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PREVERBAL SUBJECT MARKERS IN IVIE
(LES MARQUEURS DE SUJET PRÉVERBAUX EN IVIÉ)

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ABSTRACT

The goal of this study is to investigate the properties and functions of preverbal subject markers in Ivie. Ivie, like most African languages and Romance languages, has features that indicate number in both verbs and nouns, gender and case in nouns, and person in verbs. In Romance languages such as French and Italian, information about these features is normally given by verbal desinences which are invariably suffixed to such verbs. These desinences realized on verbs indicate person and number. In Ivie, these same features (number and person) are marked on the verb in form of preverbal subject markers which occur between the nominal subject and the verb. Their presence is obligatory in all Ivie sentences.

This thesis discusses these preverbal subject markers with a view to determining their grammatical status in the language. The descriptions of these elements are based on some assumptions of the Checking Theory within the Minimalist Framework (Chomsky 1993, 1995), together with ideas from other applicable theories.

In the literature, similar grammatical elements have been variously described as clitics, incorporated pronouns and agreement markers. In languages like Quebec French (Roberge 1990), the Northern Italian dialects of Trentino and Fiorentino (Brandi and Cordin 1989) among others, it has been argued that sentences containing noun phrases together with these elements instantiate the phenomenon of subject doubling. Ivie seems to exemplify this phenomenon in view of the obligatory presence of preverbal pronominal elements with subject phrases in all Ivie grammatical constructions.
In this work, a number of questions related to the properties and functional roles of the subject markers are elucidated. In particular, we showed that they are not clitic pronouns but rather agreement morphemes necessary between subjects and their verbs due to the lack of overt inflection on Ivie verbs. Drawing on theoretical foundation from morphology, syntax and phonology, as well as analogy and comparison from similar processes in many other languages, we showed that: (i) Ivie subject markers represent subject-verb agreement; and (ii) they are neither weak nor clitic pronouns since they are never in complementary distribution with Determiner phrases (DPs). This fact is further strengthened by the presence of *pro* when subjects are dropped in sentences. This evidence also shows that subject markers are realized in non-argumental positions in Ivie. In addition, our analysis indicates that only independent subject pronouns are attested in the language. Therefore, there is no basis to label the preverbal subject markers as weak or clitic pronoun as no overt dependent subject pronoun exists in the language.

We have shown that subject markers are nothing but manifestations of subject-verb agreement in the language. Aside from subject-verb agreement, agreement is also triggered in a variety of other contexts in the language.
RÉSUMÉ

L'objet principal de cette thèse est d'étudier les propriétés et les fonctions des marqueurs de sujet préverbaux en ivoirien. L'ivoirien, comme la plupart des langues africaines et des langues romanes, présente des traits qui identifient le nombre à la fois pour les verbes et les noms. Le genre et leCas apparaissent pour les noms et les traits de personne identifient les verbes. Dans des langues romanes telles que le français et l'italien, l'information concernant ces traits est transmise par les désinences verbales qui apparaissent sous forme de suffixes sur les verbes. En ivoirien, ces mêmes traits, c'est-à-dire le nombre et le genre, sont marqués sur le verbe sous la forme de marqueurs de sujet prénominaux et ceux-ci surgissent entre le sujet nominal et le verbe. Leur présence est obligatoire dans toute phrase en ivoirien.

Cette thèse analyse ces marqueurs de sujet préverbaux dans le but de déterminer leur statut grammatical dans la langue. Les descriptions de ces formes s'appuient sur des hypothèses de la théorie de la vérification (Checking Theory) dans le cadre du modèle minimaliste (Chomsky 1993, 1995). Elles s'appuient également sur des hypothèses issues d'autres théories courantes.

On trouve des formes grammaticales similaires dans la littérature et celles-ci ont été identifiées comme étant ou bien des clitiques, des pronoms incorporés ou encore des marqueurs d'accord. Dans des langues comme le français québécois (Roberge 1990), les dialectes trentais et florentins de l'Italie du Nord (Brandi & Cordin 1989), entre autres, on pose que des expressions qui contiennent des groupes nominaux avec de telles formes représentent des cas de redoublement du sujet. L'ivoirien semble illustrer ce phénomène, à
première vue, étant donné la présence obligatoire d’un élément pronominal préverbal avec le sujet dans toute phrase acceptable de cette langue.

Dans cette thèse, nous avons éclairci un certain nombre de questions liées aux propriétés et aux rôles fonctionnels des marqueurs de sujet. Plus précisément, nous avons montré qu’ils ne correspondent pas à des pronoms clittiques mais plutôt à des morphèmes d’accord nécessaires entre les sujets et les verbes étant donné l’absence de flexion manifeste sur les verbes en ivié. En nous appuyant sur des notions théoriques en morphologie, en syntaxe et en phonologie, de même que sur l’analogie et la comparaison avec des processus similaires dans beaucoup d’autres langues, nous avons montré que: (i) les marqueurs de sujet en ivié sont des manifestations d’accord entre le sujet et le verbe; (ii) ils ne sont ni des pronoms faibles, ni des pronoms clittiques étant donné qu’ils ne se trouvent jamais dans une distribution complémentaire avec d’autres groupes nominaux (DP). Ceci est appuyé par la présence de pro dans les phrases où le sujet est absent. Cet argument montre de plus que les marqueurs de sujet sont réalisés dans des positions non argumentales en ivié. Notre analyse indique également que seuls les pronoms sujets indépendants sont attestés dans la langue. Par conséquent, il devient difficile d’identifier les marqueurs de sujet préverbaux comme des pronoms faibles ou des pronoms clittiques puisqu’il n’existe aucun pronom sujet dépendant manifeste dans cette langue.

Nous avons montré que les marqueurs de sujet ne constituent que de manifestations de l’accord sujet dans cette langue. À par l’accord sujet-verbe, l’accord est également déclenché dans de nombreux autres contextes dans cette langue.
DEDICATION

With all the affection my heart can hold, this work is dedicated to:

the Sacred Heart of Jesus, for love and comfort, and Infant Jesus, my friend and Saviour. Mother Mary, you are loved;

my husband, Richard, my children, Oti, Gerald, Ogele, Eshioramhe and Eshikpemi;

my late parents, Philip and Elizabeth;

&

my late nephew and niece, Mike and Kate.
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CHAPTER 1

1.0 INTRODUCTION

1.1 Definition of the problem and scope

The main focus of this dissertation is preverbal subject markers in Ivie\(^1\). In this language, subject markers are grammatical elements which occur obligatorily between a subject noun phrase and its predicate. In the literature, similar grammatical elements, though not always obligatory as in Ivie, have been variously referred to as concord markers (Bamgbose, 1980), subject clitics (Rizzi 1986, Brandi and Cordin 1989), agreement elements (Zribi-Hertz, 1994), or affixal elements bound to the verb (Auger 1994), among others. Also, there have been claims that such elements double arguments in subject clitic doubling constructions in some languages such as Quebec French (Roberge 1990 and Auger 1994) and Northern Italian Dialects (Suñer, 1992).

An illustration of an Ivie subject marker is given in (1.1).

---

\(^1\)Ivie is an African Language spoken in an area of the south-central of the present day Nigeria. An introduction to the language and its people will be presented later in this chapter.
(1.1)a. Oti ω³ le eminale
Oti 3sg-PST³-eat food
'Oti ate food'

b. 0 le eminale
3sg-PST-eat food
'she ate food'

c. *Oti le eminale

An example of the subject markers under study is ω in (1.1a). In Ivie, this morpheme indicates a third person singular (she/he/it). The easily observable role of the preverbal element ω seems to be that of a subject double. The invalidity of (1.1c) appears to imply a compulsory presence of a preverbal subject double in acceptable statements in Ivie. It is noteworthy that the apparent appearance of a subject doubling construction in (1.1a) is not a sufficient proof that this statement should be categorized as such. To examine the role of ω as a subject double requires a good understanding of the subject doubling phenomenon. To fulfil this objective, we need to provide answers to a number of questions which include the following:

(i) what is the grammatical status of the preverbal elements that 'double' arguments in subject doubling constructions in Ivie and some other languages? In particular, we have a special interest in Quebec French, Trentino, Fiorentino,

---

² In the orthography adopted in this study, the oral vowels e and o approximate respectively, /ɛ/ and /ɔ/ in the I. P. A. chart.

¹ PST will be used for 'past - tense' throughout this work.
and West Flemish among others.

(ii) what other arguments are doubled besides subjects?

(iii) what are the constraints imposed on such arguments?

A preverbal element appearing in the context of $q$ in (1.1a) has also been variously interpreted as a clitic. This would then imply that $q$ in (1.1a) is a subject clitic. Apparently, this new property is not independent because it is directly derivable from the functional role of $q$ as a subject double: all known cases of subject doubling are clitic doubling (Cardinaletti and Starke, 1994). However, the appearance of $q$ in (1.1b) seems to contradict its status as a clitic since a clitic cannot occupy the position of $q$ in (1.1b). The kinds of pronouns which can occupy that position are strong and weak (or mildly deficient according to some classifications)\(^4\) pronouns. As such, we may ask the kind of position that clitics are excluded from. Clitics have a degree of deficiency beyond that of weak pronouns and are consequently classified as severely deficient pronouns. The questions then are:

(i) Does Ivie provide a unique exception in that weak (or mildly deficient) pronouns, instead of clitic pronouns, are involved in doubling?

(ii) Is it possible that some clitics and weak pronouns in Ivie are morphologically identical? In this case $q$ could be a clitic in one context (1.1a) and a weak pronoun in another (1.1b)

---

\(^4\) Cardinaletti and Starke (1994) have recently proposed a classification of pronouns into strong and deficient classes. They subdivide deficient pronouns into two subclasses: weak (mildly deficient) pronouns, and clitic (severely deficient) pronouns.
Another way to resolve this apparent contradiction is to reject the functional role of $q$ as a subject double. Whatever the case, the proper resolution of this problem would necessarily involve an understanding of clitics and their functional roles in grammatical constructions.

Another interpretation of the functional role of the pronominal elements similar to $q$ in (1.1a) is that they are agreement markers. It is interesting to investigate the kind of agreements they mark. This question is relevant since the presence of these pronominal elements is merely optional in some languages. This is illustrated in the data in (1.2)$^5$. In these examples, the statements are correct with or without the presence of the pronominal subject markers *elle* (1.2a), *o* (1.2b) and *o* (1.2c).

(1.2)a. Marie (elle) vient (Quebec French)
Marie (she) comes
'Marie comes'

b. Amè (o) gha rre (Edo-Bini: Amayo, 1975)
Amè (3sg) would have come
'Amè would have come'

c. awa (o) lo (Yoruba: Bamgbose, 1980)
we (1pl) go
'We went'

---

$^5$ Edo-Bini and Yoruba are both spoken in Nigeria. They are members of the Kwa group of languages (Greenberg, 1963).
The optionality of the agreement markers in some languages is probably due to the fact that agreement is an integral part of the morphological make-up of the verbs. In Ivie, the inflectional properties of verb conjugation are invariable unlike what is observed in some languages like Italian and French which have richer paradigms of conjugations as in (1.3):

(1.3)a. French

\[
\begin{array}{ll}
\text{tu viens} & \text{'You come'} \\
\text{il vient} & \text{'He comes'} \\
\end{array}
\]

b. Italian

\[
\begin{array}{ll}
\text{io parlo} & \text{'I speak'} \\
\text{tu parli} & \text{'You speak'} \\
\end{array}
\]

Person and number agreement is present in these languages in form of suffixal desinences. There is no overt morphological realizations of such features on Ivie verbs; therefore, these features are probably encoded in the preverbal subject markers.

It is interesting to note that other inflectional morphemes usually occur between the subject markers and the verbs. This is illustrated in (1.4):
(1.4) Oti ọ la le eminale

Oti 3sg FUT\* eat food

'Oti will eat food'

In Ivie, all the grammatical morphemes follow the lexical arguments clustering before the verb, thus forming a verbal complex. Ivie is not the only language to encode complex clusters of information on its verbs, as shown in (1.5). In these languages, Choctaw, Selayerese, Abkhaz, Basque and Zulu, all cited by Auger (1994), the verbs contain morphemes which are similar to Ivie subject markers. Within these languages these grammatical elements serve to establish a link between the subject and the predicate, giving information on different inflectional elements (Tense, Agreement).

(1.5)a. Choctaw

ko: wi i- chi- pila- li- tok kiyo

lion 3DAT 2Acc throw INOM PST not

'I did not throw you to the lions'

b. Abkhaz

Sará a- xác’ a de- z- bê- yi’

I the man 3sg him- 1sg- see- finite

'I saw the man'

\* FUT will be used for 'future tense' throughout this dissertation.
c. Zulu

ngi- ya- m- bona umuntu

I- tense-him | her- see person

'I see the person'

(Auger 1994).

Given the situation just described, the crucial questions for this research are then of the following types. (i) What is the morphological status of subject markers? Can we analyze the string o la le in (1.4) as words containing a verb root, tense prefixes, and prefixal subject markers, or should we analyze each element as free standing morphemes? (ii) syntactically, what is the function of elements like o in (1.1a); is it the real subject subcategorized for by the verb le 'eat' and its double, a dislocated phrase, or does it function as an agreement marker encoding subject-verb agreement in the language?

In the rest of this chapter, a comprehensive literature review of the various concepts associated with preverbal subject markers as described under this subsection will be carried out. This will be followed by a subsection on the Ivie language and its people from a historical perspective. In chapter two, we give a descriptive presentation of the essential aspects of Ivie grammar. In the next two chapters, a comprehensive analysis of the functional roles of preverbal subject markers will be carried out. At the end of these chapters, it is expected that the proper roles of these subject markers will be sufficiently clarified. Chapter five, the last chapter, will be devoted to some
concluding remarks.

While the primary focus of this work is Ivie, an extensive array of data from other languages exhibiting similar phenomena will be used for a comprehensive comparative analysis.

1.2 Theoretical basis of the analysis

In this section, we present some basic assumptions that will be adopted in this study.

1.2.1 Minimalist program

We shall adopt the general hypothesis of the Principles and Parameters approach (Chomsky, 1993 & 1995) where the grammar of a given language is determined by a small number of invariant principles in combination with parameters of variation. In particular, we shall appeal to the "Checking Theory". This theory allows lexical items to be inserted from the lexicon fully inflected; and their morphological features (Agreement and Case features for arguments, Agreement and tense features for lexical heads) must be checked off at some point of a derivation to the Logical Form (LF). Only compatible elements are combined so that all the relevant morphological features can be checked and the derivation does not crash.

We therefore assume that, in Ivie, all predicates are inserted in fully inflected forms into the syntax. Thus a verb like *le 'eat' will be identified in the lexicon by a set of phonological features, and the categorial properties [+Verb, -Noun] and inflectional
Verb-features (Number and Person Agreement, Tense, Mood and Aspect). As such, the overt morphological element $\phi$ in (1.1a) is an instantiation of the relevant morphological features on the verb (Number and Person) as well as morphological features on the noun phrases (Case, Number, Person and Animacy). Recent modifications of this theory will only be mentioned when the need arises.

Apart from the minimalist framework, we shall also appeal to the theory of Distributed Morphology as elaborated in Halle and Marantz (1993). In their framework, the process of "Spell-Out" may include "readjustment" of feature-morpheme mappings. Readjustment may either involve "merger" or "fusion", both occurring under conditions of morpheme adjacency and executed after Spell-Out.

1.2.2 Grammatical agreement

The concept of "Grammatical Agreement" that will be adopted in this dissertation will be based on Bresnan and Mchombo (1987), by which a noun phrase bears an argument relation to a verb and "The Matching Hypothesis" of Suñer (1988 & 1992), whereby an element A matches a grammatical element B in phi-features within the same syntactic configuration. Agreement is thus considered as feature sharing.

The elements which license this type of agreement are here referred to as "Agreement Markers". They express the person, number, and animacy features of the noun phrase. We argue that such elements may not necessarily be morphologically bound to the verb in Ivie.
Cases of non-affixal agreement supported by doubling of possessive determiners

(1.6) in Quebec French are observed by Auger (1994):

(1.6)a. Ma mère à moi
my mother to me
'My mother'

b. Sa mère à Marie
her mother to Marie
'Marie's mother'

Auger (1994) also observes the existence of some languages with non-affixal agreement markers: Yagua, Pihara, Nganchara. In Yagua, a language of the Peba-Yaguan family which is spoken in northern Peru, Class II clitics cannot be analyzed as affixes, since they are said to occur on words that immediately precede their double as in (1.7) below:

(1.7)a. Sa-pµµπχ, pauroi roony viimu-nii, Anitai (Auger, 1994)
3sg cl-carry Paul house into-3sg cl Anita
= 'Paul carries Anita into the house'

b. Sa-pµµπchi Pauroi - nii, Anita,
c. Sa-pµµπch, -nii, Anita,
These examples show that not all agreement markers are necessarily morphologically bound to their verbs linearly. In this regard, we are also of the view expressed in Auger (1994) that morphological boundedness and agreement-marker status are independent.

We also argue that in Ivie, quantified phrases and Wh-phrases, are all in argument positions because subject-verb agreement requires the presence of the lexical noun phrase the verb is agreeing with. Therefore, agreement markers are obligatory in all environments and found in constructions involving extractions, relative clauses, wh-questions, and long-distance extractions.

1.3 Literature review

1.3.1 Doubling

Doubling has been described as a phenomenon involving the overt phonological spell-outs of NP features by an affix or clitic. In such constructions, a pronominal element and the lexical subject or object can co-occur within the same sentence. Many languages exhibit some kind of doubling, either object or subject doubling. Usually, only one of these occurs within a given grammatical system. Also, doubling could be optional or obligatory.

Generally, it has been accepted in the literature that the syntactic units responsible for doubling are clitics. By this, we refer to the pronominal element doubling the noun phrase. Cardinaletti and Starke (1995) refer to such elements as 'severely deficient pronouns'. They are deficient in the sense that they lack many
functions or properties of full pronouns in languages exhibiting them. Similarly, in all known cases of doubling cross-linguistically, the doubling pronouns are deficient as opposed to "full" or "strong" pronouns in such systems.

1.3.1.1 Object doubling

Jaeggli (1986) shows that in clitic-doubled constructions in Spanish, the doubled constituents are subject to the Case Filter because they occupy argument positions just like any other direct objects.

Suñer (1988) shows that indirect object clitics and noun phrases do not need to match in features for grammatical doubling. She claims that these facts obtain for all Spanish dialects. In contrast, direct object doubling, according to Suñer (1988), is more restricted both dialectally, and in terms of the feature-matching between the clitic and the doubled phrase. She asserts that doubling is allowed in these dialects only when the direct object clitics match the noun phrases in both specificity and animacy.

Dobrovie-Sorin (1990) relates the presence of accusatives in certain Wh-constructions in Spanish to the clitic doubling of direct and indirect objects.

In her discussion of double object clitics in Greek, Terzi (1994) points out that a striking property of Greek pronominal clitics is that while double object clitics precede the finite verb in the order dative-accusative, pronominal clitics follow imperative and gerunds in either order, namely, dative-accusative or accusative-dative.
1.3.1.2 Subject doubling

Subject doubling is obligatory in the Northern Italian dialects of Fiorentino (Rizzi, 1986; Brandi and Cordin, 1989; and Suñer, 1992).

In discussing the status of subject clitics in Fiorentino and Trentino, Rizzi (1986) shows that a preverbal lexical subject can always co-occur with the subject clitic. He also hypothesizes that the doubling of bare quantifiers in Fiorentino is an indication that subject doubling cannot be interpreted as left dislocation in these dialects.

Similarly, Brandi and Cordin (1989) show that subject clitics obligatorily appear in sentences where the subject position is lexically filled, either by a tonic pronoun or by a lexical noun. They also assert that subject clitics in both dialects agree in all features with the lexical subjects.

Suñer (1992) points out that Fiorentino and Trentino use subject clitics to double subject arguments. She observes that this morphosyntactic trait demonstrates that these dialects have a double specification for subject agreement: the subject clitic and the verbal morphology. She also shows that subject clitics can be doubled by Wh-elements made specific by the presence of a partitive article.

As opposed to the obligatoriness of subject doubling in the Italian dialects (Fiorentino and Trentino), some French dialects (Quebec French and Pied-Noir) display optional subject doubling in their individual grammars.

Although Roberge (1990) provides data to show that subject clitics can be doubled by strong pronouns and lexical noun phrases in Quebec and Pied-Noir French, he equally demonstrates the optionality of doubling in these dialects by showing that the
clitics in such doubling constructions can be dropped with absolutely no effects on grammatical interpretations.

Roberge (1990) also uses the term "restricted subject doubling" to refer to the constraint on doubled noun phrases in Quebec French. Roberge (1990) goes on to show that one of the few identifiable distinctions between Quebec French and Pied-Noir French is that most indefinite noun phrases can be doubled in Pied-Noir. One of the exceptions applies to Wh-elements as these cannot be doubled in Pied-Noir French.

Finally, Roberge (1990) claims that subject doubling constructions in these French dialects (Quebec and Pied-Noir) are not cases of dislocations as dislocated constituents do not occupy a position that receives a grammatical function.

Recently Auger (1994) also acknowledged the presence of pronominal clitics in doubling constructions in Quebec French. She suggests that these pronominal subjects should be treated as affixal agreement markers. Auger (1994) also shows in her study that doubling with bare quantifiers is allowable among some speakers of Quebec French contrary to some previous accounts.

Auger (1993) shows that a considerable number of quantified subjects can be doubled by subject markers in Picard. She concludes that subject doubling is allowable in this French dialect.

Contrary to later accounts, Carroll (1982) claims that only object doubling and not subject doubling exists in Quebec French. She argues that constructions being described as subject doubling are not distinguishable from left dislocations.

Optional subject doubling is also observed in West Flemish (Haegeman, 1990).
Subject doubling in this dialect presents some peculiar characteristics different from other grammars. In this dialect, clitics are doubled whereas clitics do the doubling in most other grammars exhibiting subject doubling. Also, only the strong pronouns can participate in doubling with clitics; contrary to other known grammars, doubling involving R-expressions is not allowed in West-Flemish.

To conclude this section, we have seen that subject doubling can present different peculiarities as regards the type of lexical noun phrases that can be doubled. However, all these grammars have some common features such as the invalidity of the doubling of a strong pronoun by an R-expression or the doubling of a clitic pronoun by another clitic form.

1.3.2 Clitics and cliticization

In the literature, there have been opposing views concerning the categorial status of the syntactic unit responsible for doubling. There is yet to be consensus about their inherent grammatical status. In comparing the positions of subject clitics in French and Trentino on a tree structure, Rizzi (1984) observed that the notion "subject clitics" is "a spurious one from the viewpoint of syntactic theory proper." The emphasis given to them (clitics) depends on the focus of study of each author. Zwicky (1977) defines clitics as "neither clearly independent words nor clearly affixes."

Though clitics share certain properties with full words, they lack the independence of such words since they cannot be realized in isolation. They have to attach phonologically or syntactically to a host. This is what makes them look like
affixes, in particular, inflectional affixes. Historically, it is observed that clitics developed from full fledged words into inflectional affixes. Zwicky (1977) observes that "after the development from independent word to clitic, the next step is the incorporation of clitics into morphology proper. What is a clitic at one stage is reinterpreted as a derivational or inflectional affix at the next." It is crucial to note that, in contrast to the usage of the term 'clitic' by some contemporary syntacticians, the elements in question do not primarily consist of a class of pronominals. Interestingly, other clitics include elements such as auxiliaries, negative markers, adverbials, question markers; usually, these are not thought of as clitics.

In the literature, clitics have been generally assumed to be accentless or stressless. But examples from Polish and Macedonia (Spencer, 1991) show that this is not always true.

1.3.2.1 Clitic placement

Clitics can adjoin to any lexical category at the phonological form (PF) while affixes are restrictive since they attach to only specific classes of words. Clitics in other languages like Czech (Fried, 1994), and some Slavic languages behave differently from Romance clitics. According to Dimitrova-Vulchanova (1995), Slavic has "special clitic" types which show special syntactic behaviour different from the full lexical members of the same category. These comprise pronominal clitics, auxiliary clitics, question clitics, to name a few. In the literature, however, there are variations in the principles of clitic placement. For instance, in Czech, and some Slavic languages, second position
clitics could be encliticized to complementizers along with a collection of other syntactic elements capable of appearing at the beginning of a sentence. This indicates that clitics can attach to words of virtually any category as the Serbo-Croatian data in (1.8) show:

(1.8)a. Jovan mi ih je dao
Jovan 1sg-DAT 3pl-Acc Aux3sg gave
'Jovan gave them to me'

(Spencer 1991)

b. Sad ga ne vidim
now him Neg see 1p

c. Koliko im ko daje?
how much them who gives

d. Da li su automobile na putu?
C Qcl Aux-cl cars on the road.

( b-d from Dimitrova-Vulchanova, 1995)

The appearance of clitics in second position observed in many languages is often referred to in the literature as the Wackernagel’s Law of clitic placement. Clitics which obey Wackernagel’s Law are found in a variety of typologically and genetically diverse languages. Some linguists such as Anderson (1993) argue that Wackernagel’s position is clearly after the first word and not after a constituent since Wackernagel gives many examples of constituents being broken up by sentential clitics. However, Kaisse (1981)
observes that, while this strict interpretation appears to hold for some languages (e.g. Tagalog), other languages like Pashto place clitics after an initial phrasal constituent. This stand is in accord with the more general trend where the relevant second position of clitics is assumed to be after the first constituent. By adopting this more realistic interpretation, many languages could be shown to follow the Wackernagel’s rule. In languages such as Luiseno (Uto Aztecan), Bulgarian, Serbo-Croatian, and Warlpiri, the second position is defined by either the first word or the first constituent of the clause. Examples illustrating this is given in (1.9):

(1.9)a. Luiseno
ne si li mi go dala?
neg 2p sg AUX Q3p dat 3p acc given(f)
cl cl cl cl
'Didn't you(f) give it to him?'

b. Bulgarian
Toni mi go isprati.
Tony him it sent
dat cl acc cl

(a and b from Kaisse 1981)
c. Serbo-Croatian

Taj mi je pesnik knjigu

that me past poet wrote book

'That poet wrote me a book'.

d. Taj pesnik mi je napisao knjigu

that poet me past wrote book

'That poet wrote me a book'

(c and d from Anderson, 1993)

e. Kwakwala

la?mis = ek lat = gada yudex = ekq'eltaxoyu

AUX = 3[near, visible] will go = these three =

[near, visible] cut off

'And so now these three pieces cut off will'

(Anderson, 1993)

f. Yagua

sa-saay Alchico=nii sa-dee-tu=ra paa

3sg. SUBJ-give Alchico=3sg.OBJ 3sg.pos-child-

FEM=INAN.OBJ bread

'Alchico gave his daughter the bread'.

(Anderson, 1993)
As noted above, what counts as the first element in the case of post-initial (second-position) clitics is subject to some variation. The choices apparently are either the first word or the first maximal projection. We could express this by allowing the domain within which the clitic is placed to be parsed either as a phonological or syntactic structure. Other domains of cliticization are illustrated in (1.10) and (1.10) with examples from Ngiyamba and Nganchara:

(1.10)  
Ngiyamba

a. girbadja = ndu mamiyi gabira

Kangaroo = 2NOM PST-catch yesterday

b. gabira = ndu mamiya girbadja

'You caught a kangaroo yesterday'

In this Australian language, the domain of the enclitic is the sentence. It is attached after the first constituent (or word). This also looks like second position clitics. But in the Nganchara example in (1.11), the enclitic is analyzed as a sentence domain final enclitic:

(1.11)  
Nganchara

nhila pama-ng nhingu pukpe - wu ku? a = ngu wa:

he/NOM man-ERG him/DAT child-DAT dog-DATsg give

'The man gave the dog to the child?"
In this language, since the word order is free with the verb always in final position, the syntactic host of the clitic is the verb.

These characterizations have led some linguists to regard the notion of clitic as simply a descriptive cover term while others regard clitics as a separate morphosyntactic category. For Wackernagel, the category 'clitics' is defined phonologically and not syntactically, since he identifies clitics with accentless elements.

1.3.2.2 The syntax of clitics

Within the Government and Binding framework, three different arguments have been proposed to analyze subject clitics (SCLs) in Romance languages: (i) that the SCL is base-generated in the inflectional node(INFL) at surface structure (S-S); (ii) that it is attached to the verb and then raises to INFL at some point; (iii) that it is base-generated in some subject position. All three are plausible.

One of the proponents of movement (Kayne, 1975) argues that movement and not base-generation explains the locality holding between a subject clitic and the XP. Kayne (1975) claims that all pronominal clitics in French are generated in A-position at D-structure. Object clitics transformationally adjoin to the verb in syntax where the 'clitic + verb' complex is dominated by the verb node:
This is supported by the fact that they cannot be conjoined independently of their host (verb) neither can their host be conjoined separately of them. Kayne (1984 & 1989) further argues that French subject clitics are heads of the subject DP which may undergo such transformations at the Phonological Form. Also, Kayne (1991) assumes that clitics are heads and that Romance clitics must adjoin to some $X''$ and never to an XP. This excludes the French determiners which Miller (1991) refers to as syntagmatic clitics. Kayne further claims that Romance clitics invariably left-adjoin to a functional head, but the two word orders attested in these languages (Romance), verb-clitic and clitic-verb, depend on the movement of the verb past the functional head to which the clitic has adjoined. Kayne argues that in French, the verb moves up with its clitics to an infinitival projection containing the infinitival morphology which is added to the verb stem. This projection is preceded by adverbs of the 'souvent' (often) type, exemplified in (1.13):
Dufresne (1993) (Middle French) also assumes similar analysis as Kayne (1975).

However, those who adhere to base-generation of subject clitics in its surface position (AGRs) claim that this analysis is more compatible with the lack of complementarity between clitics and a full noun phrase in a clitic doubling construction. Jaeggli (1982), Roberge (1990) (Quebec French) and Sportiche (1992 & 1994) (Standard French) argue that subject clitics in French are generated as part of a complex inflectional node. Roberge argues that subject clitics merge with the verb at some point in the syntax. Sportiche (1994) also claims that subject clitics and DPs are distinct entities in French. He departs from Kayne’s proposal only in assuming that the configuration DP-subject clitic is not base-generated as such but has to hold at the Logical Form (LF). He makes a distinction between syntactic and phonological clitics as well as between syntactic and morphological cliticization.

Rizzi (1986) and Brandi and Cordin (1989) argue against this proposal. They claim that, although such a proposal holds for Trentino, it does not hold for French.
They argue that French subject clitics head noun phrases (NPs); that is, they are generated in the same position as full subjects. The following two analyses are thus proposed for French and Trentino (where SC is the underlying position of the subject clitic).

(1.14). \[ \begin{array}{c}
\text{IP} \\
/ \quad \backslash \\
\text{NP} & \text{I'} \\
| & | \\
\text{SC} & \text{I} \\
\end{array} \] French (Rizzi, 1986)

(1.15). \[ \begin{array}{c}
\text{IP} \\
/ \quad \backslash \\
\text{NP} & \text{I'} \\
| & | \\
\text{pro} & \text{I} \\
| & | \\
\text{(clitics)} \\
\end{array} \] Trentino (Rizzi, 1986)

Rizzi (1986) claims that subject clitics in Trentino and Fiorentino are agreement (AGR) under the inflectional (INFL) node. He also claims that the Northern Italian dialects (eg., Trentino) only differ from Southern Italian in that "the strong AGR is realized in the Phonetic Form, not in the concrete verbal morphology, but also in its abstract syntactic position [INFL]." Thus, in a pre-split INFL framework, the subject clitic occupies the head of an inflectional projection (AGR in INFL) while the noun phrase is realized in subject position as shown in (1.16).
Rizzi (1986) and Safir (1985) differ in their account of the doubling phenomenon in Northern Italian dialects, for example, Trentino. A basic assumption by Safir (1985) is that Nominative Case must be assigned in VP and that subject clitics must be assigned Case directly. According to him, subject clitics are base-generated as affixes on the verb. Therefore, Safir proposes the structure in (1.18) for Trentino. This corresponds to the examples in (1.17).

(1.17a). El Mario *(el) magna.
the 'Mario eats'.

b. Le putele *(le) vien
the girls
'the girls come'

(1.18). S
/ \ VS
NP INFL VP
  | V |
< --> > CL+VP
The representation in (1.18) shows that Case is assigned by INFL to the subject clitic generated inside VP and the lexical NP subject can inherit Case from this coindexed clitic (<<<< means Case Assignment; --- means Case inheritance). One of Rizzi's proposals as regards Case and Θ-role is that the clitic is not a true nominal; its presence is therefore irrelevant for Case assignment and Θ-role assignment.

Recently, Auger (1994) presented a morphological analysis of Quebec French pronominal clitics. Auger claims that these clitics are affixes at the morphological level, since all the various allomorphic forms noted in the dialect cannot be represented in syntax.

1.3.2.3 Clitics and affixes

Cliticization raises a number of questions concerning the relationship between syntactic, morphological and phonological characterizations of this notion. The nature of pronominal clitic systems especially in Romance languages has led to a debate in syntax in recent years. Some argue that clitics are weak pronominal forms, whose behaviour has to be treated syntactically. Others have argued that, morphologically, these clitic pronouns are affix-like, and as such, an adequate account of their syntactic properties will have to take into account the morphology-syntax interface.

A distinction is made between cliticization and affixation by Aronoff (1976) (taken from Klavans, 1985) who describes cliticization as "grammatical" morphological phenomena which cannot be subsumed under inflection. It is now known that this definition is more representative of the syntactic rather than morphological nature of
cliticization.

Zwicky and Pullum (1983) provide a series of tests to distinguish clitics from affixes with particular reference to the affixal status of "n’t" in English; they argue that this contracted negative form of 'not' be analyzed as an inflectional affix since it does not have the properties of a clitic.

Zwicky (1985) provides further tests to distinguish clitics from words. He argues that clitics must be distinguished from particles and observes that particles such as discourse markers, are not independent words; though other particles may have similar clitic variant, that does not make them clitics. Zwicky (1985), and, Zwicky and Pullum (1983) claim that 'clitics' are syntactically like words, in that they are relatively independent of the words they attach to. They have their own meaning, and do not show idiosyncratic allomorphy themselves, or condition idiosyncratic allomorphy on their hosts.

Inflectional affixes, on the other hand, condition idiosyncratic allomorphy on stems to which they attach. Zwicky (1985) then argues that cliticization is an essentially syntactic phenomenon, while inflectional affixation is morphological.

Klavans (1985) examines the same question and claims that cliticization is phrasal affixation, and that this property follows from the form of lexical subcategorization frames of clitics. She also argues that the non-lexical domain for Romance type of verbal clitics reflects that they are really verbal features in line with Borer (1981). Klavans further observes that Romance clitics are becoming affixes since they now have V, and not V' as the relevant domain for clitic placement, coupled with
the fact that they have insertion requirements resembling those of other verbal affixes.

1.3.2.4 Other analyses

The analysis of subject clitics in West Flemish is different from that observed for Quebec French and the Italian dialects. Haegeman (1990) shows that subject clitics are realized in the specifier position of the complementizer "daa". Haegeman (1990) further observes that subject clitics cliticize to it through movement.

Cardinaletti and Starke (1994) made the following observations on clitics which they called "severely deficient pronouns": prosodically, they do not have word stress; they can be morphologically reduced; they have no range in interpretation, and they are X°.

But Inkelas (1989) argues that we cannot automatically assume that a word is necessarily a clitic just because it is unstressed, or reduced, or a member of a minor category. Her conditions of clitic-hood are the following:

a. Clitics are separate syntactic terminals
b. Clitics cannot be pronounced in isolation
c. Clitics are always function words.

However, we know that not all function words are clitics (Zwicky, 1985).

Chomsky (1994) argues that there are certain elements that can function both as X° or XPs. And the question is: do these cause problems? According to Chomsky
(1994), they do not. Clitics are analyzed as D's under the DP hypothesis (Chomsky 1994). In his analysis, Chomsky assumes that a clitic raises from its theta-position and attaches to an inflectional head. In its theta-position, the clitic is an XP; attachment to a head requires that it be an X°. Furthermore, the movement violates the head-movement constraint (HMC), indicating again that it is an XP, raised by XP-adjunction with the final step of X-adjunction.

1.4 Ivie people and language⁷

Ivie is spoken in the northern part of Edo State in Nigeria. The closest neighbours of the Ivie are the Okpella to the West, the Avianwu to the South, Uweppa-Wano to the East and the Ebira to the North. The Ivie also share a common border with the Ebira in Kwara State across River Obu.

Westermann and Bryan (1970) classify "Ibie-Okpekpe", within the Kukuruku dialect cluster of the Kwa group. Melzian, in Westermann and Bryan (1970), notes that Kukuruku includes the following:

Auchi (auci), in and around the town of Auchi;
Fuga, between Auchi and Wano;
Wano, the west of the Kukuruku area on the Niger;
Ibilo, in the North-West;
Semolika, in the North-West;
Ibie-Okpekpe, in the North.

⁷ Maps can be found in the appendix showing the geographical location of the Ivie speaking group within the present Federal Republic of Nigeria.
Thomas in Westermann and Bryan (1970) gives the names Ibie (tribe) and Opepe (town). In Greenberg's (1963) classification of the languages of Africa, Etsako (of which Ivie is one) is classified as Kukuruku under the Niger-Congo Kwa Languages.

Hoffman (1974) classifies North-Ibie (Ivie) under the North-Central sub-group of Northern Edo. According to him, North-Central Edo includes Edo (Bini), Esan (Ishan), Emai-Iuleha-Ora (including Ivhimion), Yekhee ('Etsako', 'Afemai', 'Kukuruku' including Ikpeshi), Ghotuo ('Otwa'), Uneme, North Ibie - Okpella - Ate (Atte), Ososo and Sasaru - Enwan - Igwe.

Bennett and Sterk (1977) classify Edoid as a sub-group of the Eastern South Central Niger-Congo (ESCNC). It is also a Benue-Congo language (Williamson, 1989) of North-Central Nigeria belonging to the Edoid family (Elugbe, 1989). In Elugbe’s classification of Edoid languages, Ivie is grouped to the North-Central Edoid. (see Fig. 1.1):
The known history of the Ivie people dates back to about 15th century A.D. The Ivie claim to have migrated from the powerful Benin Kingdom when there was a mass exodus of people because of the tyrannic reign of the reigning Oba (king) Ozolua. The people of Ivie were believed to have first settled at 'Ibienafe', that is, the present day 'South-Ibie', and mixed with the indigenes. Their settlement here was not for long since an acute shortage of water in the area forced them to move to a place called 'Ajaja'. However, as the myth goes, it is from this place that the Ivie people dispersed to their present locations. The first man to settle at Ajaja had four children. The oldest of the children settled at Okpekpe, while the others, 'Egba', 'Ukwi' and 'Akebu' moved to their present sites. The present day locations are therefore, Imiegba (children of egba), Imiakebu (children of Akebu), and Itsukwi (Ukwi’s place). Okpekpe, Imiegba,

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8 PNCE: Proto North-Central Edoid

9 PSNCE: Proto South North-Central Edoid

10 PENCE: Proto East North-Cental Edoid

11 In the original tree proposed by Elugbe (1989), Ivie was not included.
Imiakebu and Itsukwi constitute the Ivie group. The name Ivie is commonly used by
the people in reference to themselves. For a finer distinction, the Ivie refer to
themselves in terms of the four major settlements which make up the group (Imięgba,
Imiakebu, Okpekpe and Itsukwi).

Apart from the literature on a closely related language Yekhee (Etsako), most
recent published works on Ivie are mainly in article forms in learned journals. Schaefer
& 1989) discusses aspects of the segmental phonology and tonal grammar of the
Masagbor and Masagbor (1995), some aspects of Ivie syntax are described. This
dissertation is the first comprehensive work on Ivie grammar.

Ivie has been known to African linguists by the name 'North Ibie'. Apart from
this name, the Ivie (the people) are also known as Ibielavho. This is a nickname given
by other ethnic groups. Ivie is of peculiar interest for two reasons: (i) the nature of its
sound system, which will not be elaborated in this work; (ii) the morphology and
syntactic patterns of the language which are quite different from other North-Central
Edoid languages in particular and other Edoid languages in general.

1.4.1 The material for the present study

The dialect used for study is Okpekpe. All the data on Ivie presented in this
work are from my intuition as a speaker of this language. Also, most of these have
been cross-checked with Dr Richard Masagbor and Mr Patrick Elimezekhe who are
both native speakers. Finally, tones will be marked only when necessary.
CHAPTER 2

2.0 IVIE GRAMMAR

Many aspects of Ivie grammar will be discussed in some detail in this chapter. This includes the sound system with specific focus on the basic tones and their functions, the verbal system including arguments against verb movement in the language, and some aspects of Ivie derivational morphology. While a large part of these details are relevant for later analysis, other parts have been added in order to enhance the understanding of Ivie grammar.

2.1 Phonological analysis

The aim of this section is to describe the features of the phonology relevant to Ivie grammar. The approach will be basically phonemic. This will, of course, be reinforced by phonetic considerations. Our rationale for this particular approach is predicated on exposing only distinctive sound units in the language, and some phonological processes which are pertinent in our eventual analysis of the status of subject markers in Ivie.
2.1.1 Consonant phonemes

Table 2.1 Ivie consonant phonemes

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Labio-velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Nasal:</td>
<td>mh(^{12})</td>
<td>m</td>
<td>n</td>
<td></td>
<td></td>
<td>(\eta m)</td>
</tr>
<tr>
<td>- Oral:</td>
<td>p</td>
<td>b</td>
<td>t d</td>
<td>k g</td>
<td></td>
<td>kp gb kph gbh</td>
</tr>
<tr>
<td>Affricate:</td>
<td>pf</td>
<td>ts dz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative:</td>
<td>f v</td>
<td>s z</td>
<td></td>
<td>kh gh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral:</td>
<td>i l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trill:</td>
<td>i r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant:</td>
<td>vh</td>
<td></td>
<td>y</td>
<td></td>
<td></td>
<td>w</td>
</tr>
</tbody>
</table>

The labio-velars, \(kp\), \(gb\), \(m\), and the labio-dental \(pf\) have double articulation.

Although not represented in the orthography, the vowels following \(/ml/\), \(/ln/\), \(/ml/\), \(/mhl/\), automatically occur nasalized.

2.1.1.1 Labialization and palatalization

Some consonants in Ivie may occur with lip-rounding (labialization) before a sequence of two vowels if the first of the vowels in the sequence is the high back vowel

\(^{12}\) 'h' is used in the orthography to indicate lax nasal and plosive phonemes; there is no /h/ in Ivie.
[u]. Some illustrative examples are presented in (2.1):

(2.1)a. ékùè -> [ékwē]¹³ 'Shoe'

b. ítsùà -> [ítswà] 'Load'

c. ígùámhi -> [ígwámhi] 'Sickness'

Another group of consonants can occur with the raising of the tongue before the front vowel /i/ (palatalization). This rule is given in (2.1) and illustrated in (2.2):

Rule 2.1 /C/ -> [+palatal] / -[V +high -back]

(2.2)a. ónìè -> [ónè] 'Crocodile'

b. sitio -> [ʃ iʃ o] 'Sit'

c. tsi -> [tʃ i] 'Pull'

[ŋ] in (2.2a), and [ʃ ] in (2.2b and c) are palatalized consonants.

2.1.2 Vowels

Vowels in Ivie are represented by the following: a, e, e, i, o, u. Additionally, there are two other vowels, 'ɪ' and 'ɔ', whose phonemic status are uncertain. So far,

¹³ The feature of labialization is transcribed by a 'w' following the consonant.
our observation is that 'I' and 'o' behave respectively as the phonemes /el/ and /ol/ under some specific contexts. Finally, we note that there are no nasal vowels in the language. In Table (2.2), we present the Ivie vowel phonemes in order of phonetic quality.

Table 2.2 Ivie vowel phonemes

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>Half-close</td>
<td>e</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Half-open</td>
<td>ŋ</td>
<td></td>
<td>ŋ</td>
</tr>
<tr>
<td>Open</td>
<td>a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.1.2.1 Vowel sequences

Sequences of two diverse vowels are attested in Ivie. In any such sequence, one of the two must be a close vowel. Such sequences are considered as two distinct vowels, due to their separate tones as shown in (2.3):

(2.3)a.  sûiì    'Little'

b.  ìògbò   'People'

c.  mísêá   'Wring' (of clothes)
2.1.2.2 Vowel elision

Full vowel elision is typical of some types of phrases in Ivie. Nouns regularly begin with vowels and all words in the language end with vowels. In a sequence involving a verb and a noun object, or in a noun-noun phrase, the final vowel of the first word is, under many circumstances, deleted. Thus the sequence of *dé* 'buy' and *ôdé* 'cloth' is actualized as *dôdé* 'buy cloth'.

Final *il* or *ul* is not normally elided before a vowel different from itself, though a few exceptions can be found in Ivie.

2.1.3 Basic tone system

Ivie has two contrastive tones, high tone (') and low tone ('). The language is also characterized by features of automatic downstep, upstep, and downdrift. Automatic upstep which is phonologically predictable is analyzed as an allotone of high tone.

The syllable is the tone bearing unit in Ivie. Tone performs both lexical and grammatical functions in the language but its function at the level of grammar is more complex. In nouns, minimal pairs contrasting high and low tones are attested as shown in the examples in (2.4). A change in tone brings about a change in meaning and new lexical items are created in this way.

(2.4)a.  èwè  ‘Town’

b.  èwè  ‘Cola nut’

c.  ákpá  ‘Lamp’
d. åkpá ‘Kite’
e. åkpà ‘Cup’

Lexical tone contrasts such as those described in (2.4) are not attested in Ivie verbs. The reason for this is that verbs are underlyingly unspecified for tone; verbal tone is dependent on the tense-aspect morphology of the verb. A sample is presented in (2.5) for the first singular form of the verb le ‘to eat’:

\[(2.5)a.\] mhi là lé  
1sg future eat  
'I will eat'

b. mhi là lè  
1sg habitual eat  
'I do eat'

c. mhi kê lé  
1sg continuative aspect eat  
'As I was eating'

As is evident, the tone pattern over the whole verb depends on the tense/aspect. In most cases, this is accompanied by a change in the affix (2.5c), but some forms, such as the future (2.5a) and the habitual (2.5b), are distinguished solely by tone. Tone is therefore part of the tense/aspect morpheme in Ivie.
There are also morphemes that have only a tonal realization in Ivie. In this case, there are no segments that bear the tone phonologically. These types of morphemic tones, which are mostly attested in the 'Associative Construction' (2.6a) and the 'Simple Past' (2.6b), are referred to as *tomorphs* (Elugbe, 1989).

(2.6)a. \(\text{èkè } \text{[H]}^{14} \text{ ìtà } [\text{èk!ìtà}]^{15}\)  
egg AM\(^{16}\) father  
'Father's egg'

b. \(\text{Gerry } \text{[H]} \text{ da } \text{ámé}\)  
Gerry 3sg PST drink water  
'Gerry drank water'

A sequence of high tones on a disyllabic noun is normally realised as high-downstep high conventionally notated by an exclamation mark `!` H!H as in (2.7):

(2.7)a. /ìlá/ [i!lhá] 'Fat'

b. /ákpá/ [á!kpá] 'Lamp'

c. /ìnámá/ [i!námá] 'Mouse'

\(^{14}\) \(\text{H}\) indicates a floating high tone ('), a segmentless morpheme

\(^{15}\) The significance of `!' is explained in the next paragraph

\(^{16}\) AM refers to 'associative marker'
In a declarative sentence, when a word ending in a H-tone is immediately followed by a word beginning with a H-tone, there is downstep. But if the H-tone is followed by a question marker, which is represented by a floating H-tone in the language, an upstep high is realized. A similar process applies to LL sequences and these are realized as Low and Downglide Low. In addition, Ivie exhibits a phenomenon of downdrift where a high preceded by a low tone gets reduced in tonal height as in (2.8):

\[(2.8) \quad /\text{átåsá}/ \rightarrow [\text{átåså}] \quad \text{[}\text{\underline{\text{\text{\text{\text{\text{\text{\text{}}}}}}]}]} \quad \text{'Plate'.}\]

Ivie also permits rising and falling tone to emerge but then only as a combination of these level tones on a short syllable. Their presence is phonologically conditioned as shown in (2.9):

\[(2.9) \quad \text{L+H} \rightarrow \text{ as in } /\text{úlùé}/ \rightarrow [\text{úlwé}] \quad \text{'Snail'}\]
\[ \text{H+L} \rightarrow \text{ as in } /\text{súi}/ \rightarrow [\text{swí}] \quad \text{'Little'}.\]

2.1.4 Relationship between phonological and grammatical word order

Ivie phonology is analyzed into the following components: phoneme, syllable, phonological word, phonological clause, and pause group.
2.1.4.1 The phoneme

The phoneme is a minimum distinctive unit that has meaning, but no structure. Some examples follow in (2.10).

(2.10)a. gia 'To laugh'
    b. kia 'To walk'
    c. àkpà 'Cup'
    d. àkpá 'Kite'

In these examples, /g/, /k/, /'/ and /v/ are phonemes. The difference in meaning between the words is brought about by these phonemes.

2.1.4.2 The syllable

The overall structure of Ivie syllables is consonant-vowel (CV). The onset is obligatory for verbs, but those of the initial syllables of nouns are onsetless. Consonant clusters are not normally attested. Each syllable bears one of two tones: high or low. Syllabification starts from left to right. For example, a word of the structure VCVCV like /ôkpôtsô/ 'woman', would have the following syllables: V-CV-CV.

2.1.4.3 The phonological word

The phonological word is described here as the unit bearing the tone pattern. It usually corresponds with the grammatical word, except in the case of compound nouns.
Various groupings within the nominal phrase, the verb and following postverbal constitute extended phonological words. An illustrative example is given in (2.11):

(2.11) Oti - la rè ebe

Oti 3sg FUT read book

(Oti)w" (o)w (la)w (zebe)w

'Oti will read a book'

2.1.4.4 The phonological clause

In this work the phonological clause is considered as the unit within which elision occurs (2.12). It correlates with the grammatical clause, but may be smaller:

(2.12) ëç + òdè - [dòdè]

buy cloth

'Buy cloth'

2.1.4.5 The pause group

The pause group corresponds with a grammatical sentence as in (2.13).

(2.13) Oti ō bë ámò

Oti 3sg PST come today

'Oti came today'

\[\text{*"w corresponds to a phonological word}\]
2.2 Ivie verbal morphology

In this section, we examine the structure of the verb, and in particular, the inflectional category: the realization of Tense, Mood and Aspect morphemes in the language. Current approaches to syntactic theory offer several proposals for the structure of the Inflection Phrase (IP) (Chomsky, 1989; Pollock, 1989; and Belletti 1990). The debates arising from the number of functional projections to be included in the IP, the order of such projections, and whether these characteristics are universal or language specific, have been very controversial. These have created problems of determining what the functional XP sequences are and how they co-occur and interact with various lexical projections (VP, NP) (see Abney, 1987; Fukui and Speas, 1986).

We will argue that the inflectional features of the verb in Ivie can be checked in the syntax through 'copy - checking' (c-checking) (Chomsky, 1995) as against verb movement to inflectional heads (Chomsky, 1989; Pollock, 1989; and Travis, 1984). In 'copy - checking', the inflectional feature spreads from some category X onto a verb phrase (VP) in a local relation to X. This proposal is contrary to that assumed in Chomsky (1993) in which functional - checking was universally assumed to be the basis for checking inflection.

Our motivation for assuming c-checking for Ivie verbal inflection derives from the morphological nature of the feature being checked. The rigid word order (SVO) combined with the ordering of morphemes in the language account for this motivation. Moreover, it is the claim that languages with serial verbs such as Ivie (see section 3.2.4) make use of c-checking rather than f-checking (Campbell, 1995).
2.2.1 The structure of Ivie verbal construction

Welmers (1973) distinguishes two important types of verbal constructions in Niger-Congo languages, a group including Ivie. "Primary Constructions" consist of one verb base and inflectional morphemes of definable classes such as construction markers and affixes. The second type is "Auxiliary Constructions": these consist of two verb bases, one of which may be considered an auxiliary and the other the "main" verb.

What Welmers (1973) refers to as "Primary Constructions" is much like the Basic Projection Sequence (BPS) proposed in Demuth and Gruber (1995). According to their proposal, the BPS constitutes a basic unit which is realized in the verbal domain as Agreement Phrase, Tense Phrase, and Verb Phrase. The BPS thus constrains the order and composition of functional and lexical projections, both within the inflectional phrase and in the composition of extended projections generally (like complementizer phrases and determiner phrases).

Like most Edoid languages, the verb stem in Ivie shows no inflection and therefore has only a base form, typically CV in structure (2.14a). Tense, Mood and Aspect are indicated by different functional free morphemes which occur before the verb stem. It is very important to point out that these grammatical morphemes occur in a fixed order between the subject and the verb (2.14b). The examples presented in (2.14b and c) show the presence of these functional formatives in Ivie phrases. We observe also that all clauses are tensed in Ivie.
(2.14)a.  
\[ \text{gé} \quad 'bark' \]

b.  
\[ \text{oni áwòshi ó lâ gé} \]
the dog 3sg FUT bark

'\text{The dog will bark}'

c.  
\[ \text{oni áwoshi ó shé gé} \]
the dog 3sg ASP bark

'\text{The dog has barked}'

2.2.1.1 Tense, mood and aspect markers

The Tense - Mood -Aspect markers attested in Ivie may occur at the same time with a given verb (in a rigid order with respect to one another). Following Chomsky (1993), we assume that the verb in Ivie is inserted in syntax with all its inflectional morphemes, depending on whether it is expressing Tense, Mood or Aspect. We also assume that a lexical item consists of a morpheme or more than one morpheme, which expresses a unit of meaning.

Generally, the system of Tense, Mood and Aspectual marking is comprised of the following: \text{shé} 'has', \text{lá} 'will', \text{le} 'was', \text{á} 'is', and \text{dóbè} 'can'. These functional morphemes occur in preverbal positions in Ivie.

Morphologically, Ivie distinguishes present, past and future tenses. The simple past is peculiar in Ivie, in that it is the only marker that is segmentless. It is solely suprasegmental being represented by a floating high tone morpheme shown as \( \text{H} \) in (2.15a).
(2.15) Oti ò ñ le - > Oti ó lé
Oti 3sg PST eat
'Oti ate'

The underlying structure of the sentence in (2.15) is presented on the left in order to show the past-tense morpheme represented by the floating high tone. Despite the absence of a morphological marker of simple past between the subject and the verb, the phrase is interpreted as simple past due to the tonal marking on the preverbal pronominal element. This is shown by the phonologically motivated surface realization of the sentence (right of the arrow).

The present habitual is expressed by la as in (2.16).

(2.16) Oti ó lä lle
Oti 3sg PRES. HAB eat
'Oti eats'

The past habitual is characterized by the aspectual morpheme le. This morpheme is translated into English as 'used to'.

(2.17) Oti ó lë lë
Oti 3sg PST HAB eat
'Oti used to eat'
The future tense is characterized by the presence of a tense marker *la*, which indicates simple future with both action and stative verbs (2.18a and b).

(2.18)a. Oti ə là ná
         Oti 3sg FUT run
         'Oti will run'

b. Oti ə là vhésèshi
    Oti 3sg FUT sleep
    'Oti will sleep'

Contrarily, stative verbs are not expressed by the habitual markers *la* and *le* as the ungrammaticality of the examples in (2.19a and b) illustrate.

(2.19)a. *Oti ə lä vhésèshi
        Oti 3sg PRES. HAB sleep
        *'Oti sleeps’

b. *Oti ə læ vhésèshi
    Oti 3sg PST HAB sleep
    *'Oti used to sleep’

The verbal complex in Ivie also consists of other morphemes which bear modality values in the language. As such, structures like those in (2.20) are attested in Ivie:
(2.20a. mhi nwémā lè
1sg must eat
'I must eat'

b. mhi mà lè
1sg quite a lot eat
'I eat a lot'

c. mhi mē lè
1sg hardly eat
'I hardly eat'

d. mhi dóbè á lè
1sg can prog. eat
'I can eat'.

e. mhi dzilē lè
1sg dare eat
'I dare to eat'

Some of these markers like dóbè in (2.20d) indicates irrealis with future interpretation while the particle dzile expresses irrealis mood with conditional or subjunctive interpretation (2.20e).

There are three aspect markers, a, which indicates progressive aspect (2.21a),
ke, the continuative aspect (2.21b), and she, the completive aspect (2.21c).
In Ivi, the negative morphemes *vha* and *obo* exist. In addition to these markers, negation can be derived tonally. In (2.22b), the denial negative marker *vha* intervenes between the preverbal pronominal element and the aspectual marker; in (2.22d), the rejection negative morpheme *obo* precedes a sentence prior to discourse.
c. Oti ó vha kìá swèswè
Oti 3sg NEG PST walk sluggishly
'Oti did not walk sluggishly'

d. obo, Oti o a kia swèswè
NEG, Oti 3sg PP walk sluggishly
'No, Oti does not walk sluggishly'

In Ivie, it is possible for more than one functional morpheme to co-occur with a given verb and when this happens, there is a rigid order in which the morphemes occur such that a mood particle occurs before an aspect particle, or negation before tense, or negation before progressive aspect. The combination *dobe a* in (2.20d) illustrates the order mood-aspect. The combinations *vha-a* in (2.22b) shows that negation occurs before mood, that is, negation-mood while the combinations *o vha* in (2.22c) shows the relative order negation-tense.

The order of these functional morphemes of Ivie can be represented schematically as in (2.23). What is interesting about the verbal complex identified in (2.23) is that they occur in consonance with the rigid word order of the language (SVO) and equally mirrors the syntactic projection of functional heads in Ivie. Aspect is closest to the verb stem, then Mood, then Tense and Negation is the furthest from the verb stem.

(2.23)a. Order of functional heads in Ivie:

Neg-Tense-Mood-Aspect (verb stem)
The facts of Ivie illustrated in the foregoing shows that the internal order of functional heads in Ivie does "mirror" their scope order. This is in line with Baker's (1985) "Mirror Principle"¹⁸, which states that the order of surface elements must reflect the order in which the derivations take place. However, in this case, the Ivie verbal complex is not formed in the syntax by means of head-to-head movement, as constrained by the Extended Projection Principle (ECP).

With the enriched syntactic structures introduced in the era of functional categories in generative grammar, the relationship between morphology and syntax has been arguably expressed as the concatenation of inflectional morphemes through syntactic head movement. Baker (1985) notes that syntactic head movement often "mirrors" the linear order of morphemes, especially in morphologically complex

¹⁸ The "Mirror Principle" (Baker, 1985) stipulates that "morphological changes take place in exactly the same order as the associated syntactic changes"
languages. But Halle and Marantz (1993) and Noyer (1992) observe that this is not always the case. There may not be a one-to one relationship between a syntactic head and the position and form of its phonological realization.

However, we observe that the linear order of Ivie verbal morphemes illustrated by (2.23a) can be derived entirely in the syntax, since it is a direct mirror image of the morphological structure. Therefore, we hypothesize that the ordering of inflectional morphemes in Ivie is based on syntactic functions. This is in consonance with the hypothesis propounded by Bybee (1985) which states that the more relevant the meaning of the affix to the verb, the closer to the verb base the affix will appear (see 2.23b).

Ouhalla (1991) has used data from Berber and Arabic as morphological evidence for cross-linguistic variation in the hierarchical arrangement of functional heads. This is shown in (2.24) and schematized in (2.25).

(2.24) Berber (Ouhalla, 1991)

a. Ad-y-segh Mohand ijn teddart.
   will(TNS)-3MASC:SG(AGR)-buy Mohand one house
   'Mohand will buy a house'.

Arabic (Ouhalla, 1991)

b. Sa-y-ashtarri Zayd-un dar-an.
   will(TNS)-3-MAS:SG(Agr)-buy Zayd-NOM house-ACC
   'Zayd will buy a house.'
Ouhalla’s contention is that in Arabic and Berber, Agr(eement) is ordered outside T(ense) since the future markers 'ad' and 'sa' (FUT), are realized at the left-edge of the verb, outside the marker for third masculine (-y-). This order is, of course, different from that observed in French and Italian.

We will show in a later subsection that the sequences of formatives shown in (2.23b) reflect the basic underlying syntactic structure in Ivie. Using data from Ivie, we will also show, contra Travis (1984), Baker (1988), Chomsky (1989) and Pollock (1989), that the head-movement parameter has to be reset to accommodate language variations.

Another interesting fact about these Tense - Mood -Aspectual markers which is very crucial to our subsequent analysis is that these grammatical elements are free morphemes which do not cliticize to the verb or to each other. Three pieces of evidence can be adduced in support of this claim. The first example comes from adverb placement. Adverbs (ADV) can intervene between these function words and the verb as the examples in (2.26) indicate.
(2.26)a. Oti o vha kèle mhe oli
Oti 3sg NEG ADV see him
'Oti did not see him in time'

b. Oti o la niania be amo
Oti 3sg FUT ADV come today
'Oti will come quickly today'

Our second evidence is drawn from contraction processes in the language. Although contractions occur readily in Ivie whenever a sequence of two vowels would come together as in (de ode -> dode 'buy cloth'), we observe that this phenomenon does not affect Tense-Mood-Aspect markers in Ivie, further showing that they are free standing words heading their own functional projections.

Another piece of evidence supporting the free-standing nature of these particles comes from the fact that some of them can appear with non-verbal predicates as the examples in (2.27) show.

(2.27) oni ishimi o la ti
DET. dance 3sg FUT good
'The dance will be good'

This evidence indicates that Tense-Mood-Aspect are free morphemes. In the next section, we will propose a syntactic analysis of these markers (Tense-Mood-Aspect) in Ivie.
2.2.2 Syntactic structure of Ivie verb

In this section, we adopt the layered VP analysis proposed in Chomsky (1989) and Pollock (1989), in which the component parts of verbal inflection (Infl) such as Tense, Mood, Aspect, Negation and Agreement (AGR) are split apart. Each is argued to head its own maximal projection. This analysis is motivated by word order facts of the language (SVO). In adopting this analysis, the morphemes representing Tense-Mood-Aspect will be assumed to head their own maximal projection. We posit a NEG projection before Mood, and Aspect. Thus the phrase structure of Ivie is presented as (2.28). All slots may or may not all be filled at the same time in the language.

(2.28) [NEG [TP [MoodP [AspP [VP]]]]]

The markers of 'past' and 'future' are realized under the Tense Projection (TP).

(2.29) \[\begin{array}{c}
TP \\
/ \\
\_ \\
T \_ VP \\
(PST) \\
(FUT)
\end{array}\]

The Mood projection (MoodP) hosts the modality markers dobe, and others in this category.
(2.30) \[
\begin{array}{c}
\text{MoodP} \\
/ \ \\ \\
\text{Mood} & \text{VP} \\
[\text{do]o}\]
\end{array}
\]

Following Kayne (1989) and Zanutti (1991), we assume that negation is generated in the head NegP in Ivie.

(2.31) \[
\begin{array}{c}
\text{NegP} \\
/ \ \\ \\
\text{NEG} & \text{VP} \\
[\text{vha}] 
\end{array}
\]

Finally, AspP is the location of the progressive aspect marker, \textit{a}, the continuative aspect, \textit{ke}, and the completive aspect, \textit{she}.

(2.32) \[
\begin{array}{c}
\text{AspP} \\
/ \ \\ \\
\text{ASP} \quad/ \\
\text{ASP'} \quad/ \\
\text{ASP} & \text{VP} \\
[a, \text{ke, she}] 
\end{array}
\]

To summarize this section, we have argued that the Tense-Mood-Aspect morphemes and negative morphemes of Ivie should be analyzed, following the layered IP hypothesis proposed for languages, as heads of their own maximal projections. The functional categories are thus "spelled out" as overtly realized free morphemes in Ivie. This analysis is not peculiar to Ivie alone. Rottet (1992) shows that in Louisiana Creole.
Tense-Mood and Aspect morphemes are free morphemes which head their own projections. Déprey and Vinet (1992) made a similar observation in Haitian Creole.

2.2.3 Verb movement in Ivie

Within the Minimalist Framework of Chomsky (1993), overt movement of functional items is determined by the interplay between the constraining principle of Last-Resort ('don't move unless you have to'), and a set of 'triggers' for movement ('you don't have to move'). But in Chomsky (1995), focus is shifted on the Target, and it is the features of the Target that trigger movement. Consider (2.33).

(2.33) \[ X \overset{\rightarrow}{\rightarrow} Y \overset{\leftarrow}{\leftarrow} Z \]

X attracts the movement of Z. Z does not have to move if it is not attracted to do so by X, that is, the target. It has been shown in the literature that overt movement in one language, triggered by parameterized properties relevant at PF, will correspond to covert movement in another (Ouhalla, 1991; Wilder and Cavar, 1994; Chomsky, 1993 and 1995).

The possible set of triggers in Universal Grammar (UG) are the morphological properties of lexical items expressed as morphosyntactic features (henceforth m-features). These are illustrated in (2.34).
(2.34) Morphosyntactic features (m-features)

'Case' (Nom, Acc ...)

'φ-features' (Pers, Nom, Gen)

'Tense' (Pres, Past ...)

also 'WH' etc.

In assuming the lexicalist treatment of the formation of inflected verb forms, finite verb forms are thus inserted in the syntax under the V₀-node, and not created in the syntax via movement of a verb-stem into an uninfl ected-node containing inflectional affixes. In some languages like French and English, the inflectional heads (T, AGRs, Asp, Mood) dominate feature matrices, but no (affixal) PF-forms. Raising of the finite verb into the inflectional-node(s) is therefore forced by the need for the m-features of the verb and those contained in it to be checked. This is illustrated by the structure in (2.35).
(2.35) AGRsP
defs
  / \ SPEC AGRs’
  | | AGRs TP
  | | | T° AGRoP
  | | | | / \ AGRo VP
  | | | | | | / \ DP V°
  | | | | | | | \ V DP

a. John 3sg Past 3sg t kissed Mary (English)
b. Jean [embrasse] t t t Marie (French)
(Chomsky, 1993)

In these examples, the subject has raised from its base position (SPEC, VP) to
the specifier of AGRsP, while the object DP remains in VP. We also observe that the
V°-constituent adjoined to AGRs in (2.35b) is the complex [ [V-AGRo] -T] formed by
successive adjunction of the finite verb to the intermediate heads in the tree structure.
In the Ivie example given in (2.36a) and structurally represented in (2.36b), we observe
that only the subject is raised.

(2.36)a. Oti 0 le eminale

Oti 3sg PST eat food

'Oti ate food'
Recall that 'Past' in Ivie is segmentless. In order for the derivation to converge, the phonological tone marking has to be checked in the phonological interface. If the high tone is not there, then there will be no convergence. Therefore, the absence of V-to-I movement in Ivie observed in (2.36b) is not due to absence in I of a functional element that requires to be bound. The element is quite present in I. We assume that movement does not take place because V checks for those features locally under adjacency since it is next to I and the maximal projection I is either [Past, Asp, or Mood]. The verb thus checks for the features it needs. The case of Ivie is different in that Tense, Aspect and Mood, as we have already illustrated, have phonetic forms. And since these are free standing, they serve as barriers to movement. In what follows, we provide evidence in support of the absence of V-to-I raising in Ivie.
2.2.3.1 The negation test

In a number of languages, it has been shown that negation (NEG) has a blocking effect on movement. The presence of NEG as head of its functional category as evident in English 'do-support' phrases, exemplified in (2.37), blocks head movement in that language (Ouhalla, 1991).

(2.37)a. Mary likes apples
b. Mary does not like apples

The Ivie data given in (2.36a) is represented here as (2.38); and the structure is illustrated by (2.39)

(2.38)a. Oti ə le eminale
Oti 3sg PST eat food
'Oti ate food'

b. Oti ə vha lé eminale
Oti 3sg NEG PST eat food
'Oti did not eat food'
(2.39) \[
\text{IP} \\
\text{SPEC} \quad \text{I’} \\
\text{I°} \quad \text{NegP} \\
\text{Neg} \\
\text{Neg} \quad \text{TP} \\
\text{T’} \\
\text{T} \quad \text{VP} \\
\text{DP} \quad \text{V’} \\
\text{V} \quad \text{DP} \\
\text{Oti 3sg} \quad \text{vha Past t le eminale}
\]

In this derivation, the presence of TP and NEG block the movement of the verb *le* 'eat', since Head Movement Constraint and Relativized Minimality (Rizzi, 1990) require a head to move to the first adjacent head (that is, a head position cannot be skipped over). Thus, in (2.39), V cannot get to I without first landing in T and then Neg, the two intervening head nodes. Therefore, if T and Neg are already filled by non-affixal heads, the movement is blocked.

In our analysis above, we have assumed following Kayne (1989), Pollock (1989), and Zanuttini (1991) that vha 'not' is [+neg] and head of NegP. It cannot be

---

19 In Rizzi (1990), a Locality Condition on Chains is stated that requires for an element to move to the closest potential landing site, where "potential" means a c-commanding position and of the same type chain (A-, A'-, or head-chain). Thus, the derivation in (i) is a violation of the relativized minimality if the chains (α, t,) and (β, t,) are of the same type: α, has skipped over a closest potential landing site, the position occupied by β. 
(i) \( [XP \alpha, [YP \beta, [2P t, \ldots t,, \ldots]]]] \).
modified like 'pas' in French ("presque pas"), and it is also not a specifier since the verb cannot move over it. But Di Sciullo and Tremblay (1996), based on data from Quebec French, argue that all heads of the category NEG cannot be specified always as [+neg]. They propose that, in Quebec French, non 'no' is [+neg] whereas ne 'not' is not. This will not be discussed since it does not form part of our analyses.

We observe, however, that there is a notable difference between the phenomenon observed in Ivie and languages like Louisiana Creole and Swedish. Consider the examples in (2.40).

(2.40)a. Jan kopte inte boken (Ou halla, 1991)
Jan bought NEG book -the

b. Mo mozh pa b'. Mo pa mözhe (Rottet, 1992)
I eat NEG 'I NEG eat'
'I don't eat' 'I haven't eaten'

Ou halla (1991) and Rottet (1992) explain this phenomenon in both languages by arguing that the negative morphemes observed in (2.40a and b) are realized in [SPEC NegP], thus allowing for verb movement.

For Rottet (1992), the verb in Louisiana Creole in (2.40b) above has not undergone any verb movement and appears within the VP, as indicated by the fact that it follows pa, the negative adverb. As a result, it does not bear Tense features. In
(2.40a), however, mozh has raised to T, as shown by its placement to the left of pa (2.41), and, as a result, bears Tense features. Tense is not marked by any overt morpheme, but rather by the absence of the final vowel - mōzhe → mozh.

```
(2.41)  IP
        /  \  
       /   \  
      /     \  
     /       \  
    /         \  
   /           \  
  /             \  
mo mozh_i pa ti ti (Rottet, 1992)
```

Aside from the negative morpheme just illustrated in (2.39), there is another exponent of negation in Ivie which is represented only suprasegmentally. Compare (2.42a) and (2.42b).

(2.42a)  Oti ò là be

Oti 3sg FUT come

'Oti will come'

b.  Oti ò vha là be

Oti 3sg NEG FUT come

'Oti will not come'
This is another instance showing that NEG occurs in a position other than the head of VP in Ivie. Observe that the function word that bears this negative marker is the preverbal pronominal element $q$. This is incompatible with F-Checking, since that involves movement of the verb to the inflectional category to check its own inflection. (2.42) provides additional evidence against an account of Ivie inflection that involves movement of the verb.

2.2.3.2 Placement of adverbs

Another piece of evidence against verb movement in Ivie comes from placement of adverbs. Chomsky (1993, 1995) maintains that adverbs are adjoined to verbs. But we know that in languages like French, VP adverbs can adjoin to several different positions including VP, TP, and NegP (Ouhalla, 1991; and Pollock, 1989). Consider the examples in (2.43).

(2.43)a. Oti $q$ nwema nono ebe oli
Oti 3sg PST ADV search book her
'Oti really searched for her book'

b. Oti $q$ kele mhê oli
Oti 3sg Tense ADV see him/her
'Oti often see him/her'

The position of the adverb is illustrated by (2.44).
(2.44) \[ \begin{array}{c}
  \text{VP} \\
  \text{/ \} \\
  \text{ADV} \quad \text{VP} \\
  \text{|} \\
  [\text{nwema}] \quad V' \\
  [\text{keli}] \quad / \quad \text{V} \quad \text{DP}
\end{array} \]

Since the position in (2.44) will place the adverb to the left of the verb, it follows that when \( V' \) does not move it will always come after the adverb as the Ivie examples in (2.43) show.

2.3 Nouns

Ivie is a noun class language. Although there appears to be some semantic correlation within the contents of some classes, the classificatory rule is not semantically based. According to Masagbor, R. (1989), Ivie does not strictly fall within the mainstream Bantu nominal class system, the type noted by known Bantuists like Guthrie (1971). Welmers (1973) observes that a noun in its simplest form, in all branches of the Niger-Kordofanian language family (including Kwa), can be analyzed as consisting of a stem and an affix. The affixes include at least one kind of class marker attached to the noun stems in the form of prefixes, infixes, suffixes or various combinations of these.

The noun classes in Ivie have been established according to the following criteria:

1. The noun prefixes
2. The presence of a specific set of concord markers
3. Where applicable, the existence of gender or singular/plural pairing.

In the following sections, we present a re-ordering of the classification proposed in Masagbor, R (1989).

2.3.1 The noun classes

Based on the rules mentioned earlier, Ivie nouns have been classified into 13 groups. In the following, the prefixes representing each class precede the consonant initial stems of the nouns.

Class I /u-/  

This class is quite varied. It consists of both animate and inanimate objects.

(2.45) ú-nù 'mouth' 
ú-lùé 'snail'
ú-gùgù 'basket'

It may also be regarded as a productive class in the sense that other nouns can be transferred to the group by processes such as diminutivization. For example 'ukpi' a diminutive marker can be prefixed to the main noun to give a derived word.

(2.46) ó-wè 'leg': ú-kp-ówè 'toe'
ó-bò 'hand': ú-kp-óbò 'finger'
Class II /i-/  

The semantic content of this class is varied. It contains both animate/inanimate objects. It also has nouns with mass and count usage. Importantly, it contains the plural pair of many nouns in other classes. Example:

\[(2.47)\]

- ì - kpôtsò 'women'
- ì - tsèdè 'big pot for cooking'
- ì - gùmà 'slaves'

Class III /i-/  

This class contains mainly abstract nouns

\[(2.48)\]

- ì - zëmi 'strength'
- ì - sàmi 'thinking'
- ì - bò 'destiny'

Class IV /e-/  

This class is a plural gender

\[(2.49)\]

- é - mì 'yams'
- é - mòsè 'men'
- é - làmhi 'goats'
**Class V /e-/**

This class is predominantly without plural/singular distinction.

(2.50)  
é - múgbè  'potato(es)'
è - khàshè  'sand'
è - wòllì  'smoke'

**Class VI /o/, /o/**

These two prefixes have been assigned the same noun class essentially on the basis of a common concord marker. The group comprises only animates. /o/ refers mostly to human while /o/ includes both human and other animates.

(2.51)  
ó - mòsè  'man'
ó - mè  'child'
ó - bò  'doctor'
ò - gùmà  'slave'
ò - dzì  'rat'
ò - mòshi  'girl'

**Class VII /o --/**

This class comprises mainly inanimate objects.

(2.52)  
ó - dè  'road'
ó - rhè  'plant'
ò - chì  'spear'
Class VIII  /o -/  
This is a small class consisting of body parts.

(2.53)    ó - bò    'hand'
          ò - wè    'foot'

Class IX  /a-/  
This class comprises only plural of body parts - from groups 8 and 12.

(2.54)    á - bò    'hands'
          ò - wè    'feet'

Class X   /a-/  
This is mainly made up of animals.

(2.55)    à - kàchí  'horse'
          à - fè     'fish'
          à - nyàká  'fox'

Class XI  /a -/  
This comprises inanimates

(2.56)    à - gà     'net'
à - tásá 'plate'
á - chè 'pepper'

**Class XII /e/**

This is another varied group including both animates and inanimates

(2.57) è - ná 'cow'
è - chè 'stone'
è - lùè 'eye'

**Class XIII /i-/ , /a-/ , /o/**

Although the prefixes are different, they have been grouped together because they are all semantically locatives and also have the same concord markers.

(2.58) í - shèmì 'farm'
ó - gbá 'garden'
à - tàlimì 'cemetery'
2.3.2 The semantics of noun genders\textsuperscript{20}

The classification of Ivie Noun class is not like that of the classic Bantu noun class. There is no clear semantic classification; rather, it is a mixed grill. The features observed are:

1. Most human referents occur in class II and VI.
2. Paired body parts occur in VIII and IX.
3. Abstract nouns - mostly of infinitive formation - occur in Class III whereas locatives occur in class XIII.
4. Many animals are grouped in Class X
5. Most other classes are mixed including objects, plants, etc.

Apart from the thirteen classes, Ivie nouns can be further classified into two groups as double and single class genders. Most noun classes are paired for the singular and plural (the double class) - in other words, singular and plural forms of the nouns have been classed separately because they have different prefixes. Some nouns, especially the mass or non-countable ones, can not be so classed and therefore have their membership restricted to only one class (the single class).

\textsuperscript{20} Gender includes distinctions related to animacy, humanness, sex, or any other qualitative property of nominal referents, as well as distinctions that are not correlated with any such semantic property - such as the masculine-feminine-neuter distinction in INDO-EUROPEAN languages or the semantically equally non-interpretable distinctions on which noun classification in BANTU is based.
2.3.2.1 Double class gender

The following are the singular / plural prefix pairings:

<table>
<thead>
<tr>
<th>Prefixes</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>u- / i-</td>
<td>(1 / 2)</td>
</tr>
<tr>
<td>a- / i-</td>
<td>(10 / 2)</td>
</tr>
<tr>
<td>e- / i-</td>
<td>(12 / 2)</td>
</tr>
<tr>
<td>o- / i-</td>
<td>(6,7 / 2)</td>
</tr>
<tr>
<td>o- / i-</td>
<td>(6 / 2)</td>
</tr>
<tr>
<td>o- / e-</td>
<td>(6 / 4)</td>
</tr>
<tr>
<td>e- / e-</td>
<td>(12 / 4)</td>
</tr>
<tr>
<td>o- / e-</td>
<td>(7 / 4)</td>
</tr>
<tr>
<td>o- / a-</td>
<td>(8 / 9)</td>
</tr>
<tr>
<td>e- / a-</td>
<td>(12 / 9)</td>
</tr>
</tbody>
</table>

Some of the prefixes, u-, e-, o-, and o- are exclusively singular. The prefixes, i- and e- appear to be exclusively plural but it will be subsequently shown that this is not strictly true.

The rules of plural formation may be summarized as follows:

Rule 2.2:  

u, o, a, --- > i 

o, o, ε, --- > e 

o, ε --- > a
Aside from this simple derivation, the rules governing the plural formation for other singular noun prefixes are derivable from complicated sequences involving animacy/inanimacy, semantics and other considerations.

2.3.2.2 Single class gender

The following gives the prefixes and classes of the single class gender nouns (e.g., abstract words):

<table>
<thead>
<tr>
<th>(2.60)</th>
<th>Prefix</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>i-</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>e-</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>i-, a, o-</td>
<td>(13)</td>
<td></td>
</tr>
</tbody>
</table>

2.3.3 Derivational morphology

Affixation is the most productive word formation process in Ivie. It is essentially the addition of an affix to the base. Some of the common derivations result from prefixation, suffixation, and simultaneous prefixation and suffixation to a stem to derive a noun. There is no case of infixation in Ivie.

Aside from affixation, there are many other word formation processes in Ivie. Some of the processes to be illustrated in later sub-sections include 'noun + noun compounding' and reduplication.
2.3.3.1 Prefixation

Much of Ivie category-changing derivational word formation is prefixal. Prefixes in general determine the category of the words they attach to. Thus, the category of a word of the form prefix X is determined by the category prefix and not X. Given the notion of 'head' Williams (1981), Selkirk (1982), and Lieber (1992), the structure of prefixation is illustrated as (2.61):

\[
X \prec \phi
\]

(2.61) \[
\text{prefix } X + \phi \text{ affix} = \text{prefixation}
\]

The following data illustrate the process of prefixation.

(2.62).

<table>
<thead>
<tr>
<th>Verb</th>
<th>--- &gt;</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>gwishemhi</td>
<td>'farm'</td>
<td>o-gwishemhi  'farmer'</td>
</tr>
<tr>
<td>kia</td>
<td>'walk'</td>
<td>o-kia        'journey'</td>
</tr>
<tr>
<td>kpa</td>
<td>'vomit'</td>
<td>e-kpa        'vomit'</td>
</tr>
<tr>
<td>tsua</td>
<td>'to load'</td>
<td>i-tsua      'load'</td>
</tr>
<tr>
<td>gbe</td>
<td>'kill'</td>
<td>u-gbe        'murder'</td>
</tr>
</tbody>
</table>

In the words above, the prefixes are concord markers - a reflex of the classes the nouns belong to. We assume that the observed changes are brought about by a zero affix, in line with the 'Righthand Head Rule' (Di Sciullo and Williams, 1987). Prefixation in Ivie does not necessarily involve a change in category as depicted by the
data presented in (2.62). The data in (2.63) show cases of prefixation with no change in category. Aside from single letter prefixes, there are bound morphemes as 'ukpi' which is commonly used in diminutivization processes. In this case, 'ukpi' attaches to nouns to derive other nouns in the language.

(2.63).  

<table>
<thead>
<tr>
<th>Noun</th>
<th>ukp-</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>awe</td>
<td>owe</td>
<td>'leg'</td>
</tr>
<tr>
<td>b.</td>
<td>obo</td>
<td>'hand'</td>
</tr>
<tr>
<td>c.</td>
<td>elue</td>
<td>'eye'</td>
</tr>
</tbody>
</table>

Usually, the derivational process involves the elision of vowel /i/ in 'ukpi'.

2.3.3.2 Suffixation

In actual fact suffixes are not as productive as prefixes in the formation of words in Ivie. And contrary to what obtains in many languages where suffixes are category changing, the suffixes in Ivie do not always change the category of the stems to which they attach. This is true of the suffix /-a/ which is cliticized to verb stems. Some illustrative examples are provided in (2.64).

(2.64)a.  

<table>
<thead>
<tr>
<th>Noun</th>
<th>'burn'</th>
<th>Noun</th>
<th>'burnt'</th>
</tr>
</thead>
<tbody>
<tr>
<td>tose</td>
<td>tose-a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>guogo</td>
<td>'break'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>guogo-a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>wase</td>
<td>'lose'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>wase-a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This suffix functions as a simple completive aspeotual marker. Other suffixes which are not category changing but act as head of the word are the frequentative or plural morphemes ‘no’ and ‘na’. The two morphemes are allomorphs of the same morpheme. This suffix expresses the fact that an action takes place many times, or to many things (2.65). Plural verbs formed in this way are allomorphs of the same morpheme.

\[
\begin{array}{ccc}
\text{Verb} & \longrightarrow & \text{Verb (plural)} \\
(2.65)a. & \text{pfa} & \text{'pluck'} & \text{pfa-no} & \text{‘pluck several times’} \\
b. & \text{de} & \text{‘fall’} & \text{de-na} & \text{‘fall -- --’}
\end{array}
\]

### 2.3.3.3 Circumfixes

Another group of nouns which exist in Ivie are formed by simultaneous prefixation and suffixation. One such process involves the prefix /i/ and the suffix /mhi/. The addition of the discontinuous morpheme ‘i…mhi’ to a verb stem has a nominalizing effect on the verbs which become automatically de-verbalised. According to Elugbe (1984), the ‘-mhi’ suffix after the verb stem de-verbalises, while ‘i-’ is prefixed to the same stem to mark it for a particular class. As such, we also assume that -mhi- are category-changing suffixes in Ivie. Usually the nouns created express an act of carrying out what the verb signifies as shown in (2.66).

\[
\begin{array}{ccc}
\text{verb stem} & \text{nominal} \\
(2.66) & & \\
a. & \text{khu} & \text{'drive'} & \text{i-khú-mhi} & \text{‘driving’} \\
b. & \text{da} & \text{'drink'} & \text{i-dá-mhi} & \text{‘drinking’}
\end{array}
\]
We note that the affixation of the discontinuous morpheme ‘i...mhi’, may be morphologically conditioned since the verb stem in all known cases is of the shape CV. With the verb stem of the shape CVCV, only the /i-/ affix is retained for nominalization. This is illustrated in (2.67).

$$\begin{align*}
(2.67) & \quad \text{verb} \rightarrow \text{Noun} \\
& \quad a. \quad kpanse \quad 'escort' \quad i-kpásé \quad 'escorting' \\
& \quad b. \quad nono \quad 'want' \quad i-nôno \quad 'wanting' 
\end{align*}$$

Abstract nouns depicting state or quality can also result from the simultaneous affixation of ‘i...mhi’ as shown in (2.68).

$$\begin{align*}
(2.68)a. & \quad ti \quad 'good' \quad i-ti-mhi \quad 'goodness' \\
& \quad b. \quad ze \quad 'strong' \quad i-ze-mhi \quad 'strength' \\
& \quad c. \quad gua \quad 'sick' \quad i-gua-mhi \quad 'sickness' 
\end{align*}$$

These nouns are derived from verbal predicates. The prefix /i-/ refers to the act of ‘being good’, ‘being sick’, and ‘being strong’. The suffix /-mhi/ in all these examples is a category-changing affix. Its presence as previously mentioned is morphologically motivated.
2.3.3.4 Noun + noun compounding

From our investigations, we observe that the process of noun + noun compounding is prominent in the language. Some examples are shown in (2.69):

(2.69)a. ômò + ôkpòtsò  --> ômôkpòtsò
        child woman       'daughter'

       b. tsi + ólù     --> tsiólù
          pull thread     'spin'

In 'noun + noun compound', sometimes, the meaning of the derived words can be deduced from the constituent morphemes as in (2.69). In many other cases, however, the compounds behave semantically like idioms. This situation obtains in the data presented in (2.70) where the meanings of the derived nouns are not transparent from the constituents.

(2.70)a. zu + ôdè     --> zùòdè
         tie   cloth       'marry'

       b. òkò + órè     --> ókórè
          vehicle tree   'boat'
2.4 Overview of pronouns

Ivie has a series of pronouns with different syntactic distributions and behaviours. Some general properties of the pronouns are discussed in this section. The pronominal system of Ivie is summarized in Table (2.3)

<table>
<thead>
<tr>
<th></th>
<th>Subject</th>
<th>Object</th>
<th>Possessive</th>
<th>Reflexive</th>
</tr>
</thead>
<tbody>
<tr>
<td>sg.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>mhẽ/mhe/mhi/i</td>
<td>mhẽ</td>
<td>mhẽ</td>
<td>mhẽ</td>
</tr>
<tr>
<td>2nd</td>
<td>giẽ/u</td>
<td>giẽ</td>
<td>giẽ</td>
<td>e</td>
</tr>
<tr>
<td>3rd</td>
<td>le/loli/o/o</td>
<td>oli</td>
<td>oli</td>
<td>oli</td>
</tr>
<tr>
<td>pl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>eye</td>
<td>eye</td>
<td>eye</td>
<td>eye</td>
</tr>
<tr>
<td>2nd</td>
<td>vhevhe</td>
<td>vhe</td>
<td>vhe</td>
<td>vhevhe</td>
</tr>
<tr>
<td>3rd</td>
<td>we/wewe/e</td>
<td>we</td>
<td>we</td>
<td>we</td>
</tr>
</tbody>
</table>

In the subsections that follow, we provide descriptions of these pronominal forms.

2.4.1 Subject pronouns

In this section, we discuss the subject pronominal forms in Ivie. Morphologically, these forms can be subdivided into two distinct classes: strong or independent, and weak or deficient forms. The two classes are listed in Table (2.4)
Table 2.4 Subject pronoun paradigm

<table>
<thead>
<tr>
<th>Person</th>
<th>Strong Forms</th>
<th>Weak Forms</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>mhemhe</td>
<td>mhi/i</td>
<td>I</td>
</tr>
<tr>
<td>2sg</td>
<td>giç</td>
<td>u</td>
<td>you</td>
</tr>
<tr>
<td>3sg (animate)</td>
<td>le/loli</td>
<td>o</td>
<td>he/she/it</td>
</tr>
<tr>
<td>3sg (-animate)</td>
<td>o</td>
<td>o</td>
<td>it</td>
</tr>
<tr>
<td>1pl</td>
<td>eje</td>
<td>eje</td>
<td>we</td>
</tr>
<tr>
<td>2pl</td>
<td>vhëvhë</td>
<td>vhe</td>
<td>you</td>
</tr>
<tr>
<td>3pl</td>
<td>wewe</td>
<td>e</td>
<td>they</td>
</tr>
</tbody>
</table>

We comment next on the morphological differences between the strong and weak subject pronouns in Ivie, along the line of Cardinaletti and Starke (1994).

The first morphological difference observed correlates with possibilities with human reference. In the case of third person singular, the strong subject pronoun has only human referent, as in (2.71a), while the third weak subject pronominal form may refer to both animate or inanimate subjects (2.71b and c). This distinction is neutralized in the plural. Consider the examples in (2.71).
(2.71)a. Lẹ o be amo
3sgS 3sgW[21] PST come today
'He came today'

b. oni awoshi o ti
the dog 3sgW good
'The dog is good'

c. oni ebe o ti
the book 3sgW good
'The book is good'

A clearer picture of the observed distinctions is given in (2.72).

(2.72)  [+human]  [-human]
strong:    Lẹ    +    -
weak:      o    +    +
           o    -    +

The morphological difference between the two forms is asymmetric.

Apart from the animacy distinction applicable only to the third singular weak forms, all Ivie subject pronominal forms can be identified for number and person

[21] S and W correspond to "strong" and "weak" pronouns.
features as the list in Table (2.4) illustrates.

These pronouns also differ in their distribution. They surface in different syntactic positions. Strong pronouns do not occur directly adjacent to the verb (2.73a), except when used in imperative constructions (2.73b). They always occur before the weak pronominal forms in sentences, hence the ungrammaticality of (2.73a), and the acceptability of (2.73c). Strong pronouns display the same distribution as full noun phrases. They can also occur in postverbal positions. The weak pronominal forms have restricted distribution. They obligatorily occur in preverbal position (2.73c), and cannot be used in imperative constructions (2.73d).

(2.73)a. *le le
   3sgS eat

b. gie, le!
   2sgS, eat
   'You, eat!' or 'Eat'!

c. le  o  le
   3sgS 3sgW PST eat
   'He ate'

d. *o!
   3sgW

Based on Cardinaletti and Starke (1994), Ivie weak pronouns cannot occur in
(i) theta-positions; (ii) peripheral positions and c-modification / coordination. Weak pronouns cannot occur in a theta-position as shown in (2.74) below.

(2.74) Oti o gie mhe/*mhi gi *e/ we
Oti 3sgW-PST send 1sgS *1sgW to *3plW/3plS
Oti sent me to them'

The example above shows the base position of subject, direct object and indirect object pronouns.

The weak pronominal subject forms cannot occur in isolation or in left-dislocations. Strong personal pronouns and nouns can appear in these contexts in Ivie. The following examples in (2.75) illustrate this.

(2.75)a. le li o somote (cleft)
him that is handsome
'It is him that is handsome'
*o lo somote

b. gie, eli u a nono? (left-dislocation)
you, what 2sgW PP search
'You, what are you searching for'?
c. ogwo q be?
   who 3sgW-PST-come
   'Who came'?
   [*o, le, Oti]
   '*3sgW, him, Oti'

According to Cardinaletti and Starke (1994), noun-phrase internal modifiers cannot modify strong personal pronouns in Ivie. But adverbs that modify the whole noun phrase (c-modifiers) may do so. However, c-modifiers cannot modify weak pronouns in the language.

At S-structure, strong pronouns appear in [Spec DP]: they are not on a par with clitics. Modified strong subject pronouns precede the modifier (2.76a):

   (2.76)a. eye ava
         we two
         'Two of us'

   b. *ava eye

Following Chomsky (1993), we assume that the strong subject pronoun is generated in VP internal position as a fully inflected form and moves to spec of DP to check its inflectional features. (2.77) is the S-structure representation of a strong subject pronoun in Ivie.
The other element that can also occur in post-nominal position with strong pronouns are quantifiers:

(2.78) \[\text{wéwé ku e bale}\]
they all 3pl PST come
'They all came'

(2.79) \[\text{wéwé ogwo e bale}\]
they only 3pl PST come
'They alone came'

The quantifier in (2.78) and (2.79) is external to the pronominal DP in the sense that the pronoun occupies the complement position to the head Q; the pronominal DP is moved to Spec of QP, thus landing in a position which precedes the quantifier (Shlonsky 1991).

Similar to nouns, strong subject pronouns can be conjoined whereas conjunctions are not acceptable with weak subject pronouns (2.80).

(2.80)\(a\). \[\text{Oti, Ogele ali gié/mhe/*u/*mhi}\]
Oti, Ogele and you/I/*2sgW/*IsgW
We also observe that only strong pronouns can be focused just as noun phrases. Consider the example in (2.81).

(2.81)a. Oti o mhe oli
Oti 3sgW PST see him
'Oti saw him'

b. a' le /*o li Oti o mhe
he FOC Oti 3sgW-PST-see
'He it is Oti saw'

b. Gerry o mhe oti
Gerry 3sgW PST see Oti
'Gerry saw Oti'

We conclude that among other properties, only strong subject pronouns can be modified, conjoined and focused. Weak subject pronouns exhibit many inadequacies not observed with strong forms.

2.4.2 Object pronouns

The table below shows a list of the pronominals commonly used in object positions.
Table 2.5 Object pronoun

mhe               me
gie/e             you
o/oli             him /it /her
ejë               us
vhë               you
we                them

An important feature of all these pronouns is that they are only used when they directly follow verbs as shown in (2.82). We also observe that in object position (2.82b'), a neutral morpheme 'oli' represents both animate or inanimate objects. The feature that is lost here is that of animacy, while number is preserved.

(2.82)a. Ogele ọ -gwukhase mhe khi ukpokia ọlí ọ khi
Ogele 3sg PST tell me that friend her 3sg say
ogbo ọ gbe oli
someone 3sg beat him

'Ogele told me that her friend told her that someone beat him'

b. Ogele ọ kiel oni ode b' Ogele ọ kiel ọlí
Ogele 3sg PST tear the cloth Ogele 3sg PST tear it
'Ogele tore the cloth' 'Ogele tore it'
To conclude this subsection, we observe that the sequence *verb + direct object* is fixed; it is not altered even in interrogative statements as illustrated in (2.83):

(2.83) a. Oti ọ là mhe ọli ́ amò

Oti 3sg FUT see him/her-Acc today

'Oti will see him today'

b. Oti ọ là mhe ọli ́ amò?

Oti 3sg FUT see him/her-Acc today?

'Will Oti see him today?'

It is interesting to observe that no verb or object movement(s) of any sort are recorded in these examples; only tonal changes which determine the different moods are observed. In the English equivalents (or translations), it is clearly observable that the structural orders have changed.

### 2.4.2.1 Indirect object pronouns

Indirect objects are preceded by the preposition *na/n'*. For example, a list of object pronouns previously shown in Table (2.5) becomes indirect object pronouns with the addition of *na/n' as shown in Table (2.6):
Table 2.6 Indirect object pronouns

<table>
<thead>
<tr>
<th>Singular</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>na mhe</td>
<td>for/to me</td>
</tr>
<tr>
<td>na e / n'è</td>
<td>for/to you</td>
</tr>
<tr>
<td>na oli / n'oli</td>
<td>for/to him</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plural</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>na eye / n'eye</td>
<td>for/to us</td>
</tr>
<tr>
<td>na ve</td>
<td>for/to you</td>
</tr>
<tr>
<td>na ve</td>
<td>for/to them</td>
</tr>
</tbody>
</table>

An illustrative example of the use of indirect object pronouns follows:

(2.84) Oti q dè oli na we

Oti 3sg PST buy it-Acc for them-Dat

'Oti bought it for them'.

In compliance with the verb + object sequence rule in Ivie, the prepositional phrase (e.g., na ve in 2.84), containing the indirect object always comes after the verb phrase as the examples in (2.85a and 2.85b) illustrate. If a direct object is present, it precedes the indirect object. In (2.85c), amè (water) is the direct object of the verb dzè (fetch).
(2.85a. Gerry o k'iel i moto n' Ogele
Gery-NOM 3sg PST repair car-ACC for Ogele-Dat
'Gerry did a repair for Ogele'

b. eni emose e dze ame na we
the men-NOM 3pl fetch water-Acc for them-Dat
'The men fetched them water'

2.4.3 Reflexive pronouns

Ivie has morphologically realized reflexive pronouns. These are formed by means of the noun egbe 'body'(self), to which the possessive pronoun forms are suffixed. The forms are given in (2.86).

(2.86). egbe-mhe 'myself'
egbe-e 'yourself'
egbe-oli 'himself'
egbe-eye 'ourselves'
egbe-vhe 'yourselves'
egbe-we 'themselves'

The reflexive pronoun occurs if the referent is the subject of the previous clause.

This is illustrated in the examples below:
(2.78a) &pita ọ gbe ęgbọli

Peter-NOM 3sg PST kill self-Acc

'Peter killed himself'.

b. eni emose e gbe ęgbewe

Det men-NOM 3pl PST kill themselves-Acc

'The men killed themselves'.

(Examples taken from Masagbor, R., 1989)

The bound morphemic elements ọli in ęgbọli, and we in ęgbewe, mark respectively singular / plural reference. The string ęgbọli is bound by the local NP (subject) and translated as reflexive. The above examples further indicate that the reflexive pronouns ęgbọli, ęgbewe and ęgbemhe are pronominals with respect to Principle A of the Binding Theory (Chomsky, 1981), which stipulates that an anaphor must be bound in its governing category. IP stands as the binding domain for them. In (2.87a), &pita is the antecedent of ęgbọli 'himself'; in (2.87b) eni emose is the antecedent of ęgbewe 'themselves'. They both c-command the reflexive pronouns. The version of c-command referred to here is given below:

A node A c-commands a node B iff

(i) A does not dominate B;

(ii) B does not domonate A;

(iii) the first branching node dominating

A also dominates B. (Haegeman, 1992)
To sum up this chapter, we have provided some background information relevant to the study as well as details of other aspects of the grammar, necessary for a better understanding of the language. Furthermore, we argued against verb movement in Ivie, and conducted tests to show that the functional categories, Tense, Mood and Aspect are free-standing elements. This has theoretical implications for a subsequent agreement analysis of the weak pronominal subject forms attested in the language. However, in chapter 3, we turn to the question of the grammatical status of the pronominal forms referred to in this chapter as weak subject pronouns.
CHAPTER 3

3.0 ON THE STATUS OF IVIE SUBJECT MARKERS

The aim of this chapter is to clarify the functional status of Ivie subject markers. Do these seemingly pronominal elements perform the tasks of lexical pronouns? Do they fit into the typology of subject clitics such as those found in many languages? If Ivie subject markers are not lexical pronouns, is there still a basis for interpreting their obligatory presence as subject doubling? The statements in (3.1) give some examples of the subject markers (underlined).

(3.1)a. Oti q dze oki

Oti 3sg PST go market

'Oti went to the market'

b. Oti ali mhemhe eye dze oki

Oti and I 1pl PST go market

'Oti and I went to the market'

c. q dze oki

3sg PST go market

'She went to the market'
d. *Oti dze oki

A comparison of (3.1a) and (3.1c) shows that the grammaticality of (3.1c) is unaffected when the subject noun phrase is dropped. On the contrary, dropping the subject marker φ in (3.1d) makes the statement ungrammatical.

In many West African Languages, the subject markers have also been described as agreement or concord markers as opposed to clitic pronouns. However in some of these languages, for example, Edo Benin (Amayo, 1975) and Yoruba (Bamgbose, 1980), the occurrence of the subject markers are optional. In view of this, what kind of agreement do subject markers represent? If the pronominal elements in (3.1a and b) are agreement, then their presence must be obligatory and fixed in the Ivie clause. Given this, does obligatoriness imply agreement?

In the following sections, attempts will be made to provide answers to the foregoing questions and more in order to elucidate the categorial status of Ivie subject markers. Specifically, arguments based on morphology, syntax and phonology will be advanced to show that Ivie subject markers are indications of subject-verb agreements.

3.1 The morphological status of Ivie subject markers

We summarize the system of preverbal subject markers in Table (3.2) below:
Table 3.2 Ivie preverbal subject markers

<table>
<thead>
<tr>
<th>Subject Marker</th>
<th>Number</th>
<th>Animate</th>
<th>-Animate</th>
</tr>
</thead>
<tbody>
<tr>
<td>mhi</td>
<td>1sg</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>u</td>
<td>2✓</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>o</td>
<td>3✓</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>o</td>
<td>3✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>eye</td>
<td>1pl</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>vhê</td>
<td>2✓</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>e</td>
<td>3✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

3.1.1 Strong and deficient pronouns

In a number of syntactic studies, a recurring contrast between two classes of personal subject pronouns are attested cross-linguistically. These are strong or independent pronoun and weak or clitic pronoun. Within the generative framework, this distinction was first made explicit in Kayne (1975). Under this classification, weak and clitic pronouns are one and the same. This method of classification was followed in the paradigm of subject pronouns presented in chapter two.

Recently, however, Cardinaletti and Starke (1994) argued for the existence of three distinct classes of personal pronouns which they termed strong (or independent), mildly deficient (or weak) and severely deficient (or clitic) (3.2). According to them, there are two kinds of structural deficiency as opposed to only one in the predominantly used, two-class system. The mildly deficient pronouns share some properties with the
strong pronouns in exclusion of the severely deficient pronouns; similarly, they share
other properties with the severely deficient in exclusion of the strong pronouns.

(3.2)a. strong (independent) pronouns
   b. deficient pronouns:   (i) mildly deficient (weak) pronoun
                              (ii) severely deficient (clitic) pronouns

Although there are many criteria to distinguish between the different classes,
only a few will be considered in this section just for illustrative purposes. The following
two criteria set aside the strong pronouns from deficient (both categories of deficiency)
pronouns.

A1: Only strong pronouns can be used in peripheral positions.

A2: Only strong pronouns can be used in conjunction.

According to Cardinaletti and Starke (1994), one of the criteria which separate
the severely deficient pronoun from both the strong and the mildly deficient pronouns
is the following.

A3: Only severely deficient pronouns can be involved in doubling

Using the foregoing criteria, we now attempt to check for the existence of three
distinct classes of pronouns in Ivie. Independent pronouns can be easily distinguished from the deficient class. This was previously shown in chapter two but we give some examples again.

**Test A1**: only strong pronouns can be used in peripheral positions.

(3.3a. (isolation)

ogwo o khi oyo? (i). Le 'He'

who 3sg is that? (ii). *q

'who is that'? (iii). mbe 'I'

(iv). *mhi

b. (left-dislocation)

(i) gie, ele e a li e?
you, what 3pl wrong with you

'What is wrong with you?

(ii) *u, ele e a li e?

The responses in (3.3aii & iv), and the interrogative sentence in (3.3bii) are not grammatical because *q, mhi* and *u* are deficient pronouns. They cannot be used in isolation or in peripheral position (as adjuncts) as do the independent forms.
Test A2: only strong pronouns can be used in coordination

(3.4)a. le ali Oti e be amo

he/she and Oti 3pl PST come today

'He and Oti came today'

b. gië ali mhemhe [*o/*u] eyë la vu amo

you and I 2pl FUT go today

'You and I will go today'

c. [*o/*u] ali mhemhe eyë la vu amo

d. *u ali *mhi eyë la vu amo

The statements (3.4b and c) containing the deficient pronouns o and u in conjunction with a strong pronoun are completely unacceptable whereas conjoined phrases involving strong pronouns (3.4a and b) are grammatical. Also, two deficient pronouns can not be coordinated as shown in (3.4d). We note that the ungrammaticality of conjoined deficient pronouns has nothing to do with their occurrence in initial position, as illustrated by the examples in (3.4b). Another important observation is that only the pronominal elements which resist coordination can refer to both human and non-human entities in the language as previously observed cross-linguistically (Cardinaletti and Starke, 1994).
**Test A3:** only severely deficient pronouns can be involved in doubling

The distinction between mildly and severely deficient pronouns is not as clear as those in the A1 and A2 tests above because both, if they exist in Ivie, will be homophonous in all cases. From Cardinaletti and Starke (1994), we give some examples involving homophonous pronouns in different classes from other languages.

(3.5)a. Elles sont trop grandes (French)
       b. Elles et celles d’à côté
           'They and those besides are very big'

(3.6)a. Sie sind groß (German)
       b. Sie und die daneben sind groß
           'They and those besides are tall'

(3.7)a. Yélè yon wankpè (Gun)
       b. Yélè kpo yélè kpo yon wankpè
           she and she and know beauty

The personal pronouns 'Elles', 'Sie', and 'Yélè' in (3.5a, 6a and 7a) are deficient subject pronouns whereas the same set of pronouns in statements (3.5b, 6b and 7b) are strong pronouns. In this case the class of each pronoun becomes obvious only
in the usage context. This situation may be similarly applicable to the deficient pronominal elements in Ivie. Consider the following examples in (3.8):

(3.8)a. Oti o a be amo
Oti 3sg PP come today
'Oti is coming today'

b. *Oti le a be amo

c. o a be amo
3sg PP come today
'She is coming today'

d. *Oti a be amo

On the basis of test A3, o in (3.8a) appears to be a severely deficient element going by the claim that only this pronominal form can be a subject double. On the contrary, (3.8b) is ungrammatical, showing that a strong pronoun cannot be used in doubling. The question then is: what is the pronominal status of o in (3.8c)? Can we assume that this is a mildly deficient element or is it of the same status as o in (3.8a)? To answer this question, we attempt to replace the proper noun Oti in (3.8a) with equivalent pronouns, both strong and deficient. Assuming that the mildly deficient pronoun exists in Ivie, we replace the proper noun Oti in (3.8a) with a mildly deficient pronoun o to obtain (3.9):

(3.9) *o o a be amo
The above expression (3.9) is not valid in Ivie. Assuming that three classes of pronouns exist in Ivie, why is the qa qa sequence not acceptable in the language? One possible reason is that qa, being a morphosyntactic element, does not need to repeat itself since it contains all the features of the dropped argument Oti. Therefore, the resulting statement in (3.9) is not acceptable in Ivie. However, we may posit that a deletion rule is triggered in the presence of the two identical morphemes to give the acceptable variant in (3.8c). The only problem with this explanation is that a legal surface expression (3.8a) can not be obtained from an illegal underlying form. One underlying assumption in the formation of (3.9) is that subject doubling also involves mildly deficient pronouns. Since there is no foundation to suggest this, it may well be the reason for the invalidity of (3.9).

So far, we are yet to determine the status of the deficient pronoun in (3.8c). Suppose the proper noun Oti in (3.8a) is replaced by a strong subject pronoun le, we obtain (3.10a).

(3.10a) le qa be amo

she 3sg PP come today

'She is coming today'

b. *le a be amo

Although (3.10a) is a perfectly acceptable statement in Ivie, it is not an exact representation of (3.8a); the actual representation of (3.8a) is (3.8c).
An underlying form of (3.10a) which includes a proper noun phrase may be written as (3.11):

(3.11). \[ le, Oti \quad o \quad a \quad be \quad amo \]

she, Oti 3sg PP come today

'She, Oti is coming today'

Contrasting (3.8a) with (3.8c), and (3.11) with (3.10a) it could be seen that the difference between the first and the second statements is the dropped noun phrase subject in the second statement. This implies that the pronominal element o in (3.8a) and (3.8c) is one and the same; as previously observed, it tallies with the severely deficient pronoun in the classification of Cardinaletti and Starke (1994).

The results of the foregoing tests suggest that a three-class pronominal system is not validated by Ivie data. Only two classes of pronouns, strong and severely deficient, can be attested in Ivie. Instead of two classes of deficiency according to Cardinaletti and Starke (1994), only one deficient pronoun, approximating the severely deficient class in their classification, was found, suggesting that the subject markers are clitics.

There are a number of other important observations resulting from the tests. For instance, the preverbal subject markers are not direct noun replacements in Ivie. This can be shown by replacing the deficient o in (3.8a) with the proper noun Oti, or a noun replacement, le, in (3.12):
(3.12)a.  *Oti Oti a be amo
Oti Oti PP come today

b.  *Oti le a be amo

Clearly, the Ivie subject markers, in spite of their surface pronominal manifestation, are not noun replacements. Additional proofs will be provided to support this in the next subsection. Although the tests provided in this section suggest that Ivie subject markers may be clitics (that is, severely deficient pronouns), many arguments will be advanced in the remainder of this chapter to show that they are neither clitics nor weak pronouns.

3.1.2 DP/D₀ analysis

Under the DP Hypothesis (Abney 1987), lexical determiners, pronouns and possessors belong to the closed class system. They are functional elements which are referred to as DPs. Under this analysis (DP), the noun phrase is DP, not NP. DP is subject to Case Filter and θ - Criterion. DP undergoes Wh-Movement, leaving behind DP - traces. The head of the DP is D. This is distinguished from functional heads like Agrs in that it belongs to the nominal system, not the verbal system, that is, D is [+Nominal, +Functional], whereas Agrs is [-Nominal, +Functional].

The premise of our arguments is therefore based on the following assumptions:

(i) Determiners appear in 'D' position in a determiner phrase.

(ii) Determiners are unable to co-occur with pronouns since both can be
generated in the same position.

From the foregoing, it can be inferred that pronouns and determiners will be in complementary distribution in Ivie. The ungrammaticality of the example in (3.13b) bears out this prediction. It shows that the grammatical elements *ona* 'this' and *le* 'he' belong to the same syntactic category (DP) since they cannot co-occur as specifiers of the same determiner phrase. Given that the subject marker *q* in (3.13a) can co-occur with the determiner *ona*, the conclusion would be that both do not belong to the same syntactic category.

(3.13a)  
\[
\text{ona} \quad q \ \text{ti} \\
\text{this (here) 3sg good}
\]

'This is good'

b.  
\[
* \text{ona} \quad \text{le} \quad q \ \text{ti} \\
\text{the/this he 3sg good}
\]

Having explained the co-occurrence restrictions expected between elements of the same syntactic category, it then follows that *ona* and *le* are generated in the same position 'D' as the structure in (3.14) illustrates. Observe that the structure does not account for our data because *q* cannot be generated in an NP position given the facts that it is not a noun replacement.
The illustrations above show that a subject marker is neither a noun phrase nor a D-head. In (3.14a and b) for instance, we cannot have two DPs occupying the same slot assuming that 0 is a DP. The position is already filled by *ona (a determiner), and *le (a strong pronoun). Therefore the occurrence of 0 in that same position is blocked.

If we assume that determiners and pronouns belong to the same lexical category (namely, D), and if we assume that both are heads of their phrases, the structure of illustrative noun phrases containing determiners and pronouns is as in (3.15).

The Ivie equivalent would be as in (3.16).
The examples in (3.16) show that only the strong subject pronoun gię is allowable in statements like the type in (3.16b). The supposedly deficient form, the pronominal element u, is out.

In French, Shlonsky (1994) observes that there is a formal similarity between clitics and determiners suggesting that they belong to one and the same category, namely D0, since they bear morphological resemblance to nominal determiners. Uriagereka (1995), Cardinaletti (1994), among others, have equally referred to clitics as D-heads. They hypothesize that clitics are phonologically null elements in VP-internal positions which move to a functional head D. According to Chomsky (1994) clitics are simultaneously DPs and D's. Considering that Ivie subject markers have been proven not to be D-heads, the foregoing suggests strongly that they are not clitics.

3.1.3 VP conjunction

According to Cardinaletti and Starke (1995), a clitic heads an X0-chain. Consider the data in (3.17).

(3.17)a. 0 a to uwolo 0 a gbe ishimhi  
3sg PP sing song 3sg PP dance dance
'Ivie' 

b. *0 a to uwolo a gbe ishimhi

c. *0 ali Oti e be amo

3sg and Oti 3pl PST come today
'she and Oti came today'
d. *la canta e ___ balla  (Trentino: Cardinaletti & Starke, 1994)
   she sings and dances

e. *la e   la Maria e vegnuile algeri
   she and the Maria are come yesterday

f. la canta e la balla  (Trentino: Brandi & Cordin, 1989)
g. elle chante et danse  (French: Brandi & Cordin, 1989)
   she sings and dances

The inadmissibility of the pronominal elements in Ivie (3.17b and c) and
Trentino (3.17d and e) in XP positions suggests a head status. If \( q \) is a weak pronoun
occupying the specifier position, it should be possible to leave \( q \) out of the second
conjunct (3.17b), exactly as with 'elle' in (3.17g). This apparent discrepancy is
represented in (3.18).

\[
\begin{array}{c}
\text{Spec} & \text{Agr's} & / \\
\text{Agr} & \text{TP} & \text{DP} \\
\text{q} & \text{T'} & \text{elle} \\
\text{T} & \text{VP} & \text{Agr} \\
\text{tuwolo} & \text{(Ivie)} & \text{chante} \\
\end{array}
\]

The contrast in the structural representation above is an indication that 'elle' in
French is a weak pronoun and therefore in a specifier position, such that it can be omitted in the second conjunct since it has scope over the two verbs. The necessity for \( \theta \) in the second conjoint in (3.17b) suggests that this pronominal element is not accessible to syntactic rules. 'la' in Trentino (3.17f) which behaves similarly as \( \theta \) in Ivie is considered as agreement since it cannot be omitted in the second conjunct.

In conclusion, the observed difference between Ivie, French and Trentino follows from the fact that French subject clitics are Dps (spell-outs of arguments adjoined to an agreement head), while the pronominal elements in Ivie and the Italian dialects of Trentino and Fiorentino are the spell-out of an agreement head, a minor category (Rizzi, 1986), which does not allow a zero pro-form under coordination.

The next question is how does the internal system of Ivie enforce the repetition of \( \theta \) in a coordinate structure? The asymmetry observed in Ivie data of (3.17a and b) follows from the fact that in (3.17b) there is no constituent to be coordinated: there is no constituent that excludes the subject marker but includes the verb. On the other hand, there is such a constituent in French (3.17g). Observe, however, that \( \theta \) in Ivie is repeated over two verb phrases in (3.17a) showing that it is not a weak pronoun, and therefore, not in a specifier position.

We observe that though the conjunct is not overtly realized in (3.17a), it is implied. It could be said that sentences like the ones in (3.17a) contain a floating conjunct whose realization is covert. This could be an example of an arbitrary gap much like the type discussed in (Zwicky and Pullum, 1983). The puzzle that the behaviour of \( \theta \) in (3.17a) poses leads to the following question: is \( \theta \) a clitic or an
independent form?

Zwicky (1985) claims that "in cases where repetition is obligatory on each conjunct, then the item is necessarily an affix and cannot be a post-lexical clitic." Similarly, Miller (1991) considers evidence such as (3.17b) a crucial criterion for distinguishing verbal affixes from post-lexical clitics. We agree with this view. As far as we can see, the necessity of repeating subject markers on each finite verb in conjunction constructions in Ivie is parallel to the requirement that suffixal agreement markers be present on each finite English verb in the same construction. Therefore, q' is agreement.

3.2 On the syntactic status of Ivie subject markers

Going by the analysis presented in section (3.1.1), there is no reason for considering subject markers as syntactic noun phrases. Consequently, we hypothesize that these elements are phonetic manifestations of the abstract features of 'agreement'. As 'agreement', they carry all the information relevant to the sentential structure of the language. There are no object markers in the language, and as such, no object agreement. Non-subject markers retain argument status.

This approach to subject markers immediately explains their restricted distribution (discussed in 3.1.1). Subject markers cannot be conjoined or modified (this is also true of clitics) because they are not free syntactic constituents; they are just the spell-out of features on some head. Therefore, in this section, the main question that is being addressed is the following: is the phonetic form of the abstract features of
subject agreement in Ivie a syntactic subject?

A number of arguments will be advanced for an agreement status of these preverbal pronominal elements as they relate to certain facts in the language, such as doubling with bare quantifiers, word order, "doubling" with pause and obligatory "doubling".

3.2.1 Doubling with quantifiers

One of the criteria employed by Rizzi (1986) to distinguish between subject clitics in French from those found in a number of Northern Italian dialects comes from quantifier-doubling. According to Rizzi (1986), bare quantifiers cannot be left-dislocated, while they can typically appear in subject position. This seems to be true in Ivie. Therefore, based on this standard test, we can show that the indefinite noun phrases *ogbo* and *iogbo* are not in a dislocated position in Ivie, that is, they are syntactic subjects and not dislocated phrases. And, given the fact that the preverbal pronominal elements attested in Ivie are able to co-occur with such types of quantifiers in a sentence in the language, the conclusion would be that such apparent doubled noun phrases are subject plus agreement. This can be shown by the following Ivie contrasts in (3.20). Observe that the underlined noun phrase is not in a dislocated position.

(3.20)a.  **ogbo**  o  vha  le  elamhi

someone 3sg NEG PST eat meat

'Nobody ate meat'
b. *ogbo, o vha le əlmhi

c. Pro o vha le əlmhi
   someone 3sg NEG PST eat meat
   'Nobody ate meat'

d. Oti, ogbo o vha le əlmhi
   Oti, nobody 3sg NEG PST eat meat
   'Oti, nobody ate meat'

The co-occurrence of subject markers with bare quantifiers in (3.20a and d) indicates that subject markers cannot be considered as noun replacements or more specifically, as syntactic subjects in Ivie. This shows that these sentences are not subject clitic doubling constructions. Since the underlined noun phrases are not dislocated, they occupy subject position. In this case, the preverbal pronominal element o is to be treated as an agreement marker. Further, this entails that when the subject noun phrase is not realized (3.20c), pro occupies the subject position.

This approach has also been proposed by Rizzi (1986) and Brandi and Cordin (1989) for varieties of Northern Italian dialects. Based on contrasts of the type illustrated in (3.21) and (3.22), Rizzi (1986) concludes that subject clitics in the Northern Italian dialects are a realization of the 'rich' agreement property which allows pro to appear, while the subject clitics in French are syntactic subjects which get cliticized to the verb in the phonological component (Kayne, 1984). Consider the contrasts in (3.21) and (3.22).
(3.21a) Gnon l’a dit gnent Torinese (Rizzi, 1986)
‘Nobody he has said anything’
b. Nessuno l’ha detto nulla Fioretino (Rizzi, 1986)
‘Nobody he said anything’
c. Tut l’e capita’ de not Trentino (Rizzi, 1986)
‘Everything it happened in the night’

(3.22a) *Personne (.) il n’a rien dit French (Rizzi, 1986)
‘nobody he NEG has nothing to say’
b. *Tout (.) il est arrivé hier (Rizzi, 1986)

Based on Rizzi’s hypothesis, the examples in (3.22) indicate that the initial noun phrases occupy a dislocated position in Standard French, so that the pronoun ‘il’ occupies the subject position.

3.2.2 Word order

Our analysis of Ivie subject markers as agreement is made more explicit when compared to order change (subject clitic inversion) in French. The clitic in French sometimes occurs after the verb, as in questions. This is possible for a clitic, but not an agreement element. This order, showing a verb-to-complementizer (V-to-C) movement, is illustrated in (3.23b).
The absence of sentences like (3.23a and b) in Ivie is a strong indication that the preverbal subject element in (3.23c and d) is the agreement constituent of the verbal complex since it is not affected by movement rules in the syntactic component. The changes observed are suprasegmental and not syntactic. Therefore \( o \) is agreement and not a syntactic subject.

Given the structure in (3.23b) where the verb has moved from V-to-C leaving the subject clitic \( 'il' \) stranded, one wonders if it is justified to consider \( 'il' \) as agreement? We maintain our analysis of Ivie subject markers as agreement and treat \( 'il' \) in Standard French as a subject pronoun. The syntactic difference between the two forms follows from the fact that \( o \) in Ivie and \( 'il' \) in French are distinct elements
occupying distinct positions. Given this, there is no reason to expect both to behave alike. The observed difference could be related to the fact that $\phi$ is a functional head.

On the other hand, 'il' is not a functional head but a DP which right-joins to Agr at PF. The tree structures in (3.24) summarize the positions of the three different syntactic categories: agreement, clitic and pronoun.

(3.24)a.  \[
\begin{array}{c}
\text{AgrsP} \\
\text{(agreement)} \\
\text{spec}_i \\
\text{Agr'} \\
\text{Agr} \\
\phi \\
T' \\
T \\
\text{VP} \\
t_i \\
V
\end{array}
\]

b.  \[
\begin{array}{c}
\text{AgrP} \\
\text{(clitic)} \\
\text{Spec} \\
\text{Agr'} \\
\text{Agr} \\
\text{Scl}_i \\
\text{VP} \\
\text{Spec} \\
t_i \\
V
\end{array}
\]
3.2.3 Relative ordering of subject markers in serial verb constructions

Serial verbs behave as single verbs rather than a series of conjoined verbs. Since the subject of both verbs is normally the same person, the rules of distribution of the subject marker are not affected by their presence. Consider the sentences in (3.25).

(3.25)a. Oti ə dzɛ amɛ (*ə) ku ekɛ
Oti 3sg PST fetch water poured ground
'Oti poured the water she fetched onto the ground'

b. Oti ə de emi (*ə) le
Oti 3sg PST buy yam (3sg) eat
'Oti ate the yam she bought'

Though semantically the clauses in (3.25a and b) contain verbs in series, the domain of the subject marker contains both verbs. The complement type serial verb construction (SVC) (3.25a) has a 'single event' interpretation, in which the two verbs combine to describe a single event, rather than a sequence of events. The adjunct-type
SVC (3.25b) does not have a single-event reading, but has a purposive interpretation instead (Campbell 1995).

If we assume that the subject marker reflects an agreement relation between the verbs and their specifiers in both clauses, that is, a spell-out of a specifier-head agreement relation, it would follow that every verb is marked for tense since this is generated on the subject marker; this is precisely what happens in the language. We also observe in this construction, just as we have done in other constructions, that subject markers maintain the same fixed positions while exhibiting the status of 'agreement' rather than that of a weak or clitic pronoun. Our conclusion therefore is that in (3.25a and b) Oti is the syntactic subject and 0 agreement.

3.2.4 "Doubling" with pause

Pause occurs with clitic elements, as in the case of object doubling. We therefore identify 'left-dislocation', which occurs with pause, as subject clitic doubling. In that case the subject is in Spec CP, or its functional extension (3.26a). When there is no pause, it is evidence that we do not have a clitic but rather an agreement element, with the subject in Spec AgrSP (3.26b). Note that if the subject is a clitic element, then it is checked by adjunction to Agr. Agr can then attract any element into its specifier. The NP bearing lexical content may however move into Spec CP or its extension if it has focus or topic properties, otherwise the subject itself moves for Case to be checked in Spec AgrSP.
Let us now compare our analysis of quantifier doubling in Ivie with that provided for Quebec French in Auger (1994) for similar sentences.

Though Rizzi (1986) had argued that bare quantifiers cannot co-occur with clitics in French, Auger (1994) argues that doubling with bare quantifiers is allowable among some speakers of Quebec French. This is exemplified in (3.27).

(3.27)a. Tout le monde il est beau (Quebec French, Auger 1994)
   all the world it beautiful

'Everybody is beautiful'
b. un enfant il dort tout le jour
   a child he sleeps all the day
   'A child sleeps all day'

We note that the subject clitic (*il) in (3.27a and b) is analyzed as an argument marker (that is agreement) in Quebec French (Auger, 1994). However, the constructions are only acceptable by some segments of Quebec French speakers. According to Nadasdi (1995), subject clitics in some French varieties (such as Quebec French and Ontario French among others) are marked for default features, and the doubled variant is found when the clitic's default features match those of the subject noun phrase; lack of matching favours the non-variant. This indicates that subject clitic doubling with quantifiers is optional in Quebec French and Ontario French. Consider the examples in (3.28) and (3.29).

(3.28)a. iogbo e le elamhi (Ivie)
   people 3pl PST eat meat
   'Everybody ate meat'
   b. *igbo, e le elamhi
   c. *iogbo le elamhi

(3.29)a. Tout le monde est beau (Quebec French)
   b. Un enfant dort tout le temps
The ungrammaticality of (3.28b) supports the claim that these sentences cannot be analyzed as left-dislocations. The ungrammaticality of (3.28c) further shows that doubling with quantifiers in Ivie is not subject clitic doubling per se, but an instance of subject-verb agreement construction in the language. However, there is good evidence to consider the Quebec French subject clitic 'il', used in the clitic doubling constructions in (3.27), an argument.\footnote{Auger (1994) and Roberge (1990) have argued that subject clitics in Quebec French are agreement markers. In their analysis, there is no pause in the examples in (3.30a and b): \((i)\) Tout le monde il est beau \(\quad (ii)\) un enfant il dort tout le jour} This can be seen from the grammaticality of the examples in (3.29a and b) when the clitic is dropped. Therefore, if (3.29) is possible, then the structure for the Quebec French sentence in (3.27) should be (3.30).

(3.30a) Tout le monde, il est beau

b. un enfant, il dort tout le jour.

(3.30a) is represented in the tree structure as (3.31).

(3.31)

```
TOP
    /\ 
  Tout le monde, AGRsP
    / \ 
   DP  Agr's'
   /  \
  il, Agr  VP
  / \ 
est  t, beau
```

\footnote{Auger (1994) and Roberge (1990) have argued that subject clitics in Quebec French are agreement markers. In their analysis, there is no pause in the examples in (3.30a and b): \((i)\) Tout le monde il est beau \(\quad (ii)\) un enfant il dort tout le jour}
Based on the observations made above, we propose that subject clitic doubling and clitic left dislocations are the same. If the clitic 'il' in (3.31) has adjoined to the specifier of the agreement phrase, nothing attracts the indefinite noun phrase 'tout le monde' to this position. Hence 'tout le monde' is realized in a non-Wh position, that is, as a topic in the specifier of a 'Topic Phrase'. This is so because the noun phrase does not need case. The case part is realized by its clitic shadow 'il'. In clitic left dislocations (Cinque, 1990 and Iatridou, 1990), clitics are obligatory because they form a referential chain with the noun phrases that have been dislocated to an adjoined A'-bar position. This is exemplified by the coindexation of 'Tout le monde' with 'il' in (3.31). Observe also that other materials can intervene between the topic phrase and the agreement phrase.

Given the fact that (3.28a) is not a left-dislocated sentence, that is, subject clitic doubling, what precisely is the position occupied by the preverbal pronominal subject marker? Is the position distinct from the position which contains the verbal agreement inflection? Since the Ivie verb is invariable, we assume that the preverbal pronominal elements will occupy the position which contains the verbal inflection. This implies that such a position will be the agreement node. As such, we adopt the structure proposed in Chomsky (1993), and propose that the syntactic position of e in (3.28a) is 'Agr' and that of the quantifier iogbo Specifier position of AGRsP. A tree structure of (3.28a) is presented in (3.32).
(3.32) 

![Tree diagram]

Treating $e$ in (3.32) in Agr (or any other functional projection higher than TP) as an agreement marker allows us to explain why the DP moves to the preverbal position in the overt syntax. Following Chomsky (1993), we assume that the DP moves to the specifier of AGRsP to check for structural case (to satisfy case filter), and also to satisfy the Extended Projection Principle (EPP).

### 3.2.5 Obligatory "doubling"

In Ivie, the pronominal element joined with the verb cannot be omitted when there is a lexical NP (3.33b). There is no reason why this should be so if it were a clitic. Therefore it is an agreement element.
(3.33)a. \( \text{oni omose } o \text{ la ayọ} \)

DET. man 3sg is there

'The man is there'

b. \( *\text{oni omose la ayọ} \) (Ivie)

Observe that the contrast between (3.33a and b) indicates that \( o \) is marking agreement between the noun phrase \( \text{oni omose} \) 'The man' and the verb \( \text{be} \) 'Come'. Therefore, (3.33a) is not a case of clitic doubling. This is essentially like Bantu (3.34a), Hausa (3.34b), Yekhee (3.34c) and some Northern Italian languages (3.34d).

(3.34)a. Ke-\text{-tla-be/bo} \( *(\text{ke})-\emptyset \text{-di-reka} \). (Bantu: Demuth and Gruber, 1995)

\[ \text{1sg-FUT-AUX} \quad \text{1sg-CONT-10them-buy} \]

'I will be buying them'

b. Amina \( \text{ta } zo \text{ jiya} \) \( b' \). *Amina zo jiya (Hausa)

Amina 3sgF come PST yesterday

'Amina came yesterday'

c. Okhai \( \text{ o } \text{ de ebe ya mhe} \) \( c' \). *Okhai de ebe ya mhe (Yekhee)

Okhai 3sg PST buy book for me

'Okhai bought book for me'

d. El Gianni el magna \( d' \). *El Gianni magna (T:Rizzi, 1986)

'John eats'

In (3.34a through d) we see that for every verb there is a tense formative, and
that such tense formatives have an Agr-S. The omission of the second Agr-S in (3.34a) and Agr-S (3.34b', c' and d') results in an ungrammatical sequence.

In French however, lexical subjects and subject clitics are in complementary distribution as shown in (3.35):

(3.35)a. *Marie elle vient (Standard French)
    'Marie she comes'
b. Marie (elle) vient (Quebec French)
    'Marie comes'

Generally, sentences such as (3.35a) are acceptable with an intonation break after the lexical noun phrase (Carroll, 1982 and Rizzi, 1986). But given that it is illogical to say that agreement is optional, there is reason to believe that (3.35a) is an instance of left-dislocation (subject clitic doubling) and not obligatory "doubling" (subject ~ verb agreement). Rizzi (1986) shows that since structures like (3.36) are not acceptable in Standard French, it then means that the only available position for 'Marie' in (3.35a) will be a TOPIC position.

(3.36) *personne il ne mange$^{23}$ (Rizzi, 1986).

If we consider that the clitic always right-adoins to Agr at PF in French

\textsuperscript{23} Auger (1994) observes that structures like "personne il fiche rien" are possible in the speech of some Colloquial French speakers.
(Kayne, 1984), then 'elle' in (3.35) should be seen as a PF clitic. The suffixal element (-t) in vient 'come' in (3.35) marks the tense and agreement features of the verb, just as φ in (3.33a) does for Ivie.

There is also some valid evidence which suggests that all subject clitics in Quebec French are argumental elements which must receive a theta-role. This can be seen from the following examples in (3.37).

(3.37a) oqbo φ be (Ivie) a'. *quelqu'un il est venu (QF)
somebody 3sg PST come
'Somebody came'

b. ogwo ϕ be? b'. *qui il est venu
who 3sg PST come
'Who came'

(3.37a) shows that Quebec French subject clitics occupy the subject position, and so any preceding NP is left-dislocated. Hence, non-referential NPs cannot appear with clitics in this dialect. (3.37b) shows that Quebec French clitics are impossible in the presence of a subject variable, since both compete for the same theta-role. It is clear from these examples that Quebec French subject clitics behave as arguments; while the preverbal pronominal element in Ivie (3.37a and b) is agreement.

Having shown in the previous sections that Ivie subject markers are neither clitics nor syntactic subjects, additional evidence would be provided from the null
subject parameter and attribution to reaffirm the agreement status of these pronominal elements in the language.

3.2.6 pro

Ivie appears to be similar to languages like Italian and Spanish, and a host of others which permit the subject position to be phonetically null in tensed clauses (Chomsky 1981, 1982; Jaeggli 1982; Rizzi 1986; Roberge 1990); this option is not available in languages like Standard French and English (3.38d and e) since there is variation concerning the pro-drop parameter. It is proposed in the literature that languages only have this option when the inflectional system is morphologically rich enough to license pro since it is the inflection that will determine the grammatical features of the missing subject. The phrase in (3.38b) implies reference to a null argument which is represented by pro. This can be rewritten as (3.38c) at the logical form. Consider also the contrast in (3.38c), and (3.38d and e).

(3.38)a. Ogele o ti

b. o ti

{ she } is good

{ Ogele } (Ivie)

c. pro o ti

d. *pro est bonne

Ø (she) is good (French)
e. *pro is good

∅ (He/she/it) is good (English)

Within generative grammar, the empty category (EC) in (3.38c) is standardly taken to be a 'pro', the analogue of an overt pronoun. Given the examples in (3.38), we need a mechanism by which the content of pro can be recovered in Ivie. We observe however, that the null pronominal in (3.38c), for instance, is identified in Ivie by a preverbal agreement marker that case-governs the empty subject position. The identification condition is stated as follows:

(3.39) AGR can identify an empty category as (thematic) pro iff the category containing AGR, case-governs the empty category.

A cross-linguistic analysis of this phenomenon (Huang 1995) shows that a single or few syntactic parameters may never be adequate in accounting for null subject languages. The reason is that different (groups of) languages may require different licensing and identificational strategies, some of which are clearly pragmatic in nature, as is the case of Chinese (Huang 1984).

In Ivie, the subject of a tensed sentence may remain unexpressed as in (3.40)

(3.40)a. Ogele ∅ zë ebe

Ogele 3sg PST read book

'Ogele read a book'.

Given the examples in (3.40), what evidence do we have that allows us to assess the empty position in Ivie? Can an empty subject position in Ivie act as an antecedent for the binding conditions in Chomsky (1981) presented in (3.41)?

(3.41)a. An anaphor is bound in its governing category

b. A pronoun is free in its governing category

c. An R-Expression is free

We now apply the conditions above to our Ivie data in (3.42) and (3.43).

(3.42)a. Ogele, o kwẹ egboli;

Ogele 3sg PST wash herself

'Ogele, washed herself,'
b. *Ogele_i o kwe Ogele_i
   Ogele, 3sg PST wash Ogele

c. *Ogele_i o kwe oli_i
   Ogele 3sg-PST-wash him/her

(3.43)a. Ogele_i o khi Oti o mhe oli_i
   Ogele 3sg PST say that Oti 3sg PST see her
   'Ogele said that Oti saw her,'

b. *Ogele o khi Oti o mhe egboli
   Ogele 3sg PST say that Oti 3sg PST see herself

c. *Ogele_i o khi Oti o mhe Ogele_i
   Ogele 3sg PST say that Oti 3sg PST see Ogele

In (3.42a), the coreferent interpretation is allowed between Ogele and egboli 'herself'. (3.42b) is excluded by principle C. (3.42c) is disqualified by principle B. (3.43a) is licit because principle B is respected, while (3.43b) and (3.43c) are ruled out respectively by principles A and C. Now the question is: does this pattern hold for Ivie when the subject position is null? Consider the examples in (3.44).

(3.44)a. [e_i o gbe egboli_i
   3sg beat him/herself
   'He/she beat him/herself,'
b. \( [e_i] \circ \text{khi Oti} \circ \text{mhe egbol}_i \)

3sg say that Oti 3sg PST see him/herself

'He/she\(_i\) says that Oti saw herself\(_i\).'

c. \( [e_i] \circ \text{khi Oti} \circ \text{mhe oli}_i \)

3sg- say that Oti 3sg PST see him/her\(_i\)

'He/she\(_i\) says that Oti saw him/her\(_i\).'

d. \( *[e_i] \circ \text{khi Oti} \circ \text{mhe Gerry}_i \)

3sg say that Oti 3sg PST see Gerry

'He, says that Oti saw Gerry\(_i\).'

(3.44) clearly shows that in Ivie, a gap can act as an antecedent for the binding conditions in (3.41). We can use the same line of argument to determine the existence of an empty category in infinitive contexts in the Ivie examples in (3.45).

(3.45)a. Ogele, o nono \( [\text{CP} \text{ ni AgrsP PRO}_i \circ \text{kwe egbol}_i \]

Ogele 3sg want that \( PRO \) 3sg wash herself

'Ogele wants to wash herself'

b. \( *\text{Ogele, o nono} \ [\text{PRO} \circ \text{kwe oli}_i \]

Ogele 3sg want that \( PRO \) 3sg wash her

c. \( *\text{Ogele, o nono} \ [\text{PRO}_i \circ \text{kwe Ogele}_i \]

Ogele 3sg want that \( PRO \) 3sg wash Ogele
(3.45) clearly shows that the empty category subject in infinitive contexts patterns with the empty subject in tensed contexts with regard to binding theory. The empty category subject encountered in tensed clauses is generally called pro, whereas the empty subject of infinitives is called PRO (Chomsky, 1982). By being an empty category, the question arises if pro equates pronoun without phonetic matrix? Within generative grammar, pro, being the null analogue of overt pronoun, is expected to behave in a fashion parallel to its overt counterpart both syntactically and semantically assuming (like Chomsky, 1982; Chung, 1989; and Lasnik, 1989) that what differentiates empty categories from their counterparts is nothing but the lack of the phonetic matrix of empty categories. In Ivie, the empty slot filled by pro denotes the presence of an implicit argument. pro is therefore a referential definite pronoun in the language. Rizzi (1982) has also shown that pro can be interpreted as free or specific, but PRO may never have interpretation except if it is controlled by some noun phrase. Thus in the following sentence in (3.46):

(3.46) It is easy [CP [IP PRO to eat]]

PRO is only interpreted as 'arbitrary person or persons'. Though Suner (1983) claims that pro can be interpreted as arbitrary, Jaeggli (1986) discusses clear-cut differences between PRO and pro. Jaeggli and Safir (1989) illustrate three sorts of diagnostics that may be used to determine whether a subject is PRO or pro. We want to apply some of these against our Ivie data.
3.2.6.1 The resumptive test

According to this test, PRO may not be a resumptive pronoun unless there is another binder; pro can be a resumptive pronoun. Consider the examples in (3.47).

(3.47) *ona k̄i oni omo[CP ni [Oti o vha yese [CP khi [o dobe [CP [PRO a gwoke]]]]]

this is the child who Oti 3sg NEG know if 3sg possible PRO to swim

(3.48) ona kh̄i oni omoshi [CP ni [AgrsP Oti o vha yese [CP ne khi [AgrsP Gerry o nwema this is the girl who Oti 3sg NEG know whether Gerry 3sg must a molî]]]
to marry

'This is the girl who Oti does not know whether Gerry must marry'

(3.47) above illustrates the inability of PRO to act as a resumptive pronoun. (3.48) shows that in Ivie an overt pronoun can serve as a resumptive pronoun. Can pro act as a resumptive pronoun in Ivie? Let us consider the examples in (3.49) below:

(3.49) ona kh̄i oni okpotso [ni, [Oti o yese [ikpotso inme [e vha somi elimi omose [ni this is the woman who Oti 3sg know women how many 3pl NEG like man who [e], o nu zuode

3sg follow marry

'This is the woman whom Oti knows how many women do not like the man whom she marries'
Observe that in (3.49), the operator *ni* 'who' has crossed two CP's; the fact that the sentence is grammatical implies that *ni* 'who' may not have been extracted by WH movement. So the subject gap coindexed with *ni* is probably an empty category functioning as a resumptive pronoun. Given that we are arguing that Ivie lacks overtly realized weak subject pronouns, when the language appeals to the resumptive pronoun strategy, it uses *pro* as a resumptive pronoun in subject position.

The interesting result, here, is that *PRO*, as opposed to *pro*, cannot function as a resumptive pronoun in Ivie, as evidenced by the illicitness of (3.47) above. Thus we have established that the empty category in subject position of Ivie tensed clauses (*pro*) can function as a resumptive pronoun in syntactic islands, whereas *PRO* (the infinitive null subject) cannot function as a resumptive pronoun. So the resumptive test makes a clear distinction between *pro* and *PRO* in Ivie.

### 3.2.6.2 Empty-category expletive condition

It is well known that virtually every language that allows null thematic subjects also allows null expletive subjects, though the reverse implication is not valid (Safir, 1985 and Travis 1984). Also, in the typology of pronouns proposed by Cardinaletti and Starke (1994), a null subject is grouped as a "deficient" pronoun which can be used as an expletive. Therefore, if indeed Ivie is a null subject language, it should have null expletive subjects. This prediction is borne out in (3.50).
(3.50)a. \( \text{pro o} \) \( \text{khi pro o} \) \( \text{gbe ena} \)

3sg PST say that 3sg PST kill cow

'He/she said that he/she killed cow'

b. \( \text{pro o} \) \( \text{khi pro a mhe khi pro o} \) \( \text{gbe ena} \)

3sg PST say that it appears that 3sg PST kill cow

'He/she said that it seems that he/she killed cow'

\( \text{PRO} \), in any language, cannot be an expletive. Thus in Ivie, an expletive cannot be the null subject of an infinitive.

(3.51) \* \( \text{pro o} \) \( \text{vha nwunu na rọ gwukhase ọli kiri Gerry o} \) \( \text{be} \)

3sg NEG difficult for to tell him that Gerry 3sg PST come

'It is easy to tell him that Gerry came'

To account for the ungrammaticality of sentences such as (3.51), Safir (1985) devised the following condition:

(3.52) **The empty-category expletive condition**

An empty-category expletive must be governed.

Due to the \( \text{PRO} \) theorem, it cannot survive in a governed position. Thus, the empty-category condition enables us to draw the line between \( \text{PRO} \) and \( \text{pro} \) in Ivie.

In summary, we have shown above that \( \text{pro} \) as opposed to \( \text{PRO} \) can be a
resumptive pronoun and an expletive in Ivie. Also, *pro unlike *PRO may occur in governed positions. In any case, we have established that the empty category that appears in subject position of Ivie tensed clauses is *pro.

### 3.2.6.3 The licensing of *pro

In languages allowing the phenomenon of null subjects (for example, Greek, Hebrew, Italian, and Spanish) the pronominal subject of a tensed sentence may be phonologically empty. In Ivie, there is no such thing as a pronominal subject in the sense usually understood for the languages mentioned above. Consider the examples in (3.53) and (3.54) below:

(3.53) **Italian**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>io parlo</td>
<td>'I talk'</td>
</tr>
<tr>
<td></td>
<td>tu parli</td>
<td>'you talk'</td>
</tr>
<tr>
<td></td>
<td>lui parlo</td>
<td>'he talks'</td>
</tr>
<tr>
<td></td>
<td>noi parliamo</td>
<td>'we talk'</td>
</tr>
<tr>
<td></td>
<td>voi parlate</td>
<td>'you talk'</td>
</tr>
<tr>
<td></td>
<td>loro parlano</td>
<td>'they talk'</td>
</tr>
</tbody>
</table>

(3.54) **Ivie**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>mhi le</td>
<td>'I eat'</td>
</tr>
<tr>
<td></td>
<td>u le</td>
<td>'you eat'</td>
</tr>
</tbody>
</table>
Though the pronominal subjects in (3.53b) are phonologically empty, the verbal morphology is rich enough to make them semantically recoverable. The paradigm exhibited in (3.54b) shows that Ivie does not have subject pronouns like Italian. The language lacks weak subject pronouns. *mhi, u, o, e, vha, e are subject markers agreeing in person and number with the nominal subject. They therefore constitute AGR-S. (3.54) shows that their presence is compulsory, for when they are omitted, the resulting forms are ruled out. Rizzi (1986) gives evidence that the appearance of a subject clitic in an Italian dialect is really an agreement element, that is, an extra 'spelling' of agreement. Rizzi shows that a pro subject co-occurs with the apparent clitic, with which the latter would be mutually exclusive. pro would be like a weak pronoun, carrying the Case features of the subject as does the clitic. Therefore the apparent clitic must be an agreement element. According to Cardinaletti and Starke (1994) weak pronouns have clitic like properties and, like clitic pronouns, have very restricted distribution: they cannot be generated in the base position nor occur in any peripheral position since they are not full arguments. One of the defining features of weak pronouns is that they must move in the syntax to a special derived position, a specifier which can be easily identified as a Case-related position. This criterion also
applies to *pro* (Rizzi, 1986). In line with Chomsky (1993), weak pronouns move to their checking position (Spec AGRsP) before Spell-out. What then is the Case position for related subjects in Ivie?

The Case position relevant for subject weak pronouns is occupied by the lexical noun phrase showing that: (i) the preverbal pronominal elements are not weak subject pronouns; (ii) they occur only in a preverbal position and never in post-verbal positions in the language; (iii) since *pro* is a weak pronoun, the co-occurrence of *pro* with the preverbal pronominal elements, shows that these forms cannot be analyzed as weak subject pronouns. We cannot have the same pronouns occurring in the same slots. If the pronominal elements were weak subject pronouns, they would have to move to the specifier position before Spell-out, blocking the movement of *pro*. The derivation as we know will not converge (Chomsky, 1993); it will crash.

Suppose subject markers are pronouns, what will be their position in a tree structure? Will it equally be Spec AGRsP, that is, the same position occupied by null subjects? If we do assume that they belong to the same pronominal class, that of "weak pronouns", we would expect to find them in one and the same position. But given the functional differences between the two, subject markers will be generated under a different node (AGR-S) underlying subject-verb agreement. We will argue that it is precisely AGR-S which licenses null subjects in Ivie. For if AGR-S were not a proper governor in Ivie, we would end up with an ECP violation. We thus conclude that AGR-S can properly govern the subject position in Ivie. Observe that, in this language TP does not have to be [+tense] since subjunctive verbal forms, though bearing the
features [-tense, +person], allow null subjects as is shown in (3.55).

(3.55)  
Oti o noo ni[^24] [e], o nwu ugwé
Oti 3sg want that 3sg marry husband
'Oti wants to marry a husband'

The embedded verb in (3.55) o-nwu is in the subjunctive form. But it still licenses a c-commanding empty category in subject position.

It has been suggested by Riemsdijk and Williams (1986), following Chomsky (1981), that the agreement relation between AGR and the subject should be sanctioned by coindexation as in (3.56):

(3.56)  
NP,[INFL,[tms]AGR],INFL VP

(3.56) presupposes as argued above that the AGR features (person, number and animacy) agreeing with the subject noun phrase are realized on the verb. Evidence from Ivie shows that (3.56) is valid. Consider (3.57 and 3.58) below:

(3.56)a.  oni omoše o de
DET. man 3sg-PST-fall
'The man fell'

[^24] In Ivie the subjunctive is marked in the head of C by the marker ni.
In (3.56), the subject markers \( q \) and \( o \), which represent AGR-S, agree in animacy and inanimacy with the noun phrases \( qhi \) \( omose \) and \( oni \) \( orhe \), respectively. Any random assignment of subject markers to inappropriate noun phrases will automatically result in ungrammaticality as (3.57) illustrates. In case the two noun phrases \( qhi \) \( omose \) and \( oni \) \( orhe \) are not available in the sentence but are semantically recoverable in discourse, we will have well-formed empty categories in subject position as in (3.58).

\[
\begin{align*}
(3.58)a. & \quad [e], q, de \\
& \quad 3sg \text{ PST fall} \\
& \quad 'He/she fell' \\
b. & \quad [e], o, de \\
& \quad 3sg \text{ PST fall} \\
& \quad 'It fell'.
\end{align*}
\]

We may then assume, with Riemsdijk and Williams (1986), that either AGR, c-commands NP, (as in 3.56) and hence can govern it, or that INFL 'inherits' the
subscript from AGR, and acts as a proper governor whenever NP, is not phonologically present. We have already adopted the assumption that, in Ivie, AGR-S properly governs the subject position, thereby licensing the occurrence of null subjects without any ECP violation.

The conclusion derivable from this analogy is that subject markers are "agreement" and not weak pronouns. It was also shown that Ivie allows thematic null subjects since AGR-S can govern an empty category in subject position. The null subject is therefore coindexed with agreement in order to obtain the phi-features of the missing subject from it (see 3.56 above). Furthermore, it predicts that only the arguments with which the verb agrees may be encoded in terms of an empty category (EC). This position, in its essential, has recently been reiterated in the minimalist program (Chomsky, 1993 & 1995).

3.2.7 Attribution

In Ivie, a verb or adjectival predicate may be attributed by a relative clause like the structure in (3.59a.i). The pronominal element within the relative is the same as in the main clause (3.59b.i), and, *ceteris paribus*, could be a clitic or agreement element.

Ivie, however, has a few 'true' adjectives which may be attributed directly. Here there is no relative and the pronoun-like element appears, agreeing with the subject (3.59a.ii, iii). In this case it cannot be a pronoun or clitic, since there is no relative clause or inner subject; it is therefore an agreement element. It appears however to be the same element that appears in main clauses with the adjective used predicatively.
(3.59b.i,iii). Thus if the former is agreement so is the latter.

(3.59)

<table>
<thead>
<tr>
<th></th>
<th>a-i</th>
<th>a-fe ni o gba</th>
<th>b.i</th>
<th>o-ni a-fe o gba</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agr-fish which Agr big</td>
<td>Agr-fish Agr-big</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>'The big fish'</td>
<td>'The fish is big'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>e-be  o-lile</td>
<td>o-ni e-be o-lile</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>'The red book'</td>
<td>'The book is red'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>o-mose o-bishi</td>
<td>oni o-mose o-bishi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Agr-man Agr-black</td>
<td>Agr-DET. Agr-man Agr-T-black</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>'The black man'</td>
<td>'The man is black'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.3 On the phonological status of Ivie subject markers

Given that phonological cliticization is 'directional', are the Ivie subject markers phonological clitics? If yes, are they 'proclitics' or 'enclitics'? Deficient pronouns such as the French 'il' would obligatorily cliticize phonologically to the right (Kayne, 1975); the Dutch 'ie' would obligatorily cliticize to the left (Booij, 1996b). Based on the 'Prosodic Integration Hypothesis' (Booij, 1996b), evidence from reduction and resyllabification, deletion, and Glide formation facts of Ivie show that subject markers are neither 'proclitics' nor 'enclitics'.
3.3.1 Phonology – syntax interface

It has been argued in the literature that clitic constructions involve a mismatch between the structures motivated by syntax and phonology (Booij, 1996b; Hayes, 1989; Marantz, 1988; Nespor and Vogel, 1986; Selkirk, 1984 & 1986; and Klavans, 1985). Consider the syntactic structure (3.60a) and the prosodic structure (3.60b) of the Ivie sentence presented below:

(3.60a)  oni awoshi]DP [[O]][[l]a]] [[le]]v [elamhi]DP ]]VP

DET dog 3sg- FUT- eat meat

'The dog will eat meat'

In order to be able to define prosodic domains adequately, we give a tree structure representation of (3.60) in (3.61).

\[
\text{(3.61) AGRsP} \\
\text{DP} \quad \text{Agrs'} \\
\text{(onawoshi)w Agr TP} \\
\text{(o)w T'} \\
\text{T VP} \\
\text{(la)w V DP} \\
\text{(le)w (elamhi)w}
\]
Observe that the subject marker and the tense and aspectual morphemes are bracketed under discrete nodes. They differ from verbs with respect to their phonological relationship with subject markers that precede them. As the tree structure in (3.61) shows, we treat Tense, Aspect and Modal morphemes as syntactically independent elements. As such, in our own analysis, subject markers, Tense, or Aspect, or Mood, or Negative markers constitute prosodic words in their own right. The parenthesis correlates with the prosodic word which is the domain of tonal spread, tone deletion and low level phonological rules. Therefore the prosodic structure of (3.60) will be achieved systematically as (3.62).

\[(3.62)a. \quad \text{IP}[[\text{oni awoshi}] \text{I}[[\text{a} \text{ [la]} \text{ [lle]} [\text{elamhi}]]] \quad \text{- syntax}
\]
\[\text{DP} \quad \text{3sg FUT} \quad \text{V} \quad \text{DP}
\]
\[\text{b.} \quad [\text{on} \varnothing \text{ awoshi}] \text{I}[[\text{a} \text{ [la]} \text{ [lle]} [\text{elamhi}]] \quad \text{- vowel deletion}
\]
\[\text{c.} \quad \text{(onawoshi)} \text{ (o) (la) (l elamhi)} \quad \text{- bracket erasure}
\]
\[\text{d.} \quad \text{(onawoshi)w (o)w (la)w (l/elamhi)w} \quad \text{- phonology}
\]

The examples in (3.62a and d) show us a case of non-isomorphy between the syntax and phonology levels. The direct object is independent syntactically, but forms a prosodic word with the verb. The same observation goes for the definite article \textit{oni} which joins with the lexical noun phrase \textit{awoshi} to form a prosodic word. This is much in line with the basic tenet of the prosodic integration hypothesis (Booij, 1996b).
Observe however, that $q$ is by no way affected by this process. This shows that other entities, aside from clitics, can be phonologically integrated into adjacent items. The independence of syntax and phonology like the type elaborated upon by Klavans (1985) is supported by cross-linguistic evidence as shown by examples in (3.63 to 3.66).

(3.63) Dutch

Jan kocht het boek

'John bought the book'

a.  \([\text{Jan}]_N [\text{[kocht]}_V \text{[het boek]}_NP]_VP\)

b.  \((\text{jan})_w (\text{koo})_w (\text{tet})_w (\text{buk})_w\)  
    (Booij, 1996b)

In this example (3.63), the determiner *het* depends syntactically on the following noun (3.63a), but phonologically on the preceding verb with which it forms a prosodic word (3.63b).

The relevant data from Haitian Creole vowel elision is shown in (3.64).

(3.64) Haitian Creole

li al ña sinema

he to go to cinema

'He went to cinema'

a.  \([\text{li}]_NP [\text{al}]_VP [\text{[na]}_P [\text{sinema}]_NP]_VP\)

b.  \((\text{li})_w (\text{na})_w (\text{sinema})_w\)  
    (Cadely, 1995)
In the Haitian Creole data exemplified in (3.64), vowel elision and the simultaneous cliticization of the subject pronoun is shown to apply between the subject pronoun and the verb (3.64b) showing that the subject pronoun is a proclitic.

Quebec French exhibits the same phenomenon as Dutch and Haitian Creole as the following type of example in (3.65) shows.

(3.65) Quebec French

Marie elle a une voiture

Marie she has a car

'Marie has a car'

a. [Marie]_{N} [elle]_{NP} [a]_{V} [[une] [voiture]_{NP}]_{VP}

b. (Marie)w (ela)w (yn)w (vwatyr)w

The Quebec French example in (3.65b) also shows a mismatch between the syntactic structure and prosodic structures. The attachment of the cliticization of the subject pronoun (elle) to the verb is both phonological and syntactic.

Based on data from a variety of languages, Marantz (1988) describes cases where independent syntactic constituents show up phonologically as part of a derived word as ‘Morphological MERGER’. For example, in (3.66a), the English auxiliary clitic 'll is syntactically and semantically related to the following verb phrase; however, it affixes phonologically as part of the last word of the subject noun phrase in (3.66b).
(3.66) English

I will go to Milwaukee  (Marantz, 1988)

a. [[I [will] [go to Milwaukee]]]

b. (I'll)ₜₜ (go)ₜₜ (to)ₜₜ (Milwaukee)ₜₜ

Given the interaction between syntactic and phonological structures we have just seen for Dutch, Haitian Creole, Quebec French, and English, a reasonable expectation is that Ivie should pattern the same way. Though, there is no visible process of o-cliticization in Ivie as the examples in (3.62b and c) illustrate, the question then is: can we still consider the subject markers in these examples phonological clitics, since the mismatch observed between phonology and syntax does not affect them?

3.3.2 Segmental integration analysis

Booij (1996b), Lahiri, Jongman and Sereno (1990), and Anderson (1992) propose that the phonological side of cliticization is a matter of prosodic integration into an adjacent word. Booij (1996b)'s arguments for motivating this type of analysis is based on resyllabification facts of Dutch.

According to Booij (1996b), cliticization induces obligatory resyllabification in the case of vowel initial clitics in Dutch. Thus, his interpretation of prosodic integration is based on the fact that the prosodic word is the domain of syllabification. This phenomenon is illustrated in (3.67):
(3.67)a. komt - ie (kom)α (ti)α (Booij, 1996b)

'Come he'

In the example above, the clitic -ie cannot be assigned the status of a prosodic word since it does not form an independent domain of syllabification; but instead, it is integrated into the preceding phonological word (komt 'come') with which it forms a prosodic word.

In Ivie, subject markers are already reduced forms, given that some of their pronominal forms are derivable from their strong counterparts thus making it difficult for us to classify them as either 'simple clitics' or 'special clitics' (Zwicky, 1977 and Anderson, 1992). Consider the examples in (3.68):

(3.68)a. Oti ọ a le olomu

/Oti + ọ + a + le + olomu/

(Oti)w ((0)w (a)w (lolomu)w

Oti 3sg PP ASP eat orange

'Oti is eating orange'

b. eni ikpotso e a le ilomu

/eni + ikpotso + e + a + le + ilomu/

(enikpotso)w ((e)w (a)w (lolomu)w

DET women 3pl PP ASP eat oranges

'The women are eating oranges'
Contrary to the Dutch example in (3.67), the subject markers \( q \) in (3.68a), and similarly \( e \) in (3.68b) have already been reduced to the minimum possible and as such cannot be reduced further despite the availability of environment.

Compared to Quebec French for instance, the first and third persons singular pronouns could be reduced if the following word started with a vowel as the examples in (3.69) show:

(3.69)a. \[ \text{Je ai} \rightarrow (j’ai)w \]
   'I have'

b. \[ \text{Elle a} \rightarrow (ela)w \]
   'She has'

The examples in (3.69a and b) reveal much about the cliticization process in general and, more specifically, in Quebec French. The examples are cases of simultaneous phonological and syntactic cliticization. They also tell us that 'Je' and 'Elle' are proclitics in Quebec French. On the contrary, such an analysis of Ivie subject markers in (3.68) is ruled out. They do not reveal anything about cliticization process. The examples in (3.68) only show the subject markers standing on their own.

However, examples (3.70b and a) show that the word following either the object pronoun or the object noun can lean on them after reduction, as illustrated in (3.70).
(3.70)a. 
/Oti + o + mhɛ + Ogele/

Oti 3sg PST see Ogele

(Ot)w (o)w (H)w (mhOgele)w

'Oti saw Ogele'

b. 
Oti o mhɛ oli

Oti 3sg PST see her

(Oti)w (o)w (H)w (mholi)w

'Oti saw her'

A number of questions can be asked with respect to these examples (3.70a and b):

(i) what is cliticizing - is it the verb or the object?

(ii) if it is the verb, is it a clitic?

(iii) if object, what are the processes involved?

We have posed the foregoing questions to reveal the ambiguity of the term "cliticization".

The examples clearly show that the direct object pronouns are not phonological clitics since vowel contraction has applied to the preceding verbs. This is striking for two reasons. First, direct object pronouns, when postverbal, must immediately follow the verb, suggesting that they are syntactically "leaning" on the verb. Phonologically, however, they do not lean on the verb, but rather are full words in their own right. Second, direct object pronouns share with subject markers the property of being monosyllabic in some cases. Consider the examples from Haitian Creole in (3.71).
(3.71a) /kisa li fe/
word pro VP
[kisal fe]
'What did he do?'

b. /Jan bòkote li/
Jean PREP pro
[Jan bòkotel]
'Jean is near him' (Cadely, 1995)

It is obvious from these examples that personal pronouns get reduced, and cliticize to the lexical item next to them causing obligatory resyllabification. Such a clear case of cliticization is not evidenced in the Ivie examples in (3.68). If the subject marker in (3.68a and b) and the object pronoun in (3.70) were phonological clitics, we would have expected them to behave as the personal pronouns in the Haitian Creole data (3.71a and b).

Evidence from Dutch equally enhances our arguments that Ivie subject markers are not affected by resyllabification rules; they do not get further reduced. For instance, the Dutch example in (3.67) reproduced as (3.72) shows a case of automatic resyllabification motivated by the reduction of the pronoun -ie 'he'.

(3.72) komt - ie (kom)_o (ti)_o
In the resyllabification process in (3.72), *ie* is reduced to *i*, while the consonant *t* forms the onset of the following syllable (ti)ο.

We observe that the pronominal elements in Ivie are not sensitive to phonological rules which affect nouns or verbs in word initial positions. In Ivie, the verb on the left-edge of a word at a word boundary undergoes the resyllabification process. There is therefore no correlation between the syntax of these pronominal elements and the phonological process of resyllabification. Subject markers are already morphologically reduced forms in Ivie, and cannot get further reduced.

It is also predicted by the prosodic integration hypothesis that phonological rules with the prosodic word as their domain also apply to word + clitic combinations (unless such a rule is turned off at the postlexical level (Booij, 1996b)).

For instance, a word domain rule in Dutch deletes schwas before an adjacent vowel. The rule applies both lexically, within words (3.73a), and postlexically, in word + clitic combinations (3.73b); but it does not apply across word-internal morphological boundary in compounds (3.73c).

(3.73) a. words

Romein 'roman' /rome + ein/ [romREPORT]

b. compounds

modeavond 'fashion night' /mede + avont/ *[modavont]

c. word + clitic

pakte ik 'took I' /pakte ik/ [paktik] (Booij, 1996b)
Contrary to the Dutch examples the word domain rule in Ivie applies only postlexically to word + word combinations (3.74a), and across the word-internal morphological boundary in compounds (3.74b), since the constituents form prosodic words of their own. Observe that this rule does not apply to word + subject marker or subject marker + word combinations (3.74c).

(3.74)a. word + word

    eke + okhokho [ekokhokho]
    'egg' 'fowl'
    'chicken's eggs'

b. compound

    oko + ame [okame]
    'vehicle' 'water'
    'boat or canoe'

c. word + subject marker

    i  awulu o la ayə *[awulolayə]*[awulwolayə]
       [awulu o layo]
    shirt 3sg is there
    'A is a shirt there'
ii akpa ọ la ayo *akpolayo
[akpa ọ layo]
cup 3sg is there
'A cup is there'

iii mhêmhe mhi a le eminale  *mhêmhemhaleminala
[mhêmhe mhi a leminale]
I 1sg PP eat meat
'I am eating'

iv oni okpotso ọ o a tuwolo
[onokpotso ọ a tuwolo]
DET woman 3sg PP sing song
'The woman is singing'

v ita mbe ọ bẹ amo *itamhobamo
[ita mbe ọ bamo]
father my 3sg PST come today
'My father came today'

Observe that the rule of vowel deletion is obligatory in the word + word
combinations (3.74a), in compound words (3.74b), whereas it is non-applicable to a
sequence of word and subject marker (3.74ci), or subject marker and aspektual marker
(3.74ciii). Various vowels have been used to show that the vowel quality of these
vowels does not affect their deletability or non-deletability. Given that deletion rules
determine the direction of prosodic integration of clitics in Dutch, French and Haitian Creole. are subjects markers proclitics or enclitics?

Going through the examples already discussed (3.74a & b), and the ones in (3.74c), one notes that despite the fact that deletion is a predominant process in the grammar of the language, it fails to apply in some cases. The word-final vowels of all the noun phrases to the left do not comply to the vowel deletion rule of Ivie. Function words such as q and a (3.74c) do not equally delete. The vowel deletion rule is blocked in such cases.

The rule of vowel deletion is formulated as follows: delete the final vowel of the left-edge of a word before a word-initial vowel of the syntactic constituent on the right across boundaries. The rule applies obligatorily across word boundaries and not within words. Nevertheless, (3.74c) provides instances where apparently legally deletable vowels fail to delete. Generally, three reasons can be advanced in such cases:

(i) syntactic and semantic information could be said to be the determining factor;
(ii) subject markers are inflectional affixes (not subject clitics) such that they do not contract or get prosodically integrated to preceding or following lexical items;
(iii) this could be due to a morpheme structure constraint in the language.

We would have expected the phonological attachment of the pronouns to the left-most edge of the words as is evident in languages like Dutch, or Haitian Creole (enclisis) or to the right (proclisis). In Quebec French, for instance, phonological cliticization, as earlier mentioned, happens each time a subject clitic which ends in a vowel precedes a verb which begins in a vowel. In Ivie, no such process takes place.
This shows that the subject marker does not form a phonological unit with the noun phrase to its left, ruling out the fact that it is an XP clitic.

A possible hypothesis is that what distinguishes between structures in which deletion can apply and structures in which it cannot is a relation of dominance satisfied in cases where deletion does occur and in contexts where it does not. Since the application of vowel deletion is the prosodic word, the relevant sequence Oti ~ q; or q ~ a must be dominated by the same w-node. This is not the case given the definition of dominance (Chomsky, 1986)

\[(3.75) \quad \text{Dominance}^{35}\]

\[\alpha \text{ is dominated by } \beta \text{ if it is dominated by every segment of } \beta.\]

Based on similar examples from Dutch, we assume that in the examples where deletion is blocked, vowels at the left-edge of words (\(\alpha\)) are not dominated in the lowest w-node. Thus, the obligatory deletion of the prosodic words is blocked.

Consequently, since the subject markers cannot be analyzed as encliticizing to the preceding NP or procliticizing to the following item, it follows that they are not phonological clitics.

Though Ivie subject markers are monosyllables, they are not prosodically deficient, since most lexical items in Ivie are monosyllables. Therefore, the minimal prosodic word of Ivie is monosyllabic; the implication of this is that subject markers

---

\(^{35}\) Though 'Dominance' is defined for syntax, we are only applying the basic concept here.
can form prosodic words of their own, and do not have to adjoin to any adjacent prosodic word in order to be prosodically licensed.

The minimal word in Ivie is CV in structure. We note that the word minimality constraints like the type proposed by McCarthy and Prince (1990) cannot be imposed on Ivie. According to McCarthy and Prince (1990), to stand alone, a prosodic word must be minimally bimoraic or disyllabic; except we assume that the minimality requirement of the verb is satisfied through the inflectional prefixes which form the verbal complex which subject markers are part of. As such, a verbal complex could be represented as (3.76).

\[
\text{(3.76)}  \quad \text{PP (Prosodic Phrase)} \\
\begin{array}{cccc}
  & & & \\
  & w & w & w \\
  & \alpha & \alpha & \alpha \\
  & & & \circ \text{TENSE le}
\end{array}
\]

Another relevant rule of Ivie is the rule of Glide Formation. This rule results in a major class change through the process of resyllabification in specific contexts. It also leads to syllable reduction. This rule inserts a glide between two adjacent vowels; the quality of the glide is determined by the first of the two adjacent vowels. In Ivie, this process involves the vowels /i/, /e/, /o/, /u/, which are sometimes realized as [j], while /o/ and /u/ become [w]. The rule applies in two specific environments: (i) within words (3.77a) and (ii) at word boundaries (3.77b) (Masagbor, G.. 1989). Observe that
this rule does not apply between any word and a subject marker (3.77c). Therefore, when items which belong to the same 'closed-system' are in juxtaposition or before a noun, deletion instead of glide formation applies (3.77c).

(3.77)a. pfiolemhi
    b. unu # ena
       mouth cow
       'cow's mouth'
    c. Oti o-kię oli
       [Oti o kjoli] *[Otjkjoli]
    d. afe + ni + ọ + gba
       [afenogba]
       fish REL 3sg big
       'big fish'

Another piece of evidence in support of the non-clitic status of subject markers in Ivie is provided by the example in (3.77d). Observe that vowel deletion can take place in this context without affecting the syntactic structure or the semantics of the sentence. ọ is still referential to the subject noun phrase.

A number of questions arise regarding the data in (3.77d). First, how do we account for the deletion of i before the subject marker? Second, is the attachment of ni to ọ a process of cliticization? If so, what type of cliticization is it? Third, in allowing the deletion of i before it, is the subject marker the host for ni? Does ni constitute a prosodic word since deletion processes only apply across word boundaries in the language?

If we assume, as we would want to, that the subject marker is part of the verbal
complex, then, it can be assumed that \( ni \) is a particle, that is, a weak function word which needs a host to lean on. As such it cliticizes to the verbal complex which is made up of the \([SM + T \text{ or } ASP + \text{ verb}]\).

Another way to analyze this data is to say that the underlying structure is \( oni \ afe \ o \ gba \); and that deletion holds between \( oni \) and \( afe \) before the movement of \( afe \) to a focus position at the logical form. A crucial observation to be made is that the rule of Glide Formation in Ivie does not apply to word + subject marker combination as shown in (3.72c).

The rules just described, that is, Deletion and Glide Formation, only apply lexically because prosodic words are already created at that level (Inkelas, 1989; Nespor, 1990; Booij and Lieber, 1993; PeperKamp, 1995). When new domains of application are created at the postlexical level through the mechanism of prosodic integration, they reapply postlexically (Booij, 1996b). This supports Kiparsky (1985)'s proposal that phonological rules are not necessarily assigned to a particular component or level but may apply at more than one level.

In sum we have come to the following conclusion concerning Ivie subject markers: they are function words that contain a full vowel. Therefore, since they are not prosodically deficient, there is no need to cliticize them; and as such, they can receive a \( w \)-node of their own. The adjunction of these subject markers with full vowels to the preceding or following word also implies that their dominating \( w \)-nodes will be erased since a syllable cannot belong to two prosodic words simultaneously.

In a number of studies on subject pronoun cliticization, the proposal has been
that this process is achieved by the application of the rule Move $\alpha$. This rule suggests that the subject pronoun moves from its base-generated position and adjoins to a verbal projection. It is also assumed within this analysis, that this movement which is rightward occurs late in the derivation (see Kayne, 1984).

These analyses are based on the assumption that subject pronouns must be strictly adjacent to the verb. Therefore, while lexical material can intervene between a non-pronominal subject and a verb (3.78a), this is not possible when this is pronominal as in (3.78b).

(3.78)a. Marie, m'a-t-on dit, est toujours en retard

b. *il, m'a-t-on dit est toujours en retard

(Dufresne and Dupuis, 1994)

However, Kayne's analysis of the rightward movement of the subject pronoun yields an ungrammatical sentence as (3.79) shows.

(3.79) *t_i m'a-t-on dit, il, est toujours en retard.

(Dufresne and Dupuis, 1994)

Such a movement analysis cannot be advocated for Ivie, because in the first instance, subject markers never occur directly before verbs in the language. Consider the examples in (3.80).
(3.80)a. Oti o la be amo
Oti 3sg-FUT-come today
'Oti will come today'

b. *Oti la o be amo

c. Oti o la niania be amo
Oti 3sg-FUT quickly come today
'Oti will come quickly today'

The tree diagrams in (3.81-3.82) summarize the differences between phonological cliticization and contraction.

(3.81)a

V
/ \
N V
|   |
J(e) ai (syntactic and phonological cliticization in French)

Note that the adjunct *Je 'I' is reduced phonologically by a lexical rule. Contraction happens later than cliticization. It is a postlexical rule. This is what is observed between verbs and their direct objects in Ivie (3.82a). A similar process is also observed in English. (see 3.82b).
Given that phonological cliticization results in reduction and subsequent integration of pronominal clitics into adjoining hosts, we posit that Ivie subject markers are not such clitics since they do not participate in any of these processes. They are inflectional morphemes which function as agreement in the language.

Therefore based on evidence from morphology, syntax and phonology that we have just seen, we make the following claims:

(1) Ivie subject markers represent subject ~ verb agreement.
(2) these elements are neither weak nor clitic pronouns.
(3) there are no overt weak pronouns in Ivie.
(4) only one paradigm of pronouns (strong forms) exists in Ivie.

In chapter 4 we shall show that though there is no overt morphological realization of agreement features on Ivie verbs, the information concerning Person and
Number of the verb is encoded in the preverbal subject markers. The mechanisms involved in determining agreement features of different types of noun phrases will be exposed.
CHAPTER 4

4.0 AGREEMENT IN IVIE

In Ivie, subject-verb agreement is sensitive to the relative ordering of elements. This arises in two major configurations. The first involves a simple subject, which precedes the verb as in (4.1a). The second involves a conjoined subject which may precede the verb as in (4.1b).

(4.1)a. noun phrase + verb

b. noun phrase₁ and noun phrase₂ + verb

In the configurations (4.1a and b) the verb agrees with the subject.

Our purpose in this chapter is to examine the working of agreement in Ivie, and provide an account for the agreement pattern in the language. We will argue that the prevailing view where agreement is analyzed as a structural relation between a head and its specifier holds in Ivie.

4.1 The nature of agreement

Agreement (AGR) in syntax is a concord relationship meant to create greater specificity of reference in grammars of languages. Agreement is therefore borne by the
grammatical categories of person and number. In a language like English, for example, the verb agrees with its subject in number and person.

In Ivie, there is agreement between the preverbal subject marker and its antecedent head word or noun. Ivie agreement marking seems to specify person, number and gender relationship. This is explicable in the sense that the main verb is not usually inflected in Ivie. Rather there are modals and auxiliaries that mark for modality and aspect. With such specified functions, the main verb remains uninflected and therefore does not need an intrinsic agreement marking. Thus the sequence AGR - T - Verb attested in Ivie is different from the more frequent sequence, Verb - T - AGR attested in other languages.

In some languages, for example, Ga (a West African language), agreement is invariable. Yet it is possible for agreement to be variable within the same grammar. Generally, agreement has been variously defined as the relationship between a source and a target. This depends on the type of agreement being discussed. Agreement types include object, subject-verb, adjectival, adverbial or determiner-noun agreements among others.

Anderson (1982) points out that, in Avar, adverbs agree with the absolutive noun phrase in their clause in the same way verbs do. Also, in Maori (Anderson 1982), adverbs agree with their associated verbs in showing (or not showing) passive morphology. Napoli (1975) shows that some adverbs that share a root with adjectives in Italian may optionally agree in some environments.

Steele (1990) states that agreement as a condition requires compatibility among
its members. She further contends that "agreement is the formal similarity required for a multi-Word sequence to freely alternate with a simple-Word sequence." Rather than agreement being an addendum to syntactic mechanisms, Steele proposes that the condition on agreement actually creates constituents, that is, the conditions on Agreement are to be interpreted as a function from words to constituents.

Agreement has also been described as a relation between a subject and its head (Aoun, Benjamoun and Sportiche, 1994; Iatridou, 1990). Subject in the above is the specifier of the head V (Kitagawa, 1986; Sportiche, 1988; and Zagona, (1988).

Basing his findings on Welsh data, Rouveret (1991) points out that agreement phenomena in this language support the view that languages may differ as to the way in which the category agreement acquires features either through Spec-Head agreement with an argument realized in its specifier or by incorporation from the specifier of the category it governs. On this basis, Rouveret suggests that a distinction should be made between the distributional and construal properties of agreement and the properties of Spec-Head agreement. He shows that, in Welsh, verbal agreement does not agree with its specifier. He also argues that, in this language, the initial content of agreement depends on the category which agrees, because, at D-structure, verbal agreement contains a person specification while prepositional agreement is empty. Rouveret (1991) further suggests that the fact that agreement acquires part of, or all, its features in the syntax sets it (agreement) apart from the other functional categories.

In his treatment of agreement in West Flemish, Shlonsky (1994) hypothesizes that agreement is the head of a discrete maximal projection. He assumes that
agreement, whether in COMP or elsewhere, is a relationship between a head and its coindexed specifier.

Contrary to this view, Speas (1991) argues that agreement is not a functional head, but a relation between a head and its specifier, in which features of the head and the specifier must match. Carstens and Kinyalolo (1989) also express a similar view based on data from Bantu languages.

Agreement is constrained in some languages. Mahajan (1990) proposes a theory of agreement that interacts with a theory of Case assignment. He postulates an agreement projection (AgP) in X-bar syntax (Chomsky, 1991; and Pollock, 1989) and proposes that specificity is a consequence for object agreement in Hindi.

Sunér (1988) points out that specificity/definiteness and animacy appear to be the prevailing features in agreement processes. But Butt (1993) shows that, although object specificity requires two distinct object positions, as proposed in Mahajan (1990), this difference cannot be correlated with agreement. She shows that, in Urdu/Hindi, both specific and non-specific objects can in fact agree with the verb.

Mohanan (1990), and Gair and Wali (1989) summarize the agreement phenomenon of Urdu/Hindi with the following generalizations:

(i) A verb can only agree with one of its own nominative arguments (agreement is clause-bound)

() If the subject is nominative, the verb agrees with it.

(i) If the subject is non-nominative, but the object is nominative, the verb agrees with the object.
(iv) If there is no nominative argument, the verb carries the 'default' masculine singular morpheme-aa.

According to Chomsky (1995), evidence from interface level shows that agreement is only present for theory-internal reasons, unlike other functional categories.

4.1.1 Basic agreement facts in Ivie

In Ivie clauses, the subject always precedes the verb as in (4.2).

(4.2)a. oni awoshi o de enode
      DET. dog 3sg PST fall yesterday
      'The dog fell yesterday'.

b. *oni awoshi o de enode

c. oni orhe o de enode
      DET. tree 3sg PST fall yesterday
      'The tree fell yesterday'

d. *oni orhe o de enode

In (4.2a and c), the agreement markers o and o, which represent verbal agreement, agree in animacy with the noun phrases oni awoshi 'the dog' and oni orhe 'the tree' respectively. Any random assignment of agreement to inappropriate noun phrases will result in ungrammaticality (4.2b and d).

Given the agreement facts described above, we will show that, in Ivie, the
agreement relation not only applies to subject-verb pairs, but also subsumes the case of a determiner and its head as in (4.3), as well as the case of the postnominal adjective in (4.4).

(4.3)a. oni omose
        b. *oni omose
        DET-man
        'The man'

(4.4)a. ode olile
        b. *ode olile
        cloth red
        'Red cloth'

In (4.3a), the determiner oni agrees with the noun omose 'man', whereas (4.4a) shows agreement between the postnominal adjective olile and the noun ode 'cloth'. In order to be able to subsume (4.3a) and (4.4a) under (4.2), we have to determine the structural configuration under which each type of agreement takes place. Since agreement holds between a head and its phrase, and has to be sanctioned locally, we assume, similar to Aoun, Benmamoun and Sportiche (1994), that:

(4.5) Agreement takes place exclusively in spec-head configurations (an XP agrees with a head Y only if XP is the specifier of Y)
Given the assumption above, what are the relevant levels at which this configuration must be met to license agreement in Ivie (S-structure? LF?). We will make the assumption that in order for agreement to have a morphological reflex, the relevant configuration, whatever it may be, must be satisfied by the syntactic representations interfacing with the phonological component. In other words, we will suppose that the configuration licensing agreement must be met by S-structure.

4.1.2 Agreement and its syntactic correlates

According to Shlonsky (1989), the degree to which a verb is richly inflected has undisputable syntactic correlation in many languages. Therefore, we can say that verbs are fully inflected in Ivie since their subjects precede them. In Arabic, for instance, fully inflected verbs follow the subjects giving rise to SVO word order whereas the semi-impoverished forms appear clause-initial, giving rise to VSO word order.

What the above statement infers is that word order variation, though a syntactic phenomenon, constrains how 'Agreement and Case' are achieved in a variety of languages.

In Ivie, the degree of inflectional richness correlates with the possibility of null subjects. These are permitted in all forms in the language, since every clause is tensed. But in other null subject languages, where there is a distinction between tensed and infinitival clauses, null subjects appear only in tensed clauses.
4.2 Inflectional morphology

The appearance of agreement phrases is not as pervasive in Ivie as in Bantu, where every word has an overt agreement. This notwithstanding, there is overt appearance of agreement on all verbal phrases in Ivie. Why is this so? Our understanding is that, while Case is needed to license XP arguments at LF, agreement is needed to license words at PF. In section (2.2), we presented the structure of the Ivie verb with its inflectional morphemes, and argued that Tense/Mood/Aspect were free-standing morphemes. In this section, therefore, we address the position of agreement projection in the clause.

Pollock (1989) argues that the agreement phrase (AgrP) and Tense (T) constitute distinct heads in the X-bar schema (that is, Xs’s). In Pollock’s structure, AgrP is intermediate between Tense and the verb phrase (VP) as in (4.6).

(4.6) \[ \begin{array}{c}
TenseP \\
\rightarrow \overline{NP} \rightarrow T' \\
\rightarrow AgrP \\
\rightarrow Agr' \\
\rightarrow VP \{ \alpha \text{Gender} \} \\
\rightarrow \{ \beta \text{Number} \} \\
\rightarrow \{ \gamma \text{Person} \} \\
\end{array} \]

Chomsky (1989) modifies this structure and analyzes IPs as maximal projections of Agr-S, the Tense Phrase (TP) as complement of Agr-O, and the agreement
projection in between Tense and the Predicate VP. In this analysis, VP is the maximal projection of Agr-O, as schematized in (4.7).

\[(4.7) \ [\text{Agr-SP}...\text{Agr-S}...[\text{TP}...\text{T}...[\text{Agr-OP}...\text{Agr-O}......[\text{VP}...\text{V}...]]]]\]

According to Pollock (1989) and Chomsky (1993), agreement features could be strong, discharging their function before Spell-Out, or weak, discharging their function after Spell-Out. The satisfaction of agreement would then be a PF interface condition. The discharge of agreement can therefore not take place after Spell-Out during the Spell-Out-LF computation, as it will not be motivated. If the agreement feature is strong, it must discharge its function before Spell-Out, otherwise, an uninterpretable strong feature will be present at LF. A weak agreement feature will be discountable at LF, and can discharge its function after Spell-Out during the Spell-Out-LF computation.

The variation observed by Pollock (1989) between English and French, where the former has raising of V-to-T overtly before Spell-Out, does not involve agreement features as such. Rather, V-to-T raising is driven by the need for event-binding (Pollock, 1989) or for V to have a T feature checked or discharged in V (Chomsky, 1993).

Strong agreement correlates with pro-Drop. Pro-Drop does not occur in English or French, but does occur in Ivie, as well as languages with overt agreement morphology such as Bantu languages (Demuth and Gruber, 1995) and Italian (Rizzi, 1986).
Given the basic principles of Distributed Morphology outlined in Halle and Marantz (1993), we can account for the surface morphological differences between Ivie and French based on the strong/weak distinctions of agreement features. In the Halle and Marantz (1993) framework, the process of "Spell-Out" may include "readjustment" of feature-morpheme mappings. Readjustment may involve either "merger" or "fusion", both occurring under conditions of morpheme adjacency and executed after Spell-Out. We assume like Demuth and Gruber (1995) that merger is a process of head-adjunction in the PF computation, resulting in heads occupying distinct nodes, maintaining their morphological identity. The head-incorporation that takes place before Spell-Out is similar, except that it requires c-command, not adjacency, and leaves a trace, while merger requires adjacency and leaves no trace. Fusion, on the other hand, is also a process in the PF computation requiring adjacency, but it reduces heads to a single terminal node representing a complex of features.

Therefore, in Ivie, strong agreement features must be discharged before Spell-Out by head-movement or incorporation resulting in a sequence of adjoined heads. With strong agreement features satisfied, further computation in the Spell-Out-PF computation, becomes impossible, such that the components of Agr-T-V appear as separate formatives.

From this analogy, it is evident that in Ivie, the Tense/Aspect/Mood markers will always be distinct from the lexical head (for example, V). The same analysis applies to the agreement marker. It will also be distinct not only from the lexical head V, but also from Tense/Aspect/Mood markers. So, in principle, there will always be
three morphemes per verbal complex in Ivie, although some morphemes may be phonologically null (for example, Past); whereas in French for instance, there may be two or three morphemes per verbal word. The following examples in (4.8) illustrate these contrasts.

(4.8)a  
Oti o a be  (Ivie)
Oti Agr PP come
'Oti is coming'

b.  
Oti o la be
Oti Agr FUT come
'Oti will come'

c.  
Marie vient  (French)
Marie come-PRES/3sg
'Marie comes'

d.  
Marie viendra
Marie come-FUT-3sg
'Marie will come'

The examples above show that in French, V will always be separate from T, although T and Agr may be fused (4.8c). Therefore the surface realization of agreement (Agr) and Tense (T) markers is determined by language-particular strategies for satisfying PF conditions: Head movement, or incorporation, occurs early (that is, before
Spell-Out) in Ivie, and later in French. LF and PF interface conditions therefore constrain X3-movement and surface realization of the basic structure of the agreement phrase in Ivie.

4.3 The structure of agreement

Agreement phenomena have been recently analyzed as Number phrases (Ritter, 1993 & 1995) and Person/Number/Gender phrases (Shlonsky, 1989) among others.

Given the relative independence of person, number and gender in Hebrew, Shlonsky (1989) proposes that person, number and gender each head a distinct syntactic projection, thus providing three separate agreement phrases, that is, Per(son)P, Num(ber)P, and Gen(der)P. In his analysis, all sentences are maximal projections of person phrase. The complement of person phrase is TP, which in turn dominates the other agreement projections, as depicted in (4.9).

(4.9) \[ PerP \ldots Per \ldots [Tp \ldots T \ldots [NumP \ldots Num \ldots [GenP \ldots Gen \ldots [VP \ldots V \ldots ]]]]]

Although Ritter (1995) assumes, like Chomsky (1980) and Shlonsky (1989), that agreement which manifests person is the head of its clause, she departs from their proposals, and claims that the syntactic category of agreement is DP, instead of AgrP or PerP. She claims that DPs occur only in clauses that are inflected for person (that is, past/future tense clauses) in Hebrew. In present tense clauses, where verbs agree with their subjects in number and gender only, Ritter (1995) proposes that the category
of agreement is NumP, which is realized as the complement of Tense as in (4.10).

(4.10)  
\[
\begin{array}{c}
\text{NumP} \\
/ \ \ \ \\
\text{spec} \ \ \\
/ \ \\
\text{Num} \ \ \\
/ \ \\
\text{TP} \\
/ \ \\
\text{T'} \\
/ \ \\
\text{T} \ \ \\
\end{array}
\]

As it stands, (4.9) and (4.10) fail to articulate any internal structure for agreement in Ivie, since they treat the representations of the phi-features of agreement as consisting of discrete affixes with discrete syntactic representations, depending on word order/tense. Since clausal structure does not vary across tenses in Ivie, like in Hebrew (Shlonsky, 1989; Ritter, 1993 & 1995) and Arabic (Shlonsky, 1989), we adopt the following proposition (4.11) which is a modification of one of the "Implicational Hierarchy of Agreement Features" proposed in Shlonsky (1989):

(4.11) If an Ivie verb is inflected for person then it is inflected for number and animacy even in cases where the feature [±animate] is not overtly marked.

We assume that 'agreement' in Ivie represents a syntactic function of the category Agr-S. Agr-S is a single node containing the features in a bundle as in Pollock (1989). This is illustrated in (4.12).
Given (4.12) and the basic tenets of Distributed Morphology of the type outlined in Halle and Marantz (1993), we assume that in Ivie, the Tense/Aspect/Mood markers are distinct from the lexical head (for example, V). We also assume that an agreement marker is equally distinct from Tense/Aspect/Mood makers, since only syntactic incorporation has taken place. So, in principle, one will expect a verbal complex in Ivie to contain at least three distinct morphemes one of which must be agreement: Agr < T < V; Agr < NEG < T < V; Agr < ASP < V and Agr < Mood < V. We also assume, following the proposal by Zagona (1988), Koopman and Sportiche (1991), and Kitagawa (1986), that the thematic subject is generated VP-internally as in (4.13).
4.4 Possible analyses

The hypothesis in (4.5) will be exploited, namely, that the factor conditioning agreement in Ivie is established by S-structure of an appropriate spec-head relationship.

4.4.1 Subject-Verb agreement in Ivie

Before we delve into the analysis of subject-verb agreement in Ivie, let us briefly present the structure of the Ivie verb, though a detailed description of it has been given in (2.2).

4.4.1.1 Verb structure

Consider the following sentence in (4.14):

\[(4.14) \quad \text{Oti} \, o \, la \, be\]

\(\text{Oti 3sg FUT come}\)

'Oti will come'

In (4.14) above, the verb is \textit{qalabɛ}. It forms a complex morphological item, made of the following constituents: the agreement marker \(q^{-}\), the tense marker \(la^{-}\), and the verb stem \(be\). So the verb stem in (4.14) has the following linear structure in (4.15):

\[(4.15) \quad \text{[AGR-Tense-[Verb stem]]}\]
The verbal complex contains the verb stem, and attached to it from left to right are the agreement marker \( q \), and the tense marker \( la \). Where would the negation marker fit in this picture? An illustration of the position occupied by negation is provided in (4.16).

\[(4.16) \quad \text{Oti } q \quad \text{va la be amo} \]
Oti 3sg NEG FUT come today
'Oti will not come today'

The negation morpheme in Ivie always occurs before the verb stem. Tense occurs between negation and the verb stem as in (4.16).

### 4.4.2 Spec-Head agreement with lexical subjects

Consider the structure in (4.17) below:

\[(4.17) \quad \text{XP} \]
\[\quad / \quad \backslash \]
\[\quad Y \quad X' \]
\[\quad / \quad \backslash \]
\[\quad X \quad Z \]

We know that in \( X' \) theory shown in (4.17), we have two relationships: head-complement and Spec-head. It is the standard assumption that AGR appears in a Spec-head relation. Therefore:
(4.18a). What type of heads are involved in Spec-head relationship (agreement) in the language?

b. Are they lexical (4.19a) or functional heads (4.19b)?

(4.19a)

```
VP
  / \  
subject V'
  / \  
  V  object
```

(4.19b)

```
FP
  / \  
subject  / \  
  F?
```

In (4.19a) we have a configuration Spec-head: and the question is, why do we not have agreement on the verb?

Given the hypothesis that only functional heads can trigger agreement, such that, we cannot have agreement on a verb which is lexically marked: (i) which features do these functional heads have in Ivie?; and (ii), by what grammatical process do verbs acquire agreement under Spec-head configuration?

We will argue that the frameworks described in (4.2) provide us with a more or less principled and explanatory account of this phenomenon (that is, subject-verb agreement) based on the assumption that verbs do not move in the syntax (head-movement), but originate as verbal complexes at the logical form.

The kind of agreement under consideration is the result of a relationship between
a head and a specifier. The subject in the specifier position of the agreement phrase agrees with Agr. In Ivie, there is an agreement marker that dictates agreement in the verb. This marker is fully specified for person, number and animacy, whose values are supplied in (4.20).

(4.20) NUMBER: one element singular
more than one plural

PERSON: [+Participant, + Speaker] I
[-Participant, - Speaker] I

+ANIMATE: [Human/Nonhuman] Masculine/Feminine /Animals

-ANIMATE: [Nonhuman] only

(4.20) summarizes the correlations between the morphosyntactic features of an agreement marker and the properties of its discourse referent (that is, the agreed with element). Given the morphosyntactic features spelled-out in (4.20), the agreement markers can be represented as in (4.21).

(4.21)

mhi 'I': [[NUM: SG], [per: I], [ANM: Human]]
u 'you': [[NUM: SG], [per: ], [ANM: Human]]
Having presented the feature specifications of the agreement markers, we can represent the inflectional paradigm of the finite verb forms as in (4.22), where each distinct verb form is characterized by exactly one distinct agreement marker. The verb le 'eat' is used for illustrative purposes.

\[
\begin{align*}
(4.22) & \\
\text{mhi le} & \quad \text{'i eat'} \\
\text{u le} & \quad \text{'you eat'} \\
\text{o le} & \quad \text{'he/she eats'} \\
\text{eye le} & \quad \text{'we eat'} \\
\text{vha le} & \quad \text{'you eat'} \\
\text{e le} & \quad \text{'they eat'}
\end{align*}
\]

Consider the examples in (4.23).

\[(4.23)a.\quad \text{Ogele o vu}
\]

Ogele 3sg PST go

'Ogele left today'
b. Ogele ọ she vu
Ogele 3sg ASP go
'Ogele has gone'

c. oni omose ọ kà vu
DET. man 3sg COND go
'The man should go'

d. eni emose e kà vu
DET. men 3pl COND go
'The men should go'

In the sentences above, we observe that the agreement marker agrees for all its grammatical features with the subject noun phrases in subject position. (4.23a and b) are singular referents hence the agreement morpheme ọ in both examples has singular referents; (4.23c) has a plural referent. In these sentences, for the correct anaphoric relationship, the correct number concord for both the referent nominal head-word and the agreement morpheme has to conform.

The complement of Agr-S is either a T(ense) P(hrase) as in (4.23a), an A(spect) P(hrase) as in (4.23b), or a M(ood) P(hrase) as in (4.23c and d) respectively. This analysis complies with the assumption that agreement commonly stands as a Spec-Head relation. Consider the tree structure of (4.23b) presented in (4.24).
(4.24)

\[ (\text{AgrsP}) \]
\[ / \]
\[ \text{Ogele, Agr'} \]
\[ / \]
\[ \text{Agr} \quad \text{AspP} \]
\[ / \]
\[ / \]
\[ \text{q} \quad \text{Asp'} \]
\[ / \]
\[ / \]
\[ \text{Asp} \quad \text{VP} \]
\[ / \]
\[ / \]
\[ \text{she} \quad t_i \quad V \]
\[ / \]
\[ / \]
\[ \text{vu} \]

The syntactic representation of (4.23b) illustrated in (4.24) clearly depicts the position of agreement (in Ivie) in relation to the other inflectional markers in the language. It also reaffirms an earlier statement that agreement always occurs before these morphemes in Ivie.

The subject noun phrase, on the other hand, can be dropped in each of the examples (4.23a-c); the sentences in (4.25) are interpreted as having a null pronominal subject in line with (Rizzi, 1986). This pronominal null subject agrees in all phi-features with the agreement marker.

(4.25)a. \( pro \quad q \quad \text{she be} \)
\[ 3\text{sg ASP come} \]
'He has come'

b. \( pro \quad q \quad \text{ka vu} \)
\[ 3\text{sg COND go} \]
'He should go'
c. \textit{pro e ka vu}

3pl COND go

'They should go'

It is often argued that the agreement marker, in addition to marking for concord, is also a bearer of tense and aspectual function in the suprasegmental phenomenon of tone. Thus it marks a different relationship, cataphoric with the verb which ordinarily is not inflected. See the examples in (4.26).

(4.26)a. Oti ṣe lè afe
Oti 3sg eat fish
'Oti eats fish'

b. Oti ū lè afe
Oti 3sg PST eat fish
'Oti ate fish'

c. Oti ó shé lè afe
Oti 3sg ASP eat fish
'Oti has eaten fish'

d. Oti ū sa khi Ogele ū le afe
Oti 3sg ASP think that Ogele 3sg ASP eat fish
'Oti thinks that Ogele eats fish'
The examples in (4.26) provide an adequate and systematic account of the contribution of the inflectional affix of a finite verb to the meaning of the sentence it heads. The structures in (4.26) also capture the fact that the person and number part of the inflected verb precedes and is independent of the tense/aspect part of it. That is, in the surface structure, the tense and aspect morphemes follow the agreement morpheme \( o \), though it is T(ense) which imposes restrictions on the nature of Agr(eement) (that is, the tonal markings it bears reflect each tense). We do not find forms such as (4.27) with tense morphemes preceding the agreement morphemes.

(4.27) \begin{align*} &\ast \text{Oti la } o \text{ le afè} \\
&\text{Oti FUT 3sg eat fish} \end{align*}

Verbs in the subjunctive form do not select tense/aspect but nevertheless show full obligatory agreement with the subject. Subjunctive verbs will appear in embedded contexts, where the infinitive is used in French and English. This is exemplified in (4.28). We note that subjunctive in Ivie is marked in the CP and is triggered by the verb in the matrix (want) which selects the C (khi).

(4.28) \begin{align*} &\text{Oti } o \text{ nono khi } o \text{ le afè} \\
&\text{Oti 3sg want that 3sg eat fish} \\
&'\text{Oti wants to eat fish}' \end{align*}
An example of this sentence (4.28) in French is given in (4.29).

(4.29) Oti veut manger

'Oti wants to eat'

Observe that the verb *manger* 'eat' is in the infinitive contrary to what is presented in Ivie in (4.30) below.

Participle agreement seems to be nonexistent in Ivie. Note that in the language any [+tense] construction shows full agreement with the subject. Participles generally show no agreement with the subject. Consequently, the case cannot be attested in the language. Ivie, however, contains the combination of the features [-tense, -person] as in (4.30).

(4.30) na ro gbe ogbo o vha ti

for to kill someone 3sg NEG good

'To kill someone is bad'.

### 4.4.3 Agreement in appositive structure

In some complex sentences where the nominal element is an antecedent element of an agreement marker followed by another pronominal element in appositive relationship with the head-word, there is agreement of number and person. This is the phenomenon of embedding. Here, there is an element of spread of agreement. Consider
the examples in (4.31).

(4.31)a. Oti ṣi kí le a bale
Oti 3sg say she PP come
'Oti says she is coming'

b. Ogele alí Oti e kí wẹwẹ a bale
Ogele and Oti 3pl that they PP come
'Ogele and Oti say they are coming'

In (4.31a) ṣi is in number, person and animacy agreement with Oti and at the same time in those same features with le. The same process is applicable in (4.31b) where the agreement marker e agrees with the subject antecedent and this agreement spreads to 'wẹwẹ' which now involves both number and person agreement.

4.4.4 Elimination of preverbal pronominal test

Consider the data in (4.32).

(4.32)a. eni ivhie e bale
DET children 3pl PST come
'The children came'

b. *eni ivhie bale
c.  Oti ゲ she dzele
   Oti 3sg COMPL. return
   'Oti has returned'

d.  *Oti she dzele

e.  Oti ゲ ma ti
   Oti 3sg very good
   'Oti is very good'

f.  *Oti ma ti

Earlier in the chapter, we established that preverbal pronominal element as a function word helps to establish specificity of meaning through agreement marking; when it is eliminated from a sentence, the possible effects are contextual ambiguity and/or ungrammaticality. Thus (4.32a and b) above differ in that in (4.32b) the agreement marker has been dropped. The result is semantic ambiguity. One meaning is an imperative sentence while a second is meaningless. Similarly, between (4.32c and d) there is either ambiguity or outright ungrammaticality. We observe that when the agreement morpheme ゲ is also dropped from sentence (4.32f), it becomes meaningless.

4.4.5 Modal adjunction test

In this section, a similar test like the type administered in (4.4.3) is tested against a different material which is exemplified in (4.33).
(4.33)a. Ogele o ma yese
Ogele 3sg much know
'Ogele knows much'

b. *Ogele ma yese

c. Ogele o nwema yese
Ogele 3sg very know
'Ogele knows very much'

d. *Ogele nwema yese

In (4.33b and d), the statements are either ambiguous or devoid of meaning. There is an intensifying function between the agreement marker, the modal and the verb. So, when the agreement morpheme is dropped, there is a break in meaning as the modal cannot modify the verb.

4.4.6 Agreement and conjunction

When the entire conjoined phrase is preverbal, the verb usually agrees with it in Ivie. For example, coordinate noun phrases of the form in (4.34b), trigger first person plural agreement because of the properties of its discourse referent and not because of the morphosyntactic features of the conjuncts.

(4.34)a. Oti ali eni ivihe e bẹ apẹ amo
Oti and the children 3pl PST come home today
'Oti and the children came home today'
b. mhẹmhe ali Oti eyẹ mhẹ Ogele oki
   I and Oti 1pl PST see Ogele market
   'Oti and I saw Ogele in the market'

c. gie ali le vha she le eminele pfuse?
   you and he 2pl ASP eat food finish
   'He/she and you have you finished eating?'

Since the agreement features of a coordinate noun phrase depend on the properties of its discourse referent, examples such as these are straight-forwardly accounted for.

4.4.7 Agreement with predicative adjectives

Agreement with predicative adjectives is a different matter, as predicative adjectives do not attach to an NP. Predicative adjective agreement is often assumed to be a form of Spec-head agreement, with the subject originating in Spec AP and raising to a higher specifier, making it similar to subject-verb agreement. In Ivie all predicative adjectives are inflected. This is shown in (4.35).

\[(4.35)a.\] oni awoshi o gba a' eni iwoshi e gba
the dog 3sg big the dogs 3pl big
'The dog is big' 'The dogs are big'
b. ode mhe o somote  b' ede mhe e somote

cloth my 3sg beautiful    clothes my 3pl beautiful

'My cloth is beautiful'    'My clothes are beautiful'

The examples discussed in (4.23) - (4.35) demonstrate that agreement exclusively operates under the specifier-head relationship. We observe that the agreement marker in Ivie, agrees in number with the adjacent subjects be they [+animate] or [-animate].

Let us now examine the structure of different noun phrases and the role of agreement.

4.5 Head-Modifier agreement

Like agreement in the clause, head-modifier agreement is obligatory in Ivie. The modifiers must agree with the adjacent noun phrase in the semantic features [+animate].

In Ivie, there are two kinds of Head-modifier agreements depending on the type of modifier. The first involves agreement in numeral and concordial classifiers.

The second kind of Head-modifier agreement involves obligatory agreement in the semantic opposition [+animate]. This type of agreement is obligatory with demonstrative pronouns as modifiers. However, it will be shown that the type of agreement exhibited under Head-modifier complies with the basic assumption that agreement commonly stands as a specifier-head agreement in different phrases.
4.5.1 Agreement in numeral classifiers

In the context of noun plus numeral constructions, nouns agree with the numeral classifier in the expressions of quantity. The examples in (4.36) illustrate this.

(4.36)a. owa ogwo a' ewa eva
    house one houses two
    'One house'

b'. omose ogwo emose ava
    man one men two
    'One man'
    'Two men'

We observe that, in the examples above, the noun not only agrees with the numerals in the expressions of quantity but also in the semantic feature [±animate]. The numerals 'one' and 'two' have to express the gender, that is, the animacy of the nouns for which they are modifiers. Since owa 'house' in (4.36a) is [-animate], ogwo 'one' is also [-animate]. The same process applies to omose 'man' in (4.36b). The same distinction, that of animacy is carried over to the plural forms. This is contrary to what is standardly observed in other constructions in the language, where the feature [animate] is usually neutralized in the plural.

Given our postulation that agreement is only triggered in a specifier-head relationship in Ivie, how do we account for the type of agreement relation observed in (4.36)? Do we have agreement in adjunction configuration? In the phrase owa ogwo
'one house', what is the structure of the noun phrase (owa) and the quantifier phrase (ogwo) since there is agreement between the two? Is the quantifier phrase an adjunction? Consider the tree structure of (4.36a) owa ogwo 'one house' in (4.37).

(4.37)  
QP
  / \  
NPi Q'  
| / \  
owa Q NPi  
|    
ogwo

We assume that the NP owa 'house' moves from the complement of Q to its specifier position leaving a trace which must meet the ECP. Let us assume, also, that the antecedent government of the trace is met by coindexation with the noun phrase in [spec QP]. This movement is internal to the quantifier phrase. If this analysis is correct, the outcome results in a Spec-head agreement.

4.5.2 Determiner-noun agreement

Morphological concord within noun phrases is common cross-linguistically. Bantu languages are typical in this respect. In the examples in (4.38), the determiner has a morphological form that varies with the grammatical class that is, [±ANIM(mate)] of the noun.
Observe that in the plural (4.38b and b'), the animacy distinction is neutralized. This, of course, does not rule out the fact that they are not distinct in terms of the feature [animate]. Despite the fact that this is not indicated in the plural, we assume its presence.

Early generative accounts of such concord relationships as observed in (4.38) generally involved simply writing a rule to spread features or the like (cf. Chomsky, 1965). We assume that the type of agreement that holds between the determiner and noun be subsumed under spec-head agreement.

We will assume the DP hypothesis as laid out in recent work (Abney, 1987). Specifically, we assume that all (arguments) 'noun phrases' are headed by a functional category D, represented in Ivie by the class of determiners. In the usual case, D selects an NP complement. This is exemplified by the structure in (4.39).
Given that D selects an NP complement, the various restrictions holding between
D and the noun phrase it subcategorizes for follow straightforwardly. For example, the
determiner *oni or oni 'the' selects an NP with the feature specification [+count], as in
(4.40a). It is illicit with a [-count] NP, as in (4.40b). Similarly, we may posit a null
determiner that selects an NP that is [-count] as in (4.40c-d), where (4.40c and c') are
bad as arguments.

(4.40)a.  

oni omose  a'.  oni orhe
'The man'

b.  *oni ame  b'.  *oni ekhasé

c.  *omose  c'.  *orhe

d.  ame  d'.  ekhasé

'Water'

'Sand'

We note that if a noun phrase contains a specifier oni/oni 'the' as in (4.40a and
a'). Spec-head agreement will relate the two agreement features in the specifier and the
head position. omose 'man' and orhe 'tree' are (singular) count nouns, which means
that they cannot occur without a specifier, as shown by the contrast in (4.40c and d)
above, with *ame* 'water' and *ekhase* 'sand' in (4.40d).

The question, of course, is why count nouns without specifiers cannot appear in argument position, and why [-count] nouns can.

We assume that noun phrases (or the chains they head) cannot be theta-marked unless they are specified for the feature [+NUM] or [-NUM]. We can state this in (4.41):

\[(4.41) \quad \text{Noun phrases cannot be theta-marked unless they are specified for} \quad [+\text{NUM}] \text{ or } [-\text{NUM}]\]

Given that a singular count noun does not contain the feature [-NUM] by itself, it follows that it cannot be case-marked, unless it is specified between a determiner, inducing the feature [+NUM] through Spec-head agreement. This accounts for the contrasts in (4.40a and d). In the case of (4.40c and d), we are invited to assume that the mass nouns *ame* 'water' and *ekhase* 'sand', which can occur in Case-positions without specifiers, contain the feature [-NUM], that is, are specified as in (4.42).

\[(4.42)a. \quad \text{ame} [N \text{ [N ame]} [Agr: -\text{NUM}, -\text{ANM}]]\]
\[b. \quad \text{ekhase} [N \text{ ekhase}] [Agr: -\text{NUM}, -\text{ANM}]]\]

Given the DP structure that we adopted, why are there agreements in (4.38a and b) since the DPs *oni* and *oni*, and *eni* are not in a Spec-head relation with the NPs
$qmose$ and $orhe$? Given that the nouns $qmose$ 'man', $orhe$ 'tree', $emose$ 'men' and $erhe$ 'trees' are not in the specifier position of the DP, is head-complement agreement possible?

One possible way of explaining the agreement relations observed in (4.38a and b), is to say that agreement between the determiners and nouns follow from LF movement as shown in (4.43).

\[
\begin{array}{c}
  \text{DP} \\
  \begin{array}{c}
    \backslash \\
    t_i \\
    \backslash \\
    D' \\
    \begin{array}{c}
      \backslash \\
      D \\
      \begin{array}{c}
        \backslash \\
        \text{oni} \\
        \text{omose}_i
      \end{array}
    \end{array}
  \end{array}
\end{array}
\]

The assumption is that, after spell-out, there is abstract movement of the NP for agreement under Spec-head, since only Spec-head relation allows agreement and not head-complement in Ivie.

4.5.3 Demonstratives and agreement marking

What we call "demonstrative" here, for instance, are those grammatical elements such as $onal/onalena$ 'this/these', and $qyo/oyo/eyo$ 'that/those' which can be adjoined to the NP in Ivie. Such grammatical elements are marked for agreement with the NPs they are coindexed with. For example, the phrases in (4.44) illustrate how this system operates.
These demonstrative pronouns, like the numerals and determiners, signal the definiteness of the noun. Even though demonstratives in actual fact are not preverbal pronominals, they nonetheless maintain an agreement relationship with the head word in specifier position in number and animacy. The exclusion of such a demonstrative with a noun phrase leads to ungrammaticality as (4.44c) shows. The movement analysis proposed for determiner-noun agreement is similar to those of demonstratives, the only difference being that the movement of the noun phrase to Spec DP is overt in the syntax. Consider the tree structure of (4.44a) in (4.45).
4.6 Wh agreement

Ivie has a variety of Wh-constructions: constituent questions, relative clauses and focalization. All have the familiar properties identified by Chomsky (1977) as diagnostic of syntactic Wh-movement. These constructions exhibit a gap which can be related to its antecedent across an apparently unbounded distance but the antecedent must observe islands. Following Chomsky (1986), we assume that the antecedent-gap relation is created by movement of some element to the specifier of CP or FP. The extracted element (or operator) is overt in all constructions. How is the Wh-agreement to be accounted for?

Since Chomsky (1986), the prevailing Government-binding (GB) Theory view of morphological agreement has been that it reflects the syntactic relation of spec-head agreement that links a functional head to its specifier. Rizzi (1990) in particular suggests that syntactic agreement of $C^0$ with its specifier plays a prominent role in the licensing of Wh-constructions. Given this, one might hope to be able to analyze Wh-agreement, and all instances of the morphology of extraction, as language-specific manifestations of spec-head agreement with $C^0$ or $F^0$. This is explored further in the remainder of this section.

4.6.1 Wh-questions

Spec-head agreement is possible with Wh-phrases in Ivie. Extraction is created when the Wh-subject is fronted in questions or focalizations. When the subject argument is moved, the agreement marker agrees in person, number, and animacy with
the features of the Wh-phrase. Such examples are given in (4.46).

(4.46)a. Oti o dze oki

Oti 3sg PST go market

'Oti went to the market'.

b. ogwo, [e], o dze oki?

who 3sg PST go market

'Who went to the market'?

c. oki oni ogwo Oti o dze t,?

market the one Oti 3sg go

'Which market did Oti go to?

d. *Oti o dze oki oni ogwo

(4.46b and c) illustrate the fact that Wh-questions require the movement of the Wh-element to a specific position immediately to the left of AgrsP. Movement to this position is obligatory and Ivie does not allow Wh in-situ strategy as shown by the inacceptability of (4.46d). The variable left behind by the Wh-movement in (4.46b) is antecedent governed by the Wh-element. Koopman and Sportiche (1986) refer to pronouns in Wh-constructions like the one in (4.47) as resumptive pronouns in Vata if the target of extraction is in subject position; otherwise, if it is the direct object, a trace occurs in the extraction site (4.47b). This could be one way of analyzing them. However, they are analyzed as agreement markers in Ivie.
(4.47)a. àló ò/ *[e] nU mI là (Koopman & Sportiche, 1986)
who he-R did it WH
'Who did it'?
b. yi kɔfi nU [e] là
what did WH
'What did Kofi do'?

Observe that the empty category (pro) apart from being antecedent governed by
the Wh-element, is simultaneously licensed by Agr-S. Since CP is the domain of Wh-
questions in Ivie, the representation in (4.48) is proposed for (4.46b).

(4.48) CP
   / \ 
  XP C' 
 [ +Wh ]i / \ 
   C0 AGRsP 
    / \ 
   [e]i Agr' 
    / \ 
   Agr TP 
    / \ 
   O T' 
    / \ 
   T VP 
   PST / \ 
   t_i V' 
    / \ 
   dze oki
4.6.2 Agreement and relative clause construction in Ivie

Relativization is assured in Ivie by the relativising morphemes *na* or *ni* in the contexts of a nominal, locative and a temporal antecedent. It is a common syntactic fact that the relative clause in language agrees with its antecedent in number and in person. This is an expected phenomenon as the relative clause only seems to specify the referent antecedent. In Ivie, the fact that the relativiser is the same all through makes it easy to establish agreement relation with its antecedent. The relationship of number and person is borne by the noun complement of the embedded clause to which the relative is adjoined. This is illustrated in (4.49).

\[(4.49)a. \quad \text{o}m\ddot{\text{o}}\text{se }[\text{n}i[t, \_ \_ bale} \\
\quad \text{man } \text{who} \quad 3\text{sg PST come} \\
\quad \text{'}The man who came'\]

\[(4.49)b. \quad \text{em}\ddot{\text{o}}\text{se }[\text{n}i[t, \_ \_ bale} \\
\quad \text{men } \text{who} \quad 3\text{pl PST come} \\
\quad \text{'}The men who came'\]

As a rule it does not always follow that the complement and the antecedent are co-referential. When such is not the case, then the agreement relationship does not hold, as in (4.50).
(4.50) omose ni eye mhe
man who we PST see
'The man who we saw'

As regards word order structure in the Ivie relative construction usage, we notice that all Ivie relatives are post-antecedent placed except in the compound forms where the relative particle is fused with the nominal element as in ashini 'where'. Within the relative, however, the relativiser is always prenominally placed whether the NP in the clause is subject or object. Some examples of these are given in (4.51).

(4.51a) emena ni Oti q li
the thing which Oti 3sg PST do
'What Oti did'

b. omose, ni ti q mhe Oti ...
man who 3sg PST see Oti
'The man who saw Oti'

c. omose ni Oti q mhe
man who Oti 3sg PST see
'The man Oti saw'

In the above sentences Oti in (4.51a and c) is in subject position while Oti in (4.51b) is in object position.
4.7 Agreement and verb movement

4.7.1 Adverb placement

One of the standard tests for verb raising is the placement of VP adverbs. This was illustrated in section (4.2) of chapter two. In Ivič, the adverb is base-generated on the VP, such that there is no possibility of verb movement. Consider the examples in (4.52).

(4.52)a. Oti opleft go market

'Oti often goes to the market'

A similar example in French shows that V moves to Agr over the adverb in the syntax, giving the order verb - adverb - object, as in (4.53).

(4.53) Jean embrasse souvent Marie

Jean kisses often Marie

Costa (1996) also provides evidence from Portuguese for the existence of short-verb-movement (that is, movement up to a functional projection which is not the highest in the structure) by assuming that the same adverb can be base-generated in different positions. Let us consider the examples in (4.54).
(4.54)a. O Paulo beija frequentemente a Maria (Portuguese: Costa, 1996)
    the Paulo kisses often the Maria

b. O Paulo frequentemente beija a Maria
    'Paulo often kisses Mary'

According to Costa (1996), the verb in (4.54a) has moved to an intermediate
position based on minimalist assumptions. Though the structure in (4.54a) corresponds
to that of French in (4.53), we note that (4.54b) does not exist in French (4.55a), just
as (4.54a) does not exist in Ivie syntax. Ivie disallows a VP-adverb to appear between
a verb and its object as (4.55b) exemplifies.

(4.55)a. *Jean souvent embrasse Marie
    Jean often kisses Marie

b. *Oti 3g go often market

c. *Oti kele 3g go market

The fact that the verb does not move over the adverb in Ivie accounts for the
ungrammaticality in (4.55b) while the reverse is the case in the French example
(4.55a). On the other hand, if an adverb or any other lexical material is allowed to
intervene between the noun phrase and the agreement marker as in (4.55c),
ungrammaticality sets in because the agreement marker ə must be obligatorily adjacent to the local subject noun phrase (Otɪ) with which it shares all the phi-features [αGender, βNumber and Person]. This accounts for agreement under a spec-head relationship being argued for. This being the case, (4.53a) will be represented as (4.56).

(4.56)  
AgrsP  
/ \  
Otɪ Agrs'  
/ \  
Agr AdvP  
| / \  
ə Adv'  
| / \  
Adv VP  
| / \  
kele t'i V'  
/ \  
dze oki

The verb does not move to Agr in the syntax overtly to check for its morphological features but remains in place.

4.7.2 The placement of negation

The agreement marker always precedes the negation marker, indicating that AGR is realized in a projection higher than the NEGP and TP. Some examples are given in (4.57).
(4.57)a. Oti o be
Oti 3sg PST come
'Oti came'
b. Oti o vha be
Oti 3sg NEG T come
'Oti did not come'

In Ivie, NegP is sandwiched between AgrsP and TP as (4.58) illustrates.

(4.58) AgrsP > NegP > TP

The postulation of (4.58) forces us to address the issue of morpheme ordering. Since the V in Ivie does not raise in Syntax to Agr-S, what explains the ordering "NP - Agr - vha - TP - V"? The answer is that, in compliance with the Theory of Distributed Morphology discussed in Halle and Marantz (1993), the necessary movements take place at LF, that is, after spell-out. Moreover, the head of NegP (vha) blocks the overt movement of V to Agr-S. Thus, an example like (4.56b) has the representation in (4.59). (See chapter 2 for negation and verb movement in Ivie).
4.8 Concluding remarks

Ivie shows certain strategies for grammatical marking of discourse properties of constructions in verbal agreement:

(i) in Wh-questions in which the identity of the subject is questioned;

(ii) in relative clauses in which the head of the relative clause functions as agentive subject

(iii) when agentive subjects are modified by a number of quantifiers.

Agreement morphemes are obligatory in all these constructions since they mark agreement between the subject and the verb or the head and the modifier. Finally, the agreement patterns observed in these constructions are consistent with our proposal that agreement in Ivie is achieved under a specifier-head relation.
CHAPTER 5

5.0 CONCLUSION

Ivie preverbal subject forms do not fit into the typology of subject clitics discussed in the literature. No forms of reduction and cliticization of the subject markers with either preceding or following elements is observed in the language. Given this, they cannot be described as proclitics or enclitics; neither can they be referred to as noun phrases or DPs, since the various tests conducted showed them co-occurring in the same contexts as noun phrases and DPs. The fact that *pro* could also be found in the same contexts as these preverbal subject markers rules out that they are subject pronouns in the language.

In view of the foregoing, we showed that Ivie preverbal subject elements mark subject-verb agreement in the language. Our analysis also clarifies the lack of dependent subject pronouns, given that only one type of subject pronoun, the independent element, is attested in the language.

A number of properties indicate that the subject marker is an inflectional agreement morpheme rather than a lexical pronoun. These include the following.

(i) a subject marker occupies a non-argumental position

(ii) it is obligatory in all constructions (except imperatives) since it marks agreement
between the subject NP and the verb, or the head and its modifier.

(iii) the subject marker forms a single phonological unit on its own. The forms

\textit{mhi}, \textit{u}, \textit{q}, and \textit{o} are pronounced [mhi], [u], [o], and [o], respectively.

(iv) it forms a verbal complex with the verb.

(v) all verbal paradigms are inflected in Ivie, depending on the various combinations of person, number and tense. Overt animacy distinction is not widespread but crucial and obligatory in the third singular form.

(vi) \textit{pro-drop} indicates that the subject noun phrase is present in AGR which is phonetically manifested by the presence of a subject marker.

The pattern of agreement displayed by the preverbal subject markers follows the proposal adopted that agreement is established under spec-head (5.1).

\[
\begin{array}{c}
\text{AgrsP} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\end{array}
\]

\[
\begin{array}{c}
\text{DP} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\end{array}
\]

\[
\begin{array}{c}
\text{Agrs'} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\end{array}
\]

\[
\begin{array}{c}
\text{[\(\alpha\)F]} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\text{\_} \\
\end{array}
\]

Those elements of nominal structure which are assigned to the \(D^o\) projection under the DP Hypothesis (Abney, 1987) uniformly trigger the presence of the agreement marker (AGR). Similarly, those elements which are proposed to appear within the NP projection also trigger agreement.

In this thesis, we have also provided evidence from extraction tests in favour of the hypothesis sketched in Chomsky (1986) that when subjects are extracted from
subject positions, the empty category occupied by \textit{pro} is properly governed. Spec-head agreement still holds between \textit{pro}, Agr-S, and the moved subject in topic position.

Another major result of this study concerns the roles of functional categories (other than Agr). At the morphological level, they were shown to obligatorily mediate the relation between lexical heads and agreement markers. More specifically, the facts discussed in section (2.2) lend support to the decomposition of IP into independent projections headed by the subcomponents of INFL (Tense,Agr,...) initiated in Pollock (1989). The conclusion reached is that Agr-S/T/Aspect/Mood are free-standing morphemes, each heading its own functional projection.

In order to test verb-movement, evidence from adverb and negation placement tests shows that main verbs do not overtly move in Ivie.

Finally, we note that some of the stands we took due to the characteristics of Ivie syntax indicate that the treatment of preverbal subject markers of Ivie type is language specific since there is variation in the way different grammars will interpret their functional roles.
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APPENDIX

The following three maps (A, B, C) show the areas mentioned in section (1.3) and the areas occupied by Ivie Speaking people.

Map A:
This shows the current political delineation of the Federal Republic of Nigeria. The Ivie and other Edoid speaking people are found in Edo state. Edo state is the highlighted area in the map.

Map B:
This is a map of Edo State with some details of the various linguistic groups. Ivie speaking area is the highlighted portion of the map.

Map C:
This shows the map of the Etsako Local Government Area. Ivie speaking area is the highlighted portion.