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ITS NATURE AND SIGNIFICANCE IN CURRENT
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University of California, Los Angeles, Ph.D.,
1977
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A Grammar of Kwa-type Verb Serialization:
Its Nature and Significance in Current Generative Theory

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Linguistics

by

Isaac George

1975
The dissertation of Isaac George is approved.

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University of California, Los Angeles  
1975
To the memory of my father
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
</tr>
<tr>
<td>VITA</td>
</tr>
<tr>
<td>ABSTRACT</td>
</tr>
<tr>
<td>CHAPTER I. Introduction</td>
</tr>
<tr>
<td>1.0. General Aims of the Study</td>
</tr>
<tr>
<td>2.0. The Kwa Languages</td>
</tr>
<tr>
<td>3.0. Nupe</td>
</tr>
<tr>
<td>4.0. Plan of the Study</td>
</tr>
<tr>
<td>5.0. Theoretical Orientation</td>
</tr>
<tr>
<td>CHAPTER II. Kwa Verb Serialization in Perspective</td>
</tr>
<tr>
<td>1.0. Preliminaries</td>
</tr>
<tr>
<td>2.1. Basic Characteristics of the Surface Syntax of Kwa Verb Serialization</td>
</tr>
<tr>
<td>2.2. Tense, Aspect, and Mood Constraints</td>
</tr>
<tr>
<td>2.3. Nuclear versus Non-nuclear Verbs</td>
</tr>
<tr>
<td>2.4. Welmers</td>
</tr>
<tr>
<td>3.0. Christaller</td>
</tr>
<tr>
<td>4.0. Williamson</td>
</tr>
<tr>
<td>5.1. Serial Verbs from Conjoined Sentences</td>
</tr>
<tr>
<td>5.2. Serial Verbs from Embedded Structures</td>
</tr>
<tr>
<td>6.0. Summary</td>
</tr>
<tr>
<td>CHAPTER III. Common Verbs in Serialization</td>
</tr>
<tr>
<td>1.0. Preliminaries</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
2.1. The Verb la 'take'
2.2. The Verb vâ 'give'
2.3. The verbs bé and lo 'come' and 'go'
3.0. The Locative Verbs
4.0. Lexical Parsimony versus Elaborate Syntax
5.0. Lexical Affinity

CHAPTER IV. Some Connectives of Nupe
1.0. Introduction
2.1. Coordinating Connectives
2.2. àmâ 'but'
2.3. (kô) ... kô 'or'
2.4. kasin 'or'
2.5. (tô) ... tô 'and'
2.6. ma...(ma) 'and'
3.1. Sequential Connectives
3.2. (kângá) ... ci 'and then'
3.3. bédzô ... ci 'before'
3.4. hári 'until'
4.0. The infinitive indicator nyi and the Purpose Marker -zi
5.0. Connectives and Lexicalization
6.0. The Conjunction Hypotheses
7.0. Summary

CHAPTER V. Syntactic Sources of Serial Verbs
1.0. Preliminaries
2.0. Complementing Serialization
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1. Instrumentals</td>
<td>105</td>
</tr>
<tr>
<td>2.2. Some Manner Adverbials</td>
<td>109</td>
</tr>
<tr>
<td>2.3. Causatives</td>
<td>110</td>
</tr>
<tr>
<td>2.4. Concomitants</td>
<td>110</td>
</tr>
<tr>
<td>3.0. The ñenyi Construction</td>
<td>112</td>
</tr>
<tr>
<td>4.0. Restrictive Serialization</td>
<td>116</td>
</tr>
<tr>
<td>4.1. Purpose Adverbial</td>
<td>117</td>
</tr>
<tr>
<td>4.2. Datives and Benefactives</td>
<td>123</td>
</tr>
<tr>
<td>4.3. Locative Adverbials</td>
<td>123</td>
</tr>
<tr>
<td>5.0. Sequential Serialization</td>
<td>125</td>
</tr>
<tr>
<td>6.0. Summary</td>
<td>129</td>
</tr>
<tr>
<td><strong>CHAPTER VI. Verb Serialization, Transformations and Psycholinguistics</strong></td>
<td></td>
</tr>
<tr>
<td>1.0. Preliminaries</td>
<td>133</td>
</tr>
<tr>
<td>2.1. EQUI-NP-DELETION</td>
<td>133</td>
</tr>
<tr>
<td>2.2. Sequential Serialization and Conjunction Reduction</td>
<td>137</td>
</tr>
<tr>
<td>3.0. Serialization and Psycholinguistics</td>
<td>142</td>
</tr>
<tr>
<td>4.0. Summary</td>
<td>146</td>
</tr>
<tr>
<td><strong>CHAPTER VII. Summary and Concluding Observations</strong></td>
<td>149</td>
</tr>
<tr>
<td>1.0. Summary of Serial Constructions</td>
<td>149</td>
</tr>
<tr>
<td>2.0. Unresolved Issues</td>
<td>154</td>
</tr>
<tr>
<td>3.0. Prospects</td>
<td>155</td>
</tr>
<tr>
<td><strong>BIBLIOGRAPHY</strong></td>
<td>159</td>
</tr>
</tbody>
</table>
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ABSTRACT OF THE DISSERTATION

A Grammar of Kwa-type Verb Serialization:
Its Nature and Significance in Current Generative Theory

by

Isaac George

Doctor of Philosophy in Linguistics
University of California, Los Angeles, 1975

Professor William Welmers, Chairman
Professor Paul Schachter, Co-Chairman

This dissertation is a study in verb serialization, a common phenomenon in West African languages, particularly (although not exclusively) those of the Kwa sub-family. The phenomenon is essentially a surface sentence containing a row of two or more verbs or verb phrases without any overt connective word between them. An example from Nupe, a Kwa language of Nigeria, is Sábá lá táká bé 'Saba brought the chisel', literally, Saba took chisel came. It should be noticed that English uses a semantically composite verb to bring to express the same meaning conveyed by the Nupe sequence of verbs lá + bé.

For the past one hundred years, accounts of the construction in different languages have appeared in the
literature under various labels such as *serial verbs*, *serial verbal constructions*, *verbal combinations*, etc. These descriptions are less than comprehensive. Part of the problem can be traced to the fact that serial constructions are used in enormously varied ways, including instrumental, manner, and purpose adverbials, datives, benefactives, locatives, causatives, comparatives, concomitants, and sequentials. Another aspect of the difficulty is that, quite often, discussions on serial structures are limited to the question of their syntactic source.

In addition to the study of the syntactic source of serial constructions, the present study focuses attention on a small segment of the lexicon which plays an important role in serialization. Chapter one introduces the general aims of the study. Chapter two critically surveys the literature on the subject, highlighting the different approaches adopted by various scholars to the study of the phenomenon. Chapter three deals with the Nupe verbs that are commonly used in serialization. Two important facts are observed. The first is that prepositions are very rare in the language, and when they occur, serialization is reduced. The second is that certain serial structures are due to a preference for nuclear verbs in the lexicon. I have employed the notion of lexical parsimony to account for the second fact, meaning that, whereas English has semantically composite verbs like *to bring* (in addition to
to take + to come), Nupe has only the nuclear verbs lá + bê to express the concept of bringing something. The implication of this is that English has more lexical rules and less syntactic rules in generating structures like Saba brought the chisel. The converse is the case in Nupe. The claim is made that the processes of lexicalization observed in Nupe and English strengthen the case for the notion of lexical decomposition advanced by McCawley (1971).

Chapter four examines some of the connective words in Nupe. It shows that ci 'and then' is the only connective word which occurs in underlying structures of the sequential type of serialization. Chapter five is concerned with the syntactic deep sources of serial verbs. The idea of deriving them from a unique source is futile. Three sources are therefore postulated. They are Complementing Serialization, in which the verbs in series are closely dependent on each other for their meaning; Restrictive Serialization, in which one verb (phrase) modifies another in the sentence; Sequential Serialization, where the verbs denote a sequence of events. Chapter six is a discussion of some formal aspects of serial verbs. It is observed that serial structures are multiple-branching constructions, and are therefore optimal in acceptability. It is suggested that serialization indicates a close relationship between structural and
performance rules. Chapter seven summarizes the study and indicates directions for future studies in verb serialization.
CHAPTER I

Introduction

1.0. General Aims of the Study

Chafe's review of Lamb's Outline of Stratificational Grammar begins with an introductory remark which states that "Language is an elephant and we are all blind men trying to discover what the elephant is like" (Chafe 1968:594). In a limited sense the remark is applicable to the syntactic surface phenomenon such as (1) found in many languages of West Africa.

(1) Nupe: Mí lá lítáfi bé.
I took book came
'I brought the book.'

This type of construction has been called by various names like 'serial verbal construction' (Stewart 1963), 'string of verbs' (Ansre 1966), 'verbs in series' (Welmers 1946), 'Compressed sentence construction' (Awobuluyi 1967), and 'serial verbs' (Stahlke 1970). It is an extremely complex structure, and Stahlke is correct in describing it as "a very perplexing type of surface structure" (Ibid.:60).

For the past one hundred years or so many investigators working on the languages of West Africa have come across this phenomenon and have given reports on it, characterizing it in one form or the other, in their attempts to "discover what the elephant is like." The present work is an
continuation of the study of verb serialization in Kwa languages. It singles out Nupe for a deeper study. Whereas many of the earlier works on serialization have been very much occupied with its syntactic structure, the present study will investigate other aspects of the phenomenon in addition to its structure. In particular, much attention will be focussed on a small segment of the lexicon that is directly relevant to verb serialization. It is hoped that an investigation of the lexical items that feature prominently in serial structures will advance our understanding of the construction, particularly because it will throw light on the processes of lexicalization of certain universal concepts in different languages. If this is successfully done it will contribute to our knowledge of linguistic universals, and consequently enrich linguistic theory.

It is a well-known fact that languages differ in respect of lexical stocks they possess, and that a one-to-one lexical correspondence hardly obtains between two languages. This fact, among others, must have influenced a certain school of linguists and led them to the conclusion that "languages could differ from each other without limit and in unpredictable ways" (Joos 1957:96). This view is, however, rejected in this study because it is largely based on the surface facts alone. It is my belief that linguistic investigations which involve both the surface and
non-surface factors will bring into focus similarities that exist among languages. Fortunately, such investigations are possible within the framework of Transformational Grammar today, for this approach enables linguists to look at languages at their deep and surface levels. It also makes predictions and generalizations about languages. It will therefore be shown in this study that serializing and non-serializing languages have similar deep structures but different types of preferred lexicalization processes. Given these differences of lexicalization certain other surface-structure differences are predictable.

2.0. The Kwa Languages

According to Greenberg's (1963a) classification of African languages forty-seven languages or language groups in eight subdivisions form the sub-family of languages called Kwa. The grouping is as follows:

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<tr>
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<tbody>
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<td>1.</td>
<td>Kru</td>
<td>6</td>
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<tr>
<td>2.</td>
<td>Western</td>
<td>26</td>
</tr>
<tr>
<td>3.</td>
<td>Yoruba</td>
<td>2</td>
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<tr>
<td>4.</td>
<td>Nupe</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>Edo</td>
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</tr>
<tr>
<td>6.</td>
<td>Idoma</td>
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<td>7.</td>
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</tr>
<tr>
<td>8.</td>
<td>Igbo</td>
<td>1</td>
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These languages are geographically located in a zone of
about 200 miles average width, stretching approximately 1400 miles along the West African coast. They spread from Liberia in the West through Ivory Coast, Ghana, Togo, and Dahomey to the eastern bounds of the Niger Delta (Nigeria) in the east (see the map on page 5).

Considering the number of speakers of these languages, those of groups 2, 3, and 7 are very important, and some of them have received much attention in terms of language studies. Among these are the Akan languages of Ghana, Ewe spoken in parts of Ghana, Togo, and Dahomey, Yoruba in south-western Nigeria and Dahomey, and Igbo in the East Central State of Nigeria. Igbo in the Rivers State of Nigeria has also received some attention.

It is not entirely obvious what set of features distinguishes the Kwa languages from the others in the larger family. But the syntactic phenomenon of verb serialization constitutes a common feature. Stewart (1971:181) has made an observation that "Perhaps the most interesting of the grammatical phenomena from the general typological point of view is what might be called serialization." This is not to be interpreted to mean that the serial construction is exclusively found in the Kwa group. In fact it occurs in some non-Kwa groups as well; for example, serial structures are found in Gur (Voltaic) languages. Moreover, Hyman (1971) describes a similar construction which he has called 'consecutivization' in Fe?fe?, a dialect of Bamileke, a
A Map of West Africa showing the location of the Kwa Languages

1. Kru
2. Western
3. Yoruba
4. Nupe
5. Edo
6. Idoma
7. Igbo
8. Ijo

Neighboring languages e.g. MANDE
non-Kwa language spoken in the Cameroun.

3.0. **Nupe**

According to statistics of the 1963 Nigerian population census the Nupe people add up to .6 million. They live in the low basin formed by the valley of the Niger and Kaduna Rivers in central Nigeria. The people refer to themselves as Nupenćiži (ži = plural morpheme). The major dialects of Nupe include Kúpá, Çèkpà, Ebági, Bèni, Ebè, Gbédègi, and Nupe 'Zam' (see the map on page 7). The neighboring languages are Yoruba to the west and south-west, Bunu and Igbira to the south, Gbari to the east and north-east, and Kambari to the north. In Greenberg (1963a) Nupe, Gbari, Igbira and Gade (the last two are not shown on my map) constitute the Nupe group.

Smith (1964, 1967a, b; 1969, 1970) has done an extensive amount of work on the Nupe verb, basing his analysis on the dialect spoken at Bida. To my knowledge, however, nothing has been done on verb serialization in Nupe. The present study is largely based on the dialect spoken at Patigi [pátigi] (= a small hill) erroneously written officially as Pategi. The difference between the dialects of Bida and Patigi is minimal.

4.0. **Plan of the Study**

The plan of the study is as follows: chapter two makes a critical survey of the literature on verb serialization in Kwa, bringing out how various writers have
A Map of Nupeland (after Nadel, 1942)

Approximate boundaries of Nupeland
Dialects are underlined
Neighboring languages are in capitals

Nigeria
characterized the construction. Chapter three is an investigation of the common verbs that appear in serialization, focussing attention on their semantic properties and syntactic behavior. The question of how they are to be represented in the lexicon is considered. Consequently, the implication of such verbs for linguistic theory is discussed. Chapter four broadly examines some of the connectives of Nupe, in particular those that occur in constructions that are used interchangeably with serial structures. This set will be contrasted with those connectives that appear in coordinate structures which do not allow serialization. Chapter five deals with the derivation of serial structures, showing that they do not originate from a unique deep source. Chapter six discusses certain formal aspects of verb serialization, and speculates on the issue of competence-performance dichotomy. That is, do serialization processes take into consideration performance factors or are they based purely on competence? Finally, chapter seven gives a summary of the study and outlines some of the unresolved problems pertaining to verb serialization.

In the course of discussion comparisons will be made between Nupe and other typologically related languages, Yoruba in particular. Whenever language data are cited from published sources I follow the convention of the authors in recording: in certain cases it is phonemic, in others it is orthographic. For the Nupe examples Nupe
orthography will be used. Lexical tones are marked as (')
High, (') Low; absence of marking on a vowel signifies the
mid tone. The same convention is applicable in Yoruba. The
terms verb serialization, serial verbal construction, serial
verbs, serial structures, etc., will be used interchangeably.

5.0. Theoretical Orientation

The work is undertaken within the framework of
Generative-transformational Grammar in that it aims not
only to classify and describe utterances but also to capture
regularities that underlie them, thus making predictions of
what may be expected and what may not be expected. Actually,
the work is pursued in the spirit of neo-transformational
theory, that is, the current which runs through the recent
works of such linguists as Gruber, McCawley, the Lakoffs,
Ross, and Postal among others. This is the version of
Transformational Grammar popularly known as Generative
Semantics, but I prefer the term Semantic Syntax, following
Seuren (1972).

The preference for Semantic Syntax over its rival
theory, Interpretive Semantics, or Autonomous Syntax in the
sense that Seuren has used it, is not fully justified.
Neither is the choice to be interpreted as meaning that
Semantic Syntax is right and Autonomous Syntax is wrong.
The choice is simply a reaction to the elegant but in-
adequate Katz-Postal-Aspects hypothesis of the mid sixties.
This theory stipulates that there exists a level of
syntactic deep structure where lexical items are inserted en bloc, and that all functional relations are defined at this level. Furthermore, the syntactic deep structure constitutes an input to all semantic interpretations, and syntactic transformations convert deep structures into surface structures. It follows from this, therefore, that optional syntactic transformations must not effect any meaning change.

But as Partee (1971a, b) has pointed out, this hypothesis cannot be maintained, however elegant it appears, for certain syntactic transformations are found to effect meaning changes. For this reason some revision is necessary. Chomsky, Jackendoff, and others have proposed a revision in one direction. In their view, not all semantic facts are explained in the deep structure; rather, some are to be explained in the surface structure and intermediate structure as well. But the level of deep structure is maintained and a semantic component is appended. Semantic Syntax takes another direction, which goes something like this: if all the elements that are necessary for semantic interpretations are to be included in the deep structure, and if syntactic transformations are to be meaning-preserving, then the deep structure must be pushed very deep, to the point where it is not distinguishable from semantic representation. In this case the semantic component of Katz-Postal-Aspecte has to be eliminated, and the level of deep structure is viewed as

10
inseparable from semantic representation. Thus semantic representation is proposed as the initial representation in the processes of sentence generation. Lexical items are allowed to replace subtrees under certain conditions during the processes of derivation, and lexical and syntactic transformations are permitted to be interspersed. Seuren's schematic representations of the two hypotheses are given directly below.

(3) a.

(SR = Semantic representation, T-rules = Transformational rules, SS = Surface structure, PR = Phonetic representation, SDS = Syntactic deep structure.)
Diagrams (3a and b) represent Semantic Syntax and Autonomous Syntax respectively. Boxes represent sets of rules, circles represent sets of structures defined by the rules (Seuren 1972:251).

One significant factor which has influenced my preference for Semantic Syntax over Autonomous Syntax is the notion of lexical decomposition advanced in McCawley's version of the former (e.g. McCawley 1971). His analysis of the verb *kill* as cause-become-not-alive is very well-known. This hypothesis provides a useful way of looking at Verb Serialization. Compare, for instance, the English verb 'to bring' with Nupe *lá + bé* 'take + come'. Whereas English has a composite surface lexical item *bring* in addition to *take* and *come*, Nupe does not have the equivalent composite surface form. Conversely, the Nupe locative verb *ta* 'to be on' has to be expressed in English by two lexical items *be on*. The consequences of such lexical systems are obvious. Where composite lexical items are available we have simple surface sentences, but complex lexical rules. Conversely, where lexical rules are simplified, we get complex surface sentences. The configurations of (4) and (5) illustrate this point.
The weaknesses of Semantic Syntax are not difficult to spot. Because we know too little about semantic representations and cognitive structures, it is not yet possible to formulate formal rules. But as Partee (1971b) has pointed out, neither school has fully worked out its theory: "The interpretivists don't say much about how their semantics works," she remarks, "and the generativists don't say much about the syntactic rules that will turn their elegant deep structures into English." Another problem is the fact that Semantic Syntax is yet to be presented as a systematic
theory.

These weaknesses, among others, do not prove the hypothesis wrong. The issues involved are empirical. Very likely, it would be impossible to prove either theory right or wrong on purely internal grounds. The major area of controversy is semantics, and each school is aware of the role of semantics in the grammar. The problem is how to account for it in a revealing manner. For every analysis undertaken within one theoretical framework an alternative one is possible within the other. This being the case, it is imperative to look for external evidence and bring it to bear on the issues.
CHAPTER II

Kwa Verb Serialization in Perspective

1.0. Preliminaries

The literature on Verb Serialization that will be surveyed in this chapter can be broadly divided into two classes, namely, general descriptions and formal grammars. Works of investigators such as Christaller (1875), Westermann (1930), and Ward (1952) fall within the former group. In general such descriptions include various construction types the authors have carefully observed in particular languages. Such grammars are designed to guide foreigners in learning the new languages.

Each of the works mentioned above contains a section on serial verbs labeled 'verbal combinations'. Westermann and Ward do not make specific claims about the construction, but they simply report the phenomenon and its peculiarities in Ewe and Yoruba respectively. Christaller differs in this respect in that he endeavours to characterise serial verbs as auxiliaries. In spite of lack of analysis in depth of serial verbal constructions in these works, they are extremely valuable, not only because of the enormous amount of information they convey but also because of the useful hints and suggestions that permeate them.

More recently a good number of linguists have worked
on Verb Serialization. They include Welmers (1946), Williamson (1963, 1965), Stewart (1963), Awobuluyi (1967), Boadi (1968), Stahlke (1969, 1970), Williams (1971) and Bamgboye (1971). These writers constitute the second group, and for the most part they are equipped with modern linguistic theory, which enables them to make specific claims about serial structures. In the sections that follow the works of both groups will be examined.

2.1. Basic Characteristics of the surface syntax of Kwa Verb Serialization

Westermann (1930:126) provides a description of the surface structure of serial verbal construction in Ewe in the following words:

A peculiarity of Ewe is that we often find a row of verbs one after the other. The chief features of this are that all the verbs stand next to each other without being connected ... Should a conjunction stand between two verbs, the subject and object must be repeated.

One of the examples cited by Westermann is given in (1).

(1) Ewe: étsɔ̀ du.
He took it ate
'He took it and ate it.'

A parallel situation obtains in Nupe and Yoruba as the sentences of (2) and (3) show.

(2) Nupe: U lá u gb.
He took it ate
'He took it and ate it.'
(3) Yoruba: ó mú u jẹ́.¹
He took it ate
'He took it and ate it.'

The surface sentences of (1) to (3) can be represented by the configuration of (4).

(4)

Westermann's description of the surface syntax of serial verbs in Ewe in fact introduces us to the syntactic nature of Verb Serialization in Kwa. What he has termed a peculiarity of Ewe turns out to be a peculiarity of related languages that have serial structures.

The first interesting thing to note is that in these 'peculiar' structures verb phrases (verbs in Westermann) are permitted to appear consecutively without an overt connective word, but in languages like English a conjunction is required between such verbs. Another important point is that a sort of interdependence exists between the occurrence of a conjunction (between VPs) and the repetition of both the subject noun and the object noun. That is, we would see structures of the type

\[ NP \rightarrow V + (NP), \text{ conjunction } + NP + V + (NP) \]
but not \*NP + V + (NP) Conjunction + V + (NP)
alternating with sentences like (1), (2) and (3). Thus
the sentences of (5), (6) and (7), are variants of (1),
(2), and (3) respectively.

(5) Ewe: étsè èyè wòdu i²
  'He took it and he ate it.'

(6) Nupe: U lá u u ci gi u.
  He took it he and ate it
  'He took it and he ate it.'

(7) Yoruba: O mú u ó si jè ẹ.
  He took it he and ate it
  'He took it and he ate it.'

In the Ewe example the conjunction is èyè, in Nupe it is
ci, and in Yoruba it is si.³ We note that with the
occurrence of a conjunction in each case the deletion of
any noun does not occur. We therefore see that serializing
languages do not have overtly conjoined verbs or Verb
phrases.

Westermann's observation is very important for the
following reasons. In the first place, the possibility
of deriving serial verbs from conjoined sentences has been
suggested. As a matter of fact, one can easily postulate
rules that will derive the sentences : . (1), (2), and (3)
from those of (5), (6), and (7) respectively. In the
second place, there is a strong indication that any
meaningful study of Verb Serialization must be done in
conjunction with a study of coordinate structures. In
the third place, there is the question of rule typology whereby languages like Ewe, Nupe and Yoruba permit verbs to appear in succession without an overt conjunction, but languages like English do not allow it. These issues will be taken up in the subsequent chapters.

2.2. Tense, Aspect, and Mood Constraints

Westermann's study of Ewe not only includes the syntactic nature of Verb Serialization, but also involves certain semantic facts. According to him, "all consecutive verbs are of the same tense or mood." More recently, Stahlke (1970:80) states a similar fact in Yatye and Yoruba by remarking that "all verbs in series must agree as to tense and ... to mood also." Furthermore, "they must all agree as to auxiliaries, negation and mood." Similarly, Boadi (1968:84) claims that in Twi

What joins them (serial verb-IG) together is agreement in mood and between certain pre-verbal affixes across the sentence. Thus, all conjoined and certain types of embedded verb phrases are either affirmative or negative, interrogative or declarative, imperative or indicative. Besides, the tenses which occur in these verb phrases are identical.

The sentences of (8) through (10) illustrate this point.

(8) Ewe: énè kútsetsewò them no mamúm ñá amewó.
    'He picked (continually) fruit and divided (them) among the people.'

(9) Yatye: iwì àbá àwá inyinwè ìbì.
    child FUT take book come
    'The child is going to bring a book.'
(10) Yor.: a. Mo Ṣẹ́lé iwe bọ.
    I PROG take book come
    'I am bringing the book.'

    b. *Mo Mmú iwe wa
    I PROG take book came
    'I am bringing the book.'

All the verbs of (8) are said to be in the progressive form, and those of (9) are imperfect, being indicated by a "low-high tone sequence". Clearly, the sentences of (10) strengthen the case for tense agreement in Verb Serialization. Both wá and bọ mean 'to come', but wá does not occur in the progressive tense, except in the habitual sense. Thus (10b) is unacceptable because mú is in the progressive form, and since the verbs must agree in tense, the second one must be in the form that is usable in the progressive tense. For further clarification (11a) is acceptable, (11b) is not; (11c) is because it is interpreted as having the habitual sense.

(11) a. Mo Mbọ.
    'I am coming.'

    b. *Mo Nwá
    'I am coming.'

    c. Mo múa Nwá.
    'I usually come.'

It should be noted that both Ewe and Yatye allow the tense marker to occur in the surface more than once. In Yoruba, however, the tense marker appears only once, specifically with the first verb in the series. We are
not at all surprised that this is the case, since different languages mark their tenses differently in the surface structure.

Ansre (1966), in his paper entitled "The Verbid - a Caveat to Serial Verbs" questions the validity of the tense agreement assumption in Verb Serialization. His argument is largely based on the fact that some verbs that are included in Westermann's examples of 'Verb Combinations' do not conjugate at all. One such verb is ná 'to' in the example of (8) above. Ansre concludes that because ná does not conjugate it is a 'verbid', and not a verb. But another lexical item exists in Ewe whose phonological shape is identical with the ná in question, and that ná means 'to give'. Boadi (1968), however, points out in a footnote that the fact that such verbs do not conjugate does not necessarily exclude them from being verbs. After all certain sub-classes of verbs do not inflect. I think that Boadi's comment is correct. But this does not mean that tense-agreement is always a condition on serialization.

Bangboše (1974) has commented on this, pointing out that there are cases when there is no agreement between serialized verbs. He then cites examples from Izi as presented by Bendor-Samuel (1968). One is given in (12).
(12) b shiá !ji àtsá ɛrɛ.
    she cooked yam is pounding eating
    'She cooked yam and is pounding and eating it.'

In the example of (12) the consecutive aspects of the verbs are reported to be 'Past, Present Progressive, Present Progressive'. We are therefore forced to conclude that while tense-agreement is observed in some serial constructions in some languages, it is not observed in others.

2.3. **Nuclear versus Non-nuclear Verbs**

The differences in how certain basic ideas are lexicalized in various languages have been well noted in the studies of Verb Serialization. Westermann (1930:126) observes that "very often several Ewe verbs may be expressed by a single verb in English," and Ward (1952:10b) has remarked that

What in English may be expressed by one verb consists frequently of a series of action: in Yoruba, as in other West African languages, the separate actions into which the idea may be analysed are usually expressed by separate verbs. For example, the English word bring implies the action of taking (something) and coming: fetch implies going, taking and coming. These must be expressed in Yoruba. The following examples illustrate this habit ...

(14) Yoruba:  
    a. ᴡé ópóti wá.  
        take box come  
        'Bring the box.'
    b. ᴯọ gbé ópóti wá.  
        go take box come  
        'Fetch the box.'
The case observed here, to anticipate Dixon (1971), is that of nuclear versus non-nuclear verbs. The verbs go, take, and come are regarded as nuclear; bring and fetch are non-nuclear. What this means is that the meaning of non-nuclear verbs can be obtained by combining appropriate nuclear verbs. Thus nuclear verbs take + come gives the meaning of bring. We cannot get the meaning of nuclear verbs by combining any verbs. Thus, they are close to being prime verbs.

Another fact noted about lexicalization in Ewe is as follows:

...many verbs when they stand next to others play the part of English prepositions, adverbs, or conjunctions (1930:129).

What Westermann has noted here is also true in Nupe and related languages. Thus examine the sentence of (15).

(15) Nupe: U cé tákùn ke mf,

he threw stone hit me

'He threw a stone at me.'

In this example Nupe uses two verbs, that is, cé and ke meaning 'throw' and 'hit', whereas English uses one verb throw and a preposition at. This is a case of expressing one idea with two different grammatical categories in English, where Nupe uses only one (the verb). We then have two aspects of lexicalization involved in Verb Serialization. The first is the stringing together of nuclear verbs in the absence of non-nuclear verbs to
express certain ideas. The second is that serializing languages use verbs in certain contexts where other languages have grammatical elements like prepositions, etc. These issues are dealt with in chapter three as they are very important for any account of serial structures. But more than that they are of great significance to linguists, especially those who are interested in linguistic universals. Bach (1968:117) comments on the nature of lexical items, pointing out that

It is precisely in the set of lexical elements that the famous 'arbitrariness' of linguistic sign becomes most obvious. Not only do the actual phonological shapes of words vary from language to language, but the particular sets of meanings and syntactic features which are given lexical status can vary widely (though not without limit).

2.4. Welmers

In Welmers' "A Descriptive Grammar of Fanti" (1946: 63ff) some interesting features of serial verbs were noted. One of them is that "the most common expressions of this type use the verbs of motion." Not only that but "series consisting of an active and a stative verb occur, in which case the stative verb is most commonly wo 'be located at', expressing the location at which the action takes place." The sentence of (16) is an example.

(16) Fanti: miyèè agwó 'ma wo nkíran.
    'I worked in Accra.'

In (16) the form wo 'be located at' is a locative verbid.
(For a discussion on Nupe Locative Verbs see chapter 3.)

Another feature observed in the grammar of Fanti is the use of serial structures to express such notions as Instrumentals, Benefactives, etc. Two examples cited by Welmers are given in (17) directly below.

(17) Fanti: a. midi má- anf 'wa abí' èn yí' húnl
'I saw it with my own two eyes.'

b. Oyéè máà-mí.
'He did it for me.'

The sentence of (17a) could be interpreted as having an Instrumental clause in it, while that of (17b) contains a benefactive clause. Stahlke (1970) and Hyman (1971) have given more extensive examples of this type of serial verbs in some other West African languages. Christaller also describes similar constructions in Twi under a different name (see the next section).

3.0. **Christaller**

In his analysis of 'Combination of Verbs' in Twi, Christaller (1875:69) characterizes such constructions as "combinations of a principal verb with one or two auxiliary verbs." Five types of such combinations are given below as provided by Christaller.

'He comes to do,'

b. O de adáre tũa dũbã.
'With a bill-hook he cuts a branch.'
c. Otu fii Asanté bètráá Akyem.
   'He moved from Asante to Akyem.'

d. Gye nom!
   'Take (and) drink'

e. O patúw yè.
   'He does (it) suddenly.'

In (18a) the 'auxiliary' is bè meaning 'come', which is said to be one of a general type of 'auxiliaries', appearing with any active verb. In this case we have a serial structure of the type

(1) Aux₁ + Principal Verb
    Aux₁ = General Type

The form de in (18b) is a representative of a class of verbs used to express the notion of Instrument. According to Christaller it "stands for the English prepositions by, with, in, for and of, introducing, as its object, the means or instrument or material for the action of the principal verb." In this serial structure we are dealing with constructions like

(ii) Aux₂ + Principal Verb
    Aux₂ = Instrumental

The 'auxiliary' fì of (18c) is the kind that is used to express the notion of direction or locative. That is, the auxiliary adds an expression direction like from, to, and through to the meaning of the principal verb. Schematically, this may be represented as

(iii) Aux₃ + Principal Verb
    Aux₃ = Directional, etc.
The example of (18d) illustrates a different type of 'verbal combination'. Two transitive verbs occur, and both refer to the same object. The verbs are therefore equal in status, and one is not subordinate to the other. Here the structure may be represented as

(iv) Principal Verb + Principal Verb.

Finally, the 'subordinate' verbs like patsuw are used to express an adverbial circumstance of the principal action. They mean something like 'suddenly' or 'unexpectedly'. Thus we have

(v) Aux₄ + Principal Verb
Aux₄ = Circumstance Adverbial

Christaller, in fact, groups his 'auxiliaries' into two, namely, Essential Combinations and Accidental Combinations. The examples of (18a, b, c, e) illustrate the former, and the example of (18d) belongs to the latter grouping. Schematically, Christaller's analysis of the combination of verbs can be given as follows:

Verb Combination \( \rightarrow \) {Essential \{Accidental\}}

Essential \( \rightarrow \) Aux + Principal Verb

\( \begin{align*}
\text{Aux} & \rightarrow \\
\text{Accidental} & \rightarrow \ PV + PV
\end{align*} \)

At this point it is pertinent to clarify Christaller's use of the term auxiliary. For him, at least in his
study of Twi, "the auxiliary or supplemental verb is coordinate only in form, but subordinate in sense, whether it be preceding or succeeding the principal verb" (p. 144). In this sense the verbs are classified according to how they function in each case. The 'auxiliary' verbs we have seen are therefore auxiliaries simply because they function as modifiers of some sort, but formally they are independent verbs which can be used as principal verbs. Christaller himself observes this fact by stating that "In most of these verbal combinations, either the auxiliary, or the principal verb, or both of them, may be used in some or all of those simple forms." By simple forms he means the verbs which occur in various tenses and aspects, and are therefore usable in simple sentences (see Christaller 1875:59). We are thus forced to conclude that Christaller's distinction between 'Essential' and 'Accidental' verbal combination arises from contextual considerations of the verbs, and that these 'auxiliary' verbs do not form any special class of verbs. His analysis, however, is full of significant insights.

In 2.1. we have seen from Westermann's work on Ewe the possibility of deriving serial verbs from conjoined sentences. Furthermore, I have pointed out the remarks made by Ward and Westermann on the nature of certain lexical items in many West African languages and the fact
that lexicalization processes have a lot to do with Verb Serialization. In Christaller's work we now find a third dimension, that is, serial structures which may not derive from conjoined sentences. In other words, the distinction he has made between 'essential' and 'accidental' verbal combinations points to the fact that they may not originate from the same source. The three important factors about serialization are now summarised in (19).

(19) a. Verb serialization is related to a preference for nuclear verbs in the lexicon.
   b. Some serial verbs may derive from conjoined sentences.
   c. Other serial verbs may derive from other sources.

4.0. Williamson

In describing certain aspects of the syntax of Ijo, Williamson (1963, 1965) has characterized a group of verbs as 'motion verbs'. Although her analyses do not employ the term serial verbs, and no direct claims are made about them, judging from her derivations, one must conclude that a grammar of motion verbs in Ijo is an account of verbs in series.

In her pre-Aspects approach, simple sentences (usually two) are set up from which a serialised form is transformationally derived, as the examples of (20) show.
(20) ḣo: a. áraighbours, ingo déniści.  
    she trap weave PAST
    'She wove a trap.'

    b. áraighbours, ingo pītē -mī.  
    she trap set PAST
    'She set a trap.'

    c. áraighbours, ingo déni, pītē -mī.  
    'She wove and set a trap.'

Very likely, this is another example of tracing the 
source of serial structures to conjoined sentences, even 
though no connective is specified in (20). But 
Williamson's analysis shows other serial constructions 
which are not likely to come from conjoined sentence. 
Thus consider (21) and (22).

(21) ḣo: a. erf, indi pēj -mī  
    he fish cut up
    b. erf, ogidi akf -mī  
    he matchet take
    c. erf, ogidi akf -nī, indi pēj -mī.  
    'He cut up a fish with a matchet.'

(22) ḣo: a. arf, ū-mić mi  
    I him make
    b. erf, mú -mi  
    he go
    'He went.'
    c. arf, ū-mić mú -mi.  
    'I made him go.'

The interpretation of (21c) is such that it contains the 
meaning of Instrumental, that is, 'use something to do
something' or 'do something with something' (Williamson (1965:55). The meaning of (22c) includes a Causative interpretation. Very likely these are not derived from coordinate structures. If this is correct, then we have another indication that not all serial verbs come from conjoined sentences. We therefore have a support for (19c).

5.1. Serial Verbs from Conjoined Sentences

The first clear statement on the derivation of serial constructions from conjoined sentences, to my knowledge, is found in Stewart (1963). In his account of such constructions in Twi he proposes that sentences like that of (23b) be derived from structures like (23a).

(23) Twi: a. Jfse ne pökó no jfemm me ne pönkó nó.
    'He took his horse. He lent me his horse.'

b. J de ne pönkónó femm me.
    He took his horse that lent me
    'He lent me his horse.'

According to the writer, a certain group of rules would replace fa in the past tense with de in the continuative, yielding *J de ne pönkónó. Another set of rules would delete the subject and direct object of the second sentence, leaving femm me. The two sentences are then combined as in (23b).

Awobuluyi's (1967) account of serial constructions in Yoruba, which he has labeled "the compressed sentence
construction\textsuperscript{,} also assumes that the structures are derived from conjoined sentences. Commenting on Ward's notion of "Verbal Combinations\textsuperscript{a}\textsuperscript{,} Awobuluyi observes that to regard serial construction as mere string of verbs is inadequate. But "it appears that the construction involves strings not so much of verbs as of sentences which have been reduced or compressed" (Ibid.:86). His argument is based on the fact that compressed sentences "usually have variants containing as many conjoined sentences as there are verbs in their 'verbal combinations' counterparts."

After Awobuluyi has presented his motive for postulating multiple sentences as the source of compressed constructions, he proceeds to subclassify the construction into two, namely, 'double-base and multi-base compressions'. The former are said to be traceable to two underlying conjoined sentences, while the latter stem from more than two underlying conjoined sentences. There seems to be no convincing argument for splitting the construction in this fashion. Awobuluyi himself seems to admit this fact when he outlines the similarities that exist between the two types. In his own words (1967:103):

\textit{Not only are their structures very similar but the two constructions convey the same types of meanings - purpose, result, or limit, and simple sequence of related actions. Moreover, the same kind of verbs occurs in both constructions; and the semantic restrictions observed among the}
verbs operating in double-base compressions hold for the verbs in multi-base compressions also. Furthermore, we are later told that the same connectives, sl 'and', lāti 'in order to', and titi...fi 'until' are used in both types of compressed sentences.\(^4\) Not only that, but even the formal rules postulated for the derivation of both types are essentially the same. Details omitted, these include:

(i) Subject deletion  
(ii) Object deletion  
(iii) Conjunction deletion (plus certain conditions).

The only reason given in support of the distinction made is that if certain conditions are met "every conjoined pair of sentences ... can be freely converted into an acceptable compressed variant." But multi-base ones "cannot be so freely compressed, even when all the usual conditions seem to have satisfied." But this is perhaps due to the added complexity of structures involved in multi-base compressions. I am therefore forced to ignore the distinction and proceed to examine Awobuluyi's handling of serial verbs as a single phenomenon.

The term 'compressed sentence construction' embraces sentences which derive from three types of sentences (considering their meanings) listed in (24)

(24) a. sentences conjoined by sl 'and'  
    b. sentences in which titi...fi 'until' occurs  
    c. sentences in which lāti occurs
Sentences of the (24a) type would be conjoined structures; those of the type (24b) would contain a limit clause, while the (24c) type would be interpreted as having a purpose clause. In actual sentences these are illustrated in (25) from which their variants of (26) derive.

(25) Yoruba: a. Bọlá mú Šikágbọ ó si wá, Bọla took Chicago he and came 'Bọla brought Chicago.'
   b. ó tó òjó tití òjó fi di ìgbà. 'She looked after Òjo until Òjo became grown up.'
   c. ó lọ látì rà aṣọ. 'He went in order to buy clothes.'

(26) a. Bọlá mú Šikágbọ wá. Bọla took Chicago came 'Bọla brought Chicago.'
   b. ó tó òjó di ìgbà. She looked after Òjo became grown up 'She looked after Òjo until Òjo became grown up.'
   c. ó lọ rà aṣọ. He went bought clothes 'He went in order to buy clothes.'

Ostensibly, the sentences of (26) are the compressed forms of (25). The analysis, however, raises some questions. In the first place, it is unlikely that (26a) can be derived from (25a). The fact that all my informants rejected (25a) points in that direction. They claim that it means Bọla took Šikago and then came, which
makes no sense, since both Bọla and Šikago are assumed to be human beings. Another factor is that any structure underlying (26a) cannot contain the connective să 'and then'.

The point here is that the serial structure of (26a) is unlikely to be due to sentence conjunction, but rather to lexical factors as pointed out by Ward (1952) and listed as (19a) above. (25a) is therefore not an underlying structure from which (26a) is derived. It is possible that some serial verbs come from conjoined sentences in Yoruba but the pair (25a - 26a) does not illustrate this possibility.

The second problem about Awobuluyi's analysis is that it is not quite clear why the author has chosen to deal with the tifii...fi and láti constructions as conjoined sentences. At one point we are told that they have the meanings of limit and purpose respectively. If this is the case, we would normally expect them to be regarded as structures containing adverbial clauses, and not conjoined sentences, at least not in the conventional use of the term. If the term adverbial is accepted for these constructions then we have another support for (19c), which claims that serial verbs may have sources other than conjoined sentences.

In spite of these problems, Awobuluyi's analysis is of great importance in that it takes the connectives into
account, and specifically deals with them. We now turn to another work in which connectives are assumed but not dealt with.

In a paper which aims at describing serial verbs as well as to determine the verbal status of certain verbs in Yoruba, Bamgboṣe (1974) postulates that serial verbs are of two types: the linking type and the modifying type. In reply to Stahlke (1970), who doubts the possibility of deriving serial verbs from conjoined sentences, Bamgboṣe argues that the linking type must come from conjoined sources because of the five important facts directly listed below.

i. reference
ii. sequence and consequence
iii. negation
iv. case
v. tense and aspect

I shall examine these in the following order: (i) (iv), then (ii) and (iii) together.

By reference Bamgboṣe means "In a serial verbal construction, it is necessary that the analysis should reveal which NP a verb refers to, as this is essential to the meaning of the construction." The examples of (27) below are his, and they illustrate this point.

    Olu took chair came
    'Olu brought a chair:'

36
b. Olu lọ aṣò nàa gbọ.
Olu used dress the worn out
'Olu used the dress and it became
worn out.'

c. Olu lọ ọmọ nàa wá ilé.
Olu drove child the come home
'Olu drove the child home.'

d. Olu bú ọmọ nàa jàáde.
Olu abused child the go out
'Olu abused the child and he/the
child went out.'

In (27a) both the verbs gbọ 'took' and wá 'came' have Olu as their subject. In (27b) Olu is the subject of the verb lọ 'used', while gbọ 'to be worn out' has aṣò 'dress' as its subject. The sentence of (27c) is ambiguous between (a) Olu drove the child and the child came home and (b) Olu drove the child and both Olu and the child came home. Possibly, (27d) has three interpretations, namely, (a) Olu abused the child and Olu went out, (b) Olu abused the child and the child went out, (c) Olu abused the child and both Olu and the child went out.

The reference argument is that if more than one underlying structure, presumably consisting of conjoined sentences, is postulated the facts of reference will be adequately accounted for as the relationship between the verbs and the NP's are clearly shown before the deletion transformation. But does it mean that ambiguities can only be clarified by postulating coordinate structures?
This is not necessarily so. Other structures like sentence embeddings can equally be postulated to show the origins of a surface sentence which is ambiguous.

Bamgboye assumes a deep structure of the type (27') for the sentences of (27)

\[
(27')
\]

\[
S_0 \quad S_1 \quad S_2
\]

Old lọ aṣò náà Aṣò náà sì gbó

The structure (27') may underlie (27b, c, and d) but not (27a). Any structure underlying the latter is not likely to contain the connective sì. Very likely, (27a) is just another case of (19a), where a serial structure has arisen because of lexicalization factors.

The argument of Case deals with the identification of the cases of NPs in serial constructions. It rests on the fact that in certain serial structures one NP may appear to be playing a double role as in the examples of (28).

(28) Yoruba: a. Ajá gbé egungun (fi) há ẹnu, dog carried bone (used) wedge mouth 'The dog took a bone in its mouth.'

b. S₁ Ajá gbé egungun dog took bone 'The dog took a bone.'
In $S_1$ of (28b) egungun 'bone' is said to be objective case and in $S_2$ of the same structure it is instrumental (in terms of Fillmore's Case Grammar of 1968). The rules that convert (28b) into (28a) delete the instrument NP of (28b), but in spite of the deletion the surviving NP egungun of (28a) retains the two roles of objective and instrumental. It is then said that "this apparent anomaly can only be understood by reference to the underlying sentences in (28b), where the instrumental case is clearly expressed." These facts are interesting, but it is not entirely clear why they compel us to derive sentences such as that of (28a) from underlying structures like (28b).

Looking at the idea of sequence and consequence as well as negation, we find that the situation is extremely complex. The main points connected with them are directly presented below. First, in a serial construction the verbs in the string form a sequence which is irreversible without a meaning change. To illustrate, we find that the sequential order of the verbs in (29) has been reversed in (30), and the meaning of (30) is therefore different from that of (29).
(29) Olu gbé àga wá (27),
Olu carried chair came
'Olu brought a chair'

(30) Olu wá gbé àga.
Olu came carry chair
'Olu came to take a chair'

Second, in addition to the fact that verbs are sequentially related in a serial construction, some verbs are also marked by the relation of consequence. That means that in a sequence VP₁ + VP₂, VP₂ is a consequence of the action of VP₁. Thus, for example, in

(31) Wón mu ọtì yó.
they drank wine drunk
'They were drunk.'

the action of VP₂ (being drunk) is a result of VP₁ (drinking). Third, there is a difference between sequence and consequence, which is reflected in (a) two transformational potentials, and (b) differences in negation.

According to Bangboše, the first transformation applicable to consequence is nitorífé 'because'. Applying this to (31) we get

(32) Wón yó nitorífé wón mu ọtì.6
they drunk reason that they drank wine
'They are drunk because they drank wine.'

The second transformation applicable to the consequence type is topicalization, which, if applied to (31), yields
(33) Mímu tì wọn mu qtf ni wọn fi yó,  
  drinking that they drank wine is that they  
  got drunk  

'It was because they drank wine that they got drunk.'

These two transformations, it is claimed, are inapplicable to a serial construction containing verbs which are merely sequentially related. If they do the outcome will be false statements. For that reason the sentences of (34) below are false vis-a-vis (29).

(34)a. Olú wá nitorípé ó gbé àga.  
  Olu came reason that he carried chair  
  'Olu came because he took a chair.'

b. Gbígbé tì Olú gbé àga ni ó fi wá.  
  carrying that Olu carried chair is he came  
  'It was because Olu took a chair that he came.'

Turning now to the case of negation, the claim is that in the sequence type of serial construction either $S_1$ or $S_2$ (or both $S$'s) in the underlying structure can be negated. In the consequence type, however, only $S_2$ can be negated. Compare then the sentences of (35) and (36).

(35) Olú ó gbé àga wá.  
  Olu not carry chair come  
  'Olu did not bring a chair.'

(36) Wón ó mu qtf yó.  
  they not drink wine drunk  
  'They drank wine but: they were not drunk.'

The sentence of (35) on the one hand is ambiguous between Olu took a chair but did not come with it and Olu came but did not bring a chair. A third interpretation was
mentioned but not considered in Bamgboye's analysis, and that is it did not happen that Olu came with a chair. The ambiguous sentence of (35) can be traced to the underlying structures of (37) below.

(37)a. \(S_1\) Oldú gbé àga. \(S_2\) Oldú ô wá.
    Olu carried chair Olu not came
    'Olu took a chair but did not come with it.'

b. \(S_1\) Oldú ô gbé àga. \(S_2\) Oldwá.
    Olu not carry chair Olu came
    'Olu did not take a chair but Olu came.'

c. \(S_1\) Oldú ô gbé àga. \(S_2\) Oldú ô wá.
    Olu not carry chair Olu not come
    'Olu did not take a chair nor come.'

The sentence of (36) on the other hand is not ambiguous, because only \(S_2\) can be negated in its underlying structure, which is

(38) \(S_1\) Wón mu ọtì. \(S_2\) wón ô yó.
    they drank wine they not drunk
    'They drank wine but they were not drunk.'

I now wish to raise two questions. First, is the distinction made between sequence and consequence to be reflected in their deep structures? It has been noted that the consequence type allows both nitorifpé and Topicalization transformations, but not the sequence type. Is there a way whereby this distinction can be reflected in the deep structure of the consequence type? We know, of course, that (32) containing a subordinating clause nitorifpé wón mu ọtì is not likely to underlie (31). It
should be noted that in (32) a reversal of the order of
the verbs in (31) has taken place. Such a reversal without
the word nitoripé gives the impossible sentence

(39) *won ydé mu qtí
  *they drunk drank wine

Should the original order of the verbs (in (31)) be pre-
erved we have another paraphrase

(40) won mu qtí nitoripé won ydé,
  they drank wine, therefore they drunk
  'They drank wine, therefore they are drunk'

I am not suggesting that (40) is the source of (31), but
that at least one other paraphrase of (31) exists, thus
revealing further complexity of the consequence type.

One other point about (31) is the claim in the
analysis that it is related to (33) by the topicalization
transformation.

(31) won mu qtí ydé,
  they drank wine drunk
  'They are drunk.'

(33) mimu tì won mu qtí ni won fi ydé.
  drinking that they drank wine is they got drunk
  'It was because they drank wine that they
got drunk.'

If so the rules needed to related the two structures must
be more complex than, or perhaps different from, the topi-
calization rules operative in relating (41) below to (31).

(41) mimu ni won mu qtí ydé.
  drinking is they drank wine drunk
  'It was drinking that made them drunk.'
The derivation of (33) must at least have additional rules to account for the presence of \( \text{tí} \) and \( \text{fí} \). Besides, it is not entirely obvious that the two sentences (31 and 33) are semantically the same.

My second question is concerned with the derivation of negation in serial structures: what is their underlying form? It has been suggested that the ambiguous sentence of (35) may be derived from (37 a-c), it is also possible to derive (36) from (38). Upon investigation, my informants readily interpreted (37 a, b, c) as

\[
(37a') \text{ Olu carried chair but Olu not come} \\
\quad \text{‘Olu took a chair but did not come with it.’}
\]

\[
(37b') \text{ Olu not carry chair but Olu came} \\
\quad \text{‘Olu did not take a chair but he came.’}
\]

\[
(37c') \text{ Olu not carry chair Olu not and come} \\
\quad \text{‘Olu did not carry a chair nor come.’}
\]

A paraphrase of (36) was given as

\[
(38') \text{ They drank wine but they not drunk} \\
\quad \text{‘They drank wine but were not drunk.’}
\]

The sentences in (37') and (38') suggest at least two possible sources for serial structures with negation: one which would contain features that would permit paraphrases with the \( \text{sùgbọn} \)-sentences, and another which would contain features which are reflected in the \( \text{si} \)-sentences. Again,
Bamgboye's analysis does not go into these issues.

Turning now to Bamgboye's modifying type of serial verbs, we are told that this type is distinguished from the linking type for the following reasons:

(i) Unlike the linking type, the string of verbs cannot meaningfully be related to more than one sentence.

(ii) Deriving the modifying serial verbs from coordinate structures would permit transformations to change meaning, and certain underlying sentences would break normal selectional restrictions if modifying serial verbs are derived from conjoined structures.

Among the examples provided to illustrate these facts are the following sentences:

(42) Yoruba: a. ó sọ fun mi.
        he said gave me
        'He told me.'

        b. ó sọ ó fun mi.
        he said he gave me
        'He told me.'

(43)

        a. Olu ri
        Olu walked failed
        'Olu failed to walk.'

        b. *Olu ri
        Olu walked Olu failed
        'Olu failed to walk.'

Clearly, the (a) sentences of (42) and (43) cannot be derived from their (b) counterparts. In (42a) a concrete interpretation of O fun mi does not make any sense. But if viewed in terms of Westermann's and Ward's remarks that
sometimes certain verbs occur in West African languages where prepositions appear in English, we find that Yoruba *fún* is translated as English *to*. The form *ti* of (43) behaves like a sentence negator. As such, there is no reason to expect it to behave like an ordinary verb in imposing selectional restrictions on nouns, since its scope is the whole sentence.

The distinction made between the linking and modifying serial structures is absolutely correct. This is not surprising. We have seen such possibilities before, notably, in Williamson's account of Ijo, and in Christaller's description of Twi. But Bamgboye's proposed structures for the two types are untenable. The 'linking' type is said to have a deep structure like (44) and the modifying type like that of (45).

\[
\begin{align*}
\text{(44)} & \\
S \rightarrow & \ S \ \ S \\
NP \rightarrow & \ NP \ \ VP \\
V \rightarrow & \ \ NP \\
NP \rightarrow & \ \ NP \\
Olú \ sá \ \ eré & \ Olú \ \ wá \ \ ilé \\
Olu \ ran \ \ race & Olu \ \ came \ \ home
\end{align*}
\]
(45)

```
S
  NP
  VP
    VP
      V
      V
    NP
  [+Mod]
Old sáré wá ilé
```

From (44) we derive **Old sáré wá ilé 'Olu ran home', and from (45) we get **Old sáré wá ilé 'Olu quickly came home'.

Looking at the verbs **sáré and **wá in (44), it is doubtful whether the structure is a 'linking' type of serialization. The actions expressed by the verbs are simultaneous. The configuration in (45) is a mere surface structure. It contains a lexical entry which is specified as [+ Modifying], just so it is distinguished from **sá(e)ré in (44), which is redundantly [-Modifying]. I leave open the question of appropriateness of the use of the feature MODIFYING in this context. (For a critique of Bamgboṣe's Modifying serial verbs, see Awobuluyi, 1973.)

Summarising the discussion on Bamgboṣe's analysis of serial verbs in Yoruba it can be said that the work is bold and comprehensive, but many of the points observed in it are yet to be worked out in detail. Furthermore, the features associated with the connectives are, for the most part, left unspecified. We do, however, find support for (19), which stipulates various sources for serial
structures.

5.2. **Serial Verbs from Embedded Structures**

In addition to the fact that some serial verbs can be derived from conjoined sentences, Boadi (1968:85) has suggested that there are other serial structures which originate from embedding structures. One such structure (generated by a phrase structure rule $VP \quad Preverb + de + VP + NP$) is directly given below:

$$(46) \text{Twii:} \quad \begin{array}{c} \text{S} \\ \text{Pred. Phrase} \\ \text{NP} \\ \text{VP} \\ \text{de} \\ \text{de too ntoma sika} \\ \text{anites} \\ \text{C} \\ \text{de} \\ \text{de too ntoma sika anites} \\ \text{He employed trickery in using the money to buy a cloth.} \\ \text{From (46) (47) is derived.} \\ \text{(47) Twii: de anites de sika too ntoma,} \\ \text{He employed trickery in using the money to buy a cloth.}' \\ \text{The structure of (46), in Boadi's term, is a 'recursive self-embedded agentivized verb phrase'. It is not clear what the implications of the rules of self-embedding verb phrases might be, but at least we have yet another piece of evidence from Twi that serial verbs may also come from non-conjoined structures. Stahlke (1969, 1970) has noted} \end{array}$$
a similar fact in Yatye, and Williams (1971) gives an account of serial verbs in Freetown Krio as a recursive verb phrase. We proceed directly to examine the latter.

In his analysis of Krio serial verbs Williams proposes the rules of (48) to account for the phenomenon. These rules would generate in part (49) from which (50) is derived.

(48) \[ S \rightarrow NP \quad Aux \quad VP \]
    \[ VP \rightarrow V \quad (NP) \quad (PP) \quad (VP) \]
    \[ NP \rightarrow (det) \ N \]

(49) Krio:

```
S
   /\   \\/
NP aux VP
   /\   \\/
V   NP VP
    /\   \/
  det NP V
```

```
a de kol di dokta kam
I am send the doctor come
```

(50) Krio: a de kol di dokta kam
I am sending for the doctor.

For Williams, the rules of (48) will adequately generate serial verbs in Krio, and he rejects their derivation from conjoined sentences. That is, the sentence of (51b) must not be derived from (51a), for the latter is a conjoined sentence.

    'He is bringing the book with him.'

b. I de fes di buk kam.
    'He is bringing the book with him.'
Similarly, (50) may not be derived from (52).

(52) A de kol di dokta f di dokta kam.\(^7\)

Williams' objection to the derivation of serial verbs from conjoined sentences is based on the observation that "there appears to be no definite environment with which to restrict the application of the connective deletion". This argument, however, collapses on its own terms. Given that Krio serial verbs are generated by (48), given also that the grammar must account for the constructions of (53) and (54) below, there must be a defined environment for the insertion of \(en\) and \(fo\).

   b. I de fes di buk en kam.
      'He is bringing the book with him.'

   b. A de kol di dokta fo kam.
      'I am requesting the doctor to come.'

Such defined environments are not given in Williams' analysis. The problem I have just mentioned, however, does not arise if no derivational relation is assumed to exist between the (a) and (b) sentences of (53 and 54).

Williams' second objection depends on the fact that certain serial verbs do not have conjoined sentences as counterparts. For example, (55a) is an orphan in that respect.
(55) Krio:  

a. A briŋ di kasada kam na os.

b. A briŋ di kasada en kam na os.

'I brought the cassava and entered the house.'

This observation is absolutely correct. Note that the verbs involved in (55) are briŋ \(+\) kam, a combination which is similar to that of Yoruba mú \(+\) wā 'take + come'. It is precisely in this type of verbal combination that conjoined sentences do not underlie serial verbs. And this is another support for (19a). In Williams' analysis then we have an explicit claim that VP is recursive and a denial that serial constructions can be derived from conjoined structures.

6.0. **Summary**

In the foregoing discussion, an attempt has been made to bring into focus the many aspects of Verb Serialization as reported and handled in various works, ranging from Christaller (1875) to Bamböse (1972). Syntactically, serial verbs constitute a succession of two or more verbs in the surface sentence without any overt connective. Semantically, these verbs often, but not always, agree in tense, aspect, or mood. By and large, they are verbs of action though locative verbs sometimes occur among them. In certain circumstances some of these verbs play the role of prepositions. As a rule the order in which serial verbs occur in a particular sentence cannot be reversed.
without serious consequences. Functionally, serial structures are used in different ways; these include Instrumentals, Causatives, Benefactives, Directionals, Locational, Simultaneous Actions, Sequential Actions, among others.

We have also seen that various investigators have taken different approaches to account for the phenomenon. This is natural, for Verb Serialization is a vast area. From this diversity three facts stand out prominently. The first is that the arbitrary nature of the processes of lexicalization is responsible for certain types of Verb Serialization. Second, some serial structures may be derived from conjoined sentences, very likely, non-symmetric conjoined sentences; and finally, others may come from embedded sentences, presumably adverbial clauses. What is required now is a systematic account of these facts.
Footnotes

1. In Yoruba the third person singular pronoun object is realized by the lengthening of the final vowel of the verb.

2. Westermann (1930:189) explains that the conjunction ëyè derives from the personal pronoun ye combined with the personal pronoun ë, which is the third person singular. A similar use of the third person pronoun ìnum (he, she, it) occurs in Yoruba, for example, ìjọ ìnum Aìna wá 'Ojo and Aina came'.

3. See chapter four for a discussion of some of the connectives of Nupe.

4. The connective tìtìfì 'until' is said to be a discontinuous connective. Its occurrence is as follows:

   NP V (NP) tìtì NP fi V as in
   ó tó ìmọ̀ náà tìtì ó fi ìdàgbà.
   'She raised child the until he (the child) grew up.
   'She raised the child until he grew up.'

5. Bamgbose's view on the role of tense/aspect in Verb Serialization has been pointed out in 2.2.

6. In view of the meaning difference between (31) and (32) the Nitoripé - Transformation Bamgbose postulates is questionable.

7. Williams has cited examples in which on and fo cannot be deleted by the rule of connective deletion. One of his examples is

   (i) I don was di klos on i go go to Bo naw.
   'She has washed the clothes and will go to
   Bo now.'

   which may not be transformed into (ii)

   (ii) I don was di klos go go Bo naw.

   But there is no reason to expect (ii). In the first place there is no close relationship between the verbs was and go; at least, their tenses do not agree. Secondly, (i) is a symmetric conjunction whose latitude is far wider than that of serial verbs, which, where applicable, can be related to non-symmetric conjunction.
CHAPTER III

Common Verbs in Verb Serialization

1.0. Preliminaries

This chapter is primarily concerned with an account of a limited number of action and location verbs in Nupe. The action verbs considered are là, và, bè, and lo, meaning 'to take', 'to give', 'to come', and 'to go' respectively. The locative verbs investigated are of the type ta 'to be on', dā 'to be in', etc. It should be recalled that action verbs feature prominently in the grammars of Verb Serialization surveyed in the previous chapter. More importantly, it should be noted that these verbs are basic and universal.

Special attention will be given to the contextual behavior of these verbs, and it will be shown that lexical parsimony is in part responsible for the existence of serial constructions in Nupe and related languages. The implication of how these lexical items are to be handled in the grammar is discussed.

2.1. The Verb là

One important characteristic feature of the verb là is that its semantic interpretation varies from context to context. This means that if it occurs as the only verb in a construction (auxiliaries and modals ignored
in this case, it conveys a particular meaning, but when it is combined with other verbs it may receive a different interpretation, particularly when the verbal combination constitutes a serial structure. Consider therefore the sentences of (1).

(1) a. Sàlàmì lá èbi.
   Salami took knife
   'Salami took the knife.'

b. Sàlàmì lá èbi bé.
   Salami took knife came
   'Salami brought the knife.'

c. Sàlàmì lá èbi ba nakà.
   Salami took knife cut meat
   'Salami used the knife to cut the meat.'

d. Sàlàmì lá hànkàlì ba nakà.
   Salami took care cut meat
   'Salami cut the meat carefully.'

e. Sàlàmì lá èbi ta èsákó o.
   Salami took knife be table LOCATIVE INDICATOR
   'Salami put the knife on the table.'

f. Sàlàmì lá kpàko tsu.
   Salami took door shut
   'Salami shut the door.'

g. Sàlàmì lá kàràtun yé mì.
   Salami took lesson understood me
   'Salami explained the lesson to me.' (= caused
   the lesson to be understood by me)

h. Yígìdí lá mángòrò dzú.
   sun took mango red
   'The sun reddened the mango.' (= the sun
   caused the mango to be red)
There is an occurrence of \( \text{là} \) in all the sentences of (1), and I have glossed this form as 'took' in each case. But it is obvious that it has a variety of interpretations. Apart from (1a) all the other sentences, (1b-h), are serial constructions. In (1a) \( \text{là} \) is interpreted as having the most concrete meaning. That is, Salami undertook an action of laying his hand on a knife and caused it to be in his possession. Hence, the meaning of \( \text{Sàlàmì là èbi} \) in this context is that he took possession of the knife.

Sentence (1b) contains two main verbs -- \( \text{là} \) followed by \( \text{bè} \) ('took + came'). Very likely, it is reduced from two sentences linked in some way, but not necessarily coordinate.\(^2\) Its interpretation is that Salami got hold of the knife and he came with it.

The sequence of verbs in (1c) is \( \text{là} + \text{ba} \) ('took + cut'). The sentence itself may be related to \( S_1 \text{Sàlàmì là èbi} S_2 \text{Sàlàmì ba nakà} \). Notice that \( S_1 \) is identical with (1a) in form. But it takes on the meaning of 'Salami used the knife', since it is combined with another sentence containing the verb \( \text{ba} \) 'to cut'. In other words, when \( \text{là} \) is combined with any verb of action which involves the use of some instrument, it acquires the meaning of Instrumental. But note that the concept of taking hold of the knife expressed in (1a) is also implied in this interpretation.

Turning now to the sentence of (1d), we find that it is radically different from those of (1a-c) in that
hánkáli 'care', the object of the verb lá, is an abstract noun. For this reason it is impossible to relate (1d) directly to S₁ Sálámi lá hánkáli S₂ Sálámi ba naká, where S₁ is ungrammatical. We note here that S₂ is identical with the possible S₂ of (1c). When lá has an abstract noun as its object and is then followed by an action verb like that of (1d), the construction is interpreted as containing a Manner Adverbial. That is, the verb lá is associated with a Manner Adverbial in this instance. Sometimes both the Instrumental and Manner Adverbials co-occur as in

(2) Sálámi lá hánkáli lá èbi ba naká,
    Salami took care took knife cut meat
    'Salami carefully used the knife to cut the meat.'

Looking at (1e), it may be regarded as a reduced form of S₁ Sálámi lá èbi S₂ èbi ta èsákò o, meaning that after Salami got hold of the knife he caused it to be located on the table. Thus the meaning of lá in (1e) is Causative. So it is in (1f, g, and h). Sentence (1f) may be related to something like S₁ Sálámi lá kpàko S₂ kpàko tsu. S₂ is ungrammatical in isolation. It is when S₁ and S₂ are combined and used in the reduced form that a grammatical sentence emerges, meaning that Salami caused the door to be shut. Obviously, the concept of taking hold of something and then doing something with it is still present.
The sentence of (1g) can be traced to something like 
\textit{S}_1 * Sàlámi lá kàràtun \textit{S}_2 kàràtun yé mf. In this 
construction the object of \textit{là} is an abstract noun kàràtun 
'lesson'. In isolation, therefore, \textit{S}_1 is ungrammatical, 
but when combined with the following sentence and somehow 
reduced, we get a grammatical sentence. The sentence 
kàràtun yé mf deserves some comment. The subject of the 
verb yé is kàràtun, while its object is mf. In a similar 
construction in English (e.g. I understood the lesson) 
the situation is different in that I is the subject and 
the lesson is the object. The closest translation of the 
Nupe construction into English is something like 'The 
lesson was understood by me'. The meaning of (1g) is 
therefore something like: 'Sàlámi caused the lesson to be 
understood by me'.

Finally, (1h) can be related to something like \textit{S}_1 
*Yígídí lá mángòrò \textit{S}_2 mángòrò dzú. We do not have \textit{S}_1 by 
itself; it must be combined with \textit{S}_2, and after some 
grammatical rules have applied we have the grammatical 
sentence (1h). Clearly, the sentences of (1) demonstrate 
the fact that the verb \textit{là} receives various interpretations 
in different contexts.

Looking at the sentences of (1) in terms of para-
phrases and transformational potential, we discover that 
they fall into two broad classes. First, there are those 
in which \textit{là} is associated with performing one action in 

58
conjunction with some other action. For the sake of this discussion, let us call this group CONCOMITANCE. The examples of (1b-d) belong here. The examples of (1e-h), where lä is interpreted as a causative verb, form the second group. The constructions in (3) below justify the grouping: the CONCOMITANCE group permits paraphrases with BENYI, the CAUSATIVE group does not.3

3 a. i. Sâlâmi lá èbi. ⇒ ii. ______
     Salami took knife
     'Salami took the knife.'

b. i. Sâlâmi lá èbi bé. ⇒
     Salami took knife came
     'Salami brought the knife.'

ii. Sâlâmi bé bè èbi nyî.
     Salami came with knife
     'Salami came with the knife.'

c. i. Sâlâmi lá èbi ba nakâ. ⇒
     Salami took knife cut meat
     'Salami used the knife to cut the meat.'

ii. Sâlâmi ba nakâ bè èbi nyî.
     Salami cut meat with knife
     'Salami carefully cut the meat.'

d. i. Sâlâmi lá hânkâli ba nakâ. ⇒
     Salami took care cut meat
     'Salami carefully cut the meat.'

ii. Sâlâmi ba nakâ bè hânkâli nyî.
     Salami cut meat with care
     'Salami cut the meat with care.'
e. i. Sàlámí lá èbi ta èsákó o. ➞
Salami took knife be table LOC.
'Salami put the knife on the table.'

ii.*Sàlámí ta èsákó o bè èbi nyì.

f. i. Sàlámí lá kpàko tsu. ➞
Salami took door shut
'Salami shut the door.'

ii.*Sàlámí tsu bè kpàko nyì.

g. i. Sàlámí lá kàràtun yé mf. ➞
Salami took lesson understood me
'Salami explained the lesson to me.'

ii.*Sàlámí yé mf bè kàràtun nyì.

h. i. Yìgídì lá màngò rè dzú. ➞
Sun took mango red
'The sun reddened the mango.'

ii.*Yìgídì dzú bè màngò rè nyì.

We are not surprised that (3e-h) are ungrammatical. In each case the subject of the second verb in the construction is different from the subject of the verb lá, which is interpreted as Causative. The second verb expresses the result of the action of the first verb. But in the ungrammatical examples the result verbs are shifted.

In the event that attention is only focussed on the result aspect of the sentences of (3e-h) we have constructions like those of (4).

(4) a. Èbi ta èsákó o.
knife be table LOC.
'The knife is on the table.'
(6) ṣọrọ ṣọrọ lè mú abiyanse ohunkóhun,  
matter child can take parent do anything  
'The matter of (having) a child can cause a  
parent to do anything.'  

It should be noted also that in English there are circum-
stances in which verbs like 'to take' cannot be inter-
preted in their concrete sense. Witness such expressions  
as those of (7)  

(7) a. to take a walk  
b. to take a nap  
c. to take a look  

2.2. The verb yà  

Basically, the verb yà has the meaning 'to give'. As  
a verb it can appear in any tense and like most other  
verbs in Nupe it can be partially reduplicated to nomi-
nalize. Its partially reduplicated form is yiyà 'giving'.  
In Fillmore's terminology (1971) it requires three  
arguments. In traditional terms these are Subject,  
Direct Object and Indirect Object. The sentence in (8)  
below illustrates an occurrence of yà as the main verb.  

(8) Etsu yà mì èwò.  
chief gave me garment  
'The chief gave me a garment.'  

A derivation which is related to (8) is  

(9) Etsu lá èwò yà mì.  
chief took garment gave me  
'The chief gave the garment to me.'  

We notice that (9) is a serial construction, containing  

61
the verbs lá and và, but the English equivalent is not. The reason is that English employs the preposition to, but an equivalent preposition is not available in Nupe; rather two verbs are used. This supports the earlier observation made that certain serial constructions are due to scarcity of prepositions in Kwa.

One other thing that draws out attention is the fact that in syntactic environments like (8) the verb và has incorporated in its meaning the Causative lá. As a matter of fact, và in (8) entails much more than the incorporation of the meaning of lá. Consider sentence (10) directly below.

(10) a. Etsu lá èwò twaria và mì.  
   chief took garment gave me  
   "The chief gave me a (gift) of garment."

   b. Etsu lá èwò twa mì rìa.
   c. Etsu twaria (nyá) èwò và mì.
   d. Etsu twa mì rìa nyá èwò.
   e. Etsu và mì (eriatwa (nyá)) èwò.

The sentences of (10) are variants of one another. A schematic representation of the surface structure of (10a) is given as (11).
One preposition, nyá 'of' occurs in (10). But it should be noted that it appears whenever lá is not found, that is, in (10 c, d, and e). In other words, whenever the meaning of lá as a Causative verb has been incorporated into another verb, nyá is used in these constructions. The incorporation processes of (10) are something like (12):

(12)   lá + twaria (10b)  
    twaria + nyá + yà (10c)  
    lá + twaria + yà → twaria + nyá  (10d)  
    yà + nyá (10e).

It is interesting to compare these facts with Givon's claim (Givon 1969:167) that "... the emergence of overt Preposition/case markings is the result of the incorporation of [cause] into lexical verbs ... and the ensuing structural changes which upset the original subject-verb syntactic order." According to Givon, languages like Indo-European, Bantu, and Semitic "incorporate the deep verb [cause] into surface lexical verbs. Thus, English cause oneself to see can be replaced by a surface lexical verb to look." Conversely, languages
(like those of Kwa) which do not incorporate the deep verb [cause] are devoid of prepositions. The Nupe examples we have examined support Givon's claim.

Like là, và is not always interpreted as having a concrete meaning. In the sentences of (13) below it has the meaning of 'for' in (a) and 'to' in (b).

(13) a. Mf lotun và etsu.
I worked gave chief
'I worked for the chief.'

b. Etsu tâ và mf.
chief said gave me
'The chief told me.'

These two sentences can be compared with those of (l4), which are Yoruba.

(14) a. Mo gisẹ fún Ọba.
I worked gave chief
'I worked for the chief.'

b. Ọba sọ fún mi.
chief said gave me
'The chief told me.'

In English, too, there are instances when the verb to give has an interpretation other than concrete, for example, to give a talk.

2.3. The verbs bè and lo

These are motion verbs involving place deictics. We get their straightforward interpretations in (15).
(15) a. Etsu bé bâbo.
   chief came here
   'The chief came here.'

   b. Etsu lo bâgá.
   chief went there
   'The chief went there.'

Quite often these verbs are used as directionals as in (16).

(16) a. Etsu bici bé bâbo.
   chief ran came here
   'The chief ran here.'

   b. Etsu bici lo dzukó.
   chief ran went market
   'The chief ran to the market.'

In (16) the use of bé and lo in the absence of prepositions results in serial constructions.

At times bé and lo have modal interpretations as illustrated by (17).

(17) a. Etsu bé de dôkkó.
   chief came own horse
   'The chief happened to own a horse.'

   b. Ele lo gá wù à dù.
   rain went say it will fall
   'It was going to rain.' (but it did not).

Clearly, there is no action of coming or going in the examples of (17). But like some other action verbs we have examined before, they also receive different interpretations in different circumstances.
3.0. The Locative Verbs

In their Nupe Grammar, Banfield and Macintyre (1915:31) have correctly noted certain verbs which they describe as 'prepositional verbs'. Since all of these verbs deal with locating objects or persons, I have called them Locative verbs. They are limited in number, and the examples from BM given below exhaust the list. 7

(18) Singular Plural
a. dā 'to be in, or inside' fi
b. ci 'to be lying down' zi
C. sl 'to be sitting down' zi
D. gī 'to be standing upright' zi
E. ta 'to be upon' kpe
f. hā 'to be stuck into' -
g. bà 'to be hanging on' -
h. fó 'to be impaled on' -
i. ba 'to be placed against' -

Certain peculiarities of these verbs are worth noting. In the first place some of them, (18 a-e), make a singular-plural distinction. As far as I know, (these verbs, (plus one other) are the only verbs in the language that make such a distinction. The other verb that has a plural form in the language is lá - ku. No attempt is made here to offer any explanation concerning the distinction.

Second, unlike most of the verbs of Nupe, these do not undergo the process of nominalization by partial reduplication. For that reason, unlike (19a), (19c) is
ungrammatical.

(19) a. Yiya etsu ya mi ëwò o.
giving chief gave me garment Top. Marker.
'It is a fact that the chief gave me the
garment.'

b. Sàlàmì ci kata o.
Salami lying house LOC.
'Salami is lying in the house.'

c.*Cici Sàlàmì ci kata o.

But as BM have correctly pointed out sentences of the type
(20) occur (the examples are theirs).

(20) a. Lá kàrà sìsì.
take load down
'Put the load down.'

b. Lá cìgbà cìcì.
take post down
'Put the post down.'

c. Lá enya kpátá zìzì.
take thing all down
'Put everything down.'

In these examples the form sìsì, cìcì, and zìzì are
interpreted as place adverbial ('down').

The third point about these locative verbs is that
because they are stative verbs, they cannot be directly
used in the Progressive Aspect or in the Imperative Mood.
For example both the sentences of (21) are ungrammatical.

(21) a. *Ta èsákó o.
be upon table LOC.
* 'Be upon the table.'
b. *Ebi ेta ेsako ो.
knife is being upon table
*'The knife is being upon the table.'
Locative verbs can only occur in the Imperative Mood in conjunction with a verb that is interpreted as causative, as in (22).

(22) Lá ọtìfì ta ेsako ो.
take book be upon table LOC.
'Put the book on the table.'

The fourth point about the locative verbs is that they occur in verb serialization. The first of each pair (23 - 31) is a serial construction.

(23) a. Etsu ेlotun dà kata ो.
chief is working in house LOC.
'The chief is working in the house.'

b. Etsu dà kata ो.
chief be in house LOC.
'The chief is in the house.'

chief is sleeping lying house LOC
'The chief is lying asleep in the house.'

b. Etsu ci kata ो.
chief lying house LOC.
'The chief is lying asleep in the house.'

chief is sitting to be sitting house LOC.
'The chief is sitting in the house.'

b. Etsu sì kata ो.
chief sitting in house LOC.
'The chief is sitting in the house.'

68
(26) a. Etsu ènakin gi kata o.  
    chief is standing standing up house LOC  
    'The chief is standing in the house.'

b. Etsu gi kata o.  
    chief standing up house LOC  
    'The chief is standing in the house.'

(27) a. Etsu lá litáfi ta èsáko o.  
    chief took book be upon table LOC  
    'The chief put the book on the table.'

b. Litáfi ta èsáko o.  
    Book be upon table LOC  
    'The book is on the table.'

(28) a. Etsu lá èbi há zana o.  
    chief took knife stuck fence LOC  
    'The chief stuck the knife into a fence.'

b. Èbi há zana o.  
    knife stuck into fence LOC  
    'The knife is stuck into the fence.'

(29) a. Etsu lá zásà bà sémpa o.  
    chief took picture hang wall LOC  
    'The chief hung the picture on the wall.'

b. Zásà bà sémpa o.  
    Picture hung wall LOC  
    'The picture is hung on the wall' (the  
    picture hangs on the wall).

(30) a. Etsu lá eci fó tsùkùn o.  
    chief took yam impaled on stick LOC  
    'The chief impaled the yam on the stick.'

b. Eci fó tsùkùn o.  
    yam impaled on stick  
    'The yam is impaled on the stick.'
(31) a. Etsu lá zògùn ba sémpa o.
   chief took mat placed on wall LOC
   'The chief placed the mat on the wall.'

b. Zògùn ba sémpa o.
   Mat placed on wall
   'The mat is placed on the wall.'

We note that in the (a) sentences of (23) through (31) the locative verbs in the serial strings indicate the location of the action expressed by the preceding verbs (cf. Welmers 1946).

Finally, the (b) sentences of (23) through (31) show that locative verbs occur as main verbs. In such instances, with the exception of (23), each locative verb presupposes the meaning expressed by the first verb of its (a) counterpart. Given, for example, (24b) Etsu ci kata o, we can infer Etsu èlele. Similarly, from (31b) Zògùn ba sémpa o, X la zògùn may be inferred. In other words, if we are given the locative verbs listed below, the meaning of preceding verbs can be inferred.

<table>
<thead>
<tr>
<th>Preceding verb</th>
<th>Locative verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>bá</td>
<td>ta</td>
</tr>
<tr>
<td>fò</td>
<td>há</td>
</tr>
<tr>
<td>ba</td>
<td>ci</td>
</tr>
<tr>
<td>lele</td>
<td>si</td>
</tr>
<tr>
<td>fédùn</td>
<td>gi</td>
</tr>
<tr>
<td>nàkin</td>
<td></td>
</tr>
</tbody>
</table>

70
The locative verb dē is too general to allow this kind of prediction.

In summary, the locative verbs of Nupe function like English prepositions in many instances. They neither conjugate, nor do they nominalize by partial reduplication. But they can still be used as independent verbs, hence it is appropriate to regard them as verbs. (See chapter two for Westermann's remarks on similar verbs in Ewe.)

4.0. Lexical Parsimony vs. Elaborate Syntax

In the foregoing sections we have seen that a few action verbs are extensively used for various purposes in Nupe. We also found that surface prepositions are very rare. The consequence is that serial structures abound in the language. This implies that any account of Verb Serialization of this nature must take the lexicon very seriously.

One way of handling the lexicon in this case is to postulate that sequences of verbs like lē + bē be entered in the lexicon as one item. But this is untenable, since each of the verbs can be independently used. Let us view the situation as that of lexical parsimony.

The notion of lexical parsimony considered here, as relating to Verb Serialization, is as follows: a subset of surface lexical items are found in the lexical stock of a language. These lexical items can be used as
independent verbs. Let us call these basic verbs without claiming that they are semantically prime verbs. Additionally, two or more basic verbs can be used in combination to express another concept whose meaning is equivalent to the total meaning of the basic verbs involved. It is possible to replace the combined verbs by a composite lexical verb, thus adding a third lexical item. If a composite item is not available, the situation is viewed as that of lexical parsimony. Dixon (1971:440) has used the term nuclear for what I have called basic, and non-nuclear for composite. According to him English look is a nuclear verb, stare is non-nuclear, and "stare can be defined in terms of the meanings of look hard."

In Nupe lá and bé are nuclear verbs, and so are English take and come. Whereas English has a non-nuclear verb to bring, which can replace take and come, Nupe does not have a corresponding non-nuclear verb to bring. As a result these two verbs must appear in the surface syntax of any construction whose meaning is equivalent of the total meaning of the two verbs. Verb Serialization is therefore inevitable. In serialization Nupe has utilized a few verbs, thus minimizing the number of surface lexical items, but this is done at the expense of elaborate syntactic rules. The items listed in (32) are examples of basic versus composite lexical items.
<table>
<thead>
<tr>
<th>BASIC</th>
<th>COMPOSITE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(32) a.</td>
<td></td>
</tr>
<tr>
<td>lá</td>
<td>+ bé</td>
</tr>
<tr>
<td>take</td>
<td>+ come</td>
</tr>
<tr>
<td>b.</td>
<td></td>
</tr>
<tr>
<td>dà</td>
<td>+ lá + bé</td>
</tr>
<tr>
<td>go</td>
<td>+ take + come</td>
</tr>
<tr>
<td>c.</td>
<td></td>
</tr>
<tr>
<td>dzùn</td>
<td>+ dà</td>
</tr>
<tr>
<td>get out</td>
<td>+ go</td>
</tr>
<tr>
<td>d.</td>
<td></td>
</tr>
<tr>
<td>bèyé</td>
<td>+ wú</td>
</tr>
<tr>
<td>look</td>
<td>+ show</td>
</tr>
<tr>
<td>e.</td>
<td></td>
</tr>
<tr>
<td>gà</td>
<td>+ yà</td>
</tr>
<tr>
<td>say</td>
<td>+ give</td>
</tr>
<tr>
<td>f.</td>
<td></td>
</tr>
<tr>
<td>lá</td>
<td>+ yé</td>
</tr>
<tr>
<td>take</td>
<td>+ understand</td>
</tr>
<tr>
<td>g.</td>
<td></td>
</tr>
<tr>
<td>lá</td>
<td>+ túlá</td>
</tr>
<tr>
<td>take</td>
<td>+ reveal</td>
</tr>
<tr>
<td>h.</td>
<td></td>
</tr>
<tr>
<td>nyá</td>
<td>+ dzùn</td>
</tr>
<tr>
<td>chase</td>
<td>+ get out</td>
</tr>
<tr>
<td>i.</td>
<td></td>
</tr>
<tr>
<td>lá</td>
<td>+ wú</td>
</tr>
<tr>
<td>take</td>
<td>+ show</td>
</tr>
</tbody>
</table>

This means that the meaning of each of the composite verbs of English can only be given in Nupe by combining the corresponding basic verbs.

Let us now consider the idea of lexical parsimony briefly described above vis-a-vis the notion of lexical decomposition advocated mainly by McCawley: that is, his well-known proposal that lexical items are to be analyzed in such a manner that kill = cause to become not alive. Given a sentence like (33), at some point its derivation
would look like (34), after the rule Predicate Raising has applied several times.

(33) Sàlámí dà lá êbi bé.
    Salami went took knife come 'Salami fetched the knife.'

(34)

In (34) the structural description for the replacement of go + take + come by fetch is met in English. The surface lexical item fetch therefore optionally replaces the nuclear verbs. This is an additional lexical rule of English, which Nupe does not have. Hence, the basic verbs must appear in the surface sentence.

The import of these processes is obvious. English has more elaborate lexical rules, at least in respect of the verbs under consideration, and this makes it possible for its surface structure to be simple. Conversely, Nupe lexical rules are rather simple, but the complexities are found in the surface syntax. This shows how interdependent lexical and syntactic rules are.

Concerning the proposed analysis, it shows that lexical decomposition provides a useful basis for comparing some lexical items of Nupe and English. To the
extent that this is successfully done some light is shed on the arbitrary nature of lexical systems and their implications for syntax.

5.0. **Lexical Affinity**

One clear fact noted in the discussion of the Nupe verbs lá, và, bê and lo is that they have varying semantic interpretations in different contexts. The following points were noted: the meaning of lá may be concrete/physical, Instrumental, Manner; và is sometimes physical, but at times it is Benefactive; bê and lo are physical, but Modal in certain circumstances. The important question is how these verbs are to be characterized in the lexicon in a way that reflects their behavior. This type of problem is not new.

In Postal (1970) we find the examples in (35).

(35) a. Harry reminds me of Fred Astaire (His la)  
   b. Lucille reminded me of a party (I was to attend) (3b)

In (35a) the surface verb *remind* has an interpretation involving "a perception of similarity between two entities", while in (35b) it means "cause to remember". Are there at least two surface verbs *remind*, or just one? We can also observe that the problem of lexical affinity is common among certain English verbs that are used in cognate object constructions, of which (36) are examples.

75
(36) a. I **had a dream** about the pending examinations.
b. I **made a promise** to visit him.
c. **We took** a walk.
d. Bill **gave a talk** on Linguistics and Logic.

In (36) the verbs **had**, **made**, **took**, and **gave** cannot be interpreted in their concrete sense as can the verbs of the same phonological shape in (37).

(37) a. **I had** a jacket.
b. **I made** a box.
c. **We took** our pens.
d. Bill **gave** a dollar to the beggar.

But clearly, these verbs must be related. If so, how do we account for them in the lexicon?

One possible solution is to postulate as many entries per verb form as there are different semantic interpretations for it. Thus for English **to have** in (36 37) there would be have1, have2 etc.; and **to give** would be give1, give2, etc. As for Nupe lá there must lá1, lá2 ... láₙ (and so for the other verbs). To justify this approach, one can invoke the doctrine of selectional restriction, for instance, to argue that lá in (38a) is distinct from lá in (38b).

(38) a. Sàlámí lá̀ bì bá nàkà.
Salami took knife cut meat
'Salami used the knife to cut the meat.'
b. Yìgì̀dì lá̀ m̀àngò̀rò dzù.
sun took mango red
'The sun reddened the mango.'
The problem with this approach is that it denies any semantic relationship that holds between $\text{Verb}_1$, $\text{Verb}_2$, etc. of the same phonological shape, whose meaning varies only according to context. Such a denial is counter-intuitive. As a matter of fact, a systematic relationship between such verbs can be traced. In the English examples of (36) the choice of the non-concrete verbs, to have, to make, to take and to give is not arbitrary. That is, we do not have structures like $\ast$to make a dream, $\ast$to take a dream, etc. Now the relationship between the non-concrete verbs of (36) and the concrete ones of (37) is as follows: the noun phrases in the object position in both cases have an identical relationship with their verbs. Thus, having a dream and having a jacket are events that are durational by nature; making a promise and making a box both imply bringing things that did not exist before into existence by the activities of some agents. Taking a walk and taking a pen involve the use of certain parts of the body, and giving a talk and giving a dollar clearly mean that there are receivers at the other end.

Turning now to Nupe, the idea of getting hold of something and then using it for one purpose or another runs through the Manner and Instrumental interpretations of lá. In these cases it is not important whether the object is concrete or abstract. In the causative interpretation of lá, it is the fact of causation and the
resultant effect of it that is significant. This being the case, the sun can be an agent of causation in making the mango red just as Salami is the causation agent of placing the book on the table. Whether the agent is animate or otherwise does not count here. It is clear that a solution which postulates one lá entry per context fails to capture this sort of lexical affinity. It is therefore rejected.

The solution I propose for entering verbs like lá in the lexicon of Nupe is that only one entry should be made. It would have both a central (concrete) meaning and peripheral meanings, depending on context. These meanings must be adequately specified. The central meaning of lá would include taking hold of something. If the object is a concrete noun it may be contextually interpreted as Concrete, and Instrumental if the object is for other activities. If lá occurs before an abstract noun it would be interpreted as a Manner Adverbial if the abstract noun is not associated with change or transfer. Finally, if lá occurs before a noun in a construction such that the state or position of the noun is altered, lá is interpreted as Causative. For the English forms to have, to take, etc., I suggest that they are not homophones of the actual verbs to have, to take, etc., but that they are contextual variants of the same verbs.
My proposal is similar to the kind of analysis Bolinger (1971) has postulated for the English verb remind. According to him the verb would be entered something like (39).

(39) \[ \text{(referential) cause to remember} \]
\[ \text{remind} \]
\[ \text{(inferential) like, resemble, similar} \]

In a similar fashion Macnamara (1971:372) has made an analysis of the verb to feel. In his words:

It is also highly likely that, associated with lexical items, there must be features which can readily be translated into syntactic properties. Take for example, the word 'felt' in these sentence [the numbering is his]:

8. a. John felt Mary.
   b. John felt Mary's leaving.
   c. John felt Mary's leaving was wise.

Its meaning varies markedly: in (8a) it has to do with physical contact, in (8b) it means 'was saddened by' and in (8c) it means 'thought'. The cue to the appropriate meaning seems to be the nature of the grammatical object: a physical entity, a proposition, or neither. Clearly, the lexical entry for felt will have to specify 'form tests' powerful enough to determine the nature of the object and to associate each type of object with a particular meaning of the word feel.

Another writer (Shopen (1971)) has adopted this sort of approach in his paper 'Caught in the Act' to analyse the English verbs such as go and come, which are sometimes used as modals as in (40).

(40) a. Please come pick up your laundry.¹⁰
    b. They go eat everyday at 12:15.
That is, the verbs go and come are not to be entered in the lexicon as homophones of actual go and come. Rather, they are the same verbs functioning differently.

The implications of this hypothesis can be viewed in different dimensions. First, it makes a claim that in language acquisition, a specific lexical item is learned as having a central meaning. But various semantic interpretations of the same lexical item can be contextually inferred.

Next, it follows that if the above paragraph is correct, linguistic theory must provide a way of capturing this aspect of the lexicon. Very likely, we need rules of the type that are widely used in phonology, that is, lexical rules of the type

\[(41) \text{ lá } \rightarrow [\text{Manner}] / \underline{[\text{Abstract Noun}]} \]

or

\[(42) \text{ have } \rightarrow [\text{Non-Physical}] / \text{Cognate Object} \]

Construction are needed. Admittedly, rules of this nature are difficult to formulate, but the need is obvious.

Finally, lexical rules like (41) and (42) have a natural consequence for historical change. At a certain stage two lexical items may actually evolve from one while retaining an identical phonological shape, in which case a rule is assumed to be lost and each lexical item assumes a distinct function (see Shopen (ibid. 256)
for a discussion on English *dare* and *need* in connection with historical changes).

6.0. **Summary**

In the foregoing discussion, attention has been focussed on two sets of verbs: action verbs and locative verbs, both of which occur in serial constructions. In the instances where members of the two sets appear together a locative verb always indicates the location of the action expressed by the verb of action.

One explanation for the widespread occurrence of serial structures in Nupe, and in Kwa languages in general, is that certain basic verbs are commonly used in combination in circumstances where a language like English would normally use semantically composite verbs. The situation in Nupe is viewed as that of lexical parsimony, such that, whereas Nupe has just *lá* + *bé* 'take + come', English has an additional lexical item *bring*, which optionally replaces 'take + come' in the surface structure. Because Nupe has no surface equivalent of *bring*, both *lá* and *bé* must appear in the surface sentence. Thus, a simplification in the rules of the lexicon dictates some complexities in the rules of syntax. It is hypothesized that the notion of lexical decomposition handles the situation in a revealing way.

One other explanation for the frequency of serial
constructions is the scarcity of prepositions. Where these occur in Nupe at all, serialization is reduced. Not only that, but the few prepositions of Nupe are associated with the situations where certain verbs have incorporated the meaning of some higher verbs like \( \text{CAUSE} \).

The behavior of the action verbs has been considered. Apart from their central meanings, they also have peripheral meanings contextually acquired. It is suggested that in such cases only one lexical entry should be made per verb, and that rules of determining the contextual meanings be specified in the lexicon.
Footnotes

1. Sàlàmì is a proper name commonly used in Nigeria. It must not be confused with the English word salami.

2. No claim is made here about the underlying structure of the two sentences combined. That is, the fact that we can recognize two sentences is not to be interpreted as saying that they form a coordinate sentence.

3. Bènyì 'with' is one of the few prepositions found in Nupe. Syntactically, it behaves like Nupe disyllabic verbs, which are often N + V. For example, leyé 'to see' is made up of le (= the verbal element) and yé (from eyé, meaning 'eye'. There is a general V-N Separation Transformation which splits this sort of verb and shifts the nominal element to a position after the object, e.g., Mí le Salami yé 'I saw Salami' from Sàlàmì mì leyé o. 'It was Salami I saw'.

Bènyì undergoes the V-N Separation Transformation just like the verbs. Thus we get Mì lo bè Salami nyì 'I went with Salami' from Sàlàmì mì lo bènyì o. 'It was Salami I went with'.

4. For discussion on the è- construction in Nupe, see George (1970).

5. See my forthcoming paper 'The Cognate Object Construction in Nupe and English'.

6. Twarìa is a bisyllabic verb whose component parts are twa (the verbal element) and rìa (the nominal element). See note 3 above for the V-N Separation Transformation. In (10e) we get eriatwa 'gift giving', which is a nominalization. This kind of nominalization is very productive in Nupe. Its process is V + N = N + V (plus noun prefix è- where applicable, e.g. èbè èvà 'to hunt buffalo' ⇒ èvàyìbè 'buffalo hunting'. See
Lees (1960) for examples of similar nominalizations in English.

7. BM include in their list dá 'to be suspended on'. I exclude it from the list because it behaves differently from Locative verbs; for example it can occur in the Imperative Mood as in Dá nambá 'suspend the bag (on your shoulder)'. It can be reduplicated to nominalize as in Didá u dá nambá o. 'It is a fact that he suspended the bag (on his shoulder)'.

8. Conversely, where Nupe converts a pre-lexical structure such as is on X into surface ta, English has this in its surface formatives as is on X.

9. The construction to make a promise is obviously related to performatives. See Ross (1970) and Austin (1962) for discussion of performatives.

10. Incidentally, these sentences look like serial verbs.
CHAPTER IV

Some Connectives of Nupe

1.0. **Introduction**

In many discussions centered around serial verbal constructions in Kwa, the possibility of deriving such structures from conjoined sentences is implied if not specifically stated. To my knowledge, no systematic account of conjoined sentences has been provided in any of the languages surveyed in chapter two. It is of great importance that such an account should be given in order to provide a background for the understanding of verb serialization. Such an account is not attempted here; rather the present chapter is concerned with a very limited number of types of sentence conjunction in Nupe.

The aim is to look at certain classes of connectives in order to discover those which occur in structures that are used interchangeably with serial verbs and those which are not. Some of the findings will be examined in view of a recent hypothesis about constituent conjunction: namely, that conjoined VP's are directly generated by a recursive phrase-structure rule.

2.1. **Coordinating Connectives**

The coordinating connectives to be considered are:
àmá  'but'
kó  'or'
kasin  'or' (in interrogatives)
tò  'and'
ma  'and'

The sentences of (1) exemplify their occurrence in the surface structure.

(1)a. Musa si dökò àmá u má (dökò) tù à.
Musa bought horse but he knows (horse) ride not 'Musa bought a horse but he doesn't know how to ride it.'

b. (kó) Musa kó Gànà à bé.
'(either) Musa or Gana will come.'

c. (ụgbá) Musa kó ni kasin u nyanyà?
(Q-marker) Musa sang or he danced?
'Did Musa sing or dance?'

d. (tò) Musa tò Gànà à bé.
(and) Musa and Gana will come '(Both) Musa and Gana will come.'

e. Musa bé (tò) Gànà ma bé (ma).
Musa came (and) Gana and came (also)
'Musa came and Gana also came.'

The behavior of each is examined below.

2.2. Àmá

This connective is employed to conjoin two sentences sharing some common topic. 'Topic' in this context is not restricted to nouns, but may include actions, qualities or expectations. Thus in John wùnkpé àmá Mary wùnkpé à 'John is tall but Mary isn't' (literally, John tall but
Mary tall not) the common topic is deemed to be tallness. In the sentence of (1) the two conjuncts are Musa bought a horse; but Musa does not know how to ride it. The conditions that must be met before the two can be conjoined are little understood and will not be discussed here. But in the Nupe context, at least, there is an expectation associated with buying a horse, and that is to ride it; if the latter is negated in the second conjunct, then the connective amf is used between the two.

In certain circumstances it is possible to delete the connective amf, but the resultant sentence is not a serial structure. Thus the sentence in (2a) is grammatical, but that of (2b) is not.

(2)a. Musa si dòkò u mà tú ñ.
Musa bought horse he knows ride not
'Musa bought a horse but he does not know how to ride (it).''

b. Musa si dòkò mà tú ñ.

2.3. (kó)...kó

In the sentence of (1b) the meaning of (kó)...kó is 'either...or'. Notice that two different noun phrases occur in this construction. If it happens that only one noun phrase appears in such a construction we get a different interpretation of the initial kó as in (3) where it means 'whether' and not 'either'.
(3) Kó Musa à bé kó u à bé à
whether Musa will come or he will come not
mf kpe à.
I know not
'I don't know whether Musa will come or not.'

Here is another example of the notion of lexical parsimony. Nupe uses only one form kó where English uses three: either, whether, and or. It is, however, conceivable that either and whether are morphologically related.

Returning to the sentence (1b), it is very likely that it is a reduced form of (4) after some deletion rules have applied from right to left.

(4) Kó Musa à bé Kó Gânà à bé.
Neither the reduced nor the unreduced form constitutes a serialized sentence. It should be noted in passing that verb phrases cannot be conjoined by kó. Thus we do not get sentences of the type.

(4') *Musa à koni kó nyanyà.
'Musa will sing or dance.'

2.4. Kasin

In a sense, this form is in complementary distribution with (kó)...kó. Whereas the latter is used in declarative sentences, kasin occurs in interrogatives. The example of (lc) is a question. By turning it into a declarative sentence we get (5) ignoring the question
(5) (kó) Musa kóní kó u nyanyà.
   Either Musa sang or he danced
   'Musa either sang or danced.'

The sentence of (lc) cannot be reduced into a serial structure, neither can kasin be used to conjoin verb phrases as the examples of (6) show.

(6) a. *ŋgbá Musa kóní nyanyà?
    *'Did Musa sing danced?'

   b. *ŋgbá Musa kóní kasin nyanyà?
      'Did Musa sing or dance?'

2.5. (tò) ... tò

This pair is used in symmetric conjunctions. The example of (1d) (tò) Musa tò Gàñá bé has the same meaning as (7):

(7) (tò) Musa à bé tò Gàñá à bé
    '(Both) Musa and Gàñá will come.'

The same type of rule that is required in the derivation of (1b) is therefore also needed here.

The function of (tò)...tò is limited to the conjoining of sentences and noun phrases only. To put it negatively, it does not conjoin verb phrases. For that reason (8) is ungrammatical.

(8)* Musa kóní tò nyanyà
   'Musa sang and danced.'

Although the serial structure Musa kóní nyanyà occurs in the language, it does not result from the deletion of
tò...tò. Rather, it comes from an underlying structure having the meaning of Musa sang and then danced, and not Musa simultaneously sang and danced. The former can be paraphrased by Musa kôni u ci nyânyâ, (see 3.2).

2.6. ma...(ma)

Although this pair occurs in conjoined sentences it is not at all clear whether it is the same kind of connective as we have encountered so far. In the first place, the first ma invariably occurs as a pre-verbal element, and always after a noun phrase in the second of two conjoined sentences, and never between conjuncts. In the second place, the second ma occurs in the final position, whereas the other optional forms appear initially. In the third place, it cannot stand between noun phrases. In any case, like the other connectives seen above, it does not occur between verb phrases.

Examine therefore the sentences of (9) and (10).

(9)a. Musa bê (tò) Gâna ma be (ma). (= 1e) Musa came (and) Gana and came also 'Musa came and Gana also came.'

b. Gâna bê (tò) Musa ma bê (ma). Gana came (and) Musa and came (also) 'Gana came and Musa also came.'

c. *Gana ma Musa be (ma).

(10)a. Musa wûnkû u ma gbô (*ma). Musa tall he and fat (also) 'Musa is tall and fat.'
b. Musa wünká ma gbó ( ma).
Musa tall and fat
'Musa is tall and fat.'
c. *Musa wünká gbó
Musa tall fat

The sentences of (9a and b) have the same meaning. This shows that ma is used in symmetric conjunction. (9c) illustrates the fact that ma does not occur between noun phrases, and (10b) demonstrates that ma does not conjoin verb phrases. (10c) is a derived structure in which ma has been deleted. But notice that it is ungrammatical. This is a piece of evidence that structure containing ma cannot be the source for serial verbs. Notice also that in (10a) ma is used to conjoin two sentences which contain a non-action verb.

One other fact to note about ma is that its second occurrence is conditioned by a repeated verb. Where this condition is not met the inclusion of the second ma renders the construction ungrammatical, as in (10a). Finally, to optionally occurs with ma in (9a and b). This indicates that ma is likely to be a sort of modal verb. This is even more likely if its preverbal position is taken into consideration.

To summarize this brief survey of the Nupe coordinate conjunctions, we have found no basis to assume that coordinate structures underlie serial verbs, nor have we
found instances of conjoined verb phrases.

3.1. **Sequential Connectives**

The connectives considered in this section are those which are used in connecting consecutive events expressed by action verbs. These are:

- (kángá)...ci 'and then'
- (bédzb)...ci 'before'
- hárí 'until'

They are used in asymmetric conjunction. Quite often constructions in which they occur have paraphrase relations with serial structures.

3.2. **(kángá)...ci**

Like ma, ci always occurs as a preverbal, and kángá is to ci as tò is to ma. Unlike ma, however, ci is never optionally repeated. Very likely the kángá (from kámi gá 'time that') is the actual connective, and ci is a modal verb of some sort. Banfield and Macintyre (1915) have correctly observed that "ci is the word used to join phrases in the course of narration or of a long sentence." The term 'phrases' here may be interpreted to mean verb phrases. Examine now the sentences of (11).

11. a. Musa fá èwò (kángá) u ci dà de.
   Musa wore garment (then) he and went outside
   'Musa put on the garment and then went out.'
b. Musa dà de (kángá) u ci fă èwò.
Musa went outside (then) he and wore garment
'Musa went out and then put on the garment.'

c. Musa fă èwò ci dà de.
Musa wore garment and then went outside
'Musa put on the garment and went out.'

d. Musa dà de ci fă èwò.
'Musa went out and then put on the garment.'

e. Musa fă èwò dà de.
'Musa put on the garment (and then) went out.'

f. Musa dà de fă èwò.
Musa went out wore garment
'Musa went out and put on the garment.'

The sentence of (11a) is an example of asymmetric conjunction. When the order of the occurrence of its conjuncts is reversed as in (11b) a meaning change occurs. As a matter of fact, very often a reversed order results in ungrammatical sentences. For example, (12b) is ungrammatical for this reason.

(12) a. Musa du eci g1.
Musa cooked yams ate
'Musa cooked yams and ate them.'

b. *Musa g1 eci du
*Musa ate yams cooked.

Examples (11c and d) are illustrations of surface verb phrases conjoined by ci. Note that they are variants of (11a and b) respectively. The structures of (11e and f) are serial constructions, which emerge after processes of deleting several elements including ci. Whenever ci is
used it can be optionally preceded by *káŋgá*, but not
conversely. *Káŋgá* can be used independently as in (13).

(13) a. Musa mátsā káŋgá
    Musa laughed then

b. Musa lotun káŋgá u fá
    Musa worked then he rested.

3.3. *bédzó...ci*

The pair *bédzó...ci* sometimes behaves in a manner
similar to *káŋgá...ci* in that its deletion may result in
a serial structure paraphrase, as in (14c).

(14) a. Musa gínya bédzó u ci lele.
    Musa ate before he and slept
    'Musa ate before he slept.'

b. Musa gínya ci lele.
    Musa ate and slept
    'Musa ate before he slept.'

c. Musa gínya lele (= a and b).

The pairs *káŋgá...ci* and *bédzó...ci* are functionally
related. The former relates two conjuncts in this
fashion: event X took place and then event Y occurred;
*bédzó...ci* does so by stipulating that event X took place
before event Y occurred. The two pairs differ in one
significant way: *bédzó...ci* has a wider scope and in
many instances structures containing it may not be para-
phrased by serial structure. Thus, the sentence of (15b)
is impossible.
(15) a. Musa lotun bédžò u ci fá.  
Musa worked before he and rested  
'Musa worked before he rested.'

b. *Musa lotun fá

c. *Musa lotun kángá u ci fá.  
Musa worked then he and rested  
'Musa worked and then rested.'

(15c) is ungrammatical because of the inclusion of ci. I suspect that if the sentence were grammatical we would be able to get (15b), but neither is acceptable.

3.4. hárí

The connective hárí is employed to conjoin sentences expressing such ideas as Event₁ took place and continues to the state or stage of Event₂. At times structures containing hárí are paraphrasable by serial constructions. Examine therefore the sentences of (16).

(16) a. Musa gínyà hárí u funín.  
Musa ate until he full  
'Musa ate until he got full.'

b. Musa gínyà funín (= a).

c. Musa bici hárí u tun dzukó.  
Musa ran until he got market  
'Musa ran until he got to the market.'

d. Musa bici tun dzuko (= c).

In (16a) Event expresses Musa's eating which continued to the point of Event₂, namely, that he got full. The example of (16b) is a serialized counterpart of (16a).
Like the other asymmetric conjunctions hárf does not permit conjunct shifting; thus (17) is ungrammatical.

(17)* Musa funin hárf u gínya

4.0. The Infinitive Indicator nyí and the Purpose marker -zi

The sentence of (18) below contains a purpose phrase:

(18) Musa bé èbi nyilá-zi.
     Musa came knife to take-PM
     'Musa came in order to take the knife.'

In this example nyí precedes the verb lá, and -zi follows the verb. Banfield (1914) describes nyí as the sign of the infinitive mood 'to' as in

(19) Eci má nyigí.
     'Yam is good to eat.'

If this is correct -zi must then be interpreted as the Purpose marker. The scanty evidence for this is that when the Purpose phrase is preposed, as in (20), nyí is dropped and -zi is retained.

(20) Ebilá-zi Musa bé o
to take the knife Musa came
     'Musa came to take the knife.'

These particles are very little understood at the moment, but their relevance to the present study is the fact that the sentence of (18) can be paraphrased as (21), which is a serial structure.

(21) Musa bé lá èbi
     Musa came took knife
     'Musa came to take the knife.'

96
5.0. **Connectives and Lexicalization**

I have pointed out in the previous chapter that the study of the way in which different languages lexicalize semantic concepts will go a long way to enrich our understanding of language. The outline of the few connectives of Nupe sketched above further justifies this claim.

R. Lakoff (1971:131) has shown that English 'and' has two interpretations, namely, symmetric and asymmetric. Syntactically, the conjuncts connected by symmetric 'and' can exchange their positions without any significant meaning change. However, those conjuncts which are connected by asymmetric 'and' cannot exchange their positions. If they do, either an ungrammatical sentence is generated or a meaning change is effected. In this case speakers of English must have an explanation for this difference since it is the conjunction 'and' that is used in both cases. This explanation must then come from outside of the structures. R. Lakoff explains this in terms of presuppositions and deductions. In Nupe, presuppositions and deductions are as necessary as in English for the interpretation of sentence conjunction, but at least some of these are lexicalized. Thus Nupe symmetric 'and' involves the lexical item *ma*, and asymmetric 'and' is *ci*.

A comparison of English or with Nupe *kasin* is another example. R. Lakoff (Ibid.:137) remarks that one otherwise inexplicable use of or involves an argument in
favor of an underlying interrogative performative abstract verb; or perhaps it is more accurate to think of questions as introduced by a somewhat more complex abstract underlying structure:

'I request that you give me information so that I can learn/know whether S' or somewhat similar.'

This type of abstract underlying form would introduce questions such as (22) (example 137 in R. Lakoff):

(22) Did John leave, or didn't you notice?

It will be recalled that Nupe uses kasin 'or' in this kind of context, that is when a disconjunctively conjoined sentence is an interrogation kasin, and not ko, is used. Here as in the case of 'and' versus Nupe ma and ci we have or versus Nupe ko and kasin. English has one lexical item which is interpreted in two distinct yet related ways, but Nupe uses two lexical items for the two interpretations.

6.0. The Conjunction Hypotheses

The following hypotheses about constituent conjunction are well known:

A. Both phrasal and derived conjunction are basic.

B. Only phrasal conjunction is basic (revised as Phrase Structure Rule Hypothesis)

C. Only derived conjunction is basic.

It is not my intention to give an account of how conjoined sentences are derived, nor do I intend to survey the pros and cons of all of the hypotheses above. For a
comprehensive survey and evaluation of A–C above see
Stockwell et al. (1973), chapter VI. My purpose here is
to examine some aspects B in view of the Nupe connectives
and verb serialization.

Dougherty (1970b, 1971) has proposed an elaborate
version of B above called Phrase Structure Rule –
Lexicalist Hypothesis. Its general goal is to consider
the "relevance of coordinate conjoined structures in
resolving the balance of power between the transforma-
tional component and the base component of a generative
grammar" (1971:298). The relevant aspect of this theory
to the present study is the proposed Phrase Structure
rules given directly below.

\[(22) \quad S \rightarrow NP \quad VP \]
\[NP \rightarrow (Q) \quad s^n \quad (ADV) \]
\[VP \rightarrow (Q) \quad v^n \quad (ADV) \quad (Ibid.:315) \]

The outstanding novelty in this theory is that VP is
claimed to be recursive along with the well-known
recursive S and NP.

If one assumes thePRS-lexicalist hypothesis
position then the sentence of (23) will have a deep
representation something like (24):

\[(23) \quad \text{Musa fā ेwọ ci dà de. (}=11c) \]
\[\quad \text{‘Musa put on the garment and then went out.’} \]

99
It will be recalled that this is the only circumstance in which verb phrases can be conjoined in Nupe. Two questions, however, arise.

The first is theoretical, and that is whether VP can be regarded as a category in universal (or quasi-universal) base. Perhaps the motivation for its inclusion in the base in the early transformational grammars was the idea that grammatical relations such as 'subject' and 'object' are found in the base component of the grammar. Some linguists have argued against this. Fillmore (1968:2), for example, claims that "such concepts as 'subject' and 'direct object'" are not included in the base structure, but they "are regarded as proper only to the surface structure of some (but possibly not all) languages."

Stockwell et al. (1973:11) argue that in English "'subject' and 'object' are in all cases derived relations. (They are derived by means of very early rules: OBJECTIVALIZATION and SUBJECT PLACEMENT)." Specifically, OBJECTIVALIZATION would place an NP (in a non-case grammar) as a
direct object of a main verb, giving rise to the VP constituent (see McCawley 1970:170).

The exclusion of English 'subject' and 'object' from the base structure, Stockwell's group explains, is "consistent with considerations of linguistic universals." It has been suggested that there is a universal (or quasi-universal) base component, such that all languages are similar in their base structure. The group observes that some languages have been found to have no 'subject' or 'object' in the base. Positing such concepts in the base for English would therefore be arguing against the universal base hypothesis.

The second question is whether Nupe provides direct evidence against VP as a base structure category. Perhaps it does not. Conceivably, one may argue that since Nupe has surface structures of the type VP ci VP, it is a support for the hypothesis. We do find, however, that Nupe sentences such as (24) above always have paraphrases like

(25)a. Musa fā ëwò (kángá) Musa ci dà de. (= lla)
   Musa wore garment then Musa and went out
   'Musa put on the garment and then Musa went out.'

b. Musa fā ëwò (kángá) u ci dà de
   'Musa put on the garment and then he went out.'

c. Musa fā ëwò dà de. (= lle)
   'Musa put on the garment (and then) went out.'

Semantically (24) and (25) are not different, but that
does not necessarily mean that they are derivationally related. It appears, however, that it is plausible that the sentences have a common source, and that three sources need not be postulated for them. So far, for all NP VP ci VP that I have found in Nupe a corresponding NP_1 VP_1 ci VP_2 is also possible.

On the basis of a universal base component and the plausibility of positing one deep source for the sentences of (24) and (25), the hypothesis that accords VP a base status is rejected for Nupe.

7.0. Summary

In this chapter some of the connectives of Nupe have been outlined. We discovered that coordinating structures interpretable as symmetric conjunctions do not underlie serial constructions in the language. The only conjoined structures from which serial verbs can derive are asymmetric conjunctions. Such constructions contain connectives that I have called sequential connectives.
Footnotes

1. *ngbé Musa kóní nyanyà* 'Did Musa sing and dance?' is grammatical, but its meaning is radically different from that of (1c). The meaning here is 'Did Musa sing and then danced?'

2. The sentence of (12a) is derived from

   Musa du eci kángé Musa ci gi eci.

   Musa cooked yam then Musa and ate yam after the underlined forms have been deleted.

3. This structure is comparable with some we have seen in chapter two.
CHAPTER V

Syntactic Sources of Serial Verbs

1.0. Preliminaries

The behaviour of the verbs ëé, ëá, ëé and lo - verbs which feature prominently in verb Serialization - was investigated in chapter three. It was seen that part of the explanation for the widespread occurrence of serial structures is the fact that many combinations of such verbs are not replaced in the surface structure by composite verbs as is the case in English. In many instances composite verbs are not available. The consequence of the parsimonious use of these few verbs in combination is therefore complex surface structures: serial verbs. But verb serialization is not fully explained by the notion of lexical parsimony. Many other verbs occur in series, in which case there must be other explanations.

In chapter four a brief outline of certain connectives of Nupe is given. Some of these elements can be deleted, thus yielding serial structures, and some are not deleted at all.

In these previous chapters attention was not focussed on the syntax of verb serialization. Hence, in the present chapter I will explore the possibility of discovering the deep syntactic sources of Nupe serial verbs. The approach is rather negative in that I assume
that they do not originate from a unique source, and that coordinate sentences, in the strict sense of the term, do not underlie serial structures.

The surface structure of serial construction has been universally given as:

"a row of verbs one after the other" (Westermann, 1930)
"two or more verb phrases" (Bendix, 1972)
"a subject followed by two predicates" (Li and Thompson, 1973).

Equipped with these definitions, I proceed to examine the origins of the construction in Nupe.

2.0. Complementing Serialization

Certain types of serial construction must be derived from sentential complementation. These I have labeled complementing serialization, and they include Instrumental and Manner adverbials, Causatives and Concomitants.

2.1. Instrumentale

Given the characteristics of the surface syntax of serial constructions in 1.0. above, the sentence of (1) is a serial structure.

1. Musa lá èbi ba nakà.
   Musa took knife cut meat
   'Musa used a knife to cut the meat.'

Each of the two verbs (lá and ba) occurring in the sentence can be shown to be a main verb because of its independent occurrence in different types of construction,
tense, and mood, as the sentences in (2) show.

(2) 

<table>
<thead>
<tr>
<th></th>
<th>lā</th>
<th>ba</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Present Progressive:</td>
<td>Musa èlā èbi.</td>
<td>Musa èba nakà.</td>
</tr>
<tr>
<td></td>
<td>'Musa is taking the knife.'</td>
<td>'Musa is cutting the meat.'</td>
</tr>
<tr>
<td>(b) Past Progressive:</td>
<td>Musa fé èlā èbi.</td>
<td>Musa fé èba nakà.</td>
</tr>
<tr>
<td></td>
<td>'Musa was taking the knife.'</td>
<td>'Musa was cutting the meat.'</td>
</tr>
<tr>
<td>(c) Future:</td>
<td>Musa à lā èbi.</td>
<td>Musa à ba nakà.</td>
</tr>
<tr>
<td></td>
<td>'Musa will take the knife.'</td>
<td>'Musa will cut the meat.'</td>
</tr>
<tr>
<td>(d) Interrogative:</td>
<td>Ké Musa lā o? ¹</td>
<td>Ké Musa ba o?</td>
</tr>
<tr>
<td></td>
<td>'What did Musa take?'</td>
<td>'What did Musa cut?'</td>
</tr>
<tr>
<td>(e) Topicalized verb:</td>
<td>Lilá Musa lā èbi o.</td>
<td>Biba Musa ba nakà o.</td>
</tr>
<tr>
<td></td>
<td>taking Musa took knife</td>
<td>Cutting Musa cut the meat</td>
</tr>
<tr>
<td></td>
<td>'Musa actually took the knife.'</td>
<td>'Musa actually cut the meat.'</td>
</tr>
<tr>
<td>(f) Emphatic:</td>
<td>Musa lā èbi lā.</td>
<td>Musa ba nakà ba.²</td>
</tr>
<tr>
<td></td>
<td>'Musa did take the knife.'</td>
<td>'Musa did cut the meat.'</td>
</tr>
<tr>
<td>(g) Imperative:</td>
<td>Lá èbi.</td>
<td>Ba nakà.</td>
</tr>
<tr>
<td></td>
<td>'Take the knife.'</td>
<td>'Cut the meat.'</td>
</tr>
<tr>
<td>(h) Negation:</td>
<td>Musa lā èbi à.</td>
<td>Musa ba nakà à.</td>
</tr>
<tr>
<td></td>
<td>Musa took knife not</td>
<td>Musa cut meat not</td>
</tr>
<tr>
<td></td>
<td>'Musa did not take the knife.'</td>
<td>'Musa did not cut the meat.'</td>
</tr>
</tbody>
</table>

We therefore have every reason to believe that (1) is a serial structure.

But the sentence of (1) cannot be derived from conjoined sentences. It will be recalled that the
connective (kángá)...ci can be easily deleted from a complex structure to yield a serial construction in Nupe. Nevertheless, this connective cannot occur in an underlying sentence for (1). Its inclusion in (3), for example, effects a change of meaning.

(3) Musa lá èbi kángá u ci ba naká.
Musa took knife then he and cut meat
'Musa took a knife and then cut the meat.'

Hence it is impossible to derive (1) from (3). For a similar reason, among others, the Yoruba sentence of (4) below cannot be derived from (5).

(4)*Musa fi őbẹ̀ ó si ge ṣẹran.
Musa used knife he and cut meat
'Musa used a knife to cut the meat.'

(5) Musa fi őbẹ̀ ge ṣẹran.
Musa used knife cut meat
'Musa used a knife to cut the meat.'

Let us now examine the relationship that holds between lá and ba in (1). The verb lá by itself means 'to take hold of something'. When it occurs in a complex structure with the verb ba it acquires the meaning of Instrumental 'to use something'. That is, when lá appears with ba in the construction its specific meaning is that of Instrumental. Clearly, this is a case of dependency. In terms of syntactic representation such constructions must have higher sentences in which lower ones are embedded. In Nupe no connectives appear anywhere
in this type of structure. Very likely, the sentence of (1) has a deep representation something like (6).

(6) a.

Details omitted, the rule of objectivalization would place NP₁ as the object of the verb lá in S₀. Similarly, the same rule would place NP₃ as the object of the verb ba in S₁. (In both cases, it is possible that the rule of objectivalization creates VP nodes.) By applying the rule of subjectivalization NP₂ is placed as the subject of S₀ and NP₄ that of S₁. The configuration that is likely to emerge from the application of these early rules is something like (6b).

(6) b.

EQUI-NP-DELETION would delete the subject of the embedded sentence, S₁ is then pruned. Finally, we get the surface sentence (6c).
At some stage in the derivation, the optional rule of COPYING may apply in order to effect the repetition of the verbs, yielding something like

\[
\text{(7)}
\]

're Musa actually used a knife to cut the meat'  

2.2. Some Manner Adverbials

It turns out that the structure of (6) accounts for some manner adverbials as well. Consider the sentence in (8).

\[
\text{(8) Musa lá hánkàli ba nakà.}
\]

Musa took care cut meat
'musa cut the meat carefully.'

The clause Musa lá hánkàli in (8) contains a manner adverbial (lá hánkàli), which is independently ungrammatical. But when it is combined with another clause its ungrammaticality disappears. This is another case in which one clause depends on another for its full meaning.
The sentence in (8) must therefore have an underlying representation similar to that of (6). Optionally, we get the repetition of the verbs as shown in (9) below.

(9) Musa lá hámkàli lá ba nakà ba.
    'Musa actually cut the meat carefully.'

2.3. Causatives

Sentences containing causatives, of which (10) below is an example also have a deep source similar to (6).

(10) Musa lá èbi ta èsàkó o.
     Musa took knife to be on table LOC
     'Musa put the knife on the table.'

The verb lá has the meaning of 'cause' in this structure. It is combined with a locative verb ta 'to be on'. The meaning of the sentence is 'Musa caused the knife to be on the table'. The underlying structure of (10) above differs from that of the Instrumental and Manner adverbials in that the NP object of the matrix sentence is identical with the NP subject of the embedded sentence. But like the Instrumentals, and Manner adverbials, the repetition of the verbs is possible, as shown in (11) directly below.

(11) Musa lá èbi lá ta èsàkó o ta.
     'Musa actually put the knife on the table.'

2.4. Concomitants

Finally, serial constructions which are to be interpreted as concomitants come under the analysis above.
The notion of concomitancy used here means that the action or event of the first clause and that of the second are to be interpreted as taking place simultaneously. Thus in

(11) Musa lá èbi bé bàbo.
Musa took knife came here
'Musa brought the knife here.'

Musa lá èbi and Musa bé bàbo are viewed as taking place simultaneously. It will be recalled that this is where English has a composite lexical item bring, which can replace Nupe lá and bé.

Very likely the source of (11) is like that of (6). Optionally, the locative noun bàbo 'here' can be left out, and we have the structure of (12)

(12) Musa lá èbi bé.
Musa took knife came
'Musa brought the knife.'

We optionally get the repetition of the verbs as well. This is exemplified in (13).

(13) Musa lá èbi lá bé (bàbo) bé.
'Musa actually brought the knife.'

The notion of concomitancy can be extended to include some forms of Directional. The sentence in (14), for example, has a directional phrase lo dzukó.

(14) Musa bici lo dzukó.
Musa ran went market
'Musa ran to the market.'

The emphatic counterpart (i.e. with repeated verbs) is
(15).

(15) Musa bici bi lo dzukó lo.
'Musa actually ran to the market.'

3.0. The bènyí-construction

In chapter three (2.1) I pointed out that Instrumental and Manner Adverbials and some Concomitants have paraphrases containing bènyí. The examples are repeated in (16) through (18) below.

(16) a. Musa lá èbi ba naká. →
'Musa used a knife to cut the meat.'

b. Musa ba naká bè èbi nyi.
'Musa cut the meat with a knife.'

(17) a. Musa lá hánkáli ba naká. →
'Musa cut the meat carefully.'

b. Musa ba naká bè hánkáli nyi.
'Musa cut the meat with care.'

(18) a. Musa lá èbi bé, →
Musa took knife came
'Musa brought the knife.'

b. Musa bé bè èbi nyi.
'Musa came with the knife.'

These sentences raise a theoretical question strikingly similar to the one Lakoff (1968) has raised in his paper entitled 'Instrumental Adverbs and the Concept of Deep Structure'. The issue is whether the pairs (a) and (b) in (16 - 18) above have just one underlying source or not. Let us refer to the (a) forms as the lá- construction and
those of (b) as the bènyi-construction for convenience. The two constructions have a number of properties in common.

First, they are synonymous in the sense that linguists use the term. Secondly the bènyi-phrase depends on the preceding verb phrase for its specific semantic interpretation just as the lā-clause depends on the succeeding verb phrase for its specific meaning. Thus we have a relationship stated in (19).

(19) a. lā-phrases depend on succeeding verb phrases for their specific meaning

b. bènyi-phrases depend on preceding verb phrases for their specific meaning

Interpreting (19a) in terms of the lā-constructions of (16) through (18) the following specifications obtain:

(20) a. lā èbi in (16a) is interpreted as Instrumental Adverb in the environment followed by a verb phrase containing an action verb which takes an object (èbi is a concrete noun).

b. lā hánkàli in (17a) is interpreted as Manner Adverbial in the environment followed by a verb phrase containing an action verb which takes an object (hánkàli is an abstract noun).

c. lā èbi in (18a) is interpreted as Concomitant in the environment followed by a verb phrase containing an action verb which takes no direct object.

The difference between (20a) and (20b) resides in the fact that the noun hánkàli in (b) is an abstract concept, whereas èbi in (a) is concrete. In (20c) the two actions
of taking and coming are viewed as inseparable.

Interpreting (19b) vis-à-vis the bènyi-constructsions of (16 - 18) we get (21).

(21) a. bènyi èbi in (16b) is understood as Instrumental Adverbial in the environment preceded by a verb phrase containing an action verb which takes an object.

b. bènyi hänkàli in (17b) is understood as Manner Adverbial in the environment preceded by a verb phrase containing an action verb which takes an object.

c. bènyi èbi in (18b) is understood as Concomitant in the environment preceded by a verb phrase containing an action verb which takes no direct object.

The differences among the specifications of (21) parallel those of (20), except in two respects: (i) è and bènyi are distinct lexical items; (ii) whereas è occurs in the first clause bènyi appears in the second. Thus we can see a mirror-image relationship between the constructions.

Third, in interrogatives both è- and bènyi-constructions are interpreted in the same way. For example, the pair of (22) have the same meaning.

(22) a. ìgbá Musa èbi ba nakà?
   Q. Musa took knife cut meat
   'Did Musa use a knife to cut the meat?'

b. ìgbá Musa ba nakà bè èbi nji?
   Q. Musa cut meat with knife?
   'Did Musa cut the meat with a knife?'

What is being questioned in (22) is not whether the action of cutting the meat took place; rather it is the instrument
that was utilized in performing the action that is being questioned.

Fourth, like the interrogatives, the negative forms of the two constructions are understood in the same way, as the examples of (23) show.

(23) a. Musa lá èbi ba nakà à.
Musa took knife cut meat not
'Musa did not use a knife to cut the meat.'

b. Musa ba nakà bè èbi nyi à.
'Musa did not cut the meat with a knife.'

In both (23a and b) what is negated is the instrument used in the action of cutting the meat and not the action itself.

In view of these facts it would appear counter-intuitive to ascribe the two types of construction to different sources. Obviously, the two are transformationally related just as they are semantically related. The only obstacle in the way of deriving them from one source is the distinct lexical items lá and bènyi. In spite of this problem, I suggest, in conclusion, that they be derived from only one source, just as Lakoff has proposed for English. At present I do not know exactly how the derivation of the bènyi-construction will be formally expressed. But if lexical transformations and syntactic transformations are permitted to mix, as has been suggested in some versions of Semantic Syntax (e.g. see Postal 1970), the problem is not unsurmountable.
4.0. **Restrictive Serialization**

This section deals with serial structures which contain Purpose Adverbials, Datives, Benefactives and Locatives. I have used the term Restrictive Serialization to characterize this subtype, because in general one clause, in such constructions, modifies another. Like Complementing Serialization, Restrictive Serialization does not derive from coordinate structures. The examples of (24) - (26) show that this is the case.

(24) a. Musa bé lá ḍebi,
Musa came took knife
'Musa came(to take)the knife.'

\(\text{he took}\)

b. Musa bé u ci lá ḍebi,
Musa came he and took knife
'Musa came and he took the knife.'

c. Musa bé ḍebi (nyi) lázī,
Musa came knife to take
'Musa came to take the knife'

(25) a. Musa lá lítǎfi yà mf,
Musa took book gave me
'Musa gave me the book.'

b. *Musa lá lítǎfi u ci yà mf.

(26) a. Musa lotun yà mf,
Musa worked gave me
'Musa worked for me.'


Sentence (24a) is ambiguous between purpose and
sequential readings. The paraphrase of its sequential reading is given in (24b). Its meaning is that Musa came and after that he took the knife. In (24c) we have the purpose reading, which does not include the connective ci in its underlying structure; its meaning is identical with (24a) as Purpose. The sentence of (25a) contains a Dative phrase và mí. The inclusion of ci in (25b) renders it ungrammatical, showing that asymmetric coordinate sentences do not underlie it. Similarly, (26b) is ungrammatical because of the occurrence of ci. In (26b) the phrase và mí is interpreted as Benefactive in that what is given is not a concrete object, hence the interpretation for me.

4.1. Purpose Adverbial

The sentence Musa bé là èbi (Purpose interpretation) asserts in its first clause that Musa bé 'Musa came'. The second clause là èbi 'took a knife' then specifies the purpose of Musa's coming, namely, to take a knife. We note here that the verb bé does not depend on the expression là èbi for its specific semantic interpretation. Rather the second clause modifies the first. In this instance the relationship between the clauses is that of modification and not that of dependency. I am using the term modification here to mean that the second of the two consecutive (surface) verb phrases supplies
additional information about the first in terms of notions such as the purpose of the action expressed in the first verb phrase. That is, the second phrase functions as a purpose adverbial. Included in this type of serial construction, as we will later see, is some kind of locative adverbial construction. In the case of dependency, as we have seen, one verb actually depends on another in the same construction for its specific meaning.

Serial constructions like Musa bé lá èbi have paraphrases like the one in (27) directly below:

(27) Musa bé èbi (nyi) lází (= 24c).
    Musa came knife to take PURPOSE
    'Musa came to take a knife.'

where nyi is the infinitive mood marker and -zí is the purpose marker (see chapter four, 4.0). In (27) the verb lá and the noun èbi have traded positions, the result of which is a nominalization: èbi (nyi) lá. Optionally, the nominalized portion of (27) can be preposed, but without nyi, as in

(28) Èbilazí Musa bé o.
    To take a knife Musa came
    'Musa came to take a knife.'

It is not clear to me why nyi is dropped in (28). Nominalization of this type is, however, not restricted to serialization. It is a common phenomenon, and the construction in (29) below is another example.

118
(29) a. gbè ëya $\Rightarrow$
    'to hunt buffalo'

   b. ëyagbè
    'buffalo-hunting'

Turning now to the question of the syntactic source of the purpose serial construction, one deep representation that is rejected is the type represented in (30).

The structure in (30) is similar to Bamgboye's (1974) representation of 'modifying' serial structures, but I hasten to add that Bamgboye excludes purpose adverbials from his analysis. Apart from the fact that VP is not regarded as a base constituent, a base representation like (30) does not provide a natural way of restricting the nominalization observed in (24c) and (27) to the phrase lä èbi, and the subsequent preposing of the nominalized VP in (28).

I have no clear idea as to what the syntactic representation of the purpose serialization might look like. Very likely, at some point in its derivation it has a structure like (31).
Details omitted, the rule of EQUI-NP-DELETION will produce the surface structure (30), and the Verb-Repetition rule (optional) will yield 

\[(32) \text{Musa b}é \text{ b}é \text{ l}á \text{ ëbi}.
\]
Musa came came took knife
'Musa actually came to take a knife.'

Furthermore, by optionally nominalizing the VP lá ëbi and by subsequently preposing the nominalized VP, we get (33a) and (33b) respectively.

\[(33) \text{a. Musa b}é\text{ ëbi (nyi) l}á\text{zi} (= 24c).}
\]
\[(33) \text{b. Èbilázi Musa b}é\text{o} (= 28).
\]

The analysis of (31) is not an isolated case, it accounts for the structures containing purpose adverbials like those of (34) as well.

\[(34) \text{a. Musa ègbè èya (gbè) wu.}
\]
Musa habitual hunt buffaloes kill
'Musa hunts buffaloes in order to kill them.'
'Musa hunts buffaloes and kills them.'

\[(34) \text{b. Musa èkóñí (kó) kún.10}
\]
Musa habitual sing sell
'Musa sings to make money.'

120
c. Musa èdu èci (du) kún.  
Musa habitual cook yams sell  
'Musa cooks yams to sell,'  
'Musa cooks yams and sells them.'  

d. Musa èdu èci (du) gi.  
Musa habitual cook yams eat  
'Musa cooks yams to eat,'  
'Musa cooks yams and sells them.'  

e. Musa èfo èdè (fo) kún.  
Musa habitual wash clothes sell  
'Musa washes clothes to make money.'  

Conceivably an objection may be raised against the analysis in (31) on the grounds that the NP subject of the sentential subject may as well be the subject of the VP (lá èbi, etc.), thus providing an analysis which would look like $S_1$ Musa bè $S_2$ Musa lá èbi, meaning 'Musa came and then he took the knife'. A similar analysis may be proposed for (34 a, c, d). Obviously, such a representation gives the sequential interpretation. We notice that the sentences of (34 a, c, d) are ambiguous between the interpretations of Purpose and Sequential just as (24a) is. Accordingly, the purpose sentences may be traced to a source like (31), while the sequential ones may derive from something like $S_1 \ldots S_2$. The non-ambiguous sentences (34 b, e) have only the purpose interpretation, and are therefore analyzed as (31) and not as $S_1 \ldots S_2$. To analyze (34b) as $S_1$ Musa èkóñf

121
S₂ Musa ękùn ení gives the interpretation 'Musa sings (songs) and sells songs', which is radically different from the meaning of the sentence. Musa does not sell songs; rather it is the activity of Musa expressed in the sentential subject (Musa ękóní) which is for the purpose of making money. Similarly, (34e) cannot be analyzed as
S₁ Musa ęfo ędè S₂ Musa ękùn ędè, meaning 'Musa washes clothes and sells them'. Clearly, that is not the meaning of (34e). It is the activity expressed in Musa ęfo ędè that is for the purpose of making money. We therefore see that whenever structures like (24a) and (34) are given the purpose interpretation, they can be analyzed as (31), but when they have the sequential interpretation, the S₁ ... S₂ analysis is applicable.

It should be made clear that when serial structures like (24a) are understood as Purpose Adverbials, the first VP expresses a fact but the second does not. Thus (24a) can be continued as follows:

(35') a. Musa bé lá ìbi àmá u de lá à. 
Musa came take knife but he got take not 'Musa came to take a knife but he failed to get it.'

b. Musa bé lá ìbi àmá u leyé lá à
Musa came take knife but he saw take not 'Musa came to take a knife but he could not find it (to take).'</n
In the examples of (35') the extensions àmá u de lá à and àmá u leyé lá à express the fact that the purpose of
Musa's coming (to take a knife) was not accomplished.

4.2. **Datives and Benefactives**

These can be accounted for by the structure of (31) as well. Following the derivational pattern (31) through (32) we get

(35) a. Musa lá àbi (lá) yà mi.
   Musa took knife (took) gave me (Dative)
   'Musa gave me the knife.'

   b. Musa lotun (lo) yà mi.
   Musa worked work (worked) gave me
   'Musa worked for me.'

Semantically, these are not unrelated to Purpose Adverbials in interpretation, in the sense that the form yà mi limits the purpose of the action or event expressed in the preceding clause. We are therefore not surprised that they are syntactically like Purpose Adverbials. One difference, however, exists: Nominalization and Adverb Preposing are impossible with Datives and Benefactives. In any case, these operations are optional even in Purpose Adverbials.

4.3. **Locative Adverbials**

Serial structures involving Locative Adverbials, where these contain locative verbs, have at some stage a structure like (31), and at some point sentences like (36) can be represented as (37).

(36) Musa fó-dùn si kata o.
   Musa sat   Loc verb house Loc. Marker
   'Musa sat in the house.'
In (37) si kata-o modifies the event expressed in the higher sentence: Musa fé dún. Optionally, the verb fé is repeated, yielding

\[(37') \quad \text{Musa fé-dún fé si kata o.}\]

'Musa actually sat in the house.'

It will be interesting to compare the syntactic deep representation of (37) (when worked out) with Lakoff's analysis of English sentences containing locative adverbials. Working under the assumption that "locative adverbials like 'in the West' do not occur in the same VP constituents as the verbs they modify in underlying structure," Lakoff (1970b:156) proposed that the sentence in (38) below has an underlying representation (39).

\[(38) \quad \text{Goldwater won in the West.}\]
That is, locative adverbials are derived from predicates of other, 'higher' verbs. One fact is at least obvious: the verb in the locative adverbial of (37) is actually a lexical verb in Nupe, whereas in (39) it is only a hypothetical verb, which is replaced by the preposition in in the surface. This means that Lakoff's analysis of such constructions is more abstract for English than for Nupe. This is explained by the fact that Nupe has a surface lexical verb where a preposition occurs in English. Once again we see the role of lexicalization processes in grammars. Whereas the sentence of (38) is not normally considered a serial structure, that of (36) is; the reason is due to lexical items.

5.0. **Sequential Serialization**

By sequential serialization is meant the use of serial verbs to express a sequence of events. Such constructions are paraphrases of sentences with sequential connectives (see chapter four (5.0.)). They have a semantic interpretation something like: event X took place and then event Y occurred, or event X continued until event Y took place. This type of serial verbs comes closest to
coordinate structures, but it is not, if we take coordinate structures to mean symmetric conjunction. Thus compare (40) with (41).

(40) a. Musa gbó (tò) u ma wúnkpá.
   Musa fat and he and tall
   'Musa is fat and tall.'

   b. Musa wúnkpá u ma gbó.
   'Musa is tall and fat.'

   c. *Musa gbó wúnkpá.
      *Musa fat tall

   d. *Musa wúnkpá gbó.
      *Musa tall fat

(41) a. Musa bici báří u ábo
   Musa ran until he got tired

   b. *Musa ábo hárí u bici.

   c. Musa bici ábo.

   d. *Musa ábo bici.

Sentence (40a) is symmetric conjunction. The conjuncts can trade their positions without any serious effect on the meaning. (40b) illustrates this. Symmetric conjunctions do not serialize, and for that reason (40c) and (d) are both ungrammatical. The string of (41) is asymmetric conjunction, in which case the VP's cannot reverse their order of occurrence. In (41b) a change in order has taken place, and it renders the sentence ungrammatical. (41c) is a paraphrase of (41a). The order of occurrence of its verbs conforms to that of (41a).
With a reversal of that order in (41d), we get an ungrammatical string.

Sentences like (40a) but not (41a) can be represented by a schema

(42)

Representing (41a) as (42) would be making a false claim that it is symmetric. Nupe asymmetric conjunction is distinguished from symmetric conjunction in two principal ways: 1. the former does not permit the verbs to be reordered, while the latter does; 2. asymmetric conjunction can be paraphrased by a structure without connectives (i.e., by a serial structure), but symmetric conjunction cannot. Thus we are forced to conclude that sequential serialization does not come from coordinate sentences.

It does not have its source in Restrictive serialization either. The meaning of modification does not obtain in it. Complementing is also ruled out, and even though sequential serialization is deeply involved with time, it is different from Time Adverbials. Thus compare (43) with (44).

(43) a. Mifédün kámi na mi sájin na.
    I sat time that I finished
    'I sat down after/when I had finished.'
b. Kámi na mi sájin na mi fédùn,
'After/when I had finished I sat down'

(44) a. Mí lotun hárí mi ábo.
'I worked until I got tired'

b. *Hárí mi ábo mi lotun.
'Until I was tired I worked.'

The clause kámi na mi sájin na in (41) is a Time Adverbial. It can be preposed as in (43b). This sort of preposing is impossible with (44a), which is a sequential construction, and so we do not get sentences like (44b). The example of (44a) can be alternatively given as

(45) Mí lotun ábo.

which is a serial structure. But serialization is impossible with Time Adverbials like (43). Hence, neither (46a) nor (b) is a sentence.

(46) a. *Mí fédùn sájin
b. *Mí sájin fédùn

It thus seems fairly obvious that sequential serialization is not derived from Time Adverbials.

Just how to formulate a syntactic representation of sequential serialization is still a problem, (Stahlke 1969:18) observes that

The conventional mode of representation for the underlying structure of sentences, the phrase structure tree, has been constrained to allow recursion of only two types: iteration and embedding. Iteration... is adequate only for symmetric conjunction. Serialization is demonstrably non-symmetric and so not derivable from iteration.

128
No attempt is made to postulate a syntactic source of sequential serialization at present. We know however, that it is something like (47).

\[(47) \quad \text{NP} \quad \text{V} \quad (\text{kángá}) \quad \text{NP} \quad \text{ci} \quad \text{V} \ldots\]

6.0. Summary

In the foregoing discussion I have shown that serial constructions do not originate from a unique syntactic source. Three subtypes have been outlined: complementing, restrictive, and sequential. In Complementing Serialization the first of two verbs occurring in a row depends on the second for its specific semantic interpretation. Included in this type of construction are Instrumental and Manner Adverbials, Causatives, Concomitants, and Locatives. In Restrictive serial structures we find that higher predicates modify the meaning of the events expressed in lower sentences. Finally, in sequentials the verb are related on the time axis such that one event must follow another in a natural way.

Lest I have given the impression that all the complexities of serial verbs have been dealt with in the discussion, I must add that this is not the case. For instance, I have not demonstrated that even the types I have outlined in the study can combine in enormously complicated ways as in the following examples:
(47) Musa lá èbi ba nakà yà yi po gi.
Musa took knife cut meat gave us roast ate
'Musa used the knife to cut the meat for us in
order to roast and eat it.'

(48) Musa lá èbi ba nakà gi funín.
Musa took knife cut meat ate full
'Musa used the knife to cut the meat and
ate till he was full.'

Sentence (47) is a combination of Complementing and
Restrictive Serialization, while (48) is a combination of
Complementing and Sequential. Another omission is that
of comparative constructions, which form a subspecies of
verb serialization. Two examples of comparatives are

(49) Musa wúnkpá gā mf.
Musa tall surpass me
'Musa is taller than I.'

(50) Musa dàzà lôkpá gā mf.
Musa walked far surpass me
'Musa walked farther than I.'

The omission is deliberate. Comparative constructions
embrace all sorts of verbs, for example wúnkpá in (49)
is a non-action verb, whereas dàzà in (50) is an action
verb. I have, in this study, concentrated on action verbs.
Footnotes

1. Ké is a question word, meaning 'what'. The particle ø occurs finally in interrogatives as well as in Topicalizations. It should not be confused with the Locative marker ò, which alternates with bo.

2. The word actually must be regarded as supplying an approximate meaning only.

3. Some kind of emphatic construction obtains in Nupe by the repetition of the verb. A transitive monosyllabic verb is repeated after the object as in the example (3f). Monosyllabic intransitive verbs are simply repeated as in

   (i) Elúgi fù. Elúgi fù fù, bird flew bird flew flew 'The bird flew' 'The bird actually flew.'

With polysyllabic verbs only the first syllable of the verb is repeated as in (ii) and (iii)

   (ii) U kóní. U kóní kó, he sang song he sang song sang 'He sang' 'He actually sang'

   (iii) U lo-tun, U lotun lo, he worked work he worked work worked 'He worked.' 'He actually worked.'

Very often the polysyllabic verb in Nupe is analysable as Verbal + nominal. In the examples (ii) and (iii) above kó- and lo- are verbal, while -ní and -tun are nominal. The form -nì is from ení 'song', and -tun is from etun 'work'. The verbal elements in these verbs cannot be used independently: they must be attached to the nominals.

The repetition of the verb is a general property of the verb in Nupe rather than a peculiar feature of serial verbs (see Smith 1970 for an account of the repetition of the verb in Nupe).

4. Somewhere in the grammar of Nupe a schema for the application of such rules as objectivalization, subjectivalization and complementation should be worked out (see Stockwell et al 1972: chapter 2 for such a schema for English).

5. It is conceivable that there is some semantic feature optionally represented in the deep source which will trigger the Copying transformation.
6. The form bici is analyzable as bi + eci 'run + race', where bi is the verbal element and eci is nominal.

7. See footnote 3 in chapter three on the syntactic behavior of the form bênyî, generally meaning 'with'.

8. Ambiguities are common in serial constructions. Examples are found in Mandarin Chinese (Li and Thompson, 1973), and in Ìjö (Williamson, personal communication).

9. See Lees (1960a) for similar nominalizations in English.

10. See note 3 above for the explanation as to why only kó is repeated in the example.
CHAPTER VI

Verb Serialization, Transformations, and Psycholinguistics

1.0. Preliminaries

It was proposed in the previous chapter that Nupe serial verbs derive from a variety of syntactic sources, namely, complementation, restrictive adverbs, and sequentials. Tentative syntactic representations were proposed for the first two, but not for the third. What is certain beyond doubt is the fact that (surface) serial structures are a product of formal rules of grammar, of which the much-talked-about, though little understood, EQUI-NP-DELETION is one. One problem that arises in the derivation of Nupe serial verbs in respect of this rule will be discussed in this chapter. In addition to that I will point out the fact that serial verbs constitute structures that are highly acceptable in terms of performance.

2.1. EQUI-NP-DELETION

This rule is universally required in verb serialization. For example, after proposing two types of deep syntactic sources for serial constructions in Mandarin Chinese, Li and Thompson (1973) state that "in all cases (conjunction and subordination) a rule of identical subject deletion is assumed to apply in the second
conjunct and the subordinate sentence." Various writers on the serial verbs of West African languages also assume that this rule is needed.¹ I also assume that the rule is needed for what I have termed the complementing and sequential types of serialization. Thus, to derive the sentence in (1) from its underlying structure (1b), EQUI-NP-DELETION must be applied.

(1) a. Sábá lá tsükün wu ewa.
   Saba took stick killed snake
   'Saba used a stick to kill the snake.'
   (See (1b) below. )

In the derivation of (1a) the NP Sábá dominated by S₂ is completely erased by the rule, presumably without any reference to another rule. That is, it is assumed that EQUI-NP-DELETION applies freely without another rule applying before it. In another context, however, where the same rule is needed, we find that its application is after the rule of PRONOMINALIZATION. Consider therefore the derivations in (2).

(1) b. 

\[ \text{Diagram of derivation} \]

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134
(2a) Sábá₁ du eci₂ kángá Sábá₁ ci gi eci₂
    Saba cooked yam then Saba and ate yam
    'Saba cooked the yam and ate it.'

b. Sábá₁ du eci₂ kángá u₁ ci gi eci₂
c. Sábá₁ du eci₂ kángá u₁ ci gi u₂
d. Sábá₁ du eci₂ u₁ ci gi ø₂
e. ?Sábá₁ du eci₂ ø₁ ci gi.
f. Sábá₁ du eci₂ gi.

The sentence in (2f) is a sequential serial structure, resulting from a series of deletions. (2a) is probably close to its deep source, and it is judged to be a sort of baby talk. (2b, c) are intermediate structures; both are grammatical and carry the same meaning. We note that the pronominal form u₁, referring to Sábá in the first instance, and to eci in the second, appears in both. In (2d) u₂ is deleted, and finally both u₁ and u₂ have been erased in (2e, f). The status of (2e) is not clear.

The derivations in (2) indicate that PRONOMINALIZATION is a rule that may be relevant to sequential serialization in Nupe. Very likely it is a rule relevant to similar structures in Yoruba too. This possibility is illustrated in the structures of (3-5) directly below.

(3) Báyọ̀ àti Fẹ́mi jeun Báyọ̀ àti Fẹ́mi si yó.²(underlying-
Bayọ̀ and Fẹ́mi ate Bayọ̀ and Fẹ́mi and full
'Bayọ̀ and Fẹ́mi ate and Bayọ̀ and Fẹ́mi are full.'

135

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(4) Báyọ ̀ ati Fẹmi jẹun wọn si yọ.
Bayọ and Fẹmi ate they and full
'Bayọ and Fẹmi ate and they are full.'

(5) Báyọ ̀ ati Fẹmi jẹun yọ.
Bayọ and Fẹmi ate full
'Bayọ and Fẹmi ate and are full.'

In (4) the conjoined NP Báyọ ̀ ati Fẹmi is pronominalized as wọn, which is subsequently deleted in (5).³

What the derivations in (2 - 5) suggest is that in sequential serialization PRONOMINALIZATION takes place before EQUI-NP-DELETION applies. But in complementing serialization, we have seen that no reference is made to PRONOMINALIZATION. We thus have the following situation:

A. EQUI-NP-DELETION

B. i. PRONOMINALIZATION
   ii. EQUI-NP-DELETION

where A would be considered to be sufficient for complementing serial verbs, and B seems reasonable for sequentials. It appears, however, that A and B are somehow related, and that the relationship must be captured in the grammar. If we assume that the grammar needs B for both types of serial structures, how could the non-occurrence of pronouns in intermediate stages of the derivation of complementing serial verbs be explained?

Obviously the complementing type in Nupe provides no direct evidence for the intermediate stage at which
PRONOMINALIZATION occurs, but we may assume that when two Noun Phrases which are coreferential appear in a complex structure, one Noun Phrase is pronominalized by the rule of PRONOMINALIZATION. Subsequent to this, the pronominal may be optionally deleted by EQUI-NP-DELETION, as is the case in sequential serialization, and obligatorily deleted in the case of complementing serialization.

The suggestion that PRONOMINALIZATION occurs before the application of EQUI-NP-DELETION as outlined above is in line with Postal's (1970b:489) hypothesis about a universal deletion constraint which he has stated as:

Universal Deletion Constraint

If a transformation T deletes an NP subject to the existence of a coreferent NP, \(a_{NP}\) in the same structure, then at the point where T applies, \(NP_a\) must be pronominal.

This constraint, according to Postal, is relevant for derivations such as

(6) a. Having no boat, Harry was forced to swim.
   b. Since he had no boat, Harry was forced to swim.

2.2. Sequential Serialization and Conjunction Reduction

In chapter five (section 5) it is claimed that the sequential serial construction is asymmetric, and that it is not the same thing as a coordinate structure, which is symmetric. I pointed out that conjoined constituents in coordinate sentences can trade positions without effecting any meaning change, while this is not the case.
with a sequential serial construction. The distinction made between the two types of sentences is further justified by the differences that are found in their derivational processes. Let us examine the examples in (7 - 10).

(7)

a. Musa₁ si eci₂ Musa₀ du eci₂ Musa₁ gī eci₂
   Musa bought yam Musa cooked yam Musa ate yam

b. Musa₁ si eci₂ kángá u₁ ci du u₂ kángá u₁ ci gīʊ₂
   'Musa bought the yam and then he cooked it and then he ate it.'

c. Musa₁ si eci₂ du gī
   'Musa bought the yam, cooked it, and ate it.'

(8)

tō...ma

a. Musa kó (e)nī Musa nga (e)nyà.
   Musa sang song Musa danced dance

b. Musa kóni tō u ma nyanyà.
   Musa sang and he and danced
   'Musa sang and danced.'

c. *Musa kóni {tō} nyanyà
   {ma}
   'Musa sang and danced.'
The derivation in (9) is a sequential serialization. Its representation in the tree diagram need not be taken seriously; that is, it is not claimed that its deep
representation is reflected in the configuration. The tree structure of (7) is for illustrative purposes only. The derivational rules required in this instance are regular. They are PRONOMINALIZATION, yielding (7b), EQUI-NP-DELETION and CONNECTIVE ELIMINATION, resulting in (7c).

The sentences in (8 - 10) are coordinate structures. Their derivational processes are varied and complicated. Sometimes it appears as if PRONOMINALIZATION is one of the rules required to derive sentences like (8b) and (7b), but at times PRONOMINALIZATION is inapplicable, as is the case in (10b, and c). The sentences of (10b and c) are ungrammatical because kārā has been pronominalized.

Another process involved in the derivation of some types of coordinate structures is conjunction reduction. At times this process seems to operate by deleting identical NPs in constituent sentences from left to right, eventually resulting in structures like (9c). It should, however, be noted that this type of deletion is not always applicable. The sentence of (8c) is ungrammatical because the identical NP in the second constituent sentence has been erased.

Sometimes conjunction reduction involves the collapsing of identical verbs or verb phrases. One of the processes involved in the derivation of (9c) (apart from EQUI-NP-DELETION) is the collapsing of the identical
verb phrases.

It is possible to view the processes of conjunction reduction in terms of identity deletions only. If so the collapsing of the identical verb phrases in (10d) may be considered as proceeding from right to left. We thus have the operation of identity deletion working in two directions: from left to right in (9) and from right to left in (10). This bidirectionality may, to some extent, be viewed in terms of a general principle proposed by Bach (1971:11) regarding conjunction reduction. The principle states that:

If a string of conjoined constituents has identical elements on left branches then deletion is from left to right, if the identical elements are on the right then deletion goes in the opposite direction.

Accordingly, in (9) the identical elements (NP Sábá) are on left branches, so are the identical verbs si; deletion is therefore from left to right, leaving in the final output the leftmost of the identical elements. In the example of (10) the identical elements (VPs) are on right branches. Very likely then the collapsing is from right to left, such that in the final output the rightmost of the identical elements is retained.

For reasons unknown to me at present, deletion is impossible in (8). Similarly, for reasons yet unknown the principle does not apply to structures like (12) below, and for that reason the phenomenon known as gapping (see
Ross 1967a) is not found in Nupe. 5

(12)

\[
\begin{array}{c}
\text{S} \\
\text{NP} & \text{VP} \\
\text{V} & \text{NP} \\
\end{array}
\]

a. Musa gi yàbà Sábá gi kpótá
   Musa ate banana Saba ate coconut

b. Musa gi yàbà to Sábá ma gi kpótá
   Musa ate banana and Saba and ate coconut
   'Musa ate a banana and Saba ate coconut'

c. *Musa gi yàbà to Sábá ma kpótá
   'Musa ate a banana and Saba, coconut'

3.0. **Serialization and Psycholinguistics**

The surface structures generated by the rules of serial verbs are of the type Noun + Verb + Verb ... or Noun + Verb + Noun + Verb (the latter would include a direct object) at least some of these surface structures seem best analyzed as involving multiple-branching. Why does the grammar generate such structures?

Current linguistic theory makes a distinction between linguistic competence and performance: a distinction which is as useful as it is legitimate. At least, it has enabled linguists to carry out investigations in well-defined areas relating to competence. The distinction, however, has not been made precise.
Lakoff (1973: 286), for example, has pointed out that the term performance is used in three senses in *Aspects of the Theory of Syntax* (1965). These are:

I. The actual use of language in concrete situations (i.e., what people actually do).

II. Performance constraints, which render certain types of constructions more or less acceptable than others. (This must be common to all human beings.)

III. Formal linguistic rules partly universal and partly language specific (e.g. rules involving 'stylistic reordering').

It appears that a demarcating line between competence and performance II and III would be difficult to draw, for it may be the case that structural rules (of competence) themselves take into consideration rules of performance in certain circumstances. Bever (1970:5) puts it this way:

> Certain grammatical rules themselves may be shown to be structural accommodations to behavioral constraints. Thus certain universal structural properties of language may express general cognitive constraints rather than particular innate linguistic structures.

In view of this given situation, it is pertinent to examine serial verbs as strings constituting a kind of surface structure which maximally accommodates certain behavioral constraints.

Discussing performance II above, Chomsky (1965:11) remarks that "the more acceptable sentences are those that
are more likely to be produced, more easily understood, less clumsy, and in some sense more natural." Furthermore, he observes that "multiple-branching constructions are optimal in acceptability ... (and) there are no clear examples of unacceptability involving only left-branching or only right-branching ..." (Ibid. 13). As I have mentioned above, at least some serial verbal constructions are multiple-branching structures, in which case they are optimal in acceptability. Why is this the case? In seeking an answer to this question, it may be useful to look at serial constructions in terms of perceptual rules of the type proposed by Bever.

According to Bever (1970:7), considerations of the manner in which listeners extract basic grammatical relations (e.g. subject, object, etc.) from the actual appearance of sentences have thrown light on 'normal perceptual rules which map surface sequences onto corresponding internal relations" and that speech perception proceeds as outlined in (13) below.

(13) Surface sequence of phrases $\rightarrow$ Perceptual Mapping rules $\rightarrow$ surface sequence labeled with underlying functions

To illustrate such processes, Bever shows that "in English any sequence of several phrases of the same type, with a conjunction between the last two phrases, is a conjoint phrase of the same type as the compound phrases."
A perceptual rule (14) (Bever's 8) is then proposed.

(14) In "...x...y conjunction, z..." in which x, y, z are identical constituent types of type T then the entire sequence is a conjoint phrase of type T, each member of which has the same internal syntactic relation to other sentence constituents as the whole phrase.

Thus after (14) has applied to (15) below, the latter is labeled as in (16).

(15) The boy the girl and the man left.

(16) \[\underline{\text{The boy the girl and the man}} \underline{\text{ left.}}\]

(Conjoined noun phrase, each phrase being a separate subject of the verb.)

In the case of serial constructions it may be possible that perceptual rules operate along lines similar to those Bever has proposed. If so, one may suggest that multiple-branching structures like (17) are perceptually interpreted as (18).

(17) Sábá bé fá.
Saba came rest
'Saba came to rest'

(18) Sábá \(\underline{\text{bé fá}}\).

(Conjoined verb phrase, each phrase being a separate predicate of the subject.)

If future studies in Serialization and Psycholinguistics show that perceptual rules like the one cited above are correct and are leading in the right direction, then we will have an example of an area in which competence and
performance come very close together.

4.0. **Summary**

To summarize, I have pointed out certain formal properties of language with which serializing grammars have to come to grips, namely, rules of Identical Item-Deletion. The problem associated with EUI-NP-DELETION is that in the case of sequential serialization it is applicable to the output of the rule of PRONOMINALIZATION, but in complementing serial structures there is no evidence of PRONOMINALIZATION; it is merely straightforward deletion. I have shown that the rules needed for sequential serial constructions are more or less straightforward, and rather uniform, but the rules needed for coordinate structures are varied and enormously complicated.

In the area of Psycholinguistics I have indicated that serial verbs may have connections with perceptual rules. The implication is obvious: more investigations must be undertaken in verb serialization, not only to discover structural rules, but also to discover how structural rules may interact with other rules of the grammar.
Footnotes

1. See, for example, Awobuluyi (1967), Boadi (1968), and Williamson (1965).

2. I leave out of discussion here whether the plural NP subject comes from two sentences or is simply a conjoined NP.

3. In Yoruba the subject marker ó at times behaves like a pronominal. Its behavior is as follows: In simple declaratives we normally do not get ó following the NP subject in the surface, rather we have a tonal change, presumably as the effect of the high tone of ó, whose segmental features have been erased. The sentences in (i) illustrate this point.

(i). Bàyò ó ìjẹn. (Underlying)

   Bayo SM ate
   'Bayo ate.'

   b. Bàyò ìjẹn
   'Bayo ate.'

In interrogatives and topicalization ó appears in the surface as in

(ii) Táll ó ìjẹn?
     who SM ate?
     'Who ate?'

(iii) Bàyò lí ó ìjẹn.
     Bayo SM ate
     'It was Bayo that ate.'

In (iv) below the form ó occurs as if it were the pronominal form of Bàyò.

(iv) Bàyò wá ó si ìjẹn
     Bayo came he and ate
     'Bayo came and he ate.'

Its deletion along with si yields

(v) Bàyò wá ìjẹn
    Bayo came ate
    'Bayo came and ate.'

In serial constructions like (v) the tonal indication of the subject marker occurs only before the first verb in the series. (See Fresco 1970, and Stahlke 1969, 1973 for their accounts of subject markers in Yoruba.)
4. The mysteries of ma-DELETION are not investigated here.

5. See also Koutsoudas 1971, Jackendoff 1971.
CHAPTER VII

Summary and Concluding Observations

1.0. **Summary of Serial Constructions**

In chapter two of this study, the major works on Verb Serialization in West African languages have been summarized, bringing out the many facts of the phenomenon as characterized by various authors from Christaller (1895) to Baagboöe (1974). Undoubtedly, the approach differs from author to author, but at least they have all indicated explicitly or implicitly that verbs of action are most susceptible to serialization. In addition to these, verbs of location frequently occur in serial structures in conjunction with verbs of action. For those scholars who are interested in derivations, frustration following the coming to grips with the non-uniqueness of the source of the construction is inevitable. One major inadequacy is apparent in most of the works on serialization, and that is the fact that the lexicon has not been dealt with seriously, although it is cursorily mentioned in some cases.

In chapter three I have used the notion of lexical parsimony to explain in part why many Kwa languages have serial structures in their grammars. The notion of lexical parsimony proposed there is something like this: whereas languages like English have semantically composite
surface lexical items like those listed under (1a) below, Nupe (like related languages) uses two or more lexical items as in (1b) to express identical concepts.

(1)  

<table>
<thead>
<tr>
<th>a.</th>
<th>CONCEPT</th>
<th>b.</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>bring</td>
<td>take + come</td>
</tr>
<tr>
<td>ii.</td>
<td>fetch</td>
<td>go + take + come</td>
</tr>
<tr>
<td>iii.</td>
<td>reddon</td>
<td>cause + to become</td>
</tr>
<tr>
<td>iv.</td>
<td>shut</td>
<td>cause + to become</td>
</tr>
</tbody>
</table>

Clearly, a grammar which does not possess composite lexical units like those in (a) and utilizes only nuclear verbs is bound to have serial constructions.

Another suggestion I have made in conjunction with the idea of lexical parsimony is that rather than postulating many homophonous entries for verbs (like lá in (lb) above) whose specific interpretation may vary from context to context, only one entry should be made with its general properties specified; then its contextual interpretations will be inferred. The form lá, for example, will be entered with a general specification: to get hold of something. Combined with the verb bé in (lb i, ii), we get a specific interpretation 'to take', but in (lb iii, iv) we get a specific meaning 'to cause' because of the verbs it is combined with.

The above proposal has at least two implications. The first is that it calls for empirical justification.
That is, the suggestion that lexical items have both inherent and inferential meanings has to be justified in terms of how they are perceived by native speakers. In the second place, the hypothesis is a pointer in historical directions. If an inferential rule is dropped and connections between inherent and inferential meanings of a lexical unit can no longer be established, then two (or more) homophonous forms have emerged in the language.

One other correlate of the widespread occurrence of serial verbs is the virtual absence of prepositions in Kwa. In Nupe the very few that are found are closely associated with certain verbs. The structures in (2) illustrate this point.

(2) a. Mi lá egbà ba cigbà
    I took ax cut tree
    'I used an ax to cut the tree.'

    b. Mi ba cigbà be egbà nyí
    I cut tree with ax
    'I cut the tree with an ax.'

The sentence in (2a) is a serialized structure. Strictly speaking, that of (2b) is not, because it contains one verb followed by the preposition bènyí. In that sentence (i.e. 2b) lá does not occur, and the phrase ba cigbà occurs directly after the subject mi; egbà now appears with bènyí. Very likely, bènyí and lá are closely associated. Perhaps one might say that semantically frozen verbs are prepositions. In any case, the use of
verbs in the contexts where English has prepositions in the forms of (3) below clearly demonstrates why aerial verbs are common in Nupe.

(3) a.

i. put X on the table
ii. hang X on the wall
iii. do X for Y
iv. run to Y
v. run away

b.

lë X ta èsáko o
lë X ëx sempa o
jìn X yà Y
bìcí lo Y
bìcí dà

(The Nupe verbs are underlined)

Obviously, the lexicon plays a very significant role in verb serialization.

I have considered the idea of lexical decomposition to be illuminating in studying lexical systems, as it deals with abstract concepts some of which may not appear as surface lexical units in a particular language. Should the study of lexical systems be confined to surface lexical units alone, the result will be that undue emphasis is placed on the differences between languages at the expense of their similarities. Should the lexicons of Nupe and English be compared only at the surface level, we may be forced to make ridiculous conclusions like Nupe has fewer parts of speech than English. Therefore, it is a deficient (or primitive) language. No modern linguist would entertain such a conclusion.

In chapter four it was pointed out that there are very few conjunctions in Nupe which occur in structures
that alternatively become serial constructions, and that it must not be assumed that all coordinate structures may otherwise be realized as serial constructions. In fact coordinate structures do not underlie serial constructions in Nupe. It was also discovered that the connectives used in complex structures illustrate the processes of lexicalization in differing languages. In the example of (4) Nupe has two connectives for two related concepts where English and Yoruba both have only one:

(4) Nupe English Yoruba

Symmetric
Connective (tə)…ma and si
Asymmetric (kángá)…ci and si

This means that both English and Yoruba must utilize devices other than lexical units to distinguish between symmetric and asymmetric conjunctions. Whatever these devices are, they are codified in two distinct lexical units in Nupe.

Coming to grips with deep syntactic sources of serial verbs in chapter five, three types were outlined. These include Complementing, Restrictive and Sequential. In the first type, two verbs in a row, to a large extent, depend on each other for their semantic interpretation. Such constructions include Instrumental and Manner Adverbials, Causatives, and Concomitants. The second type deals with modification, where higher verb phrases modify
the meaning of events or actions expressed in other sentences. Purpose Adverbials, Benefactives and Datives fall within this type of Verb Serialization. Finally, the third type is concerned with sequential actions whose verbs are related on the axis of time.

In chapter six the problems relating to formal properties of language were discussed, particularly that of the relationship that holds between PRONOMINALIZATION and EQUI-NP-DELETION. Does the former 'feed' the latter, or does the latter apply independently of the former? Furthermore, it was observed that serial structures constitute multiple branching constructions, which rank high on the scale of acceptability. If so, the study of the structural rules of serial verbs calls for an investigation of areas of interaction between competence and performance, if the distinction can be precisely defined.

2.0. Unresolved Issues

Obviously, many issues remain unresolved. Among them is the question of how to formulate a deep syntactic representation of Sequential Serialization. Its meaning is reasonably clear: its verbs must follow each other in a specifically given order, which is irreversible, not only that, but specific connectives are employed for it in Nupe. Another issue is that of the origin of both the serializing ci and its non-serializing counterpart ma.
Clearly, both of them are syntactically found in preverb position, thus suggesting that they are of verbal origin. If this is correct, then we need to take seriously the proposal that grammatical items like conjunctions are to be regarded as predicators at the deep level.

One point that is completely left out of the discussion in the study is the formal rules that are needed to derive Restrictive serial structures. The structure postulated for them capture their meaning. The formal operations connected with them, however, are a venture of the future.

3.0. **Prospects**

Various areas of study can be meaningfully pursued in order to foster our understanding of serial verbs. First, further scrutiny of their deep syntactic sources is necessary. Three sources are touched upon in this study, but these are by no means exhaustive. Very likely there are other sources from which some other types of Verb Serialization may derive.

The suggestion that there can be other sources for serial verbs can be supported. Comparative constructions, for example, take the form of serial verbs in Nupe. Consider then the sentences in (5) below.

(5) a. Nàmpà wàncín
    leopard big
    'The leopard is big.'
b. Gábà wáncín
   lion big
   'The lion is big.'

c. Gábá gã nàmpà
   lion surpasses leopard (in bigness)
   'The lion is bigger than the leopard.'

d. Gábá wáncín gã nàmpà
   lion big surpasses leopard
   'The lion is bigger than the leopard.'

The sentence in (5d) is a serial structure, combining the two verbs in (5a, b, c) to form a comparative construction.

It is not only the comparatives that support the prospect that serial structures may have other sources. Certain Reason Adverbial Constructions which are structurally similar to Relative Clauses have paraphrases that are serial structures, as the sentences in (6) below show.

(6) a. Mi bê ebô na mi à lotun na³
    I came reason that I will work
    'I came so that I can work.'

b. Mi bê lotun
   I came work
   'I came so that I can work'

Admittedly, the rules that would be required to derive (6b) from (6a) must be enormously powerful. But we see that there is a semantic connection between the sentences in (6a and b).

The second field which will be of value in the study of serial constructions is typological studies of the type
advocated by Bach (1971) and Lehmann (1972). These scholars have independently proposed that the universal base component of language simply manifests "only properties common to every language" and that predominant Verb-Object and Object-Verb word orders in different languages cannot be established in the base. It is therefore the function of "early transformations" to determine the basic word order in specific languages. Such transformations must therefore be proposed. The implication of this for serialization is that it will throw light on deletion processes, among other things, because a particular word order is likely to block or enhance deletions.

Third, since some serial structures are multiple branching constructions, which are optimal in acceptability, it is likely that psycholinguistic studies along the lines proposed by Bever, namely studies of perceptual processes, will contribute to our understanding of serial structures.

In conclusion then, I suspect that a collaboration among synchronic grammarian, psycholinguist, and typologist will yield useful results in the field of research in verb serialization.
Footnotes

1. See note 3 in chapter three for the syntactic behaviour of the preposition bènyi 'with'.

2. See, for example, Langacker (1972:101).

3. na...na is the marker of a Relative Clause in Nupe. The first na marks its beginning and the second na marks its end - a situation very much like the use of quotation marks.
BIBLIOGRAPHY


Lakoff, George (1970a) "Natural Logic and Lexical Decomposition." Papers from the sixth regional meeting, Chicago Linguistic Society, 340-362.


Lakoff, George (1973) "Fuzz Grammar." Papers from the ninth regional meeting, Chicago Linguistic Society 271-291.

Lakoff, George and Stanley Peters (1966) "Phrasal Conjunction and Symmetric Predicates." in Reibel and Schane (eds) 113-146.

Lakoff, Robin (1971) "If's, And's and But's about Conjunction." in Fillmore and Langendoen (eds) 115-150.


Li, Charles N. and Sandra A. Thompson (1973) "Serial Verb Constructions in Mandarin Chinese: Subordination or Coordination?" A paravolume to papers from the ninth regional meeting, Chicago Linguistic Society 96-103.


163


Partee, Barbara Hall (1971b) "Linguistic Metatheory." in Dingwall (ed) 650-681.


Shopen, Tim (1971) "Caught in the Act." Papers from the seventh regional meeting, Chicago Linguistic Society.


Steinberg, Danny D. and Leon A. Jakobovits (1971) (eds)  


Ward, Ida (1952) *An Introduction to the Yoruba Language.* Cambridge: Heffer and Sons Ltd.


