evidence from mainly English and French, to demonstrate that the two languages instantiate different values of two NEG parameters, hence the differences in word order that these two languages are known to exhibit in negation sentences. (cf. Edmonds 1976, 1978, Pollock 1989, Ouhalla 1991).

The predominant position in the literature just cited is that languages tend to differ with respect to exactly where they place the NEG functional category in relation to the Verb stem, as well as other functional categories such as AGR and TNS. We explained that the literature incorrectly assumes that there can only be two binary positions that the NEG element can appear within the Verbal complex, namely:

a) NEG appears inside AGR and TNS, and therefore, closest to the Verb-stem as compared to AGR and TNS (for instance in Turkish and English);
b) NEG appears outside AGR and TNS, and therefore furthest from the Verb-stem as compared to AGR and TNS (for instance in Berber and Arabic).

With regard to the above postulated positions for the NEG element, our argument was that these two binary distinctions fail to recognize that a language could decide to position NEG in between AGR and TNS, as we demonstrated is the order of elements in Kikamba.

To account for these facts on the position of the NEG category, we need to be clear with respect to where Kikamba base-generates the NEG category in the clause structure of the language. However, in order for us to authenticate that this is indeed a parametric difference between languages, we have to explain (in a general way) the structures adopted by different natural languages, in comparison to Kikamba.

According to Ouhalla (1987) in Turkish and English type of languages, NEG is assumed to be base generated immediately preceding VP, deriving the following underlying structure for negative clauses: (We have avoided too much detail concerning these languages since the present investigation was not intended to be comparative in approach):
Notice the ‘AGR-Initial parametric setting as well as the fact that NEG is positioned inside AGR and TNS. Alternatively languages could opt to have the order manifested in Berber-type languages, where NEG is base-generated preceding TNS and AGR, as displayed in the structure that follows (cf. Ouhalla 1987):

Notice the TNS-Initial setting, with NEG positioned outside AGR and TNS. Although the assumptions of UG theory are that parametric values are binary in structure, we propose a third possible structure to account for the position adopted within Kikamba grammar.
It is important to note that if we assume a uniform phrase-structure for negative clauses cross-linguistically, it would be impossible to derive the correct order of the verbal complex in Kikamba (as well as all the languages mentioned) without resorting to a reordering of rules, which clearly goes against Minimalist and UG assumptions.

We have seen that the differences in the order of the NEG category in the derived complex in all the languages cited (i.e., Turkish-type, Berber-type and Kikamba) receives a natural and principled explanation, once their respective negative clauses are assumed to derive from different underlying structures, where the difference specifically concerns the hierarchical position of the functional category NEG.

At this point, we need to provide an explanation as to why the NEG category is placed in a certain position in one group of languages and in a different position in another group. The legitimacy of this concern is that the different positions seem to violate UG assumptions of the uniformity in the structures of natural grammars.

In the context of the Principles and Parameters approach incorporated for the present investigation, the differences have to do with the c-selectional properties of NEG. In the Turkish type of languages, NEG immediately precedes VP. Hence, we can assume that in this group of languages, NEG c-selects VP. In the Berber-type of languages, NEG immediately precedes AGR/TNS, and thus NEG here c-selects AGR P/TNS P.
Lastly, in Kikamba NEG is placed in the middle of AGR and TNS, and therefore, we can tentatively conclude that NEG in Kikamba c-selects TNS P and VP. These conclusions provide the necessary ingredients for us to explain one of the NEG parameters, which will provide us with a principled motivation for the difference in the position of NEG.

6.6.1: The NEG Parameter 1

The number 1 assigned to this parameter is intended to distinguish it from another NEG parameter, which accounts for a different type of variation, similarly involving the NEG functional category. The two parametric values for this parameter according to Ouhalla (1991:138), are:

a) NEG c-selects VP;
b) NEG c-selects AGR/TNS.

Notice that this parameter is similar in form to the AGR/TNS parameter, since both attribute the respective differences in the derived order of the negative clause to differences in the c-selectional properties of the functional categories involved. To explain this, we revisit the position of NEG in the Kikamba clause:

40.a) pro tū - (t)i - ka - thi mū-syi.
   pro- AGR(2nd Psn.pl.) – NEG – TNS(Neg.fut.) – go C3-home
   ‘pro (We) will not go home’.

40b) Ka-ana ka-(t)i-na-ya ī-tumbī.
   C12(Dimin.) 12AGR-NEG-TNS(neg.prs.pfL)-eat C5-egg.
   ‘The small child has not eaten the egg.’
40c) A-kamba ma-(t)i-ka-ya m-bia.
   C2-kamba 2AGR-NEG-TNS(fut.)-eat C10-rats
   'Akamba people will not/never eat rats'.

40d) We n- dü – na - súng-a nesa.
Pron.2nd Psn.sg. AGR(2nd Psn.sg.)-TNS(NEG. Rct.pst.)-dance-sfx. well.
   'You did not dance well'.

The functional category NEG is consistently positioned between AGR
and TNS functional categories. Hence, the parametric values as they stand
fall short of accounting for the position of NEG in Kikamba, which is
placed after AGR but before TNS in the verbal complex. Hence, we propose
a third parametric value to the NEG Parameter, as follows:

**NEG Parameter 1**

a) NEG c-selects VP    (e.g. Turkish, English, etc)
b) NEG c-selects AGR/TNS. (e.g. Berber, Arabic, etc)
c) NEG c-selects TNS P/VP   (e.g. Kikamba)

Not only does this parameter provide us with a principled motivation
for base-generating NEG in different positions, and deriving naturally the
correct form of the verbal complex, but it also allows us to account for the
ungrammaticality of structures in Kikamba which clearly display an ill
formed order of the constituent elements of the verbal complex.

All except the first of the following sentences are considered to be
ungrammatical in Kikamba, simply because each of them manifests an
incorrect setting of the NEG Parameter 1 for negative clause-structure in Kikamba:

41a) Ka-ana ka-(t)i-na-ya t-tumbi.
C12(Dimin.) 12AGR-NEG-TNS(neg.prst.pft.)-eat C5-egg.
'The small child has not eaten the egg.'

41b) *Ka-ana ka-na-(t)i-ya t-tumbi.
*C12-(Dimun.)child 12AGR-TNS(neg.prst.pft.)-NEG-eat C5-egg.
'The small child has not eaten the egg'.

41c) *Ka-ana (t)i-ka-na-ya t-tumbi.
*C12(Dimun.)-child NEG-12AGR-TNS(prst.pft.)-eat C5-egg.
'The small child has not eaten the egg'.

It should be pointed out that although the structures (41b) and (41c) are considered ill formed in Kikamba, they would be acceptable structures in other languages. For instance, the structure where NEG is closest to the verb would be acceptable in English or Turkish, respectively.

Conversely, the structure where NEG is outside AGR/TNS would be considered an acceptable structure in Arabic or Berber. If this reasoning is accurate, we can conclude that the above ungrammatical structures for Kikamba sentences, not only reflect parametric mis-settings for the NEG Parameter 1, but they are also ruled out since the derivation is a clear violation of the GPP.
6.6.2: The NEG Parameter 2

This parameter concerns the nature of the NEG element. We indicated in section 4.6 that the NEG element in Kikamba is an affix and therefore, a bound morpheme. This can be validated by the fact that the morpheme never occurs as an independent entity, in itself, but must always be attached to the Verb-stem. Consider the following structure:

(42)

\[
\text{Nyiē} \quad n-\quad \text{di} \quad \text{ka} \quad \text{thī} \quad \text{mū-syī}
\]

P.1\textsuperscript{st} Psn.sg. 1\textsuperscript{st} Psn.sg.) \quad \text{NEG} \quad \text{fut.} \quad \text{Go} \quad \text{C3-home}

'I will not/will never go home'.

Notice that since the Kikamba NEG is a bound morpheme, it allows the Verb to move to it from TNS, thereby forming a complex, which subsequently moves to AGR. However, it should not be assumed that this is the universal feature of the NEG functional category in all natural languages. A case in point would be English. In contrast to Kikamba, the two languages differ in one important respect, concerning the morphological features of the NEG element.
Whereas in English the NEG element is non-affixed, in Kikamba, it is an affix, since as we have stipulated, it appears inside the verbal complex. To explain this in some detail, let us consider the structure of the NEG element in English. Consider the structure below:

\[(43)\]

In English, V-movement to NEG is excluded by the fact that neither the verb 'go', nor the NEG element 'not' is a bound morpheme, the underlying assumption being that head movement is basically a processes of syntactic affixation, or for a category to check off its features. On the other hand, V-movement to TNS, across NEG is excluded by the HMC, hence the insertion of the auxiliary 'do'.

Given the difference in the morphological properties of the NEG morpheme in the two languages, the derived negative sentences will differ. English negative clauses are 'Periphrastic' in nature, meaning that they consist of an inflected auxiliary and a non-inflected main verb. In the example we gave of the structure of English negative clauses, the inflected
auxiliary 'will', overtly inflects for future tense, while the non-inflected main verb 'go', bears no overt marking for tense. On the other hand, the NEG element in Kikamba is not periphrastic, and is, as we have stated, simply an affix attached within the Verbal complex.

Assuming this line of reasoning, we arrive at a second NEG Parameter, responsible for the periphrastic, versus a morphologically bound distinction in the negative clause structure.

**NEG Parameter 2**

a) NEG is a bound morpheme

b) NEG is a free morpheme

This variation, in terms of parameters relating to negative clauses, involves, not the categorical properties of NEG, but rather, its m-(morphological) selectional properties. Notice that the possible typological grouping, which results from this parameter, cuts across the typological grouping, which results from NEG parameter 1.

Let us consider the following data from Kikamba. Notice the bound NEG morpheme attached to the main verb:

44a) A-kamba ma - (t)i -ka-ya m-bīa.
   C2-kamba 2AGR-NEG-TNS(fut.)-eat C10-rats
   ‘Akamba people will not/will never eat rats’.

44b) We n- dū – na - sūng-a nesa.
Prns.2nd  Psn.sg  AGR(2nd  Psn.sg.-)TNS(NEG. Pst.)-dance-sfx. well.
   ‘You did not dance well’
From the data we infer that in the morpho-syntax of Kikamba, the NEG bound morpheme is attached to the main verbs: ‘-ya’ (‘eat’) and ‘-sung-a’ (‘dance’), respectively. In Kikamba, part of the NEG element’s morphological requirement is that it must attach itself to a the main verb of a clause.

According to Ouhalla (1991), an aspect of language variation predicted by the theory of Parameterisation is that, two functional elements in two different languages may have similar values with respect to a specific lexical property, or parameter, but may have different values, with respect to another parameter. To demonstrate this point further, using Kikamba and the structure of other languages cited in the literature, we could categorize the languages as follows, in respect to their parametric settings for the NEG parameters:

**NEG Parameter 1**

a) NEG c-selects VP (e.g. Turkish, English, etc)
b) NEG c-selects TNSP/AGRP (e.g. Berber, Turkish, etc)
c) NEG c-selects TNSP/VP (e.g. Kikamba, etc)

**NEG Parameter 2**

a) NEG is a bound morpheme (e.g. Kikamba, Turkish, Berber, Arabic, Kiswahili, etc.)
b) NEG is a free morpheme (e.g. English)

Observe how Kikamba differs from Turkish, Arabic and Berber with respect to the parametric setting for NEG Parameter 1, yet is categorized
with the same languages with regard to the value all these languages select in NEG Parameter 2. With respect to the NEG parameter 2, one may be led to argue that a language like English seems to instantiate both values of the NEG parameter in the form of two separate NEG elements, one bound and the other free. Consider the English sentences below:

45a) I do not eat frogs.
45b) I don’t eat frogs.

Note that we have ‘not’ a free morpheme and ’-nt’ which one may assume certainly never occurs alone in English, and therefore is a bound form. This seems a reasonable assumption, since ‘-nt’ systematically appears attached to other auxiliary elements in English Negative clauses, for instance: ‘can’t, couldn’t, hadn’t shouldn’t’, to name a few.

If this is indeed true, one may be tempted to assume that this is a clear violation of the parametric assumption that any given language can only select one of the possible values for each parameter in question. However, this is not the case. To answer this question, consider the data below:

45c) Kamba people won’t eat rats.
45d) *Kamba people will eatn’t rats.
45e) You didn’t dance well.
45f) *You did dancen’t well.
Notice that the ungrammatical sentences result as a consequence of attaching the bound ‘-nt’ suffix to the main verb, rather than to the auxiliary verb.

In contrast to Kikamba, in English the bound ‘-nt’ element never attaches to main verbs. This fact leads us to assume that there is indeed, the existence of a difference in the m-selectional properties of the two affixed NEG elements in Kikamba, as compared to English. The English ‘-nt’ element, unlike in Kikamba, does not obviate the need for the insertion of a ‘booster’ auxiliary (sometimes referred to as ‘do-insertion’) in Negative clauses. (Having highlighted the structure of NEG in English, it would clearly be outside the scope of this study to pursue this matter any further than we already have!)

6.7: The Null Subject Parameter

The most comprehensively researched parameter in the relevant literature is referred to as the ‘Null-Subject’ parameter, also known as the ‘Pro-drop’ parameter. The term, ‘Null’ refers to a covert expression, meaning that it has no phonetic content, and thus, is inaudible or silent. More significant to our study is that a null subject has no overt, morphological realization. It is important to note that the null subject in Kikamba (just like a zero-morph in conventional morphological analysis) may not have an overt, phonetic form, but it most certainly has grammatical
and semantic properties. For the sake of consistency our preference is to use the term: ‘Null-Subject’ Parameter’.

Our task in this section is to determine whether Kikamba manifests the Null-Subject ‘pro’ phenomenon in finite declarative and interrogative clause types. We should point out that we are not referring to the covert subject found in imperative clauses, (for instance, the English imperative: ‘Shut up!’). Nor are we referring to the covert PRO subject found in ‘control’ structures in English, such as:

‘[The prisoner tried [PRO to escape]].’

Consider the following data:

46a) Tu-ana tū-ya tu-a-kuat-a mū-thanga, nyie nī-ngū-tū-kūn-a.
   C13-children 13AGR-those 13AGR-TNS(prst.)-touch-sfx. C3-soil,
   Pron.(1stPsn.sg.)PrePfx.-AGR(1stPsn.sg.)-TNS(Prst.)-13Obj.AGR.-
   beat-sfx.
   *(If) those small children touch soil, I will beat them.’

46b) pro tu-a-kuat-a mū-thanga, pro nī-ngū-tū-kūn-a.
    pro 13AGR-TNS(prst..) -touch-sfx. C3-soil, pro AGR(1st Ps.sg.)-TNS (Prst.)
    -13Obj.AGR -beat-sfx.
    *(If) pro (the small children) touch soil, pro (I) will beat them’.

The above sentences reveal that the morpho-syntact of Kikamba, does indeed, licence the occurrence of overt as well as covert or Null-Subject sentences. Notice that the English translations reveal that subjects must be overt in English otherwise the derivation is considered ill formed and un-interpretable. Kikamba is licensed to display the ‘Pro-drop’ phenomenon.
The fact that the nominal in Kikamba display an AGR category, implies the existence of an inflectional category in the nominal (including DPs), which parallels the inflectional category 'I' in sentences. We mentioned in an earlier section, that this parallelism can be captured structurally by assigning NPs a structure that for ease of reference, we will repeat here, along with the sentential structure advocated by the 'I'-analysis.

By extension, since Null-subject sentences have no overt subjects, they are not realized at the PF-interface level and are consequently assumed to have an argument referred to as 'pro'. Their covert status notwithstanding, Null-Subject sentences are still expected to instantiate AGR elements just like their counterparts with overt lexical subjects. It is important to note that the identity of the Null-Subject 'pro' can only be inferred by looking at the features attached to the AGR category.

The relevant literature defines a null-subject language as one that allows finite declarative or interrogative clauses to have a null 'pro' subject. By extension, the null-subject Parameter is a dimension of variation between languages, according to whether finite (declarative and interrogative) verbs allow null 'pro' subject or not. In addition.
morphologically ‘rich’ AGR features have been associated with so called ‘Pro-drop’ languages in a number of linguistic studies on the phenomenon.

At this point it would be prudent for us to justify our investigation of this particular parameter in the light of the extensive attention it has received from previous research.

It is significant to note that most of the linguistic studies done on the Null-Subject Parameter attribute the major differences between Null-Subject languages (like Kikamba) and non–Null-Subject languages (such as English) to a parametric difference in the inherent properties of the functional category AGR (Cf. Rizzi 1982, 1986b, Chomsky 1986a, etc).

However, the idea that functional categories are actually directly responsible for most, if not all aspects of this parametric language variation was not fully recognized in most of the pre-Minimalist language investigation. The thesis underlying the present analysis is that parametric values must make reference to functional categories, and stretched even further, we hypothesize that probably all aspects of language variation are determined by functional categories.

We revisit the null subject sentences previously given to explain a point. Consider the Kikamba sentences below:

(If) those small children play with dirt, I will beat them.'
From the data, notice that the AGR element attached in the form of a prefix to the Verb stem overtly agrees with the Nominal in the Subject position. It is important to observe that the ‘pro’ subject requires identification under the AGR. Hence, there is apparent agreement relation between the verb and the subject. We can therefore generalize the ‘pro’ argument to be the thematic and structural subject of the examples presented.

In addition, in Kikamba, since the AGR category can license a ‘pro’ subject, we are justified in concluding that the subject-nominal in both constructions contain an inflectional category which dominates, (among other elements), AGR. Whereas its Specifier position acts as the structural subject position, its complement acts as the Predicate. The similarity between the two structures is seen in that D determines the X-Bar projection of the DP, in the same way that I determine the X-Bar projection of the sentence IP. Hence we could summarize this similarity in structure using the single AGR P as demonstrated below, for the structure of the following sentence:

47a) pro ma-ka-vingū-a mū-omo.
   pro AGR(3rd Psn.pl.)-TNS(fut.)-open-sfx. C3-door
   ‘pro(they) will open the door.’
47b) Mo ma-ka-vingũ-a mū-omo.

Pron.3rd Psn.pl AGR(3rd Psn.pl.)-TNS(fut.)-open-sfx. C3-door.

'They will open the door'

The following phrase structure is representative of (47a):

pro ma-ka-vingũ-a mū-omo.

Pro AGR(3rd Psn.pl.)-TNS(fut.)-open-sfx. C3-door

'pro(they) will open the door.'

\[
\text{AGR(P Spec AGR^1 Spec AGR TNS P Spec VP Spec V^1 NP NP)}
\]

AGR(3rd Psn.pl)TNS(Fut) open-sfx C3-door

(They) will open the door'.

As we mentioned before, the null-subject ‘pro’ is expected to instantiate AGR elements just like other overt, lexical subjects. In the above structure, we can consider the AGR prefix to function as a ‘Pronominal’, whose features must agree with the features of the AGR element.

It is important to note that in Kikamba, sentences with overt pronominal subjects seem to pattern in the same way as sentences having null subjects, in the sense that they all instantiate on the AGR functional element. Our explanation for this fact points to the necessity of both overt
(lexical) subjects and covert ‘pro’ subjects having to satisfy the identification requirement on the licensing of the ‘pro’-thematic subject.

To elaborate on this, for ‘pro’ to be licensed, it must move to SPEC of AGR P, thus resulting in an agreement with AGR. An overt pronoun, on the other hand, is considered to be a Topic or Adjunct, which is co-indexed with the AGR element, thus, accounting for the apparent agreement relation between the overt pronoun and AGR.

That our analysis is accurate is supported by the well-recognized fact that overt or emphatic pronouns in the majority of Null-Subject languages behave quite differently from their counterparts in non-Null-Subject languages. This fact has led some researchers to the conclusion that overt pronouns in Null-Subject languages occupy non-argument positions, or what are referred to as ‘Topic or Adjunct’ positions (Cf. Radford 1999).

That being the case, in Kikamba, the ‘pro’ subject therefore requires identification under the AGR element. As a consequence we have the apparent agreement relation between the verb and Subject. The ‘pro’ argument can therefore, be considered to be the thematic as well as structural subject of the sentence. We also need to highlight the fact that in Kikamba, overt pronoun subjects are intrinsically emphatic and hence, only used when the speaker need to draw specific attention to the subject of the sentence. For instance:

48a) **Nyie nǐ-n-a-ya mū-kate.**

1st Psn.sg PrePfx.-AGR(1st Pss.sg)-TNS(Prst.)-eat C3-bread.

‘I have eaten bread’.
48b) \textbf{We nǐ-w-a-ya mū-kate.} 
3\textsuperscript{rd} Psn.sg PrePfx.-AGR(3rd Pn.sg.)-TNS(Prst.)-eat C3-bread. 
‘You have eaten bread’.

48c) \textbf{Ko nǐ-k-a-ya mū-kate.} 
C12(dim.) PrePfx.-12AGR-TNS-eat C3-bread 
‘The small person has eaten bread’.

The sentences just presented all contain overt pronominal subjects that are emphatic and hence, draw the listener’s attention to the subject of the sentence. Rather than having overt null subjects, (which are, by all means, grammatical), in unmarked contexts, the average native speaker will avoid using the overt, lexical pronoun, unless, of course, she wants to draw excessive attention to the doer of the action; hence the following null-subject forms:

49a) \textbf{pro nǐ-n-a-ya mū-kate.} 
\textbf{pro} PrePfx.-Pron. AGR(1stPsn.sg.)-TNS(Prst.)-eat C3-bread 
‘pro (I) have eaten bread’.

49b) \textbf{pro nǐ-wa-ya mū-kate.} 
\textbf{pro} PrePfx.- Pron. AGR(3rdPsn.sg)-TNS(Prst.)-eat C3-bread 
‘pro (He/She has eaten bread’.

49c) \textbf{pro nǐ-k-a-ya mū-kate.} 
\textbf{pro} PrePfx.-12AGR-TNS(Prst.)-eat C3-bread. 
‘pro (the small person) has eaten bread’.
Since the null-subjects in the above sentences occur in a nominative position (by virtue of being the subject of a finite clause), they have different case properties from the PRO subject of infinitives (which are considered to have null case). Hence, we should point out that the null-subject ‘pro’ found in declarative and interrogative sentences in Kikamba is quite different from the ‘PRO’ null subject we identified earlier as occurring in Kikamba infinitival clauses.

It would therefore seem that finite verbs in Kikamba can have null ‘pro’ subjects, when they carry strong agreement features, but not in their infinitival form where they lack any agreement features of the subject, and thus are considered in their infinitival form. Consider the following example:

50a) Ithyi tū-ka-thamb-a ūnī.  
Pron(1stPsn.pl) AGR(1stPsn.pl)-TNS(fut.)-bath tomorrow.  
‘We will bath tomorrow’.

50b) Ithyi tu-end-a (k)ū-thamb-a.  
Pron(1stPsn.pl) AGR(1stpsn.pl)-TNS(prst)-want C15(infin)-to bath  
‘We want to bath’.

50c) pro tu-end-a (k)ū-thamb-a.  
‘pro (We) want to bath.’

50d) *pro end-a tū--kū-thamb-a.  
‘pro (We) want to bath.’
Notice from the above examples, the reason why (50d) is ill formed is simply because the verb in the infinitival clause bears an AGR feature of the ‘pro’ subject. The grammaticality of (50 a-c) reveals that it is only the tensed verb of the matrix clause which is licensed to have both a TNS feature, as well as a strong AGR feature, which helps us infer the semantic and morphological content of the ‘pro’ subject.

To recapitulate, a proper account of the distribution of subjects would benefit greatly by taking into consideration their agreement patterns, rather than simply commenting on their subject’s structural order vis a vis the other elements in the sentence. This is achievable, but only by closely examining the agreement patterns displayed by subjects in relation to their AGR elements.

6.7.1: The ‘Strength’ or ‘weakness’ of AGR in the Null-Subject Parameter

In the previous section, we demonstrated how finite (tensed) verbs in the syntax of Kikamba licence the occurrence of both overt (lexical) subjects, as well as null (missing, but understood) subjects. Though the analysis of English grammar is not within our research scope, we can observe, in passing, that English finite verbs, in contrast to Kikamba, license only overt subjects, never null subjects. Kikamba, we generalized, is therefore a Null-Subject language, whereas English is not.

At this point, one might wonder what exactly makes it possible for finite verbs in Kikamba to move up to INFL so as to receive the AGR
feature of the 'pro' subject. This in essence, is the main issue to be investigated in this section.

An issue that needs to be settled before we go to the structure of the finite verbal complex in Kikamba is the question of exactly what determines whether finite verbs will carry strong or weak features.

A plausible answer to this (with direct reference to the Verbal complex in Kikamba) is that there is a correlation between the relative 'richness' of the agreement inflection carried by finite verbs, in the sense that finite verbs in Kikamba have strong agreement features by virtue of the relatively rich system of agreement inflections they carry. To exemplify our case, consider the Null-Subject in the following structures:

51a) pro a-kook-a?
    pro Pron. AGR(3rd Psn.sg)-TNS(fut.)-come?
    *pro will come?
    'Will (he/she) come?'

51b) pro mű-kook-a?
    Pro Pron. AGR(2nd Psn.pl)-TNS(fut.)-come?
    *pro will come?
    'Will (You pl.) come?'

51c) pro ka-kook-a?
    pro 12AGR(Dimin.)-TNS(fut.)-come?
    *pro will come?
    'Will (the small person) come?'
51d) pro tū-kook-a?
pro 13AGR (Dimin.) or 1st Psn. PI-TNS(fut.)-come?
*pro will come?
‘Will (the small people/We) come?’

51e) pro yi-kook-a?
pro-C5AGR (derog/aug.)-TNS (fut.)-come?
*pro will come?
‘Will (the huge thing/person) come?’

51g) pro ū-kook-a?
pro -Pron. AGR(2nd Psn sg.)-TNS(fut.)-come?
*pro will come?
‘Will (you sg.) come?’

51h) pro n-gook-a?
Pro 1st Psn-TNS(fut.)-come?
*pro will come?
‘Will(I) come?’

As can be seen in the examples just provided, the rich verbal morphology in the form of prefixes attached to the Verb-stem make it possible for us to predict the form that an overt lexical subject or Pronoun would take, simply by looking at the Agreement Subject-Prefix attached to the Verb-stem. The difference between the finite verbs in Kikamba as compared to the English translation illustrates just how impoverished the English verbal morphology is. Without an overt lexical subject in English, it
is simply impossible for one to predict the identity of the understood null ‘pro’ subject.

We therefore deduce that the different strengths of the agreement features carried by finite verbs in Kikamba, on the one hand, and English verbs on the other are actually a reflection of a morpho-syntactic difference attributable to the setting of the null-Subject Parameter. It would therefore seem that finite verbs can have a null ‘pro’ subject in Kikamba where they carry strong agreement features, but not in English, where the Verb carries weak agreement features.

Generally, there appears to be a parametric variation between languages, as to whether or not they allow finite verbs to have null subjects. According to Radford (1999:17), the Null-Subject parameter appears to be a binary one, with only two possible settings. He further observes that there appears to be no natural language that allows the subjects of some finite verbs to be null, and not others. Languages either do or do not systematically allow finite verbs to have null subjects.

Using Chomsky’s ‘strength’ and ‘weakness’ metaphor, a verb with ‘strong’ features is assumed to possess morphological features of agreement with the subject (namely, strong person, number, Specifier features). Conversely, a verb with ‘weak’ features has poor verbal morphology, and by extension weak or unpredictable agreement with the subject; hence, the need to have an obligatory, overt subject. According to Chomsky (1997), only verbs bearing strong agreement features have the mandate to move into
INFL. Conversely, verbs carrying weak agreement features is considered to be too ‘weak’ to move to INFL.

What our discussion suggests is that there is parametric variation across languages in respect to whether the finite verb carries strong or weak agreement features. We have seen, that the relative strength of these features determines whether the non-auxiliary verbs in a language can be raised to INFL, because this will determine whether a language permits null subjects or not.

Consequently, this leads us to the question of why finite verbs should ‘raise’ out of ‘V’ into ‘I’ in Kikamba where they carry strong agreement features. An appeal to the Checking theory in Chapter Five will be seen to provide a solution to this problem.

6.8: The Head and Specifier Parameters

It is a standard assumption within Generative circles, that that the order of phrasal heads in relation to their complements is regulated by a parameter associated with X-Bar theory known as the ‘Head’ Parameter. According to Radford (1999), the Head parameter is a type of word-order variation, concerning the relative position of heads and complements within phrases. It is assumed to be a universal property of phrases in natural languages, that every phrase has a headword, which determines the nature of the overall phrase. Hence, given the Kikamba nominal structure:
52) **Mu-iitu w-a wīa.**

**C1-girl 1AGR-of work.**

‘Maid’ or ‘Female house-help’

The word in bold, ‘Mu-iitu’ (‘girl’) is the head-word, since it is the key word in the nominal phrase whose features determine the grammatical operations of the overall phrase. The expression, ‘wa wīa’ (‘of work’), which combines with the head noun ‘mw-iitu’ (‘girl’) to expand it into the NP ‘Mu-iitu w-a wīa’ (‘girl of work’), is said to be the complement of the Head noun. Before we make a generalization of the Head order in Kikamba, consider the following constructions:

53a) pro nī m-a-ku-a ma-saani na ī-kasya.
pro 2AGR-TNS (pft)-carry C6-plates with a C5-wheelbarrow.
‘(They) have carried plates.’

53b) pro nī-w-a-lik-a kī-thambyo-nī.
pro AGR(2nd Psn.sg)-TNS(pft.) C7-bath-into.
‘(He/she has gone into the bathroom’.

53c) pro nī-ka-thi na ma-ūū.
pro 12AGR(dim.)-TNS(pft.)-go with C6-legs
‘(The small fellow) has gone on foot.

From the data just provided, it can be observed that in Kikamba, prepositional phrases are formed in two ways. Firstly, the prepositional phrase could comprise of a suffix attached to the Noun-stem, for instance, ‘Ki-thambyo-ni’ (‘In the bathroom’). This suffix ‘-ni’ is a highly productive way of conveying the Prepositional meaning of ‘in, into, of, or inside’.

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Notice from the above examples that apart from the suffix ‘-ni’ being obviously locative, it also is syntactically prepositional. In the latter case, we treat it as a kind of ‘cliticized’ preposition.

An alternative way of forming a prepositional Phrase is that, it could comprise of the head preposition and its complement, for example: ‘pro ma-thi na m-basi’ (they have gone by bus’). The preposition in this case is ‘na’ (‘with’) and its complement- ‘m-basi’ (bus). Let us consider the order of elements in the Kikamba DP, NP, and VP:

54a) DP-
    A-ndu a-ya
    C2-people 2AGR-these
    ‘These people’.

54b) NP-
    Mũ-ndũ mũ-seo
    C1-person 1AGR-good
    ‘Somebody good’.

54c) VP-
    (pro) a-k(a)-ooka ũnĩ.
    (pro) AGR(2nd Psn. sg.)-TNS(fut.)-come tomorrow
    ‘(He/she) will come tomorrow’

54d) PP
    (M-besa) sy-a lũu.
    (C10-money) 10AGR-for food
    ‘(Money) for food’
55) Ma-thiko-nī m-a ka-ana ka-ake.
   C6-bury-sfx-Prep. 6AGR-of C12-child 12AGR-his
   ‘At the burial of his child’.

When we consider the positioning of lexical elements each of these phrases, we conclude that in Kikamba, the preferred position for phrasal heads is before their complements. Thus we can tentatively categorize Kikamba as adopting the ‘Head-initial’ parametric value for the Head parameter.

However, when we look at the Specifiers (in the form of demonstratives, all forms of modifiers or determiners) our conclusions are that Kikamba adopting a Specifier-final setting. Consider the examples below:

56a) Kī-vīla kī-thūku.
   C7-chair 7AGR-bad
   ‘A bad chair’.

56b) Kī-vīla kī-ya.
   C7-chair 7AGR-that
   ‘That chair.’

56c) Kī-vīla ky-akwa.
   C7-chair 7AGR-mine
   ‘My chair’

Notice that the order of the Adjectival modifiers and determiners vis a vis the Noun is the complete opposite of the preferred order in the English DP or NP. Whereas in English, heads are generally positioned before their complements and modifiers before the Noun-heads they modify, in Kikamba the Determiner follows the Noun-head.
Before we pursue the structural behaviour of heads and complements in Kikamba phrases any further, it will simplify our exposition if we also consider the arrangement of Specifier within the Kikamba morpho-syntax. In Minimalist syntax, merger operations involve merging for instance, a head noun with a complement, which is either a word or phrase, which is, actually formed by one or more merger operations. It is generally assumed that the Specifier will be positioned before a head-noun, whereas complements will occur after the head noun. We however encountered difficulties when trying to determine the answers to the following questions:

- Firstly, if we assume (as stipulated within the Minimalist Program), that all parametric settings are determined by functional categories, what functional category is responsible for the Head or Specifier order found in Kikamba phrasal categories?

- Secondly, since the preferred position of Determiners in the Kikamba DP is after the Noun, (rather than before the noun, in Specifier position), whereas the preferred position of complements with respect to their heads is after the heads, is Kikamba a head-initial or Specifier-final language?

With reference to the Head parameter, the relevant literature reveals that there is word order variation in respect to the relative positioning of heads and complements within a phrase. As a consequence, the relative positioning of heads vis a vis their complements and specifiers is a parameter along which languages will differ; hence the term Head/Specifier
Parameter. It should be noted, however, that the positioning of particularly heads and complements apparently is assumed to fall within narrowly circumscribed limits, thanks to constraints of UG.

Comparative linguistic studies on the typological behaviour of languages reveal that there are many different (logically possible) types of word order variation, which just do not seem to occur in natural languages. The Principles and Parameters framework explains this tendency by proposing that there are universal constraints on the range of parametric variation found across languages, in respect of the relative ordering of Heads, Specifier and Complements. Radford (1997:20) articulates this view clearly:

It would seem as if there are only two different possibilities which the [Minimalist and Principles and Parameters framework] theory of grammar allows for, so that a given language must either be head-first and (so consistently position all heads before all their complements), or head-last (and so consistently position all heads after all their complements). (Radford 1997:20)

Although the processes of language acquisition are not within our research scope, we cannot avoid making some mention of the theory of UG as it relates to parameter setting. Chomsky proposes the reason why many other ‘logically possible’ orderings of heads with respect to their complements simply do not manifest themselves in that apparently the theory of UG, which is genetically ‘pre-wired’ into the language faculty, imposes genetic constraints on the range of parametric variation permitted
in natural language grammars. Applied to the Head/Specifier parameter, it is assumed that UG allows only a binary set of possibilities: that a language be either consistently ‘head-first’ (alternatively referred to as ‘head-initial’), or consistently ‘head-last’ (also referred to as ‘head-final’).

To summarise our discussion in this section, the Head parameter is assumed in the literature to always have a uniform setting in any given language. Either it is head-initial, (so that all heads in all types of phrases precede their complements) or it is head-final (so that all heads follow their complements).

We must state at this point, that although this may be true of many natural languages, Kikamba does not always show such a uniform setting for the Head parameter. We have already alluded to this with reference to the manifestation of the Preposition and its complements. We demonstrated that in some cases, the Preposition functions as a suffix attached to a noun-stem, while in other cases, it functions like an ordinary head, having complements following it.

Hence, although both English and Kikamba are Head-initial languages, they differ in the sense that whereas English is a Specifier-initial language, Kikamba is a Specifier-final language, yet not in a uniform way, as previously assumed in the literature. It is also important to note, that there is, by no means universal agreement among linguists as to the nature and function of the Specifier category.
6.8.1: Weaknesses in the earlier articulation of the Head and Specifier Parameters

In the last section, we highlighted a few problems we encountered in trying to articulate precisely what type of parametric value is adopted by the syntax of Kikamba with the respect to the order of Heads, Complements and Specifiers in their respective phrasal categories.

In this section, we will give empirical evidence from Kikamba in support of the position that these two parameters, (which serve to regulate the order of categories in relation to the Head, Complement and Specifier) could, after all, be associated with individual lexical items, rather than with the X-Bar theory. Our position may seem unconventional, but it most certainly, is not an isolated case. We will use some evidence from the literature on similar linguistic studies that have encountered problems similar to the ones we encountered in the present investigation.

At this point we will examine the functional category INFL, which we believe, has a role to play in the order of items, at least within the verbal phrasal category within Kikamba. The Verb in relation to its Object in Kikamba has the following structure. Consider the sentence:
I-veti ithi i-ka-thi n-dünü ünî.
C8-women 8AGR-these 8AGR-TNS(fut.) C9-market tomorrow.
'These women will go to the market tomorrow.'

(To simplify our analysis, we have deliberately left out information on feature checking and the strength of the Verbal features that prompt the V-movement to I. (This will be extensively discussed in Chapter Six).

As can be observed from the above structure, the syntax of Kikamba selects the structure where the functional category 'I(NFL)' immediately dominating VP is to the left, and as a consequence, V-movement to 'I' will always give rise to a Verb-Object order, regardless of the order of the elements inside the VP itself. Let us verify whether the alternative structure would give us a grammatical Kikamba sentence. Consider the sentence:
The above structure derives an ill-formed sentence, at least in Kikamba. The reason why we specify the ungrammaticality in Kikamba is because this is an unacceptable derivation, particularly in languages, which place the object of a sentence before the verb.

That the derivation yields an ungrammatical Kikamba sentence can be explained in the sense that the functional category 'I(NFL)' occurs to the right of the verb, and as a consequence, the V-movement to 'I' gives rise to an 'Object-Verb order, which is definitely, not the preferred order of elements within the Kikamba sentence.

The first problem we encountered in establishing the exact setting for the Head Parameter in Kikamba had to do with the fact that a preposition can manifest itself either as the head of the prepositional phrase preceding its complements, or alternatively, as a suffix 'clitic' attached to the Noun-stem. We need to establish a way to harmonize this value, given that the
Principles and Parameters framework only makes an allowance for a strict, 'either-or' binary selection of 'Head-final' or (not 'and') 'Head-initial setting'.

However, we do not totally discredit this parameter completely. In the present context, where parameters are associated exclusively with functional categories, we need to deal with the second problem we highlighted in the previous section, namely how to account for the order of the Head, Complement and Specifier, within the syntax of Kikamba, using a specific functional account.

Ouhalla (1990b) argues that the order of the verb in relation to its object is fixed by the position of a functional category situated outside the VP predicate. His analysis would therefore, generate the following two structural orders:

\[ \text{XP} \quad \text{XP} \]
\[ \text{X} \quad \text{V} \quad \text{O} \quad \text{O} \quad \text{V} \quad \text{O} \]

(X= Functional category, O=Object positions)

In (a) the functional category immediately dominating VP (X) is to the left. As a result, V-movement to X will predictably give rise to a 'Verb-Object' order, regardless of the order of the Object (O) contained inside VP. On the other hand, when the functional category in question is to the right, as in (b) above, then V-movement to X will inevitably give rise to an 'Object-Verb order', again regardless of the object contained inside VP.
The empirical evidence for the analysis just presented comes from the fact that (at least with respect to Germanic languages such as English, Dutch, German), the order of the object in relation to the verb systematically mirrors the order of VP in relation to the inflectional category immediately dominating it. Hence, in a language where complements appear to the left of the verb, ‘I(NFL)’ takes its complement VP to the left, and vice versa. Further evidence in support of the fact that the order of the verb and object inside VP is free comes from the facts of language acquisition as discussed by Tsimpli (1990b) and Kaviti (1993).

To further justify our case, the relevant literature reveals that there are some natural languages where some categories take their complements to the left, while (still within the same language) other categories take their complements to the right. For instance, according to Ouhalla (1991), in Dutch, verbs take their complements to the left (Object-Verb order), whereas postpositions take their complements to the right (Postposition-Object order). Hence the term ‘Post-positions rather than Pre-positions. Having mentioned the behaviour of Heads with respect to their Specifier and Complements in different languages, we will not pursue this issue any further since it is not within our research scope to do so. Suffice it to say that it tears to pieces the fundamental tenets within which this parameter is built upon.

In view of our discussion thus far, it is not totally unreasonable to maintain that, whatever the parameter which regulates the order of
categories in relation to their complements, it need to be associated with individual lexical items, and furthermore, these items could actually be restricted solely to the class of functional categories.

6.9: Summary

The assumption that different complexes derive from different underlying structures is justified on the basis that it enables us to give a principled explanation of the differences in the derived order of their constituent elements. As has been observed, a number of typological properties in natural languages receive a natural explanation once we recognize that differences in underlying clause-structures, is a reflection of the differences in hierarchical order of AGR, TNS and NEG.

Moreover, these differences in the underlying structures are motivated on principled grounds, more precisely, in terms of parameters relating to the selectional properties of the functional categories involved.
CHAPTER SEVEN
FEATURE CHECKING AND V-MOVEMENT
WITHIN THE KIKAMBA CLAUSE-STRUCTURE

7.0: Introduction

This Chapter seeks to provide a comprehensive analysis of the principles that determine the morphological forms of words within the lexicon. Whereas in the previous chapter our concern was with the ordering of elements in the verbal and nominal phrases, we now attempt to examine the motivation for elements to move from their original, (base generated) positions.

Accordingly, we will examine the operations of the Checking principles and the role they play in constraining movement of nominal and verbal elements in the morpho-syntax of Kikamba. The Theory predicts that movement of elements only takes place for purposes of Feature-Checking. Using data from Kikamba, we seek to put this assumption to test.

According to Minimalist assumptions, Movement is always forced by the need for formal 'Feature-Checking' of lexical items. The principle of Economy further stipulates that movement should take place only when necessary for the purpose of Case-checking. In addition, a study by (Pollock 1989) on Movement in English and French, whether or not a language will have overt movement is related to the strength of the features of AGR.
Bearing all this in mind, therefore, we will address one of our research objectives that seek to investigate whether the Economy Criterion of movement (only for purposes of Feature checking) constrains movement in Kikamba. In addition, an attempt will be made to establish whether movement of lexical and functional categories in Kikamba is constrained by the strength or weakness of AGR features or a 'checking' principle.

The Minimalist Program assumes the morphological properties of words to be characterized in terms of sets of grammatical features. The theory further states that features of lexical categories must be 'checked' in an appropriate manner.

We will explore exactly how the Checking theory helps explain morpho-syntactic phenomena in Kikamba. In addition we will look at the main determinants of parametric settings within the Kikamba nominal phrase, namely functional categories.

7.1: Feature-checking and overt verbal movement

Although this Chapter is mainly concerned with the phenomena of feature-checking and Verb-movement, for expository ease it is important for us to make a brief reference to a V-movement phenomena subsumed under what is referred to as the 'Verb-movement' parameter. This parameter is alternatively referred to as the 'V-to-I' or the AGR Parameter. The reference comes from the assumption that the parametric settings of this parameter
will determine whether or not a language allows overt verb movement, all as a consequence of the ‘strength’ or ‘weakness’ of AGR.

We indicated in the previous chapter, that we have deliberately limited our discussion of V-movement in tensed clauses because some of the operations that may lead to Negation, Wh-movement or subject-auxiliary inversion do not apply obligatorily in Kikamba. Nevertheless, it is significant that we briefly point out the implications of V-movement phenomena, in the grammars of other natural languages. Consider the structure below:

1) mu-ǐtu ǔ-ya a-ka-thi sukulu ūnī.
   ‘That girl will go to school tomorrow’.

   In the above structure, the Verb-stem ‘-thi’ (‘go’) originates in the head ‘V’-position of VP, and because it contains strong agreement features, it then raises to INFL. The gender and number features of the verb correspond with the nominative head features of the subject DP:
Mu-ńtu u-ya.

Cl-girl 1AGR-that

(‘That girl’).

In addition, the [Future] feature of the verb marks its Future tense head feature. The [Cl/sg.] gender feature carried by the verb are Specifier features, which mark the fact that it requires a Noun-Class 1-singular, nominative subject as its Specifier or a null subject ‘pro’ bearing identical morphological features with the overt, lexical subject.

Since the subject-verb agreement in Kikamba involves a local checking relation between INFL and its Specifier (the subject of the sentence), an obvious consequence of moving the verb from ‘V’ into ‘I’ is that it enables the Specifier (or Subject) features of the Verb to be checked off. This is possible because the verb ends up in INFL, and from there, it can check its morphological Gender [Noun-class Subject-agreement, number, etc] features against the corresponding [Noun-Class/number/Nominative case, etc] Head features of the Subject-Nominal.

Since the two sets of features match, the Specifier-features of the verb are then erased, along with the nominative features of the Subject DP (because these features are un-interpretable at LF or PF levels), so ensuring that the derivation does not crash at either of the interface levels. Using another of Chomsky’s descriptive metaphors, we can therefore conclude that movement from ‘V’ to INFL is motivated in Kikamba by considerations of ‘Greed’. In the present context, this should be understood to mean:
...the selfish desire of the verb to check its own morphological features. (Radford 1999:228).

In addition, movement of the verb '-thi' (‘go’) to INFL also ensures that INFL carries a [+ TNS] feature, and in particular, the [Future tense] head feature of the verb: '[AGR a- [TNS -ka-thi]]' ('[AGR He/she [TNS will go]'] ). Hence, the feature of INFL becomes interpretable at LF. Consider another example of overt movement below:


C7-wife 7AGR-my 7AGR-TNS(fut.)-eat C6-eggs.

‘My wife will eat eggs’.

As can be observed from the above structure, the syntax of Kikamba selects the structure where the functional category ‘I(NFL)’ immediately dominating VP is to the left, and as a consequence, V-movement to ‘I’ will always give rise to a Verb-Object order, regardless of the order of the elements inside the VP itself.

As we explained in our exposition of the Null-Subject Parameter in Kikamba, verbs overtly move out of their base-generated position, into
INFL, so as to have their strong AGR feature checked off against the subject, whereas in a language such as English, due to the weak verbal morphology, the main verb remains insitu, with only the percolation of its grammatical features to INFL.

We have postulated that this way of checking the relevant feature of finite verbs correlates directly with the relative strength of the agreement features carried by the verbs in Kikamba. Our analysis hinged upon how the morphological strength of lexical items in the language plays an important role in the instantiation of syntactic movement, in the sense that the Checking requirement of strong features necessitates such structural dislocations.

In the previous chapter, we also made reference to the NEG parameter which determines whether the NEG morpheme will be a free or bound element. We further indicated in section 4.6 that the NEG element in Kikamba is an affix and therefore, a bound morpheme. This can be validated by the fact that the morpheme never occurs as an independent entity, in itself, but must always be attached to the Verb-stem. As a reminder of the nature of NEG in Kikamba, consider the following structure:

3a) Nyie n-di- ku-enda ki-ndu.

Pron(1stpsn.sg.)-NEG-TNS(prst.)-want C7-thing

‘I do not want anything’.
3b) 'I do not want anything'.

Notice that since the Kikamba NEG is a bound morpheme, it allows the Verb to move to it from TNS, thereby forming a complex, which subsequently moves to AGR.

Based on our analysis thus far, it would not be unreasonable for us to assume, that the AGR functional category of Kikamba is morphologically rich and ‘transparent’ enough to also allow the transmission of the verb’s theta-roles. In comparison, a language like English has morphologically ‘weak’ verbal morphology in the sense that the AGR category is ‘opaque’ and as a consequence, is unable to allow theta-role assignment. (Having brought up the issue of theta-roles, our research scope does not permit us to pursue this phenomenon any further in the present investigation).

In summary of our discussion so far, we have demonstrated that the agreement properties of finite, non-auxiliary verbs in Kikamba are checked by raising the verb into INFL, so that the Verb is in a local Specifier-head
relation with its subject, and thus, its subject as well as its 
[person,/number/case/ Specifier] features can all be checked off.

7.2: Overt V-movement or ‘attraction’ in the Kikamba 
Clause-structure?

In the morpho-syntax of Kikamba, we have observed that it is 
possible to have Head movement involving movement of both the phonetic, 
as well as the grammatical features of the head-verb, as a package. This 
includes all the verb’s features, namely, categorical, semantic, 
morphological, syntactic and phonetic features. The structure below reflects 
this ‘package’ movement:

4a)

Mo nǐ-m-end-ete m-besa.


‘They love money’.

This gives us the following phase-structure:
(It should be noted that the morphology of Kikamba does not distinguish between masculine or feminine gender in pronominal reference; the only relevant features have to do with person and number).

Notice that the overt pronoun could actually be left out, and in its place, an empty ‘pro’ could suffice, since the agreement features on the verb make it possible for us to predict the identity of the subject. From the data, notice that the prefixed AGR element attached to the verb stem overtly agrees with the Nominal in the Subject position. It is important to observe that the ‘pro’ subject requires identification under the AGR. This is the reason for the apparent agreement relation between the verb and the subject. We can therefore generalize the ‘pro’ argument to be the thematic and structural subject of the examples presented.

In addition, in Kikamba, since the AGR category can license a ‘pro’ subject, we are justified in concluding that the subject-nominal in both constructions contain an inflectional category which dominates, (among other elements), AGR. Whereas its Specifier position acts as the structural subject position, its complement acts as the Predicate. The similarity between the two structures is seen in that D determines the X-Bar projection of the DP, in the same way that I determine the X-Bar projection of the sentence IP. Hence we could summarize this similarity in structure using the single AGR P as demonstrated below:

5a) pro ma-ka-tho-a n-gali.

pro AGR(3\textsuperscript{rd} psn.pl.)-TNS(fut.)-buy-sfx. C9-car

‘pro(they) will buy a car.’
Mo ma-ka-tho-a n-galī.


'They will buy a car.'

The following phrase-structure represents the structure of (5b). Notice the presence of a null subject:

\[
\text{AGR P} \\
\text{Spec} \downarrow \text{AGR} \quad \text{TNS P} \\
\text{'pro'-insertion} \quad \text{AGR} \\
\text{TNS} \\
\text{Spec} \quad \text{VP} \\
\text{Maka} \quad \text{tho-a} \quad \text{n-galī}
\]

Notice that, the null-subject 'pro' is expected to instantiate AGR elements just like other overt, lexical subjects. In the above structure, we can consider the AGR prefix to function as a 'Pronominal', whose features must agree with the features of the AGR element.

It is important to note that in Kikamba, sentences with overt pronominal subjects pattern in the same way as sentences having null subjects, in the sense that they all instantiate on the AGR functional element. Our explanation for this fact points to the necessity of both overt
(lexical) subjects and covert 'pro' subjects having to satisfy the identification requirement on the licensing of the 'pro' -thematic subject.

It therefore follows that, for 'pro' to be licensed, it must move to SPEC of AGR P, thus resulting in an agreement with AGR. An overt pronoun, on the other hand, is considered to be a Topic or Adjunct, which is co-indexed with the AGR element, thus, accounting for the apparent agreement relation between the overt pronoun and AGR.

It must be emphasized that a characteristic of the morpho-syntax of Kikamba (in reference to the null-subject phenomenon), is that overt pronoun subjects are used mainly for discourse emphasis or deliberate clarification on the doer of an action. In the majority of instances, native speakers usually refrain from using overt pronominal forms since (as the examples just presented reveal), the semantic and morphological identity is directly inferable from the AGR element attached to the verbal complex.

The inference we can make thus far is that for a verb to carry strong agreement features, (as in the case of Kikamba finite verbs) means that these strong agreement features cannot be separated from the phonetic features carried by the relevant word.

Hence, the only way of checking the strong agreement features of the verb is to move the whole word, in essence, the whole set of grammatical features carried by the word. In this sense, the strong features of the Verb trigger overt movement in Kikamba. This is the mechanism for dislocation to take place.
On the other hand, what we infer from a verb having weak grammatical features is that, as we have demonstrated using the English verb ‘loves’, the relevant grammatical features move to INFL on their own, with the phonetic features being left behind in the head ‘V’ position of VP.

In summary of our discussion so far, although ‘attraction’ is of course, a more ‘economical’ grammatical operation as compared to movement, in Kikamba, V-movement is forced by the fact that the relevant grammatical features on the Verbal morphology are strong, and hence, the verb must move to check-off its features at INFL, or else risk the derivation crashing at the LF or PF interface levels.

Strong verbal features can be correlated with a rich morphological agreement between subject and verb, which seems to provide a straightforward explanation as to why Kikamba allows the overt-movement of verbs, and thus would be categorized as a [+MOVT] language.

However, we must point out that although V-movement occurs in Kikamba, it does not always take place in all possible derivations. For instance, whereas in English, we encounter Verb-movement in Subject-auxiliary inversion, inverted questions, negation, etc., in comparison in Kikamba, it is not clear whether the Verb-stem actually moves out of its initial position, or simply has an addition prefix attached to the verb-stem. Consider the data below that exemplifies some of the possible types of Negation and interrogatives, which (as can be noticed in the English gloss), would result in obligatory V-movement:
6a) pro nī-w-a-thi wīa-nī.
pro PrePfx.-AGR(3rd Psn.sg)- TNS(Prst. Pft.)-go work-to
‘pro (He/she) has gone to work’.

6b) pro nī-w-a-thi wīa-nī?
pro PrePfx. -AGR (3rd Psn.sg.)-TNS (Prst. Pft.)-go work-to
‘Has (he/she) gone to work?’

6c) pro n-da-n-a-thi wīa-nī.
pro AGR(3rd Psn.sg)-NEG—TNS(Prst. Pft.)-go work-to
‘pro (He/she) has not gone to work’.

6d) pro nī-n-a-thi wīa-nī.
pro PrePfx.-AGR(1st Ps.sg.)-TNS(Prst. Pft.)-go work-to
‘pro (l) have gone to work’.

6e) pro nī-n-a-thi wīa-nī?
pro PrePfx.-AGR(1st Psn.sg.)-TNS(Prst.pft.)-go work-to
‘Have (l) gone to work?

6f) pro ndi-n-a-thi wīa-nī.
pro NEG-AGR(1stpsn.sg)-TNS(Prst. Pft.))-go work-to
‘pro (l) have not gone to work’.

6g) pro nī-m-a-thi wīa-nī.
pro PrePfx.-AGR(3rd Psn.Pl.)-TNS(Prst. Pft.)-go work-to
pro (they) have gone to work.’
With reference to the data above, notice that whereas in English we have Subject-auxiliary inversion in the derivation of inverted questions, the verb, in Kikamba remains insitu, and the interrogative is actually only distinguished from the statement by intonation features, and not by V-movement. In light of this observation, we need to clearly explore whether it is still accurate for us to classify Kikamba as a [+MOVT] language.

Strong verbal features, as we have seen, can be correlated with a rich morphological agreement between subject and verb, which seems to provide a straightforward explanation as to why Kikamba allows the overt-movement of verbs, and thus would be categorized as a [+MOVT] language. On the other hand, as we have observed, a language such as English, which
lost most of its rich morphology can be considered to be a [-MOVT]

At this juncture, we need to clarify the following issue: Why should we have overt V-movement in Kikamba rather than 'attraction', which, (in accordance with Minimalist 'economy' principles), would certainly be a more 'economical' grammatical operation?

The 'Economy Principle' stipulates that only the minimal set of features needed to satisfy some grammatical requirement undergoes movement in a given structure. Using this line of thought, we need to address the issue of whether or not 'attraction' is more economical than overt movement, since, movement after all, affects both the phonetic and grammatical features carried by a word, whereas 'attraction' only involves movement of grammatical features alone?

Under Minimalist assumptions, overt movement will involve the movement of categories (the Verb, for instance); covert movement refers only to the dislocation (or to use a more positive term), the detachment of features, in order to satisfy the economy requirement of derivation.

The implications of this requirement are that, only the necessary or minimum amount of formal features need to be dislocated, unless some extra material, for instance, PF features, are 'pied-piped' to the feature in question, in order to check, and finally delete the strong features of the target form. 'Pied piping' is an appropriate metaphor that describes the process by which a moved constituent (or set of features) drags one or more
other constituents, or sets of features, along with it when it moves (Cf. Radford 1999: 276).

The term ‘Procrastination’ has been used in Minimalist terminology to capture the tendency of the system to force covert movement wherever possible. The need to have overt movement, then, is related to the existence of strong features, and in particular, those features that trigger overt movement, in order to be finally checked and deleted.

Chomsky (1995c) distinguishes between two grammatical situations, the scenario being where a verb carries strong agreement features, which must be checked by movement within the syntax.

The second case involves verbs with weak agreement features whose agreement is checked, not by movement, but by what is referred to in Minimalist terminology as: ‘the process of feature percolation’, or to use Chomsky’s colourful terminology, ‘attraction’. Hence, in a Kikamba, where verbs carry strong agreement morphology, agreement is checked by movement; conversely, in a language like English, which lost the rich agreement features characteristic of Old and Middle English, verbs have weak agreement features, and thus, agreement is checked by attraction or percolation of features.

To effectively deal with this issue, we need to examine the nature of the two, different grammatical operations. According to Radford (1999), ‘attraction’ involves movement of a set of grammatical features carried by a head on its own, or stated differently, without movement of the
corresponding phonetic features. Further to this, attraction involves movement of only those grammatical features, which could not have been, checked off otherwise, hence the terminology, 'Percolation of Features'.

This is phenomenon can be illustrated as follows:

(7) We ni-w-end-ete ma-laa.

3rd psn.pron. Prepfx-AGR(3rdpsn.)-love-sfx. C6-flower

'She/he loves flowers'.

As can be observed in this structure, the Head and Specifier features of the verb 'ni-w-end-ete' (‘loves’) have percolated up to INFL, where its [3S.Nom.] Specifier features (requiring that the verb takes a 3rd Person-sg-Nominative Subject. This can then be checked for compatibility with the [3F/S.Nom] head features of the subject ‘She/he’.

Having so doing, the features are then erased, together with the un-interpretable nominative head features of ‘She/He’. On the contrary, in English INFL here only ‘attracts’ the relevant features carried by the verb, and not the actual verb itself. In essence, although the TNS/AGR features of
the verb are attracted to INFL, the Verb's phonetic features, represented by
the orthographic form 'loves' remain firmly attached to the 'V'-node.

We cannot assume to have all the answers to this complex issue at
this point. Suffice it to say that, a model, which allows for word-formation
in the syntax, as well as in the lexicon, captures the aspects of the grammar
in insightful and economic ways. A model such as the Minimalist Program,
which is in essence, a mixed 'lexical-syntactic' approach allows both lexical
and syntactic information in the construction of words and sentences allows
us to give a principled account for the phenomena of V-movement (in the
contexts it occurs) within the grammar of Kikamba.

7.3: Movement and grammatical Feature-checking in the
Kikamba Nominal

We have emphasized the fact that syntactic movement within the
Minimalist Program framework is motivated by the requirement that
morphological features must get 'checked-off' before the interface levels PF
and LF respectively. In addition, all movement operations displacing lexical
categories from their original position inside lexical maximal projections are
driven only by inflectional necessity.

The inflectional features of the lexical category must be checked
(and subsequently deleted) in the domain of an inflectional (functional)
head. If left unchecked, a morphological feature would reach the level of
PF. It is important to note that morphological features are prohibited from reaching the PF interface, because if they do, the derivation 'crashes'.

However, if all the necessary features have been checked, the structure satisfies the 'Principle of Full Interpretation' (PFI), and as a result, the derivation 'converges' at PF, in the sense that it is well-formed or grammatical.

The following phrase-structure exemplifies the Feature-checking operation within the Kikamba DP:
In the structure above, the noun head moves overtly to check-off its agreement features (person, number, gender, etc) in Specifier of AGR. In Kikamba, we have no definite or indefinite articles, neither do we distinguish masculine or feminine Person features. Hence, the only features checked off by the noun will consist of the Morphological gender, animacy and Number (sg/pl) features.
We mentioned in the previous Chapter that the Minimalist Program no longer recognizes operations such as 'Government' or 'Binding' as legitimate syntactic operations. Within the tenets of the theory, only one generalized relation is posited that enables one element to 'licence' another by checking off its Features (person, number, or gender), and in particular, the basic relation of Agreement, which is the relation between a Head and its Specifier. This is referred to as the 'Checking domain'. Feature checking will therefore entail a matching of features of the functional head (for instance, Agreement) and the Lexical head (for example a noun), by adjoining the inflected lexical category to the relevant functional head.

When the abstract feature on a functional head is strong, it will attract the lexical item with the associated features before 'Spell-out' (the point at which the structure that has been formed is rendered 'overt' or derived to PF interface). The effects of having 'strong' features of a functional head result in overt movement or movement within the syntax. We emphasize again that under the theory, all movement operations displacing lexical categories from their original position inside lexical maximal projections are driven purely by inflectional necessity.

Functional categories are either affixes (bound morphemes) or free morphemes. Hence movement of the lexical category to the functional (inflectional) head is triggered by the morphological property ('affix hood') of this functional head, rather than any strong features. In languages, like
Kikamba, where inflectional heads are affixes, movement is overt, meaning, before Spell-out.

7.4: Feature-checking in the Nominal-internal domain

We mentioned in the previous section that syntactic movement from a Minimalist perspective will be triggered by the requirement that morphological features get checked off before the interface levels PF and LF respectively. In greater detail, the head Noun must move and adjoin to the functional heads AGR(eement) and Det(erator) to have its Noun-features checked by these functional heads. The corresponding AGR(eement) features on the DP-internal AGR can be regarded as the Nominal features of this AGR(eement) node. The following structure represents Feature checking within the Kikamba Determiner Phrase:

8)
Tu-la tu-ana tu-thuk-u tu-kuły-a...
C13(dimin)-those C13-children C13AGR-bad-sfx C13-who 13AGR-TNS(pst) crying...
Those bad, little children who were crying...
In the above structure, the noun head moves overtly to 'check-off' its agreement features (person, number, gender) in Specifier of AGR. Where
necessary, the noun could then moves further up to check-off the definiteness feature in Specifier of Determiner position.

The Case and AGR (person, number and gender) features of nouns must then be checked in the appropriate position within the NP. The Nominal feature of AGR then is erased once it has checked the Noun. Likewise, the Nominal feature of Det(erator) disappears once it has checked the Noun. Elements morphologically marked [+definite], for instance, definite determiners and proper nouns must have this feature checked in a Determiner category. The 'definitising' morpheme is regarded as a strong feature, which requires checking before Spell-out given its 'affix hood' status.

The Minimalist Program also recognizes what is referred to as an ‘Agreement Chain’. This means that morphological agreement inside NPs can be represented in terms of nominal determiners with identical superscripts to the head Noun. These then form members of an agreement chain with the head Noun. For example, the 'chain' mechanism entailing the feature [- definite] can be invoked to account for indefiniteness properties on the modifier phrases inside a NP.

7.5: The applications of the Principle of Full Interpretation (PFI) in Kikamba Morpho-syntax

Chomsky (1986b) proposes a condition on the licensing of the constituent elements of constructions known as the ‘Principle of Full Interpretation’. This principle forms a requirement that every element at PF
and LF levels, must receive an interpretation or (stated differently), must be licensed.

The phonetic, grammatical and semantic properties of words are described in terms of sets of features. We mentioned that it is in the nature of PF representations that they contain only phonetically interpretable features, and conversely, in the nature of LF representations that they contain only semantically interpretable features. This requirement is imposed by a UG principle referred to as: ‘The Principle of Full Interpretation,’ (henceforth PFI). This principle specifies that a representation for a given expression must contain only those elements, which contribute directly to its interpretation at the relevant interface levels.

Hence, if a derivation results in a PF representation which satisfies PFI (by containing only phonetically interpretable features, it is said to converge at PFI. On the other hand, if the derivation results in a LF representation, that satisfies PFI (by containing only semantically interpretable features), it is said to converge at LF.

If both the LF and PF representations for a derivation satisfy PFI, the associated derivation is said to converge, and the relevant expression is deemed to be grammatical. However, if the PF and LF representations of an expression violate PFI, the resulting derivation is said to ‘crash’, and the relevant expression is deemed ungrammatical. At this point, it is important for us to consider the Minimalist implications of the PFI on the Kikamba
sentence or phrase. The morpho-syntax of Kikamba may select, for instance, the noun:

9a) ‘Mu-Ifitu’
   C1-girl (sg.)
   ‘girl’

With the selection of this noun, will be a precise definition of its semantic, morphological and syntactic features, such as: noun-class Gender, Number(sg. / pl.), the modifiers or determiners it can co-occur with (and their consequent agreement patterning, the pronominal features and generally speaking, the concordial agreement pattern of the relevant noun-class, for instance :

9b) Mu-Ifitu ü-yu mû-seo.
   [C2-girl/singular] 2AGR-this 2AGR-good.
   ‘This girl is good’.

The implications of the PFI are that all the derivations computed by the grammar of Kikamba must go through each one of the following operations, before being deemed grammatical. (Adapted from Radford 1999):

a) Selection: - By this operation, lexical items are taken from the lexicon, each item comprising of sets of phonetic, semantic and grammatical features.

b) Merger: - By this process, constituents are combined together in a 'pair-wise' fashion to form a phrase-structure tree, with each word in the tree comprising a set of phonetic, semantic, and grammatical features.
(Our concern throughout this study has been to demonstrate how both lexical and functional categories in Kikamba 'merge' in order to form both phrasal elements as well as sentences.

c) Spell-out: -After Spell-out, the phonetic and semantic features of items are processed separately, the former being processed by PF operations which compute PF representations, and the latter being processed by LF operations which compute LF representations.

At this point, it is significant to state that ‘Spell-out’ is the point at which the phrase-structures generated by the processes of selection and Merger feed into the PF component, which processes their phonetic features, as well as an LF component, which processes their grammatical and semantic features. According to Chomsky (1995b), grammatical/formal features determine the morphological form of items. These are features that play a role in the grammatical (read Morpho-syntactic) processes in a language. Applied to the grammar of Kikamba, these features include:

a) Number (sg./pl) features, since they play a role in the syntax of agreement. Consider the examples below:

10a) Kĩ nĩ kĩ-veti ky-akwa..

C7AGR-this is C7-wife C7AGR-mine.

‘This is my wife.’

10b) Ii nĩ i-veti sy-akwa.

C8AGR-these are C8-wives C8AGR-mine.

‘These are my wives’.

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Notice that grammatical information about number is important as part of the sub categorization information required of a particular noun-class. Notice the consequent change in grammatical agreement imposed on the rest of the elements in the sentence as a consequence of whether the noun-class denotes a singular or plural category.

b) Gender features similarly play a role in the agreement between the head noun and its modifiers, as well as the Subject-Verb agreement. With reference to this, we explained in great detail in Chapter Two that the category of Gender is important in the Morpho-syntax of Kikamba, since this will affect the concordial agreement pattern of the entire phrase or sentence. (Consider example 10(a-b) just presented on how morphological Gender influences the morpho-syntactic patterning of the entire sentence).

c) Features, which determine the morphological form of words include the Case features of pronouns as well as the inflectional features of verbs. We must point out that in the grammar of Kikamba, pronominal forms do not overtly manifest Case inflection features. Consider the examples below:

11a) Sy-ana sy-akwa nī n-thuk-u.
    C8-children 8AGR-my are 8AGR-bad-sfx
    My children are bad'.

11b) Mū-thükūm-i w-akwa nī mū-thūk-u.
    C1-work-agt.sfx 1AGR-my is 1AGR-bad-sfx.
    'My worker is bad'.
In the examples just given, notice that the pronoun translated as ‘my’ or ‘mine’ has the same form irrespective of whether it is appears as a determiner in subject-position to modify the subject noun or alternatively in Object position.

(Alternatively, in a language such as English, these features would also include gender features of Masculinity or Feminity, since they play a role in the syntax of reflexive anaphors, as well as Person features, which play a role in the syntax of subject-verb agreement).

It must be emphasized that these grammatical features do not include features, which have no morpho-syntactic correlates, for instance, purely semantic features that play no role in grammatical processes, and thus, cannot be classified as being either grammatical or formal features. However, we must emphasize that in the grammar of Kikamba, the distinction between grammatical and semantic features is not always clear-cut, since many grammatical features have clear semantic content.
7.6: Summary

In this Chapter, we have discussed how the grammatical features carried by words are checked. We suggested that the phonetic, grammatical and semantic properties of words in Kikamba could be described in terms of sets of features. In addition, we demonstrated that the grammar of Kikamba generates two main types of structural representations for sentences, namely, a PF representation and an LF representation. We noted that the PFI requires on the one hand, PF representations should contain only phonetic features, and conversely, LF representations should contain only semantic features.

We observed that in Kikamba, the grammatical features of person, number and gender of nominals (pronouns, nouns and null subjects) have morphological and semantic content, hence are interpretable at LF. Any un-interpretable features, we emphasized, must be erased in the course of the derivation; otherwise, the derivation might crash at LF level.

In addition, we demonstrated that in conformity with the general theoretical position of the Minimalist Program, lexical categories in Kikamba carry three sets of grammatical features, namely, Head-features, Specifier-Features and Complement-features. Our analysis was that Specifier and complement features (as well as those head-features that are purely formal, and hence have no semantic content) are un-interpretable, and consequently, a process of checking must erase them.
Lastly, we looked at how Feature-Checking works, with reference to the Kikamba Verbal and nominal structure and argued that it is in the nature of the ‘merger’ process by which phrases are formed, that projections carry the same head-features as their heads. We examined features carried by Determiners and Adjectives which we argued, must be checked so as to agree in number and gender with the nouns they modify.

We have seen that the introduction of the Feature-Checking theory is an overt recognition of the role played by the morphology within the syntactic analysis of a natural grammar such as Kikamba. As a consequence, this makes it redundant for us to still insist on the traditional division of syntax and morphology as separate components of grammar.
CHAPTER EIGHT
RESEARCH FINDINGS AND CONCLUSIONS

8.0: Introduction

This Chapter adopts a full-circle approach by revisiting the Research Problem, Objectives and Hypotheses of the investigation, in the light of the research-findings, analyses and generalizations made throughout the five chapters of this dissertation.

8.1: A review of the Research Problem

In recapitulation, our Research Problem had three main dimensions. The first perspective of the thesis was to examine the explanatory adequacy of the Principles and Parameters Framework as articulated within the Minimalist Program. This was done by investigating just how much of what is attributed to UG is actually verifiable using data from the morpho-syntax of Kikamba.

Using empirical data from this language, we were able to provide a detailed, principled and economic account of the interplay between morphological and syntactic (lexico-syntactic) features within the grammar of the language. We emphasized that due to the complexities of Bantu morphology, in most cases the boundary between the two levels of grammatical analysis become artificial, particularly if one intends to present
a comprehensive and linguistically scholarly account of a natural language such as Kikamba.

The second concern of our thesis involved establishing whether grammatical structures in Kikamba are generated by what the Minimalist Program refers to as ‘Optimally efficient derivations’, suggesting that any structure derived or computed within the lexicon or by syntactic movement rules is constrained by principles recognizable at the only two levels of linguistic analysis, namely, the PF and the LF levels.

We established that this was, in effect, a genuine claim, since principles, such as the ‘Economy’ Principle, the Principles of ‘Greed’ and ‘Enlightened Self- Interest’, (to name a few) do apply to limit both V-movement and N-movement only for purposes of Feature-Checking. Consequently, our observations were that these principles drastically reduce the number of superfluous derivations, so characteristic of some of the predecessors of the Minimalist Program (a case in point being the Government/Binding theory).

Our research findings demonstrated that the Economy principle does indeed eliminate the need for unnecessary grammatical rules and operations. In addition, the recognition of a morphological component within the lexicon, as assumed under the Checking Theory, makes it possible for us to give an economical, unified, and principled account of aspects of both the morphology and syntax of Kikamba within a single investigation.
Lastly, in keeping with the tenets of the Principles and Parameters theory, we suggested the possibility that in the grammar of Kikamba, the parameter settings for each of the parameters under investigation are determined largely by variations in the functional categories, such as TNS, NEG, or the strength of AGR and INFL. Our research findings were that, the structural order of substantives (lexical categories) in Kikamba, particularly the order of nouns and verbs) was recognized to fit automatically and predictably from the features of these functional categories.

We underscored the fact that, although the idea of parameter setting is well recognized, the idea that it is functional categories that determine what parametric values a language selects has not received widespread attention. However, based on the empirical findings of our analysis on the grammar of Kikamba, we propose that this is not an entirely unreasonable position for future investigations to adopt.

8.2: Evaluation of the Study’s Research Objectives

Our first objective entailed investigating whether the Kikamba NP should receive a DP analysis, as proposed by (among others) Abney (1987) and Carstens (1991), based on their analysis of other languages. Whereas we identified a number of similarities between the IP (Sentence) and NP structure of Kikamba, our contention was that it would be inaccurate to generalize and assume that all nominals in Kikamba should automatically be
analysed as DPs. We cited the structure of genitives (gerunds) and possessives which we argued, are best analysed as AGR Ps. This in effect, means that the Kikamba nominal could be treated as either an AGR P (Genitives (POSS)) or a DP, depending on the presence or absence of an overt Det. (erminer) element, as well as the 'strength' or 'weakness' of the AGR features of INFL.

The second research objective was to investigate whether lexical or functional categories determine parametric values in Kikamba. We examined the values of five parameters, namely, the AGR/TNS parameter, the Null-Subject parameter, the Det. Parameter, the Head-Specifier parameter and the NEG parameter. All the parametric values the grammar of Kikamba institutes for each of these parameters, we proposed, are entirely determined by the related functional categories.

To generalize our findings even further, we demonstrated that the structural order of substantive (lexical) elements within the Kikamba clause and phrase follow largely from the features of functional categories, which in traditional grammars were relegated to a secondary, (and somewhat insignificant) role in expressing purely grammatical relations.

Our third objective was to establish whether the 'Economy' criterion, stipulating syntactic movement only for purposes of Feature-checking actually applies within the syntax of Kikamba. Our conclusion is that the inclusion of this morphological element within the syntax actually
eliminates the need to have a separate D-Structure and S-Structure, as previously postulated by the earlier Generative grammars.

With direct reference to this Checking procedure of Minimalist assumptions, there is the assurance that all lexical categories are well formed, and only move overtly to check off their strong features, which, if allowed into the LF or PF levels, would cause the derivation to 'crash'. Further to this, we emphasized the role of a number of principles of UG, which, when applied to the grammar of Kikamba, constrain unnecessary movement within the syntax of the language.

The last of our research objectives involved accounting for the structure and function of nominal elements, and explaining whether they should be considered to be referential and thus, optional. We pointed out that certain principles of X-Bar theory such as the endocentric requirement and the values for the NEG-Parameter parametric settings will probably need to be re-examined, particularly with reference to their ability to account for grammatical phenomena in Bantu (as well as other) languages.

8.3: Evaluation of the Study's Hypotheses

The first prediction of this study was that parametric values for the parameters investigated are exclusively determined by functional categories. This hypothesis we regard to be authentic in light of the AGR-initial setting of the AGR/TNS parameter, the Head-Initial setting for the Head Parameter, as well as the Null-Subject setting of the Null-Subject Parameter. It
therefore would not be an illogical assumption to adopt, that parametric values are, to a large extent, purely a functional domain.

The second hypothesis made was that functional categories, generally appearing as morphological affixes, attached to either the Kikamba verb or noun root, are actually syntactic categories in their own right. The accuracy of this claim we verified using the 'Mirror Principle' as it applies to the verbal or nominal complex in Kikamba. Based on this prediction, we exemplified the TNS /AGR/NEG. features, affixed to the Verb-stem, which, we argued, can be assumed to attach themselves through syntactic operations.

Similarly, we proposed that the noun-stem is the bearer of gender information, rather than the traditional assumption that it is the noun-class prefix that carries this information. Our contention was that it is the syntactic N-raising rule that leads to the attachment of the noun class-Prefix onto the noun in Kikamba.

The third hypothesis we had postulated was that movement of lexical categories in Kikamba is motivated largely by morphological factors as assumed under the Feature-Checking theory. This was verified in our findings as being the grammatical reason for both V-movement as well as N-Movement in Kikamba. We confirmed that Kikamba is in effect, a 'true' null-subject language, manifesting the typical features identified in the literature such as, 'rich' verbal morphology. This provides an explanation for the fact that using the overt lexical pronouns in Kikamba is redundant.
(and has purely emphatic purposes), since the null subject 'pro' features are directly inferable from the agreement prefix attached to the Verb.

Our fifth hypothesis, that the Kikamba NP is actually a DP, was not entirely accurate, since, as we explained in the analysis of the nominal structure (viz. Section 3.1), not all nominal structures are DPs. The position we adopt, therefore, is that the nominal in Kikamba could either be a genitive, and therefore, an AGR P, or a DP.

Using Kikamba as a reference point, we conclude that the effects of lexical specifications, morphological marking, and morphological splits, as well as the presence of referential elements within the nominal complicate the analyses of Bantu grammars. Our position is that a comprehensive and explanatory account of Bantu languages cannot be effectively undertaken without acknowledging the unified role of both syntactic and morphological (or lexical) principles in totality.

8.4: Research implications for Universal Grammar

A general principle of the Minimalist Program that is supported by our research findings on the grammar of Kikamba is that the variant differences in the clause-structure of different natural languages is reducible largely to the features of functional categories as well as their structural order within the clause. Functional categories, we have emphasized, are the primary determinants of parametric settings.
However, we are aware that such a generalization may seem incompatible with the view assumed under UG theory that all languages underlyingly have an identical clause structure. This idea of similarity is occasionally invoked in order to substantiate the claim that languages, despite their superficial differences, are identical at some deep and abstract level of grammatical representation. This line of thought may suggest that our position (that functional categories create differences in language structure) goes against the UG hypothesis, that languages are similar at some abstract level, as a consequence of the interaction between a set of common principles. On the contrary, the view validated by the conclusions of this research has the effect of reinforcing, rather than contradicting, the UG hypothesis.

As we highlighted in Chapter Five, despite the fact that the clause-structure, structural representation of constituents, as well as grammatical operations deriving the LF order of lexical categories is constrained by a well defined corpus of UG principles, which we have invoked in a number of cases to validate our analysis of Kikamba morph-syntactic phenomena.

Our position can effectively be summarized as follows: it is not a necessary consequence of UG that all languages should have an identical clause or phrase-structure. The position we subscribe to is that the differences languages manifest in clause-structure are restricted to a difference in the category of a limited set of functional categories, namely, AGR (or INFL), TNS, NEG, DET, to name a few.
In summary, although UG allows for cross-linguistic variation in clause and phrase-structure, this variation (as we have observed with reference to Kikamba) is severely constrained, in that, it only seems to affect the hierarchical ordering of a small set of categories, namely functional ones. Slight variations in the order of these functional categories give rise to major typological differences, in spite of which each natural language still operates within the constrains of UG principles.

Indeed it is arguable that this observation further underscores the crucial role played by functional categories in determining grammatical processes, and consequently, linguistic variation.

8.5: Research implications for studies on Language Typology

We have argued that the Principles and Parameter approach to UG as assumed under the Minimalist Program allows for a principled, economical and accurate account of morpho-syntactic phenomena in Kikamba. We have also demonstrated that the theory provides a linguistically economical account of the order of lexical categories (for instance, the syntactic arrangement of the Subject, Verb and Object of a sentence), and further, allows for a principled explanation of the grammaticality, and ungrammaticality of phrases and sentences in Kikamba.

This strongly suggests that one linguistically sound way of classifying languages would be to take into account the properties of functional categories, rather than retaining the traditional over-emphasis on
only lexical categories (or substantives). We have seen that the grammatical behaviour of lexical categories is predictable largely from the features of functional categories.

Among other things, this research has demonstrated that the Minimalist Program (like the Principles and Parameters approach) gives us a credible explanation as to why many ‘logically possible’ orderings of heads, with respect to their complements, would not be permitted in the grammar of Kikamba. The theory of UG, as we have pointed out from time to time, imposes genetic constraints on the grammar of Kikamba.

We assume that these constraints are part of UG, since there is no evidence to suggest that the native speakers of Kikamba are even remotely aware that these principles exist, let alone, being able to impart this information to young children acquiring Kikamba. (cf. Kaviti 1993).

Accordingly, we concur with the conclusion that most of the grammatical variations between languages could easily be accounted for in a principled and economical way using the principles and parameters account, where UG principles reduce the range of structural variation between languages to a simple binary choice.

8.6: A review of the relationship between Syntax and Morphology

We have argued that the Minimalist Program allows for word formation processes to be incorporated into the syntactic description of a
language, as well as in the lexicon. In this way, the theory captures significant aspects of Kikamba morpho-syntax in a principled way. Words are viewed as being produced in the morphological component of the lexicon, and inserted (fully inflected) into the relevant syntactic structure in question. This, as we have seen, follows from the Minimalist framework, making syntactic, as well as lexical construction of inflected words available before the actual computation of derivations.

In view of this observation, one may question the rationale for maintaining the analytic distinction between the syntactic and morphological components as distinct levels of grammar.

We have appealed extensively to the Economy principle (considered to be the fulcrum of Minimalist assumptions) which dictates that the apparent morphological features need not be catered for in a separate component of the grammar. Furthermore, we have seen that the Feature-Checking approach allows movement of the inflected word, in a way that matches its internal morphological structure, to that of the hierarchy of syntactic structure. With this 'mixed' (lexico-syntactic) approach, we see little justification therefore, to regard the two levels of grammar as separate and distinct levels of grammar.

Lastly, our research findings and review of the supporting literature revealed that certain 'morphologically-based' principles, such as the Mirror principle, can actually be subsumed under general principles of Universal Grammar. In brief, the Problem addressed in this investigation is reducible
to the general question of how effectively the Principles and Parameters framework (as articulated within the Minimalist Program) deals with providing a natural, principled and economical interpretation of syntactic constructions in Kikamba, in keeping with constraints of Universal Grammar. This in effect, is consistent with the ultimate goal of Linguistic Theory: to reduce to a bare minimum the number of rules and principles used to explain Native-Speaker competence in any given grammar.

8.7: Recommendations for further areas of Research

It is our hope that the analyses and generalizations made throughout this investigation will be of significance to linguistic scholars who may feel inclined to further explore the applications of the Minimalist Program or the Principles and Parameters framework in the analyses of different languages. We certainly do not want to give the impression that our research findings are entirely conclusive or indisputable. On the contrary, we see a definite need for further research, particularly with regard to the applications of the Minimalist theory, as it applies to other African languages.

As has been the case with traditional Generative Grammars, there has been an overemphasis on the linguistic behaviour of Indo-European languages, to the detriment of Linguistic theory. If the Principles of UG are really meant to apply universally, it will be of great benefit to the relevant theoretical scholarship to have further testing of the Minimalist assumptions on empirical language data from other language families.
We specifically recommend further research into the features of other functional categories not dealt with in this investigation, and their role in determining clause-structure. Our research scope focused on the features of Det, AGR, TNS, Head-Spec, relations, and NEG. It would be interesting for a future researcher to go a step further and examine the role of COMP, particularly in determining the WH-Parameter.

We also recommend further research into the structure of other phrasal categories, other than the nominal and verbal categories concentrated on in this study. This could be explained in light of the significant role of functional categories in influencing the clause-structure of a language.

Only then can we be in a competent position to formulate a comprehensive answer to the question many a linguist strives to respond to, in essence; how to provide an explanatorily adequate account of the content of UG, and thereby, providing a credible answer to what Chomsky often refers to as: 'the Logical Problem of Language Acquisition.'
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