

**INDIRECT OBJECT CONSTRUCTIONS IN HAUSA**

**BY**

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## ABSTRACT

### Indirect Object Constructions in Hausa

This is a study of the semantics and morpho-syntax of indirect object constructions in Hausa. Hausa is a Chadic language belonging to the Afroasiatic phylum. The phenomena are investigated from both descriptive and theoretical perspectives. The theory within which this investigation is developed is the Government and Binding framework (Chomsky 1981) and subsequent works.

The study looks at the two different indirect object constructions in Hausa, 'Internal' and 'External' indirect object constructions. The properties of indirect object constructions and that of the indirect object markers are examined. It is shown that the indirect object markers used in the External indirect object constructions are independent prepositions capable of assigning Case and Theta-role to their NP complements, whereas the indirect object markers used in the Internal indirect object constructions are considered to be part of the verb. In this latter case the verb and the indirect object marker together are involved in determining the ultimate Theta-role of the indirect object NP.

Internal indirect object constructions are most interesting and in which I focus my investigation. The properties of constructions are then considered with respect to two major approaches recently proposed within the theory, the Syntactic Incorporation approach of Baker (1985a, 1988a) and the Lexical Incorporation approach of Di Sciullo and Williams (1987). In this thesis it will be argued that the evidence from Hausa data favour the Lexical Incorporation approach.

The behaviour of both the indirect object and direct object NPs with respect to Wh-movement, NP-movement and word order facts are discussed. It is shown that in Hausa Internal indirect object constructions, the indirect object NP is freely allowed to undergo Wh-movement. In contrast, the indirect object NP cannot undergo Wh-movement in English Internal indirect object constructions and Chichewa dative applicative constructions. However, the indirect object NP in Hausa cannot undergo NP-movement. I will argue that the syntactic behaviour of the direct object and indirect object NPs is assumed to be derived through the notion Head and Feature Percolation Convention as proposed in Di Sciullo and Williams (1987) and Lieber (1980) respectively.

With regard to the kind of Case parameters that the indirect object constructions employ to satisfy the Case Filter requirement, I argue that, contrary to the standard view, the direct object NP in Hausa Internal indirect object constructions is not assigned an (inherent) accusative Case. Instead, using evidence from the pronominal systems of the language, I argue that the direct object NP receives a default nominative Case.

The study also presents a general overview of the morpho-syntactic behaviour and semantic interpretation associated with certain Hausa verbs when they occur before indirect object constructions. Based on semantic and syntactic evidence, it will be argued that the pre-dativial suffix /-ɸ/ used by certain verb grades is not related to the causative morpheme /-ɸ/, contrary to both Parsons (1971/72) and Frajzyngier (1985).

Finally, the study compares the syntactic behaviour of NP complements in indirect object constructions with similar NP complements in Hausa morphological causative constructions. It will be argued that both the Internal indirect object markers and the causative affix /-ɸ/ are lexically incorporated to the verb. However, the two affixes differ with respect to the kind of argument they introduce.



**Dedicated to  
my wife Laraba and my daughter Rukyayyatu**

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Komai ya yi farko tilas ya yi karshe says a Hausa adage, which literally means 'whatever has a beginning must have an end.' It is difficult, however, to start and stop giving thanks to those people without whose guidance, encouragement and inspiration I would have been unable to complete this dissertation.

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### Abbreviations and Conventions

*	=	ungrammatical
(*x)	=	ungrammatical if x is present
Isg	=	first person
2m/f	=	second person masculine/feminine
3m/f	=	third person masculine/feminine
1pl	=	first person plural
2pl	=	second person plural
3pl	=	third person plural
A	=	adjective
Abst	=	abstract
Adv	=	adverb
AGR	=	Agreement
caus	=	Causative
COMP	=	complementizer
Compl	=	completive
CONT	=	continuous
Cop	=	copula
D-form	=	dative verbal form
DO	=	direct object
e	=	empty category
ECP	=	Empty Category Principle
Foc	=	Focus marker
f	=	feminine
FUT	=	future
GB	=	government and binding
H	=	high tone
HAB	=	habitual tense
I/INFL	=	inflectional
Imper	=	impersonal
IMP	=	imperative
IO	=	indirect object
IO-Pro	=	indirect object pronoun
IOC	=	indirect object construction
L	=	low tone
LF	=	logical form
M	=	masculine
N	=	noun
NEG	=	negative
NP	=	noun phrase
OBJ	=	objective
OBL	=	oblique
P	=	preposition
Pass	=	passive
PI	=	preposition incorporation
PERF	=	perfective
PF	=	phonetic form
PP	=	prepositional phrase
Pr	=	primary verbal noun
PRT	=	particle

REL	=	relative
S	=	sentence
sec	=	secondary verbal noun
SUB	=	subjunctive
SPEC	=	specifier
t	=	trace
TOP	=	topic
TNS	=	tense
UG	=	universal grammar
V	=	verb
VP	=	verb phrase
VN	=	verbal noun
X-o	=	lexical category

In this study, the standard (Kano) Hausa orthography is adopted, with the following modifications: low tones are marked with a grave accent over the vowel [àa,] falling tones with circumflex over the tone bearing vowel [âa] and high tones remain unmarked. Long vowels are indicated with double letters [aa] and short vowels are unmarked.

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## Chapter One

### Introduction

#### 1.0. Preliminary Remarks

This dissertation is primarily concerned with the analysis of Hausa indirect object constructions (IOCs). The analysis is based mainly on data from the standard Kano dialect. The theoretical framework assumed is that of Government and Binding as outlined in Chomsky (1981) and related works. However, those Hausaists who are not interested in the theory are advised to proceed directly to chapter three.

#### 1.1. Background to the Hausa Language

Hausa is classified as a member of the Chadic group of the Afroasiatic family of languages (cf. Greenberg 1963). It is estimated that Hausa has over twenty million speakers. The majority of Hausa speakers are found in northern Nigeria and Niger, but Hausa speakers are also found in Ghana, Cameroon, and other parts of West Africa, as well as the Sudan. It is considered the lingua franca of West Africa.

The basic word order of the language is SVO and it has two basic tones, high and low, with a combination of a falling tone.

In the current Government and Binding theory terminology (cf. Chomsky 1981), Hausa is considered to be a pro-drop language in that it exhibits most of the properties associated with other pro-drop languages: missing subjects, apparent violation of that-trace filter, absence of expletives. For discussion see Tuller (1982) and (1986).

Finally, in Hausa the tense/aspect markers and agreement do not occur as affixes or clitics to the verb, but surface as independent constituents preceding the verb. There are basically eight tense/aspect markers in Hausa, as summarized in Table 1 below.

Table 1

<u>Perfective</u>		<u>Relative</u>	<u>Completive</u>
1sg. naa zoo	'I came'	na	zoo 'I came'
2m. kaa zoo	'you came'	ka	zoo 'you came'
f. kin zoo	'you came'	kikà	zoo 'you came'
3m. yaa zoo	'he came'	ya	zoo 'he came'
f. taa zoo	'she came'	ta	zoo 'she came'
imper. an zoo	'somebody came'	akà	zoo 'somebody came'
1pl. mun zoo	'we came'	mukà	zoo 'we came'
2pl. kun zoo	'you came'	kukà	zoo 'you came'
3pl. sun zoo	'they came'	sukà	zoo 'they came'

First Future

Second Future

1sg.	zân zoo	'I will come'	nâa zoo	'I will come'
2m.	zaa kâ zoo	'you will come'	kâa zoo	'you will come'
f.	zaa kî zoo	'you will come'	kyâa zoo	'you will come'
3m.	zâi zoo	'he will come'	yâa zoo	'he will come'
f.	zaa tâ zoo	'she will come'	tâa zoo	'she will come'
imper.	zaa à zoo	'somebody will come'	âa zoo	'somebody will come'
1pl.	zaa mù zoo	'we will come'	mwâa zoo	'we will come'
2pl.	zaa kù zoo	'you will come'	kwâa zoo	'you will come'
3pl.	zaa sù zoo	'they will come'	swâa zoo	'they will come'

Subjunctive

Habitual

1sg.	nâ zoo	'I may come'	nakân zoo	'I always come'
2m.	kâ zoo	'you may come'	kakân zoo	'you always come'
f.	kî zoo	'you may come'	kikân zoo	'you always come'
3m.	yâ zoo	'he may come'	yakân zoo	'he always comes'
f.	tâ zoo	'she may come'	takân zoo	'she always comes'
imper.	à zoo	'somebody may come'	akân zoo	'somebody always comes'
1pl.	mù zoo	'we may come'	mukân zoo	'we always come'
2pl.	kù zoo	'you may come'	kukân zoo	'you always come'
3pl.	sù zoo	'they may come'	sukân zoo	'they always come'

	<u>Continuative</u>		<u>Relative Continuative</u>
1sg.	inàa zuwàa 'I am coming'		nakèe zuwàa 'I am coming'
2m.	kanàa zuwàa 'you are coming'		kakèe zuwàa 'you are coming'
f.	kinàa zuwàa 'you are coming'		kikèe zuwàa 'you are coming'
3m.	yanàa zuwàa 'he is coming'		yakèe zuwàa 'he is coming'
f.	tanàa zuwàa 'she is coming'		takèe zuwàa 'she is coming'
imper.	anàa zuwàa 'somebody is coming'		akèe zuwàa 'somebody is coming'
1pl.	munàa zuwàa 'we are coming'		mukèe zuwàa 'we are coming'
2pl.	kunàa zuwàa 'you are coming'		kukèe zuwàa 'you are coming'
3pl.	sunàa zuwàa 'they are coming'		sukèe zuwàa 'they are coming'

## 1.2. Outline of the Dissertation

The dissertation is divided into seven chapters. Chapter one is an introduction.

Chapter two discusses some of the basic notions of the Government and Binding theory and some of the various claims and analyses made to account for the English indirect object constructions. The theoretical problems that the English indirect object constructions pose are considered with respect to the Case theory. The various

analyses enable us to see how the Hausa indirect object constructions can be adequately accounted for. The chapter also introduces some of the basic notions and assumptions proposed within the Lexical Incorporation approach in relation to word formation processes.

Chapter three deals with the general characteristics of Hausa indirect object constructions. A brief outline of Parsons' (1960) classification of Hausa verbs is also given. Two different types of indirect object constructions are identified, namely, Internal and External indirect object constructions. The structural positions of indirect object NPs with respect to the direct object NPs in both Internal and External indirect object constructions are discussed. It is argued that the different structural positions utilized by the two indirect object constructions correlate with the type of indirect object markers employed. The Internal indirect object constructions are introduced by the indirect object markers wà/mà/ma, while the External indirect object constructions are introduced by the indirect object markers gà/gàree. The status of each type of indirect object marker is also examined. It is shown that the two indirect object markers differ in a number of ways. The Internal indirect object markers wà/mà/ma are considered to be affixes, which must be attached to a verbal category, while the External indirect object markers gà/gàree are regarded as heads of prepositional phrases

capable of standing on their own. With regard to those instances where the verb is considered to be empty, I argue that the internal indirect object markers wà/mà/ma may be attached to the Tense element in order to satisfy the morphological requirement that affixes be attached to a phonologically realized category.

Chapter four examines the different morphophonological alternations displayed in certain verb 'Grades' ('grades' 2, 3 and 7 of Parsons' classification) when followed by indirect object markers. The chapter critically considers the analyses previously presented to explain why the verbs in these grades utilize special pre-dative forms. Based on semantic and syntactic evidence, it is argued that the pre-dative suffix /-f/ used by the verbs in these grades is not related to the causative morpheme /-f/, contrary to both Parsons (1971/72) and Frajzyngier (1985). Furthermore, contrary to Parsons, it is shown that the final /ee/ D-form used by these grades is not a "borrowed" grade 4, but a true grade 4 which is syntactically restricted.

Some previously unrecorded facts dealing with semantic interpretations and Tense/aspect restrictions accompanying the various pre-dative forms are presented. It is argued that the final /-f/-m/ pre-dative form tends to reflect a more advanced degree of involvement in the completion of the action than the other pre-dative



forms, namely, final /-aa/ and final /-ee/. Moreover, it is also shown that with some speakers the final /-f/-m/ cannot be used outside the perfective tense. The chapter also discusses the different semantic interpretations associated with these various pre-dativial forms. Finally, it is noted that a few grade 2 verbs allow a pre-dativial final vowel /-i/ (C-form), as well as the final /-f/-m/ and final /-aa/.

Chapter five discusses and evaluates the Hausa indirect object constructions in the light of the assumptions presented in chapter three. The indirect object constructions are evaluated in the light of Baker's (1985a, 1988a) Syntactic Incorporation analysis, which claims that affixes are base generated as heads of prepositional phrases and subsequently move to be incorporated to the verb before the S-structure level. It is shown that Baker's Syntactic Incorporation cannot be extended to cover the Hausa facts. Baker's Syntactic Incorporation analysis is examined with respect to some of the diagnostic properties of both direct object and indirect object NPs, such as word order facts, passivization and Wh-movement, which Baker claims to be derivable via the Incorporation analysis.

In relation to the Hausa indirect object construction facts, it is shown that neither the indirect object NP nor the direct object NP can become the subject NP when the verb is passivized, whereas in both Chichewa

dative/benefactive applicatives and English internal indirect object constructions, it is possible for the indirect object NP to become the subject NP when the verb is passivized. Furthermore, in Hausa, unlike both Chichewa dative/benefactive applicatives and English internal indirect object constructions, both the indirect and direct object NPs may undergo Wh-movement; in the latter languages only the direct object NP may be Wh-moved.

With respect to the Case assignment parameters that indirect object constructions utilize to satisfy the Case filter requirement it is argued that, contrary to the standard assumption, the direct object NP in Hausa Internal indirect object constructions is assigned a default nominative Case, not an (inherent) accusative Case. This view has been reached on basis of the pronominal system of the language. Evidence from the double object constructions, topicalization and focus constructions, as well as causative constructions, is employed to support the claim.

Finally, it is shown that contrary to Baker (1988a), indirect object constructions can be productively formed with a number of intransitive verbs in Hausa.

Chapter six examines the Hausa indirect object constructions in the light of the Lexical Incorporation analysis proposed by Di Sciullo and Williams (1987), which

claims that the attachment of the affixes to the governing verb takes place in the lexicon via a word formation process. It is argued that the Lexical Incorporation analysis is superior in many respects to the syntactic movement analysis. The Lexical Incorporation analysis accounts in a principled fashion for those things that are problematic to the Syntactic Incorporation analysis, such as pied piping/Wh-movement facts, restriction on the theta-role assignment, meaning differences between the Internal and External indirect object constructions, and an increase in the number of arguments. Based on the notion of Head and Feature Percolation Conventions, it is argued that the indirect object markers wà/mà/ma are the Heads of the complex verb they occur with. Finally, adopting the lexicalist position enables us to compare and contrast the Hausa Internal indirect object markers wà/mà/ma with the Hausa morphological causative suffix /-f/. Both affixes are assumed to be similar, in the sense that they are considered to be Heads of the derived verbs they appear with. The two affixes are also similar with regard to the fact that they increase the argument structure of the verb they are attached to. However, the two affixes differ with respect to the kind of argument they introduce. The Internal indirect object markers wà/mà/ma introduce a new internal argument, whereas the causative suffix /-f/ introduces a new external argument. It is shown that when the two affixes occur together with

the same verb, the causative affix /-f/ always precedes the Internal indirect object markers wà/mà/ma. It is argued that this follows from the fact that it is the latter that occur in the ultimate Head position.

Chapter seven summarizes the various issues considered in this dissertation and the implications raised by the analysis with respect to the syntax and morphology interface.

## Chapter Two

### An Overview of Government and Binding Theory and General Analysis of Indirect Object Constructions

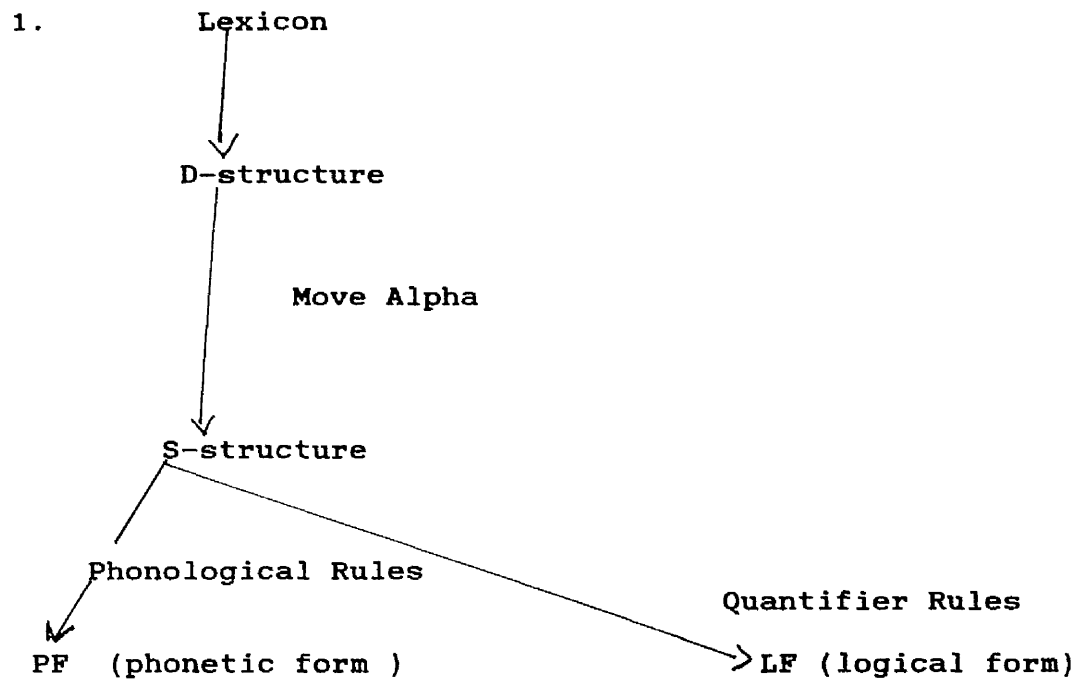
#### 2.0. An Introduction to the General Theoretical Framework

The framework to be adopted in this study is basically that of Government and Binding Theory (GB), as developed by Chomsky (1981, 1982, 1986a, 1986b) and related works. The study aims to investigate the syntactic and semantic properties exhibited by Hausa Indirect Object Constructions (IOCs). The study considers the behaviour of Hausa IOCs in relation to two major approaches motivated within the GB framework: the Syntactic Incorporation analysis and the Lexical Incorporation analysis.

In this chapter a very brief overview of GB theory will be presented.

#### 2.1. The General Organisation of the Theory

The theory considers the structure of Core Grammar (Universal Grammar) as modular in nature. That is, the theory divides the levels of grammar into various components as given in (1). Each component is assumed to be independent, but they can interact with other components through a number of subtheories and principles which include those listed in (2) below.



- 2.
- X-bar Theory
  - Government Theory
  - Theta Theory
  - Binding Theory
  - Bounding Theory
  - Case Theory
  - Control Theory
  - Move Alpha
  - Projection Principle
  - Empty Category Principle
  - Morphology Theory

The diagram (1) above represents the various levels and components in the grammar as viewed in the GB theory and the various processes relating them. Furthermore, each component contains rules and principles (cf. 2) which

determine the properties of the various components. I will assume in this study that the lexicon should be considered as an independent component and should be governed by rules and principles similar to other components of the grammar (i.e. D-structure, S-structure, LF and PF).

## 2.2. The lexicon

The lexicon is basically regarded as a component in which the subcategorization features of lexical items are represented. These include, among other things, the syntactic, semantic and phonological properties of the lexical item in question. The syntactic properties of a lexical item include its categorial and contextual features (i.e. selectional and subcategorization properties). For instance, the subcategorization property specifies which category a lexical item can take as its complement, e.g. the verb kaamàa 'catch' takes a noun phrase as complement. The semantic properties indicate the representation of the conceptual content of the lexical item. The phonological properties, on the other hand, specify the phonological representation of the lexical item.

The D(eep)-structure is generated from the lexical component via a lexical insertion. The D-structure has to obey the subcategorization requirement of the lexical item by virtue of the theta-criterion. Furthermore, the structural relations between the lexical items are constrained by X-bar theory.

The D-structures are then mapped onto the S-structures level by the rule "Move-alpha," where (alpha stands for any arbitrary category). The rule Move-alpha can be constrained by principles such as Theta theory and Bounding theory. S-structures are then mapped onto the Phonological form (PF) and Logical form (LF) via further rules. For instance, S-structures are mapped onto PF through deletion rules, filters, stylistic rules and the rules of phonology. The S-structure are also mapped onto the LF via Quantifier raising rules, as motivated in May (1977).

The mapping from S-structure to PF, and the mapping from S-structure to LF are totally independent. Chomsky (1986a: 68) observes that "PF and LF constitute the "interface" between language and other cognitive systems, yielding direct representations of sound on the one hand and meaning on the other, as language and other systems interact, including perceptual and production systems, conceptual systems and pragmatic systems." For further



discussion see Stowell (1981), Chomsky 1975, 1980),  
1986a), Koopman (1984), Brody (1985), Burzio (1986) and  
Travis (1984).<sup>1</sup>

### 2.3. The Subtheories

As pointed out in the previous subsection, the relation between the various levels of representations follow from the interaction of a number of subtheories and principles, some of them are listed in (2) above. In this section, a brief outline of some of these subtheories are presented. As the study progresses some of the subtheories and principles will be discussed in detail as they become relevant.

#### 2.3.1. Projection Principle

Through the Projection Principle the lexicon plays an important role in determining the syntactic representation of lexical items (cf. Chomsky 1981). That is, the principle presupposes the existence of a lexicon, including the information contained in the lexical items

(i.e. subcategorization as well as selectional features), as discussed above. Thus, the Projection Principle specifies those representations at each syntactic level (LF, D-structure, and S-structure) that are projected from the lexicon, in that they observe the lexical properties of lexical items (cf. Koopman 1984:5). In other words, the Projection Principle, as defined in Chomsky (1981), assumes that lexical requirement must be met at every syntactic representation: D-structure S-structure and LF. For example, if a verb is lexically specified as transitive, (i.e. taking an NP complement), it follows that it must have an NP complement at all relevant levels. Consider the verb kaamaa 'catch' in (3) below:

3. Audù yaa kaama dookii  
 A he-PERF catch horse  
 'Audu caught a horse'

In the above example the transitive verb subcategorizes for an NP complement. Furthermore, the Projection Principle requires that if a category moves as the result of "Move-alpha", it must leave behind a trace so that the interpretation of its selectional properties would be preserved. Consider sentence (4) below: the NP complement is moved to the initial position via a Wh-movement rule; as a result it leaves behind a trace in order to preserve the interpretation of the selectional properties of the lexical item (cf section 2.3.5).

4. Mèe/i Audù ya kaamàa t/i?  
 what A he-PERF catch  
 'what did Audu catch?'

The moved NP and its trace in the above example are related by a process of coindexing. This sort of coindexing is known in the literature as "Chain". Chomsky (1986a :95), defines "Chain" as "the S-structure reflection of a "history of movement" ".

### 2.3.2. X-bar Theory

The introduction of the X-bar theory helps to reduce the options allowed by the set of phrase markers (cf. note 1). X-bar theory states that every lexical category X (X= N, V, A, P.) heads a category X' (X-bar) consisting of X and its complements. Chomsky (1986b: 3) proposes the following schemata for the X-bar theory (cf. Jackendoff<sup>2</sup> 1977).

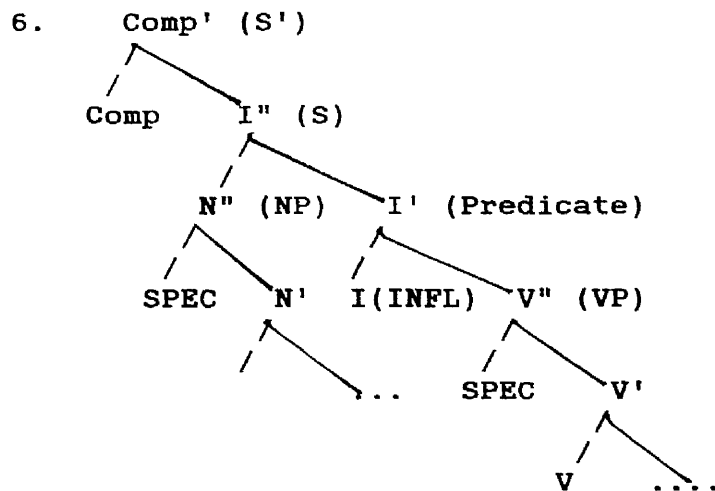
5a.  $X' = X X''^*$

b.  $X'' = X''^* X'$

In (5) above \* indicates zero or more occurrences. X'' stands for a maximal projection, while X is the head. X', on the other hand, stands as an intermediate projection between the maximal projection and the head. Hence, in (5a) X'' is assumed to be the complement of the head X and they both constitute the X' projection. X'' in

(5b) is assumed to be the specifier of X (or X' or X" ). For instance, determiners are assumed to be specifiers of NP while the subject NP is assumed to be a specifier of the predicate. The X-bar representation is assumed to hold at D-structure level.

One of the important aspects which the X-bar theory is said to capture is the distinction between "head initial" and "head final" languages (i.e. the difference between SVO and SOV) languages. This is achieved by fixing the parameters in terms of the two values allowed for the "head position". Consider the following structure (6) below (cf. Tuller 1986:9).



Structure (6) represents head initial languages (e.g. Hausa and English).<sup>3</sup> It is generally assumed that in the unmarked case all lexical categories have the same complement structure, and that in a given language complements always occur in the same position, with

respect to the "head". For detailed discussion of the interaction of X-bar theory with other subtheories see Stowell (1981), Chomsky (1986a) and Koopman (1984).

### 2.3.3. Move Alpha

In the current GB theory the various rules that were used in the earlier transformational approach have been drastically reduced to a single "meta rule" which Chomsky (1981) termed "Move-alpha" (alpha stands for any category). Move-alpha therefore reduces the various stipulations assumed in the transformational rules and shifts the descriptive burden to the other subtheories (e.g. Theta-role, Binding theory etc).

The assumption is that when a category moves it leaves behind a phonologically null element (empty category) in the original position of the moved category; the empty element retains the index of the moved category. Consider the following sentences from Hausa (7) and English (8).

7a. D-s. [Audù yaa [ga wàa]]  
           S                  VP  
           A he-PERF see who  
           'Audu saw who?'

b. S-s. [wàa [Audù ya [ ganii t/i]]]  
           S'          S                  VP  
           who A he-PERF see  
           'who did Audu see?'

8a. D-s. seems [ John to be happy]

b. S-s. John/i seems [t/i to be happy]

The S-structures (7b) and (8b) are derived from the D-structures (7a) and (8a) respectively via the application of the rule Move-alpha.

Chomsky (1982:55) observes that the following properties hold between a moved element and its trace after Move-alpha.

9a. the trace is (properly) governed, that is, it is subject to the ECP.

b. the antecedent of the trace is not in a theta-position.

c. the antecedent-trace relation satisfies the subjacency condition.

As we shall see shortly, the properties exhibited by various constructions are assumed to follow largely as a result of the interaction of the above various modules (i.e. theta theory, Government and so forth). Note that some of these modules are assumed to be parametrized in order to allow for language particular variation.

#### 2.3.4. Government Theory

This subtheory is the basic structural notion which is central to the GB theory as whole. In other words, many of the other subtheories are based upon it. That is, Case

theory, Theta theory, the Empty Category Principle (ECP) etc. The definition of government follows from the notion of C-command, though there are various definitions of C-command, each with a different prediction.<sup>4</sup> For concreteness, the definition given in Reinhart (1976), as cited in Horvath (1986) is adopted here.

10. A C (constituent)-commands B if neither A nor B dominates the other and the first branching node which dominates A dominates B.

In the above definition, the first branching node is considered to be a maximal projection i.e. NP or VP. Government is then defined as (11). (Cf. Chomsky (1986b)).

11. A governs B if and only if  
A C-commands B, and there is no  
category C, such that C is a barrier  
between A and B.

According to the above definition all lexical categories (i.e. N, V, A, P) govern all elements contained in their maximal projections (i.e. NP, VP, AP, PP). It has been assumed that INFL(ection) category, if it is marked [+Tense] or [+AGR(eement)] can be a governor although it is not considered as a lexical category. This accounts for the reason why INFL is regarded as the governor of the subject of its clause.

The notion Government also enters into the statement of the Empty Category Principle (ECP), which requires that traces must be properly governed.

12. A properly governs B if and only if  
A governs B, and (a). A is a lexical category  
(b). A is coindexed with B.

It is now widely accepted that ECP applies only to nonpronominal elements. In other words, the principle does not hold of pronominal elements (i.e. big PRO and small pro). The above definition states that empty categories are governed by a lexical head or a coindexed antecedent.

#### 2.3.5. Theta Theory

This subtheory is concerned with the relation between heads and their complements. Lexical elements assign thematic roles to their complements under government. The number of theta-roles correspond to the number of the arguments a lexical element selects. The sort of theta-roles assigned include: Agent, Goal, Theme, Instrumental, Benefactive, Location, Possessor etc. The general assumption is that lexical heads directly assign theta-roles to their complements while the subject theta-roles are assigned indirectly. That is to say, it is compositionally determined by the verb and its complements. This is due to the fact that the verb does not govern the subject. The classic example given in Chomsky (1981) to indicate that the subject theta-role is assigned indirectly (i.e. by the verb and its complements) is illustrated in (13a-b) with the Hausa equivalent given in (14a-b) below (cf. Howard 1988).

13a. John broke the door

b. John broke his hand



14a. Audù yaa karyà kóofàa  
A he-PERF break door  
'Audu broke the door'

b. Audù yaa karyà hannunsà  
A he-PERF break hand-his  
'Audu broke his hand'

In (13a and 14a) John is the Agent that performs the action. Whereas in (13b and 14b) John again the subject this time bears the Patient theta-role.

The "Theta-Criterion" is a principle central to Theta theory. This is a condition on theta role assignment, a version of which is given in (15) below.

15. Each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument.  
Chomsky (1981:36).

The term 'argument' in (15) refers to noun phrases that require theta-roles, i.e. those have a referential function. Examples are: names, variables, pronouns and anaphors. Nonarguments, on the other hand, do not require theta-roles. The nonarguments include: the "pleonastic elements" i.e. "there", and impersonal "it". Chomsky (1986a) claims that theta-roles are assigned only to elements in A(rgument) position and this position is called "theta-Position". A position that is not assigned theta-roles is known as "theta-bar position."

The general assumption is that movement is always from a "theta-position" to a "theta-bar position." That is, an argument can only move from a theta-marked position to a non-theta marked position. However, movement of an argument from a theta-marked position to another theta-

marked position is not allowed in that it would violate the Theta-Criterion. Consider the following examples (16a and b) below:

16a. who/i did John see t/i

b. \*John/i see t/i

In (16a) the Wh-element moves into the COMP-position which is a theta-bar position (i.e. no theta-role is assigned at that position). In the case of (16b), the element moves to another theta-position (i.e. the subject position) where another theta-role can be assigned. As a result the moved element 'John' ends up with two theta-roles in violation of the Theta Criterion. Theta Criterion is assumed to hold at D-structure.

#### 2.3.6. Binding Theory

This subtheory is concerned with the principles that govern the relation between anaphors, reciprocals, reflexives and pronouns (whether phonologically overt or otherwise) to their potential antecedents. As proposed in Chomsky (1981), there are basically three binding conditions as given in (17) below (cf. Borer 1984a:12).

17. A. An anaphor must be bound in its governing category. (anaphors: NP-traces, lexical anaphors, PRO).
- B. A pronominal is free in its governing category. (pronominals: pronouns, PRO).
- C. An R (= referential)- expression is free. (R-expressions: names, variables).

The definition of the notion 'bound' is given in (18), and that of 'governing category' is stated in (19).

18. A is bound if A is an argument coindexed with a C-commanding argument. Free simply means A is not bound.
19. A is a governing category for B if and only if A is the minimal category containing B, a governor of B and a SUBJECT accessible to B.

From the above definitions, the various instances of empty categories also fall under the binding conditions. For instance, NP-traces and PRO respect condition (A), empty pro and PRO respect condition (B) and Wh-traces respect condition (C). This makes it possible to classify the various occurrences of both overt NPs and empty NPs with the features [+pronominal and [+ anaphoric]. The examples below taken from Tuller (1986) illustrate how the above features are used to classify the various occurrences of both overt NPs and their empty counterparts. See Huang (1984) and Rizzi (1986).

20. -pronom	Null NP	Overt NP
-anaph	Wh-traces(vbl)	
	Mèe/i ka sàyaa t/i ? What/i did you buy t/i?	Naa sàyi naamaa I bought meat
-pronom	NP traces	Lexical Anaphor
+anaph	Àli/i seems t/i to be ill	Àli hit himself
+pronom	Pro	Lexical pronoun
-anaph	pro yaa tàfi Kando (he) went to kano	He went to Kano
+pronom	PRO	
+anaph	Baa nàa sòn PRO kafantàawaa I dont like PRO to read	

It would be observed from the above definitions and classifications that PRO appears to respect both conditions (A) and (B) which seems to be a paradox, i.e. PRO is both free and bound in its governing category. This apparent paradox is resolved by considering PRO to be ungoverned, that is, it has no governing category (cf. Chomsky 1981).

### 2.3.7. Bounding Theory

This subtheory constrains the movement process allowed by the convention Move-alpha. In other words, the subtheory ensures that movement rules cannot apply across more than one bounding node. Bounding nodes include NP, S and S' subject to parametric variations (cf. Rizzi 1982).<sup>5</sup>

One of these constraints is the "Subjacency Condition" which restricts how far Move-alpha can take a category in one step. The Subjacency Condition is stated in (21) (cf. Chomsky 1981). Note that Subjacency is now stated in terms of 'Barriers' (cf. Chomsky 1986b), I will continue to use the term Subjacency since it is not crucial to my analysis.

21. \_ \_ A \_ \_ [ X \_ \_ [ \_ \_ [ \_ \_ Y \_ \_ B ] \_ \_ A.

No rule can involve A and B in (21) if both X and Y are bounding nodes.

The Subjacency Condition says, in effect, that Move-alpha cannot cross two bounding nodes. The following examples (22), taken from Chomsky (1986a:153), illustrate how the Wh-movement violates the bounding theory by crossing more than one bounding node.

22. \*who does John believe [the claim that [Bill saw e]]

b \*what does John know to whom [Bill gave e e]

c. \*to whom does John know what [Bill gave e e]

The above sentences are ungrammatical because the moved

Wh-elements have crossed more than one bounding nodes in one swoop. The Subjacency Condition violation can be avoided if the Wh-element moves from one COMP-position to another (known as COMP to COMP movement). However, movement to COMP-position is blocked in the above sentences because the lower COMP-position is occupied by a Wh-phrase (cf. Baltin 1982).

#### 2.3.8. Case Theory

This subtheory deals with the assignment of Case to lexical categories. In some languages (e.g. German and Turkish) Case is morphologically realized while in others (e.g. Hausa and English) Case is assumed to be abstract. Nevertheless, the general assumption is that both abstract and morphological Cases are assigned in a uniform way. Furthermore, Case assignment, just like Binding theory, is assigned under government to a phonetically realized NP. Chomsky (1981:170) proposes the following Case assignment rules:

23. NP is nominative if governed by AGR.  
NP is objective if governed by V.  
NP is oblique if governed by P.  
NP is genitive in the structure [ NP\_\_\_ X' ].

In addition, Chomsky (1981: 49) proposes the

following well-formedness condition, known as the "Case Filter," which requires that at PF every phonetically realized NP must have Case. See Chomsky and Lasnik (1977) and also Rouveret and Vergnaud (1980).

24. Case Filter

\*NP if NP has Phonetic content and has no case.

Furthermore, it has been claimed by Stowell (1981) that Case assignment observes a condition of "adjacency" which requires that Case assigners not only govern but be adjacent to the elements to which they assign Case. In other words, if there is an intervening element between the Case assigner and Case receiver, the Case assignment would be blocked. Stowell (1981:98), following Chomsky (1981), proposes the following condition (25).

25. I $\hat{A}$  the configuration [ A B \_ \_ ] or [ \_ \_ \_ A B ]  
A case-marks B where,  
(i) A is a governor and  
(ii) A is adjacent to B and  
(iii) A is [-N ].

Consider the following examples: in (26b and d) below the prepositional phrase and adverb prevent the verb from directly assigning Case to the direct object NP. This of course, violates the "adjacency condition". In contrast, sentences (26a and c) satisfy the adjacency requirement.

26a. John put the book on the table

b. \*John put on the table the book

c. John insulted Mary deliberately

d. \*John insulted deliberately Mary

In addition, it would be observed from condition (25) above that only [-N] categories (e.g. Verb and Preposition) are assumed to assign Case directly to their complements. This means that nouns and adjectives cannot directly take bare NPs complements because, as examples (27a and b) indicate, these NPs would lack Case. See however, Chomsky (1986b).

27. \*the destruction the city

b. \*proud John

To save the above sentence, the rule of "of-insertion"<sup>6</sup> must apply as demonstrated in (28a and b) below.

28a. the destruction of the city

b. proud of John

In the case of infinitival clause with overt subject, the construction requires the insertion of the "complementizer for", as shown in example (29).

29. for John to be the winner is obvious.

In Chomsky (1986a), a distinction between "structural Cases and inherent Cases" is introduced. The former are: nominative Case assigned by AGR element within the INFL, and the objective Case assigned by the verb. The latter are: oblique Case assigned by preposition, and genitive Case assigned by nouns and adjectives. The difference between structural and inherent Cases follows from the level at which the Case assignment occurs. Thus, structural Cases are assigned at S-structure while inherent Cases are assigned at D-structure and are



associated with theta-marking. Chomsky (1986a:193) proposes the following condition (30).

30. "inherent case is assigned by A to an NP if and only if A theta-marks NP, while structural case is assigned independently of theta-marking."

The issue of Case assignment and the "adjacency condition" in relation to Hausa Indirect Object construction is explored in detail in chapters five and six.

#### 2.3.9. Morphological Theory

This study assumes that morphological theory is another independent subtheory of Grammar. See Scalise (1986), Baker (1988a) Di Sciullo and Williams (1987) and Borer (1988). It has been argued that the principles of morphology are not confined to a certain specific component i.e. Lexicon, S-structure or PF, but can apply to any component (cf. Anderson (1982), Ouhalla (1988), and Borer (1988)). However, it will be shown in this study that as far as the Hausa Indirect constructions are concerned the morphological principles seem to operate at the Lexical level. It has also been argued that the domain of the principles of morphological theory operate

at the X-0 (i.e. word) category not XP (i.e. phrasal) category. Thus, the theory of morphology essentially determines how words are formed via word formation rules and specifies some aspects of their morphological combinations and their phonological shapes.

The principles of morphological theory that I will assume in this study include: Williams' (1981) "Righthand Head Rule," which stipulates that the Head of a word is the most righthand element (cf. Di Sciullo and Williams 1987); Lieber's (1980) "Feature Percolation Convention," which requires that the feature of the head must be transferred to the mother node; Lasnik's (1981) "Morphological Principle" which requires that affixes must be attached to a phonologically realized stem. I will also assume the "Strong Lexicalist Hypothesis" which specifies that Move-alpha cannot extract part of a base-generated word.

Some of the above principles of morphological theory are language-specific, in view of the fact that phonological shapes and morphological combinations vary between languages (cf. Ouhalla 1988). Other principles, however, could be considered universal. For instance, the requirement that affixes must be attached to a stem and the prohibition against extracting part of a word. It will be shown in this study that the Hausa indirect object markers can only be attached to a verbal category.

The GB theory considers Universal Grammar to be

basically modular in nature, consisting of various components and levels such as, Lexicon, D-structure, S-structure, PF and LF respectively. The relationships between the various components follow from the interactions of a number of subtheories and principles such as Case theory, Binding theory, Theta theory, Projection Principle, Morphological theory etc. For instance, S-structure is derived from D-structure by a rule of Move-alpha. The S-structure is then mapped onto the PF and LF components via different types of rules, for example, quantifier rules and phonological rules respectively. As Chomsky (1981:17) observes, "(P)henomena that appear to be related may prove to arise from the interaction of several components, its apparent complexity reducible to simple principles of separate subsystems."

In the following subsections and chapters we shall see how some of these principles and subtheories interact to account for sentences generated by Indirect Object Constructions. We start by reviewing some of the analyses proposed in the literature to account for the English Indirect Object Constructions.

#### 2.4.0. A General Analysis of Indirect Object Constructions

In the generative literature, different analyses have been proposed to account for Indirect Object Constructions (IOCs). In the subsequent sections I briefly consider some of these analyses, specifically the analyses put forward to account for English IOCs.

##### 2.4.1. Earlier Transformational Approaches

In the early transformational approaches, the general assumption is that there is a set of rules which moves a constituent from one position to another within the same sentence. This idea is based on the assumption that sentences consist of phrase-structure rules, as illustrated in (31). These phrase-structure rules give a direct representation of the structure of the sentence in question. For discussion see Chomsky (1957, 1965).

31. S \_\_\_\_\_ → NP          VP  
    VP \_\_\_\_\_ → V (NP) (NP)    (PP).

In addition, there are sets of transformational rules operating in the structure generated in (31). Thus a transformational rule is described by a structural description identifying the class of phrase-structures to which it applies and specifying how these structures are

analyzed for the purpose of the transformation in question. Furthermore, there is a "structural change" which indicates what is done to these phrase-markers to yield new phrase-markers. In short, a transformational rule consists of two parts: (i) a structural description, and (ii) a structural change. For instance, the relationships between sentences (32a) and (32b), (33a) and (33b) are derived via a transformational rule known as the "Dative Movement Rule" as demonstrated in (34a and b) below. Following Green (1974) I will call sentences (a) External IOCs, while sentences (b) will be called Internal IOCs.

32a. Bill gave a book to Mary.

b. Bill gave Mary a book.

33a. Bill bought a book for Mary.

b. Bill bought Mary a book.

34a. SD. NP1    V    NP2    to<sup>4</sup>/<sub>for</sub> NP3.  
           1        2        3        4    5.

b. SC. 1            2            5            0    3.

(34a and b) show that sentences (32b) and (33b) are derived from (33a) and (34a) by means of a relatively simple rule which deletes the preposition "to" or "for" and reverses the order of the two post-verbal NPs. Note that this sort of rule is no longer assumed in GB theory.

Among those who propose a movement-based analysis for IOCs are: Fillmore (1965), Emonds (1976) and Whitney (1982, 1983). For instance, Emonds (op cit) claims that the alternation between sentences (32a and b) and (33a and b) should be captured by a transformational rule (i.e. Dative Movement) as indicated in (35).

35.  $X + V - NP - P \left[ \begin{array}{l} \{ \text{to} \} \text{ NP} \\ \{ \text{for} \} \end{array} \right] - Y == 1- 5 -3 -0 - 2- 6.$

Emonds (1976 :186) called this sort of movement rule a "Structure-Preserving Rule," as defined in (36) below.<sup>7</sup>

36. "A Structure-Preserving Rule is one by which a node of category X is moved, inserted or copied into a new position in a tree, where the node of category X can be generated by the phrase-structure rule of the base".

This means that a Structure-Preserving Rule preserves the structure generated in the base component. That is, by moving a constituent from one category to a similar category elsewhere in a sentence.

The transformational analysis for IOCs as proposed along the lines of Emonds and others (cf.35), however, faces a number of problems. For instance, there are certain sentences which appear not to observe the rule even though their structural descriptions have met the requirement for the application of rule. This means that the rule will massively overgenerate as the following examples (from Green 1974: 74) show.



- 37a. we donated \$10 to UNICEF  
 b. \*we donated UNICEF \$10
- 38a. we transferred some stock to Bill  
 b. \*we transferred Bill some stock
- 39a. the maitre *d* selected a French wine for us  
 b. \*the maitre *d* selected us a French wine
- 40a. John allowed his sister a peek  
 b. \*John allowed a peek to his sister

In above the examples, if we consider (37a), it has the same structure as (32a). While (32b) is grammatical, (37b) is not. This indicates that the analysis has to stipulate some ad hoc conditions to prevent certain structures from undergoing the rule. That is, the analysis must state which structures allow the movement to operate and which do not. These sort of stipulations and ad hoc conditions, of course, complicate the grammar.

Oehrle (1976) opposes the transformational analysis of English IOCs on the grounds that sentences like (37b) and (38b) above cannot be said to be transformationally derived from (37a) and (38a) respectively. Instead, he proposes a lexical alternation rule for sentences (32b) and (32a). According to Oehrle, verbs like 'give' and 'buy' are base-generated with two distinct subcategorization frames as illustrated in (41) below.

41a. V:      NP {to }      NP  
                      {for}

b.            NP            NP

Based on the above subcategorization, Oehrle argues that verbs with two subcategorization frames should be related via a lexical redundancy rule along the lines proposed in Jackendoff (1975). The problem with Oehrle's analysis, as we shall see below, is that it fails to explain how the various IOCs interact with other syntactic processes such as Wh-movement and NP-movement (cf. Czepluch 1982). For different accounts of English IOCs see Allerton (1978), Dryer (1987) and Hawkins (1981).

#### 2.5.0. GB Approaches

The standard assumption within the GB theory is to reduce the various complex transformational rules as well as the ad hoc conditions in the grammar. In order to achieve this objective the descriptive burden has to be shifted to the other subtheories and principles assumed in theory, such as Case theory, Theta theory, Binding theory, Empty Category Principle etc.

Consequently, some linguists adopt some of the GB principles to account for the English IOCs and at the same



time maintain the dative movement rule (cf. Larson 1987). Below, I discuss how Whitney (1982, 1983) attempts to accommodate dative movement by using one of GB principles, namely, the Binding theory.

#### 2.5.1. Whitney's Analysis

Whitney (1982, 1983) challenges Oerhle's (1976) lexical alternation analysis of English IOCs. Following Emonds (1976), she points out that the relationship between English Internal IOCs (43b & 44b) and their External counterparts in (a) should be derived via a movement rule.

42a. Paul sold his linguistics book to Kitty

b. Paul sold Kitty his linguistics book

43. John bought a book for Mary

b. John bought Mary a book

According to Whitney there is no need to propose a unified analysis for English IOCs in (42-43) and other English double object constructions given in sentences (44) and (45) below.

44a. we elected John president by acclamation

b. \*we elected president {to } John by acclamation  
{for}

45a. this only cost me a quarter

b. \*this only cost a quarter {to} me

Whitney claims that the double object constructions (44-45) above behave both in a markedly different manner from each other and from English Internal IOCs in (42b and (43b). For example, while the double object construction in (44) can have<sup>a</sup> derived nominal form as shown in (46), nominalization is blocked in the case of English Internal IOCs (42b) as shown (47).

46. our electing of John president

47a. \*the selling of Kitty linguistics book

b. \*John's buying of Mary a book

Whitney (1982:320) cautions that, "it doesn't make sense to rule out a dative movement on the basis of five or six verbs that do not form a class either with the dative or with each other. It makes more sense, given that an analysis of dative is possible based on already existing principles of the grammar to treat these cases separately".

Amongst the other arguments Whitney cited in support of a dative movement rule, and also against giving a uniform analysis with other double object constructions, is the relation between IOCs and other movement rules, such as Wh-movement, Complex NP-shift, It-clefting and Topicalization. Whitney points out that it is possible for the underived double object constructions to interact freely with the above mentioned rules, as examples (48b-e) below demonstrate.

- 48a. Double NP:                   we poured John a drink
- b. Move-Wh:                   who did we pour t a drink?
- c. Top:                         John, we poured t a drink
- d. It-Cleft:                   It was John we poured t a drink
- e. Complex NP-shift:         we poured t a drink a man we met  
                                  only yesterday

The Internal IOCs, on the other hand, cannot interact at all with such movement rules, as shown in examples (49b-e) below.

- 49a. Internal IOC: John gave Mary a book
- b. Move-Wh:                   \*who did John give t a book?
- c. Top:                         \*Mary, John gave t a book
- d. It Cleft:                   \*It was Mary that John gave t a book
- e. CNP:                         \*John gave t a book the man on the bus

According to Whitney (1982, 1983), the above differences follow from the fact that only the Internal IOCs are derived as result of movement rule, while no movement rule is involved in the case of double object constructions. To explain why the Internal IOCs cannot interact with Wh-movement and related rules, Whitney posits that when the dative movement rule applies it leaves behind a trace (i.e. an empty category), as illustrated in example (50b) below.

- 50a. Paul sold his linguistics book to Kitty
- b. Paul sold Kitty/1 his linguistics book t/1

When Wh-movement or other related rules apply to

move IO NP (Kitty), it leaves behind another trace t/2,  
 8  
 which is a "bound variable" as shown in example (51).

51. \*who did Paul sell t/2 his linguistics book t/1

Employing Chomsky's (1981) binding condition (C), which states that an R-expression (including variable) must be A-free in the domain of its operator, Whitney (1982: 318) proposes the following filter (52) which rules out any sentence in which a bound variable and a trace are coindexed.

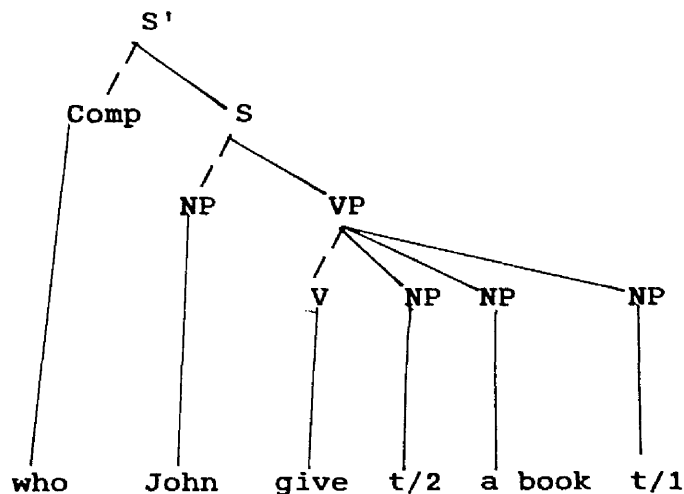
52a. A bound variable and a trace may not be coindexed when the variable is in the domain of the trace.

b. A is in the domain of B when the first branching node which dominates A also dominates B.

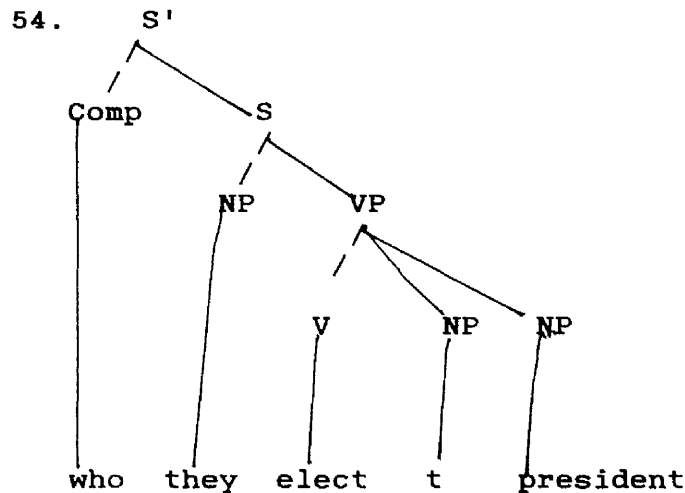
Sentence (51) violates the above filter because the variable (i.e. the trace left after the Wh-movement) is coindexed with the trace left after the dative movement.

Consider the tree diagram (53):

53.



In contrast, sentences (48b-e) above are grammatical because the variable is not coindexed with another trace as shown in the tree diagram (54) below.



Although the moved IO NP cannot undergo Wh-movement and related rules, the moved IO NP can undergo NP-movement, as sentence (55) shows.

55. Mary was given t/2 the book t/1 [by John].

Whitney resolves that (55) is possible because the trace t/2 left after NP-movement is not a variable but an NP-trace and an NP trace, as we have seen above, behaves like a bound anaphor in terms of binding theory. That is, it has to be bound within its own governing category. As such, sentence (55) does not violate filter (52). This means that the filter does not prevent coindexation of two NP traces.

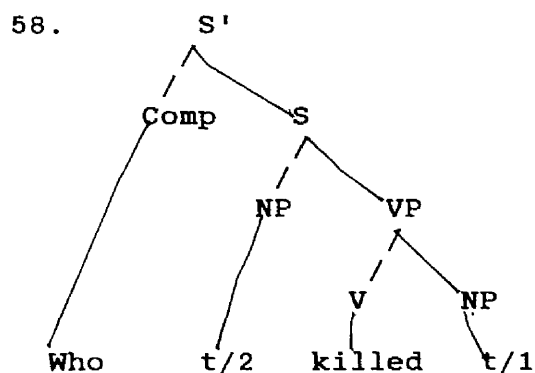
The second clause in Whitney's filter (i.e. section b) is stipulated in order to account for sentences like (56)

and (57).

56. who t/2 was killed t/1?

57. who t/2 was believed t/1 to have left?

In both examples (56) and (57), the variable is coindexed with another trace, and yet the sentences are perfectly grammatical. Whitney posits that sentences like (56) and (57) are grammatical because the bound variable and the trace are not in the same domain. That is, the first branching node which dominates the trace is VP, while the first branching node which dominates the bound variable is S. This is illustrated by the tree diagram (58) below.



The analysis proposed by Whitney maintains that dative movement rules exist and she attempts to constrain the interaction of English Internal IOCs with Wh-movement and related rules by adopting an aspect of the GB theory, notably, Chomsky's Binding Condition (C). The analysis, however, fails to consider other important GB principles such as Case theory and theta theory which play a crucial role in IOCs. Furthermore, the analysis does not provide the principled motivation that instigate the dative movement in the first place.

### 2.5.2. Indirect Object Constructions Without Dative Shift

In the preceding sections we have seen how the transformationalists account for English IOCs. They posit that the Internal IOC (59b) is derived from its External counterpart (59a) via a syntactic movement rule.

59a. John gave a book to Mary

b. John gave Mary a book

The movement analysis, however, cannot be extended to a number of IOCs as we have seen. The standard assumption within the GB theory now is that there is no need to capture the alternation between (59a and b) through a movement rule. Instead, the different word order exhibited by IOCs, as well as the general properties that distinguish IO NPs from DO NPs, may be derived in terms of the general principles of Universal Grammar such as Case theory, Theta theory, ECP etc. For instance, how and what sort of Case can be assigned to both the IO and DO NPs.

### 2.5.3. English IOCs and Case Theory

The basic property of the theory of (abstract) Case, as we seen above, is that each lexical NP must have a Case. Otherwise, the Case Filter rules out the structure

as ungrammatical in the PF component (cf. Chomsky 1981). The type of Case an NP receives is determined by the Case assignment rule (see section 2.3.8.). Furthermore, Case assignment as proposed in Chomsky (1981) and developed in Stowell (1981) contains an adjacency condition which states that the Case receiver must be adjacent to the Case assigner. If we consider the External IOCs (60a) and (61a), there is no problem as far as the Case assignment is concerned. The verb assigns Objective Case directly to the direct object NP, whereas the preposition "to" or "for" assigns Case directly to the IO NP. In contrast, the Internal IOCs (60b) and (61b) present a problem in that there are two NPs in need of Case. Moreover, the constructions violate the adjacency requirement in that the direct object NP is separated from the verb by another NP.

60a. John gave the book to Mary

b. John gave Mary the book

61a. John bought the book for Mary

b. John bought Mary a book

In light of the above problems, various analyses have been proposed in order to account for not only the Case assignment puzzle, but also the movement facts. Consider the following sentences:

62a. \*who did John give t a book?

b. what did John give Mary t ?

63a. Mary was given t a book

b. \*the book was given Mary t



In the case of External IOCs both the IO and DO NPs undergo Wh-movement (64). However, the IO NP cannot become the subject of the passivized verb while the DO NP can (65).

64a. who did John give a book to t?

b. what did John give t to Mary?

65a. \*Mary was given a book to t

b. a book was given t to Mary

Czepluch (1982) rightly pointed out that the grammatical judgements of IOCs passives in English vary considerably. The data illustrates the grammatical judgements reported by different researchers (cf. Czepluch 1982:4).

66.	A	B	C	D
a. The book was given to Mary	ok	ok	ok	ok
b. Mary was given the book	ok	ok	ok	ok
c. The book was given Mary	ok	ok	ok	*
a. The book was bought for Mary	ok	ok	ok	ok
b. Mary was bought the book	*	?	ok	ok
c. The book was bought Mary	*	*	ok	*

In the next sections I will examine the three ways in which the Case problem has been handled.





- b. \*a book was given Mary t
- c. a book was given t to Mary
- d. \*Mary was given book to t

The oblique trace filter cannot be universal, because in languages like Hausa it is possible to Wh-move the IO NP in Internal IOCs (cf. Munkaila 1985, 1988).

Furthermore, Hornstein and Weinberg's Oblique-Objective Case distinction in English is abrogated in view of the fact that it is now generally accepted that English lacks an oblique Case. That is, both verb and preposition are assumed to assign objective Case in English. See Kayne (1984), Czepluch (1982), Baker (1985a) and Chomsky (1986a).<sup>10</sup>

#### 2.5.5. Chomsky's Analysis

Two suggestions have been put forward by Chomsky (1981) to account for the Case puzzle the English Internal IOCs present. Firstly, Chomsky argues that in the Internal IOCs the first NP is assigned a structural Case while the second NP is assigned an inherent Case. With

regard to the External IOCs, he argues that both the DO and the IO receive structural Cases.

73a. John gave Mary a book  
Struc Case Inherent Case

b. John gave a book to Mary  
Struc Case Struc Case

Chomsky (1986a) proposes that inherent Case is assigned at D-structure and the Case assigner must theta-mark the NP. Structural Case, on the other hand, is assigned at S-structure and no theta-marking relation is required.

The second suggestion made by Chomsky (1981) for English Internal IOCs is the "small-VP analysis". This analysis is proposed in view of the apparent counterexample the Internal IOCs pose to the adjacency condition of Case assignment as well as the Case uniqueness condition which requires that a Case assigner assigns only one Case to the Case receiver and vice versa. To meet this joint requirement, Chomsky assumes that the small V' should be allowed to function as an "exceptional governor", hence, both V' and V Case mark one NP each adjacently as illustrated in (74) below.

74. John [ [ give Mary ] the book ]  
VP V' OBJ OBJ

Under the small V' analysis, the English Internal IOCs contain two governors (V and V') and each governor

assigns one structural Case as shown in (74) above. As such, there is no need to assume that the second NP bears an inherent Case as stipulated previously.

Chomsky's analysis does not address the interaction of IOCs with other movement rules, such as Wh-movement and NP-movement (see Czepluch's (1982) criticisms of Chomsky's small V' analysis). It follows that to give a systematic account of IOCs, the analysis must not only distinguish the different Cases assigned to the NPs, but equally explain how the constructions interact with other constructions, and also specify the property that distinguishes IOCs from one language to another. Below I briefly discuss some of the analyses that are put forward.

#### **2.5.6. Empty Preposition Analyses**

The empty category analysis of Kayne (1984) and the covert category analysis of Czepluch (1982) are both proposed in order to distinguish the IO NP in the Internal IOCs from the DO NP, on the one hand, and to relate it to its External counterpart on the other. According to Kayne (1984), the IO NP in the internal IOCs is headed by an empty preposition, while the IO NP in the external IOCs is headed by an overt preposition. DO NP, on the other hand,

is neither headed by an overt preposition nor by a null preposition. This is illustrated roughly by the structures given in (75) below.

75a. [ <sub>VP</sub> V NP ] = direct object

b. [ <sub>VP</sub> V [ <sub>PP</sub> { P } NP ] ] = indirect object  
e

Furthermore, the behaviour of IOCs varies depending on the type of Case assignment rule operating in a given language. For instance, Kayne (1984) points out that in English both the preposition and the verb assign an objective Case, while in French the preposition and the verb assign two different Cases, oblique and objective respectively.

#### 2.5.6.1. Kayne's Analysis

As pointed out above, Kayne's (1984) analysis is meant to account for the difference between English IOCs and their counterparts in French. Kayne points out that both French and English have External IOCs as shown in examples (76 and 77) below.

76a. John gave a book to Mary.

b. John has left a great deal of money to his children.

c. They sent a registered letter to Mary.

77a. Jean a donné un livre à Marie.

b. Jean a laissé beaucoup d'argent à ses enfants.

c. Ils ont envoyé une lettre recommandée à Jean.

The two languages, however, differ with respect to Internal IOCs. English allows Internal IOCs as indicated in examples (78). Internal IOCs are totally absent in French, as examples (79) indicate.

78a. John gave Mary a book.

b. John has left his children a great deal of money.

c. They sent John a registered letter.

79a. \*Jean a donné Marie un livre.

b. \*Jean a laissé ses enfants beaucoup d'argent.

c. \*Ils ont envoyé Jean une lettre recommandée'.

According to Kayne (1984), English allows Internal IOCs because the preposition in English assigns objective Case just like verbs. The absence of Internal IOCs in French on the other hand, is due to the fact that the verb and the preposition assign different Cases. The former assigns objective Case while the latter assigns oblique Case. Hence, Kayne points out that French lacks the Internal IOCs because the preposition in the language does not have the same property as that of the English preposition (cf. Kayne 1981). Kayne (1984:195) proposes that English Internal IOCs should be represented by the structure (80) below.



80. ----- V [Pe) NP] NP  
                  PP

The question which arises immediately is that of how the two NPs in the above structure realize their Cases. According to Kayne's analysis, English does not have inherent Case, i.e. English lacks oblique Case, and he goes on to assume that an empty preposition cannot be a source of Case. This means that the only way the IO NP can get a Case is from the verb. However, the verb does not govern the IO NP which means it cannot directly assign Case to it.

Kayne argues that the verb in (80) governs the PP, as such it can assign objective Case to this PP, and this objective Case percolates to the head of the PP (i.e. the empty P). Because the head is empty it transmits the Case to the IO NP. In short, the IO NP realizes its Case from the verb through the empty P. With regard to the manner in which the second NP gets its Case, Kayne (1984:201 n. 8) simply assumes Chomsky's small V' analysis. Moreover, with regard to why the Internal IO NP cannot be Wh-moved, Kayne argues that it is due to the fact that the IO NP is embedded in a "left branch of the structure".<sup>11</sup> Another analysis that presupposes an empty P for English Internal IOCs is that of Czepluch (1982) to which we now turn.

### 2.5.6.2. Czepluch's Analysis

Czepluch's (1982) analysis is similar to Kayne's analysis in the sense that he too assumes that English Internal IOCs should be analyzed as containing a 'covert PP'. That is, the IO NP is headed by an empty P. Czepluch (1982: 11) proposes structure (81) for English Internal IOCs.

81. [ NP INFL [ V [ [P e] NP ] NP ]  
       S          V' PP

According to Czepluch (1982:14), structure (81) is selected by the ECP. He argues that the empty P is exempted from the ECP by "Reanalysis" because the P appears adjacent to the verb (cf. Hornstein and Weinberg 1981).<sup>12</sup>

With regard to how the two NPs realize their Cases, Czepluch draws a parallelism with the way "Exceptional Case-Marking" (ECM) operates in English. Consider the following examples:

82a. John believed [ Mary to be foolish]  
                   S' OBJ

b. they considered [ John [ foolish]]  
                   A' OBJ A

The verb in (82a) may assign Case to Mary and the verb in (82b) may assign Case to John due to the fact that "both clausals are defective with respect to bounding: the infinitival because of S' deletion after 'believe'; the small clause because it is an A' rather than an A" (Czepluch 1982:15).

By analogy, Czepluch claims that, in the structure (81) the PP in the Internal IOCs is also defective because the head is empty. As such it loses its bounding character which in effect allows ECM to operate. Czepluch goes on to argue that the empty P functions as an exceptional governor which make it possible for the IO NP to receive Case by transmittance (cf. Kayne 1984). As he puts it:

"V directly governs and Case-marks the DO, and it governs the empty P whence the UIO nominal receives Case by transmittance, the empty P functioning as exceptional governor. Thus, the single-Case condition is satisfied although being stretched. Since the material intervening between V and the DO is linked by transmitted governance, the DO is successively adjacent to its governor (cf. Chomsky (1981b): 94), thus satisfying the adjacency condition". (Cf. Czepluch 1982: 14-16)13

With respect to why the internal IO NP cannot be Wh-moved, Czepluch's covert category analysis assumes that the construction is ungrammatical because the IO NP is extracted from an empty head, as illustrated by the structure (83).

83. \*[[ who] [ ---- V [ t] -----]]  
       S' NP           S           PP

Furthermore, Czepluch (1982:19) argues that the structure above violates the Case filter in the sense that the Wh-element in COMP fails to receive Case by inheritance. This is due to the fact that the PP heading the trace is not subject to Case-marking.

Despite the various proposals put forward by different researchers, the issue of how the two NPs in

English Internal object constructions realize their Case is still controversial, see Larson (1987) for an alternative account.

We now turn to another radically different approach proposed to account for the behaviour of IOCs.

#### 2.5.7. Incorporation Analyses

A number of linguists hold the view that a sort of word formation rule operates in Internal IOCs. That is, the constructions contain a complex verb formed through a kind of incorporation process of either the IO NP (cf. Stowell 1981), or syntactic incorporation of preposition overt or empty, (cf. Baker 1985a, 1988a). Others argue that the incorporation of the preposition is lexically rather than syntactically derived (cf. Di Sciullo and Williams 1987). We discuss each of the above proposals in turn.

### 2.5.7.1. Stowell's Analysis

Stowell (1981) argues that the adjacency condition on Case assignment must be maintained in English IOCs. As we have seen above, the External IOCs do not present a problem in that the verb directly assigns Case to the DO, while the prepositions 'to' or 'for' directly assign Case to the IO. In the case of the Internal IOCs, the DO is separated from the verb by the IO which means that the DO cannot directly get Case from the verb. To ensure that the adjacency condition is satisfied, so that the DO can realize its Case, Stowell (1981: 301) claims that English Internal IOCs contain a complex verb in which the IO NP is incorporated as part of the verb via a word formation rule. The following structure is proposed by Stowell.

84. Wayne [ [v sent-Robert] [ a telegram] ]  
          V

In the above structure, Stowell assumes that both NPs are complements of the complex verb, as such the DO is now adjacent to the governing verb. According to Stowell (1981:301), the complex verb assigns Case to the DO under adjacency, while the IO NP is assumed to "absorb" Case features because of its incorporated status, which is similar to clitics in Romance languages.

Using the word formation analysis, Stowell accounts for the impossibility of Wh-movement of the Internal IO NP. He argues that the movement is blocked because the IO

NP is incorporated as part of the verb and syntactic movement rules cannot apply to a subpart of a word. The DO NP, on the other hand, is free to undergo Wh-movement because it is not inside the verb. Thus, according to Stowell's (1981:318) analysis, a trace is only allowed in the position NP/j but not in the position NP/i.

85a. [ [v-NP/i] - NP/j [e/i]/i ]

The Passive construction raises a serious problem for Stowell's analysis in that the IO NP can undergo NP movement despite the fact that it is incorporated as part of the verb. The unincorporated DO NP, on the other hand, cannot, as examples (86) and (87) show.

86a. Bill was sent t a telegram [ by Wayne].

b. Bill seems to have been sent t a telegram.

87a. \*a telegram was sent Bill t [ by Wayne].

b. \*a telegram seems to have been sent Bill t .

To account for the above examples Stowell is forced to reconsider his incorporation analysis and is compelled to posit that the structure of the passive construction, like (86a) above, is (88) where the IO NP appears after the DO instead of the incorporated structure proposed in (85) above.

88. Wayne sent a telegram to Bill

Stowell assumes that the preposition 'to' is required for the purpose of Case assignment. He draws a parallelism with Wh-movement rule (89). Here the preposition must be

present to assign Case to the variable so that the theta-role assignment will be fulfilled (cf. Chomsky 1986a).

89. who did Wayne send a telegram to t ?

In the case of the NP-movement (86) above, Stowell (1981:328) argues that the preposition is not required because the trace left behind as result of the NP-movement is "part of an A-Chain which is headed by the NP in the subject position. Since nominative Case is assigned to the subject NP, the indirect object position is A-associated with the nominative Case feature, and  $\theta$ -role assignment is possible".

Another entirely different incorporation approach is  
14  
proposed in Baker (1985a, 1988a) to which we now turn.

#### 2.5.7.2. Baker's Analysis

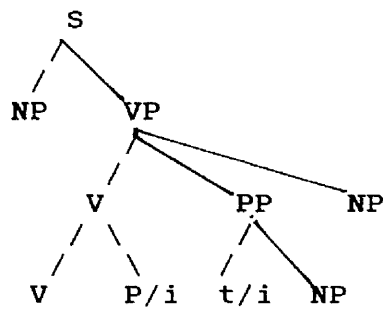
Baker's (1985a, 1988a) Syntactic Incorporation analysis differs radically from the analyses that we considered so far, as well as from Stowell's IO NP incorporation analysis. According to Baker the c(overt) preposition heading the IO NP is syntactically attached to the verb via a process called "Incorporation". The notion of Incorporation as developed by Baker is based on the syntactic movement rule Move-alpha. This moves a

lexical category ( $X^0$ ) rather than a whole phrase and adjoins it to another lexical category. This type of movement, just like phrasal movements (i.e. NP- and Wh-movements), is also constrained by the ECP. In other words, Incorporation is an instance of "Head to Head" movement that respects all the various constraints associated with movement rules.

Based on the notion Incorporation, Baker examines the properties of applicative constructions in Bantu languages as well as English Internal IOCs. Baker claims that in both constructions there is a preposition heading the IO NP. The only difference between the Bantu languages and English is that in the former the preposition is overt, while in latter the preposition is covert. This leads Baker to motivate a syntactic movement rule that involves the movement of the preposition, overt or otherwise, from its head position and its adjunction to the governing verb. In essence, Baker's analysis assumes that in the IOCs the prepositions are generated in the D-structure as heads of the IO NP. Then, on the way to S-structure, Move-alpha applies by attaching the prepositions to the governing verb as illustrated by the tree diagram below.



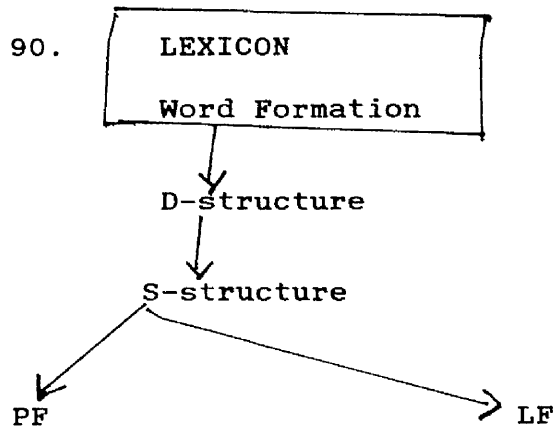
90.



In the above structure, when the rule Move-alpha applies, it leaves behind a trace. This trace has to be constrained by the ECP. Furthermore, the Incorporation analysis gives rise to a new government relation between the derived verb and the IO NP. According to Baker the various properties of IOCs, such as NP-movement, Wh-movement, word order facts etc can be adequately accounted for via the Syntactic Incorporation analysis and other principles of Universal Grammar, notably, Case theory and theta theory. For further discussion see chapter five, where I consider Baker's Incorporation analysis in detail and evaluate it in relation to the Hausa IOCs.

### 2.5.7.3. Di Sciullo and Williams' Analysis

In the Lexical Incorporation analysis the assumption is that the attachment of the c(overt) preposition to the governing verb is not derived through a movement rule. Instead, it has been argued that the preposition is lexically part of the verb. The process is derived via "word formation rules", which takes place in the lexicon. Within the lexicalist approaches, the general assumption is that the prepositions related to the IO NPs must be considered as "affixes". The lexical analyses proposed in Lieber (1980), Williams (1981), Scalise (1986) and Di Sciullo and Williams (1987) posit that affixes are listed in the lexicon with their own insertion frames. Being affixes, however, they cannot stand on their own and as such they must be attached to the verb in the lexicon. Consider the structure given in (90) below:



The word formation rules operating in the lexicon are governed by specific "morphological rules". Lieber

(1980:39) defines a morphological rule as: "a relation defined between pairs of lexical items which are listed in the permanent lexicon."

The idea that morphological rules can operate in the lexicon was first proposed in Chomsky's (1970) "Remarks on Nominalization." Chomsky's idea was later developed by other linguists, notably, Aronoff (1976), Jackendoff (1972, 1975), Allen (1978) and Selkirk (1982). The idea is in line with modular approach to grammar, (cf. Chomsky 1981) which assumes that grammar consists of a set of different interacting modules. Each module, as we have already seen, performs a certain operation in accordance with specific principles. In short, there is a kind of division of labour between the various modules. This means that the modular nature of grammar prevents a syntactic rule from operating on a morphological rule, a function that is delegated to the lexicon. Di Sciullo and Williams (1987:57) state that, "on every view there will be rules of word formation not a part of the syntax, because their domain is simply the individual word, which derive words, and their properties from other words or morphological material."

As we have pointed out above, affixes are also listed in the lexicon (cf. Lieber 1980). In Di Sciullo and Williams (1987) the affixes are also considered to belong to lexical categories (i.e. V, N, A, P), just like words.

Furthermore, affixes are assumed to have argument structure similar to other lexical items. The question then is, at which level of the grammar does the word formation take place?

There are various proposals regarding this question in the literature, for instance, Lees (1960), Chomsky (1970), Roeper and Siegel (1978), Selkirk (1982), Lieber (1980) and Di Sciullo and Williams (1987). The word formation rule (WFR) is formulated as in (91) (cf. Scalise 1986: 42).

91. A WFR specifies the set of words on which it can operate: this set is called the "base" of that rule. Every WFR specifies, furthermore, a unique phonological operation performed on the base. Finally, every WFR specifies the syntactic label and subcategorization frame of the resulting word, along with a semantic reading which is a function of the semantic reading of the base.

In Robert Lees' "The Grammar of English Nominalizations" (1960) it was proposed that a word formation rule can be captured by transformational rules. However, Chomsky's (1970) "Remarks on Nominalization:" opposed the transformationalist position on word formation. Chomsky's argument against the transformationalist position stems from the difference between derived nominals and gerundive nominals in English. He argues that, while gerundive nominals can be accounted for at the syntactic level, the derived nominals should be handled totally at the lexicon component. In

fact, Chomsky's "Remarks on Nominalization" considers the lexicon as an autonomous component, independent of the syntactic component. This gives rise to two opposing camps. Those that are called the "strong lexicalists," e.g. Halle (1973), Jackendoff (1975), Lieber (1980), Kiparsky (1982), Lapointe (1983), Scalise (1986) and Di Sciullo and Williams (1987). These linguists maintain that there is no difference between inflectional and derivational affixes and that both derivational and inflectional processes operate in the lexicon. The other camp are known as the "weak lexicalists," and they include: Chomsky (1970), Siegel (1974), Allen (1978), Aronoff (1976), Anderson (1982) Tuller (1981), Borer (1984b) and Baker (1988a). The proponents of the weak lexicalist hypothesis maintain that inflectional processes take place in the syntactic component or later (e.g. PF level). Derivational processes, on the other hand, are allowed to operate at the lexicon component. In this study I will argue for the strong lexicalist position. I will show that the attachment of the IO marker to the verb in Hausa takes place in the lexicon .

Di Sciullo and Williams propose that suffixes are "Heads" of their words and the Heads determine the properties of the whole word. The notion Head is vital in both syntax and lexicon. Di Sciullo and Williams (1987:23) point out that "In syntax the head of a phrase is

identified as the item with one less bar level than the phrase (or simply as the lexical daughter of the phrase)." This is formalized in (92) below (cf. Lieber 1981) and Selkirk (1982).

92. X<sub>n</sub>..... YP .... X<sub>n-1</sub> ..... ZP .....

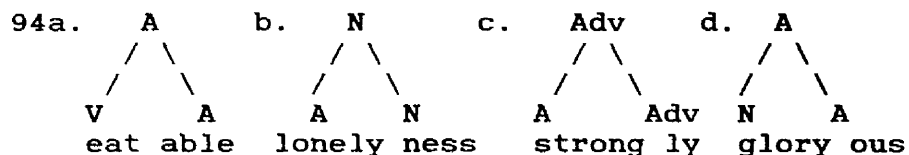
In the case of the lexicon, Di Sciullo and Williams argue that the Head of the word is the rightmost member of the word- known as the "righthand rule." They point out that "the properties of the head are those of the whole; in general, there is complete agreement of features between the head and the whole" Di Sciullo and Williams (1987:23).

The transfer of the feature of the Head onto the whole word is achieved through the "Feature Percolation Convention" which requires that the feature of the Heads should be transferred to the base word (see Lieber 1980). The Feature Percolation Conventions are stated as follows:

93. Feature Percolation Conventions

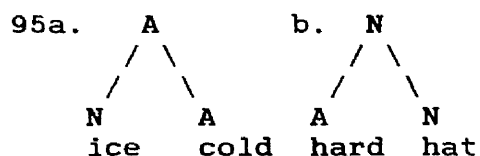
- a. If the head of a word is specified for feature A, then A percolates up to the mother node.
- b. If the sister of the head of a word is specified for feature B and the head is not, then B percolates up to the mother-node (unless the head specifies otherwise).

Let us briefly see how the word formation operates in the light of the above claim. Consider the structure given in (94) below: (data from Scalise 1988:230).



In above diagrams, the various suffixes (-able, -ness, -ly, -ous) are considered as Heads because they are the rightmost elements. These suffixes are also considered as lexical categories (e.g. -able is regarded as an adjective). Because the suffixes are Heads, it follows that their features should take precedence over the feature of the base. This explains why the lexical category of the base verb changes from a verb in (94a) to an adjective.

Compound formations in English are also assumed to be right headed and the Head determines the category of the whole compound word. This is illustrated in (95) below (cf. Lieber 1988:211).



In Di Sciullo and Williams (1987:24), it has been argued that only suffixes are Heads, not prefixes. This means that only suffixes can determine the lexical category, plurality, etc of whole words. It has been shown, however, that in some languages prefixes are the ones that determine the category of the whole word. For

instance, Lieber (1988) cites languages like Vietnamese, Breton and Tagalog. In these languages the category of the derived compound word is determined by the leftmost element (i.e. the prefix). Scalise (1988) points out that in Somali and Italian the Head is not fixed to a particular position, that is it varies from left or right depending on specific phenomena. In fact, even in English, Lieber (1988:214) observes that there some few left headed structures, for example, the prefix en- determines the word as the following words demonstrate.

96. encase	enable
enrage	endear
enchain	enlarge
encyst	enjoy
enthron	enfeeble

Finally, there are those affixes that only affect the argument structure of the base verb but cannot change the lexical category of the word in question. Di Sciullo and Williams (1987:65) point out that "a morphological operation can affect the syntactic distribution of the resulting word in only two ways: it can affect the features on that word or it can affect the argument structure of that word." We have already seen how morphological operations determine the features of the resulting complex words. Let us now see the way morphological operations can affect argument structure.

The lexical structure of a given predicate is



determined by the number of the arguments as well as the semantic roles these arguments bear. For instance, the argument structure of the verb 'put' is represented in (97) below (cf. Hale and Keyser (1986)).

97. put (A, Th, Loc)  
(cf. John put the book on the table)

In (97), one of the arguments, the Agent, is called the "External argument" while the other two arguments are called the "Internal arguments" (cf. Williams 1981). Williams (1981) posits that the External argument receives its theta-role from the VP via predication. In the case of the Internal arguments, the Theme theta-role is directly assigned by the verb, and the Location theta-role is assigned by the preposition.

The question then is how can affixes affect the argument structure of the base verb? According to Di Sciullo and Williams (1987) affixes such as the causative affix, passive affix and applicative affix all affect the argument structure of the verb with which they occur. Furthermore, they claim that these affixes occupy the Head position which means that they are the Heads of the predicate to which they are attached. Consider what happens when the applied affix -il combines with the verb 'cook' in Chi-mwi:ni (a Bantu language). The applied affix being the Head of the verbal complex affects the argument structure of the base verb by adding an extra argument (i.e. the accusative NP 'the children') in



Case assignment, extraction and other issues presented earlier. In chapter six, I evaluate the Hausa IOCs in terms of the Lexical Incorporation analysis. I will argue that the various syntactic behaviour of Hausa IOCs are better handled by the Lexical Incorporation rather than a Syntactic Incorporation analysis.

#### 2.6.0. Conclusion

What I have basically done in this chapter is to give a brief review of the GB theory, and a brief overview of some of the analyses proposed in the literature to account for English IOCs. The theoretical problem that the English Internal IOCs pose is highlighted with respect to the Case theory. From the discussions and the various analyses reviewed, there seems to be lack of consensus. For instance, no clear alternative emerges with regard to the way and manner in which the two NPs in Internal IOCs realize their Case. Furthermore, the issue of IOCs passives is still open to debate.

Nevertheless, the various analyses presented will enable us to see how the Hausa IOCs can be adequately accounted for. I will discuss and evaluate the Hausa IOCs in terms of the two major analyses, Baker's Syntactic Incorporation and Di Sciullo and Williams' Lexical Incorporation.



to the DO. Note also that all those who argue in favour of the dative movement rule simply presuppose the deletion of 'to/for' without giving any empirical reasons.

10. Baker (1985a: 458) points out that, in those languages that make a distinction between oblique and objective Case, the oblique Case is assigned to the second object NP (contra Hornstein and Weinberg). Baker cites Chamorro as a classical example- Case is morphologically realized in this language, e.g. consider example (i):

(i). Hu ta gi'- i [i che'lu- hu] ni ka''tta]  
 1aS- write-appl the sibling- my obl letter  
 'I wrote my brother the letter.'

11. Baker (1985a: 455) observes that Kayne's analysis cannot explain why Wh-movement is blocked in a structure where there is only NP. For instance, in Chichewa the IO NP cannot be Wh-moved in (ii). Baker points out that the IO NP cannot be said to be on the 'left branch' of the small clause in (i), in that there is no other NP to be the head of this small clause. (Examples from Baker).

(i). Mavuto a- na- vin- ir - a mfumu.  
 Mavuto SP- past dance- appl-asp chief  
 'Mavuto danced for the chief'

(ii). \*Iyi ndi mfumu imene ndi - ku- ganiz-a a-na-  
 This be chief which 1aS-pres think -asp 3aS- past-  
 vin-ir-a  
 dance- appl- asp.  
 'This is the chief which I think that she danced for'

12. Czepluch's analysis does not distinguish between base-generated empty categories and those left behind as a result of movement rule.

13. UIO stands for an empty headed IO NP in Czepluch's formulation.

14. Baker (1985a:457) argues that contrary to Stowell (1981) it is the DO NP that gets incorporated to the verb, not the IO NP. See chapter six for discussion.

### Chapter Three

#### The General Characteristics of Hausa Indirect Object Constructions

##### 3.0. Introduction

In this chapter I briefly consider the general characteristics of the Hausa indirect object constructions (IOCs). I start in section (3.1.) by giving a brief outline of Parsons' (1960) classification of Hausa verbs. I then give a general description of the Hausa indirect objects with respect to their structural position vis-à-vis direct objects.

I argue that the Hausa indirect object constructions can be divided into two types, namely, Internal and External IOCs. This division correlates with the type of the indirect object markers employed. I then consider the status of these markers, and present evidence following Parsons (1971/72) and Tuller (1984) to show that Internal and External indirect object markers differ in a number of ways.

I argue that the Internal indirect object markers wà/mà/ma are affixes which must be attached to a phonologically realized category, normally the Verb. In those instances where the verb is optionally dropped, the indirect object markers are attached to the next available element, in this case the TENSE element. I claim

further that the affixed indirect object markers must always be attached to an element of a verbal category (i.e. [+ V]).

In contrast, the External indirect object markers gà/gàree are assumed to introduce independent prepositional phrases and are capable of assigning both Case and theta-role to their NP complements.

### 3.1. Parsons' Classification Of Hausa Verbs

The first comprehensive classification of Hausa verbs was proposed by Parsons (1960, 1971/72)<sup>1</sup>. This classification divides Hausa verbs into seven morphological categories or "grades" on the basis of final vowel (with the exception of grade 5, which is consonant final) and tone pattern. Parsons' classification, known as the "Grade System", subdivides the seven grades into:<sup>2</sup>

Primary Grades 1 - 3.

Secondary Grades 4 - 7.

According to Parsons' classification, Hausa verbs consist of an underlying verbal base (i.e. unspecified for tone and final vowel) which then combines with any of the seven morphological categories which are made up of tone and final vowel, as demonstrated in (1) below. Thus, the tone pattern and the final vowel determine the grade to which each Hausa verbal form belongs.<sup>3</sup>





### 3.2. The Surface Form of the Hausa Verbs

Within the Parsonian framework, the final form of the verbs in all the grades is defined with respect to four syntactic contexts-- referred to as the 'A', 'B', 'C' and 'D' forms. The 'A' form is the form of a verb with no following object, i.e. the citation form of the verb. The 'B' form is when the verb is immediately followed by a pronoun direct object. The 'C' form is when the verb is immediately followed by noun direct object. Finally, the 'D' form-- which is the subject of this study -- is the form of the verb when it is immediately followed by noun or pronoun indirect objects (the indirect object constructions). Examples (2a-d) illustrate the grade 1 verb kaamàa 'catch' in each of the four syntactic contexts.

- 2a. Àli yaa kaamàa 'A-form'  
A he-PERF catch  
'Ali caught (it)'
- b. Àli yaa kaamàa shi 'B-form'  
A he-PERF catch it  
'Ali caught it'
- c. Àli yaa kaamà dookìi 'C-form'  
A he-PERF catch horse  
'Ali caught a horse'
- d. Àli yaa kaamàa wà Audù dookìi 'D-form'  
A he-PERF catch IOM Audu horse  
'Ali caught a horse for Audu'  
or  
Àli yaa kaamàa masà dookìi  
A he-PERF catch IOM-pro horse  
'Ali caught a horse for him'

With grade 1 verbs, when the verb is immediately

followed by noun direct object (C form), the final vowel is short, while in all other cases (B and D forms ) the final vowel is long as in the citation form (A form).<sup>5</sup>

### 3.3. The Characteristics of Indirect Object Constructions

Indirect object constructions (IOCs) in Hausa are introduced by overt markers wà/mà/gà before nouns and ma/gàree before pronouns. There are two different types of IOCs in Hausa. The first set will be called Internal IOCs and are introduced by IO markers wà/mà/ before nouns, ma before pronouns. The second set will be called External IOCs and are introduced by IO markers gà/ before nouns, gàree before pronouns as demonstrated in (3).<sup>6</sup>

- 3a. Internal IOCs (see appendix 1).  
 wà/mà Audù 'for/to Audu' Noun IO  
 ma-sa 'for/to him' Pronoun IO
- b. External IOCs  
 gà Audù 'to Audu' Noun IO  
 gàree shì 'to him' Pronoun IO

Example (4) illustrates a simple sentence without the indirect object marker and examples (5a and b) illustrate the Hausa Internal IOCs.

4. Àli yaa aikà wàsiikàa  
 A he-PERF send letter  
 'Ali sent a letter'
- 5a. Àli yaa aikàa wà sarkii wàsiikàa  
 A he-PERF send IOM king letter  
 'Ali sent a letter to the king'
- b. Àli yaa aikàa masà wàsiikàa  
 A he-PERF send IOM-pro letter  
 'Ali sent a letter to him'

In the above the examples, the IO precedes the direct object NP. Thus, in the standard Hausa (Kano dialect) if the word order is reversed whereby the IO markers wà/ma are used and the direct object precedes the IO, ungrammatical sentences are obtained (6a and b).<sup>7</sup>

- 6a. \*Àli yaa aikà wàsiikàa masà  
 A he-PERF send letter IOM-pro  
 'Ali sent a letter to him'
- b. ?Àli yaa aikà wàsiikàa wà Laadi  
 A he-PERF send letter IOM L  
 'Ali sent a letter to Ladi'

In the case of the External indirect object construction the direct object comes before the IO as illustrated in examples (7a and b).

- 7a. Àli yaa aikà wàsiikàa gà sarkii  
 A he-PERF send letter IOM king  
 'Ali sent a letter to the king'
- b. Àli yaa aikà wàsiikàa gàree shì  
 A he-PERF send letter IOM-Pro  
 'Ali sent a letter to him'

Thus, ungrammatical sentences are produced when the IO markers gà/gàree are used and the IO comes before the DO as shown in (8a and b).

- 8a. \*Àli yaa aikàa gà sarkii wàsiikàa  
 A he-PERF send IOM king letter  
 'Ali sent the king a letter'
- b. \*Àli yaa aikàa gàree shì wàsiikàa  
 A he-PERF send IOM-Pro letter  
 'Ali sent him a letter'

From the linear order of both Internal IOCs and External IOCs given in examples (5 and 7), we could sum up by way of definition as follows: (i) the IO markers

wà/mà/gà introduce noun indirect objects and the IO markers ma/gàree introduce pronoun indirect objects. (ii) in the Internal IOCs the IO (in standard Hausa) precedes the DO. The converse is the case in the External IOCs. This shows that the structural position of indirect objects correlates with the type of IO markers employed. (iii) In the Internal IOCs the IO markers wà/mà/ma are suffixed directly to the verb. In the case of the External IOCs the IO markers gà/gàree appear as a prepositional phrase after the direct object NP. This raises the question as to the status of IO markers wà/mà/ma in the Internal IOCs. That is, whether they should be regarded as heads of prepositional phrases (similar to IO markers gà/gàree), or part of the verb. These two types of IOCs are repeated here as (9a and b).

- 9a. Àli yaa aikà wàsiikàa gà sarkii/gàree shì  
 A he-PERF send letter IOM king/IOM-Pro  
 'Ali sent a letter to the king/him'
- b. Àli yaa aikàa wà sarkii/masà wàsiikàa  
 A he-PERF send IOM king/IOM-Pro letter  
 'Ali sent a letter to the king/him'

Newman (1982:63) argues from a comparative Chadic perspective, that (10) below represents the typical Chadic indirect object system (pn stands for pronoun in Newman's notation and represents a redundant pronoun which can cooccur with a prepositional phrase in some Chadic languages).

- 10a. I.O. Pronoun: V-pn - D.O.
- b. I.O. Noun: V(-pn) - D.O. - prep + N

Newman then argues that the Hausa Internal IOCs (9b) above seems to be "aberrant" when compared to (10). That is (a) there shouldn't be an overt IO marker ma to introduce the pronoun indirect object, and (b) the noun indirect object should follow the direct object.

However, Newman (1982) points out that the typical indirect object system is characteristic of old Hausa and that vestiges of the system can be observed in present-day Hausa. Thus, he cites the verb baa 'to give' where the pronoun indirect object immediately follows the verb without the IO marker ma, as shown in example (11)

11. yaa baa ni littaaɸii  
 he-PERF give me book  
 'he gave me a book' (data from Newman 1982:63).

In the case of the IO marker wà/mà introducing the noun indirect object, Newman suggests that it was historically derived from the preposition gà (i.e. External IO marker gà). Newman's argument follows from the fact that the IO marker gà is normally used when the noun indirect object is complex, hence, it has to be shifted after the direct object NP. Examples (12a and a') are provided by Newman (1982:65) to illustrate the structural positions of the two types of IO markers. (12b-12e) are further examples where the IO marker gà is used with complex NP.

- 12a. yaa yaake hakdoransa [gà babban baakoo]  
 he-PERF open teeth-his IOM big visitor

- a'. yaa yaakèe [wà/mà bàbban bàakoo] hakòoransà  
 he-PERF open IOM big visitor teeth-his  
 He (the dog) bared his teeth at the important visitor.
- b. yaa yaakè hakòoransà [gà yaaròn dà bàì saabàa  
 he-PERF open teeth-his IOM boy REL NEG use  
 dà shii ba]  
 with him NEG  
 He bared his teeth at the boy he wasn't used to.
- c. sarkii yaa yi jàwaabii [gà mutàanèn dà sukà  
 chief he-PERF do speech IOM people REL they-PERF  
 tàaru à dandàlii]  
 gather in square  
 The chief made a speech to the people who assembled in  
 the square.
- d. yakàn kaawoo ràguwaf fàhimtàa [gà wandà karìn  
 It-HAB bring less understanding IOM REL accent  
 harshènsà yakè dàban]  
 tongue-his it-REL-PERF different  
 This brings a lessening of understanding to the  
 person whose manner of speaking is different.
- e. naa nuunà takàfdàf [gà wandà na faarà gàmúwaa  
 I-PERF show letter IOM REL I-PERF first meet  
 dà shii à koofàa]  
 with him at gate  
 I showed the letter to the first person I met at the  
 door.

From the above examples, Newman (1982:71) concludes that the choice of IOCs in present-day Hausa "depends on the complexity of the IO in relation to the complexity of the DO. The weakening of gà to wà and its semi-attachment to the verb stem had the effect of lessening the heaviness of the noun IO's, thereby allowing noun IO's to remain before DO's and not be extraposed as was probably more general at an earlier period." (I standardize Newman's abbreviation using IO and DO instead of i.o. and d.o.).

Notice, however, that wà - IO- DO order would be equally acceptable in the examples (12c-e) as shown in

examples (13a and b). This shows that the structural position of the IO is not determined by its complexity.

- 13a. yaa yaakèè [wà yaaròn dà bàì saabàa dà  
 he-PERF open IOM boy REL NEG use with  
 shii ba] hakòoransà  
 him NEG teeth-his
- b. yakàn kaawoo [wà wandà karìn harshènsà yakè  
 It-HAB bring IOM who accent tongue-his It-REL-PERF  
 dàban] ràguwaɸ fàhimtāa  
 different less understanding

Newman's comparative analysis might suggest that there is a possibility of deriving the Internal IOCs (9b) from the External IOCs (9a) via a syntactic movement rule similar to English dative shift.

However, I will argue here that the Internal IOCs and the External IOCs are not related by a movement rule. This is suggested by the fact that not all the Hausa Internal IOCs have External IOCs counterparts. Consider the following sentences: while in examples (a) the Internal IOCs use the IO markers wà/mà/ma, the IO markers gà/gàree (External IOCs) cannot be used in examples (b).

- 14a. Àli yaa sayàa wà Laadi mootàa  
 A he-PERF buy IOM L car  
 'Ali bought a car for Ladi'
- b. \*Àli yaa sàyi mootàa gà Laadi  
 A he-PERF buy car IOM L
- 15a. Àli yaa kaamàa wà Laadi dookii  
 A he-PERF catch IOM L horse  
 'Ali caught a horse for Ladi'
- b. \*Àli yaa kaamà dookii gà Laadi  
 A he-PERF catch horse IOM L

16a. Àli yaa wankèe wà Laadi riigaa  
 A he-PERF wash IOM L shirt  
 'Ali washed the shirt for Ladi'

b. \*Àli yaa wankè riigaa gà Laadi  
 A he-PERF wash shirt IOM L

The above examples show that the two IOCs are not always allowed with the same verb. The External IO markers gà/gàree have only a dative interpretation (i.e. they assign a GOAL theta-role), whereas the Internal IO markers wà/mà/ma may have dative, benefactive, malefactive, etc. interpretations, depending on the verb in question. This means that the two types of IO markers only overlap in those cases where the IO may receive a GOAL theta-role as in examples (17a-b). See also Newman's examples in (12).

17a. Àli yaa nuunàa wà Laadi littaa<sup>fi</sup>  
 A he-PERF show IOM L book  
 'Ali showed a book to Ladi'

b. Àli yaa nuunà littaa<sup>fi</sup> gà Laadi  
 A he-PERF show book IOM L  
 'Ali showed a book to Ladi'

Furthermore, it is even possible for the two types of IO markers wà/mà/ma and gà/gàree to co-occur in the same sentence as shown in examples (18). This indicates that the meaning associated with the two IO markers wà/mà/ma and gà/gàree is not necessarily the same.

18. Àli yaa aikàa wà Laadi wàsiikàa gà sarkii  
 A he-PERF send IOM L letter IOM king  
 Ali sent the letter to the king for Ladi'

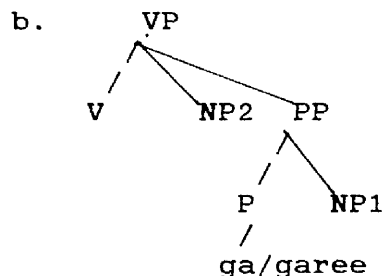
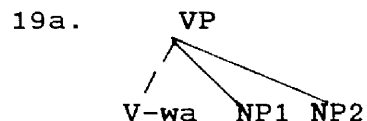
The discussion so far suggests that the two IO markers cannot be related by a movement rule. In this study I will argue that the two IO markers ought to be



considered as base generated distinct structures. I then assume that the Internal IO markers wà/mà/ma are affixes, while the external IO markers gà/gàree are to be regarded as independent prepositions.

### 3.4. The Status of Hausa Indirect Object Markers

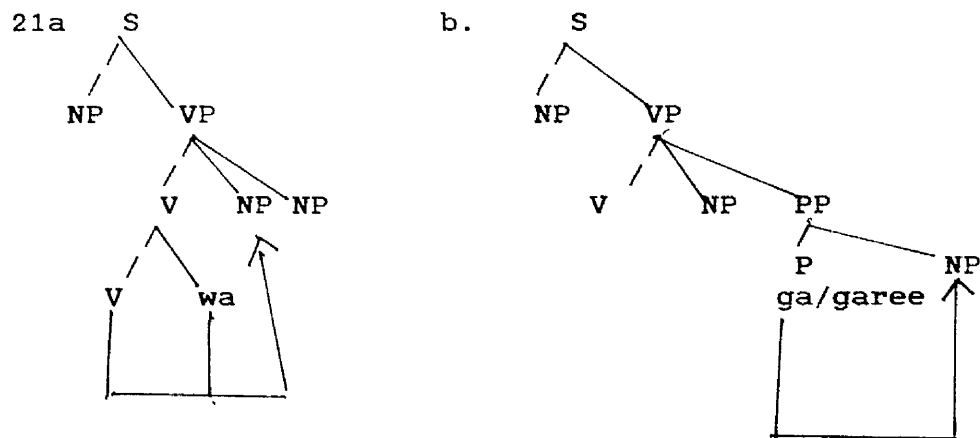
In section (3.3) we have seen that IOCs in Hausa are introduced by two different types of IO markers which in turn affect the structural positions of NP complements as roughly shown by structure (19a-b) below (NP1 stands for IO NP and NP2 stands for DO NP).



The claim I will be defending here is that the IO markers wà/mà/ma are affixes which must be attached to a phonologically realized word (i.e. they cannot occur in isolation). This assumption is formalized in Lasnik (1981:162) as (20). (See also Baker's 1988a Stray Affix Filter).

20. "A morphologically realized affix must be realized as a syntactic dependent at surface structure"

In contrast, the IO markers gà/gàree are to be regarded as independent prepositions similar to other prepositional phrases in the language. From the above assumptions it follows that the IO markers gà/gàree being heads of PP are capable of assigning Case and Theta-role to their object. In the case of Internal IOCs the IO receives its theta-role compositionally from the complex verb (i.e. V plus the IO markers wà/mà/ma). Following Baker (1985a) the way theta-marking operates is roughly illustrated in (21a and b) below. (For further discussion on Case and theta-roles properties of the two constructions see chapter five).



### 3.4.1. Indirect Object Markers wà/mà/ma as Part of the Verb

A number of arguments are put forward in literature to support the claim that the IO markers wà/mà/ma are part of the verb. (cf. Parsons (1971/72), Tuller (1984)). In the

following subsections I discuss some of these arguments, and in sections (3.4.5) to (3.4.7) I present additional facts to back up the above claim. Furthermore, in section (3.5.1) I argue that when the verb yi 'to do' is optionally dropped, the IO markers wà/mà/ma are attached to the next phonologically realized element. A condition is then proposed to restrict the morphological incorporation of the IO markers wà/mà/ma to an element bearing a [+V] feature.

#### 3.4.2. Modal Particle Evidence

In Parsons (1971/72) it was argued that the IO markers wà/ma are verbal suffixes and that no element can intervene between them and the verb. Moreover, Parsons points out that in speech it is even possible to pause between the IO markers wà/ma and the following NP, but not between the verb and wà/ma. Tuller (1984), following Parsons, argues that the so-called modal particles cannot occur between the verb and the IO markers.

Hausa has a set of modal particles (e.g. fa, kuma, maa, dai etc) which can generally appear anywhere in a sentence except within a word or between a clitic and its host. Example (22a-c) show that a modal particle can occur

between the subject NP and person/aspect markers (22a), between the person/aspect markers and the verb (22b), between the verb and the direct object NP (22c), but not between the verb and the clitic pronoun (22d).

- 22a. Àli maa yaa sàyi dookìn  
 A Prt he-PERF buy horse-the  
 'Ali even bought the horse'
- b. Àli yaa maa sàyi dookìn  
 A he-PERF Prt buy horse-the  
 'Ali even bought the horse'
- c. Àli yaa sàyi maa dookìn  
 A he-PERF buy Prt horse-the  
 'Ali even bought the horse'
- d. \*Àli yaa sàyee maa shì  
 A he-PERF buy Prt it  
 'Ali bought it'

These so-called modal particles can also not occur between the verb and the IO markers wà/mà/ma (23a), but they can occur between the IO markers and the IO as shown in example (23b) below.

- 23a. \*Àli yaa aikàa maa wà Laadi/matà wàsiikàa  
 A he-PERF send Prt IOM L/IOM-Pro letter  
 'Ali sent a letter to Ladi'
- b. Àli yaa aikàa wà maa Laadi/matà wàsiikàa  
 A he-PERF send IOM Prt L/IOM-Pro letter  
 'Ali sent Ladi a letter'

nor can the modal particles appear between the IO marker ma and the following indirect object pronoun because the pronoun IO is clitic which means it too must be bound by its host. See example (23c).

- 23c. Àli yaa aikàa ma (\*fa) tà wàsiikàa  
 A he-PERF send IOM Prt her letter  
 'Ali sent a letter to her'

In contrast, these modal particles can occur between the IO marker gà and the following IO NP (24a) and between the verb and the direct object NP (24b). They cannot appear between the IO marker gàree and the following pronoun IO because the pronoun IO is a clitic and needs to be bound by its host (24c)).

- 24a. Àli yaa aikà wàsiikàa gà fa Laadì  
 A he-PERF send letter IOM Prt L  
 'Ali sent a letter to Ladi'
- b. Àli yaa aikàa maa wàsiikàa gà Audù  
 A he-PERF send Prt letter IOM A  
 'Ali sent a letter to Audu'
- c. Àli yaa aikà wàsiikàa gàree (\*maa) shì  
 A he-PERF send letter IOM Prt him  
 'Ali sent a letter to him'

The fact that a modal particle cannot intervene between the verb and the IO markers wà/mà/ma supports the view that the IO markers wà/mà/ma are affixes which must be attached to the verb. If they are separated from the verb the sentences are ruled out by the morphological principle (20).

### 3.4.3. Conjunction Facts

Another reason to support the the claim that the IO markers wà/mà/ma should be regarded as part of the verb comes from conjunction facts. Conjunctions are traditionally employed to test if a phrase may be regarded as a constituent or not. Hence, Tuller (1984) employs

the conjunction facts to show that the NP IO markers wà/ma/ are part of the verb, she points out that when prepositional phrases are conjoined in Hausa, the preposition may be repeated in the second conjunct as shown in the example (25). On the other hand, if indirect object NPs are conjoined the IO markers wà/ma/ may not be repeated in the second conjunct (26).

25. Sun zaunàa [bisa teebùř] dà [(bisa) kùjèeruu].  
 INFL sit on table and on chairs  
 'They sat on the table and (on) the chairs.'
26. Sun nuunàa wà Aishà dà (\*wà) shùugabansù hòotoo.  
 INFL show to A to leader-their photo  
 'They showed Aisha and their leader a picture.' (Tuller 1984:450).

In contrast to this, the IO marker gà being a preposition can be repeated in the second conjunct (27) below.

27. Dàalìbai sun aikà wàsiikàa gà gwamnàa dà  
 students they-PERF send letter IOM governor and  
 kudii gà iyàayensù  
 money IOM parents-their  
 'The students sent a letter to the governor and money to their parents'

#### 3.4.4. Preposition Stranding and Pied Piping

Preposition stranding and pied piping facts offer another argument to support the claim that IO markers wà/mà/ma are actually part of the verb.

In Hausa, preposition stranding is generally disallowed whenever the NP object of the preposition is extracted. Pied Piping, on the other hand, is generally allowed. Sentences (28a and b) show that the IO External marker gà, being a preposition, cannot be stranded (28a), but it can be pied piped (28b).

28a. \*wàa/i Àli ya aikà wàsiikàa gà t/i?  
 who A he-PERF send letter IOM  
 'who did Ali send a letter to?'

(cf. \*gàa mùtum̀n/i dà na yi màganàa dà t/i)  
 here's man-REL INFL do speech with  
 'Here's the man I spoke with' (data from Tuller 1984:450)

b. gà wàa Àli ya aikà wàsiikàa?  
 IOM whom A he-PERF send letter  
 'to whom did Ali send a letter?'

(cf. dà wàa ka yi màganàa)  
 with who you-PERF do speech  
 'with whom did you speak?'

In the case of the IO markers wà/mà/ma the opposite result is true, that is the IO markers wà/mà/ma can be stranded, but cannot be pied piped as indicated in (29a and b).

29a. wàa/i Àli ya nuunàa wà t/i mootàa?  
 who A he-PERF show IOM car  
 'who did Ali show the car to?'

b. \*wà wàa/i Àli ya nuunà t/i mootàa  
 IOM whom A he-PERF show car  
 'to whom did Ali show the car?'

The above examples clearly indicate that the IO markers wà/mà/ma must always be attached to their host, otherwise the sentences violate Lasnik's morphological principle as stated in (20) above.

### 3.4.5. Causative Formation

Causative constructions provide additional evidence in support of the claim that the IO markers wà/mà/ma are part of the verb. In Hausa, morphological causatives are formed by adding the causative morpheme /-f/ (da) plus all High tones to the basic verb (cf. Bagari 1977, Newman (1983). I will assume that this process takes place in the lexicon and introduces a new external argument, while the former external argument is internalized (cf. Williams 1981). Sentence (30b) illustrates the effect of the causative process when it is added to a simple sentence (30a). (For detailed discussion on this process see chapter six).

30a. mootàa taa tsayàa  
 car it-PERF stop  
 'the car stopped'

b. Àli yaa tsayaf dà mootàa  
 A he-PERF stop-caus prep car  
 'Ali stopped the car'

What I am concerned with here is the fact that when the IO markers wà/mà/ma interact with causative process, the preposition /dà/ associated with the causative constructions can appear either between the IO NP and the DO (31a), or between markers wà/mà/ma and the IO (31b), but can never appear the verb and the IO markers wà/mà/ma (31c).

31a. Àli yaa tsayaf wà Audù/masà dà mootàa  
 A he-PERF stop-caus IOM A/ IOM-Pro prep car  
 'Ali stopped the car for Audu/him'



- b. Àli yaa tsayaf wà dà Audù/masà mootàa  
 A he-PERF stop-caus IOM prep A/ IOM-Pro car  
 'Ali stopped the car for Audu'
- c. \*Àli yaa tsayaf dà wà Audù/masà mootàa  
 A he-PERF stop-caus prep IOM A/ IOM-Pro car  
 'Ali stopped the car for Audu'

Additionally, the preposition /dà/ may be optionally dropped as in (32a), or alternatively it may appear in two places as shown in (32b). There are no differences of meaning between these sentences, apart from differences in degree of preference (cf. Parsons 1962).

- 32a. Àli yaa tsayaf wà Audù (dà) mootàa  
 A he-PERF stop-caus IOM A prep car  
 'Ali stopped the car for Audu'
- b. Àli yaa tsayaf wà dà Audù dà mootàa  
 A he-PERF stop-caus IOM prep A prep car  
 'Ali stopped the car for Audu'

The fact that the preposition /dà/ cannot intervene between the causative morpheme and the IO markers wà/mà/ma indicates further that the IO markers wà/mà/ma are actually part of the verb.

#### 3.4.6. Interaction with other Prepositional Phrases

Another argument in favour of the claim that the IO markers wà/mà/ma are part of the verb, while the IO markers gà/gàree are heads of prepositional phrases can be seen when we consider the position of the IO Internal markers wà/mà/ma and the External IO markers gà/gàree vis-

à-vis other prepositional phrases.

The following prepositional phrases exist in Hausa:

- 33i. locative preposition à 'at/in' (e.g. à Kanòo 'at/in Kano')
- (ii). ablative preposition dàgà 'from' (e.g. dàgà Kanòo 'from Kano')
- (iii). viative preposition ta 'via' (e.g. ta hanyàf Kanòo 'via the Kano road')
- (iv). equative preposition i/yà 'just like' (e.g. i/yà naakà 'just like yours')
- (v). associative/instrumental preposition dà 'with' (e.g. dà mabuudii 'with a key')

The IO markers gà/gàree being prepositional phrases can scramble with any of the prepositional phrases above without giving rise to ungrammatical sentences. Thus both examples (34a and b) are acceptable sentences in the language.

- 34a. Àli yaa aikoo riigaa gà Audù dàgà Kanòo  
A he-PERF send shirt IOM A from K  
'Ali sent a shirt to Audu from Kano'
- b. Àli yaa aikoo riigaa dàgà Kanòo gà Audù  
A he-PERF send shirt from K IOM A  
'Ali sent a shirt from Kano to Audu'

A parallelism could be drawn with the English scrambling process given below (cf. Hornstein and Weinberg 1981).

- 35a. John talked to Bill about Peter
- b. John talked about Peter to Bill

In contrast, if any of the above prepositional phrases occur with Internal IOCs, the prepositional

phrases always come after the IO as in (36a-38a). If, on the other hand, the IO markers wà/mà/ma plus the IO are sited after the prepositional phrase ungrammatical sentences are obtained as shown in (36b-38b).

- 36a. Àli yaa buudée wà Laadi/mata koofoaa dà  
 A he-PERF open IOM L/IOM-Pro door with  
 mabuudii  
 key  
 'Ali opened the door for Ladi with a key'
- b. \*Àli yaa buudée koofoaa dà mabuudii wà  
 A he-PERF open door with key IOM  
 Laadi/mata  
 L/IOM-Pro  
 'Ali opened the door for Ladi with a key'
- 37a. Àli yaa aikoo wà Audu/masa riigaa dagà Kando  
 A he-PERF send IOM A/IOM-Pro shirt from Kano  
 'Ali sent a shirt for Audu/for him from Kano'
- b. \*Àli yaa aikoo riigaa dagà Kando wà Audu/masa  
 A he-PERF send shirt from Kano IOM A/IOM-Pro  
 'Ali sent a shirt for Audu/for him from Kano'
- 38a. Àli yaa nuunaa wà Audu/masa mootaa à tashaa  
 A he-PERF show IOM A/IOM-Pro car at station  
 'Ali showed a car to Audu/to him at the station'
- b. \*Àli yaa nuunaa mootaa à tashaa wà Audu/masa  
 A he-PERF show car at station IOM A/IOM-Pro  
 'Ali showed a car to Audu/to him at the station'

Notice that sentences (36b-38b) do not violate the Case Filter, if we assume that the verbs can assign Case to the direct object while the indirect object NPs get their Case directly from the IO markers wà/mà/ma. Therefore, the only reason to account for the ungrammaticality of sentences (36b-38b) above has to do with the fact that IO markers wà/mà/ma are separated from the verb in violation of the morphological principle which requires that affixes must be attached to their hosts.

The examples given above show that the IO markers gà/gàree unlike the IO markers wà/mà/ma are independent prepositions capable of standing on their own. Assuming the Minimality Condition of Chomsky (1986b), the preposition gà is a closer governor than the verb. This means that the verb in this case cannot govern the indirect object NP, in which case it automatically follows that it cannot assign Case to it. Hence, in External IOcs the IO markers gà/gàree assign both Case and theta-role to their objects.

The preposition 'scrambling process' review above gives additional support to the claim that the IO markers wà/mà/ma are part of the verb, not heads of PPs, whereas the IO markers gà/gàree are heads of prepositional phrases.

### 3.3.3. Morphological Process

Another important argument in favour of the claim that the IO markers wà/mà/ma are in fact morphologically part of the verb can be observed when the IO markers wà/mà/ma are attached to certain verb grades. As a result these verbs change their tone pattern from Low-High (for

disyllabic verbs) to either High-High plus a suffix /-f/,  
 or High-Low with final vowel /-aa/.<sup>11</sup> This  
 morphophonological process affects verbs in grades 2/3/7  
 (for detailed discussion see chapter four). Sentences  
 (39a) and (40a) show grades 2/3 verbs without the IO  
 markers wà/mà/ma and the verbs have Low-High tone pattern.  
 When these same verbs occur before the IO markers  
wà/mà/ma, they change their tone pattern from Low-High to  
 High-High with a suffix /-f/ (39b) or to High-Low  
<sup>12</sup>  
 (40b).

- 39a. Àli yaa nèemi aikii (grade 2)  
 A he-PERF seek job  
 'Ali sought a job'
- b. Àli yaa neemaƒ wà Audù/masà aikii  
 A he-PERF seek IOM A/IOM-Pro job  
 'Ali sought a job for Audu/for him'
- 40a. yaa yafda (grade 3)  
 he-PERF agree  
 'he agreed'
- b. yaa yafdaa wà Audù  
 he-PERF agree IOM A  
 'he agreed with Audu'

The above examples clearly demonstrate that the IO  
 markers wà/mà/ma are morphophonologically part of the  
 verb that they are attached to.

To sum up, all the above tests point to the fact that  
 the IO markers wà/mà/ma, unlike the IO markers gà/gàree  
 are affixes which need to be attached to a host.

### 3.5. Apparent Counterexamples

Despite the convincing argument presented so far, there are some apparent counterexamples which seem to argue against the claim that the IO markers wà/mà/ma are part of the verb. The most serious counterexample is the one noted in Newman (1982) where he points out that when the IO markers wà/mà/ma occur with the verb yi 'to do', it is possible to delete the verb without the IO markers wà/mà/ma as shown in example (41) below.

- 41a. Àli yaa (yi) wà Laadi/matà aikii  
A he-PERF do IOM L/IOM-Pro Job  
'Ali did work for Ladi/her'
- b. munàa (yi) wà Àli/masà máganàa  
we-CONT do IOM A/IOM-Pro talk  
'we are talking to Ali/him'

Newman (1982) argues that if the IO markers wà/mà/ma are truly part of the verb one would expect them to be deleted along with the verb to which they were attached.

Another counterexample is the existence of a particular dialect of Hausa (the Bauchi dialect) which normally allows the IO marker wà plus the IO NP after the DO NP. That is in this dialect the IO marker wà is not suffixed directly onto the verb. Hence, in this dialect (6b) repeated here as (42) is perfectly grammatical.

42. Àli yaa aikà wàsiikàa wà Laadi  
A he-PERF send letter IOM L  
'Ali sent a letter to Ladi'

The above example shows that the IO marker can



46. \*Àli yaa aikàa fa matà wàsiikàa  
 A he-PERF send Prt IOM-Pro letter  
 'Ali sent a letter to her'

The issue is how do we account for the these counterexamples, especially the yi-deletion one noted by Newman. As regards to the Bauchi dialect, suffice it to say here is that IO marker wà is non-affixal in this dialect.

The first attempt to account for the yi-deletion problem was in Tuller (1984:457, n.1). Tuller posits that the verb yi should be considered as an empty verb similar to a base generated empty NP (pro). The basis of her argument comes from the fact that a base generated empty NP participates in the argument structure of the sentence, that is, it can absorb a theta-role. It follows by analogy, according to Tuller, that an empty yi may also assign a theta-role. She then proposes structure (47) for sentence (41) above.

47. '[V [V e] wà]' Tuller (1984: 457, n.1).

Tuller argues that if wà is absent the indirect object NP (Àli) would not be assigned a theta-role (or Case), and the sentence should therefore be ruled out. According to this view, it follows that the indirect object may receive its theta-role and/or Case from a base generated empty yi.

However, Tuller's solution, runs into a number of problems. First of all, it means that the IO markers



wà/mà/ma can incorporate onto an empty element in violation of our morphological principle (20) which requires that an affix must be attached to a phonologically realized category. Secondly, Tuller's empty yi proposal contradicts the assumption that empty categories can neither assign Case nor theta-role, see Baker (1985a) and Kayne (1984).<sup>14</sup>

In next section, I will modify Tuller's empty yi proposal by claiming that if the verb is empty the IO markers wà/mà/ma are attached to the next phonologically realized element.

### 3.5.1. An Alternative Analysis

In this section, I will maintain our earlier assumption that the IO markers wà/mà/ma are affixes that must be attached to a host, thus maintaining our morphological principle (20), repeated here as (48) for convenience.

48. A morphologically realized affix must be realized as a syntactic dependent at surface structure.

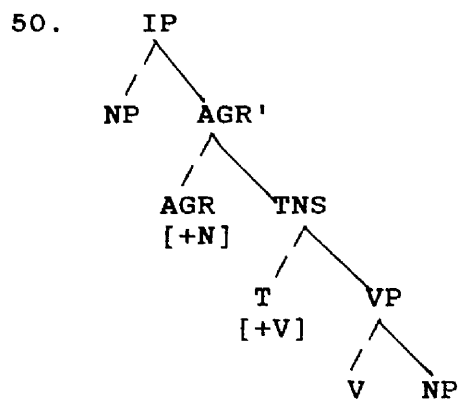
I have pointed out above that Tuller's empty verb analysis is problematic for the above principle in that it implies that the IO markers wà/mà/ma can be attached to an empty element.<sup>15</sup> The natural question that arises then

is what happens to the IO markers wà/mà/ma when the verb yi is empty. This means that the IO markers wà/mà/ma will be unattached and this of course violates our morphological principle. When this situation arises I will demonstrate that the IO markers wà/mà/ma get incorporated to the next available phonologically realized verbal element, in this case [TENSE INFL].

I will assume that the IO markers wà/mà/ma in Hausa are not only affixes but must be attached to a host which has a verbal feature. Hence, in conjunction with the morphological principle (48), I propose that condition (49) holds for (standard Hausa) Internal IOCs. This condition is in conformity with Zwicky and Pullum's (1983) criteria of distinguishing affixes from clitics-- that is affixes are very selective on their hosts.

49. The IO markers wà/mà/ma Must be Attached to [+V] Category.

Assuming the standard assumption that within INFL AGR is [+noun] while the TENSE part is [+verb] (cf. Chomsky 1981), I adopt Pollock's (1987) proposal that all elements within the INFL (i.e. AGR and TENSE) are to be viewed as independent heads in terms of X-bar theory, and we have  
16  
the structure (50) below.



Adopting the structure (50) above, I will present a number of arguments in support of condition (49) and suggest how the optional yi-drop is straightforwardly accounted for.

The first argument in favour of the claim that the IO markers wà/mà/ma are attached to the [TENSE INFL] if the verb is empty could be observed from the consonant assimilation process which occurs between the TENSE morpheme and the markers wà/mà/ma. That is, the final -n TENSE marker assimilates to the point of articulation of the IO markers whenever the verb yi is empty as shown in examples (52a-c). Example (51) indicates the sentence when the verb yi is present.

51. mutàanee sun yi wà Àli/masà aikii  
 people they-PERF do IOM A/IOM-Pro work  
 'the people did some work for Ali/him'

52a. mutàanee sum mà Àli/ masà aikii  
 people they-PERF IOM A/ IOM-Pro work  
 'the people did some work for Ali/him'

(= mutàanee suw wà Àli aikii)  
 people they-PERF IOM A work

b. am                      mà Laadi aikii  
 IMPERS-PERF    IOM L        work  
 'some work was done for Ladi'

(= aw wà Laadi aikii)

The phonological assimilation facts, as correctly pointed out in Parsons (1971/72: 64) clearly indicate that the dropping of the verb yi is complete. And the fact that the so-called modal particles cannot intervene between the IO markers and the TENSE morpheme (53) supports the claim that the markers wà/mà/ma are attached to the [TENSE INFL]. Recall that the modal particle can occur between the [TENSE INFL] and the verb.

53. \*bàràayii sun            fa wà Laadi saatàa  
       thieves they-PERF Prt IOM L        theft  
 (=bàràayii sun            fa yi wà Laadi saatàa)  
       thieves they-PERF prt do IOM L        theft  
       'the thieves robbed Ladi'

Another argument in support of the claim that the IO markers wà/mà/ma must be attached either to the verb or the [TENSE INFL] can be observed from the imperative construction. The verb yi cannot be dropped in the imperative construction, since [TENSE INFL] is lacking. Thus, the ungrammaticality of sentence (54b) follows from the fact that if the verb yi is also empty, there is no phonologically realized element that the IO markers wà/mà/ma can attach to. The NP Laadi cannot host the affixes because it is [+N].

54a. yi            wà Laadi/matà aikii  
 do-IMP IOM L/IOM-Pro work  
 'do some work for Ladi/her'

- b. \*wà Laadi/matà aikii  
IOM L/IOM-Pro work

Another important argument to support the claim that the IO markers wà/mà/ma have to be attached to either the verb or the [TENSE INFL] is the fact that verb yi cannot be empty in the subjunctive aspect as shown in example (55).

55. yaa cée kà \*(yi) wà Laadi/matà aikii  
he-PERF say you-SUB do IOM L/IOM-Pro work  
'he said you should do some work for Ladi/her'

According to Parsons (1971/72) the IO markers wà/mà/ma cannot be incorporated to the subjunctive because the subjunctive is too accentually weak to carry the IO markers wà/mà/ma. I think the ungrammaticality of sentence (55) could easily be accounted for if we assume the general notion that the subjunctive is defective with regards to [TENSE INFL]. In other words, since the subjunctive lacks the TENSE element, it follows that, if the verb yi is empty there is no verbal category that the IO markers wà/mà/ma can attach to. Thus, the sentence is ruled out by condition (49).

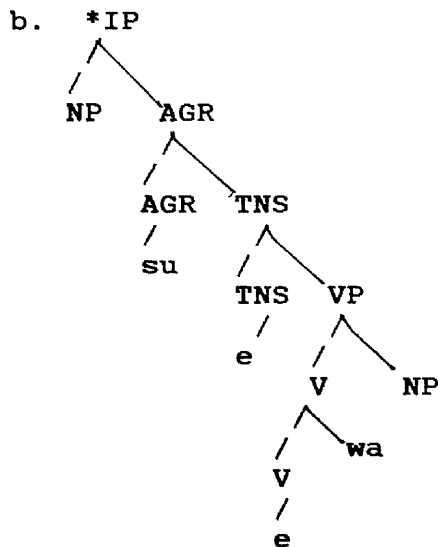
Another salient argument which lends support to condition (49) comes from the fact that it is possible to optionally drop the AGR element in the affirmative continuous and habitual tense-aspects leaving only the TENSE element. Since the TENSE element is present the IO markers wà/mà/ma can attach to it without giving rise to an ungrammatical sentence. Example (56) shows that when both the AGR and the verb yi are empty, the IO markers

wà/mà/ma can still be attached to the [TENSE INFL].

56. Àli (ya) nàa (yi) wà Laadi/matà aikii  
 A (he) CONT (do) IOM L/IOM-Pro work  
 'Ali is working for Ladi/her'

However, if both the verb and the TENSE are empty the sentence is completely ungrammatical because there is no any [+V] category that IO markers wà/mà/ma can be attached to as shown in example (57a) and illustrated by structure (57b).

57a. \*mutàanee su wà Laadi/matà aikii  
 people they IOM L/IOM-Pro work  
 'people are working for Ladi/her'



The above example clearly indicates that IO markers wà/mà/ma can only attach to [TENSE INFL] not the AGR if the verb yi is empty, thus offering further support to our condition (49).

Let us now consider what happens to the IO markers wà/mà/ma when they are preceded by an empty element left

as a result of a movement rule (i.e. trace) (See Chomsky (1981) for a distinction between a base generated empty element and a trace). In Hausa the distinction between a base generated empty element and a trace can be observed in Focus constructions vs Topicalization constructions. The Focus construction in Hausa is analogous to Wh-movement whereby the element to be focussed is moved to sentence initial position leaving its trace behind (cf. Tuller 1986). Thus, in Hausa it is possible to focus the subject NP (58a), the IO NP (58b), the DO NP (58c). Example (58) represents the neutral sentence. The trace in Topicalization construction is assumed to be base generated.

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58. yāaraa sunāa kai wà Laadì kudii  
 children they-CONT take IOM L money  
 'the children are taking some money to Ladi'
- a. yāaraa/i (nèe) t/i sukèe kai wà Laadì  
 children FOC they-REL-CONT take IOM L  
 kudii  
 money  
 'it is the children who are taking some money to Ladi'
- b. Laadì/i (cee) yāaraa sukèe kai wà t/i  
 L FOC children they-REL-CONT take IOM  
 kudii  
 money  
 'it is Ladi the children are taking money to'
- c. kudii/i (nèe) yāaraa sukèe kai wà Laadì  
 money FOC children they-REL-CONT take IOM L  
 t/i  
 'it is money the children are taking to Ladi'

The relevant aspect for our discussion here is the fact that Hausa allows its VP to be focussed. And when the VP is focussed the trace it leaves behind is obligatorily replaced by a "pro-verb yi". However, as

correctly pointed out in Tuller (1986:437), when the VP is focussed in the continuous tense, the pro-verb yi is normally optional. This is illustrated in (59a) where the V with all its complements are focussed. (59b) shows that the V and its direct object can be focussed, leaving the Internal IO behind. Note that the verb cannot be focussed alone (59c).

18

- 59a. kai wà Laadì kudii (nèe) yâaraa sukèe (yîi)  
 take-VN IOM L money FOC children they-REL-CONT  
 'it's taking Ladi money the children are doing'
- b. kai kudii (nèe) yâaraa sukèe yi wà  
 take-VN money FOC children they-REL-CONT do IOM  
 Laadì  
 L  
 'it's taking money the children are doing to Ladi'
- c. \*kai (nèe) yâaraa sukèe yi wà Laadì kudii  
 take-VN FOC children they-REL do IOM L money  
 'it is taking money the children are doing to Ladi'

Notice here that in (59b) when the verb and its direct object are focussed together leaving wà and the Internal IO NP behind, the pro-verb yi is obligatory; it cannot be dropped as is the case when the VPs are focussed (cf. 59a). Thus, example (60) without the pro-verb yi is completely ungrammatical.

60. \*kai kudii (nèe) yâaraa sukèe t/i wà Laadì  
 take-VN money FOC children they-REL-CONT IOM L  
 it's taking the money the children are doing to  
 Ladi'

The reason for the ungrammaticality of sentence (60) above follows from the fact that the IO markers wà/mà/ma are left unattached, because there is no phonologically realized element to which they can be attached. The other



available option, where the IO markers wà/mà/ma are attached to the [+V] (i.e. the [TENSE INFL]) is also blocked by the trace of the focussed V. This clearly demonstrates that the traces left by movement rule unlike base generated empty categories can prevent the IO markers from being attached to [TENSE INFL]. (Cf. Chomsky 1981, Hornstein and Weinberg (1981). Thus, the only way for sentence (60) to satisfy the morphological principle is that the pro-verb yi must be inserted and when this is done, as we have seen in sentence (59b) above the IO markers wà/mà/ma are given the support they need.

Tuller's base generated empty yi proposal might also be modified to account for the data. However, we would have to assume that an empty verb fails to satisfy the morphological principle (20), which requires that the IO markers are attached to phonologically realized element and in order for the structure to satisfy (20) the whole verb complex (i.e. empty yi and the IO marker wà/mà/) has to be attached to the [TENSE INFL]. This is possible because the base generated empty verb does not contribute any feature to the verb complex.

In the preceding discussion we have seen that the IO markers wà/mà/ma in standard Hausa are affixes that cannot appear alone and must always be attached to a phonologically realized host. I argued that this host must bear a verbal feature [+V]. Thus both these conditions are independently needed to explain why, for

instance, the IO markers wà/mà/ma cannot be pied piped, as in example (61a) below. This explanation follows from the fact that when the IO markers wà/mà/ma are extracted there is no verbal element in sentence initial position that can host them. In contrast, the External IO markers gà/gàree, being independent prepositions can be pied piped (61b) below.

- 61a. \*wà wàa/i ka nuunà t/i littaa<sup>h</sup>ii?  
 to who you-PERF show book  
 'to whom did you show the book?'
- b. gà wàa/i ka nuunà littaa<sup>h</sup>ii t/i?  
 to who you-PERF show book  
 'to whom did you show the book?'

We have also seen that the Internal IO markers wà/mà/ma unlike the External IO markers gà/gàree cannot be repeated in the second conjunct as indicated in example (62a). What prevents the IO markers wà/mà/ma from being attached to the conjunction preposition is the fact that the conjunction preposition is [-V].

- 62a. \*sun aikàa wà Laadi rìigaa dà wà Audù hùulaa  
 they-PERF send IOM L shirt and IOM A hat  
 'they sent a shirt to Ladi and a hat to Audu'
- b. Cf. sun aikà rìigaa gà Laadi dà hùulaa gà  
 they-PERF send shirt IOM L and hat IOM  
 Audù  
 A  
 'they sent a shirt to Ladi and a hat to Audu'

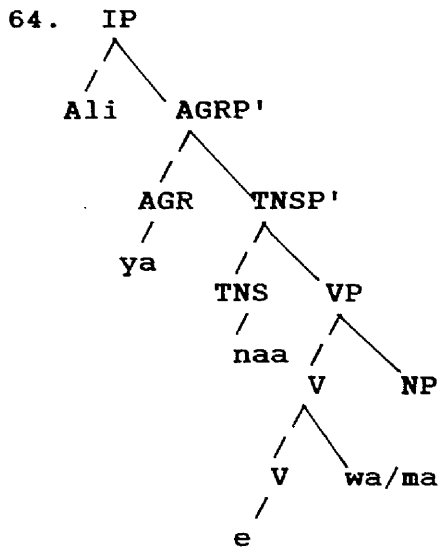
Furthermore, we noticed that the IO markers wà/mà/ma cannot be scrambled with other prepositional phrases, this is due to the fact that the IO markers wà/mà/ma could not be separated from the verb; and even if we allow the preposition scramble to operate the next element preceding

the IO markers wà/mà/ma is a [+N] category as shown in example (63).

63. \*sun buudè koofoà dà mabuudii wà Laadi/matà  
 they-PERF open door with key IOM L/IOM-Pro  
 'they opened the door with the key for Ladi/her'

(Cf. sun buudè koofoà dà mabuudii gà Laadi)  
 they-PERF open door with key IOM L  
 'they opened the door to Ladi with the key'

Finally, I have suggested a modification of Tuller's base generated empty yi proposal, i.e. in those instances when the verb yi is optionally empty. The verb complex (empty yi + the IO markers wà/mà/ma) is further moved to be attached to the [TENSE INFL]. The resulting structure is possible because the [TENSE INFL] is [+V]. Structure (64) demonstrates how the incorporation works. Thus the marker, if attached to the empty yi, fails to satisfy the morphological principle which states that affixes must be attached to a phonologically realized host. In order to satisfy this principle the IO marker must be attached to the [TENSE INFL] which in this case is phonologically overt. Notice that if the verb yi is overt there is no need for the IO marker to be attached to the [TENSE INFL].



All the arguments presented above offer a convincing support to the claim that the Internal IO markers wà/mà/ma in standard Hausa are genuine affixes that must be attached to a [+V] phonologically realized category.

The fundamental issue that arises in this chapter is at what level of the grammar does this attachment takes place? This issue is discussed in chapters five and six with respect two major approaches: (1) Baker's (1985a, 1988a) Syntactic Incorporation analysis which claims that the affix is base generated as head of PP (i.e. at D-structure); and (2) Di-Sciullo and Williams' (1987) Lexical Incorporation approach, which claims that the attachment takes place in the lexicon. Before that however, in chapter four we investigate the morpho-semantics of Hausa indirect object constructions.

### 3.5. Conclusion

In this chapter I have discussed the structure of the Hausa verbal system as proposed in Parsons (1960, 1971/72), and how the indirect object constructions fit into the paradigm. I then discussed the structure of Hausa indirect constructions and argued that there are two different types: Internal and External indirect object constructions respectively. The Internal indirect object construction is introduced by <sup>the</sup> indirect object markers wà/mà/ma. In standard Hausa the indirect object NP invariably precedes the direct object [ V wà/mà ----IO NP ----DO NP ].

The External indirect object construction, on the other hand, is introduced by the markers gà/gàree and in this construction the indirect object occurs after the direct object [V---- DO---- IO].

I discussed the status of the two types of indirect object markers, and argued following Tuller (1984) that the indirect object markers wà/mà/ma are affixes. Using Lasnik's (1981) morphological principle which requires that affixes must be attached to a phonologically realized category, I demonstrated that the IO markers wà/mà/ma are always attached to an overt category. I demonstrated further that this category must be [+V].

In those instances, where the verb yi can be dropped, I maintained Tuller's base generated empty verb proposal.

However, I argued that in order for the IO markers wà/mà/ma to satisfy Lasnik's morphological principle the whole verb complex must be attached to the [TENSE INFL]. This is because the verb is empty and as such cannot host the affixes, and the attachment is possible because the [TENSE INFL] is [+V].

Finally, with regard to the External indirect object markers gà/gàree, I posited that they are free prepositions capable of standing on their own.

### Notes to Chapter Three:

1. Earlier attempts to classify Hausa verbs were made by Schön (1862) and Robinson (1925).
2. Later on Parsons (1962) subdivided grades 4-7 into 'secondary' grades 4 and 5 and 'tertiary' grades 6 and 7, on grounds that some grades 6 and 7 verbs can be derived from grades 4 and 5.
3. In theory any abstract verb can utilize any grade, however, this is not generally the case in reality. Thus, not all Hausa verbs can co-occur with all the grades. In fact, Parsons only mentions one verb karàntaa 'to read' that can utilize all seven grades.
4. In Newman's (1973) modification of Parsons' grade system, it was proposed that tone and final vowel are part and parcel of the lexical specification of all the Hausa verbs.
5. Not all verbs undergo vowel shortening in the C-form. See Newman (1973) who provides some counterexamples to final vowel shortening.
6. The use of indirect object marker wà vs mà introducing a noun indirect object depends upon the dialect. For instance, in Standard Hausa (i.e. Kano dialect) the indirect object marker wà is often used in place of mà which is used in northern and western dialects (cf. n. 7 below).

However, in all Hausa dialects the IO marker ma (with H tone) is used to introduce a pronoun indirect object. In (appendix 1) I present the full range of Hausa pronouns. Note that the pronouns following the IO marker ma is a dependent pronoun not an independent one. Note also that the vowel of the IO marker ma generally assimilates to the vowel of the following pronoun (e.g. makù ----> mukù 'for/to you')

Apart from the IO markers wà/mà introducing noun indirect objects, Jaggar (1985a:132 n.4) observes that "A previously unreported fact about the pre-noun indirect object marker is the existence of the allomorphic variants wàa and wâa, paralleled by a màa/mâa array in more archaic dialects". I tried to find out whether there is any semantic difference between these various allomorphs. However, it appears they are in free variation, although further investigation could reveal some subtle meaning differences.

From a historical viewpoint, Eulenberg (1972) adopting 'Klingeheben's Law' (1928) proposes that IO marker wà is derived from ma (with H tone) as a result of a "lenition rule", as illustrated in (i) below. According to Eulenberg (1972:36) when the complement is a pronoun, the IO marker ma retains its underlying high tone when the (polar tone) is incorporated (cf. i) below.

(i).	<u>Tone Lowering</u>	<u>Lenition</u>
	ma Laadi    mà Laadi`	wà Laadi`
	<u>Incorporation</u>	<u>Tone Polarization</u>
	/ma// //ta//    //ma-ta//	//ma-tà//

For an alternative view see Newman (1982) and the discussion in section (3.3)

7. A question mark is used in example (6b) because the Bauchi dialect allows the IO marker wà plus the indirect object NP to occur after the direct object.
8. In section 3.5.1 I show in fact that with some verbs the IO markers wà/ma can be separated by a modal particle, this contrasts with the nominalizing suffix -waa, secondary grade extensions and clitic pronouns which cannot be detached at all. See note 12 below.
9. These modal particles are used to add emphasis or contrastive meaning, and are often employed in topicalisation constructions (see Jaggar 1978, Junaidu 1987).
10. The IO pronoun marker gàree like the IO pronoun marker ma, takes a dependent pronoun (cf. appendix 1). Most prepositions in Hausa are followed by the independent pronoun. For example dà shii not \*dà shi 'with him', dàgà ita not \*dàgà ta 'from her' etc.
11. Such a change in tone pattern is typical of a number of morphological processes. See Newman (1986) and chapter six. With regard to tone integrating affixes, Newman (1986:252) states that "Whenever the affix is added to a stem, the original tone of the stem is obliterated and the affixal tone extends over the entire word." Examples of tone integrating affixes are: nominal plural (i), derivational nouns (ii) and verbal extensions (secondary grades) (iii) to mention just a few (cf. chapter six).





object pronouns are clitics.

14. Note, however, that any empty element may transmit Case via percolation (cf. Kayne 1984). See also Chomsky (1986b).
15. Ironically, Tuller (1986) employs the same morphological principle to argue against incorporation of the CONT INFL into the AGR element when the latter is empty. In Hausa the AGR element may be optionally dropped in the affirmative continuous and habitual tense/aspects. This AGR-drop is only allowed if the subject NP is overt as illustrated in examples (i) and (ii) below

(i). Àli (ya) naa wàasaa  
A (he)CONT play 'Ali is playing'

(ii). e (\*ya) nàa wàasaa  
CONT play 'he is playing'

In the above examples, Tuller adopts the morphological principle requiring affixes to be attached to a phonologically realized category. She argues that the CONT tense is an affix which must be incorporated either to the AGR, or when the AGR is absent, to the following predicate.

16. In fact Newman and Schuh (1974) claim that in Proto Hausa the AGR was independent from the [TENSE INFL].
17. On the difference between Focus constructions and Topicalization in Hausa see McConvell (1973), Jaggar (1978) and Junaidu (1987).
18. With other tenses, when the VP is focussed, the pro-verb yi must be inserted. See Tuller (1986) for formulation and discussion.
19. The question of why the V and NP can be focussed as a discontinuous constituent is left open.
20. It seems to me that yi insertion in this case is similar to English do-support.

## Appendix 1: Hausa Pronouns

### A. Indirect Object Pronouns

1sg	mini	`for/to me'	1pl	mana	`for/to us'
2m	maka	`for/to you'	2pl	muku	`for/to you'
f	miki	`for/to you'			
3m	masa	`for/to him'	3pl	mu	`for/to them'
f	mata	`for/to her'			

### B. Direct Object Pronouns (can be high or low tone)

1sg	ni	`me'	1pl	mu	`us'
2m	ka	`you'	2pl	ku	`you'
f	ki	`you'			
3m	shi	`him'	3pl	su	`them'
f	ta	`her'			

### C. Independent Pronouns

1sg	nii	`I'	1pl	mu	`we'
2m	kai	`you'	2pl	ku	`you'
f	kee	`you'			
3m	shii	`he'	3pl	su	`they'
f	ita	`she'			

## Chapter Four

### The Morphology and Semantics of Hausa Pre-datival Verbs (= "D-forms")

#### 4.0. Introduction

This chapter deals with the different morphological alternations displayed by grades 2,3 and 7 verbs when followed by the Internal IO markers (cf. Parsons 1960). Verbs in these grades, unlike verbs in other grades (1,4,5 and 6), generally undergo morphophonological alternations whenever they occur before the indirect object markers. The chapter critically considers the previous analyses presented to explain why the verbs in these grades utilize different pre-datival forms. Based on semantic and syntactic evidence I will show that the pre-datival verbal suffix /-f/-m/ is not related to the causative morpheme /-f/ (contra Frajzyngier 1985). Whereas the latter introduces an extra argument the former cannot. I will also show that contrary to Parsons (1971/72), the grades 2/3 final /-ee/ D-form is not a "borrowed" grade 4 but a true grade 4 verb which is syntactically restricted (to use in pre-dative position only).

Some previously unrecorded facts dealing with semantic interpretations and tense/aspect restrictions accompanying the various D-forms of these grades are presented. It will be shown that the pre-datival suffix /-f/-m/, unlike other extensions (for instance, final

/-aa/), can only cooccur with the perfective tense, and that its use tends to entail a higher degree of involvement in the completion of the action than the final /-aa/ extension. Furthermore, with certain verbs the IO accompanying the pre-dative suffix /-f/-m/ has a malefactive interpretation while the IO accompanying the final /-aa/ has a benefactive interpretation.

#### 4.1. Pre-dative verb forms in Hausa

Within the Parsonian classification, the form of all Hausa verbs varies depending on the syntactic context. Parsons gives four such syntactic contexts which he defines as shown below and illustrated in (1a-d) (see also chapter three).

A-Form no object following

B-Form pre-direct object pronoun

C-Form pre-direct object noun

D-Form pre-indirect object noun/pronoun

- 1a. yaa nuunàa (A form)  
he-PERF show  
'he showed (it)'
- b. yaa nuunàa shi (B form)  
he-PERF show it  
'he showed it'
- c. yaa nuunà mootàa (C form)  
he-PERF show car  
'he showed a car'

- d. yaa nuunàa wà Àli/masà mootàa (D form)  
 he-PERF show IOM A/IOM-Pro car  
 'he showed a car to Ali/him'

Among these seven grades, the D-form of verbs in grades (1,4,5, 6) is the same as their A-form (= Parsons' citation form).<sup>1</sup> That is, the verbs in these grades do not manifest any morphophonological change in terms of either vowel quantity/quality or tone pattern in position before an IO marker. Consider the following examples in (2a-d).

- 2a. yaa kaamàa wà Àli/masà dookii (gr.1 kaamàa)  
 he-PERF catch IOM A/IOM-Pro horse  
 'he caught a horse for Ali/him'
- b. yaa nikèe wà Laadi/matà hatsii (gr.4 nikèe)  
 he-PERF grind IOM L/IOM-Pro grain  
 'he completely ground the grain for Ladi/her'
- c. yaa sayaf wà Audù/masà (dà) dookii (gr.5 sayaf dà)  
 he-PERF sell IOM A /IOM-Pro horse  
 'he sold a horse for Audù/ him'
- d. yaa kaawoo wà Audù/masà dookii (gr.6 kaawoo)  
 he-PERF bring IOM A /IOM-Pro horse  
 'he brought a horse for Audù/ him'

The remaining three grades (2,3 and 7) and some "irregular verbs" (verbs that do not fit into the Parsons' schema) present a problem in that their their D-forms are not the same as their A-forms.

#### 4.2. Characteristic features of grades 2, 3 and 7 verbs

Disyllabic verbs in grades 2,3 and 7 have low-high tone pattern. Furthermore, verbs in these grades are either exclusively transitive (gr.2) or exclusively intransitive (grs. 3 and 7). The A-forms of grades 3 and 7 end with a short vowel /-a/ and /-u/ respectively. The A-form and the B-form of grade 2 end with long vowels /-aa/ and /-ee/ while the C-form ends with short a vowel /-i/. Consider the following grade 2 examples (3a-c). Table 4:1 below summarizes the different surface realizations exhibited by grades 2/3/7 verbs.

- 3a. yaa        sàyaa    (A-form)  
      he-PERF buy  
      `he bought (it)'
- b. yaa        sàyee shi (B-form)  
      he-PERF buy it  
      `he bought it'
- c. yaa        sàyi dookii (C-form)  
      he-PERF buy horse  
      `he bought a horse'

Table 4:1 Grades 2/3/7 Two Syllable Verbs

Grade	Tone Pattern	A-Form	B-Form	C-Form	Gloss
2 (trans)	LH	/-aa / sàyaa	/-ee/ sàyee	/-i/ sàyi	`buy'
3 (intrans)	LH	/-a/ bùlla	-	-	`appear'
7 (intrans)	LH	/-u/ àuku	-	-	`happen'

Newman (1973:302) provides a number of common

features that are shared by the 'basic' grades 2 and 3. The features include the fact that both grades utilize a widespread Chadic /-i/ imperative suffix, e.g. kàrbi (<gr.2 kàrbàa) 'take (it),' and hàkùri (<gr.3 hakura) 'be patient.' Secondly, neither grade utilizes the nominalizing suffix -waa; as illustrated in examples (4a and 5a). In contrast, other grades (1,4,5,6,7) use the nominalizing suffix -waa as shown in examples (6a-e) below.

4a. yanàa kàrbàa (< gr.2 kàrbàa)  
 he-CONT get-VN  
 'he is getting (it)'

b. \*yanàa kàrbàawaa (<gr.2)  
 he-CONT get  
 'he is getting (it)'

5a. yanàa fìtaa (<gr.3 fita)  
 he-CONT go-VN  
 'he is going out'

b. \*yanàa fìtàawaa (<gr.3)  
 he-CONT go  
 'he is going out'

6a. yanàa kaamàawaa (gr.1 kaamàa)  
 he-CONT catch-VN  
 'he is catching (it)'

b. yanàa kashèewaa (gr.4 kashèe)  
 he-CONT kill-VN  
 'he is killing (it)'

c. yanàa bayâfwaa (gr.5 bayaf)  
 he-CONT give-VN  
 'he is giving (it out)'

d. yanàa kaawôowaa (gr.6 kaawoo)  
 he-CONT bring-VN  
 'he is bringing (it)'

e. yanàa àukuwaa (gr.7 àuku)  
 it-CONT happen-VN  
 'it is happening'



Finally, the final vowel -i (gr.2 C-form) and final vowel -a (gr.3 A-form) are relatable to the final ɛ/a dichotomy in Chadic verbs. Recall also that both grades have low-high tone pattern (see Table 4:1 above).

Since these two grades (2/3) share a number of common morphological features, it is not surprising that they also have unusual D-forms.<sup>3</sup>

#### 4.3. Grades 2/3/7 D-forms

Regarding unusual D-forms of grades 2/3/7 and some irregular verbs,<sup>4</sup> the following descriptive statement is generally given in the literature: (a) these verbs may either become high-high (high) plus a suffix /-f/ (which optionally assimilates to -m/) or (b) they may become high-low (high) with final vowel /-aa/. Consider the following examples: sentences (a) show the disyllabic verbs ending with a suffix /-f/-m/ and high-high tone pattern while the (b) examples show the verbs ending with final long vowels /-aa/ plus high-low tone pattern:

- 7a. yaa neemam mà Audù/masà gidaa (<gr.2 nèemaa)  
 he-PERF seek IOM A /IOM-Pro house  
 'he sought a house for Audu/him'
- b. yaa neemàa wà Audù/masà gidaa  
 he-PERF seek IOM A /IOM-Pro house  
 'he sought a house for Audu/him'

- 8a. yaa      búllam mà Audù/masà      ( <gr.3 búlla)  
 he-PERF appear IOM A /IOM-Pro  
 'he appeared to Audu/him'
- b. yaa      búllàa wà Audù/masà  
 he-PERF appear IOM A/IOM-Pro  
 'he appeared to Audu/him'
- 9a. àbín dà ya      aukam mà Audù/masà (<gr. 7 àuku)  
 thing that it-PERF happen IOM A/IOM-Pro  
 'the thing that happened to Audu/him'

(grade 7 does not have a final /-aa/ D-form, see note 3).

We pointed out before that grades 2/3 are traditionally regarded as basic grades and that they shared a number of morphological features, including the D-forms. The immediate question, however, is whether there is any way of predicting the pre-datival forms to be used by these verbs and if so, whether they correlate with any meaning differences. An attempt will be made to answer these questions.

#### 4.4. The Traditional Description of Grades 2/3/7 D-forms

Most of the traditional descriptions assume that the verb-final /-f/ is basic while /-m/ is derived as a result of a low level optional assimilation rule (cf. Abraham (1959:28)), Jaggar (1985a:130). However, various attempts were made from both the comparative point of view and language internally to account for the distribution and morphology of these pre-datival extensions.

#### 4.4.1. Parsons's Hypothesis

Based on his grade system, Parsons (1971/72) proposes that grade 2/3/7 verbs must "borrow" their D-forms from other grades, viz 1,4, and 5. Thus, whenever grades 2/3/7 verbs use final vowels /-aa/ in pre-dative position it means that they borrow the form from grade 1. If, on the other hand, they use the suffix /-f/-m/, it means that they borrow the form from grade 5. Finally, if they use final /-ee/ it follows that they have borrowed it from grade 4. Consider the examples given below.

- 10a. yaa neemaa masà (D-form of gr.2 nèemaa  
he-PERF seek IOM-Pro = 'borrowed' gr.1)  
'he sought (it) for him'
- b. yaa kaamàa masà (= gr.1 kaamàa )  
he-PERF catch IOM-Pro  
'he caught (it) for him'
- 11a. yaa neemaƒ masà (D-form of gr.2 nèemaa  
he-PERF seek IOM-Pro = 'borrowed' gr.5)  
'he sought (it) for him'
- b. yaa sayaf masà (= gr. 5 sayaf )  
he-PERF sell IOM-Pro  
'he sold (it) for him'
- 12a. yaa yafjèe minì (D-form of gr.3 yafda  
he-PERF agree IOM-Pro = borrowed gr.4  
'he agreed with me'
- b. yaa koonèe minì mootàa (= gr.4 koonèe)  
he-PERF burn IOM-Pro car  
'he burnt my car'
- 13a. taa haifam mà Audù/masà 'yaa 'yaa biyu  
she-PERF bear IOM A /IOM-Pro children two  
'she bore two children for Audu/him'  
(D-form of gr.2 haifaa = borrowed gr.5)
- b. taa haifàa wà Audù/masà 'yaa'yaa biyu  
she-PERF bear IOM A /IOM-Pro children two  
'she bore two children for Audu/him'  
(D-form of gr.2 haifaa = borrowed gr.1)

Parsons claims that the pre-datival suffix /-f/-m/ occurring in the D-forms of grades 2/3/7 verbs is 'borrowed' from the Hi-Hi final -f grade 5 (causative). He remarks as follows:

"I see no reason to make any systematic separation (on a synchronic analysis) among the level-toned forms of the verb with a final consonant, -s/-r/-d/-m, diverse as their function, and somewhat erratic as their contextual and dialectal distribution is..... I call them all grade 5 forms ....." Parsons (1971/72:205)

In the case of the final /-aa/ D-forms Parsons simply stipulates that they are 'borrowed' from grade 1. The same is assumed for the final vowel /-ee/ D-forms (i.e. they are 'borrowed' from gr.4).

Parsons (1971/72:76 fn. 62) also states categorically that among the seven grades only grade 6 (Hi-Hi, final-oo 'ventive') has a D-form that is neither a lender nor a borrower. The reasons Parsons gives (among others) are (a) that it is a tertiary grade, whereas the borrowed forms come from either primary (gr.1) or secondary grades (grs. 4 and 5). (b) that its characteristic meaning is too specialized for its form to be used by any other grade. Neither of these reasons, however, are sufficiently convincing. For instance, the last argument is suspect in that all the derived grades (4-7) i.e. including the lending grades (4 and 5) are considered to have a specialized meaning.<sup>5</sup>

In addition, there is a grade 2 verb nufaa 'head

toward' which has only grade 6 as its D-form; all other forms are ungrammatical as illustrated below.

- 14a. yaa        nufoo manà    (<gr.2 nùfaa)  
      he-PERF head IOM-Pro  
      'he headed toward us'
- b. \*yaa        nufam manà  
      he-PERF head IOM-Pro
- c. \*yaa        nufàa manà  
      he-PERF head for-us
- d. \*yaa        nufèe manà  
      he-PERF head IOM-Pro

More fundamentally, the idea of borrowing seems to contradict the hierarchical nature of the verbal system as envisaged by Parsons. The grade system is organised into three hierarchical levels: primary grades (1,2,3), secondary grades (4 and 5) and tertiary grades (6 and 7). The basis of this threefold division according to Parsons (1962:257) rests on the fact that "no grade form of the verb can derive its meaning, either inclusively or exclusively from a grade that does not rank above it -- either at one or two steps remove --in the gradational hierarchy". This means that primary grades should not be able to borrow from secondary grades.

In the case of the D-forms, however, Parsons's analysis means that the primary grades (2 and 3) must borrow their D-forms from secondary grades (4 and 5). This leads to a contradiction in the sense that borrowing from a grade normally implies that the semantic attributes of the lending grades are also borrowed, suggesting that

the borrowed D-forms should have a similar meaning to the lende D-form. Newman (1977), however, correctly points out that the supposedly borrowed D-forms do not have the same semantic attributes as the lending grades. Newman only make this observation in relation to `borrowed grade 5 D-form. See section (4.4.4).

In view of these problems, Parsons (1971/72) proposes some conditions that restrict the choice of the grade to be borrowed from, namely: (i) that grades 2,3 and 7 borrow a grade 5 final suffix /-f/ as a D-form, if the same verbal base operates grades 1 and 4 with a similar meaning, but has no attested grade 5 form. Consider the following examples, where the final /-f/-m/ is employed by the verbs in sentences (a) because there are related verbs in grades 1 or 4 with almost identical meaning, illustrated in sentences (b) and (c). There is however, no extant grade 5 verb, thus all sentences (d) are ungrammatical. Examples (a-c) are from Parsons (1971/72:80-81).

- 15a. naa yankam masà naamàa (gr.2D)  
 `I cut him off some meat'
- b. naa yankàa masà naamàa (gr.1D)  
 `I cut up/carved the meat for him'
- c. yaa yankèe minì naamàa (gr.4D)  
 `he cut the meat away (from the bone) for me'
- d. \*yaa yankař masà (dà) naamàa (gr.5D)  
 `he cut off the meat for him'
- 16a. yaa sookam minì ràakumii (gr.2D)  
 `he stabbed/ found fault with my camel'

- b. yaa sookàa minì wukaa (gr. 1D)  
`he stuck a knife into me'
- c. yaa sookèe minì ràakumii (gr. 4D)  
`he slaughtered (by spearing the jugular) a camel for me'
- d. \*yaa sookař minì (dà) ràakumii (gr.5D)  
`he slaughtered a camel for me'

The second condition proposed by Parsons is that grades 2 and 3 only borrow from grade 1 if the grades 2/3 verbs do not otherwise operate a grade 1. For instance, the D-form of grade 2 sàyaa 'buy' is sayàa (=borrowed gr.1) since there is a verb sayař (gr.5) 'sell' of a similar meaning but no grade 1 other than the D-form (cf. Jaggar lecture notes).

- 17a. yaa sayàa minì naamàa (gr.2D = borrowed gr.1)  
he-PERF buy IOM-Pro meat  
`he bought meat for me'
- b. yaa sayař minì (dà) naamàa (gr. 5D)  
he-PERF sell-CAUS IOM-Pro with meat  
`he sold the meat to/for me'
- 18. yaa fadàa masà làabaafii (gr.2D = borrowed gr.1)  
he-PERF tell IOM-Pro story  
`he told him a story'
- 19. yaa gutsùraa masà `alaawàa (gr.2D = borrowed gr.1)  
he-PERF broke IOM-Pro sweet  
`he broke off a piece of sweet for him'
- 20. yaa rookàa wà Audù gaafafàa (gr.2D)  
he-PERF beg IOM A pardon  
`he begged for pardon for Audu'
- 21. naa yafdáa makà kà tàfi (gr.3D = borrowed gr.1)  
I-PERF agree IOM-Pro you-SUB go  
`I agreed to your going' (example from Parsons)
- 22. sai kà hakùraa masà (gr.3D = borrowed gr.1)  
PRT you-SUB bear IOM-Pro  
`you must bear with him'

Finally, Parsons states that grade 3 borrows from grade 4 if the verbs do not operate grade 1. Grade 2 does not borrow from grade 4, according to Parsons, because most grade 2 verbs operate a grade 4 with appreciably different meanings.

The conditions proposed in Parsons in terms of borrowing are too ad hoc because there are a lot of exceptions (which Parsons also acknowledged). For instance, some verbs allow two, or even all the D-form possibilities, e.g.:

- 23a. naa karbaa masà kudii (gr 2D = borrowed gr. 1)  
 I-PERF receive IOM-Pro money  
 'I received the money for him'
- b. naa karbam masà kudii (gr. 2D = borrowed gr.5)  
 I-PERF receive IOM-Pro money  
 'I received the money for him'
- c. naa yafdaa makà kà tàfi  
 I-PERF agree IOM-Pro you-SUB go  
 'I agreed to your going' (gr.3D = borrowed gr.1)
- d. naa yafjèe makà kà tàfi  
 I-PERF agree IOM-Pro you-SUB go  
 'I completely agreed to your going'  
 (gr.3D = borrowed gr.4)
- e. naa yafdam makà kà tàfi (gr.3 = borrowed  
 I-PERF agree IOM-Pro you-SUB go gr.5)  
 'I completely agreed to your going'

On the other hand, some verbs allow only one form, as given in examples (24a-c), while a few verbs do not have a D-form at all, as shown in (25a-c).

- 24a. Allàh yaa isam masà  
 God he-PERF suffice IOM-Pro  
 'God is sufficient for him'
- b. \*Allàh yaa isaa masà  
 God he-PERF suffice IOM-Pro



- c. \*Allàh yaa ishèe masà  
 God he-PERF suffice IOM-Pro
- 25a. \*yaa riddaa wà Allàh  
 he-PERF apostasize IOM God
- b. \*yaa riddam masà  
 he-PERF apostasize IOM-Pro
- c. \*yaa rijjèe masà  
 he-PERF apostasize IOM-Pro

From the preceding discussion, we can see that the notion of borrowing cannot be taken literally, in view of the fact that the so-called borrowed D-forms have their own semantic interpretation different from those of lending grades. Instead it more plausible to assume a 'switching' from one grade to another as suggested in Newman (1977).

We mentioned above that (contra Parsons) grade 4 is not a lender. Parsons (1971/72) assumes that both final /-aa/ (i.e. borrowed gr.1) and final /-ee/ (borrowed gr.4) have similar meaning. But upon closer examination we discover that the two extensions are semantically distinct. That is, the final /-ee/ (the supposedly borrowed gr. 4) does not have the same semantic interpretation as the final /-aa/. It will be shown in section (4.5.1) that final /-ee/ shares a "totality" interpretation with the suffix /-f/m/. For present purposes let us consider the semantic interpretation of both borrowed final /-aa/ and borrowed final /-ee/ in relation to true grade 4 in order to see whether there is

any meaning difference. Consider the following examples

(26-28):

- 26a. yaa zamàa makà tiilàs (<gr.3 zama)  
it-PERF become IOM-Pro compulsory  
'it has become compulsory for you'
- b. yaa zamèe makà tiilàs (<gr.3 zama)  
it-PERF become IOM-Pro compulsory  
'it has become extremely compulsory for you'
- c. naa sayèe matà goofo (gr.4 sayèe)  
I-PERF buy IOM-Pro kolanut  
'I bought all the kolanut from her'
- d. yaa zamam makà tiilàs  
it-PERF become IOM-Pro compulsory  
'it has become extremely compulsory for you'
- 27a. zân hakuraa masà (<gr.3 hâkura)  
I-FUT forbear IOM-Pro  
'I will be patient with him'
- b. zân hakuree makà (<gr.3 hâkura)  
I-FUT forbear IOM-Pro  
'I will be completely patient with you'
- c. zân karbee masà kudii (gr.4 karbee)  
I-FUT take IOM-Pro money  
'I will take away all his money'
- d. naa karbam masà kudii  
I-PERF receive IOM-Pro money  
'I received all the money for him'
- 28a. yaa yaŋdàa makà kà zaunàa (<gr.3 yàŋda)  
he-PERF agree IOM-Pro you-SUB sit  
'he agreed to your sitting down'
- b. yaa yaŋjèe makà kà zaunàa (<gr.3 yàŋda)  
he-PERF agree IOM-Pro you-SUB sit  
'he totally agreed to your sitting down'
- c. yaa saacèe masà kudii (gr.4 saacèe)  
he-PERF steal IOM-Pro money  
'he stole all his money'
- d. naa yaŋdam makà kà zaunàa  
I-PERF agree IOM-Pro you-SUB sit  
'I completely agreed to your sitting down'

In sentences (a) above, the idea of totality is not

implied whereas both sentences (b) and (c) convey the idea of totality of the action, which is considered to be the primary features of grade 4. The only meaning difference between grade 4 final /-ee/ in examples (b) and the pre-dativial /-f/-m/ given in (26d) above (as we shall see later) has to do with the fact that the latter implies a higher degree of involvement in the completion of the action than the former: both forms share the totality reading.

The important thing to observe is that the totality interpretation associated with the final /-ee/ in the true grade 4 verbs examples (26c-28c) also applies to Parsons' 'borrowed' grade 3 D-forms /-f/-m/ (26d-28d). However, this interpretation is lacking in final /-aa/, showing that the (b) examples in (25-27) are actually grade 4 verbs which happen to occur before a dative. Note that Parsons (1971/72) claims that there is no meaning difference between examples (a) and (b) in sentences (26-28) above. See Swets (1989) for a slightly different view.

Independent support comes from the well established fact that a lot of grade 3 verbs are being replaced by grade 4 verbs. Note also that there are a lot of verbs that operate grade 4 without the basic verb forms (for details see Furniss 1983). Jaggar (1988: 407) also suggests that even "original 2-term transitive verbs with the completive extension were gradually pushed aside by

encroaching transitive grade 4 totality forms." Consider sentences (29a-b) from Newman (1977:326). In sentence (a) the use of a grade 4 is considered to be more natural than a regular grade 2 (b).

29a. M̀aigidaanaa yaa yaaf̀ee miǹi  
 master he-PERF forgive IOM-Pro  
 'my master forgave me'

b. M̀aigidaanaa yaa ỳaafee ǹi  
 master he-PERF forgive me  
 'my master forgave me'

The semantic evidence associated with the interpretation of the so-called 'borrowed' grade 4 D-forms and the fact that there is generally a shift in the language to use grade 4 in place of grades 2/3 verbs provide further evidence to support our view that the final /-ee/ used as the D-forms of grade 3 verbs (see examples (26b-28b) above) are actually true grade 4 verbs. Hence, contrary to Parsons (1971/72), there is no 'borrowed' grade 4 D-form.

From the above observation, it follows that the use of final /-ee/ instead of final /-aa/ correlates with the meaning intended. That is to say, the final /-ee/ emphasises the totality of the action whereas there is no such implication in case of final /-aa/. This can be compared with grade 6 (final -oo) verbs which have a ventive interpretation: the verbs in this grade, even though they are derived from the basic grades are considered as true grade 6 verbs because of their semantic

interpretation (which implies an action toward the speaker). See also Newman (1977).

30. yaa sayoo mini naamàa (<gr.2 sàyaa)  
he-PERF buy IOM-Pro meat  
'he bought and brought the meat for me'
31. zaakii yaa zaabufoo masà (< gr.3. zàabuɓà)  
lion he-PERF spring IOM-Pro  
'the lion sprang at him'(i.e.towards him)

Furthermore, most of the so called irregular verbs that are assumed in Parsons (1971/72) to borrow their D-forms from grade 4 also have totality reading, e.g. yaa girmèe masà 'he has totally outgrown him', yaa tseerèe masà 'he has totally escaped from him', yaa kauràcee manà 'he has totally left us' yaa tsoofèe masà 'he is too old for him' etc. The fact that the use of final /-ee/ by all these verbs carries with it the totality reading shows that they are grade 4 verbs which happen to be syntactically restricted to use before a dative.

We now turn to consider another possible D-form, that is the use of final vowel /-i/ grade 2 verbs.

#### 4.4.2. The use of -i (i) as a D-form in grade 2

Parsons (1971/72:74/75, n60) points out that apart from grade 6 and a few irregular verbs, the D-forms of Hausa verbs are never the same as the C-forms (i.e. the pre-direct object NP form of transitive verbs). Towards

the end of his article, however, Parsons (1971/72:196) does correct this false claim.

In this section I look at a lexically restricted group of grade 2 verbs that use final /i/ in pre-datival position (i.e. C-form = D-form). Consider the following examples (33-35). Example (32) illustrates the C-form of the grade 2 verb:

32. yaa fàafàri dookii  
he-PERF chase horse  
'he chased the horse away'
- 33a. yaa fàafàri wà Audù/masà yàaraa (<gr.2 fàafaràa)  
he-PERF chase IOM A/IOM-Pro children  
'he chased the children away from Audu/him'
- b. yaa fìtìni wà Audù /masà yàaraa (<gr.2 fìtinàa)  
he-PERF trouble IOM A/IOM-Pro children  
'he troubled Audu's/his children'
- c. yaa dàami wà Audù/masà yàaraa (<gr.2 dàamaa)  
he-PERF disturb IOM A/IOM-Pro children  
'he disturbed Audu's/his children'
34. yaa sàari wà Audù/masà icèe (<gr.2 sàaraa)  
he-PERF cut IOM A/IOM-Pro wood (Zaria dialect)  
'he cut some wood for Audu/him'
35. yaa bùgi wà Audù/masà jàakii (<gr.2 bùgaa)  
he-PERF hit IOM A/IOM-Pro donkey (Zaria dialect)  
'he hit Audu's/his donkey'

A number of grade 2 verbs with long final vowels /-ii/ before a dative are documented in Pilszczikowa (1969:20-22). Pilszczikowa, however, incorrectly claims that the /-ii/ D-forms are the same as short final /-i/ (C-forms). Below are some of the examples cited in Pilszczikowa.

- 36a. yaa màarii masà yaaròo  
'he slapped the boy for him'

- b. naa hàurii masà tunkiyaa dà kafàa  
`I hit his sheep with my foot'
- c. yaa dòokii masà jàakii dà buulaalàa  
`he hit his donkey with a stick'
- d. yaa kòorii manì awaakii zuwàa makiyaayaa  
`he drove away my goats into the grazing land'

Other grade 2 verbs mentioned in Pilszczikowa which have long /-ii/ in pre-datival position are as follows:

- 37a. hàrbaa `shoot'
- b. màaraa `slap'
- c. shùuraa `kick'
- d. fùrgaagàa `drive away'
- e. gàbtaaràa `bite off'
- f. fàafaràa `pursue'

The questions to be raised here are as follows: (i) do these verbs belong to a particular semantic class? (ii) do they also allow final /-f/-m/ or /-aa/? If so, is there any meaning difference?

Most of the verbs shown in examples (33-36) above are verbs of "contact" (i.e. `beat', `hit', `kick', etc). But the fact that there are other verbs like nèemaa `to seek' tàmbaayàa `to ask' and sayaa `to buy' that also allow final /-i/ in their pre-dative position is an argument against grouping these verbs into a "contact class". Consider the following examples:

- 38. yaa           sàyi/ sai mà Audù rìigaa (Katsina dialect)  
he-PERF buy           IOM A   shirt  
`he bought a shirt for Audu'

39. yaa      t̄arbi    m̄à    Audù   b̄aakonsà  
 he-PERF receive IOM A      guest-his  
 'he welcomed Audu's guest on his behalf'
40. yaa      s̄ooki    masà      r̄aakumii (Katsina dialect)  
 he-PERF stab    IOM-Pro camel  
 'he slabbed the camel for him'
41. k̄à    t̄amb̄ayi    m̄in    l̄aabaaṛin    iȳaayeena (Zaria dialect)  
 'ask for the news of my parents for me' (from Jaggar  
 1982:140)

Most of the verbs that use a C-form as their D-form do allow the suffix /-ḥ/-m/ or final vowel /-aa/ as well. In fact a lot of speakers I consulted prefer to use final vowel /-aa/ or the suffix /-ḥ/-m/ instead of final /-i/, as shown in examples (42-44) below. Note also that some of the examples given above are dialect specific. However, it will be shown shortly that the use of one form or the other with respect to some verbs correlates with a meaning difference.

- 42a. yaa      faafaram    minì      ȳāaraa  
 he-PERF pursue    IOM-Pro children  
 'he chased the children away from me'
- b. = yaa    f̄aaf̄ari    minì      ȳāaraa  
 'he chased the children away from me'
- c. yaa      faaf̄araa    minì      ȳāaraa  
 he-PERF pursue    IOM-Pro children  
 'he chased the children away for me'
- 43a. yaa      kooram    masà      ȳāaraa  
 he-PERF drive    IOM-Pro children  
 'he drove the children away from him'
- b. = yaa    k̄oori    masà      ȳāaraa  
 'he drove the children away from him'
- c. yaa      koor̄aa    masà      ȳāaraa    zuwaa    makaf̄antaa  
 he-PERF drive    IOM-Pro children to      school  
 'he drove the children to school for him'



- 44a. yaa neemam masà màataa  
 he-PERF seek IOM-Pro wife  
 'he sought a wife for him'
- b. = yaa neemaa masà màataa  
 he-PERF seek IOM-Pro wife  
 'he sought a wife for him'
- c. yaa nèemi masà màataa  
 he-PERF seek IOM-Pro wife  
 'he chased his wife'
- (= yaa neemèe masà màataa)  
 'he chased his wife'

If we compare examples (44a-b) with (44c), the use of the C-form carries with it a specialized meaning 'to chase' and this interpretation is confirmed by all the speakers I consulted. This means that sentence (44c) with final /-i/ may be interpreted as malefactive (which literally means he sought the person's wife with intent to commit adultery). Sentences (44a) and (b) on the other hand, may be interpreted as benefactive. The malefactive reading can also be observed in case of examples (42a/b) and (43a/b) above indicating that the children are driven away to the detriment of the person. This is contrasted with final /-aa/ (42c and 43c), which in this case may have a benefactive reading implying that person wants the children to be driven or chased away (possibly they are disturbing him). This [+benefactive] semantic difference can also be clearly observed in relation to final /-ee/ and final /-oo/ pre-dativally, in which the latter indicates a benefactive reading whereas the former indicates a malefactive reading, as shown in examples (45a) and (b) below.

- 45a. yaa kooroo masà yâaraa  
 he-PERF drive IOM-Pro children  
 'he drove the children to him'
- b. yaa koorèe masà yâaraa  
 he-PERF drive IOM-Pro children  
 'he drove away the children from him'

This semantic contrast is discussed in detail in section (4.5), where I will also show that use of the final /-f/-m/, unlike the /-aa/ extension, entails a greater degree of involvement in the completion of the action.

#### 4.4.3. Frajzyngier's Analysis

Following Parsons (1971/72), Frajzyngier (1985) explicitly states that the final /-f/-m/ of grades 2/3/7 D-forms is in fact related to the same final -f morpheme occurring in Hausa causative verbs (=Parsons' gr. 5). (See also Pilszczikowa (1969)). According to Frajzyngier (1985:35) the final /-f/-m/ is also functionally identical to the causative morpheme -f. As he puts it, "The term 'the same morpheme' may have two interpretations.....one diachronic, viz. indicating that the morphemes were historically related, and the other one synchronic, meaning that the morphemes are identical." It should be noted that /\*-s/ is assumed to be the older form of the Hausa causative suffix and the -f is derived via Klingenberg's (1928) syllable final weakening rule.



verbs as shown in examples (48a-c). Thus, the suffix also adds one more argument or rather increases the argument structure of the verb in question.

- 48a. yaa neemam masà He sought it for him (<gr. 2 nèemaa)  
b. yaa tuubam mini He apologized to me (<gr. 3 tuuba)  
c. yaa aukam mata It befell her (<gr 7 `auku)

Frajzyngier makes the claim that the causative morpheme /-f/ and the pre-datival suffix /-f/-m/ are synchronically related on the grounds that they both increase the argument structure of the verb. I shall argue that this claim is based upon wrong assumptions about indirect object constructions. As regards his diachronic claims see Newman (1977) and Jaggar (1985a) for  
10  
alternative views.

In Hausa causative constructions, there is no doubt that the causative morpheme -f increases the argument structure of the verb it is attached to, that is, it may be used to transitivize an intransitive verb. Thus, the function of the causative morpheme in Hausa is similar to other languages in that it introduces a new external argument while at the same time internalizing the old external argument if the verb is intransitive (see Koopman 1984). Note that not all Hausa transitive verbs can be causativized. In fact causativization is most common with the verbs of "ingestion" (i.e. ci 'eat', shaa 'drink' etc), see Guerssel (1986).  
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Consider the following examples. Sentences (49a) and (50a) contain intransitive verbs with only external arguments. In sentences (b) where the causative morpheme is attached to the verbs, the external arguments become the internal arguments while new external arguments are introduced.

49a. yaaròo yaa fìta  
 boy he-PERF go out  
 'the boy went out'

b. yaa fita-f' (dà) yaaròo  
 he-PERF go out-caus boy  
 'he made the boy go out'

50a. Àli yaa zaunàa  
 A he-PERF sit  
 'Ali sat down'

b. Audù yaa zaunaf' (dà) Àli  
 A he-PERF sit-caus A  
 'Audu made Ali sit down'

In sentence (51a), where the verb is transitive, an external argument is also introduced while the old external argument is internalized and the direct object NP becomes the second object (51b).

51a. dookii yaa ci cìyaawàa  
 horse he-PERF eat grass  
 'the horse ate grass'

b. Àli yaa ciyaf' (dà) dookii cìyaawàa  
 A he-PERF eat-caus horse grass  
 'Ali made the horse eat grass'

From the above examples we can see that the causative morpheme introduces a new argument to the argument structure of a given predicate. This in turn enables the verb to assign both Case and Theta-role to the internal argument.

Turning now to the indirect object constructions, contrary to Frajzyngier (1985), I will claim that the pre-datival suffix /-f/-m/ does not add an extra argument to the verb, rather the extra argument is introduced by the IO marker wà/mà.

The first evidence in support of this claim is the fact that it is ungrammatical to omit the IO markers leaving only the pre-datival suffix /-f/-m/ with grades 2/3/7 verbs D-forms; hence the ungrammaticality of sentences (52b -54b). In contrast, sentences (a) are perfectly grammatical in that the IO marker wà/mà, which introduce the dative NP, can equally assign Case to it.

52a. yaa neemaf wà/mà Laadi aikii (<gr.2 nèemaa)  
 he-PERF seek IOM L job  
 'he sought a job for Ladi'

b. \*yaa neemaf Audù aikii  
 he seek A job

53a. yaa zaabufaf wà/mà Laadi (<gr.3 zàabufà)  
 he-PERF spring IOM L  
 'he sprang at Ladi'

b. \*yaa zaabufaf Laadi  
 he spring L

54a. sun taaram mà Audù (<gr.7 tàaru)  
 that-PERF gather IOM A  
 'they gathered around Audu'

b. \*sun taaram Audù  
 they gather A

One could still argue, however, that the extra argument is introduced by the pre-datival suffix /-f/-m/ as assumed in Frajzyngier (1985) and that the dative marker wà/mà is inserted for the purpose of Case assignment.

To put it another way, we could assume that the pre-dative suffix /-ʔ/-m/ can introduce a new argument but cannot assign Case to it; sentences (b) above would therefore be ruled out because the dative NPs lack Case.

There is overwhelming evidence, however, which refutes this line of reasoning and supports our own view that the extra argument is actually introduced by the IO marker wà/mà rather than the pre-datival suffix /-ʔ/-m/. In most cases the IO marker wà/mà is the only element introducing the extra arguments: there is no pre-datival suffix in case of grades 1/4/5/6 verbs as illustrated (55a-d) below.

- 55a. yaa kaamàa (\*wà/mà) Laadi dookii (<gr.1 kaamàa)  
 he-PERF catch IOM L horse  
 'he caught a horse for Ladi'
- b. yaa koonèe (\*wà/mà) Muusaa rìigaa (<gr.4 koonèe)  
 he-PERF burn IOM M shirt  
 'he burnt Musa's shirt'
- c. yaa sayaf (\*wà/mà) Audù (dà) dookii (<gr.5 sayaf)  
 he-PERF sell IOM A horse  
 'he sold a horse for Audu'
- d. yaa sayoo (\*wà/mà) Audù dookii (<gr.6 sayoo)  
 he-PERF buy IOM A horse  
 'he bought a horse for Audu'

In these examples the extra arguments are added by the IO markers and there is no pre-datival suffix at all. Hence, the omission of the dative markers make the sentences completely ungrammatical. This argues that dative NP receives its Case from the IO markers, without which the sentences are ungrammatical.

Furthermore, this Case assigning function of the dative marker wà/mà refutes Newman's (1973:341) claim that the final vowel /-aa/ (Newman's 'applicative' extension) occurring with some grades 2 and 3 verbs, functions as a transitivizer. In the case of the IO constructions, this applicative extension is not the one that transitivizes or adds another argument; rather it is the IO marker wà/mà that performs this function. Sentences (56) and (57) are both ungrammatical without the IO markers.

56. yaa        neemàa    \*(wà/mà) Laadi aikii  
 he-PERF seek    IOM    L        job  
 'he sought a job for Ladi'

57. yaa        yaf'daa    \*(wà/mà) Audù  
 he-PERF agree    IOM        A  
 'he agreed with Audu'

Finally, this syntactic function of IO marker wà/mà introducing an extra argument also provides an argument against Newman's (1982:70) "dative fusion" claim, where he argues that with some verbs the IO marker is weakened when incorporated into the verb leaving only a long vowel plus a low tone /àa/. The examples Newman cited, however, to show the incorporation of the IO marker, are rejected as ungrammatical by all speakers I consulted. Thus while the (a) sentences are grammatical, sentences (b) without the dative marker are not. Note that  
 12  
 Newman cited sentences (b) as grammatical.



58a. yakàn tiilàsaa wà mutàanee sù yi hakà  
 he-HAB compel IOM people they-SUB do that  
 'he compels people to act thus'

b. \*yakàn tiilàsaa mutàanee sù yi hakà  
 he-HAB compel people they-SUB do that

59a. kâř kà durkùsaa wà mùtùm  
 Neg you-SUB kneel IOM man  
 'don't kneel down for a man'

b. \*kâř kà durkùsaa mùtùm  
 Neg you-SUB kneel man

60a. kadà kà kwântaa wà mùtùm  
 Neg you-SUB lie IOM man  
 'don't lie down for a man'

b. \*kadà kà kwântaa mùtùm  
 Neg you-SUB lie man

The primary instance in which the IO marker mà/wà may optionally be dropped is when it occurs with the verb baa 'to give', as shown in (61). With some speakers the verb has a long vowel /-âa/ plus a falling tone before a noun indirect object, as illustrated in (61a).

61a. yaa baa Laadi kudii  
 he-PERF give L money  
 'he gave Ladi money'

b. Cf. yaa bai (wà) Laadi kudii  
 he-PERF give IOM L money  
 'he gave Ladi some money'

The optional omission of wà in the case of (61a), however, does not seem to follow from Newman's incorporation claim, because the same falling tone baa is allowed even in the those instances where the IO marker wà is present, as shown in example (62) below. (Jaggar pc).

62. Àli yaa baa wà Laadi kudii  
 A he-PERF give IOM L money  
 'Ali gave money to Ladi'

Other instances in which the IO marker wà may optionally be dropped are in common proverbs and fixed expressions, as noted in Parsons (1971/72:66).

- 63a. daddawaa (taa) gayàa (wà) mandaa Bakii  
 'the pot calling the kettle black'
- b. ya zargàa (wà) kàrensà igiyàa  
 'he slung his hook'
- c. sai naa ga àbîn dà ya tuurèe (wà) Buuzuu nadii  
 '(I'll do it) come hell or high water'
- d. naa/mun goodèe (wà) Allàh  
 'I/we thank God'

This optional omission of IO marker wà/mà before the verb 'give' does not constitute an argument against my claim, since the verb is lexically specified as a double object verb. See a similar situation in the case of Chichewa, where the verb pats-a 'give' may appear without the applicative suffix (cf. Alsina and Mchombo 1988)

From the discussion so far we can deduce that the causative morpheme -f and the pre-datival suffixes /-f/-m/ appearing in pre-datival positions of grades 2/3/7 verbs, are different as far as their synchronic status is concerned. Thus, while the causative morpheme -f may increase the argument structure of a given predicate and also enable the verb to assign both Case and theta-role to its argument, the pre-datival suffix /-f/-m/ cannot. Rather the extra argument is added by the IO marker

wà/mà and Case assigned to it accordingly. This seems to indicate that the occurrence of these pre-datival suffixes is presumably lexically determined (i.e. the pre-datival suffix is simply a lexical property of the verb in question). The primary and perhaps the only function of the pre-datival extensions, as we shall see later, is that they modify the meaning of the verb with which they occur.

#### 4.4.4. Newman's Hypothesis

Based on both comparative and internal synchronic evidence, Newman (1977) rejects Parsons' 'borrowing' hypothesis, which relates the pre-datival suffix /-f/-m/ to the causative morpheme. Instead, he reconstructs the pre-datival suffix /-f/ as \*-n, which he assumes to be derived from the Proto-Chadic "Destinative" \*in. The meaning of this destinative extension according to Newman (1977: 282) is, "to indicate that the action of a verb was destined for, done for the benefit of, or otherwise affected or pertained to someone. It was probably most commonly used in sentences containing an indirect object".

In the case of those grades 2/3/7 verbs ending with the final vowel /-aa/, which Parsons (1971/72) claims are 'borrowed' from grade 1, Newman (1973, 1977) assumes that this is simply another extension, to be treated equally with other derivational extensions in the language. Newman calls this pre-datival extension the "applicative extension", as he puts it, "these so-called 'borrowed' grade 1 forms are not basic grade 1 verbs (i.e. underlying Hi-Lo a-verbs), as they appear to be, but rather represent a derivative grade (i.e, basic verb + extension) where the phonological identity to true grade 1 verb is accidental" (Newman 1973:339).<sup>13</sup>

Newman (1977) presents a number of arguments against giving a unified analysis of the causative morpheme -f

and the pre-datival suffix /-f/-m/. He refers to Parsons' (1971/72) own claim that the pre-datival suffix almost always assimilates to the dative marker mà/ma whereas assimilation in the case of the causative morpheme is less regular. Consider the following examples:

- 64a. yaa neemam masà aikìi (grade 2)  
 he-PERF seek IOM-Pro job  
 'he sought a job for him'
- b. yaa kooyaf masà (da) kàfàatuu (grade 5)  
 he-PERF teach-caus IOM-Pro reading  
 'he taught him how to read'

However, as correctly pointed out in Jaggar (1985:131) many speakers, especially of standard Kano dialect, do not always apply the -f--->m/\_\_\_ m assimilation rule in the D-form, as the following examples illustrate. See also section (4.4.5) for more examples.

- 65a. yaa neemaf masà aikìi (<gr.2 nèemaa)  
 he-PERF seek IOM-Pro job  
 'he sought a job for him'
- b. yaa karbaf masà kudii (<gr.2 kàrbaa)  
 he-PERF receive IOM-Pro money  
 'he received the money for him'

Another argument Newman cites against relating the pre-datival suffix to the causative morpheme is the fact that some speakers use the historically original causative morpheme -s instead of -f in the true grade 5 causatives, but -s is never used in place of the pre-datival /-f/-m/. Newman (1977:290) provides examples (66a-b) from an old Hausa text where final -s occurs before the dative marker mà/ma but only in causative constructions (tone and vowel length unmarked).

- 66a.    ina bayas ma talaka kurdi (< Mischlich (1906:50))  
       `I am giving money to the poor'
- b.   sayas mini da doki (< Mischlich (1906:444))  
       `sell me a horse'

Following Newman (1977) I conducted a test by using a sample of verbs from both the supposedly `borrowed' grade 5 D-form and the original grade 5 (causative) with a view to seeing whether speakers may accept final -s in both constructions. All the speakers reject final -s in the so-called borrowed D-forms (67a-f).

- 67a. yaa       kooyam/\*kooyas masà    kàràatuu (<gr.2 kòoyaa)  
       he-PERF teach                   IOM-Pro reading  
       `he taught him how to read'
- b. yaa       jeefam/\*jeefas masà    kudii (<gr.2 jèefaa)  
       he-PERF throuh                   IOM-Pro money  
       `he threw his money away'
- c. yaa       zaabuřař/\*zaabuřas wà   Audù (<gr.3 zàabuřà)  
       he-PERF spring                   IOM A  
       `he sprang at Audu'
- d. yaa       shigam/\*shigas masà    gidaa (<gr.3 shìga)  
       he-PERF enter                   Iom-Pro house  
       `he entered his house'
- e. yaa       harbam/\*harbas masà    zaakii (<gr.2 hàrbaa)  
       he-PERF shoot                   IOM-Pro lion  
       `he shot a lion for him'
- f. hawàayee sukà    zubam/\*zubas masà (<gr.zùba)  
       tears    it-PERF stram            IOM-Pro  
       `tears streamed down his face'

Now consider the case of the grade 5 causative construction: the speakers who rejected the final -s D-forms in (67) find both final /-ř/ and /-s/ acceptable here.

- 68a. yaa kooyaf/kooyas masà (dà) kàràatuu  
 he-PERF teach-CAUS IOM-Pro reading  
 'he taught him to read' (<gr.5 kooyaf)
- b. yaa jeefaf/jeefas masà (dà) kudii (<gr.5 jeefaf)  
 he-PERF through-caus IOM-Pro money  
 'he threw his money away'
- c. yaa zaabufaf/zaabufas masà (dà) dookii (<gr.5  
 he-PERF spring-Caus IOM-Pro horse zaabufaf)  
 'he made his horse spring at him'
- d. yaa shigaf/shigas masà (dà) mootàa gaafeeji (<gr.5  
 he-PERF enter-caus IOM-Pro car garage shigaf)  
 'he put the car into the garage for him'

The above examples refute Parsons' (1971/72) and Frajzyngier's (1985) assertion that the final /-ř/-m/ in the pre-dative position in grades 2/3/7 verbs is the same as the final /-ř/ in causative construction, thus confirming Newman's (1977) and Jagggar's (1985b) views that the two morphemes are etymologically unrelated.

Furthermore, Newman cites some archaic Hausa verbs which end with final -m whenever they precede the IO marker (examples (69a-c)). I also came across example (70).

- 69a. im mà 'control'  
 b. taasam mà 'attack'  
 c. cim mà 'overtake'
70. `yam mà 'give'

In Jagggar (1985a) it was demonstrated that taasam can occur with final /-ř/ instead of the final /-m/ as in (71), while the verb ci can occur without the final /-m/ suffix (72). To this end Jagggar (1985a:132) suggests that

the final /-m/ occurring with verbs is probably due to the assimilation of /-f/ to the following IO marker mà/ma.

71. yaa taasaf manà  
 he-PERF attack IOM-Pro  
 'he attacked us'
72. yaa cii masà mutuncii  
 he-PERF eat IOM-Pro decency  
 'he humiliated him'

Newman (1977:294) also cited some examples from Taylor (1959) in which the pre-datival suffix is /-n/ even when the indirect object marker is wà as shown below. These are the forms which support Newman's \*-in destinative claim.

73. gudun wà 'run away from'
- b. zaaburan wà 'spring upon'
- c. sanan wà 'inform' (cf. the causative sanad dà)
- d. taasan wà 'approach' (cf. the more usual taasam mà)

Finally, Newman refers to the semantic distinction between the so-called borrowed grade 3 form and the true causative (grade 5). He particularly cites Parsons' (1971/72:189) own example given below as (74a and b):

- 74a. sai kà kawam minì kàdan (<gr.3 kawa = kau 'to move')  
 just move away from me a bit'
- b. sai kà kawaf minì dà shii kàdan (<gr.5 kawaf 'move something')  
 'just move it away from me a bit'

Noting the fact that there is a semantic distinction between the above sentences, Newman (1977:291) then correctly observes that "there doesn't seem to be any explanation as to why a gr.2 or gr.3 verb should "borrow" a highly marked causative form to use in pre-dative



positions, or why this borrowed 5D form should thereby lose all of its original semantic attributes".

From the evidence presented above, Newman rejects Parsons' (1971/72) claim that the final /-f/ appearing in pre-dative position in grades 2/3/7 is related to the -f occurring in the grade 5 (causative). Instead, he posits that the pre-dative form was /-n/, derived from a Proto-Chadic destinative extension /\*in/. Newman (1977:294) concludes that "while the circumstances under which -f developed remain unclear, there is little doubt but that the direction of change was from n to f and not f to n." The evidence presented in Newman provides further support for the claim that the pre-dative suffix /-f/-m/ is not related to the causative morpheme /-f/.

#### 4.4.5. Jaggar's Analysis

Jaggar (1985a: 131) supports Newman's (1977) claim that the pre-dative suffix /-f/ is not at all related to grade 5 (causative) suffix /-f/. He disagrees, however, with Newman's claim that the suffix /-f/ appearing in pre-dative position of grades 2/3/7 verbs was derived from "Destinative" \*-n. Instead, Jaggar tentatively suggests that the pre-dative /-f/ was probably derived from a feminine possessive suffix \*-t.

Jaggar (1985a) argues that Newman's postulation of -n as basic appears a bit bizarre, in that it claims that the n changes to f before m. There is no independent evidence, however, within the language to support this sort of change (cf. Frajzyngier 1985). By positing underlying /-f/ (< \*t possessive suffix), according to Jaggar (1985a:131), one could account for the different pre-datival allomorphs in terms of the optional assimilation rule given in (75):

75. -f-----> m/w /\_\_\_ m/w.

The allomorph /-w/ had not been reported until Jaggar (1985a) and this further supports the optional assimilation rule stated above (see below).

The fact that there are many dialectal variations in using the pre-datival suffixes, see the examples from Taylor (73a-c) above, Jaggar's (1985a:132) dialect specific example (76) given below where the pre-datival suffix is /n/, and example (77a-b), which I personally came across all these examples seem to support Jaggar's (1985a) suggestion that there are possibly two etymologically distinct datival suffixes /-n/ and /-f/.<sup>14</sup>

76. `abin dà ya abkan mâi/mà Muusaa  
 `what happened to him/Musa'

77a. `abookan Audù sun taaran mâi/mashi (Katsina)  
 `Audu's friends gathered around him'

b. yaa halban mâi/mà Audù tsuntsuu (Katsina)  
 `he shot a bird for Audu'

The following data (from Jaggar 1985a) illustrate

the full allomorphic of grades 2/3/7 D-forms.

78. D-form+ma+pro D-form+mà+noun D-form +wà+noun

Grade 2: nèemaa 'seek', tàmbayàa 'ask'

neemař masà	neemař mà Audù	neemař wà Audù
neemam masà	neemam mà Audù	neemaw wà Audù
tambayař masà	tambayař mà Audù	tambayař wà Audù
tambayam masà	tambayam mà Audù	tambayaw wà Audù

Grade 3: òulla 'appear' zàabuřà 'spring up'

òullař masà	òullař mà Audù	òullař wà Audù
òullam masà	òullam mà Audù	òullaw wà Audù
zaabuřař masà	zaabuřař mà Audù	zaabuřař wà Audù
zaabuřam masà	zaabuřam mà Audù	zaabuřaw wà Audù

grade 7: àuku 'happen' tàaru 'collect, meet'

aukař masà	aukař mà Audù	aukař wà Audù
aukam masà	aukam mà Audù	aukaw wà Audù
taarař masà	taarař mà Audù	taarař wà Audù
taaram masà	taaram mà Audù	taaraw wà Audù

#### 4.4.6. Summary

In summary, the following generalization could be observed: grades 2/3 verbs, two grade 7 verbs, and a few irregular verbs show an extension in pre-dative position. These extensions are (i) final vowels /-aa/ and (ii) final suffix /-ř/-m/. As Newman (1973:339) observes, "all grade IIm verbs add an extension in pre-dative position. Individual grade IIm verbs differ as to which extension(s) they take- whether Applicative, Totality or 'Borrowed V'-

but the use of an extension is obligatory". (IIm stands for grades 2/3 in Newman's modification of Parsons' grade system and 'Borrowed V' stands for Parsons' grade 5).

We also observed that some grades 2/3 verbs allow both extensions, that is, final /aa/ and final suffix /-f/-m/, and certain grade 2 verbs in addition to the final /-aa/ and suffix /-f/-m/ also allow final /-i/, i.e. where C-form = D-form.

As regards those grade 3 verbs that allow final /-ee/ in their D-forms, we pointed out that the semantic interpretation accompanying this extension supports the argument against calling it a 'borrowed' grade 4 as assumed in Parsons (1971/72). Instead, I claim that there are actually true grade 4 verbs which happen to be syntactically restricted. I then assumed that the choice between final /-ee/ (cf. examples 26-28) and final /-aa/ D-forms is determined by the meaning intended. That is, the final /-ee/ indicates a totality interpretation (as it is generally the case for gr.4 verbs), but there is no such implication when final /-aa/ D-form is used. In section 4.6 I investigate the semantic contrast between final /-aa/ and final /-f/-m/ extensions.

Given the fact that some grades 2/3 verbs can allow at least two different extensions in their pre-dative positions, it follows that the appearance of these pre-dative extensions in grades 2/3 verbs is presumably

lexically determined as we have suggested above. Hence, it is not surprising if this lexically determined process displays all the vagaries of derivational morphology, i.e. arbitrary gaps and so forth (cf. Aronoff 1976).

Alternatively, the different morphophonological alternations presented by grades 2/3/7 verbs in the pre-dative positions may be contrasted with English past participle forms, which also show different morphological realizations. As Baker (1985a: 437) writes of English:

"The most common and productive way of forming past participles is to add the productive affix -d to the verb, which may undergo general phonological rules of voicing, assimilation and epenthesis, thereby deriving forms such as like/liked, advise/advised, omit/omitted. Nevertheless, some verbs select for a special, unproductive morpheme -en (e.g. give/given); other are suppletive (e.g. sing/sung, buy/bought). Finally, a small class of verbs have a past participle which is morphologically identical to the stem itself: split/split, hit/hit."

Baker concludes by saying that despite this morphological variation, all these past participles are equivalent in terms of their syntactic properties and distributions. Following Baker (1985a) one may assume that the different morphological variants exhibited by Hausa grades 2/3/7 verbs plus some irregular verbs when followed by the IO marker wà/mà mirror exactly the behaviour of the English past participle affix -ed.

The behaviour of Hausa grades 2/3/7 verbs D-forms can also be compared with Chamorro applied affix -i. This applied affix, as Baker points out, can appear with an

extra consonant (cf. the Hausa pre-datival suffix /-ɸ/). According to Baker, the presence of this extra consonant is usually phonologically as well as morphologically conditioned. Recall I mentioned above that when the verbs in grades 2/3/7 are followed by IO markers they usually change their tone pattern to high-high and add a suffix /-ɸ/, which becomes /-m/ as a result of optional assimilation rule, or they become high-low (high) with final vowel /-aa/ etc.

All the analyses reviewed above focus attention mainly on the morphology and/or historical origin of these pre-datival suffixes. The analyses fall short of giving an explicit account of whether the use of one extension or the other correlates consistently with any meaning differences (i.e. semantically determined). I intend to address these issues in the remaining sections of this chapter.

#### 4.5. Tense/Aspect Restrictions on /ɸ/-m/ D-form

An interesting finding in this study concerns a tense/aspect restriction on the use of final /-ɸ/-m/ D-forms, previously unreported in the literature.

In Hausa there are eight different tense/aspect markers. The tense/aspect marker is an independent element

occurring between the verb and the subject, consisting of an agreement part (which agrees with the subject) and a tense morpheme (cf. chapter one). The combination of both the agreement and tense elements is referred to as the INFL(ection)) node in GB literature. Tuller (1986:93) illustrates the eight tense/aspects using the third person plural form as indicated below.

79. 3p INFL forms:

sun	completive/perfective
sukà	relative completive/perfective
sunàa	continuous
sukée	relative continuous
sukan	habitual
zaa sù	future
sâa	future II (indefinite future)
su	subjunctive

Starting with the perfective tense, it will be observed that all the various D-forms are possible as indicated below:

80. sun            zaabàa/zaabam/zaabée/zaaboo    masà    rìigaa  
 they-PERF select                                    IOM-Pro shirt  
 'they selected a shirt for him'

For some speakers, however, (including myself) the pre-datival suffix /-f/-m/, unlike the /-aa/ extension, can only be used in the perfective, i.e. it cannot cooccur with any other tense/aspect (future, continuous tense), as illustrated in (81a-b). Note that there are no such tense/aspect restrictions when the /-aa/ extension or other D-forms are used.

81a. sun/sukà                                    neemam masà    aikii  
 they-PERF/REL/PERF seek    IOM-Pro job  
 'they sought a job for him'

b. \*zaa sù neemam masà aikii  
 Fut-they seek IOM-Pro job  
 'they will seek a job for him'

(cf. zaa sù neemàa masà aikii)  
 'they will seek a job for him'

c. \*sunàa neemam masà aikii  
 they-CONT seek IOM-Pro job  
 'they are seeking a job for him'

(cf. sunàa neemàa masà aikii)  
 'they are seeking a job for him'

Given the above examples, it appears that for those grades 2/3/7 verbs that allow the use of either the extension /-aa/ or pre-datival suffix /-ř/-m/, i.e. neemàa or neemař, the choice of one form or the other seems to be partially determined by the tense/aspect used.

The assumption here is that for those speakers that have these tense/aspect restrictions, this may possibly be related to a meaning difference between the pre-datival suffix /-ř/-m/ and other possible D-forms (e.g. the extension). Use of the /-ř/-m/ suffix tends to emphasize a higher degree of completion in the action. (For further discussion see the next section). The following examples demonstrate further the difference between the final /-aa/ extension and final suffix /-ř/-m/ in terms of tense/aspect restrictions:

82. zaa sù/sunàa zaabàa/zaabèe/\*zaabam masà riigaa  
 FUT-they/they-CONT select IOM-Pro shirt  
 'they will select/they are selecting a shirt for him'

83. zaa sù/sunàa rookaa/\*rookam manà Allàh  
 Fut-they/they-CON beg IOM-Pro God  
 'they will beg/they are begging God for us'





more acceptable than sentence (b).

87a. watakiilà sù neemàa masà aikii  
perhaps they-SUB seek IOM-Pro job  
'they may (perhaps) seek a job for him'

b. ?watakiilà su neemam masà aikii  
perhaps they-SUB seek IOM-Pro job  
'they may (perhaps) seek a job for him'

Notice that the tense/aspect restriction with respect to the final /-f/-m/ D-form is an additional argument against identifying the pre-datival suffix with the causative morpheme /-f/, because the latter morpheme is not subject to this tense/aspect restriction, as shown below:

88. zaa sù/sun/sunàa tsayaf manà (dà) mootàa  
FUT-they/they-PERF/they-CON stop-caus IOM-Pro car  
'they will make/have made/are making the car stop for us'

We shall now see that the above tense-aspect restriction correlates with a meaning difference between final /-f/-m/ and other pre-datival extensions.

#### 4.5.1. Semantic interpretation accompanying the various grades 2/3/7 D-Forms

In this section we shall consider whether various extensions used as the D-forms of grades 2,3 and 7 verbs do correlate with any meaning differences, an issue which has not been explicitly considered in the literature.

Parsons (1971/72) states, somewhat obliquely, that the choice of either final /-f/-m/ or vowels /-aa/ for grades 2/3 D-forms depends upon the meaning intended. Newman (1977:292) argues that the semantic contrast between vowel /-aa/ and final /-f/-m / "could then be understood in terms of the difference between the two derivational extensions, the Applicative and the Destinative". Consider the following examples from Parsons (1971/72:81), also cited by Newman (1977):

- 89a. ya sookàa minì wukaa (Applicative)  
 'he stuck a knife into me'
- b. ya sookam minì ràakumii (Destinative)  
 he stabbed my camel'
- 90a. yaa googàa masà m̂ai (Applicative)  
 'he rubbed polish on it'
- b. kaa googam minì kafàa (taa) (Destinative)  
 'you brushed against my leg'

According to Newman (1973,1977), the difference between the (a) and (b) sentences above is due to the inherent meaning associated with each of the extensions. In other words, each extension adds extra semantic properties to the verb it appears with. Thus, in the case of the vowels /-aa/ (Newman's 'applicative'), the function of this extension is to bring about the application of the action of the verb onto the dative object; while the function of the final /- f/-m/ (Newman's 'destinative' extension) is to indicate that the action of the verb is meant for the benefit or otherwise of the affected party. Newman's semantic analysis is based

on the fact that all the various extensions in Hausa have a specific meaning which generally modifies that of the basic verb they are attached to. For instance, if the totality grade 4 extension /-ee/ is added to basic grade 1 verb zubàa 'to pour' it becomes zubèe 'to pour away' (intransitive), and if the ventive grade 6 extension /-oo/ is added to the same basic grade 1 verb it becomes zuboo 'to pour toward the speaker.'

Finally, if the causative grade 5 extension is added to the same verb it becomes zubaf 'to pour away'. The following examples (91a-c) demonstrate how the various extensions modify the meaning of the verb they are attached to before a dative argument:

- 91a. yaa sayèe matà gooƙò (totality) (<sàyaa 'buy')  
 he-PERF buy IOM-Pro kolanut  
 'he bought all the kolanut from her'
- b. yaa sayoo matà gooƙò (ventive) (<sàyaa 'buy')  
 he-PERF buy IOM-Pro kolanut  
 'he bought the kolanut and brought it to her'
- c. yaa sayaf matà (dà) gooƙò (causative) (<sàyaa  
 he-PERF buy-caus IOM-Pro kolanut 'buy')  
 'he sold the kolanut to/for her'

Newman (1977) then, assumes that the function of the final /-aa/ (applicative) and the final /-ɸ/-m/ (destinative) extensions is analogous to that of the ventive, totality or causative extensions (cf. Swets 1989).

With certain verbs, Newman (1977), agreeing with Parsons (1971/72), points out that the above meaning

difference between final /-aa/ and final /-f/-m/ has been neutralized. Examples (92a and b) and (93a and b) are cited by Newman (1977: 292 fn. 27) as cases where the meaning of the two forms has merged.

92a. naa        zaabaa masà        dookii  
 I-PERF chose IOM-Pro horse

b. =naa        zaabam masà        dookii  
 I-PERF chose IOM-Pro horse  
 'I chose a horse for him'

93a. taa        haifaa masà        'yaa'yaa ukù  
 she-PERF bear IOM-Pro children three

b. =taa        haifam masà        'yaa'yaa ukù  
 she-PERF bear IOM-Pro children three  
 'she bore three children for him'

However, there is still a semantic contrast between the ending /-aa/ and suffix /-f/-m/. The pre-datival /-f/-m/ signifies a greater degree of completion in the action, but there is no such implication in the case of final /-aa/. Pilszczikowa (1969:102) also notes that the final /-f/-m/ D-form is more "emphatic" indicating a greater involvement in the completion of the action (similar to Grade 4).

Consider (94-95), where sentences (a) imply a higher degree of "certainty" in the completion of the action than sentences (b).

94a. yaa        neeam masà        aikii (<gr.2 nèemaa)  
 he-PERF seek IOM-Pro job  
 'he sought a job for him (and got it)'

b. yaa        neemaa masà        aikii (<gr.2 nèemaa)  
 he-PERF seek IOM-Pro job  
 'he sought a job for him'

- 95a. yaa saamam masà gidaa (<gr.2 saamùu)  
 he-PERF get IOM-Pro house  
 'he got a house for him (he has already moved in)'
- b. yaa saamàa masà gidaa (<gr.2 saamùu)  
 he-PERF get IOM-Pro house  
 'he got a house for him'

The semantic contrast between the use of final /-aa/ and final /-f/-m/ could be explained as follows: (94a) above means that the job has already been found and presumably the "affectee" has even started it. In short, the action has actually materialized. (94b) on the other hand, may mean that the job has been sought but it doesn't necessarily indicate whether the person has actually got it.

The same meaning differences are noted between examples (a) and (b) in sentences (96-99) below. For instance, sentence (98a) means that the loan has been approved by the bank and that the recipient has already started using the money, whereas in (98b), even though the loan has been approved, the recipient has not yet received the go ahead to use it. Note that even those speakers that do not have the tense/aspect restrictions noted in section 4.5. agreed that there is a meaning difference between the final /-aa/ and /-f/-m/ D-form.

- 96a. yaa zaabam masà rìigaa (<gr.2 zàabaa)  
 he-PERF choose IOM-Pro shirt  
 'he chose a shirt for him (and has given it to him)'
- b. yaa zaabàa masà rìigaa (<gr.2 zàabaa)  
 he-PERF choose IOM-Pro shirt  
 'he chose a shirt for him'

- 97a. yaa karbam masà kudii (<gr.2 kàrbàa)  
 he-PERF receive IOM-Pro money  
 'he received some money for him (and he has handed it to him)'
- b. yaa karbàa masà kudii (<gr.2 kàrbàa)  
 he-PERF receive IOM-Pro money  
 'he received some money for him'
- 98a. bankì yaa rantam masà kudii (<gr.2 ràntaa)  
 bank it-PERF lend IOM-Pro money  
 'the bank lent some money to him (and he has already started using the money)'
- b. bankì yaa ràntàa masà kudii (<gr.2 ràntaa)  
 bank it-PERF lend IOM-Pro money  
 'the bank lent some money to him'
- 99a. yaa diibam masà ruwaa (<gr.2 diibàa)  
 he-PERF draw IOM-Pro water  
 'he drew some water for him (and gave it to him)'
- b. yaa diibàa masà ruwaa (<gr.2 diibàa)  
 he-PERF draw IOM-Pro water  
 'he drew some water for him'

Recall that in section (4.4.1) I argued that those grades 2/3 D-forms assumed in Parsons (1971/72) to be 'borrowed' grade 4 final /-ee/ verbs are true grade 4 verbs which happen to be syntactically restricted. This claim is based on the fact that the verbs have the same semantic attributes as true grade 4 verbs, i.e. a totality reading. Since we know that final /-ř/-m/ also correlates with a higher degree of completion in the action, the question that immediately arises is, what is the precise semantic difference then between final /-ř/m/ and final /-ee/ D-forms?

Let us begin by comparing all the three derivational extensions examples (100a-c) below.

- 100a. yaa        karbàa    masà        kudìnsà (<gr.2 kàrbàa)  
 he-PERF receive IOM-Pro money-his  
 'he received his money for him'
- b. yaa        karbèe    masà        kudìnsà (<gr.4 karbèe)  
 he-PERF receive IOM-Pro money-his  
 'he took away all his money from him'
- c. yaa        karbam    masà        kudìnsà (<gr.2 kàrbàa)  
 he-PERF receive IOM-Pro money-his  
 'he received all his money for him'

Sentence (100a) above means that he has just received the affectee's money and he is yet to give it to him. Sentence (c) on the other hand implies that he received the affectee's money and has already given it to him. Both sentences have a benefactive interpretation. Sentence (b) means that he has taken away the money from him. Thus, both final /-f/-m/ and final /-ee/ here entail a complete/total interpretation of the action. Unlike the final /-f/-m in (100c), the final /-ee/, however, does not entail a higher degree of involvement in the completion of the action. Another distinction is that the IO NP in sentence (b) has a malefactive theta-role whereas the IO in sentence (c) has a benefactive theta-role.

Turning to examples (101a-c), sentence (a) (= final /-aa/) implies a certain degree of uncertainty but both sentences (b) (= final /-ee/) and (c) (= final /-f/-m/) indicate certainty and totality of the action, with the final /-f/-m/ D-form entailing a greater degree of involvement in the completion of the action. This clearly shows that both extensions seem to have the same reading as far as the the totality of the action is concerned, and



support Pilszczikowa's (1969) comparison of final /-ř/-m/ with final vowel /-ee/ (totality extension gr.4).

- 101a. yaa yařdàa minì ìn tàfi (<gr.3 yàřda)  
 he-PERF agree IOM-Pro I-SUB go  
 'he agreed to my going'
- b. yaa yařjèe minì ìn tàfi (<gr.4 yařjee)  
 he-PERF agree IOM-Pro I-SUB go  
 'he totally agreed to my going'
- c. yaa yařdam minì ìn tàfi (<gr.3 yàřda)  
 he-PERF agree IOM-Pro I-SUB go  
 'he completely agreed to my going'

In the rest of the examples (102-103) below, the semantic contrast between final /-aa/ in sentences (a) and (b) final /-ee/ and (c) final /-ř/-m/ is still maintained. The judgement here by most speakers is that the final /-aa/ appears to be less certain and the degree of involvement in the completion of the action is also less than that of the final /-ř/-m/. For instance, some of the speakers told me that the final /-ř/-m/, e.g. (102c) taa haifam masà yaaròo namiji 'she bore a baby boy for him' may indicate that the naming ceremony has already taken place (which in Hausa society is after seven days). In the case of the final /-aa/ it may only mean that she safely delivered the child but the naming ceremony is yet to take place (102a).

- 102a. taa haifàa masà yaaròo namiji (<gr.2 haifaa)  
 she-PERF bear IOM-Pro boy male  
 'she bore a baby boy for him'
- 17
- b. taa girmèe masà (<gr.4 girmee)  
 she-PERF be old IOM-Pro  
 'she is too old for him'

- c. taa haifam masà yaaroo namijì (<gr.2 hàifaa)  
 she-PERF bear IOM-Pro boy male  
 'she bore a baby boy for him'

Furthermore, the final /-f/-m/ in example (103c) below indicates that the affectee accepted the selection and he is happy with it. This means, he has already received the item selected. But in the case of the final /-aa/ D-form in (103a), although the selection has been done, there is no indication whether the affectee has seen the item or not.

- 103a. yaa zaabàa masà mootàa (<gr.2 zàabaa)  
 he-PERF select IOM-Pro car  
 'he selected a car for him'
- b. yaa zaabèe masà irìi (<gr.4 zaabèe)  
 he-PERF select IOM-Pro seeds  
 'he selected all the seeds for him'
- c. yaa zaabam masà mootàa (<gr.2 zàabaa)  
 he-PERF select IOM-Pro car  
 'he selected a car for him'

This semantic distinction in terms of advanced degree of involvement in completion of the action could explain the tense/aspect restriction accompanying the choice of final /-f/-m/ by some speakers. Notice that I mentioned that final /-ee/ (i.e. gr.4) also entails a totality interpretation of the action, but this does not necessarily imply a higher degree of completion, hence the ability to occur with non-perfective tense/aspects as shown in examples (104a-c) below:

- 104a. zâi/yakàn/yanàa/ yafjèe masà yà tàfi  
 he-FUT/HAB/CONT agree IOM-Pro he-SUB go  
 'he will totally agree/ usually agrees/ is agreeing/  
 for him to go'

- b. zân hakùree masà baashìn dà nakèe  
 I-FUT be patient IOM-Pro loan REL I-RELCONT  
 bînsà  
 follow-him  
 'I will renounce the loan I owe him'
- c. (cf. zân yaafèe masà baashìn dà nakèe  
 I-FUT forgive IOM-Pro loan REL I-RELCONT  
 bînsà)  
 follow-him  
 'I will renounce the loan I owe him'

Note also that final /-i/ grade 2 D-form and the other extensions that do not entail a higher degree of involvement do not have the tense/aspect restriction as illustrated by (105).

105. zaa sù bùgi/bugèe/bugoo/ bugaf masà dookii  
 they-FUT beat IOM-Pro horse  
 'they will beat the horse for him'

The claim is, therefore, that the extra semantic interpretation entailed by the final /-ř/-m/ extension inhibits it from cooccurring with other tense/aspects other than the perfective.

Another example of the semantic distinction between final /-aa/ and final /-ř/-m/ D-forms can be observed if we consider the grade 2 verb kòoyaa 'to learn'. The final /-ř/-m/ in example (106a) implies that the person has already learned the language, but there is no such implication in example (106b).

- 106a. yaa kooyam masà Hausa (<gr.2 kòoyaa)  
 he-PERF teach IOM-Pro Hausa  
 'he taught him Hausa'
- b. yaa kooyàa masà Hausa (<gr.2 kòoyaa)  
 he-PERF teach IOM-Pro Hausa  
 'he taught him Hausa'

Interestingly enough, English offers a similar semantic contrast: the same meaning difference is noted by Oehrle (1976) with the verb 'to teach' in the English double object construction and its prepositional counterpart given in (107a and b) below. Sentence (a) implies that the child has learned French but there is no such implication in (b).

107a. Mary taught the child French

b. Mary taught French to the child

Furthermore, with the grade 2 verb tambayaa 'to ask', the final /-ʔ/-m/ D-form in (108a) implies that the person has already passed on the news to the affectee, but there seems to be no such implication in the case of (108b).

108a. yaa        tambayam masà       làabaafin gàrinsù  
           he-PERF ask           IOM-Pro news           town-their  
           'he asked for news of their town for him'

b. yaa        tambàyaa masà       làabaafin gàrinsù  
           he-PERF ask           IOM-Pro news           town-their  
           'he asked for news of their town for him'

Finally, a more revealing semantic distinction between the final /-aa/ and final /-ʔ/-m/ D-forms can be seen in terms of how the action affects the IO argument, whether malefactively or benefactively. Similar findings are independently reported by Swets (1989) for the Dogondoutchi dialect. I discuss this semantic distinction in conjunction with the other derivational extensions, namely grade 6 final /-oo/ "ventive extension" and grade 4 final /-ee/ "totality extension".

I discuss this in relation to some verbs that may be considered to be semantically neutral. That is, those verbs the lexical semantics of which do not explicitly indicate a benefactive or malefactive reading. The following grade 2 verbs, daukaa 'take', diibaa 'draw', gòogaa 'rub', dànkaa 'to grasp', tsìnkaa 'to pluck' and sàaraa 'to cut' are good candidates. Let us now see what happens when the various extensions are used with these verbs, as shown in examples (109) to (114) below.

- 109a. yaa        daukaa masà    kaayaa (<gr.2 + final -aa  
          he-PERF take    IOM-Pro load        extension)  
          'he took the stuff for him'
- b. yaa        daukoo masà    kaayaa (<gr.6 final -oo  
          he-PERF take    IOM-Pro load        extension)  
          'he took the stuff and brought it for him'
- 110a. yaa        deebaa masà    ruwaa (<gr.2 + final -aa  
          he-PERF draw    IOM-Pro water        extension)  
          'he drew some water for him'
- b. yaa        deebo masà    ruwaa (<gr.6 final -oo  
          he-PERF draw    IOM-Pro water        extension)  
          'he drew some water and brought it for him'

From the examples given above, the following theta-roles are assigned to the IO's: when the final /-aa/ is used in sentences (a) the IO NP is interpreted as benefactive; the same interpretation applies to the IO when the ventive extension /-oo/ is used in sentences (b).

In contrast, when the final /-f/-m/ D-form is used, the IO is interpreted as malefactive, and a similar reading is given when the final /-ee/ extension is used, e.g.

- 111a. yaa d̥aukam masà kaayaa (<gr.2 + /-ř/-m  
 he-PERF take IOM-Pro load extension)  
 'he took the stuff away from him'
- b. yaa d̥aukee masà kaayaa (<gr.4 final -ee  
 he-PERF take IOM-Pro load extension)  
 'he took the stuff away from him'
- 112a. yaa d̥eebam masà ruwaa (<gr.2 + /-ř/-m  
 he-PERF draw IOM-Pro water extension)  
 'he took the water from him'
- b. yaa d̥eebèe masà ruwaa (<gr.4 final -ee  
 he-PERF draw IOM-Pro water extension)  
 'he drew off some of his water'

The following examples (113a-f) illustrate further that final /-aa/ and final /-oo/ may assign benefactive theta-roles to their IOs.

- 113a. yaa googaa matà hoodaa (<gr.2 + -aa  
 he-PERF rub IOM-Pro powder extension)  
 'he rubbed some powder on her'
- b. yaa googoo matà hoodaa (<gr.6 final -oo  
 he-PERF rub IOM-Pro powder extension)  
 'he rubbed some powder and brought it for her'
- c. yaa dankàa manà kudii (<gr.2 + -aa  
 he-PERF hand IOM-Pro money extension)  
 'he handed some money to us'
- d. yaa dankoo manà kudii (<gr.6 final -oo  
 he-PERF hand IOM-Pro money extension)  
 'he grabbed some money and brought it to us'
- e. yaa tsinkaa manà lèemoo (<gr.2 + -aa  
 he-PERF pluck IOM-Pro lemon extension)  
 'he plucked the lemon for us'
- f. yaa tsinkoo manà lèemoo (<gr.6 final -oo  
 he-PERF pluck IOM-Pro lemon extension)  
 'he plucked and brought the lemon to us'

In contrast, the IO arguments in sentences (114a-f) receive a malefactive theta-role, indicating further that final /-ee/ and final /-ř/-m/ D-forms assign malefactive theta-roles.

- 114a. yaa googam matà hoodàa (<gr.2 + /-ř/-m  
 he-PERF rub IOM-Pro powder extension)  
 'he rubbed some powder off her'
- b. yaa googèe matà hoodàa (<gr.4 final -ee  
 he-PERF rub IOM-Pro powder extension)  
 'he rubbed some powder off her'
- c. yaa dankam manà kudii (<gr.2 + /-ř/-m  
 he-PERF hand IOM-Pro money extension)  
 'he grabbed the money from us'
- d. yaa dankèe manà kudii (<gr.4 final -ee  
 he-PERF hand IOM-Pro money extension)  
 'he grabbed the money from us'
- e. yaa tsinkam manà lèemoo (<gr.2 + /-ř/-m  
 he-PERF pluck IOM-Pro lemon extension)  
 'he plucked off our lemon'
- f. yaa tsinkèe manà lèemoo (<gr.4 final -ee  
 he-PERF pluck IOM-Pro lemon extension)  
 'he plucked off our lemon'

This semantic interpretation is summarized in (115a-b) below. Note that this interpretation is only restricted to verbs that we assume to be semantically neutral.

- 115a. Final {-aa} dative receives a benefactive theta-role  
 {-oo}
- b. Final {-ř/-m} dative receives a malefactive theta-role  
 {-ee }

Swets (1989) reached almost a similar conclusion using data from the Dogondoutchi dialect. She specifically points out that grade 2 verbs do not occur with an indirect object, but shift to grades 1, 4, and 6. She then argues that this restriction derives from a semantic factor: grade 2 verbs before an IO marker shift to a grade 6 /-oo/ when the IO NP has a benefactive theta-role; similarly it may shift to a grade 4 /-ee/ when the IO NP

has a malefactive theta-role. Last, grade 2 verbs before IO markers usually shift to grade 1 /-aa/ when the IO NP has also a benefactive theta-role. Note that Swets states categorically that final /-f/-m/ D-forms are not productively used by her informants; and she does not give any semantic interpretation for the few cases her informants allowed. Consider the following examples from Swets (1989:53):

- 116a. naa <sup>^</sup>daukàa mâi bùhun hatsii  
 infl take-grade 1 to-him bag millet  
 'I have taken a bag of millet for him'
- b. = naa <sup>^</sup>daukoo mâi bùhun hatsii  
 infl take-grade 6 to-him bag millet  
 'I have taken him a bag'
- c. Cf. yaa <sup>^</sup>daukèe minì bic  
 infl take from-grade 4 to-me pen  
 'He has taken my pen from me (= approximately steal)

Finally, a clear semantic distinction between the various D-forms could be seen using the grade 2 verb sàaraa 'to cut'. When final /-f/-m/, final /-ee/ and final /-i(i)/ D-forms are used, the IO has a malefactive theta-role (117a-c). If, on the other hand, final /-oo/ and final /-aa/ D-forms are used, the IO NP has a benefactive theta-role (118a-b).

- 117a. yaa saara<sup>f</sup> minì itàacee  
 he-PERF cut of IOM-Pro wood  
 'he cut off some of my wood'
- b. yaa saarèe minì itàacee  
 he-PERF cut off IOM-Pro wood  
 'he cut off some of my wood'
- c. yaa saari minì itàacee  
 he-PERF cut off IOM-Pro wood  
 'he cut off some of my wood'



(cf. yaa sàarii mìn itàacee (Pilszczikowa 1969:87))  
 `he cut off my tree (and therefore I become  
 angry)'

118a. yaa saaroo minì itàacee  
 he-PERF cut IOM-Pro wood  
 `he cut some wood for me'

b. yaa saaràa minì itàacee  
 he-PERF cut IOM-Pro wood  
 `he cut some wood for me'

It is possible that the unproductive use of the final /-i/ and possibly final /ɛ̃/-m / D-forms in Niger Hausa may be attributed to the fact that the malefactive interpretation which these forms convey can be accomplished equally by a grade 4 final /-ee/ verb. The same reason accounts for the productive use of grade 6 /-oo/ in expressing a benefactive reading more than grade 1 (final /-aa/).

#### 4.6. Conclusion

In this Chapter I discussed some of the morpho-semantic issues accompanying the various extensions appearing in grade 2/3/7 verbs D-forms.

Using semantic and morpho-syntactic evidence I showed that the dative suffix /-ɛ̃/ is not at all related to the causative morpheme /-ɛ̃/. From the syntactic perspective I pointed out that the pre-dative extension, unlike

the causative morpheme /-ř/, cannot increase the argument structure of the predicate. Instead, the extra argument is introduced by the IO marker wà/mà. And from a semantic point of view we have seen that the two forms do not have the same semantic attributes. Hence, my analysis supports both Newman's (1977) and Jaggar's (1985a) claim that the causative morpheme /-ř/ and the pre-datival suffix /-ř/ are etymologically distinct, as opposed to Parsons (1971/72) and Frajzyngier (1985), who claim that the the two morphemes are related.

Furthermore, using semantic evidence I argued, that contrary to Parsons, there is no 'borrowed' grade 4, because the final /-ee/ associated with the grades 2/3 D-forms has the same semantic attribute of totality as the true grade 4 verbs, i.e. there is a 'switch' of grades.

We also noted that there are few grade 2 verbs which, apart from final /-aa/ and final /-ř/-m /, may also allow final vowel /-i/ (i.e. C-form) pre-dativaly.

In relation to the semantic distinction between the final /-aa/ and final /-ř/-m/ D-forms, I claim that the latter tends to reflect a more advanced degree of involvement in the completion of the action than the former. The same high degree of involvement in the completion of action distinguishes the final /-ř/-m/ extension from other possible D-forms, specifically final /-ee/.

Finally, I claim that the fact that for some speakers final /-f/-m/ D-forms cannot be used outside the perfective tense, a restriction which follows from the semantic interpretation accompanying the final /-f/-m/ D-forms discussed above. I demonstrated further that the use of various D-forms in relation to certain verbs depends upon the meaning intended, that is, the type of theta-role the IO argument receives- benefactive or malefactive.

## Chapter Four Notes

1. This is the form of the verb in isolation and the form used in the dictionary entry. Parsons assumes this form as the underlying form of all Hausa verbs. Newman (1973) rejects this form; instead he considers the form of the verb before noun direct object (=Parsons's C-form) to be the underlying form. See Leben and Bagari (1975) and Furniss (1981) for discussion of the base form of Hausa verbs.
2. In fact, among the modifications Newman (1973) proposed to Parsons's classification is that he referred to Parsons's gr.3 as the intransitive counterpart of gr.2.
3. Parsons (1971/72:78) also points out that in the whole Hausa lexicon there are two grade 7 verbs- taaru 'to gather' and auku 'to happen' that are used with a dative. As to why these two grade 7 verbs take the suffix /-f/-m/ before IO markers, this question must remain unanswered for the present.
4. These verbs are called 'irregular' because their basic forms fall outside Parsons' grade system (cf. Jaggar lecture notes). One feature some of them share with the basic grade 3 verbs, is that they also form their verbal noun by lengthening the final vowel instead of adding the nominalizing suffix -waa. As regards their D-forms, some of them appear with the pre-dativial suffix /-f/-m/, e.g. taashì 'stand up'- taasam masà 'to attack him'. Others like bata 'get lost', baaci 'get spoiled', mutù, 'die' and gudu 'run' use final vowel /-ee/ (i.e. gr.4) as their D-form. For example, yaa facee mini 'he was lost from my sight completely'. Note that I call this D-form true grade 4 verb. Some of the irregular verbs like tafi 'go', baaci 'get spoiled', faadi 'fall down' undergo no change before an indirect object marker. For example, yaa tafi mini Kano 'he went to Kano on my behalf' raanaa taa baaci mana 'we ran out of luck' and raanaa taa faadi musu a goonaa 'the sun set on them at the farm'. Finally, others like barii 'leave' drop the final vowel, e.g. taa baf masà baashin 'she wrote off the debt for him'.
5. For the tertiary grade 7 see Jaggar (1981a,1988), for the secondary grade 4 see Furniss (1983) and for the secondary grade 5 see Newman (1983).
6. Recently Swets (1989) reports that a grade 6 D-form as an alternative to a grade 2 D-form is productively used in the Dodondoutchi dialect. Adopting Newman's

(1977) idea of switching grades, she argues that the grade 6 D-form is chosen instead of the grade 2 D-form especially when the indirect object has a benefactive theta-role.

7. Newman (1977:292,fn.26) suggests if one assumes for Hausa that, in appropriate contexts, non-extended, non-derived verbs could have been used before a dative, it follows that forms such as \*sòoki(i) masà could have existed alongside sookàa masà and sookam masà. Grade 2 forms like dàami minì, fàafàri minì etc are instances of non-extended D-forms.
8. Most of the final long /-ii/ grade 2 examples in Pilszczikowa are from Niger Hausa; however, the Nigerian Hausa speakers I consulted allow only short /-i/ (see note 9).
9. Swets' (1989:40) data basically confirm Pilszczikowa's final /-ii/ grade 2 D-forms. She, however, mentions that the forms are not used productively. For instance, she points out that only 20 out of 140 test items were accepted by her informants. Examples (i) and (ii) are cited as final /ii/ D-forms.

(i).    naa           gàỳyàcìì           mà̀tà/mà̀           à̀bookiinaa  
 Infl       invite           to-her/to       friend-my  
 uwà̀ayentà/uwà̀ayenshì  
 parents-her/parents-his  
 'I have invited her/my friend's parents'

(ii).   naa   hàngìì                   mishì/mà̀   à̀bookiinaa gidaa  
 Infl seen from afar to-him/to friend-my house  
 'I have left to take a look at his/my friend's village'(sic).

Bagari (1977: 5) also mentions the following final /-ii/ grade 5 D-form example for the Guddiri dialect (tones not given).

(iii).   yau   naa       saisì       kaayaanaa da wuri  
 today I-compl buy-cause goods-my with earliness  
 'Today I have sold my goods early'

(iv) wannan nee riigar       da Audu ya       saisii (maka)  
 this cop shirt-the rel A   he-comp buy-cause (you)  
 'Is this the shirt that Audu sold you?'

10. A synchronic explanation of the restriction on the use of indirect objects with grade 2 verbs is proposed recently in Gouffé (1988) and developed further in Caron (1987). Their analysis is based on the assumption that the Hausa verbal system is based on "voice distinctions". This simply means that the various Hausa verb grades are associated with

different voice systems, which according to them restrict the possible argument structure with which the verbs can co-occur. They specifically argue that grade 2 verbs imply the category "middle voice", which means that the subject (or agent) is a direct beneficiary of the process. Example (i) indicates that the action is agent oriented, meaning the action expressed is performed for the benefit of the agent.

- (i).  $\dot{\text{A}}$ li yaa  $\dot{\text{d}}$ eebi ruwaa.  
 A he-PERF take water  
 'Ali took some water for himself'

In contrast, other grades, 1,4,5 and 6 are conceived to be neutralized as far as the middle voice expression is concerned. Hence, they argue that the D-forms of grades 1, 4, 5, are used instead of grade 2 D-forms because the verbs in these grades are assumed to be neutral for the category middle voice. In short, that grades 2/3 verbs cannot precede IO markers follows from the fact that verbs expressing middle voice generally impose a restriction on their argument structure. Other grades employed in their place have a different voice character; thus, they do not have such a restriction on their argument structure; hence their suitability as an alternative grade 2 D-forms. Grades 1, 4 and 6 are characterized by the following voice distinctions (cf. Swets 1989: 76).

- (i) Grade 1 expresses neutral voice  
 (ii) Grades 4 and 6 are neutralized for voice.

The middle analysis proposed by Gouffé and Caron restricting the cocurrence of grades 2/3 verbs with indirect objects, however, suffers from a number of problems (for detailed criticism see Swets 1989). The problems stem from fact that there are a number of grades 3 verbs that occur before IO markers, as the following examples show (Jaggar (p.c.)), and there are a number of grade 2 verbs where the C-form = D-form.

- (i). yaa  $\dot{\text{d}}$ ira masà (gr.3 D-forms)  
 he-PERF swoop IOM-Pro  
 'he swooped on him'
- (ii). yaa  $\dot{\text{y}}$ ãrda masà (gr.3 D-form)  
 he-PERF agree IOM-Pro  
 'he agreed with him'

Furthermore, other verbs like tafi 'to go' which may be regarded as an "apocopated" grade 3 form (cf. Parsons 1971/72) can occur with an indirect object as indicated in (iii).

- (iii). Àli yaa      tàfi wà    Laadi/matà Kanòò  
 A    he-PERF go    IOM L/IOM-Pro K  
 'Ali went to Kano for Ladi/her'

Another example of a grade 3 verb D-form from `Magana Jari Ce' is cited in Parsons (1971/72:202/2) and illustrated in (iv). (tone and vowel length not given)

- (iv). Ko da ruwannan ya      zuba masa  
 when water-the it-PERF pour for-him  
 'when the water poured down on him'

Finally, Swets (1989) documents a number of grade 2 verbs that do not possess a middle voice semantic interpretation, e.g.

- (v). `agazàa `help, come to the rescue'  
 bùgaa `beat, strike'  
 cakaa `stab, pierce'  
 dòokaa `beat, hit'

As she correctly points out, the verbs mentioned above "seem to be orientated towards the theme of the verb and not at all towards the agent, as Caron and Gouffé would claim" (Swets 1989:79).

11. For discussion of the relation between the morphological causative, lexical causative and syntactic causative in Hausa see Bagari (1977).
12. Newman presumably misinterpreted the data: in, for example, tiilàsaa wà, the final syllable of the verb is phonemically a high tone, but pulled down phonetically by the preceding low tone, and the initial glide of -wà means it is phonetically weak (Jaggar p.c.).
13. Newman (1977:289) suggests that "it was better to describe these D-forms in terms of switching grades rather than of borrowing grade forms. In other words, the D-form neemaa is not merely a Gr. 1 form, it is Gr.1, and the change from nèemi to neemàa is as much a change in grade as, for example, the change to the Gr.6 neemoo".
14. Jaggar (p.c.) informs me that he and Newman both now think that /-n/ and /-f/ represent a survival of originally bound indirect object pronouns. The discussion of the historical origin of these morphemes is beyond the scope of this study.
15. It should be emphasized, however, that this judgement is not shared by all the speakers I consulted. And in some of Hausa texts, for instance Abubakar Imam's Magana Jari Ce, there are a few examples where final

/-f/-m/ cooccurs with the subjunctive (i) and with the future tense/aspect (ii). As for the subjunctive, one would argue that this form is allowed because the subjunctive is generally considered to be [- tense].

(i). Dà kà bugam masà kàree gwamma kà bugam  
 to you-SUB hit IOM-Pro dog better you-SUB hit  
 masà dáa  
 IOM-Pro son  
 'It were better you struck his child than his  
 dog' (Mjc, ii, 227) cited in Parsons (1971/72:81).

(ii). Allàh yaa baa kà kàrfìn dà zaa kà neemaƴ  
 God he-PERF give you strength REL FUT-you seek  
 wà kànkà girmaa dà shii  
 IOM-yourselves respect with it  
 'God has given you the strength (whereby) to seek  
 to win respect for yourself'. (Mjc, i, 59) cited in  
 Parsons (1971/72:67)

16. Swets (1989) points out that final /-f/-m/ are not productive in the Dogondoutchi dialect (Niger Hausa). The same conclusion was reached by Pilszczikowa (1969), where she observes that her informant from Niger uses the final /-f/-m/ D-forms much less frequently than her informant from Kano. However, neither of the two authors explain why the final /-f/-m/ D-form appears to be very unproductive in Niger Hausa, specifically, whether the restriction has something to do with the semantic interpretation of form or with the tense/aspect used.

17. The grade 4 verb haifèe before an IO has an idiomatic meaning, for example, yaa haifèe minì cikìnsà 'he told me the whole story' (lit. his stomach).

18. Some speakers suggest that use of the final /-f/-m/ D-form in this case may indicate that the learning happened in the distance past, but there is no such implication in the case of final /-aa/.



Chapter Five  
Syntactic Incorporation

5.0. Introduction

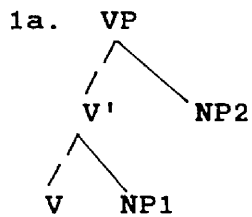
In Chapter three, I discussed the general characteristics of Hausa IOCs. We have seen that there are two types of IOCs in Hausa, namely: Internal IOCs introduced by the IO markers wà/mà/ma and External IOCs introduced by the IO markers gà/gàree. I argued that the IO markers wà/mà/ma are affixes that need to be attached to a [+V] category whereas the IO markers gà/gàree are independent prepositions. This immediately raises the interesting question of how the IO markers wà/mà/ma become attached to the verbal element. In other words, at what level of grammar does this operation take place? Throughout the next two chapters, I have been greatly influenced by Tuller's works on Hausa datives, which will be presented and observed more fully in chapter six.

I will examine this issue with regard to two approaches: In this chapter, I discuss and evaluate the Hausa IOCs in the light of Baker's (1985a, 1988a) Syntactic Incorporation analysis, which claims that affixes are base generated as heads of prepositional phrases and subsequently move to be Incorporated into the governing verb, prior to the S-structure level.

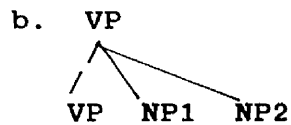
In the next chapter, I consider Hausa IOCs in terms of the Lexical Incorporation analysis proposed by

Di Sciullo and Williams (1987), which claims that the attachment of affixes takes place in the lexicon via a word formation rule. It will be argued that the Lexical Incorporation analysis is superior in many respects to the Syntactic Incorporation analysis.

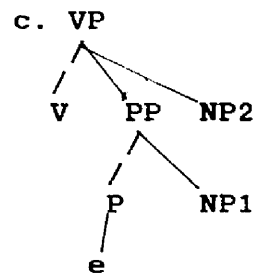
Chapter two presented a brief review of some of the analyses proposed to account for the IOCs. Some of the structures proposed for English Internal IOCs could be summarized as follows: (where NP1 is the IO NP ...).



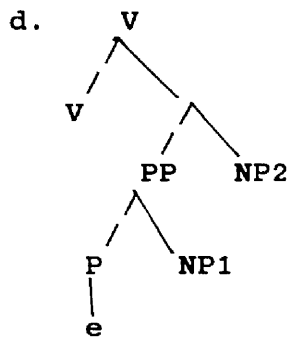
(Chomsky 1981)



(Oehrle 1976)



(Czepluch 1982)



(Kayne 1984)

The above structures, as we have mentioned in Chapter two, have been proposed to explain the differences in the syntactic behaviour of IO NPs and DO NPs. For example, it

is impossible to Wh-move the IO NP (NP1), but NP2 is freely allowed to be Wh-moved, and so forth.

A different approach is found in Baker (1985a, 1988a). Baker proposes that all the major grammatical function changing process, such as passives, antipassives, causatives, possessor raising and applicatives involve movement of a head category to another head category. For instance, Baker argues that the empty preposition in English Internal IOCs and the prepositions heading the applicative constructions in Bantu languages are Syntactically Incorporated into the verb via a movement rule (Move-alpha).

In section 5.1, I review Baker's Incorporation theory, which considers Incorporation to be an instance of Move-alpha that moves a lexical category rather than a phrasal category (cf. Baker 1985a).

In section 5.2., I examine the Uniformity of Theta Assignment Hypothesis (UTAH), which might at first sight imply that Internal and External IOCs should have the same D-structure representation. I will argue that this implication should not hold, since the only instance where the two constructions assign the same theta-roles is when the indirect object has a dative interpretation (i.e. GOAL theta-role).

In section 5.2.2, I consider Baker's Case assignment parameters utilized by different languages when two NPs

follow the verb. In English, for instance, the standard assumption is that the DO NP is assigned an inherent accusative Case, while the IO NP receives a structural Case. In Kinyarwanda it has been argued that the verb can assign two accusative Cases (cf. Baker 1985a, 1988a). In the Case of Hausa Internal IOCs, however, I will argue that the DO NP is assigned a "default nominative Case," while the IO NP receives a structural Case from the complex verb.

In section 5.3., I consider some of the diagnostic properties of NPs observed in IOCs, which Baker claims to be derivable through an Incorporation analysis. I will show that some of the facts in Chichewa and English that are supposed to follow from the Syntactic Incorporation analysis do not hold for Hausa.

Section 5.4 gives a brief summary of the different syntactic behaviour of NPs in IOCs observed in Chichewa, English and Hausa.

Finally, in section 5.5, I consider another principle, the Case Frame Preservation Principle (CFPP), put forward in Baker (1988a). The principle prevents the formation of IOCs from intransitive verbs on the grounds that the complex verb cannot inherit Case, which the stranded NP needs in order to satisfy the Case Filter. I will show, however, that contrary to Baker (1988a), IOCs can be formed with intransitive verbs in Hausa.

### 5.1. Syntactic Incorporation

It is now generally accepted that the rule Move-alpha can apply either to phrasal categories [NP, VP, PP, AP etc] or to lexical categories [N, V, P, A etc]. Incorporation is the term used to refer to the latter case. In other words, Incorporation is the syntactic movement of an X-o category (in the sense of X-bar theory) which adjoins it to another X-o governing category. Since Incorporation is assumed to be a subpart of standard syntactic movement, it follows that the movement also has to be constrained by the principles which constrain movement processes in general, i.e. the Empty Category Principle (ECP), Projection Principle, Subjacency etc. The way and in which these principles interact to constrain Incorporation will become clearer as we proceed.

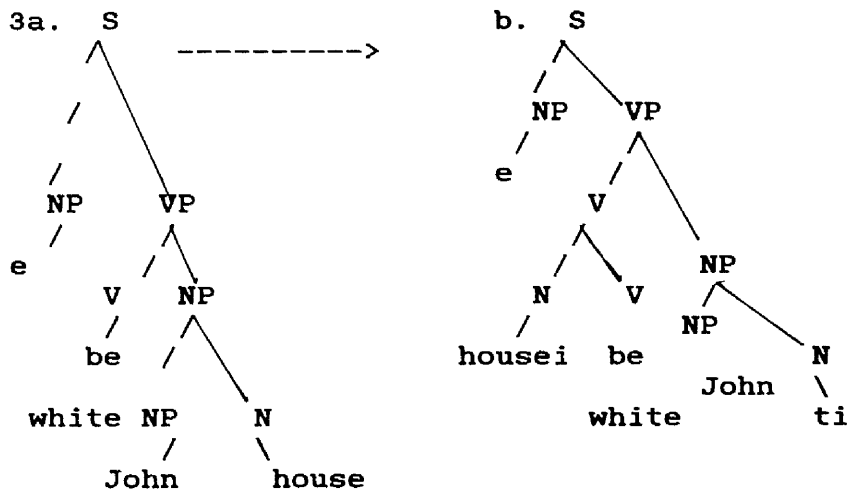
#### 5.1.1. X-o Movement

We mentioned above that the term Incorporation is used to refer to an instance of a generalized syntactic movement (Move-alpha), which moves a lexical category rather than a phrasal category and adjoins it to another lexical category. This sort of movement is also known as "head to head movement". The theory of Incorporation recast within the GB framework is explicitly developed in

Baker (1985a, 1988a). Baker (1988a) points out that lexical categories i.e. N, V and P, can move in the syntax and adjoin to the governing verb. The following examples (2a-b) from Baker (1988a:20-21) demonstrate how Noun Incorporation operates.

- 2a. Ka-rakv ne sawatis hrao-nuhs-a?  
 3N-be white DET John 3M-house-SUF  
 'John's house is white.'
- b. Hrao-nuhs-rakv ne sawatis  
 3M-house-be white DET John  
 'John's house is white.'

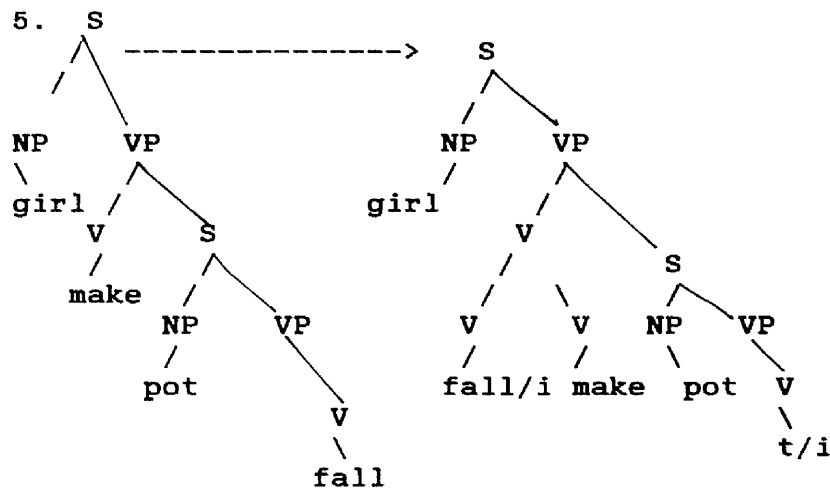
Sentence (2) describes Noun Incorporation in Mohawk whereby the noun 'house' (i.e. the direct object of the verb) in (2a) is incorporated into the verb in (2b) as a result of X-o movement, as shown by the tree diagram (3a & b) below.



Sentence (4) illustrates how Verb Incorporation accounts for the morphological causative in Chichewa (a Bantu language). Thus, sentence (4b) is derived via verb Incorporation in the syntax as shown in structure (5)

below (cf. Baker 1988a).

- 4a. Mtsikana a-na-chit-its-a kuti mtsuko u-gw-e.  
 girl do-cause that waterpot fall  
 'the girl made the waterpot fall.'
- b. Mtsikana a-na-gw-ets-a mtsuko.  
 girl fall-cause waterpot  
 'the girl made the waterpot fall.'



Finally, example (6) from Kinyarwanda describes how the so-called "applicative" construction in this language can be accounted for in terms of a process of Preposition Incorporation that derives (6b) from (6a) :

- 6a. Umwaana y-a-taa-ye igitabo mu maazi.  
 child SP-PAST-throw-ASP book in water  
 'The child has thrown the book into the water.'
- b. Umwaana y-a-taa-ye-mo amaazi igitabo  
 child SP-PAST-throw-ASP-in water book  
 'The child has thrown the book into the water.'

In this chapter we are mainly concerned with the last type of Incorporation, to this extent we will have nothing to say about Noun and Verb Incorporation. For

detailed discussion see Baker under the references cited above, and for a different account that derives Noun incorporation via a morphological process see Di Sciullo and Williams (1985).

### 5.1.2. Preposition Incorporation

We indicated above that most of the major lexical categories [N, V and P] can move from their independent base positions and adjoin to another lexical category in the syntax. Baker (1985a, 1988a) shows that the so-called applicative constructions and English Internal IOCs can be accounted for as manifestations of Prepositional Incorporation. In this section, I will briefly highlight some of the facts presented by Baker to argue for this claim. The term applicative in this sense includes among other things, benefactive/goal, instrumental, and locative constructions, which according to Baker can all be regarded as prepositional phrases. In this section, I will limit my discussion to the benefactive/dative applicatives.<sup>1</sup>

Consider the following Chichewa sentences from Baker (1988a:229):

7a. Mbidzi zi-na-perek-a msampha kwa nkhandwe.  
zebras SP-PAST-hand-ASP trap to fox  
'The zebras handed the trap to the fox.'



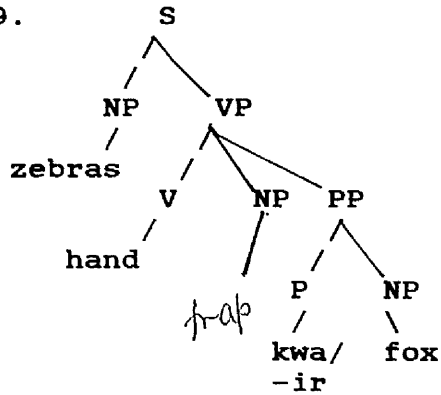
b. Mbidzi zi-na-perek-er-a nkhandwe msampha.  
zebras SP-PAST-hand-to-ASP fox trap  
'The zebras handed the fox the trap.'

In sentence (7a) the verb contains an NP direct object and a prepositional phrase complement. In (b) the verb appears with a suffix, which is regarded as the applicative suffix and is followed by two bare NPs. In this case, however, the Goal NP precedes the direct object NP. The examples given above (which is a goal applicative construction) show that the appearance of the suffix in (b) can be related to the preposition kwa 'to' in (7a). That is, in both constructions the dative NP 'fox' is assigned a GOAL theta-role. According to Baker this GOAL theta-role is assigned in the same way at D-structure. In order to capture this generalization Baker (1988a:46) proposes the following principle:

8. THE UNIFORMITY OF THETA ASSIGNMENT HYPOTHESIS (UTAH):  
Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

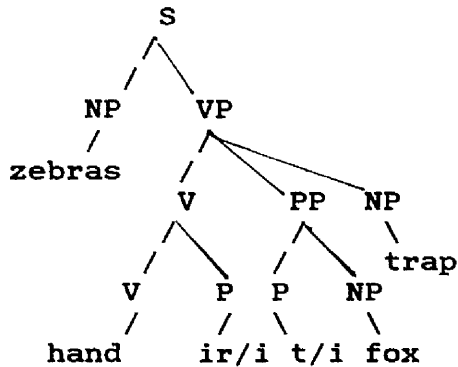
The above principle implies that items having the same thematic role should be base generated as independent categories at the D-structure level. Thus, sentences (7a and b) should have the same D-structure as shown in (9) (Baker 1988a:230). (The change of the suffix from -ir to -er in the sentence is due to a productive vowel harmony rule in Chichewa).

9.



Let us consider how Baker analyses sentence (7b) as an instance of PI. Baker argues that the applicative suffix is base generated as an independent preposition (i.e. the head of the dative object argument). This suffix then moves from its base position and adjoins to the governing verb, as illustrated by the structure (10).

10.



The moved P leaves behind a trace as required by the Projection Principle of Chomsky (1981), which states that lexical representation must be preserved at every syntactic level (i.e. D-structure, S-structure and LF). Furthermore, all movements (i.e. where the moved element comes from and where it lands) is also constrained, in that the trace left behind must be properly governed in

accordance with the Empty Category Principle (ECP). The ECP requires that traces of moved categories should be properly governed (cf. Chomsky 1981).<sup>2</sup> The suffix -ir has to move in order to satisfy the Stray Affix Filter, which is a morphological principle requiring affixes to be attached to a word. The Filter is stated as follows:

11. Stray Affix Filter

\*X if X is a lexical item whose morphological subcategorization frame is not satisfied at S-structure. (Baker 1988a:140).

The PI also gives rise to a new government relationship between the object of the preposition and the verb. Baker (1988a:250) points out that, before Incorporation the verb does not govern the object of the PP in that the P, being a closer selecting head, creates a barrier. After the PI, however, the complex verb (V + moved P) governs the stranded object via the "Government Transparency Corollary" (GTC). Baker (1988a:64) defines GTC as:

12. The GOVERNMENT TRANSPARENCY COROLLARY (GTC)

A lexical category which has an item incorporated into it governs everything which the incorporated item governed in its original structural position.

Through the Incorporation analysis and its interaction with other independent modules i.e. Case theory and Theta theory, Baker is able to account for the following phenomena observed in the applicative constructions: word order facts, object agreement, passivization and Wh-movement.

First of all, consider the dative applicative sentence (7b) above represented by structure (10). In that sentence there are two NPs that need Case in order to satisfy the Case Filter, which states that every phonetically realized NP must have Case (cf. Chomsky 1981). For sentence (7b) to satisfy this Case theory requirement, it is assumed that the verb can assign structural Case to one of the NPs and an inherent Case to the other.

The difference between structural and inherent Case is that inherent Case is assigned at D-structure, and the Case assigner must theta-mark the NP in question, while structural Case is assigned at S-structure, and the Case assigner must be adjacent to NP in question (cf. Stowell 1981).

Following Stowell's (1981) adjacency condition on structural Case Assignment, Baker claims that the applied NP is assigned a structural Case after the PI (cf. structure 10). The DO NP, on the other hand, may be inherently Case-marked. Baker concludes that since the structural Case is assigned to the applied NP, it must occur immediately after the verb. Hence, the word order facts witnessed in the dative applicative construction (7b) above.

As regards object agreement facts, Chichewa and other Bantu languages allow the presence of a pronominal element

in their verbal morphology. This pronominal element generally agrees in terms of number and gender with the NP complement following the verb. In dative/benefactive applicative constructions, if this element appears, it agrees with the applied object NP, but not with the direct object. Baker, following standard GB assumptions, takes the pronominal elements to be a manifestation of the structural Case features of the verb. Since in dative/benefactive applicative constructions the structural Case is assigned to the applied object NP it follows automatically that the pronominal element can only agree with the applied object NP and not the direct object NP. This is shown in (13a) below, where the pronominal element mu agrees with the applied NP mtsuko.

13a. Amayi a- ku -mu-umb-ir-a mtsuko mwana.  
 woman SP-PRES OP-mold-for-ASP waterpot child  
 'The woman is molding the waterpot for the child.'

As a result of this agreement relationship, it is possible optionally to pro-drop the applied object NP as demonstrated in (13b).

13b. Amayi a - ku- mu-umb- ir- a mtsuko  
 woman SP-PRES-OP-mold-for-ASP waterpot  
 'The woman is molding the waterpot for the child.'

In contrast, since the agreement relationship can not hold between the direct object NP and the pronominal element once the applied object NP is present, (as shown in (14a)), the direct object NP cannot be dropped (14b). (All examples are from Baker 1988a:247).

14a. \*Amayi a- na- u- umb- ir- a mwana mtsuko  
woman SP-PAST-OP-mold-for-ASP child waterpot  
'The woman is molding the waterpot for the  
child.'(sic)

b. \*Amayi a -na- u -umb- ir- a mwana.  
woman SP-PAST-OP-mold-for-ASP child  
'The woman is molding it for the child.'(sic)

Another interesting fact, which Baker claims to follow from PI and structural Case assignment, is that only the applied object NP can become the subject of the clause when the verb is passivized (15b). The direct object NP cannot, as indicated in (15c).

15a. Kalulu a-na- gul-ir-a mbidzi nsapato.  
hare SP-PAST-buy-for-ASP zebras shoes  
'The hare bought shoes for the zebras.'

b. Mbidzi zi-na- gul-ir-idw- a mbidzi (ndi kalulu)  
zebras SP-PAST-buy-for-PASS-ASP zebras by hare  
'The zebras were bought shoes by the hare.'

c. \*Nsapato zi-na-gul-ir-idw-a mbidzi (ndi kalulu).  
shoes SP-PAST-buy-for-PASS-ASP zebras by the hare  
'The shoes were bought for the zebras by the hare.'

Baker points out that the applied object NP becomes the subject of the passive clause, because passivization only  
3  
absorbs structural Case.

Finally, Baker (1988a) shows that in terms of Wh-movement facts, the opposite result is obtained: the applied object NP cannot be Wh-moved (16b). The direct object NP, on the other hand, can be extracted as shown by example (16c). Sentence (16a) represents the basic sentence.

16a. Mavuto a- na- umb- ir- a mfumu mtsuko  
Mavuto SP-PAST-mold-APPL-ASP chief waterpot  
'Mavuto molded the waterpot for the chief.'

- b. \*Iyi ndiyo mfumu imene ndi-ku- ganiz-a kuti Mavuto  
 this is chief which 1sS-PRES-think-ASP that Mavuto  
 a- na- umb- ir- a mtsuko  
 SP-PAST mold-APPL-ASP waterpot  
 'This is the chief which I think that Mavuto molded  
 the waterpot for.'
- c. Uwu ndiwo mtsuko u-mene ndi-ku-ganiz-a kuti Mavuto  
 this is waterpot which 1sS-PRES-think-ASP that Mavuto  
 a- na- umb- ir- a mfumu  
 SP-PAST-mold-APPL-ASP chief  
 'This is the waterpot that I think that Mavuto molded  
 for chief.'

The impossibility of extracting the applied object NP is due, according to Baker, to the presence of a trace (among other things) left behind after the P has Incorporated into the verb. Baker (1988b: 376) then proposes a filter (18) which rules out extraction of an element headed by an empty head. The Filter is a simplified version of the one given in Baker (1988a:299). (Op stands for an operator phrase in COMP).

18. The Non-Oblique Trace Filter  
 \*[Op/i...V +X/j....[xp t/j t/i]...] at S-structure,  
 where X is [-V] (N or P).

The Non-Oblique Trace Filter will be reconsidered in section 5.3.3, where I consider the Hausa IOCs facts.

The above discussion gives a brief overview of Baker's Preposition Incorporation analysis for dative/benefactive applicative constructions. In the following subsections, I will examine the behaviour of NPs in Hausa IOCs with respect to the following properties: word order facts, object agreement, passivization and wh-movement, in order to see how they fare in relation to the expectations

generated by Baker's Syntactic Incorporation analysis. Before we do that, let us consider the Uniformity of Theta-Assignment Hypothesis (UTAH) in relation to the two types of Hausa IOCs.

### 5.2. Uniformity of Theta-Assignment and Hausa IOCs

In Chapter three, I gave a general description of Hausa IOCs. We saw that Hausa IOCs can be divided into two types, namely Internal and External IOCs. The former is introduced by the markers wà/mà/ma, while the latter is introduced by markers the gà/gàree. Consider the following examples (18 and 19):

18. Audù yaa aikàa wà Laadi/matà wàsiikàa  
A he-PERF send IOM L/IOM-Pro letter  
'Audu sent a letter to Ladi'

19. Audù yaa aikà wàsiikàa gà Laadi/gàree-tà  
A he-PERF send letter IOM L/IOM-Pro  
'Audu sent a letter to Ladi'

In his discussion of Chichewa applicative constructions, Baker (1985a, 1988a) argues that applicative constructions are related to their independent prepositional counterparts. Given this, there is a need for a uniform analysis to explain this fact. Consider the following examples from Chichewa: both sentences (20a and b) are assumed to have the same interpretation. That is the same theta-role, that of GOAL, is assigned to the chief in both (a) and (b).



20a. Ndi-na- tumiz-a chipanda cha mowa kwa mfumu.  
1sS-PAST send-ASP calabash of beer to chief  
'I sent a calabash of beer to the chief.'

b. Ndi-na- tumiz-ir-a mfumu chipanda cha mowa.  
1sS-PAST-send-to-ASP chief calabash of beer  
'I sent the chief a calabash of beer.'

To account for these cases (among others), Baker (1988a:230) posits that both sentences should have the same D-structure (see the discussion above). Baker points out that Chichewa has two different prepositional elements which happen to assign the same theta-role. The only difference between the two is that one is an affix -ir whereas the other kwa is an independent preposition. The same D-structure (9) above is assumed for the English External IOC (21a) and its Internal counterpart (21b). The difference between English and Chichewa is that the analog of the Chichewa affix -ir is taken to be null in English (cf. Kayne 1984, Czepluch 1982).

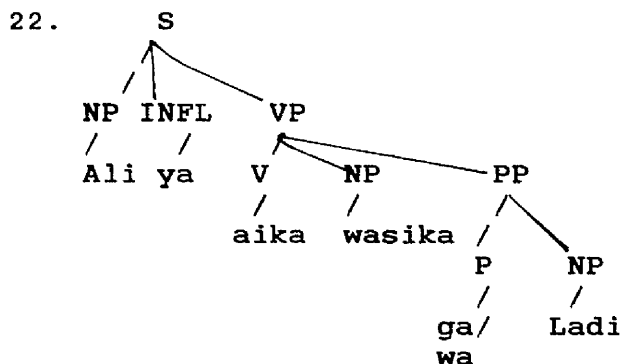
21a. I sent a letter to John.

b. I sent John a letter.

Baker's (1988a:46) Uniformity of Theta-Assignment Hypothesis (UTAH) requires a movement relation to hold between sentences (20a) and (b) and between sentences (21a) and (b).

Now let us consider the two types of Hausa IOCs given in examples (18) and (19). Using UTAH as a working hypothesis, the two types of Hausa IOCs, i.e. the Internal IOC and the External IOC, should have the same D-

structure. Furthermore, let us also assume that Hausa has two different types of prepositional elements wà and gà corresponding to Chichewa's -ir and kwa. Hence, according to UTAH the two types of Hausa IOCs should have the same D-structure (22) similar to that proposed for Chichewa in (9) above.



'Ali sent a letter to Ladi'

If we examine the Hausa IOCs carefully, however, we discover that the Internal IO marker wà, unlike the External IO marker gà, assigns either benefactive or goal theta-roles, while gà is restricted to assigning a goal theta-role. This means that the two IO markers in Hausa do not always assign the same theta-roles. UTAH only applies to relate the Hausa Internal IOC and its External counterpart if both constructions happen to have a goal interpretation, that is, if the two IO markers assign the same theta-role. But in those cases where the Internal IOCs have benefactive interpretation it cannot be related to the External IOCs. Thus, the IO marker gà can never occur with verbs assigning the benefactive

theta-role. Consider the following sentences: in sentences (a) the Internal IOCs have benefactive interpretation and the IO marker wà is employed. By contrast, in sentences (b) where the External IO marker gà is employed the sentences are ungrammatical.

23a. Audù yaa sayàa wà Laadi mootàa  
 A he-PERF buy IOM L car  
 'Audu bought a car for Ladi'

b. \*Audù ya sayi mootàa gà Laadi  
 A he-PERF buy car IOM L

24a. Audù yaa kaamàa wà Laadi dookii  
 A he-PERF catch IOM L horse  
 'Audu caught a horse for Ladi'

b. \*Audù yaa kaamà dookii gà Laadi  
 A he-PERF catch horse IOM L

25a. Audù yaa gyaaràa wà Laadi mootàa  
 A he-PERF repair IOM L car  
 'Audu repaired the car for Ladi'

b. \*Audù yaa gyaarà mootàa gà Laadi  
 A he-PERF repair car IOM L

In fact, even in Chichewa it has been pointed out by Alsina and Mchombo (1988) that benefactives can never be realized as independent obliques; they can only be expressed as applied arguments. According to Alsina and Mchombo (1988:20) Chichewa has no preposition that can introduce the benefactive applicative in a sentence like (26) (cf. also Alsina and Mchombo to appear).

26. ana a-na-phik-ir-a mfumu chakudya  
 2-children 2SB-RECPST-cook-APPL-IND 9-chief 7-food  
 'The children cooked food for the chief'

The Hausa examples given above seem to imply the same conclusion. Notice, that either the IO markers wà or

gà might be used if the IOCs have a dative or goal interpretation as shown in sentences (27-29) below.

- 27a. Audù yaa nuunà littaa<sup>h</sup>fii gà Laadi<sup>h</sup>  
 A he-PERF show book IOM L  
 'Audu showed a book to Ladi'
- b. Audù yaa nuunàa wà Laadi<sup>h</sup> littaa<sup>h</sup>fii  
 A he-PERF show IOM L book  
 'Audu showed a book to Ladi'
- 28a. Audù yaa kaawoo littaa<sup>h</sup>fii gà Laadi<sup>h</sup>  
 A he-PERF bring book IOM L  
 'Audu brought a book to Ladi'
- b. Audù yaa kaawoo wà Laadi<sup>h</sup> littaa<sup>h</sup>fii  
 A he-PERF bring IOM L book  
 'Audu brought a book to Ladi'
- 29a. Audù yaa miikà sàndaa gà Laadi<sup>h</sup>  
 A he-PERF hand stick IOM L  
 'Audu handed a stick to Ladi'
- b. Audù yaa miikàa wà Laadi<sup>h</sup> sàndaa  
 A he-PERF hand IOM L stick  
 'Audu handed a stick to Ladi'

These examples indicate that UTAH is only relevant when the markers gà and wà assign a goal theta-role to the IO NP.

It has been observed in Parsons (1971/72) and Newman (1982) that the semantic interpretation of the Hausa Internal IOCs is normally determined by the verb grade and the semantic context. For example, in sentence (30a) the IO is assigned a benefactive theta-role; in (30b) a benefactive theta-role; in (30c) a directional theta-role and in (30d) a locational theta-role. Examples are from Newman (1982:59).

- 30a. zaatà kaawoo makà ruwaa  
 FUT-she bring IOM-Pro water  
 'she will bring you water'

- b. yaa yaafam minì shii  
 he-PERF forgive IOM-Pro it  
 'he forgave me (for) it'
- c. naa sookàa matà maashii  
 I-PERF stab IOM-Pro spear  
 'I stabbed a spear into her'
- d. kà sakàa mà dookii lìnzaamii  
 you-SUB put IOM horse bridle  
 'put a bridle on the horse'

Finally, as we have seen in chapter three, it is even possible for the IO marker wà and IO marker gà to cooccur in the same sentence, as shown in example (31).

31. Audù yaa aikàa wà Laadi wàsiikàa gà bàabantà  
 A he-PERF sent IOM L letter IOM father-her  
 'Audu sent a letter for Ladi to her father'

From the foregoing discussion, we have seen that the Hausa Internal IOCs, unlike the External IOCs, tend to have different interpretations, such as dative, benefactive etc, depending on the lexical semantics of the verb. This shows that the two types of IO markers wà and gà need not be derivationally related, meaning that each of them must be base generated independently. A parallelism could be drawn from the English examples (32a-b) given below, where, arguably, the same thematic relationship holds in both sentences. That is, in each sentence the 'book' is the theme and 'Bill' is the source; however, the two sentences cannot be related by a movement rule.

- 32a. John bought a book from Bill  
 b. Bill sold John a book

Considering our earlier claim that the Internal IO markers wà/mà/ma must be attached to a phonologically realized word (cf. chapter three), the question then is, is this possible to claim that the IO markers wà/mà/ma are base generated as heads of the IO NP?

#### 5.2.1. Internal IO Markers wà/mà/ma as Preposition Incorporation

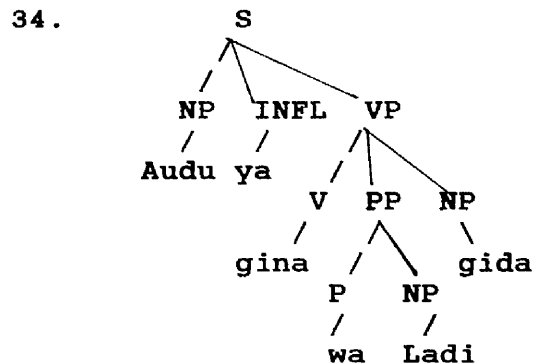
Under the Syntactic Incorporation analysis the Hausa Internal IO markers wà/mà/ma would be regarded as syntactically incorporated into the governing verb via PI (cf. Baker (1985a, 1988a)). The properties of English Internal IOCs and Chichewa dative applicative constructions discussed in section 5.1.2 are all assumed to be the consequences of the Syntactic Incorporation process plus interaction with other GB principles such as Case theory, ECP, theta theory etc.

- (i). Word order facts
- (ii). Object agreement with the verb
- (iii). Passivization
- (iv). Wh-movement

In the subsequent sections, I examine the behaviour of the two post-verbal NPs that occur in Hausa Internal IOCs with respect to the above properties. In addition, I will consider the Case assignment facts of the Hausa IOCs.

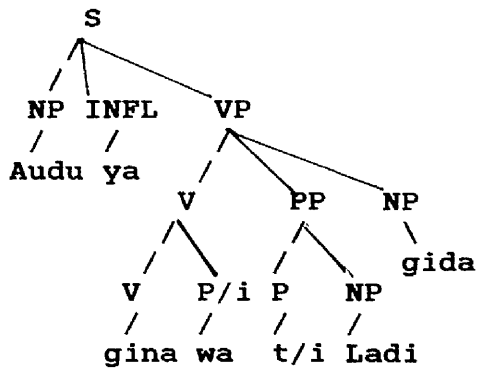
In Baker's approach (1985a, 1988a) the D-structure for Hausa Internal IOC sentence (33) may be represented as in (34).

33. Audu yaa ginaa wa Laadi gidaa  
 A he-PERF build IOM L house  
 'Ali built a house for Ladi'



From the D-structure (34), the IO marker wa moves from its base generated position and adjoins to the governing verb. The IO marker wa has to move in order to satisfy the morphological principle requiring affixes to be attached to words. However, when it moves it must leave behind a trace in order to satisfy the Projection Principle. Furthermore, the trace it has left behind must be properly governed in accordance with the Empty Category Principle (ECP) (cf. Chomsky 1981). After the movement, the moved IO marker wa plus the verb form a complex verb ginaa-wa 'build for' at S-structure as illustrated in (35) (see chapter two for definitions of ECP, Government and C-command).

35.



In Baker's approach the trace in (35) satisfies ECP via antecedent government (cf. Baker 1988b). This follows from the fact that the PP from which the IO marker wà moves is theta-marked by the verb that the IO marker is adjoined to. Hence, after the movement the trace can be governed by its antecedent, the moved IO marker wà, since the two are coindexed and there is a C-command relation between the moved wà and the trace.

This theta-marking relationship between the verb and the PP allows Baker to derive the "Head Movement Constraint" of Travis (1984) through the ECP. Baker (1988b:361) reformulates the HMC as follows:

36. An X<sup>o</sup> category B may adjoin to another X<sup>o</sup> category A only if A  $\theta$ -marks the smallest maximal projection containing B.

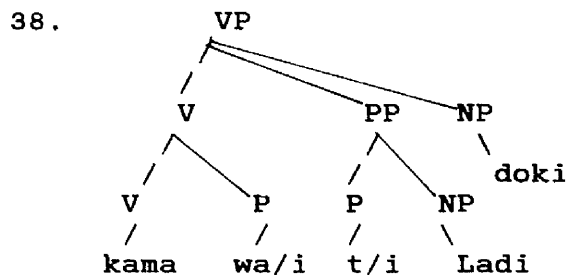
Although Syntactic Incorporation can account for some aspects of Hausa IOCs, it cannot for all the facts. Hausa differs from Chichewa and English in the several aspects that will be discussed.



### 5.2.2. Case Assignment Parameters

If we adopt the Syntactic Incorporation analysis to explain the Hausa Internal IOCs, the resulting structure for the construction would be as in (37). In this structure there are two NPs that need to be given Case in order to satisfy the Case Filter (cf. the tree diagram 38)

37. [NP Audù yaa [VP [kaamàa-wà/i] [P t/i [NP1 Laadi]]]  
       A he catch- IOM L  
       [NP2 dookii]  
       horse  
       'Audu caught a horse for Ladi'



The question is how the two NPs in (38) realize their Cases? The standard assumption as we have seen, is that one of the NPs may receive a structural Case at S-structure, while the other NP may be inherently Case-marked at D-structure (cf. Chomsky 1986a). However, see Larson (1987, 1988), Stowell (1981), Czepluch (1982) and the discussion in chapter two.

The standard option, is not employed by all languages. Baker (1985a, 1988a) suggests that there are basically three possible Case assignment parameters that different languages employ to satisfy the Case problem posed by a

structure such as (38) above. The three possibilities  
4  
are as follows:

39i. The first possibility, which Baker later discarded, is the standard assumption, thus languages allow the second NP (the DO) to receive inherent Case, while the applied NP (the IO NP) receives structural Case. These languages are English, Swahili, Chimwiini and some other Bantu languages.

Here the assumption is that the NP adjacent to the complex verb is assigned the structural Case at S-structure, consistent with the adjacency condition of Stowell (1981). The direct object NP, on the other hand, is assigned an inherent Case at D-structure in that the verb theta-marks the direct object. According to Baker the IO cannot receive an inherent Case because the verb does not govern it at D-structure, where inherent Case is assigned.

Evidence of the structural Case's assignment to the adjacent NP follows from the fact that only the structural Case-marked NP can become the subject NP when the verb is passivized, because passive involves absorption of structural Case only. Consider the following English examples (40):

40a. Mary was given a book (by John)

b. \*a book was given Mary (by John)

In (40a) the passive verb cannot assign the structural Case which the IO 'Mary' needs, and this forces the IO to move to subject position where it receives structural nominative Case from INFL. (40b) is ruled out by the

fact that the passive verb cannot assign the structural Case to the IO 'Mary' when the DO 'book' is moved to the subject position.

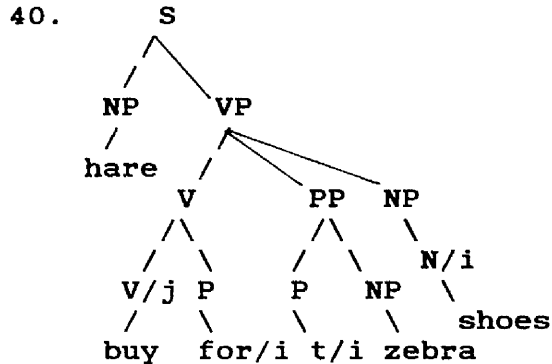
Other properties of the IOCs can be made to follow from Structural Case assignment to the applied NP: first, the NP receiving structural Case must precede that receiving an inherent Case (see section 5.2.1 above); second, the structurally Case marked NP (in applicative languages) tends to agree with the object marker, while the inherently marked NP cannot. In fact Baker went as far as to claim that the object agreement in Bantu languages is an indication of structural Case assignment.

39ii. The second possibility is argued for languages like Kinyarwanda, which allow their verbs to assign two structural Cases, i.e. both NPs are assigned accusative Case.

In this type of language, therefore, both NPs appear to behave in similar fashion. Either the IO NP or DO NP can become the subject NP if the verb is passivized. Both NPs can undergo Wh-movement. In terms of word order, either the IO NP or DO NP can immediately follow the verb (cf. Baker 1985a).

39iii. The third possibility is in fact an alternative to the first possibility (39i). Because of the Case problem the Internal IOCs pose, Baker (1988a) posits that the second NP does not receive an inherent Case at all, rather the NP "abstractly incorporates" into the verb. According to Baker (1988a:277) "the basic object in applicatives does in fact undergo N-V Reanalysis, which is possible because it is "directly theta connected" to the verb." This means that in languages like English and Chichewa the DO NP is not assigned an

inherent Case (contra Chomsky 1981). Baker (1988a:278) gives structure (40) as the S-structure after the abstract Reanalysis process, where this is indicated by the coindexation of the V 'buy' and the N 'shoes.' This new proposal does not seem to be better than the standard assumption Baker discarded.



Having reviewed the three possible Case assignment parameters, let us now turn to the Hausa IOCs in order to see how the two NPs realize their Cases. I will argue that Hausa utilizes none of the three possibilities mentioned above. Instead, I will show that the second NP in Hausa is assigned a "default nominative Case."

### 5.2.3. Case Assignment in Hausa IOCs

In (41) the External IOC does not pose any problem as far as Case assignment is concerned. Thus, the verb directly assigns an accusative Case to the DO, while the IO marker gà directly assigns an oblique Case to its object.

41. Audù yaa miikà littaa<sup>^</sup>fii gá sarkii/gàree shì  
 A he-PERF hand book IOM king/IOM-Pro  
 'Audu handed the book to the king/him'

The Internal IOC (42) presents a problem in that there are two NPs that need Case. Each needs Case in order to be assigned a theta role under the 'visibility hypothesis' of Chomsky (1986a), which requires that a NP must have a Case before it can be visible for theta-role assignment.

42. Audù yaa kaamaà wà Laadi dookii  
 A he-PERF catch IOM L horse  
 'Audu caught a horse for Ladi'

Furthermore, in (42) the DO is not adjacent to the complex verb because of the intervening IO. This means that the complex verb cannot assign a structural Case to the DO as required by the adjacency condition (cf. Stowell 1981). The question then is which Case assignment parameters do Hausa Internal IOCs utilize? We might initially assume Hausa is of the type (39i). In (42) the IO is assigned a structural Case from the complex verb, while the DO is assigned an inherent Case at D-structure, similar to Chichewa dative applicative and English Internal IOCs.

While there is no problem as far as the structural Case assignment to the IO is concerned, there seems to be a strong argument against inherent Case assignment to the DO in Hausa Internal IOCs. This follows from the fact that the pronoun that occurs after the IO is a nominative

not an accusative pronoun, as shown in examples (43a-b). Sentence (b) is ungrammatical because the pronoun after the IO is an accusative pronoun (note that in Hausa morphological Case is only overtly marked on pronouns, just like English).

43a. Audù yaa nuunàa wà Laadi/matà ita  
 A he-PERF show IOM L/IOM-Pro it  
 'Audu showed it to Ladi/her'

b. \*Audù yaa nuunàa wà Laadi/matà ta  
 A he-PERF show IOM L/IOM-Pro it  
 'Audu showed it to Ladi'

The evidence that the pronoun appearing after the IO in Hausa Internal IOCs is a nominative pronoun is clearly demonstrated by the fact that it does not differ from the pronouns that occur in subject and topic positions, as illustrated in sentences (44) and (45) respectively.

44. ita tanàa sôn Audù  
 she she-CONT love A  
 'she loves Audu'

(cf. \*ta tanàa sôn Audù)  
 her she-CONT love A

45. ita (kàm) tanàa sôn Audù  
 she TOP she-CONT love A  
 'as for her she loves Audu'

(cf. \*ta (kàm) tanàa sôn Audù)  
 her TOP she-CONT love A

Compare the above sentences with External IOCs (46a): here the pronoun that occurs adjacent to the verb is an accusative pronoun, not a nominative one (46b) below.

46a. Audù yaa nuunàa ta gà Laadi  
 A he-PERF show her IOM L  
 'Audu showed her to Ladi'

- b. \*Audù yaa nuunàa ita gà Laadi  
 A he-PERF show she IOM L  
 'Audu showed her to Ladi'

Since only a nominative pronoun can occur after the IO NP in Hausa Internal IOCs, I posit that the second NP (i.e. DO NP) in Hausa Internal IOCs is assigned a "default nominative Case". I term it default Case because structural Case assignment is blocked by the IO NP. The assumption is supported by the topic construction facts (45) above, if we assume that a default nominative Case is assigned to pronouns occurring in topic position. Note, however, that the nominative pronoun in the subject position is structurally assigned by the AGR within the INFL. The nominative subject pronoun may be assigned by default, if the AGR element is absent.

From the preceding discussion we may assume (47) below.

47. DO receives Accusative Case in Hausa if and only if the DO is immediately adjacent to the Verb.

(47) predicts that if there is an intervening constituent between verb and DO, then a default nominative Case is assigned to the DO.

The assumption that a default nominative Case is assigned in Hausa when the DO is not adjacent to the verb is clearly borne out by data from the Causative constructions, double object constructions, Focus constructions and the Topicalization facts. We discuss

each in turn.

The morphological Causative construction in Hausa is formed by adding a causative morpheme -f and optionally followed by the preposition dà. This process, as we have argued in Chapter four following Williams (1981), takes place in the lexicon, whereby a new external argument is introduced while the old external argument is internalized. This is illustrated in examples (49a and b) below (see chapter six for further discussion).

49a. yaarò yaa fìta  
boy he-PERF go out  
'the boy went out'

b. Audù yaa fitaƒ (dà) yaarò  
A he-PERF go out-caus boy  
'Audu took the boy out'

What is of interest here is that only a nominative pronoun can appear after the dà (50a). If, on the other hand, the pronoun is adjacent to the verb (i.e. without dà intervening), we have an accusative pronoun (50b).

50a. Audù yaa fitaƒ dà ita/\*ta  
A he-PERF go out-caus she/her  
'Audu took her out'

b. Audù yaa fitaƒ ta/\*ita  
A he-PERF go out-caus her/she  
'Audu took her out'

The above examples show that non-adjacent NPs in Hausa cannot be assigned accusative Case.

Another argument in support of the claim that NPs that are not adjacent to the verb are not assigned accusative Case, but default nominative Case, can be observed in double object constructions. In Hausa, there



are some verbs that take two NPs, as illustrated in (51).

- 51a. Laadi<sup>̀</sup> taa            tayà Audù aikii<sup>̀</sup>  
L        she-PERF help A        work  
`Ladi helped Audu in his work'
- b. Laadi<sup>̀</sup> taa            fi        Audù tsayii<sup>̀</sup>  
L        she-PERF exceed A        height  
`Ladi is taller than Audu'
- c. Audù yaa            hanà    B`alaa Laadi<sup>̀</sup>  
A        he-PERF refuse B        L  
`Audu refused to give Ladi to Bala (in marriage)'

In (51c), if the second object is pronominalized, only an independent pronoun, i.e. nominative pronoun, can appear after the first object NP as illustrated in example (52b).

- 52a. Audù yaa            hanàa ta/\*ita kudii<sup>̀</sup>  
A        he-PERF refuse her/\*she money  
`Audu refused her some money'
- b. Audù yaa            hanàa shi ita/\*ta  
A        he-PERF refuse him she/\*her  
`Audu refused him her (=his daughter i.e. in marriage)'

Further evidence supporting the claim that the verb assigns accusative Case only to NPs adjacent to the verb can be found in topicalization and focus constructions. We have already seen that only nominative pronouns can occur in topic position. Now let us consider the focus constructions. In sentence (53a) below, the pronoun occurring adjacent to the verb is assigned accusative Case. If, however, the pronoun is focused and shifted to sentence-initial position, no longer being adjacent to the verb, it can occur only as an independent nominative pronoun (53b) below.

- 53a. Audù yaa            kaamàa ta/\*ita  
A        he-PERF catch her/she  
`Audu caught her'

b. ita/\*ta (cèe) Audù ya kaamàa t  
 she/her Foc A he-PERF catch  
 'it is her that Audu caught'

All the above examples clearly demonstrate that in Hausa NPs are assigned accusative Case only when they are directly adjacent to the governing verb. These facts, support our claim that the second NP in Hausa Internal IOCs is not assigned inherent accusative Case, but a default nominative Case. The IO NP, on the other hand, receives structural Case from the complex verb.

### 5.3. The Syntactic Properties of Hausa IOCs

In the preceding section we have shown that in the Internal IOCs, the Case assignment parameter that Hausa utilizes is that a structural Case may be assigned to the IO by the verb complex. The DO NP, on the other hand, receives a default nominative Case, this follows from the assumption that the  $D\theta$  is no longer adjacent to the verb due to the intervening IO NP. Hence, there is no need to assume that a Syntactic Incorporation must occur, as the facts from the topicalization and focus constructions clearly illustrate. We now move to consider the other syntactic properties that are assumed to be the consequences of Syntactic Incorporation.

### 5.3.1. Word Order Facts

Hausa is an active-accusative, SVO language. Consider example (54):

54. Audù yaa        sàyi riigaa  
A     he-PERF buy shirt  
      `Ali bought a shirt'

The External IOCs have DO IO word order, as in example (55).

55. Audù yaa        nuunà mootàa gà Laadi  
A     he-PERF show car IOM L  
      `Audu showed a car to Ladi'

In the Internal IOCs the IO precedes the DO, as shown in (56).

- 56a. Audù yaa        nuunàa wà Laadi mootàa  
A     he-PERF show IOM L car  
      `Audu showed a car to Ladi'
- b. Audù yaa        kaamàa wà Laadi dookii  
A     he-PERF catch IOM L horse  
      `Ali caught a horse for Ladi'

Under the Preposition Incorporation analysis, structure (57) will be assumed for the Hausa Internal IOCs.

57. [S Audù yaa [VP kaamàa-wà/i [P t/i [NP1 Laadi]]  
      [NP2 dookii]]]

According to Baker's Syntactic Incorporation analysis, the word order follows from the fact that at D-structure, the verb cannot directly theta-mark the IO, which means that the IO cannot be assigned an inherent Case. After the PI, the IO receives structural Case assuming the adjacency condition on structural Case. Hence, the IO

must occur immediately after the verb preceding the DO. It is not clear how the word order (58a-c) can be ruled out in Baker's (1985a, 1988) analysis. In chapter six, I will account for the ungrammaticality of (58) without assuming a Syntactic Incorporation analysis.<sup>8</sup>

- 58a. \*Audù yaa nuunàa-wà mootàa Laadi  
 A he-PERF show IOM car L
- b. \*Audù yaa kaamàa-wà dookii Laadi  
 A he-PERF catch IOM horse L
- c. \*Audù yaa aikaà-wà wàsiikàa Laadi  
 A he-PERF send IOM letter L

### 5.3.2. Object Agreement Facts

We now turn to the object agreement facts. We have seen that in Chichewa dative applicative constructions, only the applied NP agrees with the object marker which appears on the verb. Baker assumes that the agreement element is a manifestation of the structural Case feature of the verb. Since structural Case is assigned to the applied NP, it follows that only the applied NP can trigger object agreement. Secondly, it is the applied NP, as we have seen, that can become the subject of the clause when the verb is passivized. Finally, as a result of this agreement between the applied NP and object marker it is even possible optionally to drop the applied NP, as shown in example (59b) (the prefix mu stands for the object



claiming that vowel shortening before a direct object NP in Hausa is a manifestation of an object agreement marker.

Abdoullaye (n.d.) argues that short vowel -a/-i before a DO NP implies an accusative agreement between the verb and the DO as shown in examples (61) below.

- 61a. Audù yaa jeefà sàndaa  
A he-PERF throw stick  
'Audu threw a stick'
- b. Audù yaa sàyi mootàa  
A he-PERF buy car  
'Audu bought a car'

An argument against Abdoullaye's claim is that verbs in Hausa appear with long not short vowel before accusative pronouns, as illustrated in example (62).

- 62a. Audù yaa jeefàa ta  
A he-PERF throw it  
'Audu threw it'
- b. Audù yaa sàyee tà  
A he-PERF buy it  
'Audu bought it'

Furthermore, Abdoullaye's article is limited to verbs in grades 1 and 2 only. Grade 6 verbs as well as grade 4 verbs for some speakers do not shorten their final vowels before noun direct objects as illustrated in (63).<sup>10</sup>

- 63a. Audù yaa saamoo kudii  
A he-PERF get money  
'Audu got some money'
- b. Audù yaa koonèe itàacee  
A he-PERF burn wood  
'Audu burnt all the wood'

In the case of the Internal IOCs, the verbs appear

with a long vowel not short vowel, as shown in example (64).

64. Audù yaa jeefàa wà Laadi sandaa  
A he-PERF throw IOM L stick  
'Audu threw the stick at Ladi'

Finally, Tuller (p.c.) points out that variables are also assigned structural Case, yet the vowel of the preceding verb is not short. Consider example (65):

65. mee/i Audù ya jeefàa t/i  
what A he-PERF throw  
'what did Audu throw?'

From the above discussion, it appears that a Pre-DO NP shortening rule cannot be considered as evidence in favour of object agreement or structural Case assignment. In short, the presence of a short vowel does not at all indicate that the verb assigns a structural accusative Case to the DO NP. This means that the object agreement factor as an indication of structural Case assignment can be dismissed as irrelevant as far as the Hausa IOC facts are concerned.

### 5.3.3. Passivization

In section (5.1.2.) we have seen that in the Chichewa applicative and English Internal IOCs, the structurally Case-marked NP is the one that becomes the subject NP when the verb is passivized, while the inherently Case

marked NP cannot be, as demonstrated by the English sentences (66a and b) respectively.

66a. Mary was sold the book

b. \*the book was sold Mary.

Let us see what happens in the case of Hausa IOCs. Before that, however, let us examine how the passive operates on simple transitive verbs in Hausa. Passive verbs (= grade 7) in Hausa are formed by the attachment of the passive morpheme -u to the verb and the (disyllabic) verb has a L-H tone pattern. For example, buudee 'open' vs bùudu 'be completely opened.' It has been convincingly argued in Jaggat (1981a, 1981b, 1988) that Hausa has passive verbs (= 'affected-subject' verbs in Jaggat 1988) which can be derived from their active counterparts. Jaggat identifies two different types of passives in Hausa, namely, "Perfective-Passives" and "Imperfective-Passive." Example (67b) illustrates a perfective-passive and example (a) represents its active counterpart.

67a. Audù yaa gyaarà mootàa  
A he-PERF repair car  
'Audu repaired the car'

b. mootàa taa gyaaru  
car it-PERF repair-Pass  
'the car was completely repaired'

Sentence (68b) below illustrates an imperfective-passive with sentence (a) serving as its active form.

68a. Audù yanàa gyaarà mootàa  
A he-CONT repair car  
'Audu is repairing the car'



- b. mootaa tanaa gyaaaruwaa  
 car it-CONT repair-Pass  
 'the car can be repaired'

The standard assumption within GB theory is that passive verbs cannot assign a theta-role to their subject and they cannot assign Case to their object. Chomsky (1981:124) states that passives exhibit the following properties:

- 69a. [NP, S] does not assign a theta-role  
 b. [NP, VP] does not receive Case within the VP

Considering the two types of Hausa passives given in examples (67b) and (68b) above, assuming the standard analysis, we might say that they are derived from the D-structures (70a and b) respectively (note that Hausa does not have a by-phrase).

- 70a. e taa gyaaaru mootaa  
 it-PERF repair-Pass car  
 b. e tanaa gyaaaruwaa mootaa  
 it-CONT repair car

The assumption goes as follows: the passive verb cannot assign a Case to its object at the D-structure level (property 69b). This means that the object mootaa 'car' is forced to move to a place where it will receive Case in order to satisfy the Case Filter requirement. The object can move to the subject position where it will receive a nominative Case from the AGR element under the INFL node. This movement is licit because the passive verb does not assign a theta-role to the subject position

(property 69a). This makes the position a non theta-position (i.e. a position where no theta-role is assigned), hence a possible landing site for the moved NP mootaa. Thus, it is the interaction of these two properties that derives the passive sentences (67b) and (68b) above. It has been argued by Jaeggli (1986), Roberts (1987), and Baker (1988a) that the movement of the object NP in a passive construction follows from the fact that the structural Case needed by the direct object NP has been absorbed by the passive morpheme, as has equally the subject theta-role.

Let us now return to the Hausa IOCs and see what happens when the verb is passivized. In general, when the verb is passivized the direct object of the verb has to move to the subject position where it will receive Case from the AGR element within the INFL. However, when a verb followed by two objects is passivized (e.g. English Internal IOCs, Chichewa applicative constructions, Hausa Internal IOCs etc), the remaining NP still requires Case which the passivized verb cannot provide. To overcome this problem we have seen that the Case parameter options have to be brought into action. Thus, some languages like Kinyarwanda allow their verbs to assign two accusative Cases -- in this language, therefore, when one of the NPs becomes the subject of the passivized clause, the other NP will still receive an accusative Case from the verb. In other languages, like English, the verbs assign both

structural and inherent accusative Cases. Here only the structurally Case marked NP can move to the subject position, while the inherent Case marked NP is left behind, since it is assigned at D-structure and so cannot be absorbed by the passive morpheme.

The Hausa External IOCs present no problem as far as Case assignment is concerned. That is, the direct object NP is immediately adjacent to the verb, hence it receives a structural Case from the verb. The IO NP, on the other hand, receives Case from the IO marker gà/gàree.

71. Audù yaa aikà wàsiikàa gà sarkii/gàree shì  
 A he-PERF send letter IOM king/IOM-Pro  
 'Ali sent a letter to the king/him'

From the above discussion it follows that the DO of Hausa External IOCs can become the subject NP when the verb is passivized. This is confirmed by example (72) below.

72. wàsiikàa taa aiku t gà sarkii/gàree shì  
 letter it-PERF send-Pass IOM king/IOM-Pro  
 'the letter was sent to the king/him'

The next question is whether the IO in the External IOCs also becomes the subject NP when the verb is Passivized. Both examples (73a and b) are ungrammatical. This ungrammaticality could be explained because in both sentences the verb cannot assign a structural accusative Case to the DO NP. (Note that there is another independent reason that rules out (73a), that is, that

preposition stranding is generally prohibited in Hausa)).

- 73a. \*sarkii/shii yaa      `aiku      wàsiikaa gà/gàree t  
king/he      he-PERF send-Pass letter IOM  
'the king/he was sent a letter (to)'
- b. \*gà sarkii/gàree shì yaa      `aiku      wàsiikaa t  
IOM king/IOM-Pro      he-PERF send-Pass letter  
'to the king/him a letter was sent'

In Hausa Internal IOCs we argued that while the IO can receive structural Case from the complex verb under the adjacency condition, the DO is assigned a default nominative Case. The question then is what happens to the NPs when the verb is passivized. The answer is neither of the NPs (IO or DO) can become the subject of the passive sentence. Thus, both sentences (74b and c) are quite ungrammatical.

- 74a. Audù yaa      nuunàa wà      Laadi/matà littaafile  
A      he-PERF show IOM L/IOM-Pro book  
'Audu showed a book to Ladi/her'
- b. \*Laadi taa      nùunu      wà t      littaafile  
L      she-PERF show-Pass IOM      book  
'Ladi was shown a book'
- c. \*littaafile yaa      nùunu      wà Laadi t  
book      it-PERF show-Pass IOM L  
'a book was shown to Ladi'

The reason for the ungrammaticality of (74b-c) seems to follow from a Hausa-specific phenomenon that prevents the Internal IO markers wà/mà/ma from being attached to a passivized verb. In chapter four I have discussed the fact that whenever the IO markers wà/mà/ma are attached to verbs in grades 2 and 3, as well as grade 7 (i.e. the passive verb), the verbs usually undergo a morphological change in final vowel and tone pattern.

In relation to grade 7 'affected-subject' verbs, this morphological change occurs only with two verbs in the whole Hausa lexicon, as correctly pointed out in Parsons (1971/72). Thus, the rest of the verbs cannot even undergo this morphological operation. They are simply ungrammatical when immediately followed by the IO markers wà/mà/ma, as we have seen in example (74b-c) above. Examples (75a) and (76a) illustrate the two grade 7 verbs with special D-forms (examples (75b) and (76b) are ungrammatical because the IO markers wà/mà/ma are attached directly to the passive verbs without any morphological change).<sup>11</sup>

75a. `abîn dà ya aukaw wà Laadi/matà  
 thing REL it-PERF happen IOM L/IOM-Pro  
 'the thing that happened to Ladi/her'

b. \*`abîn dà ya `auku wà Laadi/matà)  
 thing REL it-PERF happen-Pass IOM L/IOM-Pro

76a. mutàanee sukà taaram mà Audù/masà  
 people they-PERF gather IOM A/IOM-Pro  
 'the people gathered around Audu/him'

b. \*mutàanee sukà tàaru wà Audù/masà  
 people they-PERF gather-Pass IOM A/IOM-Pro

The question of the ungrammaticality of passivizing verbs in the Hausa Internal IOCs is beyond the scope of this study and needs further research. See Swets and Tuller (1989) for some interesting suggestions.

Abdoullaye (n.d.) reports that in his Niger dialect the IO can become the subject NP when the verb bâa 'to give' is passivized, as shown in example (77b) below.<sup>12</sup>

- 77a. Laadi<sup>̀</sup> taa            baa    Audù<sup>̀</sup> dookii<sup>̀</sup>  
 L            she-PERF give A            horse  
 'Ladi gave Audu a horse'
- b.    Audu yaa            bàayu            dookii<sup>̀</sup>  
 A            he-PERF give-Pass horse  
 'Audu was given a horse'

Note, however, that in example (77a) the IO NP Audu is not introduced by the IO marker wà/mà, and according to Abdoullaye no IO marker is possible with the verb 'give' in his dialect. It seems to me that Audu in the above example is not an indirect but a direct object of the verb.

Jaggar (1981a:32) also cites a verb matsàa 'to pester, harass, pressurize etc.' which ~~also~~ permits passivization of its indirect object NP as shown in example (78a). Jaggar assumes that (78a) is the passive version of (78b). (P-P stands for perfective passive, P-A stands for perfective active and (1) stands for grade 1 verb).

- 78a. P-P: yaaròò    yaa            matsù<sup>̀</sup>  
 boy-SUBJ he-PERF pester-PASSIVE  
 'the boy was thoroughly pestered/harassed etc.'
- b. P-A: sun                            matsàa (1) wa yaaròò  
 they-SUBJ-PERF pester            to boy-IO  
 'they pestered/harassed etc. the boy'

However, there is another active form for (78b), which is (79) below, and most likely the passive form in (78a) is from (79) not (78b).

79. sun                    matsà    yaaròò  
 they-PERF pester boy  
 'they pestered/harassed the boy'

This means that yaaròò 'boy' in example (78a) is not an

indirect but a direct object of the verb matsaa 'to pester.' The passive counterpart of (78b) should be (80) but sentence (80) is completely ungrammatical. (Recall that the IO marker wa in Hausa can be stranded).

80. \*yaaroo yaa matsu wa  
 boy he-PERF pester-Pass IOM  
 'the boy was pestered'

To summarize the discussion so far, we have seen that neither the IO NP nor the DO NP can become the subject NP in Hausa Internal IOCs. In the next section we discuss the Wh-movement facts, which also reveal an interesting asymmetry between Hausa Internal IOCs on the one hand and Chichewa applicative constructions on the other.

#### 5.3.4. Wh-movement Facts

Baker (1985a,1988a) points out that Preposition Incorporation provides a natural explanation for the difference between the direct object NP and the dative or applied object NP. That is, while the former can undergo Wh-movement the latter cannot. Consider the following examples (81a-c) from Chichewa dative applicative constructions:

81a. Atsikana a-na-perek-er-a mfumu chitseko  
 girl SP-PAST-hand-APPL-ASP chief door  
 'The girl handed the chief the door'

- b. \*Iyi ndi mfumu imene ndi-na-nen-a kuti Mtsikana  
 this is chief which 1sS-PAST-say-ASP that girl  
 a-na-perek-er-a chitseko  
 SP-PAST hand-APPL-ASP door  
 'This is the chief which I said that the girl handed  
 the door to.'
- c. Ichindi chitseko chimene ndi-na-nen-a kuti Mtsikana  
 this is door which 1sS-PAST-say-ASP that girl  
 a-na-perek-er-a mfumu.  
 SP-PAST-hand-APPL-ASP chief  
 'This is the door which I said that the girl handed  
 to the chief' (data from Baker 1988a: 291)

The same conclusion is arrived at in the case of the English Internal IOC, as illustrated in examples (82b and c):

- 82a. Wayne sent Robert a telegram (data from Stowell 1981)
- b. \*Who did Carol say that Robert sent --- a telegram?
- c. What did Carol say that Robert sent Wayne ---?

Extraction of the direct object NP is allowed because it is not headed by a trace. (Note that for English Internal IOCs, Baker assumes the preposition that gets Incorporated into the verb is covert). See Kayne (1984) and Czepluch (1982).

This asymmetry between the dative NP and direct object NP, according to Baker, follows from the fact that after Preposition Incorporation, the trace left behind by the moved P will continue to head the PP that contains the stranded dative NP. And it is this trace that blocks the extraction of the dative NP.

As we have seen above, Baker (1988a, 1988b) attempts



to account for Wh-movement by means of a Filter called the "Non-oblique Trace Filter," repeated here as (83). According to (83) it is not possible to extract the applied NP in dative/benefactive applicative constructions because the NP is headed by an empty element (i.e. t/j in (83) is the trace of the Incorporated preposition).

83. The Non-oblique Trace Filter

\*[Op/i ...V+ X/j...[xp t/j t/i]...] at S-structure, where X is [-V] (N or P). Baker (1988b:376).

Baker (1988a: 302-303) writes:

"the trace of the incorporated P has played a central role: it blocks wh-extraction of the benefactive NP by causing the variable left behind to violate the Non-Oblique Trace Filter. However, in order for the the trace of the P to serve this explanatory function, it must exist. In order for this to be true, the prepositional affix must be generated separately from the verb at D-structure, in accordance with the Uniformity of Theta Assignment Hypothesis. This, then, is an argument against deriving applicative verbs by operations on the argument structure of the verb in the lexicon, as would be the case in frameworks like that of Williams and DiSciullo (to appear) and the Lexical-Functional Grammar of Bresnan (1982b). Furthermore, the P must also be required to leave a trace when it does combine with the verb, in accordance with the strong Projection Principle that I have assumed. This, then, is an argument against a framework like that of Marantz (1984) with a modified Projection Principle, where "applied objects" are not structural objects in underlying syntactic structure, but they are completely assimilated to ordinary direct objects by surface syntactic structure."

Before we consider the Hausa facts with respect to Wh-movement, let us briefly illustrates the operation of Filter (83) in English. Consider the following sentences (84a-b):

84a. \*who did John give a book?

b. what did John give Mary?

Sentence (84a) is ruled out because the variable left after the Wh-movement is headed by an empty head as schematized in (85a) below, whereas (84b) is grammatical because the variable is not headed by an empty head (85b).

85a. [S' wh/j ---- V-P/i [PP t/i t/j] NP]

b. [S' wh/j ---- V-P/i [PP t/i NP] t/j]

From the discussion and Baker's remarks above, it follows that the Wh-movement provides additional support for Syntactic Incorporation, since the trace left behind serves a vital role that of blocking the extraction of the dative NP.

A filter like (84), however, ought to be derived from universal principles and it not all clear what general principle would derive this filter. Furthermore, the presence of the operator makes the filter very suspicious.

It has been argued recently by Alsina and Mchombo (to appear) that the Non-oblique Trace Filter cannot adequately account for the impossibility of Wh-movement facts in the English Internal IOC and Chichewa applicative constructions. Alsina and Mchombo (to appear) point out that Wh-movement of the applied beneficiary and dative NP in both the Chichewa applicative and the English dative shift is allowed in passive sentences, as exemplified by the Chichewa applicative sentence (86) and English (87) below.

86. Awa ndi atsikan amene a-na-gul-ir-idw-a mphantso.  
 2-these be 2-girls 2-REL 2s-PST-buy-AP-PAS-FV 9-gift  
 'These are the girls that were bought a gift'

87. Who do you think was awarded the prize?

In the above discussion we observed that the Non-oblique Trace Filter as construed in Baker (1988a, 1988b) cannot adequately account for the Wh-movement facts in both Chichewa and English.

#### 5.3.5. Wh-movement in Hausa IOCs

In Hausa Internal IOCs, unlike both English Internal IOCs and Chichewa dative/benefactive applicative constructions, both the IO and DO can be Wh-moved, as demonstrated in examples (88b-c) below.

88a. Audù yaa aikàa wà Laadi wàsiikàa  
 A he-PERF send IOM L letter  
 'Audu sent Ladi a letter'

b. waa/i Audù ya aikàa wà t/i wàsiikàa?  
 who A he-PERF send IOM letter  
 'who did Audu send a letter to?'

c. mée/i Audù ya aikàa wà Laadi t/i?  
 what A he-PERF send IOM L  
 'what did Ali send to Ladi?'

Secondly, both NPs can be extracted to form a relative clause as illustrated in examples (89a and b) below.

89a. gaa mùtumin/i dà Audù ya aikàa wà t/i  
 this is man-the REL A he-PERF send IOM  
 wasiikaa  
 letter  
 'this is the man that Audu sent a letter to'

b. gaa wasiikaf/i dà Audù ya aikàa wà Laadi  
 this is letter-the REL A he-PERF send IOM L  
 t/i  
 'this is the letter that Audu sent to Ladi'

It is also possible to extract both the IO and DO from embedded clauses as illustrated in examples (90a-b).

90a. gaa Laadin/i dà Audù yakèe tsammaanin cèewaa  
 this L-the REL A he-RELCONT think COMP  
 Àli ya aikàa wà t/i wasiikaa  
 A he-PERF send IOM letter  
 'This is the Ladi that Audu thinks Ali sent the letter to'

b. gaa wasiikaf/i dà Audù yakèe tsammaanin cèewaa  
 this is letter-the REL A he-REL thinks COMP  
 Àli ya aikàa wà Laadi t/i  
 A he-PERF send IOM L  
 'This is the letter which Audu thinks Ali sent to Ladi'

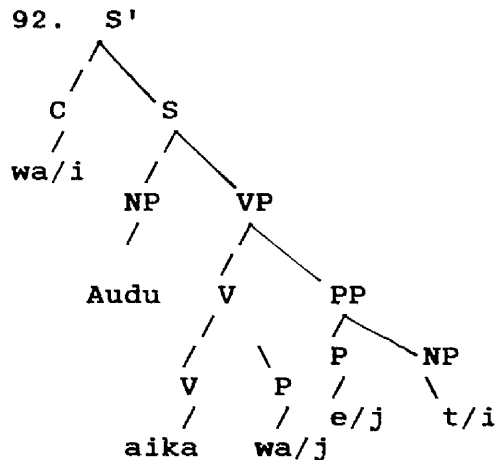
Finally, it is possible for either NP in Hausa  
 13  
 Internal IOCs to be focused, as in (91a and b) below.

91a. Laadi/i (cee) Audù ya aikàa wà t/i wasiikaa  
 L COP A he-PERF send IOM letter  
 'It is Ladi that Ali sent a letter to'

b. wasiikaa/i (cee) Audù ya aikàa wà Laadi t/i  
 letter COP A he-PERF send IOM L  
 'it is a letter that Ali sent to Ladi'

The above examples clearly demonstrate that in Hausa the IO can be Wh-moved, assuming here, as in Chomsky (1981), that Focus and relativization are subparts of Wh-movement. That is, the landing site for the moved element is in a COMP-position (see Tuller 1986). Thus, we can roughly represent the structure of Hausa Internal IOCs

when the IO is Wh-moved as in (92), and that of relativization as in (93).



93. [NP mùtumìn[S'dà/j [S..[S Audù ya aikàa-wà/i  
 man REL A he-PERF sent to  
 [PP e/i t/j] wàsiikàa ]]]  
 letter

The data above clearly violate Baker's Non Oblique Trace Filter, if Hausa Internal IOCs are considered to be derived via Syntactic Incorporation analysis. That is, the trace of the moved IO marker wà/mà in Hausa does not block the extraction of the IO NP at all. In other words, given Baker's assumption, Wh-movement is a strong argument against Preposition Incorporation.

In the next chapter, I will argue that the IO marker wà/mà in Hausa is attached to the verb in the lexicon, and this will allow us to account for the Wh-movement facts. That is, if we assume that the IO marker wà/mà is attached in the lexicon, then no trace is left behind that might block Wh-movement.

5.4. Summary of the Differences between the Chichewa applied object, English Internal IOCs and Hausa Internal IOCs

In the previous sections I discussed some of the diagnostic properties that Baker assumes to be consequences of Preposition Incorporation, namely, word order, object agreement, passivization and Wh-movement. Some of these syntactic properties do not seem to follow in Hausa IOCs if we assume that the IO marker wà/mà is generated as a head of prepositional phrase and subsequently moves to be Incorporated to the governing verb. Table 5:1 provides a brief summary of the different syntactic behaviour of IO and DO in Chichewa, English and Hausa.

Table 5:1

CHICHEWA DATIVE APPLICATIVE		
	Applied OBJ	Direct OBJ
-----		
Wh-movement:	NO	YES
Passivization:	YES	NO
Agreement:	YES	NO
Word Order:	Must follow the verb	Occurs after the applied object

### ENGLISH INTERNAL INDIRECT OBJECT CONSTRUCTION

	DATIVE OBJ	DIRECT OBJ
Wh-movement:	NO	YES
Passivization:	YES	NO
Agreement:	-	-
Word Order:	Must follow the verb	Occurs after the indirect object

### HAUSA INTERNAL INDIRECT OBJECT CONSTRUCTION

	INDIRECT OBJ	DIRECT OBJ
Wh-movement:	YES	YES
Passivization:	NO	NO
Agreement:	-	-
Word Order:	Must follow the verb	Occurs after the indirect object

In the next chapter I shall account for the above properties via a Lexical Incorporation analysis; suffice it to say here that Hausa passivization of the IO is blocked for of morphological reasons. The DO NP, on the other hand, cannot become the subject NP because it receives default nominative Case, which cannot be observed when the verb is passivized.

Let us now consider another important issue raised in Baker (1988a) which has to do with the way the Case Filter constrains the formation of applicative constructions.

## 5.5 Transitivity and IOCs

Baker (1985a, 1988a, 1988b) following Chung (1976), Aissen (1983) and Marantz (1984) assumes that applicative constructions cannot be formed with intransitive verbs. This follows from the assumption that intransitive verbs cannot assign Case. Consider the following English example (94), where the sentence is ungrammatical because the verb cannot assign Case to the NP (Mary). Hence, the sentence is ruled out by the Case Filter stated in (95). (See chapter two).

94. \*John laughs Mary.

95. Case Filter.

\*NP where NP has a lexical content, but not Case.

Baker (1988a) argues that applicative constructions can only be formed if the governed verb can assign a structural Case. The following Chichewa examples illustrate Baker's claim. The applicative formations are allowed because the verb can assign structural Case to the applied NP and inherent Case to the direct object NP. Thus the sentences respect the Case Filter requirement.

96. Kalulu a-na- gul-ir-a mbidzi nsapato  
hare SP-PAST-buy-for-ASP zebras shoes  
'The hare bought shoes for the zebras'

97. Mbidzi zi-na- perek-er-a nkhandwe msampha  
zebras SP-PAST-hand-to-ASP fox trap  
'The zebras handed the fox the trap'

Although IOCs are clearly well-formed with transitive verbs in Hausa (98), Hausa still presents a problem for Baker's analysis because IOCs are productively formed



with intransitive verbs, as discussed in the next section.

- 98a. Audù yaa sayàa wà Laadi mootàa  
A he-PERF buy IOM L car  
'Audu bought a car for Ladi'
- b. Audù yaa miikaa wà Laadi sàndaa  
A he-PERF hand IOM L stick  
'Ali handed over a stick to Ladi'

### 5.5.1. The Case Frame Preservation Principle

Baker (1988a:122) proposes the Case Frame Preservation Principle (CFPP) in order to confine a derived verb's ability to assign Case to those verbs that are inherently transitive. He writes: "underived verbs across languages generally assign only one structural Case; therefore, syntactically derived verbs must do the same". (Baker 1988a:250). CFPP is stated as in (99) below.

99. The Case Frame Preservation Principle: (CFPP)  
A complex Xo of category A in a given language can have at most the maximal Case assigning properties allowed to a morphologically simple item of a category A in that language.

In other words, the ability of the derived verb (i.e. V+P) to assign Case strictly depends on the ability of a simple verb to assign Case. For instance, if the simple verb is a transitive verb (i.e. a Case assigner), then according to Baker (1988a) the complex verb (V+P) can assign an accusative Case inherited from the simple transitive verb. If, on the other hand, the P is incorporated into an intransitive verb (V+P) then the applied NP cannot receive Case because the verb is

morphologically specified as a non Case assigner.

According to Baker's analysis, dative/benefactive applicatives cannot be derived from intransitive verbs because these verbs are not lexically specified as Case assigners. Consider the following Chichewa examples (from Baker 1988a).

- 100a. Mlenje a-na- gon-a  
hunter SP-PAST-sleep-ASP  
'The hunter slept'
- b. \*Mlenje a-na- gon-er-a kalulu.  
hunter SP-PAST-sleep-for-ASP hare  
'The hunter slept for the hare'
- 101a. Chiphadzuwa chi-a- fik-a  
beautiful-woman SP-PERF-arrive-ASP  
'The beautiful woman has arrived'
- b. \*Chiphadzuwa chi-a- fik-ir-a mfumu  
beautiful-woman SP-PERF-arrive-for-ASP chief  
'The beautiful woman has arrived for the chief'
102. \*Kalulu a-na- sek -er -a atsikana.  
hare SP PAST laugh APPL ASP girls  
'The hare laughed for the girls'
103. \*Mkango u- ku- yend -er- -a anyani.  
lion SP PRES walk APPL ASP baboons  
'The lion is walking for the baboons'

Sentences (100b, 101b), (102) and (103) are all ungrammatical because the preposition is incorporated into an intransitive verb; but intransitive verbs cannot assign the accusative Case that the stranded applied NP needs in order to satisfy the Case Filter.

However, several languages including Hausa, seem to be counterexamples to the Case Frame Preservation Principle (CFPP), for instance Ainu (cf. Shibatani 1988).

Consider the following examples of Hausa IOCs formed with intransitive verbs.

- 104a. Audù yaa dàara  
 A he-PERF laugh  
 'Audu laughed'
- b. Audù yaa daaràa wà Laadi/matà  
 A he-PERF laugh IOM L/IOM-Pro  
 'Audu laughed at Ladi /her'
- 105a. kàakaa taa mutu  
 grandmother she-PERF died  
 'grandmother died'
- b. kàakaa taa macée manà  
 grandmother she-PERF died IOM-Pro  
 'grandmother died on us' (cf. Newman 1982)
- c. zoobèe yaa sullùbèe  
 ring it-PERF slip  
 'the ring slipped (down)'
- d. kadà zoobèe ya sullùbèe makà  
 NEG ring it-SUBJ slip IOM-Pro  
 'Don't allow the ring to slip away from you' (cf. Newman 1982)
- 106a. Audù yaa tàfi  
 A he-PERF go  
 'Audu went'
- b. Audù yaa tàfi wà Laadi Kanòò  
 A he-PERF go IOM L Kano  
 'Audu went to Kano for Ladi'

Recall also that in chapter four we saw that indirect object constructions in Hausa can be formed with grade 3 verbs, which are exclusively intransitive (cf. Parsons 1971/2), e.g.:

107. yaa bullaf wà Audù (<gr. 3 intrans bulla)  
 he-PERF appear IOM A  
 'he appeared for Audu'

Note that the IO formed with these intransitive verbs can be Wh-moved as shown in examples (108a-c) below.

- 108a. wàa/i Audù ya            tàfi wà t/i Kanòò?  
 who A he-PERF go IOM Kano  
 'who did Audu go to Kano for?'
- b. wàa/i Audù ya            daaràa wà t/i?  
 who A he-PERF laugh IOM  
 'who did Audu laugh at?'
- c. wàa/i zoobèe ya            sullùbee wà t/i  
 who ring it-PERF slip IOM  
 'who did the ring slip away from?'

This is in fact an argument against Baker's Non-oblique Trace Filter, if we assume that the trace left by the extracted NP is headed by an empty head. Furthermore, neither Kayne's (1984) nor Stowell's (1981) assertions that Wh-movement cannot apply to the first NPs in Internal IOCs can account for these examples because there is only one NP after the verb.

Finally, there are even some counterexamples from Chichewa, the principal language discussed by Baker. Consider the following examples from Alsina and Mchombo (1988):

- 109a. Yesu a - na - f-a pa - m - tanda.  
 Jesus 2SB-PST die-IND 16 - 3 - cross  
 'Jesus died on the cross'
- b. Yesu a -na -f-er -a anthu onse pa-m-tanda.  
 Jesus 2SB-PST-die-APPL-IND 2-people 2-all 16-3-cross  
 'Jesus died for all the people on the cross'

The above examples show that a beneficiary applicative can be formed with the intransitive verb f-a 'die', as in example (109b). Alsina and Mchombo point out that applied arguments based on intransitive verbs can interact with other syntactic processes just as applied argument based on transitive verbs can. That is, the NP

can trigger verbal agreement (110a) and can also become the subject if the verb is passivized (110b).

110a. Yesu a-na-wa-f-er-a pa- m- tanda (anthu).  
Jesus 2SB-PST- 2OB-die-APPL-IND 16- 3- cross 2-people  
'Jesus died for them on the cross'

b. Anthu a -na - f- er - edw - a pa -m - tanda  
2-people 2SB-PST- die-APPL-PASS-IND 16- 3- cross  
'the people were died for on the cross'

From the preceding discussion we have seen that it is wrong to assume that Indirect Object constructions cannot be formed with intransitive verbs. Thus, the CFPP cannot be used as a principle to constrain the formation of Indirect Object construction with intransitive verbs. This also suggests that not all applicative constructions can be accounted for by UTAH. In the next chapter I show that in the Lexical Incorporation analysis; the IO markers wà/mà/ma attach to intransitive verbs in Hausa, allowing them to assign Case to the IO NP.

## 5.6. Conclusion

In this chapter I discussed the Hausa Internal IOCs in the light of Baker's Syntactic Incorporation analysis. The Syntactic Incorporation analysis assumes that affixes are base generated as independent elements in the D-structure and later on move to the governing verb prior to the S-structure level. This movement is assumed to be a subpart of standard phrasal movement, as such it has to be

constrained by the GB principles that constrain phrasal movement, namely, ECP, the Projection Principle, Case theory etc.

Through the Syntactic Incorporation theory the behaviour and interaction of a number of syntactic processes, such as word order, passivization, object agreement, Wh-movement etc. in applicative constructions and English Internal IOCs are said to receive an explanation. For instance, in English and Chichewa the stranded NP (i.e. the NP left after the PI) cannot be Wh-moved because the variable it leaves behind is headed by the trace of the moved P.

In relation to Hausa facts, however, we observed that if the IO markers wà/mà/ma are base generated as heads of PP and later on move and adjoin to the governing verb via PI, there is then no way that we can account for the Wh-movement of the IO NP. In view of this problem it would seem natural to assume that the incorporation of the IO markers wà/mà/ma to the governing verb might be lexically rather than syntactically derived (see the next chapter for detailed discussion). Using the Lexical Incorporation analysis I will account for the word order and the passivization facts.

As far as the Case assignment parameters are concerned, I claimed that the direct object NP in Hausa Internal IOCs does not receive an accusative Case, but a

default nominative Case. This is supported by the fact that verbs can only assign accusative Case to NPs if and only if the NPs are directly adjacent to the verb. Evidence from double object constructions, topicalization and focus constructions, as well as causative constructions are exploited to support this claim. That is, in Internal IOCs the IO NP intervenes between the verb and the DO NP, and this prevents the verb from assigning an accusative Case to the DO NP.

Finally, I have pointed out that, counter to Baker's claims, IOCs are productively formed with a number of intransitive verbs in Hausa.

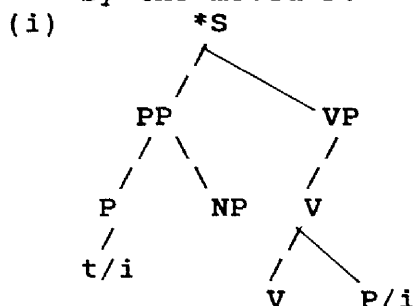
## Notes to Chapter Five

1. Applicative is used in Baker (1988a:9) as "a cover term for a set of closely related Grammatical Function permutations", as illustrated below:

{oblique	}	
{indirect object	}	---> object, object---> 2nd object
{null	}	(or null)

Individual languages can employ either option. Hausa only utilizes the second option, that is to say only benefactive/dative constructions take over the position of the direct object, and the direct object becomes the second object. Other oblique phrases (i.e. instrumental and locative) do not undergo this sort of permutation.

2. The analysis predicts that incorporation from a subject or adjunct position is ruled out by the ECP. For instance, if the prepositional phrase is base generated in the subject position and the P moves from its base generated position and adjoins to the verb as illustrated in (i). The trace left behind would not be properly governed because it would not be C-commanded by the moved P.



3. The general assumption is that only structural Case is absorbed under passivization. Thus, an inherent Case cannot be absorbed because it is assigned at D-structure where it is theta-related with the governed verb.
4. The Case assignment parameters are assumed for the marked option. The unmarked option is for a verb to assign only one structural Case per NP. Languages like French, Berber, Turkish are assumed to be restricted to only the unmarked option. This means that these languages do not allow double constructions at all. Hence, if another NP appears it will lack Case and the sentence would be ruled out by the Case Filter.
5. See chapter three for the different types of pronouns in Hausa.



6. Interestingly, in those dialects where the morpheme dà has been reanalysed as part of the verb, only the accusative pronoun can immediately follow the reanalysed verb (cf. Tuller 1984). Examples (i-iii) illustrate.

(i). mun fiddàa ta/\*ita  
we-PERF remove her/\*she  
'we removed her'

(ii). yaa gaidàa ta/\*ita  
he-PERF greet her/\*she  
'he greeted her'

(iii). mun yaɗdàa ta/\*ita  
we-PERF throw her/she  
'we threw her (away)'

7. The argument that the verb in Hausa assigns accusative Case to NPs that only occur directly adjacent to it, derives further support from the so-called sociative verb constructions in Hausa. These verbs are also separated from their objects by a preposition dà 'with'. However, only a nominative pronoun can occur after the dà, as demonstrated in the examples (i-iii) below.

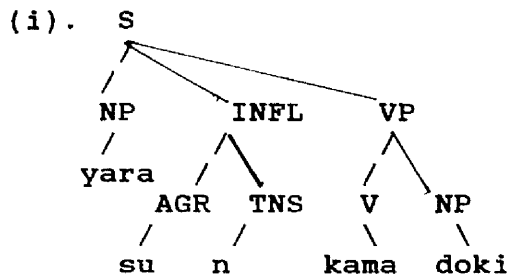
(i). mun gàmù dà ita/\*ta  
we-PERF meet with she/\*her  
'we met with her'

(ii). mun tunàa dà ita/\*ta  
we-PERF remember she/\*her  
'we remembered her'

(iii). mun zaunàa dà ita/\*ta  
we-PERF sit with she/\*her  
'we sat down with her'

8. Note that in those languages that allow their verbs to assign two accusative Cases, the word order is generally free (i.e. either object can occur after the other). Kinyarwanda is a classic example.

9. Hausa verbs (except in the continuous) are not inflected for tense/aspect (cf. chapter one). The INFL (i.e. tense/aspect) is base generated at D-structure separate from the verb and the subject (cf. Tuller 1986). However, there is agreement in terms of number and gender between the subject and the person/aspect marker of INFL. A simple sentence in Hausa may be represented roughly by the structure (i), (see chapter three for the different projection of both AGR and TENSE elements).



10. In fact there are a number of basic verbs that retain long vowels preceding noun direct object NPs as shown in (i) and (ii).

(i). yaa kiraa Audù  
 he-PERF call A  
 'he called Audu'

(ii). yaa biyaa Audù  
 he-PERF pay A  
 'he paid Audu'

Others are the basic monoverbs shaa 'drink' and jaa 'pull.'

11. Note, however, that these verbs can be immediately followed by the External IO markers gà/gàree as examples (i) and (ii) demonstrate below.

(i). `abìn dà ya `auku gà Audù/gàree shi  
 thing REL it-PERF happen IOM A/IOM-Pro  
 'the thing that happened to Audu/him'

(= `abìn dà ya fàaru gà Audù/gàree shi)  
 'the thing that happened to Audu/him'

(i) sun tàaru gà Audù/gàree shi  
 they-PERF gather IOM A/IOM-Pro  
 'they gathered around Audu/him'

12. I find sentence (77b) completely ungrammatical, as do all the speakers I consulted. In fact, Abdoullaye points out that some Niger speakers find the sentence unacceptable. Note, also that in Kano dialect the omission of the IO marker wà before the verb bâa 'give' is optional (see chapter four).

13. Parsons (1971/72:66) reports that the Katsina dialect sometimes allows both mà and wà in sequence as the following example (i) illustrates.

(i). wàa zân kai mà wà?  
 'whom shall I take (it) to?'

The interesting fact is that Katsina Hausa speakers only allow the sequence, if the indirect object is extracted, while the direct object NP is understood from the context, as shown in (i) above. Thus the sequence cannot be used if both the direct and indirect object NPs are present as shown in (ii).

- (ii). \*zân kai mà wà Audù dookii  
'\* I will take to Audu a horse'

However, Jaggar informs me that some speakers do allow the sequence if the direct object NP is present, while the indirect object NP is extracted as shown in (iii).

- (iii). wàa zân kai mà wà dookii?  
'whom shall I take a horse to?'

Finally, I found out that contrary to Parsons, the final vowel of the second marker for Katsina Hausa speakers is not a short low tone wà, but a long waa plus a high tone, as the following examples indicate. (Jaggar (pc) points out that the Maradi dialect also uses the sequence mà and waa).

- (iv). wàa zân nuunàa mà waa?  
'whom shall I show (it) to?'
- (v). wàa zân kai mà waa?  
'whom shall I take (it) to?'

## Chapter Six

### A Lexical Incorporation Analysis of Hausa IOCs

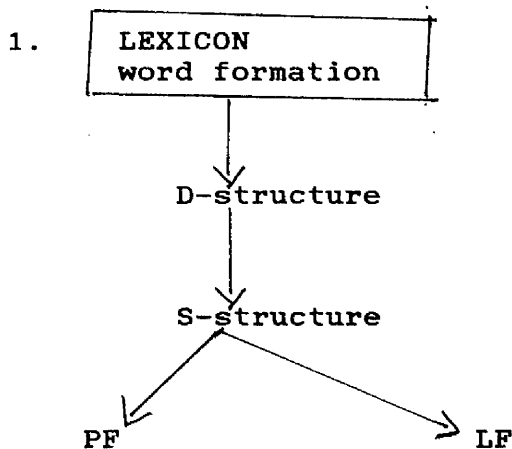
#### 6.0. Introduction

The central question addressed in the last three chapters is whether the attachment of the IO markers wà/mà/ma to the verb should be confined to the syntax or the lexicon. In chapter five, I considered whether the Syntactic Incorporation approach proposed in Baker (1985a, 1988a), which claims that affixes are incorporated into the verb via a movement rule, would account for the Hausa facts. However, I have shown that it could not.

In this chapter I will argue that the attachment of the IO markers wà/mà/ma to the verb is the result of a word formation rule, and that this operation takes place in the lexicon. The analysis propose in this chapter is greatly influence by Tuller's work on Hausa syntax (cf. Tuller 1986). It will be argued that the Lexical Incorporation analysis is superior in many respects to the Syntactic Incorporation analysis discussed in the previous chapter. The Lexical Incorporation analysis accounts in a principled fashion for the things which the Syntactic Incorporation accounts for, and also for things which are problematic to Syntactic Incorporation: pied piping/Wh-movement facts, changes in verb meaning between Internal and External IOCs and restriction on the theta-role assignments.

Finally, it will be shown that the attachment of the Internal IO markers wà/mà/ma to the verb affects the argument structure of the verb in question.

In chapter two I provided a brief overview of the Lexical Incorporation analysis proposed in Lieber (1980), Williams (1981), Scalise (1986) and Di Sciullo and Williams (1987). They argued that affixes are listed in the lexicon with their own insertion frames. Being affixes, however, they cannot stand on their own; as such they have to be attached to the verb, and this attachment takes place in the lexicon. The diagram (1) below illustrates (cf. Lieber 1988):



The idea is in line with the "modular approach" to grammar (cf. chapter 2), which assumes that grammar consists of a set of different interacting modules, each module performing a certain operation in accordance with specific principles (see Chomsky 1981).

The theory proposed in Di Sciullo and Williams (1987) essentially states that both words and affixes are represented in the lexicon and the two can combine at that level to derive a complex word. A word formation rule is posited to handle this combination (cf. Selkirk 1982). Di Sciullo and Williams's analysis assumes that affixes are Heads of their words and that Heads determine the properties of the complex word. According to Di Sciullo and Williams the Head of the word is the rightmost member of the word known as the "righthand rule." See chapter two for discussion.

- F
2. Definition of "head" (read: with respect to the feature F):  
The head<sup>F</sup> of a word is the rightmost element of the word marked for the feature F. (Di Sciullo and Williams 1987: 26).

The features of the Heads are transferred to the resulting complex words via Lieber's (1980) Feature Percolation Conventions as defined below.

#### Feature Percolation Conventions

- a. If the head of a word is specified for feature A, then A percolates up to the mother-node.
- b. If the sister of the head of a word is specified for feature B and the head is not, then B percolates up to the mother-node (unless the head specifies otherwise).

Di Sciullo and Williams (1987:65) argue further that "a morphological operation can affect the syntactic distribution of the resulting word in only two ways: it can affect the features on that word or it can affect the

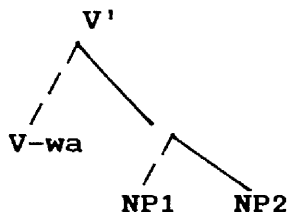
argument structure of that word." The lexicalist analysis accounts for the Hausa IOCs facts in a principled fashion, as well as other word formation processes in the language.

### 6.1. Tuller's Analysis

The first attempt to analyze the Hausa IOCs within the GB framework is that of Tuller (1982, 1984, 1986). She argues that the Internal IO markers wà/mà/ma are part of the verb. The motivation for this analysis hinges on the following facts: interpolation of modal particles, conjunction of prepositional phrases, preposition stranding and pied piping. For discussion and analysis see chapter three.

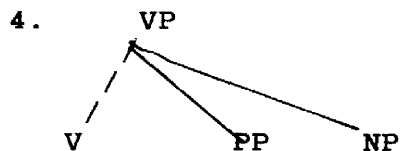
Adopting Kayne's (1984) dative small clause analysis for English Internal IOCs, Tuller (1984:453) proposes that the structure for the Hausa Internal IOCs should be represented as (3) where NP1 and NP2 form a small clause.

3.



The arguments advanced in Tuller (1984) in support of the small clause analysis for Hausa Internal IOCs are as

follows. Firstly, she points out that structures such as (4) are excluded, either by Kayne's Unambiguous Path Condition (UPC), which requires only binary branching, or Stowell's adjacency condition on Case assignment, which requires that a Case receiver must be adjacent to a Case assigner. However, in (4), the verb cannot directly assign Case to the DO NP because of the intervening PP (see also Tuller 1986:310).



Secondly, she points to the fact that an adverb or adverbial reflexive may not occur between NP1 and NP2 of a small clause; however, an adverb or adverbial reflexive may occur between the DO NP and IO NP in the External IOCs. This is illustrated by examples (5) and (6) (cf. Tuller 1984:453).

- 5a. \*Audù yaa nuunàa wà [Laadi maza/jiyà  
 A he-PERF show IOM L quickly/yesterday  
 littaafig] book  
 'Audu showed Ladi a book quickly/yesterday'
- b. \*Audù yaa nuunàa wà [Laadi dà kànsà littaafig]  
 A he-PERF show IOM L with himself book  
 'Audu showed Ladi a book by himself'
- 6a. Audù yaa nuunà [littaafig] maza/jiyà [gà  
 A he-PERF show book quickly/yesterday IOM  
 Laadi] L  
 'Audu showed a book to Ladi quickly/yesterday'



- b. Audù yaa nuunà [littaafii] dà kânsà [gà  
 A he-PERF show book with himself IOM  
 Laadi]  
 L  
 'Audu showed a book himself to Ladi'

According to Tuller, the fact that adverbs cannot intervene between the DO and IO in (5) is a manifestation of the small clause analysis.<sup>1</sup> Finally, Tuller points out that the difference between Hausa and English Internal IOCs small clauses is that in the former the subject of the small clause is not contained in a PP headed by an empty preposition, while in English it is (cf. Kayne 1981, 1984).

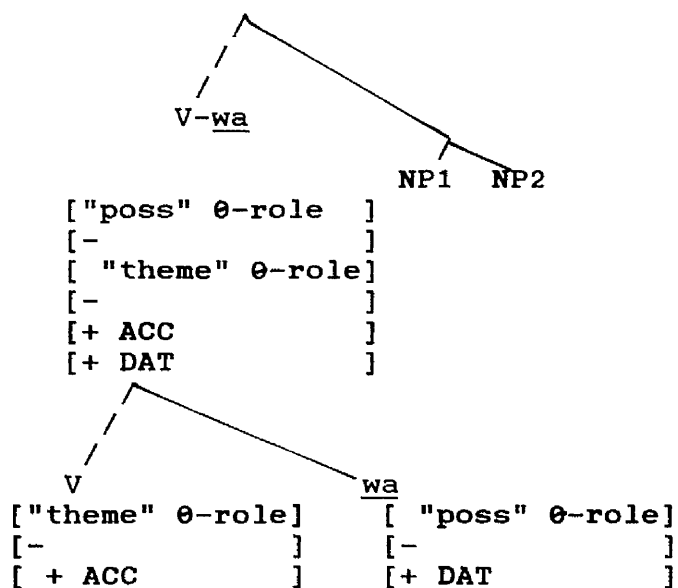
Using the small clause analysis, Tuller (1986:311) accounts for the difference between Hausa and English small clauses with respect to extraction of the IO NP, which is allowed in Hausa, but prohibited in English, as shown in (7) and (8) respectively (cf. chapter 2). She argues that NP1 in Hausa is allowed to undergo Wh-movement because it is not embedded on a left branch, as is the case in English small clauses.

7. waa/i Audù ya [nuunàa wà] [ t/i] [littaafii]?  
 who A he-PERF show IOM NP1 NP2 book
8. \*who/i did John show [s.c. [ e [ t/i]] [ a book]]?  
 PP NP1 NP2

Tuller argues further that the attachment of the IO markers wà/ma/ma to the verb is a result of a morphological rule. However, Tuller does not explicitly state the level at which this morphological rule takes

place. Nevertheless, from her analysis, one may assume that the IO markers wà/mà/ma are attached to the verb at the lexicon level, since she assumes Lieber's Feature Percolation Convention. She points out that in the case of Hausa Internal IOCs there is no conflict as far as the feature assignment is concerned. According to Tuller (1984:454) "In Hausa, Case-assigning and  $\theta$ -role-assigning features of both the root and wa percolate since they do not overlap." Tuller proposes the following structure to explain how the Case and theta role features are assigned to both the IO and DO NPs. That is, in (9) both the IO marker wà and the verb assign two different Cases and theta-roles to NP1 and NP2 respectively.

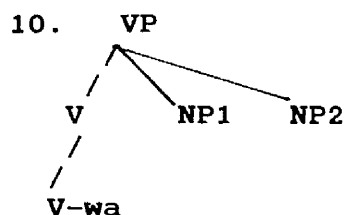
9.



In the above structure, Tuller (1984:453) suggests that "dative small clauses have a possessive

interpretation --that is, NP1 is taken to be the possessor (in a loose sense) of NP2 --." Furthermore, the structure implies that the DO NP (NP2) is assigned accusative Case. As regards the possessive interpretation, we saw in chapter four that the IO NP is not restricted to a possessor theta-role, but receives other theta-roles as well, such as benefactive, malefactive, dative/goal, experiencer etc. (see section 6.4.4.). With regard to the type of Case the DO NP receives, we saw in chapter five that the DO NP is assigned a default nominative Case.

Following Tuller (1984), I will assume that the Hausa Internal IO markers wà/mà/ma are part of the verb, and that the attachment take place at the lexicon level. Contrary to Tuller, I will claim that the two postverbal NPs do not form a small clause. Instead, I will assume structure (10) for the Hausa Internal IOCs (cf. section 6.3. for discussion).



[V- wà [NP1] NP2]  
 (cf. yaa kaamá wà Laadi dookii)  
 he-PERF catch IOM L horse  
 'he caught a horse for Ladi'

The problem with the small clause analysis is that the two postverbal NPs do not form a constituent (cf. Di

Sciullo 1988). For instance, the two NPs cannot be focussed or questioned together, as examples (11b-c) show.

- 11a. Audù yaa kaamàa wà Laadi dookii  
 A he-PERF catch IOM L horse  
 'Audu caught a horse for Ladi'
- b. \*Laadi dookii (nee) Audù ya kaamàa wà  
 L horse Foc A he-PERF catch IOM  
 '\*it is Ladi and the horse that Audu caught for'
- c. \*mèe Audù ya kaamàa wà?  
 what A he-PERF catch IOM  
 '\*what did Audu catch for?'

Note, however, that each of the two NPs can be focussed or questioned, thus sentences (12a-b) and (13a-b) are perfectly grammatical.

- 12a. Laadi (cee) Audù ya kaamàa wà dookii  
 L FOC A he-PERF catch IOM horse  
 'it is Ladi that Audu caught the horse for'
- b. dookii (nee) Audù ya kaamàa wà Laadi  
 horse FOC A he-PERF catch IOM L  
 'it is a horse that Audu caught for Ladi'
- 13a. waa Audù ya kaamàa wà dookii?  
 who A he-PERF catch IOM horse  
 'who did Audu catch the horse for?'
- b. mèe Audù ya kaamàa wà Laadi?  
 what A he-PERF catch IOM L  
 'what did Audu catch for Ladi?'

Another important argument against the small clause analysis is the fact that it is possible to focus the verb and the direct object NP leaving the indirect object behind, as shown in example (14). (See Chapter three and section 6.4.5. for discussion on what happens to the IO marker when the verb is empty).

14. kaama dookii (nee) Audù ya (yi) wà Laadi  
 catch horse FOC A he-PERF do IOM L  
 'it is catching the horse that Audu did for Ladi'

Another problem with the small clause analysis for Hausa Internal IOCs is that the structure appears to contradict both conditions (A) and (B) of the Binding theory. Condition (A) states that anaphors (i.e. reflexives, NP-traces) must be bound, that is coindexed with their C-commanding antecedent in their governing category. Condition (B), on the other hand, states that a pronominal is free in its governing category (cf. chapter two). Tuller (1986) considers the small clause as the governing category for both NP1 and NP2. This means that if a reflexive appears in place of NP2 it must be bound by NP1, since NP1 is the nearest C-commanding NP. However, the reflexive kántà 'herself' is not bound within the small clause in (15) below. Instead, the reflexive is bound by the NP Laadi, which is outside the small clause.

15. Laadi taa [ nuunàa wà ] [ Audù ] [ kántà ]  
 L she-PERF show IOM NP1 A NP2 herself  
 'Ladi showed herself to Audu'

Furthermore, in example (16) below the pronoun would be bound in its governing category, and this of course violates condition (B) of the Binding theory.

16. Laadi/j taa [ nuunàa wà ] [ Audù/i ] [ hòotonsà/i/\*j ]  
 L she-PERF show IOM NP1 A NP2 picture-his  
 'Ladi showed Audu his picture'

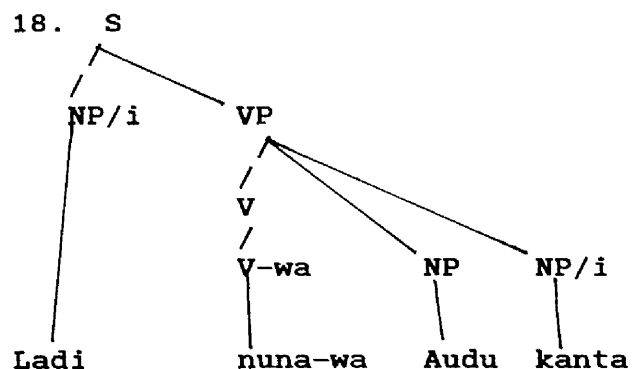
The above examples clearly show that both conditions (A) and (B) will be violated if one assumes the small clause to be the governing category of the two postverbal NPs (see Barss and Lasnik 1986).

Finally, Tuller's small clause analysis could not be generalized to those sentences where the IO marker is followed by a pronoun, as pointed out to me by Newman (p.c.), since the pronoun occurring after the IO marker ma is a clitic pronoun, not an independent pronoun. This means that in sentences like (17), Tuller has to assume a single clause.<sup>2</sup>

17a. Audù yaa [nuunàa ma-tà ] [dookii]  
 A he-PERF show IOM-Pro horse  
 'Audu showed her a horse'

b. Laadi taa [sayaa ma-sà ] [mootaa]  
 L she-PERF buy IOM-Pro car  
 'Ladi bought him a car'

In view of the above problems, the small clause analysis for Hausa Internal IOCs is rejected in this study. If, however, we adopt structure (10) above, then nothing prevents the pronoun from being cliticized to the complex verb. Furthermore, the structure will neither violate condition (A) nor condition (B) of the Binding theory. For instance, the reflexive in (15) will be coindexed with the subject NP. Consider the following structure:<sup>3</sup>



Adopting Di Sciullo and Williams's use of the notion Head and Lieber's Feature Percolation Convention, I will assume that the IO markers wà/mà/ma are the Heads of the verb to which they are attached. Using the above assumptions, I will account for the word order facts, pied-piping/Wh-movement facts and so forth without necessarily assuming a syntactic movement rule. Before that, let us discuss some derivational processes in Hausa, which offer empirical support for the Feature Percolation procedure and the notion Head. The features to percolate from the Head include lexical category, morphological, syntactic (i.e. argument structure) etc.

## 6.2. Word Formation Processes in Hausa

I pointed out above that word formation is part of the lexicon not syntax. The process is brought about when two items combine to form a complex word. These items could both be independent words like the English compound 'ice cold', or one of them could be an affix as in the case of the English derivational noun 'construction', where the suffix --ion is an affix. Di Sciullo and Williams (1987:25) remark that "there is no harm in regarding -ion as "noun," so long as it is a bound form and thus cannot surface independent of a stem to which it is attached."

Through the notion Head of a word and Feature Percolation Convention, we have seen in chapter two that the Head, which occurs in the righthand position (e.g. English), transfers its feature to the nonhead element, which in turn becomes the feature of the whole word.

I will show here that Hausa derivational affixes (specifically suffixes) are Heads of their words and their features can percolate and become the feature of the entire word. Plural formation, verbal extensions (i.e. secondary grades), derivational nouns, participial endings and feminine endings will be cited in support of the notion Head and Feature Percolation Convention.

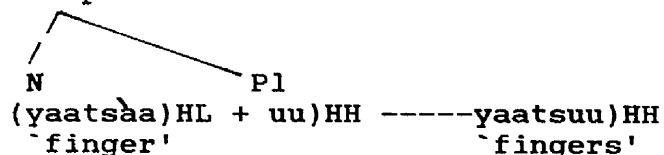
It has been argued in Newman (1986) that Hausa has two different types of affixes, namely, "Tone integrating affixes" and "Tone non-integrating affixes". This dichotomy is based on the fact that the former can affect the lexical tone of the word by overriding it, whereas the latter cannot. For instance, Newman (1986) analyzes participial and feminine endings as "Tone non-integrating" affixes because tonal features do not percolate over the word. Plural endings and verbal extensions, on the other hand, are considered as "Tone integrating" affixes because their tones percolate over the entire word.

Hausa plurals are formed by affixation plus a tonal assignment over the entire word. I will assume that plural suffixes percolate to the entire word in that they

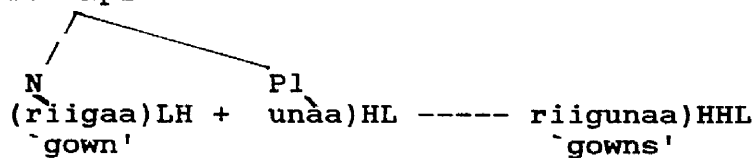


are the Heads of the words. For example, the plural of yaatsaa 'finger' is derived by adding the plural suffix -uu + HH (i.e. yaatsaa + uu --- yaatsuu 'fingers'). Consider the structures given (19) below. (All data are from Newman (1986:252)).

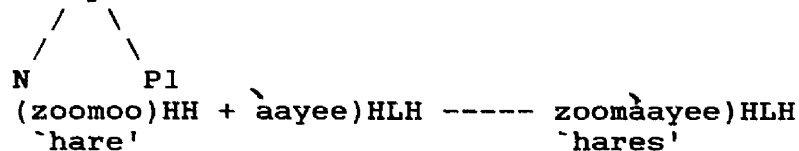
19a. Npl



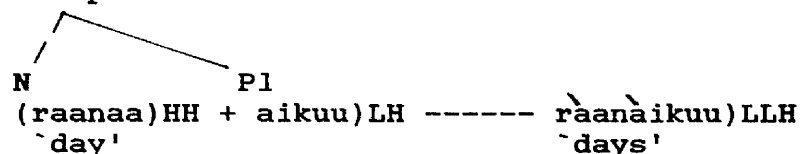
b. Npl



c. Npl

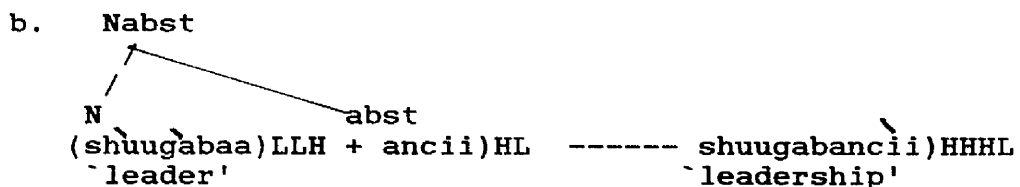
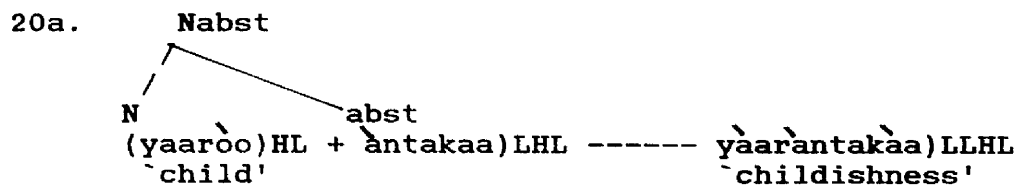


d. Npl



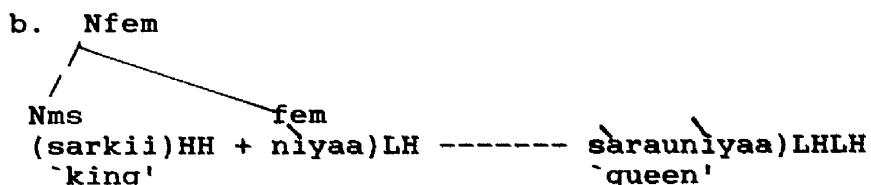
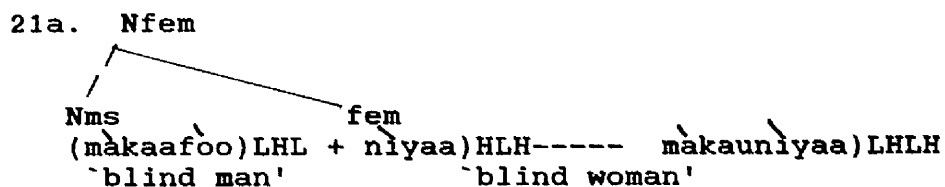
In the above examples, the plurals of the nouns are derived from the suffixes via the Feature Percolation process.

Another example where the suffixes determine the feature of a word can be observed in the derivation of the abstract nouns, as illustrated below.



In the above examples, the nouns change from concrete noun to abstract noun. In other words, the semantic feature of the head percolates over the feature of the stem by changing the feature from [- abstract] into [+ abstract].

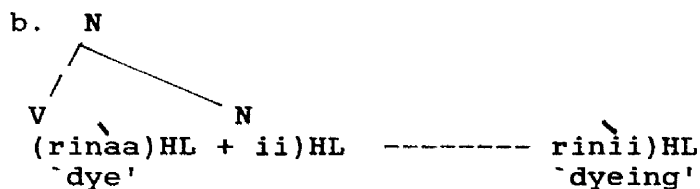
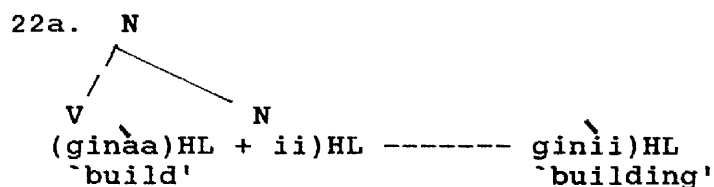
Another argument in support of the notion Head and Feature Percolation process in Hausa can be observed in feminine formation. Here the tones do not percolate, but the semantic feature of the feminine percolates over the masculine nouns. Consider the following examples:



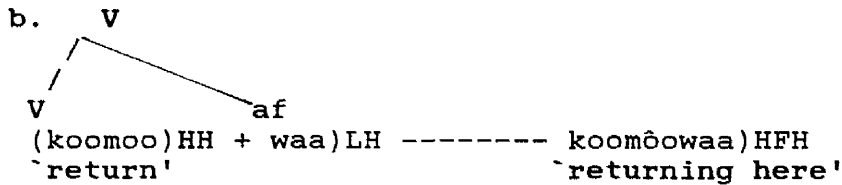
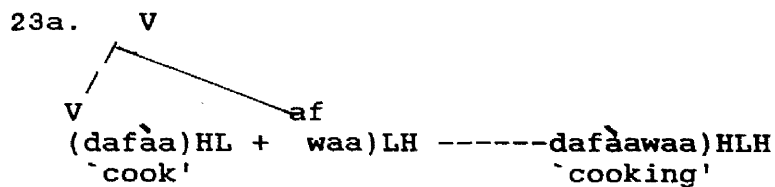
The structures above clearly indicate that the feminine noun in Hausa is derived via the Head and Feature

Percolation procedure. Thus, the masculine noun 'blind man' in (21a) changes to a feminine noun 'blind woman' because the feminine suffix is the Head of the word.

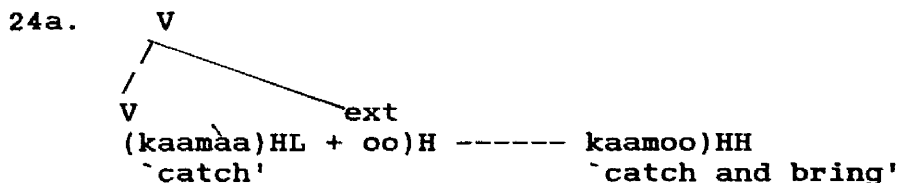
Hausa derived nominals provide further support to the view that the entire word can receive its feature from the nominalizing suffix which is the Head.<sup>5</sup> Consider the structure below where the feature of the suffix being the Head percolates and becomes the feature of the entire word.

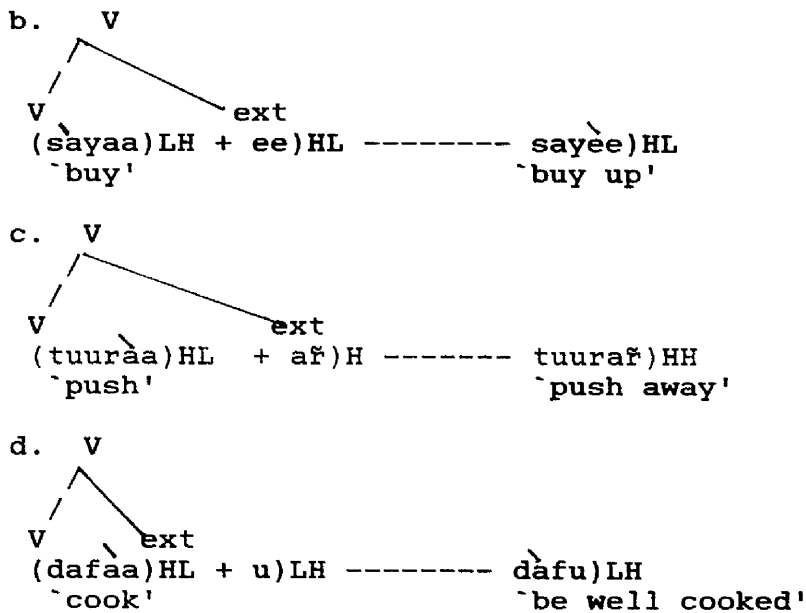


Participial forms in Hausa (which are similar to English gerundive nominals) offer further support to the notion Head and Feature Percolation Convention. In continuous tenses, the Participial ending waa is attached to certain verbs in Hausa (with floating low tone which grounds on the previous syllable). The participial waa being in the Head position determines the feature of the entire word. Consider the following structure (note that there is no tone percolation here).



Finally, another derivational process can be seen in the so-called verbal extensions in Hausa, that is, the secondary verb grades (see Parsons 1960 and Newman 1973). Newman (1986:255) points out that "the secondary (and tertiary) grades are formed by means of extensional suffixes." I am assuming here that these extensional suffixes are Heads of the primary verbs they are attached to. Since they are Heads they can affect the semantic feature of the verb they occur with. This is in support of Scalise's (1986) idea that apart from affecting the syntactic, morphological and phonological properties, a word formation rule can also affect the semantic reading of the base word. Consider structures (24):



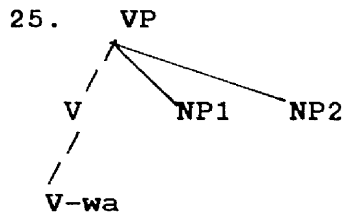


From the above structures we can see that the attachment of the extensional suffixes to the base verb can modify the meaning of the base verb by adding distinctive semantics. This can be explained by the fact that the extensional suffixes, being the Heads of the word, can project their features up to the entire word (cf. chapter four).

From the preceding discussions we have seen that there is an independent reason within Hausa in support of the notion Head and Feature Percolation Convention. Thus, Hausa derivational affixes provide empirical support for the claim that affixes affect either the lexical, semantic or phonological features of the stem they are combined with. We now turn to consider how the Hausa indirect object markers affect the feature of the verbs they are associated with.

### 6.3. IO markers wà/mà/ma as Heads

Following Tuller, in chapter three and section 6.2. I argued that the IO markers wà/mà/ma in Hausa Internal IOCs should be considered as part of the verb. The IO markers gà/gàree in the External IOCs, on the other hand, are regarded as heads of prepositional phrases. I argued in section (6.2) against Tuller's small clause analysis for Hausa Internal IOCs. Instead, I proposed structure (10), repeated here as (25).



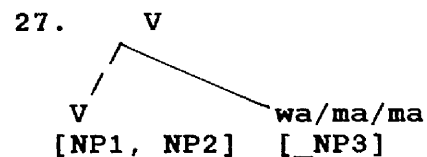
[V- wa [NP1] NP2]  
 (cf. yaa kaamaa wà Laadi dookii)  
       he-PERF catch IOM L horse  
       'he caught a horse for Ladi'

Following Di Sciullo and Williams (1987), I will assume that the IO markers wà/mà/ma should be considered as the Heads of the verbs they are attached to. However, unlike other derivational affixes, the IO markers wà/mà/ma do not change the lexical category of the base verb they occur with, but affect the verb's argument structure. This confirms Di Sciullo and Williams idea that affixes can affect the syntactic distribution of a derived word in two ways: either by affecting the lexical feature of the word in question, or by affecting its argument structure.

Adopting the strong lexicalist position, I will posit that the attachment of the IO markers wà/mà/ma/ to the base verb takes place in the lexicon. I will suppose further that the IO markers wà/mà/ma are given a category status (i.e. a verb) and that they have their own subcategorization frame (i.e. they subcategorize for an NP), as illustrated by structure (26) below

26. wà/mà/ma V: [\_ NP]

Furthermore, the IO markers wà/mà/ma being affixes, they must have a morphological subcategorization frame which stipulates that they must be attached to a verb. In chapter three, I argued that the IO markers wà/mà/ma must be attached to [+ V] category. The resulting structure after the lexical attachment of the IO markers wà/mà/ma to the verb can be roughly represented as (27) below.



The above structure indicates that the verb has two NPs (NP1 stands for external argument and NP2 stands for internal argument). The IO markers wà/mà/ma, on the other hand, have one internal argument NP3 (i.e. the IO NP).

In the following subsections, I will elucidate why I consider the Lexical Incorporation analysis to be superior to the Syntactic Incorporation analysis discussed in chapter five.

#### 6.4. Word Order Facts

The active-accusative SVO language nature of Hausa is reflected by the External IOCs where the DO precedes the IO as illustrated by example (28) below.

28. Audù yaa nuunà mootàa gà Laadi  
A he-PERF show car IOM L  
'Audu showed a car to Ladi'

In the Internal IOCs, the word order is altered so that the IO precedes the DO, as shown in example (29).

29. Audù yaa nuunàa wà Laadi mootàa  
A he-PERF show IOM L car  
'Audu showed a car to Ladi'

Under the Syntactic Incorporation analysis, the reason given for a word order (29) is that at D-structure the IO NP is not directly theta-marked by the verb: this means that the verb cannot assign inherent Case to the IO NP. After the preposition is moved and Incorporated into the verb a new government relationship is established between the verb and the IO, and given the adjacency condition of Case assignment, the IO is assigned a structural Case, hence it must occur immediately after the verb.

Under the Lexical Incorporation analysis, the IO which is the argument of the IO markers wà/mà/ma precedes the DO of the verb because the IO markers wà/mà/ma are the Heads of the verbal complex. Thus, the internal argument subcategorized by the IO markers wà/mà/ma takes precedence over the internal argument of the base verb since it is associated with the Head, as shown in example (29) above.



The word order given in (30) below is ruled out by the fact that the verb is not the Head of the verbal complex.

30a. \*Audù yaa kaamaa wà dookii Laadi  
 A he-PERF catch IOM horse L  
 'Audu caught a horse for Ladi'

b. \*Audù yaa nuunaa wà mootaa Laadi  
 A he-PERF show IOM car L  
 'Audu showed a car to Ladi'

The analysis above raises the question of why the argument of the IO markers wà/mà/ma cannot take precedence over the external argument of the verb (i.e. NP1, cf. structure 28). The reason is simple: the IO markers wà/mà/ma do not have an external argument. This supports Di Sciullo and Williams' (1987) assertion that when the head has no external argument, the external argument of base will be the external argument of the whole.

#### 6.4.1. Pied piping and Wh-movement facts

Pied piping and Wh-movement facts provide a very strong argument in favour of a Lexical Incorporation analysis and against the Syntactic Incorporation analysis. Recall that in chapter three we saw that the Internal IO markers wà/mà/ma cannot be pied piped, while the External IO markers gà/gàree can. Consider the following examples:

31a. \*wà waa/i Audù ya kaama t/i dookii?  
 to whom A he-PERF catch horse  
 'for whom did Audu catch a horse?'

- b. g`a w`aa/i Aud`u ya nuun`a dookii t/i?  
 to whom A he-PERF show horse  
 'to whom did Audu show a horse?'

If we assume that the attachment of the IO markers w`a/m`a/ma takes place in the lexicon, the ungrammaticality of sentence (31a) above can be explained under the strong lexicalist analysis (cf. Chomsky 1970) which states that a syntactic rule cannot move any part of a word. The strong lexicalist analysis is referred to as "syntactic atomicity" by Di Sciullo and Williams (1987:47), and is defined as "the inability of syntactic rules to "analyze" the contents of X<sup>o</sup> categories". See also Lapointe's (1978) lexical integrity hypothesis.

Another important argument in support of the Lexical Incorporation analysis can be observed from the Wh-movement facts. Under the syntactic movement rule, it has been proposed that Wh-movement of the IO NP in Chichewa applicative constructions and English Internal IOCs is blocked because the trace is headed by a null head, that is, the trace of the moved preposition (cf. chapter five). In the case of Hausa Internal IOCs, however, we have seen that the IO NP is free to undergo Wh-movement, as illustrated by the following examples.

32. w`aa/i Aud`u ya say`aa w`a t/i r`iigaa?  
 who A he-PERF buy IOM shirt  
 'who did Audu buy a shirt for?'
33. w`aa/i Aud`u ya nuun`aa w`a t/i moot`aa?  
 who A he-PERF show IOM car  
 'who did Audu show a car to?'

The above Hausa sentences could not be accounted for if one assumed that the IO markers wà/mà/ma are attached to the verb via a syntactic movement rule (i.e. PI). If, on the other hand, we assume that the IO markers wà/mà/ma are lexically attached to the verb, then no trace would be left behind to prevent Wh-movement. There is also no need to propose an ad hoc filter like Baker's "Non Oblique Trace Filter", as we saw in chapter five. Furthermore, since the attachment of the IO markers wà/mà/ma happens in the lexicon, the Projection Principle would not be violated, in that traces are left behind in order to satisfy the Projection Principle (cf. Tuller 1984). The process is thus analogous to adjectival passive formation in English. See Borer (1984b), Levin and Rappaport (1986) Wasow (1980), Williams (1981) and Fabb (1984) among others.

#### 6.4.2. Case Assignment Parameters

We saw in chapter five that different Case parameters are utilized by different languages when two postverbal NPs immediately follow a verb. The Hausa Internal IOCs clearly represent a similar situation, as shown in example (34a). In contrast, the External IOCs do not present any problem as far as Case assignment is concerned (34b). The

DO receives Case from V, the IO receives Case from the External IO marker gà.

- 34a. Audù yaa kaamàa wà Laadi dookii  
 A he-PERF catch IOM L horse  
 'Audu caught a horse for Ladi'
- b. Audù yaa nuuna dookii gà Laadi  
 A he-PERF show horse IOM L  
 'Audu showed a horse to Ladi'

I suggested in chapter five that in the Hausa Internal IOCs, the DO NP is assigned a default nominative Case rather than an (inherent) accusative Case. This default nominative Case assignment could be accounted for under the Lexical Incorporation analysis. It follows from the fact that the lexical attachment of the IO markers wà/mà/ma to the verb makes the IO NP take precedence over the internal argument (i.e. DO NP) of the verb since it is associated with the Head. As a result the DO NP cannot be directly adjacent to the verb, a necessary condition for accusative Case assignment in Hausa. The only option left for the DO NP to satisfy the Case Filter is to receive a default nominative Case. (cf. chapter five for discussion).

Finally, I argued in chapter five (contra Baker 1988a) that IOCs are fully formed with intransitive verbs in Hausa. That is, the IO markers wà/mà/ma can be attached to intransitive verbs, as illustrate by examples (35a-d).

- 35a. Audù yaa goodee wà Laadi  
 A he-PERF thank IOM L  
 'Audu thanked Ladi'

- b. Audù yaa tuubam mata  
 A he-PERF apologize IOM-Pro  
 'Audu apologized to her'
- c. Audù yaa tsayaa wa Laadi  
 A he-PERF stand IOM L  
 'Audu stood for Ladi'
- d. duuniyaa taa rikicee mana  
 world she-PERF confuse IOM-Pro  
 'the world has become confused for us' '(i.e. we have  
 run out of luck)'

According to Baker's Syntactic Incorporation analysis, applied affixes cannot Incorporate into intransitive verbs because the verbs cannot assign Case to the stranded NP. Baker's assumption follows from the fact that intransitive verbs are generally assumed to be non-Case assigners. The above examples, however, show that IOCs formed with intransitive verbs are perfectly grammatical. This could be accounted for under the Lexical Incorporation analysis if we assume that the IO NP receives its Case from the IO markers, not from the verb. This follows from the fact that the IO NP is subcategorized by the Heads of the complex verbs, i.e. the IO markers wa/ma/ma.

### 6.4.3. Argument Structure and Hausa Internal IOCs

I have already pointed out that Di Sciullo and Williams' system allows the Heads to add an argument. In contrast, Baker's syntactic analysis does not allow IOCs to add another argument because it would violate UTAH. The Hausa Internal IOCs support Di Sciullo and Williams' position in that the IO markers wà/mà/ma affect the argument structure of the predicate they occur with.

The argument structure of a predicate consists of the list of arguments associated with the predicate, and each argument is identified by the theta-role (Agent, Theme, Goal, Locational etc) it carries. Consider the verb dafàa 'cook' in Hausa. The verb takes an Agent external argument (i.e. the one who did the cooking), and a Theme internal argument (i.e. the thing cooked), as shown below.

36. dafàa: V (A Th)  
(cf. Laadi taa dafà tuwoo)  
'Ladi cooked food'

When the IO markers wà/mà/ma are attached to dafàa it increases the argument structure of the verb by one more argument as illustrated by (37).

37. Laadi taa dafàa wà Audu/masà tuwoo  
L she-PERF cook IOM A/IOM-pro food  
'Ladi cooked food for Audu/him'

Furthermore, if the IO markers wà/mà/ma are attached to verbs having only an external argument (for example, the intransitive verb tàfi, 'go' in (38a)), they introduce a new internal argument as given in example (39b) below.

38a. tafi V (A )

b. Àli yaa tafi wà Audù/masà Kanòò  
 A he-PERF go IOM A/IOM-pro K  
 'Ali went to Kano on behalf of Audu/him'

From the preceding examples we can see that the Internal IO markers wà/mà/ma increase the argument structure of a given predicate. Thus, example (37) above changes from a 2-place to a 3-place predicate (i.e. it changes the transitive verb to ditransitive). In the case of example (38b), the IO markers change the verb from intransitive to transitive (i.e. from a 1-place to a 2-place predicate). The fact that the IO markers wà/mà/ma increase the argument structure of the predicate strongly suggests that the process cannot be derived via a movement rule. This is because syntactic rules cannot affect the argument structure of the predicate. In other words, syntactic rules cannot introduce an additional argument.

The Hausa internal IO markers wà/mà/ma add an internal argument not an external argument. This is an argument against Williams (1981), but not against Di Sciullo and Williams (1987).<sup>7</sup> The following examples illustrate further the effect the IO markers wà/mà/ma have<sup>8</sup> on the verb's argument structure.

39a. Audù yaa dooràa wà Laadì/matà littafii àkàn  
 A he-PERF put IOM L/IOM-Pro book on  
 teebuƙ  
 table  
 'Audu put the book on the table for Ladi/her'

- b. Audù yaa shigoo wà Laadi/mata daakii  
 A he-PERF enter IOM L/IOM-Pro room  
 'Audu entered Ladi's/her room'
- 40a. Audù yaa kaamaa wà Laadi/mata dookii  
 A he-PERF catch IOM L/IOM-Pro horse  
 'Audu caught a horse for Ladi/her'
- b. Audù yaa baƴ wà sarkii/masà garinsà  
 A he-PERF leave IOM king/IOM-Pro town-his  
 'Audu left the town for the king/him'

From the above examples, we can see that the IO markers wà/mà/ma increase the valency of the verb by one more internal argument. Recall that in Chapter four I mentioned that the particular meaning of the indirect object (benefactive, malefactive etc.) depends largely on the class of the verb the markers occur with. This seems to indicate that the IO markers wà/mà/ma have an additional function, namely, to add the meaning "affect X", where X is the newly added argument.

#### 6.4.4. Semantic Distinctions in Hausa IOCs

Semantic considerations lead us to prefer the Lexical Incorporation analysis over the syntactic movement analysis. We have seen in chapter five that the Internal IO markers wà/mà/ma and the External IO markers gà/gàree do not always overlap in the type of theta-roles they assign to the IO NP. I pointed out that when the IO markers wà/mà/ma are used, they select a wide range of theta-roles, which include Benefactive, Goal, Possessor,



Experiencer etc. In contrast, the IO markers gà/gàree are restricted to a Goal theta-role only. Compare the following examples: while the IO markers wà/mà/ma are used with all the various theta-roles, the IO markers gà/gàree are restricted to Goal theta-role (46b)

41a. Audù yaa saayàa wà Laadi mootàa (Benefactive)  
 A he-PERF buy IOM L car  
 'Audu bought a car for Ladi'

b. \*Audù yaa sayi mootàa gà Laadi  
 A he-PERF buy car IOM L  
 'Audu bought a car for Ladi'

42a. zaatà kaawoo makà ruwaa (Benefactive)  
 FUT-she bring IOM-Pro water  
 'she will bring water for you'

b. \*zaatà kaawoo ruwaa gàree kà  
 FUT-she bring water IOM-Pro  
 'she will bring water for you'

43a. yaa yaafam mini shii (Experiencer)  
 he-PERF forgive IOM-Pro it  
 'he forgave me (for) it'

b. \*yaa yaafèe shi gàree ni  
 he-PERF forgive it IOM-Pro  
 'he forgave me (for) it'

44a. naa sookàa matà maashii (Directional)  
 I-PERF stab IOM-Pro spear  
 'I stabbed a spear into her'

b. \*naa sookà maashii gàree tà  
 I-PERF stab spear IOM-Pro  
 'I stabbed a spear into her'

45a. yaa hanàa mini riigaatàa (Possessive)  
 he-PERF deny IOM-Pro shirt-my  
 'he denied me my shirt'

b. \*yaa hanà riigaatàa gàree ni  
 he-PERF deny shirt-my IOM-Pro  
 'he denied me my shirt'

46a. Audù yaa nuunàa wà Laadi mootàa (Goal)  
 A he-PERF show IOM L car  
 'Audu showed a car to Ladi'

- b. Audù yaa nuunà mootàa gà Laadi  
 A he-PERF show car IOM L  
 'Audi showed a car to Ladi'

Recall that under the Syntactic Incorporation analysis, Baker proposes the Uniformity of Theta-Assignment Hypothesis to relate two different structures with a common D-structure if the same theta-roles are assigned in both constructions. The fact that the Internal IO markers wà/mà/ma select different theta-roles suggests that the two IO markers in Hausa should not have the same D-structure.

Furthermore, the IO NP can sometimes be interpreted as either possessive or benefactive, depending on the context. Consider the following examples:

47. Laadi taa shiga wà Audù daakii  
 L she-PERF enter IOM A room  
 'Ladi entered Audi's room'  
 or  
 'Ladi entered the room for Audi'
48. Audù yaa gasaa wà Laadi naamàa  
 A he-PERF roast IOM L meat  
 'Audi roasted some meat for Ladi'  
 or  
 'Audi roasted Ladi's meat'

In the above sentences we can see that the meaning associated with IO NP is ambiguous; it could either be interpreted as possessive, or as benefactive. The fact that these constructions allow different theta-roles argues strongly against any Syntactic Incorporation analysis, because what UTAH guarantees is that items must always have the same theta-role. Note that the IO markers

gà/gàree could not be used, as examples (49a-b) illustrate.

- 49a. \*Audù yaa shìga daakii gà Laadi  
 A he-PERF enter room IOM L  
 'Audu entered Ladi's room'
- b. \*Audù yaa gasà naamaa gà Laadi  
 A he-PERF roast meat IOM L  
 'Audu roasted some meat for Ladi'

An additional argument against the syntactic analysis of the IO markers wà/mà/ma, but in support of the Lexical Incorporation analysis, can be observed from the change of semantic/meaning when the IO markers wà/mà/ma are attached to certain verbs. Parsons (1971/72:72) observes that for a few verbs, when the IO markers wà/mà/ma are attached, they not only add an extra argument, but can completely alter the total meaning of the verb. Parsons cites the verb ji 'to feel' and dandanaa 'to test'. When the IO markers wà/mà/ma are attached to these verbs, they have the effect of turning them into "quasi-causatives". Consider the following sentences:

50. yaa ji ciiwòò  
 he-PERF feel pain  
 'he felt pain' (i.e. he got hurt)
- b. yaa ji wà Laadi/mata ciiwòò  
 he-PERF feel IOM L/IOM-Pro pain  
 'he made Ladi/her to feel pain'
- 51a. naa dandana wiyaa  
 I-PERF taste suffering  
 'I have tasted suffering'
- b. yaa dandanaa mini wiyaa  
 he-PERF taste IOM-Pro suffering'  
 'he made me taste suffering'

Parsons (1971/72) correctly points out that sentence (50b), for instance, instead of having the expected meaning of 'he felt pain on my account', or 'he suffered in sympathy with me,' in fact means 'he caused me to feel pain' or 'he hurt me.' The same causative reading is implied in (51b). The fact that the attachment of the IO markers wà/mà/ma can give rise to semantic idiosyncracies clearly demonstrates that the process takes place in the lexicon, as semantic idiosyncracies are generally assumed to be properties of the lexicon component (cf. Chomsky 1965). That is, syntactic rules cannot acquire idiosyncratic properties.

#### 6.4.5. IOCs and Lexical Analyses GB and LFG

From the preceding discussion, we are able to show that the markers wà/mà/ma in Hausa Internal IOCs are lexically attached to the verbs they occur with. Based on the notion Head and Feature Percolation Convention, I demonstrated that the IO markers are the Head of the verbs they are joined with. This has a number of consequences: for example, the properties of the Head (in this case the IO NP) take precedence over the direct object NP because the IO NP is associated with the Head of the complex verb. This accounts for the word order facts. Furthermore, the fact that the IO markers wà/mà/ma increase the argument structure of the verb strongly

argues against a syntactic analysis because syntactic rules cannot introduce an extra argument. The Lexical Incorporation analysis also accounts for the Wh-movement facts without necessarily employing an ad hoc Filter. The IO NP can be Wh-moved in Hausa simply because the IO markers wà/mà/ma are lexically attached to the verb, hence there is no need for a trace to be left behind that might block Wh-movement. This means that the process would not violate the Projection Principle, since the IO markers are not base generated as heads of prepositional phrases: as a result no trace is required. As regards the inability of the IO markers wà/mà/ma to be pied-piped, this follows from the strong lexicalist hypothesis which states that syntactic rules cannot move any subpart of a lexically formed word. Finally, we have seen that attachment of the IO markers wà/mà/ma to verbs allows for a wide range of theta-role assignments to the IO NP. With a few verbs, the attachment of the IO markers wà/mà/ma gives rise to a different semantic interpretation, and it is generally accepted that semantic idiosyncrasy is essentially part of the lexicon. All the above facts lead us to conclude that the attachment of the IO markers wà/mà/ma has to occur in the lexicon. Thus the Hausa facts lead us to doubt whether syntactic movement is necessarily involved in indirect object alternations, hence opening the debate as to whether syntactic movement is also necessarily involved in Chichewa applicatives.

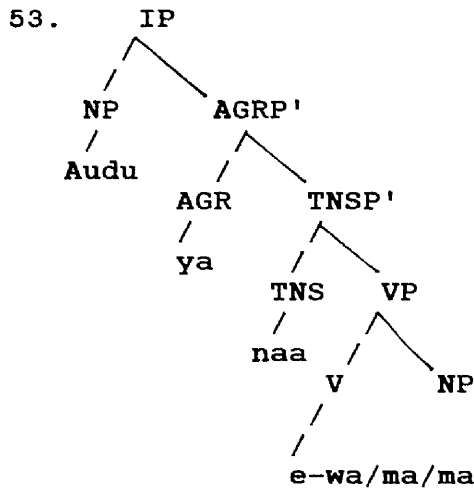
It has been proposed within the Lexical mapping theory of Lexical Functional Grammar (LFG) that the so-called applicative constructions in Bantu languages are adequately accounted for without postulating a syntactic movement rule. See Alsina and Mchombo (to appear), Bresnan and Moshi (1988) and Bresnan and Kanerva (1989). For instance, Bresnan and Moshi (1988:39) point out that "The syntactic asymmetries between semantically differing applied arguments are better explained by the thematic hierarchy than by oblique hypothesis. And the syntactic symmetries between applied objects at different positions on the hierarchy follow from the alternative mappings of different thematic roles into an independent tier of grammatical functions." Alsina and Mchombo (to appear) show that most of the syntactic behaviours of applied objects, such as word order facts, passivization and object agreement, are accounted for through the lexical mapping theory. Furthermore, they present a number of facts that are problematic for Baker's syntactic movement analysis. They include extraction facts and transitivity effects. Note that one basic difference between LFG and GB theories is that the former considers grammatical functions as "primitive", while the latter considers them as derivative. For discussion on the differences between the two theories (i.e. Lexical mapping theory and Government and Binding theory) see Alsina and Mchombo (1988) and Bresnan and Kanerva (1989).

6.4.6. An Apparent Counterexample to the Lexical Incorporation Analysis

In chapter three, we saw that the IO markers wà/mà/ma must be attached to a phonologically realized word. This assumption is formalized by Lasnik (1981). He argues that a morphologically realized affix must be realized as a syntactic dependent at surface structure. I pointed out that in the case of the Hausa IO markers wà/mà/ma, they must be attached to a verbal category. In chapter three, however, we saw that they can be attached to the TENSE element under the INFL if the verb is empty. Consider the example (52):

52a. Audù yanàa e wà Laadi/matà aikii  
A he-CONT IOM L/IOM-Pro work  
'Audu is working for Ladi/her'

Following Chomsky (1981), I argued that the IO markers wà/mà/ma are attached to the TENSE part not the AGR element because the TENSE is specified as [+V], while the AGR is specified as [+N]. Consider the following structure (cf. chapter three for discussion on the different projection of each element).



The fact that the IO markers wà/mà/ma can be attached to the TENSE element if the verb is empty suggests that a syntactic movement rule is involved in this case. Although the above structure raises problems regarding the Lexical Incorporation analysis, it is equally problematic to Baker's system. Ouhalla (1988:19) observes that Baker's Incorporation account does not allow direct Incorporation from the complement position of a verb into INFL because this would result in an ECP violation.<sup>9</sup> However, Ouhalla (1988) shows that in Kinyarwanda and Tuscorora applicative constructions, the preposition is Incorporated into the INFL, while in the Chichewa applicative the preposition is Incorporated into the verb. Consider the following examples: (data from Ouhalla (1988:18), as cited in Baker (1988a)).

54a. Mbidzi zi-na-perek-er-a nkhandwe msampha  
zebras SP-PAST-hand-to-ASP fox trap  
'The zebras handed the fox the trap.'

b. Ndi-na-tumiz-ir-a mfumu chipanda cha mowa  
1sS-PAST-send-to-ASP chief calabash of beer  
'I sent the chief a calabash of beer.'



55a. Abaana b-iica-ye-ho ameeza  
children SP-sit-ASP-on table  
'The children are sitting on the table.'

b. Wa?-khe-yat-wir-ahninv?-0  
PAST-1sS/30-REFL-child-buy-ASP-APPL  
'I sold him children.'

Ouhalla points out that in the Chichewa examples (55a and b), the Preposition precedes the ASP element in relation to the verb, while in Kinyarwanda and Tuscorora (examples (56a) and (56b) respectively), the preposition follows the ASP element. Ouhalla (1988:18) concludes that, "On the assumption that ASP is an I element, these facts seem to imply that while the applicative preposition incorporates into V in the Chichewa examples, in the Kinyarwanda and Tuscorora examples it incorporates into I, just like the ne clitic in Italian." The above observation indicates that even in Bantu languages the Preposition can Incorporate either into the verb, or into the INFL. In the case of Hausa, however, the IO markers wà/mà/ma can only Incorporate into INFL, if the verb is empty, otherwise the IO markers are always part of the verb.

According to Ouhalla (1988:19) the fact that the applied affix can Incorporate either into the verb, or into the INFL may be explained in terms of the morphological subcategorization properties of the applicative prepositions. He points out that the applicative preposition in Chichewa morphologically

subcategorizes for a V category, while the preposition in Kinyarwanda and Tuscorora morphologically subcategorizes for an I category. As regards the Hausa facts, I posit that the IO markers wà/mà/ma when attached to the TENSE element under INFL (as in (52a)), can only do so because the TENSE is also specified as [+V] category (cf. Chomsky 1981). It is probably the case that the prepositions can incorporate into INFL in Kinyarwanda and Tuscorora because the ASP element within the INFL may be specified as [+V]. This issue requires further research (cf. Munkaila in preparation). I now turn to discuss another morphological process in Hausa that also supports the Lexical Incorporation analysis.

#### 6.5. Causative Formation

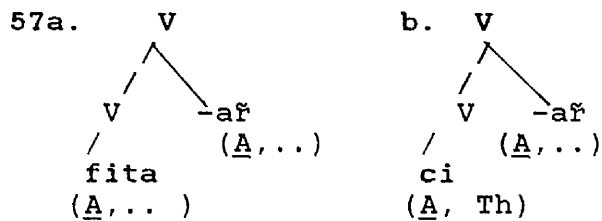
In this section I consider the morphological causative formation in Hausa. Following Di Sciullo and Williams (1987), I will argue that this process takes place in the lexicon similar to Hausa Internal IOCs. Hence, using the notions Head and Feature Percolation procedure, I will show that the causative suffix -af in Hausa is the Head of the verb to which it is attached.

6.5.1. Causative -aɸ as Head

Assuming that affixes belong to a lexical category (i.e. V, N, P, A), and that they also have their own argument structure similar to other lexical items, and adopting Di Sciullo and Williams '(1987) argument, I will assume that the Hausa causative affix -aɸ belongs to a category [V] and subcategorizes for an external argument, namely: the causative 'Agent'. Furthermore, it has a morphological subcategorization frame which requires it to be attached to a verbal category. This can be illustrated as in (56) below:

56. -aɸ: V (A....)

What happens when the causative affix -aɸ is attached to the verb to form a morphological causative verb? Consider the following structures (58a-b):



In (57a) the verb fita 'to go out' is intransitive, that is, it has only an external argument, while in (57b) the verb ci 'to eat' is transitive, i.e. it has both external and internal arguments. The causative affix -aɸ, on the other hand, has an external argument. Following Di Sciullo and Williams (1987), I will assume that the causative affix -aɸ is the Head since it occupies the

righthand position. Therefore, it is the causative affix that determines the argument structure of the entire word. This assumption follows from the fact that it is the external argument of the causative morpheme that takes precedence over the external argument of the base verb. In other words, it is the external argument of the causative affix which becomes the external argument of the complex predicate.

The next issue is what happens to the external argument of the base verb? The answer is that when the external argument of the causative affix -af becomes the external argument of the whole, "the argument of the nonhead verbal stem, including its external argument, becomes the internal argument of the whole" (cf. Di Sciullo and Williams 1987). Consider the following sentences (58) to (61) below:

- 58a. yaaròo yaa        fìta  
 boy        he-PERF go  
 'the boy went out'
- b. Audù yaa        fitaʔ (dà) yaaròo  
 A        he-PERF go-Caus        boy  
 'Audu took the boy out'
- 59a. mootàa taa        tsayàa  
 car        she-PERF stop  
 'the car stopped'
- b. Audù yaa        tsayaʔ (dà) mootàa  
 A        he-PERF stop-Caus        car  
 'Audu stopped the car'
- 60a. littàttàafai sun        waatsee  
 books        they-PERF scatter  
 'the books scattered'

- b. iskàa taa waatsaʔ (dà) littattàafai  
 wind it-PERF scatter books  
 'the wind scattered the books'
- 61a. Laadi taa shiga daakii  
 L she-PERF enter room  
 'Ladi entered the room'
- b. Audù yaa shigaʔ (dà) Laadi daakii  
 A he-PERF enter L room  
 'Audu made Ladi enter the room'

In sentences (b) the causative Agents of the causative affix -aʔ, for instance, Audù and iskàa (which are the external arguments), become the external arguments of the sentences in question, while the external arguments of the intransitive verbs (i.e. yaaròo, mootàa, littattàafai) are internalized, that is they become the internal arguments.

Another reason Di Sciullo and Williams (1987:35) give with regard to why the external argument of the base is realized internally has to do with the semantic feature associated with the causative morpheme. They point out that the causative morpheme should be regarded as a "functor" and being a functor it relates to its base verb via what they term "function composition". They define the relationship as follows:

62. (The argument of the head) and the argument structure of the nonhead if the head is a functor. Di Sciullo and Williams (1987:36).

Consider what happens when the base verb is transitive: in this case also the external argument of the causative affix becomes the external argument of the whole

complex word. The external argument of the verb, on the other hand, is internalized as in the case of the intransitive verb, and realized as the object of the complex verb. This is illustrated by example (63b) below.

- 63a. dookii yaa ci ciyaawaa  
 horse it-PERF eat grass  
 'the horse ate grass'
- b. Audu yaa ciyaɗ (da) dookii ciyaawaa  
 A he-PERF eat-Caus horse grass  
 'Audu made the horse eat grass'

Thus, in the case of transitive verbs, both external and internal arguments are realized as internal arguments.

From the examples above we have seen that the morphological causative formation in Hausa can be analyzed on the basis of the notion Head and Feature Percolation Convention, and the process is lexical not syntactic, similar to the Hausa Internal IOCs. Evidence in support of the Lexical Incorporation analysis comes from the increase in argument structure.

#### 6.5.2. Argument Structure and Causative Formations

The morphological causative in Hausa, just like the Internal IOCs, increases the number of arguments of the verb by one more. For instance, in (58b-61b), the causative affix changes the verb from a 1-place predicate

into a 2-place predicate. In (63b) it changes the verb from a 2-place predicate into a 3-place predicate (cf. Newman 1983). Unlike Internal IOCs, however, the argument that is added is realized as an external argument, while that of IO markers wà/mà/ma is realized as an internal argument. The fact that the morphological causative gives rise to a change in the argument structure clearly shows that the process should be lexical, since syntactic rules cannot increase the number of the arguments in the predicate.

Notice also that the morphologically derived causative verb cannot be passivized. That is, the object of a derived causative cannot become the subject NP when the verb is passivized. The following examples (64a-b) are completely ungrammatical:

- 64a. \*Laadi taa shigàf-u daakii  
 L she-PERF enter-Caus-Pass room  
 'Ladi was made to enter the room'
- b. \*dookii yaa ciyàf-u ciyaawaa  
 horse it-PERF eat-Caus-Pass grass  
 'the horse was made to eat grass'

Recall that we have seen in the previous chapter that none of the objects of Hausa Internal IOCs can become the subject NP when the verb is passivized. Whatever principles prevent the IO NP or DO NP from becoming the subject NP when the verb is passivized, could possibly be extended to account for the morphological causative facts.

The discussions so far are consistent with the

assumption that both the morphological causative formation and Internal IOCs in Hausa occur in the lexicon. The IO markers wà/mà/ma and causative affix -aɸ are both considered as the Heads of the verbs they are attached to. Furthermore, both affixes are morphologically subcategorized for a verbal category. In other words, both affixes must be attached to a verbal element. In addition, the two affixes increase the argument structure<sup>10</sup> of the verb they are joined with.

The two affixes, however, differ with respect to the type of argument they introduce. For example, the IO markers wà/mà/ma introduce an internal argument (contra Williams 1981), while the causative affix -aɸ introduces an external argument. The difference follows from the fact that the IO markers wà/mà/ma subcategorize for an internal argument; the causative affix -aɸ, on the other hand, subcategorizes for an external argument.<sup>11</sup>

The difference in terms of the sort of argument each affix is specified for is further reflected via the Feature Percolation Convention. That is, the internal argument of the IO markers wà/mà/ma takes precedence over the internal argument of the base verb if the verb is transitive, whereas the external argument of the causative affix -aɸ takes precedence over the external argument of the base verb. Let us consider the interaction of the two processes.



6.6. The Interaction between the Morphological Causative Formation and Internal IOCs

I have shown in this study that both the morphological causative and Internal IOCs in Hausa take place in the lexicon via a word formation rule. Empirical support for this view comes from the Head and Feature Percolation Convention. The question that immediately arises is, what happens when both the causative affix -af and the IO markers wà/mà/ma are attached to the same verb? Consider the following examples:

- 65a. Audù yaa shigaf wa Àli (dà) Laadi daakii  
 A he-PERF enter-Caus IOM A L room  
 'Audu made Ladi enter the room for Ali'
- b. Audù yaa zaunaf wa Àli (dà) Laadi  
 A he-PERF sit-Caus IOM A L  
 'Audu made Ladi sit for Ali'

The above examples show that both the IO markers wà/mà/ma and the causative affix -af can occur with the same verb. Baker (1985b) proposes a principle which determines the order in which affixes are attached to the verb. He calls this principle "The Mirror Principle" (MP), and it is stated as (66):

66. The Mirror Principle  
 Morphological derivations must directly reflect syntactic derivations (and vice versa). Baker (1985b:375).

The Mirror Principle simply implies that if an affix X is attached to a verb before affix Y, it follows that the syntactic process related to affix X must occur before the

syntactic process related to affix Y. To give a concrete example, let us consider the attachment of the causative affix -aɓ and the IO marker wà to the verb in Hausa, as illustrated below.

67. V + -aɓ + -wà  
           Caus    IOM

From (67), the Mirror Principle predicts that the syntactic process related to the causative affix must occur before the syntactic process related to the IO marker. This means that the effect of the causative affix -aɓ on the verb in terms of internalizing the external argument of the verb and introducing a new external argument must take place before the introduction of a new internal argument by the IO marker wà. Consider (68):

68. Àli yaa shigaɓ (dà) Laadi daaki  
       A he-PERF enter-Caus L room  
       'Ali made Ladi enter the room'

In sentence (68), the causative affix -aɓ introduces a new external argument (Àli) and internalizes the old external argument of the verb (Laadi). When the IO marker wà is attached to the morphologically derived causative verb, it adds a new internal argument (Audu) to the argument structure of the complex verb, as shown in (69) below.

69. Àli yaa shigaɓ wà Audu Laadi daaki  
       A he-PERF enter-Caus IOM A L room  
       'Ali made Ladi to enter the room for Audu'

The reverse order is not possible, that is, the IO marker wà cannot be attached to the verb before the

causative affix -af. Sentence (70b) is thus completely ungrammatical.

70a. Laadi taa shiga wa Audu daakii  
 L she-PERF enter IOM A room  
 'Ladi entered Audu's room'

b. \*Ali yaa shiga-wa- af Audu Laadi daakii  
 A he-PERF enter-IOM-Caus A L room  
 'Ali made Ladi enter the room for Audu'

From the above discussion we can see how the Mirror Principle might be employed to account for the order in which the causative affix -af and IO marker wa are attached to verbs in Hausa. However, it has been argued by Di Sciullo and Williams (1987) that the cases cited by Baker in support of the Mirror Principle are not syntactic rules but lexical rules. They point out that "if this is so, then the Mirror Principle apparently amounts to nothing more than the compositionality of word formation." Di Sciullo and Williams (1987:56). The reason why Di Sciullo and Williams regard the operation as lexical rather than syntactic is based on the fact that these affixes affect the argument structure of the verb they are attached to. Consider the following operation that derives adjectival past participles in English, as illustrated by Di Sciullo and Williams (1987:57).

71. see (A, Th) ----- seen (A, Th)

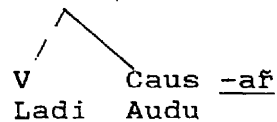
According to Di Sciullo and Williams, the derivation of adjectival participles is a lexical operation which results in internalizing the Agent argument, while the Theme argument becomes the subject argument. They remark

that this rule cannot be syntactic because the domain of its application is not the phrase but rather the argument structure of the word in question.

The fact that the Hausa causative affix -aʔ and the IO markers wà/mà/ma affect the argument structure of the verb they are attached to provides further support for Di Sciullo and Williams' position that the Mirror Principle can be reduced to the special case of compositionality of word formation. The next issue then, is how do we explain the attachment of the two affixes using the Head and Feature Percolation Convention?

Let us start with the attachment of the causative affix -aʔ. I have argued that the causative affix is the Head of the verb it is joined to. It follows from this that its features must percolate over the feature of nonhead (i.e. the verb). As a result, the new external argument introduced by the causative affix becomes the external argument of the entire complex word (V+ Caus affix); the old external argument of the verb is internalized and realized as the direct object of the derived verb. Structure (72a) roughly represents how the argument of the causative affix, Audu, becomes the external argument of the whole complex word. The old external argument of the verb, Laadi, is now an internal argument (cf. 72b).

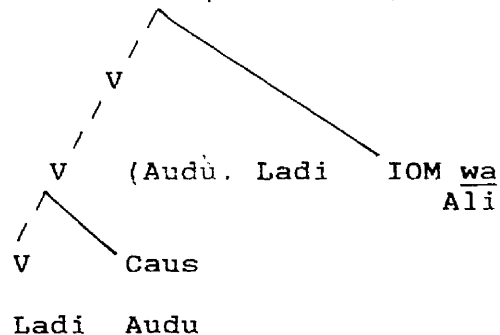
72a. V (Audù Laadi) daakii



b. Audù yaa shigaḥ (dà) Laadi daakii  
 A he-PERF enter-Caus L room  
 'Audu made Ladi enter the room'

When the IO markers wà/mà/ma are attached to the derived causative their features must percolate over the features of the derived causative. This is illustrated by structure (73a) and the example in (73b).

73a. V (Audu, Ali, Laadi) daakii



b. Audù yaa shigaḥ wà Àli (da) Laadi daakii  
 A he-PERF enter-Caus-IOM A L room  
 'Audu made Ladi enter the room for Ali'

In (73a) the internal argument of the IO marker wà (i.e. Àli) takes precedence over the internal argument of the morphological causative verb (i.e. Laadi). The external argument of the morphological causative still remains the external argument because the IO marker wà is not specified for an external argument (cf. section 6.3). The internal argument of the IO marker wà percolates over the internal argument of the morphological causative

because it occurs in what Di Sciullo and Williams (1987:25) term the "'ultimate' head position (the head of the head of the head....)".

The analysis presented in this chapter supports the lexicalist position in that both the Internal IOCs and morphological causative formation in Hausa affect the argument structure of the verb they are attached to. Di Sciullo and Williams (1987: 61 ) write:

"the atomicity thesis says that morphological rules can operate only on what is represented in the argument structure of verbs. This is part of the general inescapable feature of morphological rules: that they operate only on the lexical information (and not on syntactic configurations). Thus an affix added to a verb can alter only that verb's argument structure; further, any alteration of the verb's argument structure must be associated with an affix added to that verb and not to some other word in the sentence in which that verb might appear".

The Lexical Incorporation analysis also accounts for the interaction between the morphological causative verbs and the Internal IOCs without positing any syntactic movement rule. Thus both the IO marker wà and causative affix -af are attached to the verb in the lexicon and the order in which they occur is determined by the Head and Feature Percolation Convention.

## 6.7. Conclusion

In this chapter I have argued that the attachment of the IO markers wà/mà/ma, which is similar to applied affixes in Chichewa benefactive/dative applicative constructions, should be analysed as a lexical process, rather than a syntactic process.

The Lexical Incorporation analysis as proposed in Di Sciullo and Williams is contrasted with Baker's Syntactic Incorporation (cf. chapter five). It has been shown that the Lexical Incorporation analysis is superior to the syntactic analysis in the sense that it accounts for the things which are problematic to the Syntactic Incorporation analysis, such as the pied-piping and Wh-movement facts. For example, the Internal IO markers wà/mà/ma cannot be pied-piped because they are lexically part of the verb. According to the strong lexicalist hypothesis, Move-alpha cannot affect a subpart of a lexically formed word.

As regards the Wh-movement facts, it was established that in Hausa the IO NP can be extracted. Under the syntactic movement analysis, Wh-movement is generally excluded on the grounds that the IO NP can be headed by a null head. Adopting a lexical analysis allows us to account for the Hausa facts by claiming that the IO markers wà/mà/ma are lexically attached to the verb; given this, no trace is left behind that might block Wh-

movement. In fact, the Filter proposed by Baker to block extraction of the applied NP in Chichewa is too ad hoc, and does not seem to be derived from any principle.

Furthermore, it was shown that the lexical attachment of the IO markers wà/mà/ma to the verb increases the argument structure of the verb. This of course supports the Lexical Incorporation analysis proposed by Di Sciullo and Williams (1987). The Syntactic Incorporation analysis, on the other hand, does not allow new arguments to be introduced.

Using the Head and Feature Percolation Convention, I demonstrated that the argument introduced by the IO markers wà/mà/ma takes precedence over the direct object of the verb because the IO markers are the Heads of the complex word. This also accounts for the word order facts of the standard Hausa Internal IOCs, whereby the IO always precedes the direct object (V-wa - IO - DO). The following word order ( \*V-wà - DO - IO ) is ruled out because the DO is not associated with the Head.

In contrast, in the External IOCs, the typical Hausa word order (i.e. V- DO - IO ) is obeyed. It was shown that the External IO markers gà/gàree are not part of the verb, but are heads of the prepositional phrases.

Furthermore, we have seen that the lexical attachment of the IO markers wà/mà/ma to the verb changes the Case



assigning property of the base verb in the sense that the verb can no longer directly assign accusative Case to its direct object. This is due to the fact that the direct object is no longer adjacent to the verb; as such, the only option left for the direct object NP to satisfy Case Filter is to receive a default nominative Case.

Finally, adopting the lexicalist position we are able to compare and contrast the Hausa IO markers wà/mà/ma and the Hausa causative affix -aǎ. The two affixes are similar in the sense that both are regarded as Heads of the word they occur with. Both affixes also share in common the fact that they may increase the number of arguments of the verb they are attached to. However, the two affixes differ with respect to the type of argument they can introduce. The IO markers wà/mà/ma introduce a new internal argument, while the causative affix -aǎ introduces a new external argument.

We then considered what happened when the two affixes (i.e. the IO marker wà and the causative affix -aǎ) occur with the same word. It was pointed out that the causative affix -aǎ is attached to the word first, before the IO marker wà. Thus, the feature of the causative affix -aǎ first percolates over the feature of the verb, which results in introducing a new external argument and internalizing the old external argument of the verb. The IO marker wà is then attached to the morphologically derived causative verb; as a result, the internal argument

of the IO marker wà takes precedence over the internal argument of the derived verb because the IO marker wà occurs in the ultimate Head position.

Notes to Chapter Six

1. It should be noted, however, that modal particles can freely occur between NP1 and NP2, as illustrated by (i) and (ii) below. Tuller does not explain why these particles are allowed within the same clause.

(i). Audù yaa nuunàa wà Laadi kùwa mootàa  
A he-PERF show IOM L PRT car  
'Audu even showed a car to Ladi'

(ii). Audù yaa sayàa wà Laadi fa dookii  
A he-PERF buy IOM L PRT horse  
'Audu even bought a horse for Ladi'

2. In trying to defend the small clause analysis, one might argue that the clitic pronoun moves and incorporates to the verb complex, as illustrated in (i). However, this will not solve the remaining problems. For an argument against small clause analysis see Williams (1983).

(i). Audù yaa [nuunàa ma-tà/i] [t/i dookii]  
A he-PERF show IOM-pro horse  
'Audu showed her a horse'

3. This in turn raises questions about the statement of the Binary Branching Condition, which I am not in the position to discuss in this work.
4. Interestingly, Newman (1986) argues that the tone assignment in Hausa is also from right to left.
5. Derived nominals in Hausa are exactly similar to English derived nominals and are also referred to as secondary verbal nouns in the Hausa literature. See Bagari (1971), Abraham (1959) and Hodge (1947)
6. The division of affixes into derivational and inflectional affixes is a contentious issue in the generative morphology literature (cf. Anderson 1982). The strong lexicalists believe that both derivational and inflectional processes take place in the lexicon. The weak lexicalists, on the other hand, maintain that the inflectional process takes place in the syntax. Anderson (1982:587) claims that "inflectional morphology is what is relevant to the syntax". That is to say, inflectional affixes are generally assumed not to change argument structure.

According to Di Sciullo and Williams (1987), both inflectional and derivational affixes should be considered as Heads. They point out that, "The

separation of affixes into derivational and inflectional ones seems entirely a matter of interpretation, not of form." They go on to suggest that "It is roughly true that some affixes have more syntactic consequences than others, but it would be best to explain this in terms of the intrinsic properties of the affixes themselves rather than by simply assigning each affix to one of the two groups." Di Sciullo and Williams (1987:69).

Most strong lexicalists agree that both derivational and inflectional affixes are located in the lexicon. However, some suggest that the two affixes should be hierarchically ordered in the lexicon. For instance, Scalise (1986) posits that the inflectional affix should always follow the derivational affix, not vice versa, as illustrated in (i) and (ii) below. (See also Allen's 1978 level ordering hypothesis).

(i). Word -- derivation affix -- inflectional affix

(ii). \*Word -- inflectional affix -- derivational affix

In Hausa the IO markers wà/mà/ma can only occur after other verbal affixes. For instance, verbal extensions -oo, -ee and -aɓ must always precede the IO markers wà/mà/ma, as illustrated in (iia-c) below.

(iia). kaamàa + -oo + wà  
 catch ext IOM  
 (cf. yaa kaamoo wa Laadi dookii)  
 'he caught a horse for Ladi'

b. sàyaa + -ee + wà  
 buy ext IOM  
 (cf. yaa sayee wa Laadi goofo)  
 'he bought up the kola nuts for Ladi'

c. tuuràa + -aɓ + wà  
 push ext IOM  
 (cf. yaa tuuraɓ wà Laadi kèekee)  
 'he pushed away Ladi's bike'

7. See note 11 below.

8. The prefix 'out' in English is also assumed to add an internal argument when it is attached to intransitive verbs, as sentences (i) and (ii) indicate (cf. Zubizarreta 1985).

(i). John outran Mary

(ii). John outate Mary

9. Under Baker's Syntactic Incorporation analysis, movement from a deeply embedded position within a given complement is ruled out by the ECP. This follows from the fact that the trace left behind will not be C-commanded by its antecedent, hence it will not be properly governed. Ouhalla (1989: 18), however, points out that since the applied affix can incorporate directly into the INFL without giving rise to ungrammatical sentences, this clearly shows that "the ECP is no longer a viable principle that can be invoked to account for the subject-object asymmetry with respect to this particular phenomenon."
10. The two processes are different from the passive formation in Hausa: the passive affix decreases the syntactic valency of the verb by one argument (cf. Jaggar 1988).
11. Williams (1981:91) claims that a morphological process can affect the argument structure of a given predicate in only two ways, either by externalizing an internal argument, or internalizing an external argument. In other words, a morphological process may only affect the external argument. These two morphological processes are defined in (ia-b) and exemplified in (iia-b).
- (ia). E (X): erase the underline on the external argument, if there is one, and underline X. IF X=0, then underline nothing. Williams (1981:92).
- b. I(X):
- (a) Set the external argument of the input word "equal to" X in the output word;
- (b) Add a new external argument, A for verbs, R for nouns. Williams (1981:99).
- (iia). E (Th): read (A, Th) --- readable (A, Th)  
(cf. these books are readable)
- b. I(Th): legal (Th) ---- legalized (A, Th =Th)  
(the government legalized abortion)

In (iia) the internal argument (i.e. the object) becomes the external argument (i.e. the subject). In example (iib), on the other hand, a new external argument is added while the old external argument is internalized.

## Chapter Seven

### Summary and Concluding Remarks

#### 7.0. Summary

This study exposes a number of facts about the morpho-syntax and semantics of Hausa Indirect Object Constructions (IOCs). It examines the properties of Hausa IOCs by developing and extending existing accounts of IOCs in other languages.

Chapter one is a general introduction to the Hausa language. Chapter two gave a brief outline of the main features of the Government and Binding Theory (GB), the main framework within which this study is conducted. I also briefly discussed some of the analyses proposed in the GB literature to account for IOCs, specifically English IOCs.

The general characteristics of Hausa IOCs were discussed in chapter three. Two different types of Hausa IOCs were identified, namely, Internal IOCs introduced by the indirect object markers wà/mà/ma, and External IOCs introduced by the indirect object markers gà/gàree. In the Internal IOCs, the indirect object precedes the direct object, while in the External IOCs, the indirect object occurs after the direct object. I then considered the status of the indirect object markers wà/mà/ma Vs gà/gàree used in the two types of IOCs. The Internal indirect object markers wà/mà/ma were assumed

to be part of the verb, whereas the External indirect object markers gà/gàree were considered independent prepositional phrases.

Some of the morpho-semantic correlates of attachment of the Internal IO markers wà/mà/ma to certain verb 'grades' (i.e. verbs in grade 2/3/7) were discussed in chapter four. After reviewing some of the analyses proposed by various Hausa scholars to explain why the verbs in these grades utilize different D-forms, and using semantic and syntactic evidence, I pointed out that the pre-datival verbal suffix /-f/-m/ that appears when the IO markers wà/mà/ma occurred with the verb in these grades, is not related to the causative morpheme /-f/ (contra Parsons 1971/72 and Frajzyngier 1985). For instance, the pre-datival verbal suffix /-f/-m/, unlike the causative morpheme /-f/, cannot introduce an additional argument. Furthermore, some previously unrecorded facts dealing with the semantic interpretation and tense/aspect restrictions accompanying the various D-forms of these grades were documented. It was shown that for some speakers the pre-datival suffix /-f/-m/, unlike the final /-aa/ extension, cannot be used outside the perfective tense/aspect. This follows from the semantic interpretation accompanying the final /-f/-m/ D-forms which tends to reflect a more advanced degree of involvement in the completion of the action than the final /-aa/ D-forms.

Following the discussion of the status of the Internal

IO markers wà/mà/ma and external IO markers gà/gàree presented in chapter three, where I claimed that the former are part of the verb, whereas the latter are prepositional phrases, in chapters five and six I evaluated the claim that the Internal IO markers are part of the verb with respect to two recent analyses within the GB framework: the Syntactic Incorporation analysis of Baker (1985a, 1988a) on the one hand, and the Lexical Incorporation analysis of Di Sciullo and Williams (1987) on the other. I discussed the question of whether the attachment of the IO markers wà/mà/ma to the verb should be derived via a syntactic movement rule or be considered a lexical operation, and argued that the syntactic movement approach cannot account for the Hausa IOCs facts.

The Lexical Incorporation analysis assumed in chapter six does seem to account for most of the Hausa Internal IOCs facts. The evidence presented clearly shows that no movement rule is needed in attaching the IO markers wà/mà/ma to the verb, and supports the claim that the Hausa Internal IOCs are essentially lexical in nature.

The Lexical Incorporation analysis is based on the notion Head (cf. Di Sciullo and Williams 1987) and the Feature Percolation Convention (cf. Lieber 1980), which stipulate that the feature of the Head must percolate over the feature of the nonhead.



Independent support for the claim that the attachment of the IO markers wà/mà/ma to the verb is better handled at the lexical level is provided by morphological causative formations in Hausa. The derivation of morphological causative formations is shown to also be lexical in nature. That is, the causative affix /-af/ is attached to the verb at the lexical level and this process increases the argument structure of the verb. The process also follows from the notion Head and the Feature Percolation Convention, whereby the external argument of the causative affix, which is the Head of the morphological causative verb, takes precedence over the external argument of the base verb. The causative affix -af and the IO markers wà/mà/ma have a number of properties in common: both are considered as Heads, both are attached to a verbal category, and both affixes increase the argument structure of a given predicate.

However, the two affixes differ with respect to the type of argument they introduce. The causative affix -af introduces an external argument, while the IO markers wà/mà/ma introduce an internal argument. When the two affixes occur with the same verb, the causative affix -af is attached to the verb before the IO markers wà/mà/ma. This follows from the fact that the IO markers wà/mà/ma occupy the ultimate Head position.

7.1.1. **Some Remarks on the Interaction between Morphology and Syntax**

The analysis presented in this study is in essence compatible with the modular approach of Universal Grammar. It provides further support for the view that the lexicon is an autonomous component, and that word formation/morphological theory should be regarded as an independent theory, separate from the other modules: that is, a word formation rule has its own rules and principles that are distinct from syntactic rules and principles. Di Sciullo and Williams (1987:46) point out that "the theory of grammar has two subtheories, morphology and syntax, each with its own atoms, rules of formation, and so on." The various rules and principles that distinguish morphology and syntax are summarized by Baker (1988c: 11), as shown in Table 7:1 below.

Table 7:1

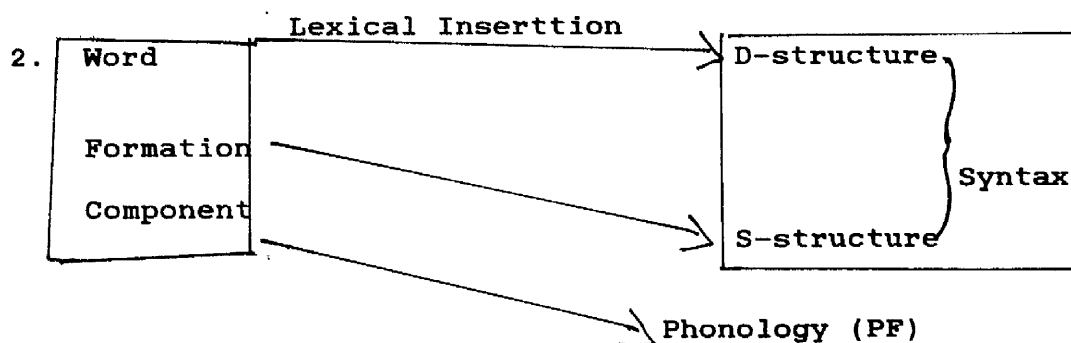
MORPHOLOGY 'The theory of Xo's and their shapes'	SYNTAX 'The theory of sentences and their interpretations'
VOCABULARY prefix, suffix stem, root, ... morpheme subcategorization properties	N, V, A, P, ...  θ-role assigning properties
phonological type (e.g. +, # boundary)	Case marking features
PRINCIPLES 'Righthand Head Rule' No stray Affixes	Projection Principle Theta criterion ECP

The above table clearly shows that morphology and syntax have both different principles and vocabulary. According to Di Sciullo and Williams (1987:47) "syntactic rules simply lack the vocabulary for analyzing morphological objects--a vocabulary that would include stem, affix, prefix, and so on". This basically means that affixes are not located within the syntactic component.

From the preceding discussion, we see that there is a need for a separate morphological theory independent of the syntactic theory (contra Baker 1985b, 1988a, 1988c). However, this view raises an important issue: namely, if morphology is considered as an independent theory, how does it interact with syntax? A number of different proposals have been made to account for the morphology-syntax interface. Di Sciullo and Williams (1987:47-48) suggest that there are certain properties that are common to both theories, namely, parts of speech (e.g. N, V,...), features like plurals, tenses etc, and argument structure. These properties are referred to as "shared vocabulary" by Di Sciullo and Williams. According to them it is via the shared vocabulary that the theory of morphology and the theory of syntax may "communicate" with each other. In other words, the interaction is possible simply because both syntax and morphology share a vocabulary of features. Di Sciullo and Williams (1987:49)

point out that an affix "will first interact with other parts of the word to determine the properties of that word, and that word will then interact with syntax (it will have a syntactic distribution)." This basically indicates that morphological rules operate before syntactic rules (cf. Wasow 1977, Scalise 1986).

More recently, Borer (1988) has proposed a principle known as "Parallel Morphology". This principle also recognizes the existence of independent morphological components; however, the principle is formulated in such a way that morphological rules are allowed to operate at any level (i.e. lexicon, syntax, and PF), as long as the output does not violate well-formedness conditions (see Borer 1988 for details). See also Anderson (1982), who also suggests that morphology is everywhere. The system of parallel morphology is represented by Borer (1988: 21) as shown in diagram (2) below.



The system proposed by Borer is essentially meant to account for the distinction between the derivational

process and the inflectional process: in the former, the morphological rule may apply in the lexicon, while in the latter, the morphological rule may apply in the syntax.

The analysis presented in this study to account for the Hausa IOCs supports the existence of an independent morphological theory. I argue that the morphological rules accounting for the attachment of the Internal IO markers wà/mà/ma may apply at the pre-syntactic level (i.e. they represent a lexical process). However, the fact that the IO markers wà/mà/ma may be attached to the TENSE element within the INFL when the verb yi 'do' is empty, seems to indicate that there is a need for both lexical and syntactic processes in the grammar, and raises a further question for research, specifically, the place of morphology in Universal Grammar (cf. Munkaila in prep).

## 7.2. Concluding Remarks

In the course of this study a number of descriptive and theoretical contributions have been made. The study reexamines the various works conducted on indirect object constructions - from the earlier transformational approach to the more recent approach involving Incorporation. Particular attention is paid to Tuller's work on Hausa

datives, this is reexamined in the context of the question of the interaction of syntax and morphology and the level at which Incorporation takes place. I argue that the Incorporation of the Internal IO markers wà/mà/ma is at the lexical level, along the lines proposed by Di Sciullo and Williams (1987). The Lexical Incorporation analysis accounts satisfactorily for Hausa IOCs, and the result is consistent with other accounts where IOCs are morphologically characterized, for instance, Lexical Functional Grammar (cf. Alsina and Mchombo to appear).

The study is also relevant to a number of theoretical issues within GB; for instance, the status of Baker's Uniformity of Theta-role Assignment Hypothesis (UTAH) and the Case marking convention, particularly the issue of default nominative Case assignment.

With regard to Baker's UTAH, I have shown that UTAH only applies to relate the Hausa Internal IOCs and their External counterparts if both constructions happen to have a GOAL theta-role. In those cases where the Internal IOCs have a benefactive interpretation, UTAH cannot be used to relate them to the External IOCs. Furthermore, the Lexical Incorporation analysis assumed in this study supports the view that the IO markers wà/mà/ma increase the argument structure of a given predicate. In contrast, Baker's Syntactic Incorporation does not allow IOCs to add another argument, since this would violate UTAH. Additional arguments against Baker's Syntactic

Incorporation analysis come from the change of semantic/meaning when the IO markers wà/mà/ma are attached to certain verbs. Thus, for a few verbs, when the IO markers are attached they not only add an extra argument, but totally alter the meaning of the verb (cf. Parsons (1971/72)).

With regard to the different Case assignment parameters employed to account for Internal IOCs in different languages, those I have considered include English, French, Chichewa and Kinyarwanda. I have argued that, contrary to the standard assumption, the direct object NP in Hausa is not assigned an (inherent) accusative Case. Instead, using evidence from the pronominal system of the language, I have proposed that the direct object NP is assigned a default nominative Case. This view receives further support from the fact that verbs in Hausa can only assign accusative Case to NPs if the NPs are directly adjacent to the verb. Evidence from double object constructions, topicalization and focus constructions, as well as causative constructions, was exploited to support this view.

With respect to Wh-movement, it was shown that in Hausa Internal IOCs the indirect object NP can be extracted, while in English Internal IOCs and Chichewa dative applicative constructions, the indirect object NP cannot undergo Wh-movement. I argue that the extraction of the Hausa indirect object NP would be accounted for in

a straightforward manner if one assumes that the IO markers wà/mà/ma are lexically incorporated to the verb, since no trace would then be left behind to block Wh-movement. Furthermore, since the incorporation of the IO markers occurs in the lexicon, the Projection Principle would not be violated, in that traces are left behind in order to satisfy the Projection Principle (cf. Tuller 1984).

The study also reexamines Tuller's small clause analysis for Hausa Internal IOCs. The analysis is shown to have a number of problems on theoretical as well as empirical grounds. An alternative analysis is suggested in place of the small clause analysis.

In addition to the theoretical issues raised in this study, a number of descriptive contributions are made. It is shown that the different structural positions employed by the two indirect object constructions in Hausa depends on the type of indirect object marker used. It is also shown that IOCs are productively formed with intransitive verbs in Hausa (contra Baker 1988a). Passing remarks are also made about other Hausa dialects, particularly Bauchi and Katsina dialects.

As I pointed out above an interesting finding in this study was the tense/aspect restriction on the use of final /-f/-m/ D-forms, a fact previously unreported in the literature. Furthermore, I have demonstrated that the use of the various D-forms in relation to certain verbs depends upon the meaning intended, that is, the type of



theta-role the indirect object argument receives:  
benefactive or malefactive.

Finally, I have proposed a modification of Tuller's (1984) base generated empty yi analysis. I suggest that when the verb yi is empty, the IO markers wà/mà/ma would be attached to the the TENSE element within the INFL node.

The question of whether the IO markers wà/mà/ma and applied affixes in some Bantu languages are attached to either the verb or the TENSE element is left open. So also is the issue of indirect object alternations as a whole. Recently Larson (1988) has restated a syntactic account for English indirect object constructions. It may well be that indirect object alternations in some languages are a result of both morphological and syntactic processes. In Hausa, however, the facts seem to suggest that morphological processes play a dominant role. The limitation of this dissertation, of course, is that more interesting issues have been raised than it is possible to pursue; these, however, I hope to develop in future research.

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