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Syntactic reanalysis in the historical development of serial verb constructions in languages of West Africa

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University of California, Los Angeles, 1989
UNIVERSITY OF CALIFORNIA

Los Angeles

Syntactic Reanalysis
in the Historical Development of Serial Verb Constructions
in Languages of West Africa

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

by

Carol Diane Lord

1989
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University of California, Los Angeles
1989
To Jack
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ABSTRACT OF THE DISSERTATION

Syntactic Reanalysis
in the Historical Development of Serial Verb Constructions
in Languages of West Africa

by

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Doctor of Philosophy in Linguistics
University of California, Los Angeles, 1989
Professor George Bedell, Co-Chair
Professor Sandra Thompson, Co-Chair

Serial verb constructions are widespread in languages of West Africa. In these constructions, a sentence typically contains two or more verb phrases without overt connective morphemes. The semantic/pragmatic relationship between the verb phrases varies somewhat from one language to another. In some languages, serial constructions are used to express case-role relationships such as Locative, Recipient, Benefactive, Comitative, Instrument, and Patient; their morphological and syntactic properties tend to show a continuum from fully verbal to highly defective.

Comparison of serial verb constructions in several West African languages, as well as Caribbean creoles and Mandarin Chinese, supports the view that the case-marking functions of verbs have developed in
the serial construction context. The verbs have lost lexical semantic content through a "bleaching" or "desemanticization" process, and have lost morphological and syntactic capabilities as a result. The change has been directional, from major category (verb) to minor category (preposition) to grammatical morpheme (case-marking prefix) along a grammaticalization continuum. This same grammaticalization process has resulted in the development of complementizers, adverbial subordinators, conjunctions, adverbs and auxiliaries from verbs.

Languages discussed include Twi, Ewe, Ga, Awutu, Fon, Yoruba, Engenni, Idoma, and Nupe, among others. Special attention is given to the development of complementizers from verbs 'say' and 'resemble' in Twi, and the development of markers for objecthood and transitivity/causativity from a verb 'take' in Twi and other languages. The comments of 19th century grammarians H. N. Riis and J. G. Christaller on semantic relationships and historical development in Akan are reviewed.

The reanalysis can result in typological change. The changes show a cyclic, recurring process, arising out of human interaction and metaphorical extension of word meanings.
PREFACE

A linguist working on the Kwa\textsuperscript{1} languages of West Africa has to deal with serial verb constructions sooner or later. In the early seventies linguists studying serial verbs, such as Stahlke, Bamgbose, and Awobuluyi, were concerned with the question of deep structure. At that time, one of the givens was a syntactic phrase structure that permitted either verb phrase coordination or subordination, along with transformations that didn't change meaning (much). The arguments over whether serial verb structures were basically coordinate or subordinate were many and complex, like the structures themselves. As the constructions resisted unambiguous pigeonholing, one interesting observation was the range and diversity of serial or serial-like structures. The range of examples, often in even a single language, made it hard to come up with a neat synchronic description because of the many exceptions and borderline cases. But the same messy, inconclusive synchronic data seemed to fit together into an ordered continuum when viewed in historical perspective. What were problems for a static description became parts of the diachronic explanation.

My method has not been to take a particular theoretic model and "field test" it in West Africa. I have not consciously selected a restrictive set of fieldwork procedures or a particular syntactic framework. I am aware that any approach reflects a certain set of assumptions, and each researcher has his/her own peculiar set of insights and blinders, given his/her particular training and historical context. For me, this included an assumption of the
usefulness of description in terms of constituent structure relationships (although not necessarily a directional "rule" like \( S \rightarrow NP \ VP \)); the idea that certain phenomena can be described insightfully using semantic case-rolé concepts; and the view that interesting explanations can deal with concepts like diachronic change, universal tendencies widespread in many languages, and communicative function. Given this approach, I hope that my findings will be valid and understandable for readers in other places and times.

Many linguists have influenced me. The first, Gilbert Ansre, helped me begin work on West African languages. At UCLA, William Welmers communicated his delight in learning African languages and his wide-ranging knowledge of their structures. Paul Schachter demonstrated careful, honest analysis. Talmy Givón, by his example, encouraged me to look beyond constricted paradigms for larger designs and explanations in terms of language history and function. As a fellow student and colleague, Larry Hyman shared his energy and enthusiasm. Mickey Noonan and Lynette Behm Nyaggah shared in the joys of discovering. Lynell Marchese provided validation when it was needed. Throughout, the solid source of reasonableness and encouragement has been Sandra Thompson. Her open-mindedness, tact, generosity, and willingness to listen to crazy ideas have been limitless. Her questions have helped me clarify ideas, and her suggestions have enabled me to relate my work to that of others. Through her ideas and her example, she has been a major influence on my work.
My dissertation committee members have been helpful and supportive, especially Co-Chair George Bedell and Marianne Celce-Murcia, and I thank Russell Schuh and Boniface Obichere for their participation. I appreciate the early encouragement from Breyne Moskowitz, Talmy Givon, and Pamela Munro.

My research has been crucially dependent on the generosity of many speakers of West African languages, but particularly on the insights and the patience of Elizabeth Akpati, Yemisi Olusola, Fui Gbedemah, Enoch Aryee, Twum and Evelyn Akwaboah, and Barnabas Forson in helping me understand their languages.

I have gained much from reading the works of the nineteenth century grammarians H. N. Riis, J. G. Christaller, and J. Zimmerman. I like to think that they would approve of my goals and find my conclusions interesting ones.
CHAPTER ONE: INTRODUCTION

The goal of this dissertation is to demonstrate the historical reanalysis of verbs in serial verb constructions as prepositions, adverbs, auxiliaries, conjunctions, complementizers, and adverbial subordinators in West African languages. Because written historical records for these languages do not go back very far, work on their historical reconstruction has been criticized as mere speculation. Therefore, another goal is to demonstrate the validity of comparative historical work on such languages.

By examining the semantic classes of verbs that change category, and by observing the resulting categories and functions, we can notice considerable consistency among related and unrelated languages and identify some well-traveled paths of change. I suggest that serial verb constructions are the structures in which these verbs have been reanalyzed, and the results of this process can include typological shifts to other sentence structure types, as well as changes in the organization of the lexicon.

There is a continuum between lexical function and grammatical function. Lexical verbs typically name events, processes, actions, or states. Over time, speakers may come to employ a verb for other functions, and the verb's loss of verbal semantic content can be described in terms of a "bleaching" or "desemanticization" process. Losing semantic specificity, a verb may also lose the ability to occur in contexts where a verb would normally be expected, and may undergo phonological erosion or assimilation processes in ways
uncharacteristic of verbs in the language. Such a verb, with limited
distribution or loss of phonological viability, can be described as
"defective".

When a verb has moved towards the grammatical end of the
lexical/grammatical function continuum, it can be described as having
undergone "grammaticalization". According to Lehmann (1985:303), this
term was first used by Meillet (1912) for the attribution of
grammatical character to a word which was formerly autonomous. As
described by Kurylowicz (1965) (quoted in Traugott and Heine 1988),
"grammaticalization consists in the increase of the range of a
morpheme advancing from a lexical to a grammatical or from a less
grammatical to a more grammatical status...." Carrying the definition
a bit further, Traugott and König (1988) refer to grammaticalization
as "the dynamic, unidirectional historical process whereby lexical
items in the course of time acquire a new status as grammatical,
morpho-syntactic forms, and in the process come to code relations that
either were not coded before or were coded differently." Traugott and
Heine (1988) distinguish between grammaticalization and reanalysis:
grammaticalization is unidirectional, but reanalysis is not
necessarily, since subordinate clauses can become reanalyzed as main
clauses "by default" when a main clause subject and verb become
grammaticalized as focus-placement markers. This is observable in Kwa
languages in contexts such as 'It is John who has come', where the 'It
is' takes on the grammatical function of focus marking.

Any historical work benefits from careful synchronic studies.
The concept of broad historical change presented here owes much to
many careful descriptive studies, utilizing various theoretical
approaches, among them Riis (1854), Zimmermann (1858), Christaller
(1875, 1881), Westermann (1930a), Ward (1936), Abraham (1951),
Armstrong (1963a), Pike (1966), Ansre (1966b), Rowlands (1969),
(1973), Huttar (1975), Awobuluyi (1978), Thomas (1978), and Li and

Our understanding of the form and meaning of serial verb
constructions was expanded as a result of the efforts of linguists to
identify deep structures and transformational relationships in the
tradition of the work of Chomsky (for example, Chomsky 1957 and 1965).
The criticisms of this work and the exploration of alternatives have
extended our appreciation of the range and complexity of serial verb
constructions. Contributions have included Stewart (1963), Williamson
Williams (1971), Bangbose (1973a, 1973b), Li and Thompson (1973a,
(1975), and George (Madugu) (1975, 1976), among others. As the
formulations of Chomsky's theoretical model have changed and
alternatives have been proposed, the questions regarding syntactic
structure have been reformulated, and the construction has enjoyed
further examination, by Byrne (1987) using the model of Chomsky (1981,
1982, 1986), and by Sebba (1987) using the model of Gazdar and Pullum
(1982), among others.

The earliest discussions of meaning and historical change come from the descriptive grammars of Twi from the 19th century. I have chosen to focus initially on the grammars of Riis [1854] and Christaller [1875]. Their work is discussed in chapter two. In chapter three I discuss paths of syntactic reanalysis in Twi and other languages. Chapter four discusses the implications for typological structures and word order, the directionality of the historical process, and its cyclic recurrence.
CHAPTER TWO: NINETEENTH CENTURY PERSPECTIVES

The first substantial descriptions of the grammatical structure of Twi were done by two German missionaries working at the Basel Mission on the Gold Coast in the middle of the 19th century. After four years in Africa (1845-49) the Reverend H. N. Riis put together a grammar, vocabulary, and list of proverbs, published in 1853 in German and a year later in English as *Grammatical Outline and Vocabulary of the Oji-Language, with Especial Reference to the Akwapim-Dialect, Together With a Collection of Proverbs of the Natives*. Upon Riis's return to Europe because of ill health, he passed on his knowledge of the language to the Reverend J. G. Christaller, who arrived in Africa in 1853. Working primarily at Akropong and Aburi (towns in the southeast of present-day Ghana), Christaller concentrated on Bible translation and the production of material for religious education, publishing a number of books and articles, including *The Holy Bible* in Twi in 1871. With his team of native speaker assistants, Christaller was able to develop and expand on Riis's grammar, and in 1875 *A Grammar of the Asante and Fante Language Called Tshi* was published.

Both of these early grammars are notable for their insights into the structures of the language. Although the term "serial verb construction" was not used by these grammarians, they both noted and described these constructions. They both recognized the gradual historical process by which verbs lose lexical meaning as well as formal properties, becoming "defective". In their descriptions of serial verb constructions, both distinguished between combinations of
two or more full verbs and combinations where one verb, often formally
defective in some way, plays a secondary role in the meaning of the
sentence.

Riis's view of serial verb constructions is discussed in section
2.1 of this chapter, and Christaller's view is discussed in section
2.2.

I include here a discussion of early descriptions of serializing
languages because, since linguists (myself included) delight in
discovering things for themselves, earlier works are often not
consulted (for example, no discussions of serial verbs since 1965 with
which I am familiar have mentioned Riis's work); I want to acknowledge
the insights of these early grammarians. Some early grammars and
vocabularies are not readily available today; when they are available,
relevant passages may be missed due to their manner of organization.
A reader not familiar with the particular language may miss the
significance of certain examples, since they are sometimes not
translated, or whole sentences are given idiomatic translations which
provide no clue to the nature of the sentence structure. I hope my
interpretations reflect accurately what these authors intended to
show.

According to Stewart (1972), the Basel missionaries used the term
"Twi" to refer to Asante-Twi, Akwapim-Twi, and Fante. However, Fantes
objected, since they did not use the term "Twi" for their language.
The term "Akan" was used in the 1960 census reports for the group of
languages to which these belonged, including others such as
Anyi-Baule, Nzema, and Ahanta; it was also used, somewhat
inconsistently, for larger groupings. The term "Akan" was later agreed upon as a name for Asante-Twi, Akwapim-Twi, and Fante. Because of the degree of mutual intelligibility, Akan is considered a "language", and among its "dialects" are Asante-Twi, Akwapim-Twi, and Fante. (Stewart suggests that there are two main subdivisions of Akan, one including Ashanti, Akim, Asin, Kwahu and Brong, and the other including Fante, Akwapim and Akwamu.) In this mine-field of nomenclature, I have tried to be fairly consistent and to avoid offense. Generally, in referring to the work of Riis and Christaller, I use the term "Twi", as they did; I also use the term "Akan" to refer to the three dialects as a group.

2.1 Riis

In this section I present and discuss Riis's treatment of serial verb constructions. The form and meaning of sentences with verb phrase sequences are discussed in 2.1.1. Riis saw verbs in serial constructions as either "notional" or "relational", and viewed the latter as having developed from the former historically, as discussed in 2.1.2. Implicit in his account is a view of the historical process of change from verb to verbal preposition as a gradual one (section 2.1.3), reflected in the language as a continuum between verb and preposition in terms of syntactic and semantic properties (section 2.1.4). He noted serial verb constructions which have acquired idiomatic meaning (section 2.1.5), as well as the limited phenomenon of compound verbs having been formed from verbs in serial constructions (section 2.1.6). Section 2.1.7 summarizes briefly.
2.1.1 Verb phrases without conjunctions: successive and coherent actions.

In his description of the connection of sentences without any conjunction, Riis says:

Several peculiar cases of sentences being thus connected require a particular notice. When of the same subject several successive and coherent actions are stated, the predicates by which they are expressed generally follow in corresponding succession, without being connected by conjunctions, and the reference to the subject being indicated only in the first of the predicates. [Riis 1854:103]

As illustrations Riis cites "the very frequent expressions" fa bera 'take, come; i.e., bring', and ko fa bera 'go, take, come; i.e., fetch', as in (1) [Riis 1854:103].

(1) ko fa ensu bera
go take water come

'Fetch water.'

As Riis notes, the actions are successive—the instructions are first to go, then take the water, and then come back. The actions are
also coherent—the going and taking and returning are contiguous sub-parts of a single undertaking, namely, the fetching of the water.

In another version of this construction, the post-initial verb or verbs have an a- prefix. The perfect tense prefix is also a-, but the perfect tense construction differs in tone, in some dialects at least, as discussed later by Christaller (see section 3.5.1.12 below for discussion of the prefix as a subjunctive marker). Although Riis was aware of the importance of tone distinctions in general, he may have missed this one, and he equated the a- prefix in verb phrase sequences with the a- prefix in perfect tense constructions. As noted much later by Nyaggah (1972) and Forson (1976), in a serial verb construction the post-initial verbs agree with the first verb in tense/aspect. When tense markings are suffixal, they occur on all verbs in a given construction; when tense markings are prefixal, they take the form of a- on post-initial verbs. The result is that Perfect, Progressive, and Future post-initial verbs all take a-, which is accordingly most conveniently referred to as the Sequential prefix (SEQ), the term I use here.

Riis makes an important observation about the meanings that are expressed by these peculiar constructions.

Another idiomatic form of coordinate connexion is the succession of one predicate to another in the perfect tense without conjunction. This form appears to be used, when two actions are conceived as connected not only by immediate succession, but
so that the one preceding is done only with a view to the one following, the performance of the latter being intended by that of the former, and, as it were, already completed by it. [Riis 1854:104]

Riis's examples of this construction include (p. 104):

(2) (a) mi-ko m-a-ba
   I-go I-SEQ-come
   'I go (with the intention) to return again immediately.'

(b) mi-serre aduaj m-a-di
   I-beg food I-SEQ-eat
   'I beg for food to eat.'

(c) mi-huam taa m-a-te se e-ye ana
   I-smell tobacco I-SEQ-perceive whether it-good Q
   'I smell the tobacco, to perceive whether it is good.'

In these examples the verbs refer to actions in a temporal sequence, but in addition the second action is the intended outcome of the first; the two actions are in a sense sub-parts of a single overall event. In sentences of this type, the a-prefix occurs on all post-initial verbs; additionally, for first person singular only, person and number are marked by m- (the first person singular marker for non-serial verbs) as in (2).
Riis notes that this construction requires that both verbs have the same subject (but cf. 3.5.1.11 below for exceptions) and be in the same mood. If either requirement is violated, the clause conjoiner na must occur, as in

(3) (a) meçe no na vaba
    I-FUT-compel him CONJ he-SEQ-come
    'I will compel him to come.'

(b) fye iye na wammo ahinna no
    look well CONJ you-SEQ-NEG-break pot the
    'Take care that you do not break the pot.'

In (3a) and (3b) the second verb names the intended outcome, as in (2), but in (3a) the subject of the second verb is different from that of the first ('he' vs. 'I'), and in (3b) the mood of the second verb is different from that of the first (negative vs. imperative); accordingly, a conjunction is required.

In citing Twi examples from Riis, I use his spellings. To contemporary readers, some of these may appear a bit strange, such as the use of v for [w]. For Riis, [ɛ] is written ɛ, and both [ɔ] and [ɔ] are written o. A line over a vowel (e.g., å) indicates length. He does not mark tone. His use of single and double consonants is not always consistent. However, these details do not hamper us in understanding and evaluating his remarks on syntax and meaning. The word-for-word glosses are mine, as is the morpheme segmentation, which
I have added in some examples for clarity. Where Riis does not give idiomatic glosses, I have provided them.

2.1.2 **Historical change from notional verb to relational verb.**

Another major insight is contained in Riis's observation that some "verbs have lost their original signification and have become relational words" [Riis 1854:37]. He distinguishes between notional words and relational words:

All the words contained in the language are either notional or relational words. The former express notions i.e. ideas of things or actions; the latter merely denote the relations, into which the notions enter in the connexion of a sentence. [Riis 1854:36]

(The distinction between "content-word" and "form-word" is what Riis is getting at here.) In Riis's description, "verbs used not to express notions, but merely relations" (p. 37) are called relational verbs. Some of these, "though they have changed their primitive signification, yet they have retained the character of verbs, and express relations in the way of predication" (p. 37). That is, some verbs have fairly concrete lexical meanings, but they also have more abstract meanings when they occur in certain contexts within the sentence. Thus, the verb nya means 'get, receive' when it appears as a transitive main verb with a noun object, but when it occurs in the
negative preceding a verb it has the more abstract meaning 'not yet' (formally it is still a verb). Among the verbs cited by Riis at various points are those listed in (4), with their concrete notional meanings and relatively more abstract meanings.

<table>
<thead>
<tr>
<th>VERB</th>
<th>NOTIONAL MEANING</th>
<th>RELATIONAL MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ye</td>
<td>'make'</td>
<td>copula with adjective or substantive</td>
</tr>
<tr>
<td>si</td>
<td>'stand'</td>
<td>copula with numeral</td>
</tr>
<tr>
<td>di</td>
<td>'eat, bite; have, take'</td>
<td>depends on noun object, e.g., with the noun atutu- 'quarrel' it means 'to quarrel'; with avoda 'birthday' it means 'celebrate a birthday'; etc.</td>
</tr>
<tr>
<td>daso</td>
<td>'lie on'</td>
<td>'continue'</td>
</tr>
<tr>
<td>ma</td>
<td>'give, present'</td>
<td>'let, cause'</td>
</tr>
<tr>
<td>de</td>
<td>not clear; 'carry, hold'</td>
<td>used with other verbs to mark instrument, means, suggested as material, or patient possible earlier meanings</td>
</tr>
<tr>
<td>nya</td>
<td>'get, receive'</td>
<td>'not yet', when used in negative with a following verb</td>
</tr>
</tbody>
</table>

16
ko 'go' 'towards'; 'in order to'

Riis sees the notional meaning as historically prior to the relational meaning. For example:

Di is originally a transitive verb, and probably identical with the verb di 'to eat'. But in connections like those here referred to, it has lost its original signification, and no longer by itself expresses any definite idea, but only the predicative relation, together with the form in which the predicative idea is referred to the subject.

[Riis 1854:75]

Examples of abstract nouns with di in its relational sense include:

(5) NOUN                        SENTENCE WITH di + NOUN
(a) atutu 'quarrel'            vo-di atutu 'They quarrel.'
(b) atorro 'lie'               o-di atorro 'He lies (tells lies).'  
(c) abuada 'fast'              o-di abuada 'He fasts.'
(d) avirrehosem 'conversation' vo-di avirrehosem 'They converse.'

Riis is describing the phenomenon of semantic change where there is no accompanying grammatical category change. The verbs in (4) generally have concrete interpretations when they occur in basic SVO
sentences in which they are followed by concrete nouns (including locative nouns). These same verbs have relatively more abstract interpretations when they occur in less basic sentence structures or are followed by abstract nouns—specifically, when followed by an adjective, a numeral, a verb, a clause, or an abstract process noun.

Riis does not defend his interpretation of the direction of the historical meaning change as having gone from concrete to abstract, from specific to general, rather than in the opposite direction. It may well be that he assumed that the gradual depletion of semantic specificity in verbs such as, for example, ye 'make' and si 'stand', leaving general copular verbs, constitutes a plausible historical explanation; while a historical change in the opposite direction—from copula to 'make' in one case and from copula to 'stand' in another, with corresponding narrowing in the range of acceptable complement structures—is idiosyncratic and rather more difficult to motivate historically. Such an assumption gains reinforcement when we observe that the hypothesis of a gradual loss of concrete lexical meaning along with a gradual generalization of selectional restrictions accounts for all of the verbs in (4). In contrast, the abstract-to-concrete shift hypothesis would assume a set of idiosyncratic, difficult-to-motivate particularizations of verb meanings along with the narrowing of acceptable grammatical contexts to a single possibility, namely, before a concrete noun object. Although Riis does not say so, the occurrence of concrete-to-abstract shifts in verbs in other languages suggests that the phenomenon may well be a universal of language change. Riis notes the use of the
English verbs to have, to be, shall, will as examples of verbs that have "lost their original signification" (p. 37).

2.1.3 **Historical change from verb to verbal preposition.**

The verbs in (4) still retain formal properties making them classifiable as verbs, even when they occur with relational meanings. However, the meanings of other verbs have become so altered, and the range of acceptable semantic/syntactic contexts have shifted to such a degree, that these words no longer have the set of formal properties typical of verbs. According to Riis, "They have not only changed their original signification, but have also lost the character of verbs, and must, when used relationally, be considered as belonging to another class of words, e.g. fi, vo, and ko are used as prepositions" [Riis 1854:37]. For these words, the change in semantic and syntactic properties has been so great that a reanalysis in terms of category membership is warranted; the historical direction of change is from lexical to grammatical, from content-word to form-word, or, in Riis's terminology, from notional to relational. Riis calls the new class of words verbal prepositions, and his discussion includes the following examples:

<table>
<thead>
<tr>
<th>Verb</th>
<th>Notional Meaning</th>
<th>Relational Meaning as Verbal Preposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>fi</td>
<td>'be from (a place)'</td>
<td>direction from a place</td>
</tr>
<tr>
<td>ko</td>
<td>'go'</td>
<td>direction towards a place</td>
</tr>
<tr>
<td>vo</td>
<td>'be (at a place)'</td>
<td>location at a place</td>
</tr>
</tbody>
</table>
ba 'come' direction towards the speaker
to 'fall' direction from higher to lower place
gu 'fall (of a collective multitude)' place (for a collection rather than a single thing)
tya 'pass through' movement through a place
ma 'give' the communication of an action to a recipient; 'for'
kyræ 'show' communication to a recipient (often oral)

Sentences illustrating these words in both their notional (i) and relational (ii) uses are given in (7):

(7) (a) fi

(i) ohinne no fi akwam (p. 91)
chief this be-from Akwam
'This chief is from Akwam.'

(ii) oyi hoŋ fi dompem na odi (p. 93)
he-take-off marrow from bone-in and he-eat
'He took the marrow out of the bone and ate it.'
(b) ko

(i) v-a-ko krum (p. 91)
he-PERF-go town-in
'He has gone into the town.'

(ii) vo- kýirre n'ensa ko n'eki (p. 92)
they-tie-together his-hands towards his-back
'They tied his hands behind his back.'

(c) vo

(i) tā bi vo kotokum (p. 91)
tobacco some be-at bag-in
'There is some tobacco in the bag.'

(ii) m-a-gyaw me poma vo ne dagm (p. 92)
I-PERF-leave my stick at his house-in
'I have left my stick in his house.'

(d) ba

(i) obarima bi a-ba ha (p. 91)
man a PERF-come here
'A man has come here.'

(ii) o-ðaj nehu ba hai (p. 92)
he-turn his-body towards here
'He turns this way.'
(e) to

(i) osu to rain fall 'Rain falls.'

(ii) o-curufi acemam to pom he-spring from canoe-in down-towards sea-in 'He sprang from the canoe into the sea.'

(f) gu

(i) dua egycypa gu fam tree blossom fall ground 'The blossoms of the tree are falling to the ground.'

(ii) ye-be-bu dag igiara gu fam we-FUT-break house whole down-to ground 'We will break the whole house down.'

(g) tyar

(i) osram tyar majm moon pass town-in 'The moon passes over the town.'

(ii) o-gwarre tyar asubontaj he-swim through river 'He swam through the river.'
(h) ma

(i) o-ma mi sekaj
he-give me knife
'He gave me a knife.'

(ii) m-u-n-su ma-m
you-POT-NEG-weep for-me
'Do not weep for me.'

(i) kyere

(i) o-kyere mi emfoninne
he-show me picture
'He showed me a picture.'

(ii) o-kasa kyere me
he-speak to me
'He spoke to me.'

The words in (6) are semantically classable as motion words; in
(7) (i) they are verbs of motion, and their counterparts in (7) (ii)
are verbal prepositions. They express direction, location, and
communication towards a recipient.

In many Twi sentences, a noun of "locality" signifying the
location or destination or recipient is the object of the main verb,
as in the (i) sentences in (7). Many other Twi verbs (without verbal
preposition counterparts) take nouns of locality as objects, e.g., nam
'walk (in a place)', *kinne* 'rove (in a place)', *ginna* 'stand (in a place)', *seg* 'hang (in a place)', *fiti* 'pierce', *fite* 'blow into'. However, when the main verb in a sentence does *not* take a noun of locality as object, if the location or destination or recipient is to be expressed, the speaker must use a different structure—a verbal preposition—to introduce the noun of locality. As Riis puts it,

> The local relation... is either included already in the action expressed by the predicate, or it is superadded to it in the way of qualification. In the former case the object of locality is *integrant*, in the latter merely *accessory*. [Riis 1854:90]

And when the object is merely accessory, "the local relation must be particularly expressed which is done by the verbal prepositions" (p. 91).

In other words, when specification of locality is not part of the main verb's semantic function, locality can be specified in the sentence by adding a nominal (introduced by a verbal preposition), an accessory element whose role in the sentence is semantically and syntactically secondary.

2.1.4 *Gradual nature of change from verb to preposition.*

The distinction between notional and relational uses of the same verb is not a tidy one; some examples seem to fall somewhere between the two endpoint classifications of verb and verbal preposition. But
this is the synchronic situation we would expect to find as individual
lexical items are subjected to the gradual historical process of
change. Riis does not discuss the phenomenon in these terms, but he
does note examples of words with more and less verb-like uses. For
example, the verb *fi* means 'be from, come out (from)', as in (7a) (1)
above. Typical constructions with *fi* and other verbs in series
include (8) and (9); note that both *fi* and the following verb (*ko* and
*fye*) take the third person singular subject prefix o-, which is what
we would expect for verbs.

(8) o-\textit{fi} \hspace{1cm} \textit{Kumasi o-ko Akropong} \hspace{1cm} (p. 93)
    \hspace{1cm} \begin{tabular}{ll}
    he-	extit{come-from} & he-	extit{go} \\
    \end{tabular}
    \begin{tabular}{l}
    'He went from Kumasi to Akropong.'
    \end{tabular}

(9) o-\textit{fi} \hspace{1cm} dua so o-fye fam \hspace{1cm} (p. 93)
    \hspace{1cm} \begin{tabular}{ll}
    he-	extit{come-from} & tree top he-	extit{fall ground} \\
    \end{tabular}
    \begin{tabular}{l}
    'He fell down from a tree.'
    \end{tabular}

But equivalent to (9) is (10), in which the *fi*-phrase comes after the
*fye* verb phrase, and the bare word *fi* occurs without the third person
singular verb prefix.

(10) o-	extit{fye} fam \textit{fi} dua so \hspace{1cm} (p. 93)
    \hspace{1cm} \begin{tabular}{ll}
    he-	extit{fall ground} & from tree top \\
    \end{tabular}
    \begin{tabular}{l}
    'He fell down from a tree.'
    \end{tabular}
Noting the somewhat ambiguous character of \textit{fi}, Riis says:

When put with the object of locality \textit{before} the predicate, it still in a degree retains its verbal character, the personal-augments or pronouns being attached to it, as to a verb, though it does not admit any other kind of inflection.... When put with the object of locality \textit{after} the predicate, it has completely assumed the character of a preposition, i.e., it has then become a particle unvaried by any kind of inflection. (p. 183)

When \textit{fi} occurs after the verb, as in (10), it can stand alone without the person/number prefix. It is not quite secure enough in its preposition-hood to stand bare at the beginning of the sentence, so in pre-verb position as in (9) it requires the prefix. When the verb \textit{fi} has lost its ability to take person and tense-aspect prefixes, it no longer meets the formal qualifications of the category \textit{verb}, and it is given the classification \textit{preposition}. In the first position, as in (9), its classification is somewhat ambiguous, since it retains some but not all properties of a verb.

Riis described the data as he found it. He was not constrained by a model requiring unambiguous category labels for each lexical item. To sort the occurrences of a motion verb into two sets, Verb and Preposition, one would have to make an arbitrary cut in the continuum. To attempt to do so seems somehow artificial and misguided, given the data. Nevertheless, the occurrences at each
endpoint of the continuum can be given category labels of Verb and Preposition, respectively.

Much later, Gleason [1961:156] described the continuum between lexical content words and grammatical form words: "There is a complete intergradation from items which are almost purely structural markers, to ones which have considerable lexical meaning and for which the function of marking structure is incidental. A function word is any word near one end of this continuum."

The syntactic defectiveness of the de-verbal preposition is illustrated in (7h) above for ma, translated as the verb 'give' and the preposition 'for'; in (7h) (ii) it is a preposition and as such it takes no prefixes. Ma 'give' in (7h) (i) has different semantic properties from ma 'for' in (7h) (ii). But we can find the historical pathway from 'give' to 'for' in a series of similar sentences in which ma occurs with senses establishing something of a continuum between 'give' and 'for', as in (11) (p. 87).

(11) (a) ogugu abro ma egkoko
he-pour corn give fowls

'He pours corn out for the fowls.'

(b) oye adyuma ma no
he-do work give him

'He works for him.'
(c) osu       ma       ne       nua
       he-weep       for       his       brother
       'He weeps for his brother.'

(d) oyi       me       bogyese       ma-m
       he-remove       my       beard       for-me
       'He shaves my beard for me.'

In (11a) *ma* can be translated as meaning literally 'give', as in 'He pours corn out and gives it to the fowls.' Corn is concrete and quite give-able. In (11b) the understood object 'work', is abstract, but we can stretch the literal meaning of 'give' to provide a rough paraphrase like 'He does work and gives it to him.' In (11a) and (11b) the first verbs have noun objects ('corn' and 'work') but in (11c) the first verb *su* 'weep' has no noun object, and a literal interpretation of *ma* as 'give' is more difficult; we can interpret (11c) as meaning that the act of his weeping is somehow "given" to his brother, but this strains the sense of (11c). Finally, in (11d), a literal 'give' interpretation of *ma* is clearly incorrect: the sentence does not mean 'He shaves my beard and gives it to me.' The function of *ma* here is to mark the pronoun 'me' in a Benefactive case relationship to the preceding action.

A similar continuum of meanings from verbal to prepositional exists for *ko*. In (7b) above, *ko* means 'go' as a verb in (i) but means 'towards' as a preposition in (ii). In (12a), *ko* occurs in a serial construction (p. 92).
(12) (a) vo-si kanne tutu mirika ko Adami-m
    they-stand competition run race go Adami-in
    'They ran a race to Adami.'

(b) vokekyirre n'ensa ko n'êki
    they-tie-together his-hands towards his-back
    'They tied his hands behind his back.'

Included in the meaning of (12a) are 'they ran a race' and 'they went to Adami'. But the racing and the going to Adami are not merely successive events; they are coherent actions, in which the going to Adami is intended by the racing, as specified in Riis's description of the meaning of serial verb constructions (see section 2.1.1 above). For (12b) a successive-clause paraphrase is less readily available; assigning a 'go' translation to ko is difficult here; semantically, the 'behind his back' phrase qualifies the act of their tying of his hands.

The verb vo 'be at' and the corresponding verbal preposition 'at' are exemplified above in (7c). More examples of vo as a preposition include (p. 92):

(13) (a) mmee mmofra gorro v'abonte so
    female children play at-street top
    'The girls are playing in the street.'
(b) mi-fua abofra vo m'abasa so

I-carry child at my-arm top

'I am carrying a child on my arm.'

According to the meaning of the sentences in (13), if vo were a verb, the understood subject of vo would have to be the preceding subject 'girls' in (13a), but would be the preceding object 'child' in (13b). But since vo is a preposition here (note that in (13b) it does not take the first person singular prefix mi- as a verb would), the vo-phrase can be viewed as qualifying the preceding action; it is not necessary to resort to the establishing of underlying subjects for the prepositional phrases.

2.1.5 Serial verb constructions with idiomatic meaning.

Riis notes instances in which the meaning of a combination of verbs in series is not equivalent to a combination of their independent meanings. For example, in (14), gi-di 'believe' is not equivalent to a literal combination of its components gye 'take, receive' (the likely historical source for gi) plus di 'eat, have, take, use'.

(14) mi-gi n'asem mi-di

I-take his-word I-use

'I believe his word.'

The combination has taken on a degree of idiomatic meaning, much as
lexical compounds tend to do.

2.1.6 Compound formation from serial verb constructions.

Riis notes the equivalence of (15a) and (15b) (p. 30):

(15) (a) mi-ka asem mi-kyerre no

I-speak word I-show him

'I told him something.'

(b) mi-ka-kyerre no asem

I-speak-show him word

'I told him something.'

In (15a) the verbs ka and kyerre both have the first person singular prefix mi-. In (15b), kyerre does not have its own prefix; the two verbs ka and kyerre are juxtaposed. According to Riis, because kyerre 'show' occurs frequently with ka 'speak', the unusual compound verb form kakyerre 'tell, inform' has arisen (p. 203).

The historical development of a verb-verb compound from a serial verb construction is not widely attested (but see Lord 1977 for Igbo and section 3.8.6 below for Edo). For this item such an explanation appears likely, particularly since ka 'speak' occurs frequently without an object, and since with verbs of speaking the person spoken to is introduced by the verb kyerre 'show', the two verbs ka and kyerre therefore often occur juxtaposed.

The NP-V V NP sentence, o-ka kyerre no (literally, he-speak show
him) 'He told him,' could easily have been reanalyzed by hearers as an NP - [V-V], NP structure. Then, if it was necessary to mention what was told, the Patient noun could have been added at the end of the string, resulting in the configuration NP-V NP NP as in (15b).

In some instances the combination retains a syntactic property of separate verbs, however, in that in the first person singular both verbs (not just the first) take the mi-prefix, as in (16).

(16) aseq no bai se nea mi-ka mi-kya

word the come as which I-speak I-show-you

'The thing has happened just as I told you.'

It has been observed that, in historical change, non-main clauses tend to retain old morpho-syntactic patterns more tenaciously than main clauses do, and that it is the affirmative-indicative-simplex structures which are at the forefront of change. The examples here are consistent with such a generalization: the mi-prefix is retained in the adverbial clause in (16), but it is not retained in the simple main clause in (15b).

2.1.7 Summary.

To summarize: Riis noted important aspects of the form and meaning of Twi serial verb constructions and marked how verbs in these constructions become prepositions as meaning and form change. The verbs in a serial construction denote successive and coherent actions, the second action being the intended outgrowth of the former action.
Some verbs have notional functions, expressing actions, and in other contexts have relational functions such as copula, connective, adverb, or case marker. The notional meaning is older, and the more general relational meaning is more recent. In some relational verbs the meaning change has gone so far that the words have also lost formal properties, and classify as prepositions with respect to meaning and form.

2.2 Christaller.

The Rev. J. G. Christaller, the missionary who continued Riis's work on Twi, published *A Grammar of the Asante and Fante Language Called Tshi* in 1875 and *Dictionary of the Asante and Fante Language Called Tshi* in 1881 (revised and reprinted in 1933). Christaller built on the groundwork done by Riis, incorporating many of his ideas and using many of his examples, but recasting many of his descriptions. Both Riis and Christaller explicitly recognize the effects of historical change on serial verb constructions. Both recognize two sets of verbs, differentiated according to meaning. Full verbs are "notional" for Riis, "principal" for Christaller; verbs that have lost some of their former meaning, as well as syntactic properties in some cases, are called "relational" by Riis, and "auxiliary" by Christaller. Christaller's representations are based on his own sophisticated phonological analysis. His grammar is in three parts: sounds, words, and sentences. Verb combinations are treated at several points in the description: under sections on verbs, simple sentence predicates, predicate complements, and predicate
adjuncts.

In this section I discuss and comment on Christaller's description. Section 2.2.1 deals with his perception of an elusive yet real distinction between serial constructions in terms of the meaning relationship between the verb phrases. This meaning relationship is dependent on the context; a given verb may function as a main verb or as an auxiliary, depending on the context, as discussed in section 2.2.2. Section 2.2.3 summarizes.

I use Christaller's symbols in citing his Twi examples. In his 1875 grammar, [ɔ] and [ɛ] are written as o and e, respectively, with dashes under the letters; the 1933 edition of his 1881 dictionary uses ɔ and ɛ. Where Riiis used v for [w], Christaller uses w, so Riiis's vo is Christaller's wo or wɔ. High tones are marked with an acute accent, low tones with grave. Initial low tones are unmarked; a tone the same as the one preceding it is unmarked. An acute accent following a high tone indicates a downstepped high. I have added word-for-word glosses, and in some cases idiomatic translations.

2.2.1 Coordinate and subordinate meaning in serial verb constructions.

In describing and categorizing coordinate sentences and verb combinations, Christaller focuses on meaning. In coordinate sentences, one assertion follows another, connected by the conjunction na, as in (17) (from Christaller 1875:150).

34
(17) (a) akóko -fwè  aberewá, na aberewa -fwè  akóko

hen  care-for old-woman and old-woman care-for hen

'The hen cares for the (old) woman and the woman cares for
the hen.'

(b) wɔrèkɔ  ykraŋ 'nè, nà ɔkyëna  wɔsåŋ

they-PROG-go Accra today and tomorrow they-return
akó  dona

go Elmina

'They are going to Accra today, and will return to Elmina
tomorrow.'

In such combinations, according to Christaller, the sentences can
represent simultaneous situations or express a succession in space or
time; the second sentence can be of equal importance, can give greater
extent of meaning, or can contain an explanation of the preceding one.
Riis's examples in (3) above with the conjunction na are similar.

Christaller discusses another type of coordinate sentence, with
two or more verbs but without the conjunction na. The verbs may
express different successive actions, as in (18). In other instances,
one verb represents a state or act simultaneous with another, as in
(19) (from Christaller 1875:144).

(18) (a) osoreŋ  guareŋ  sræŋ

he-arose washed anointed

'He arose, washed, and anointed himself.'
(b) yeqre de ntém ko ofe
we-arose quickly went home
'We arose quickly and went home.'

(c) strà né pojko so guajè
he-sat his horse top fled
'He mounted his horse and fled.'

(19) (a) w¿te ho resu
they-sit there PROG-weep
'They sit there weeping.'

(b) gyaré da mpà so
he-be-sick lie bed top
'He lies sick.'

Christaller calls verb combinations like those in (18) and (19) 
accidental combinations; "two (or more) sentences are thrown or 
contracted into one, and the verbs are coordinate in sense as well as 
in form." [1875:144]

By saying that these conjunctionless sentences are "coordinate in 
form", Christaller means simply that the verb phrases are juxtaposed. 
"Coordinate in sense" means, if I may paraphrase Christaller, that two 
ideas are juxtaposed--two (or more) actions or situations, which may 
be temporally sequential or simultaneous, but which are nevertheless 
separable and distinct.
In a second type of verb combination there is a principal verb and an auxiliary verb, this distinction being semantic, not syntactic: "the auxiliary or supplemental verb is coordinate only in form, but subordinate in sense, whether it be preceding or succeeding the principal verb" [1875:144]. By this Christaller means, I take it, that the verbs occur together in a single sentence ("coordinate in form"), but that the actions or situations they name are not separable, not distinct from each other. Christaller calls these essential combinations. "One verb is the principal, and another is an auxiliary verb, supplying, as it were, an adverb of time or manner, or forming or introducing a complement or adjunct; or the second verb is supplemental, forming part of a verbal phrase. The actions expressed by both verbs are simultaneous and in an internal or inseparable relation or connection." [1875:144]. Examples of essential combinations are given in (20), in which the locative verb wo 'be at' serves as the auxiliary verb.

(20) (a) ódi ne dũma wo ofie [1875:131]
    he-do his work (be)-at home
    'He carries on his business at home.'

(b) màgyaw me poma wo ne dagmu [1881/1933:560]
    I-PERF-leave my stick (be)-at his house-in
    'I have left my stick at his house.'
(c) gye mé wè m'atámfo nsam' [1875:132]
take me (be)-at my-enemies hand-in
'Deliver me from my enemies!'

Christaller's distinction between accidental and essential verb combinations is an important one. It is based on his perception that for some Twi verb combinations—the accidental ones—the verb phrases in the sentence name distinct actions or situations such as arising, washing, anointing, sitting, weeping. In other sentences, the semantically subordinate verb serves, for example, to express circumstances of place, time, manner, cause, degree, or to introduce nouns and indicate their case roles with respect to the main verb (my terminology, not Christaller's). Christaller's implication, although he does not state it in these terms, is that a certain set of verbs tends to become syntactically subordinate. This set is not distinguishable initially in terms of formal attributes, but it can be characterized semantically. This set is "real", to speakers, because it is only members of this set that they eventually allow to become formally defective. The subordinate verb in Christaller's "essential combination" is comparable to what Riis described as the verb with "relational" function.

If Twi were the only language in which this happened, one could ignore the meanings of these verbs and argue that the choice of verbs that become syntactically "defective" is accidental and idiosyncratic. However, the occurrence of the same phenomenon in related languages and in unrelated languages, affecting the same semantic set of verbs,
suggests that membership in the set is not arbitrary.

To get at what Christaller is referring to when he calls verb series like those in (18) and (19) "coordinate in sense", we can observe that the near equivalent of the meaning of a sentence in (18) or (19) can be provided by a series of sentences. The verb phrases in, say, (18c) can be separated and each put with the subject, and the result preserves the general meaning (the propositional meaning, at least) of the serial verb sentence. For example, (18c) (repeated here) can be paraphrased as (21).

(18c) .otraa ne po go ko so guaghe

he-sat his horse top fled

'He mounted his horse and fled (on his horse).'

(21) .otraa ne po go ko so

'He mounted his horse.'

oguaghe

'He fled.'

The fact that the fleeing was done on horseback is part of the meaning implied in the serial verb construction, and it is this element of meaning that is not necessarily conveyed by separate sentences, as in (21) (although the hearer with some experience of the world may well assume that is the way it happened).

For essential combinations, as in (20), it is more difficult to come up with a satisfactory multiple sentence paraphrase. For the sentences in (20) above, paraphrases are attempted in (22). The subject and first verb phrase of each sentence in (20) can be
repeated, as in the first column in (22). But for the second verb phrase of each sentence in (20); the choice of a unique subject is not always possible, as the alternatives (i) and (ii) illustrate in (22). For example, (20a) can be paraphrased as either (22a i) or (22a ii).

Yet neither paraphrase means quite the same as (20a). That is, the meaning, 'He carries on his business at home', is not exactly equivalent to either 'He carries on his business, and he is at home', or 'He carries on his business, and his business is at home.'

(22) (a) ődì ne òwùìma

(i) ọwò ofìe

(ii) ne òwùìma wò ofìe

'He carries on his business.'

(i) 'He is at home.'

(ii) 'His business is at home.'

(b) magyaw me poma

(i) mewọ ne dagmu

(ii) me poma w ne da mu

'I have left my stick.'

(i) 'I was in his house.'

(ii) 'My stick was in his house.'

(c) gye me

(i) ? wo m'atámfo nsam'

(ii) mewọ m'atámfo nsam'

'Take me.'

(i) ? 'Be at the hands of my enemies.'

(ii) 'I am at the hands of my enemies.'

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The two-clause paraphrases in (22) are less satisfactory than that in (21) because, in essential combinations, as Christaller says, "the actions expressed by both verbs are simultaneous and in an internal or inseparable relation or connection." These sentences often do not easily divide up into a series of separate actions or states which still convey the original meaning. In each case in (20), the locative phrase expresses a circumstance of the action or state named in the first predication; it is not interpretable as a conjoined verb phrase referring to the subject. The locative phrase is "coordinate only in form, but subordinate in sense." The locative verb phrase participant in an essential combination is called an adjunct by Christaller.

"These adjuncts are not necessary to complete the sense of the verb, but are accessory parts of the predicate" [1875:130].

"Subordinate in sense" means less important pragmatically; in some sentences the wo phrase is so subordinate that the verb wo is omitted altogether, "when the sense is plain without it" [1875:132], as in (23).

\[(23) \text{mmofr\'a \ g\'oru (wo) abgnte\'j so } \quad [1875:132] \]

children play be-at street top
'Children are playing in the street.'

The deletability of the verb wo is consistent with Christaller's characterization of it as "subordinate in sense."

Adjuncts in the form of verb phrases are not limited to locatives, and can also express time, duration, manner, degree, means,
instrument, accompaniment, and cause [1875:130-142]. Christaller says,

We treat the circumstances of place, time, manner, cause, etc., more in their logical than in their grammatical relation to the principal verb of the sentence.... We call the verb which in such cases expresses the principal action of the subject, the principal verb, and the verb which expresses any circumstances of that action in the form of a coordinate predicate, an auxiliary. [1875:130]

In addition to we, other locative verbs occurring both as independent verbs and as auxiliaries in essential combinations include nam 'walk', fa 'take one's way', gyina 'stand', and si 'stand', for example as in (24)—as main verb in (a) and as auxiliary verb in (b).

(24) (a) dua bi si hê

    tree a stand there

     'A tree stands there.'

(b) Yesu sii yeg a nagmu wui

    Jesus stood our footprint died

     'Jesus died in our stead.'

In (24b) the verbs are "in an internal or inseparable relation or connection;" the standing in our stead is a circumstance of the dying.
Referring to Christaller's meaning distinction, Stewart (1963) says, "It seems desirable... to treat the distinction between principal and auxiliary verbs as bogus at least as long as no clear-cut formal justification can be found for it." But Christaller proposed the distinction as a semantic one, not a formal one. Formal properties aside, many combinations are interpreted such that one verb phrase is less central to the message being expressed.

Verbs with certain meanings tend to occur, more frequently than others, as auxiliaries. For example, verbs with locative NP objects are frequently auxiliaries. This is not surprising, since the communication of the location of an event is commonly less central to the meaning of the utterance than is the announcement of the event itself. The locative verb wo 'be at' is a prime example. Transitive verbs of motion also take locative NP objects, and they often convey pragmatically secondary information, occurring in combination with another verb phrase which carries the central meaning, the main message.

2.2.2 **Semantic subordination dependent on context.**

Christaller writes as though his accidental/essential distinction were airtight, forming two neat sets, with verb combinations falling into one category or the other. However, Christaller is focusing on the same set of phenomena, and often on the same set of sentences, as Riis was, and, as we have seen, the distinction between notional word and relational word, between verb and verbal preposition, is one of degree; there are gradations in a range of semantic and formal
properties. In many instances the classification is not clear-cut. For example, although verbs of motion often have semantically secondary roles, it does not follow that in combination these verbs of motion will necessarily always be auxiliaries. This is demonstrated here in the discussion of examples (26)-(29) below.

Christaller’s description is a bit imprecise on this point. He says that place nouns are introduced by auxiliary verbs (p. 131); in his description, in essential verb combinations, verbs of motion are auxiliaries expressing direction. Christaller’s example sentences include the verbs of motion listed in (25):

(25) ba ‘come’
    ko ‘go’
    fwa ‘fall’ (single things)
    to ‘fall’ (single things)
    gu ‘fall’ (a collective multitude)
    kyene ‘swing’
    kyere ‘point to, show’
    twa ‘pass, cut across’
    tra ‘pass over’
    fi ‘come forth’

Let us consider some contexts for the motion verb fi ‘come forth’. It is a main verb in (26); in the verb combinations in (27) it is an auxiliary.
(26) \textit{\textbf{fi}}
\textit{\textbf{m'ahohiam}}
\textit{\textbf{come-forth}}
\textit{\textbf{come-forth}}
\textit{\textbf{my-trouble}}
\textit{\textbf{from behind the clouds}}
\textit{\textbf{sun}}
\textit{\textbf{be-fell}}
\textit{\textbf{he}}
\textit{\textbf{out of}}
\textit{\textbf{He took me out of my trouble.}}

(27) (a) \textit{\textbf{ofii}}
\textit{\textbf{m'ahohiam}}
\textit{\textbf{come-forth}}
\textit{\textbf{my-trouble}}
\textit{\textbf{draw}}
\textit{\textbf{his house}}
\textit{\textbf{inside}}
\textit{\textbf{called me}}
\textit{\textbf{from his house, i.e., he, being in his house,}}
\textit{\textbf{called me.}}

(b) \textit{\textbf{ofii}}
\textit{\textbf{dag}}
\textit{\textbf{mu}}
\textit{\textbf{free me}}
\textit{\textbf{his house}}
\textit{\textbf{inside}}
\textit{\textbf{called me}}
\textit{\textbf{from his house, i.e., he, being in his house,}}
\textit{\textbf{called me.}}

(c) \textit{\textbf{ofii}}
\textit{\textbf{mm'hraase yare}}
\textit{\textbf{his infancy}}
\textit{\textbf{he}}
\textit{\textbf{be-sick}}
\textit{\textbf{is sick}}
\textit{\textbf{from his infancy.}}

(d) \textit{\textbf{ofii}}
\textit{\textbf{fii hye yu too pom}}
\textit{\textbf{ship}}
\textit{\textbf{inside}}
\textit{\textbf{fall sea}}
\textit{\textbf{sprang}}
\textit{\textbf{from the ship into the sea.}}

(e) \textit{\textbf{ofii}}
\textit{\textbf{Dodi varai fawu}}
\textit{\textbf{Firaw baaw}}
\textit{\textbf{Awurahai}}
\textit{\textbf{he}}
\textit{\textbf{swam}}
\textit{\textbf{crossed Volta}}
\textit{\textbf{came}}
\textit{\textbf{swam from Dodi over the Volta (river) to Awurahai.}}
\textit{\textbf{Dodi}}
\textit{\textbf{to}}
\textit{\textbf{Awurahai}}
\textit{\textbf{He swam from Dodi over the Volta (river) to Awurahai.}}
In (27) (abc) fi 'come forth' is the auxiliary. The gloss for (27b) indicates that the fi phrase is indeed semantically secondary. The sentence does not mean 'He left his house and called me'; the fi phrase expresses a circumstance of the calling, and is better translated as 'from his house.' Similarly, the meaning of (27c) is not 'He comes from his infancy and is sick'; rather, the fi phrase provides adverbial modification. According to Christaller's presentation, the auxiliaries in (27d) are fi and to 'fall'; the auxiliaries in (27e) are fi, twa 'cross', and ba 'come'. The principal verbs in (27d) and (27e) are huruw 'jump' and guare 'swim', intransitive verbs expressing manner of locomotion, not direction. The directional auxiliary verb phrase can either follow or precede the principal verb when the principal verb is a "manner of locomotion" verb, as illustrated by the equivalence in meaning of (28a) and (28b).

(28) (a) o-guáŋ faá bóŋ mù
    he-fled took valley inside
    'He fled through the valley (took his way through the valley).'

    (b) o-faá bóŋ mú guáŋè
    he-took valley inside fled
    'He fled through the valley.'

In (29a) the motion verb fi 'fall' is the auxiliary; in (29b) its status is less clear.
(29) (a) ọtọ̀w  dà̀ ̀wọ̀ nọ̀ ́fwè ̀ho
     he-strike tree the fall there
     'He felled the tree.'

(b) ọfiì  dà̀ ̀wọ̀ sò̀ ́fwè ́fám̀
     he-came-forth tree top fell ground
     'He fell down from a tree.'

If we assume, with Christaller, that verbs of direction are
semantically subordinate to other verbs, we have an interesting
situation in (29b), where both verbs are direction verbs: ̀fì 'come
forth' and ̀fwè 'fall'. If direction verbs are auxiliaries, we are
left with two auxiliaries and no principal verb (not a happy
analysis). How can we decide which is the auxiliary? Is his leaving
the tree subordinate in sense to his arriving at the ground? Or
vice-versa? The existence of sentences like (29b) suggests that verbs
of motion in essential combinations are not always auxiliaries, and
that the concept of auxiliary is not absolute but relative and depends
on the meaning of the sentence and the verb with which it occurs in
combination.

In his review of Christaller's analysis, George [1975:28] makes a
similar assessment. He notes that the verbs are classified according
to how they function in each case; the auxiliary verbs are therefore
auxiliaries simply because they function as modifiers of some sort.
He concludes that Christaller's distinction between essential and
accidental verbal combinations arises from contextual considerations
of the verbs, and that these "auxiliary" verbs do not form any special class of verbs.

But from the fact that Christaller's distinction is not a clear formal distinction, we should not necessarily conclude that it is not a real distinction, particularly when it is just those verbs that frequently provide pragmatically secondary information which in time become syntactically "defective" or develop prepositional homophones.

Since the locative verb wo 'be at' occurs so frequently in combination with other verbs to introduce semantically secondary information, it has accordingly lost some of the formal properties of a verb. In Twi, tense/aspect is indicated by prefixes and suffixes on the verb; subject pronouns and the negative take the form of verb prefixes. Ability to occur with these affixes, then, can be considered a syntactic property of verbs in the language. But certain verbs have lost some of these properties. Christaller says:

Yet the verbs wo, sa, and gye ('except') have so far stripped off their verbal character and have become mere particles, as they do not assume any prefixes, not even the pronominal prefix me, nor the negative prefix, except when they are used, not as prepositional or auxiliary verbs or particles, but as principal verbs. [1875:76]

That is, in combination with another verb, wo does not inflect; as an invariant particle, taking an object nominal, it corresponds to the category preposition in other languages.
2.2.3 **Summary.**

To summarize: Christaller distinguishes between accidental and essential serial verb combinations. This distinction is based on sentence meaning. The verbs in accidental combinations generally name sequential or simultaneous actions or states. The verbs in essential combinations are integrally related; they often merge to form the meaning of the whole sentence, making it difficult to paraphrase as a sequence of separate actions or states. Verbs in essential combinations are either principal or auxiliary (although the terms probably describe the extremes of a continuum rather than discrete categories); the auxiliary verb is "subordinate in sense." Semantic/pragmatic subordination leads to syntactic subordination; of those verbs that frequently occur as auxiliaries, some become syntactically defective, losing verb properties such as the ability to inflect.

Where recent studies of serial verb constructions have cited 19th century work on Twi, they have referred to Christaller's grammar but not that of Riis. For serial verb constructions, Christaller's descriptive analysis is in all respects similar to Riis's, except for the terminological differences noted at the beginning of this section. Christaller studied Riis's writings before beginning work in Africa, and his use of many of the same examples in his grammar suggests that he relied heavily on the earlier grammar. Christaller shared and reiterated Riis's view that a semantic class of verbs, over time, within the context of the serial verb construction, give up lexical
meaning and sometimes, gradually, inflectional capacity, remaining as grammatical function words.
CHAPTER THREE: PATHS OF CHANGE IN MEANING AND FORM

The pattern of organization in this chapter is to describe a case of reanalysis in Akan, and then draw parallels with similar developments in other languages. Many of these "other languages" are historically related to Akan; some are not. The West African languages discussed differ in the closeness of their historical relationship to Akan and to each other.

Of the work on relationships among West African languages, much is based on careful word counts, without much note of syntactic or typological correspondences. Among these languages, the groupings and the group names differ somewhat among scholars such as Westermann and Bryan, Greenberg, Stewart, Welmers, Givon, Hyman, Bennett and Sterk, and Williamson, among others. Names of African rivers seem to be favorite choices for names of language groupings. According to Stewart (1972), Akan belongs to the small Tano sub-group, which also includes Bia languages such as Anyi-Baule, Ahanta, and Nzema. These Tano languages belong to the Volta-Comoé group, along with Ono and Guan languages such as Awutu, Krachi, and Kyerepon-Larteh-Anum. I cite Volta-Comoé data from Bia (Anyi-Baule) and Guan (Awutu). I also discuss data from larger family groupings; I do not claim consistency in the use of terms such as Kwa, Benue-Congo, Benue-Kwa, and Niger-Congo.

Scholars may differ in the groupings they set up for West African languages. They may also differ in the degree to which they attribute similarities to borrowing or bilingual interference or creolization or
"areal" factors rather than a common forbear. However, the many
resemblances among the West African languages discussed here is not at
issue. There are typological similarities, common morphological and
syntactic patterns, as well as regular sound correspondences among
languages, even those that are separated by considerable distances
geographically. Many of these languages show instances of verb
reanalysis in the serial verb context, and are included here.

West African morphemes and syntactic structures, such as serial
verb constructions, are present in pidgin and creole languages in West
Africa and the Caribbean. How we choose to describe the nature of the
relationship between West African languages and Caribbean creoles may
be controversial. However, since these languages echo the West
African structural patterns, I have included them in the discussion.

I have also included data from languages with no known historical
relationship to West African languages, for example, Mandarin Chinese,
because these typologically-similar languages show evidence of the
same verb reanalysis phenomenon.

Following the introduction in section 3.1, this chapter examines
verbs with place noun objects and their corresponding Locative
prepositions (3.2); the verb 'give' as a preposition marking Recipient
and Benefactive NPs (3.3); conjunctions, often traceable to a verb
such as 'be with' (3.4); the verb 'take' as prepositional marker of
Instrument, Patient, transitivity/causativity, and definiteness (3.5);
miscellaneous de-verbal prepositions and particles that don't fit any
particular category but are clearly instances of the reanalysis
phenomenon (3.6); verbs which have become complementizers and
subordinating conjunctions (3.7); and de-verbal adverbs and auxiliaries (3.8).

3.1 Introduction

What characterizes the set of verbs that change from notional to relational (Riis), from principal to auxiliary (Christaller), from major lexical category to minor category, or from lexical content morpheme to form word or grammatical morpheme? There are no particular formal criteria which these verbs share. Looked at across languages, the set of verbs is largely characterizable in terms of meaning. One can find deverbal case markers associated with nominals in many of Fillmore's [1968] case roles and, in general, cross-linguistic consistency as to the meanings of the verbs that give rise to them, as observed by Givón [1975]. But a defective verb does not necessarily mark one of Fillmore's deep case notions, and two different verbs in different languages may develop similar grammatical functions. In this chapter I examine paths of change in meaning and form, beginning with verbs in serial constructions. The grouping is according to verb meanings and functions of defective verbs, but because of the nature of the data the sections overlap somewhat. Since the most insightful 19th century studies were of Twi, as discussed in chapter two, each section here begins with a discussion of instances of reanalysis in Twi, and is followed by comparable historical developments in other languages, primarily those of West Africa.

I have used data from nineteenth century authors, current
studies, and my own research. These data span more than a century, and reflect different dialects and orthographies. By lumping data together in some instances, I may have obscured some facts. However, any corpus—even a single idiolect—will show variation; indeed, variation is central to the kind of language change described here.

The case role terms used here are basically those of Fillmore [1968]. According to Fillmore, the sentence in its basic structure typically consists of a verb and one or more noun phrases, each associated with the verb in a particular case relationship. The case role, or underlying syntactic-semantic relationship, is distinguished from its expression in a particular language in a particular case form, which can be indicated by inflections, affixes, prepositions, post-positions, particles, or constraints on word order. Verbs can be classified according to the number and kinds of case roles they can occur with.

The set of case roles reflects how speakers perceive events and interactions. Following are the case roles I have found most useful (adapted from Fillmore 1968:24, 81).

**Agent**: the typically animate perceived instigator of the action identified by the verb.

**Instrument**: the inanimate force or object causally involved in the action or state identified by the verb.

**Recipient**: the animate being affected by the state or action identified by the verb (not used for animate subjects; Fillmore and Givón use "Dative").

**Factive**: the object or being resulting from the action or state

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identified by the verb, or understood as a part of the meaning of the verb.

**Locative:** the location or spatial orientation of the state or action identified by the verb.

**Patient:** the thing affected by the action or state identified by the verb, or whose role is identified by the semantic interpretation of the verb itself. (Fillmore 1968 called this case role "Objective", but I have avoided this term because it invites confusion with the term "object" or "direct object". Givón uses the term "Accusative", but Fillmore prefers to reserve that to label the surface case form.)

**Comitative:** expresses accompaniment; marked by the preposition with in English, the post-position to in Japanese; may be related to NP conjunction.

Additional case roles may be found to be useful (see, for example, discussion and references in Fillmore 1977). There may be utterances in the language in which a semantic case role for an NP is not readily determinable, or where elements of more than one semantic role are identifiable. We can distinguish between paradigm instances and non-paradigm instances of a given case role. The notion of agency, for example, is discussed by Lyons [1977:483]. He notes that a paradigm instance of agency may include features like animacy, intention, responsibility and the use of its own internal energy-source, but that non-paradigm instances might not include all of these elements. According to Lyons, one can fairly assume that languages are designed to handle the paradigm instances, and it is only to be expected that the applicability of notions like agency
should be unclear in non-paradigm instances.

Givon (1984b) sees case roles as prototypes, with metaphoric extension from these prototypes. He notes that, in principle, there are as many case-roles as there are verbs, so that the most common ones are merely the most likely, the most general classes of case roles.

The concept of clause topic is also a useful one, as developed in Chafe (1976), Schachter (1976), and Li and Thompson (1976). Subject and topic do not necessarily coincide for all languages. But for many of the languages discussed here, the primary clausal topic is coded as subject. For the SVO languages discussed here, direct object position is typically the immediate post-verb position. Givón (1984b) identifies direct object position as that position whose grammatical coding is otherwise characteristic of Patient objects. Then, "promotion to direct object" is the placing of a non-Patient object into direct object position. The term "dative shift" has been used to describe this, but the possibility is not always limited to Datives. (As Givón points out, Bemba obligatorily promotes Dative/Benefactive objects, and KinyaRwanda allows promotion of objects other than Dative/Benefactive.)

It can be argued that Fillmore-type case roles can be broken down into more basic semantic features such as animacy or responsibility, and that they are merely ad hoc collections which rather messily combine noun features and properties of abstract predicates. This may be demonstratable to some extent; however, the value of Fillmorean case roles lies in the extent to which they help us describe and
explain how people use their languages and how linguistic changes arise out of language use. I use the concept of case roles here because I find it useful in describing and explaining the diachronic shift from verb to case marker in the context of serial verb constructions.
3.2 Verbs with place noun objects become Locative prepositions.

In terms of semantic class, verbs of motion and location are among the most likely to occur in serial constructions, and most likely to undergo "semantic devaluation" and often even syntactic defectivization. In some languages the verb and its Locative noun object gradually take on the character of a Locative prepositional phrase. In some cases the preposition is eroded and becomes a consonantal prefix, which may then be lost.

Section 3.2.1 looks at locative prepositions in Twi, and section 3.2.2 examines them in Ewe, Ga, Yoruba, Igbo, Engenni and Iedoma. Section 3.2.3 follows the development of Yoruba ni from locative preposition to generalized marker of oblique arguments and prepositional marker for arguments which are not utterance topics. Section 3.2.4 concludes.

3.2.1 Locatives in Twi.

Riis alluded to a number of locative verbs with prepositional functions in his Twi grammar (see 2.1.3 above). For example, fi 'be from' occurs as a verb in (30a) and as a preposition in (30b):

(30) (a) chinne no fi akwam

[chief this be-from Akwam

'This chief is from Akwam.'
(b) oyi ho fi dompem na odi  [Riis 1854:93]
    he-take-off marrow from bone-in and he-eat
    'He took the marrow out of the bone and ate it.'

In (30b) the meaning of fi has faded from 'be from' to 'from', and
with another verb preceding it in this serial-like configuration, it
does not inflect (see 2.1.4 and 2.2.2 above).

The verb wo 'be at' (vo for Riis) occurs in (31a). It is used as
a preposition in (31b), where it means 'at'. As a preposition it does
not occur with construction markers for tense-aspect, subject
agreement, or negation (as noted in 2.2.2 above), and is even
omittable, as in (31c).

(31) (a) tā bi vo kotoku-m  [Riis 1854:91]
    tobacco some be-at bag-in
    'There is some tobacco in the bag.'

(b) magyaw me poma vo ne dag-m  [Riis 1854:92]
    I-PERF-leave my stick at his house-in
    'I have left my stick in his house.'

(c) mnofrā gòru (wo) abontēg sò  [Christaller 1875:132]
    children play be-at street top
    'Children are playing in the street.'

Other motion/direction verbs taking place nouns as objects also

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occur in prepositional contexts. Examples are those in (32) (as in section 2.1.3 above).

<table>
<thead>
<tr>
<th>FORM</th>
<th>VERB MEANING</th>
<th>PREPOSITIONAL MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ko</td>
<td>'go'</td>
<td>'to, into, towards'</td>
</tr>
<tr>
<td>ba</td>
<td>'come'</td>
<td>'to'</td>
</tr>
<tr>
<td>to</td>
<td>'fall'</td>
<td>'to'</td>
</tr>
<tr>
<td>gu</td>
<td>'fall'</td>
<td>'to'</td>
</tr>
<tr>
<td>tyn</td>
<td>'pass through'</td>
<td>'through'</td>
</tr>
</tbody>
</table>

But while all these verbal prepositions have "faded" semantically, only fi 'from' and wɔ 'at' have lost syntactic properties as indicated by their failure to take affixes like verbs do. There are no instances here of loss of syntactic properties without loss of meaning; this suggests that the semantic decline precedes the syntactic and makes it possible.

3.2.2 Locative verbs, prepositions and prefixes.

In Benue-Kwa languages we can find locative verb/preposition pairs similar to those found in Twi. Ewe and Ga are Twi's neighbors in southeastern Ghana (and in Togo), and both have morphemes with verb and preposition functions paralleling those of the Twi locative wɔ described above. Evidence suggests that there were probably locative verb counterparts for locative prepositions and/or prefixes in Yoruba, Igbo, Englenni and Idoma.

In Ewe a locative verb,  ámb 'be at', occurs as the verb in (33).
(33) agbalë̀a lè  kpiča  dzi
    book-the be-at table-the top

    'The book is on the table.'

The same word occurs in a serial-like construction as in (34) and
(35).

(34) me fle agbalë̀ le  keta
    I buy book  be-at Keta

    'I bought a book in Keta.'

(35) me kpọ lèrí le  mọ  dzi
    I see lorry be-at street top

    'I saw a lorry on the street.'

The lè in (34) and (35) is homophonous with the verb in (33), but it
does not inflect. The le in (34) and (35) is similar to the verb in
that it takes object pronouns, and takes the same semantic range of
object words. But in (34) and (35) the lè and its object form a
phrase which adverbially modifies the other verb in the sentence.
Ansre [1966a] identifies lè and four other Ewe words words with
parallel characteristics (they all have preposition-like translations
in English) and labels them verbide, a term he chose in order to
recognize their verbal quality, at least in historical origin, while
acknowledging their special semantic/syntactic characteristics. The
phenomenon was also observed and described by Westermann [1930a:129]:

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"Many verbs when they stand next to others play the part of English prepositions, adverbs, or conjunctions. Now many of these verbs, in playing the part of prepositions, etc., begin to lose their verbal characteristics in that they are no longer conjugated; they thus begin to become form words."

Paralleling Ewe le and Twi wo is the Ga locative verb yé, as in (36) and (37).

(36) tete yé jia
    Tete be-at house
    'Tete is at home.'

(37) tete baa-he wolo yé osu
    Tete FUT-buy book be-at Osu
    'Tete will buy a book at Osu.'

Ordinarily, in a serial construction both verbs take the same tense-aspect and negation markers; but the preposition yé does not, as seen in (37). But even when yé occurs as the only verb in a sentence, as in (36), it appears to be missing some verb capabilities. It doesn't take the usual range of tense-aspect and negation markers; to express these meanings, other verb morphemes are used. It may be that yé was formerly fully verbal and is now going through a transition stage to a solely prepositional identity.

The Yoruba language, also a member of the Benue-Kwa family, has structures comparable to (34)-(35) and (37), with the locative ni, a
preposition-like word that takes a noun phrase object and is often translatable as 'in' or 'at', as in (38).

(38) ó ìṣè ni ile
   he do work at house
   'He worked at home.'

This particle ni does not occur as a locative main verb. In serial-like constructions like (38), it doesn't conjugate for tense or aspect, and it doesn't negate. Transitive true verbs take a third person pronoun object in the form of a repeated stem vowel on a predictable tone, but locative ni does not. Verbs can undergo a form of focus-placement transformation, but locative ni can not. Thus, in (39) mú and wa are both verbs and can be fronted in mimúwa; however in (40) se is a verb but ni is not, and there is no analogous *uşẹni.

(39) mo mú iwe wa ile ⇒ mimúwa ni mo mú iwe wa ile
    I take book come house
    'I brought a book home.'

(40) mo ìṣè ni oko ⇒ *uşẹni ni mo ìṣè ni oko
    I do work at farm
    'I worked at the farm.'

Locative ni is clearly not a verb. But ni does occur as a main verb meaning 'have, possess' as in (41).
(41) ó ́nì owo

he have money

'He has money.'

The use of the same morpheme for location and possession is not just a quirk of Yoruba. The 'have, possess' gloss is also valid for the locative verbs Twi wɔ and Ga ɔɬɛ, for a possessive idiom with Ewe le, and for several unrelated languages. In fact, a good case can be made for a universal relationship between location and possession, as described in Lord [1973]. The evidence suggests that the Yoruba locative preposition n̩ is historically derived from a former locative verb nì, related to the homophonous verb of possession. (A possible cognate is the verb nì in Akan, used for location and possession, instead of wɔ, for the negative.)

Bamgbose [1966:78] calls n̩ 'in' a post verb. According to Bamgbose, the five words in this class do not function as free verbs; they must be preceded by a free verb in a serial verb construction. Three others are locative: si 'into', kà 'on', and le 'on', possibly cognate with Ewe le. One is directional: de 'for one's arrival'.

Awobulu (1982) lists n̩ as a postverbal preposition, along with "at least" two others--the Locational/Directional si 'to, at', and Dative/Benefactive fun 'for, on behalf of' (see section 3.3.2 below). He lists as a preverbal preposition another locative, ti 'from', along with the Instrumental fi 'with, by means of' and Benefactive ba 'on behalf of' (which is homophonous with the verb ba 'join the company of'). Awobulu differentiates between verbs and prepositions in

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Yoruba according to several criteria:

(a) A word that can function as a predicate in a simple sentence should not be considered a preposition.

(b) Verbs and prepositions both select nouns as objects (e.g., ni 'at' selects objects denoting location, manner, or time), and many verbs select nouns as subjects, but no preposition selects nouns as subjects.4

(c) Verbs can be questioned, but prepositions can't.

(d) Verbs can be emphasized and relativized, but some prepositions can't, and for other prepositions the grammaticality judgments of speakers are mixed.

The Yoruba Locative ni meets all these preposition criteria.

One of the few words in Igbo that can be called prepositions is ná, translatable as 'at, on, in, to,' as in (42).

(42) ọ  bi  ná ọká

he live at Awka

'He lives at Awka.'

In Igbo there is an incomplete aspect marker ná, as in (43) (as well as a locative verb nà, a verb of possession gwe, and a verb ná 'receive').

(43) ọ ná ọrí  ní  ná  ọjú  ọmányá

he INC eat food INC drink wine

'He is eating and drinking.'

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Welmers [1973:312] makes a good case for relating this aspect marker historically to a locative verb reconstructed ná 'be at'. The same historical relationship is suggested by the similarity of the Yoruba locative ní and incomplete marker ñ, the homophony of forms for location, possession and incomplete aspect in Ewe (lè), and the use of homophonous forms for location, possession and incompletive action in other languages, as described in Lord [1973]. Mandarin Chinese is not related to Benue-Kwa languages historically, but it employs serial verb constructions and is similar typologically. In Mandarin zài is a locative preposition, a locative verb, and an aspect marker. Progressives frequently have syntactic features in common with locatives (Comrie 1976). The locative 'be at' is stative, and it can be argued that clauses in the progressive are also stative (Vlach 1981). The semantic, syntactic, and phonological similarities support a historical relationship.

Engenni, another Kwa language of southern Nigeria, has locative and incomplete morphemes similar in form and function to those in Igbo, for which a historical relationship is probable. Engenni has a locative prefix n' which occurs with locative nouns and time nouns, as in (from Thomas 1978:14,42):

(44) mí ta ka mi wúru iyo n' òmù à
I not-go SEQ I will-do what in house Q
'If I don't go, what shall I do in the house?'

66
(45) m' ta ükwo n' udhe
    I went farm (at) yesterday
    'I went to the farm yesterday.'

The corresponding incomplete aspect particle na (with allomorph no) occurs at the beginning of the verb phrase, which is where we would expect to find a fossilized verb marking aspect, as in (from Thomas 1978:99):

(46) i na yia ....
    they INC come
    'They were approaching ....'

The Engenni prefix n' is probably historically related to the incomplete aspect particle, just as the Igbo preposition na is probably related to the Igbo incomplete aspect morpheme, and a former verb is the likely historical source for the aspect morpheme, the preposition, and the prefix.

Data from the Senufo language group (some of which are northern neighbors of Kwa languages) show a similar pattern of related locative verbs, progressive markers and locative case markers. Carlson (1988) has compiled data from several sources on Senufo languages. He finds evidence that the locative postposition na 'at, on' developed from a verb or locative copula 'be at' in serial verb constructions, as in Supyire (from Carlson 1988):
(47) u a véríbíí taanna tabalini na
   s/he PERF glasses line-up table on
   's/he lined the glasses up on the table.'

The postposition's tonal behavior is verblike rather than nounlike, and it is found as a progressive aspect marker in two languages. The Senufo languages have OV (object-verb) order rather than VO (verb-object) order. (There is evidence that OV was the prevailing word order in Niger-Congo languages at a much earlier stage—see, for example, Givon 1975 and Hyman 1975.) In a language with VO typology, the verb bleaching process will result in the sequence preposition-NP; however, in a language with OV typology, the process will produce the sequence NP-postposition. The results in both instances are de-verbal adpositions marking locative case. The Senufo languages show parallels with the Kwa data, but they reflect an OV typology. If the basic clausal word order in Kwa languages was formerly OV, the change to VO must have preceded the development of de-verbal na and ni case markers (or else they would be postpositions as in Senufo).

Another locative postposition, ni 'in, at' is widespread in Senufo languages, according to Carlson (1988). One Senufo language, Jimini, has ni as a verb of location and possession as well as locative postposition. In some Senufo languages there is a cognate progressive aspect marker ni or ọ. Carlson (1988) also cites data from nearby Gur languages: Wara has ni as locative verb, and Tyurama has na as locative verb, progressive aspect marker, and locative postposition.
Using internal and comparative evidence, we have documented a probable path from verb to preposition to prefix. We can think of these forms as stages in one possible life cycle of a morpheme. When it reaches the prefix stage, we might well ask what lies ahead for the morpheme. Because of its diminished phonological status, we might not hold much confidence in the staying power of a prefix. Will speakers simply drop it? Replace it with a more robust form? Dialect data from Idoma suggest one scenario.

Idoma is spoken in the Benue Province of Nigeria. Southern Idoma has a locative prefix ɪ-, which Armstrong (1963) suggests is likely to be a cognate reflex of the Yoruba verb and preposition ni. The Yoruba preposition becomes the prefix ɪ' before a noun beginning with any vowel except /i/. The corresponding structures in Southern Idoma have a locative prefix ɪ-. Examples here are from Armstrong (1963).

(48) n mọtsé ɪ-ɪd̪̄-ma
    I see-chief in-Idoma
    'I saw a chief in Idoma.'

(49) n lā ɪ-ọt̪ùrkpo
    I live in-Oturkpo
    'I live in Oturkpo.'

However, the corresponding structures in Central Idoma do not have the ɪ- prefix:
(50) ̀m m̀c̀ ̀`idômà
I see-chief Idoma

'I saw a chief in Idoma.'

(51) ̀n lá ̀ otùkpó
I live Oturkpo

'I live in Oturkpo.'

In other constructions as well, the Southern dialect appears to be the more conservative historically; for example, the Southern dialect retains consonants in verbal nouns, where they have been lost in the Central dialect, according to Armstrong (1963:131). It is likely that the Central dialect has lost the reduplicated consonants and the ̀-prefix, not that the Southern dialect has inserted them.

But has the locative morpheme simply been lost in Central Idoma? Armstrong (1963:144) suggests that its effect is still felt in the language, as a zero-element suspending the elision that ordinarily takes place between two nouns in typical speech: compare (52), where elision has occurred between 'chief' and 'Idoma', with (50), where it has not occurred.

(52) ̀ọ́ m̀cídômà (m̀ + m̀c̀ + ̀`idômà)
he see-chief-Idoma (see chief Idoma)

'He saw the Chief of Idoma.'

According to this interpretation, the zero-preposition also suspends
the linkage between verb and noun in (51); compare (53), where there
is no zero-preposition and linkage has occurred (in the linked form
the vowel quality of the verb assimilates to the initial vowel of the
following noun).

(53) Ọ ọmọọtukpo
     (ọma 'come from')
     he come-from-Oturkpo
     'He came from Oturkpo.'

To extend the life-cycle metaphor, we can regard the ghost-prefix
as exerting its influence from the morpheme graveyard in its blockage
of elision and linkage. An alternative view would consider the
absence of elision and linkage to be the unmarked situation. The
elision in (52) would then follow from the genitive relationship
between the two nouns, with the lack of word boundary an iconic
reflection of the closeness of the genitive relationship. Similarly,
the linkage of verb and noun in (53) would be attributable to the fact
that the place noun is an obligatory argument of the verb ọma 'come
from'. This latter interpretation is consistent with the linkage data
for Idoma constructions with the verb 'take', discussed below at the
end of section 3.5.4.

Whichever point of view we adopt, the Idoma dialect data suggest
that a possible ultimate consequence of the defectivization process is
the physical disappearance of the former verb morpheme, and the birth
of a new sentence configuration like (50) with a place noun as a bare
adverbial instead of as object of a locative verb in a serial verb

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construction.

To summarize the events: In Twi, Ewe, Ga—and Mandarin Chinese—evidence suggests that the locative preposition has developed historically from a homophonous locative verb in a serial construction. In Yoruba, Igbo, Engenni and Idoma the historical development has proceeded similarly, but the locative verb is no longer present. In Engenni and Southern Idoma the surviving morpheme is a prefix, and in Central Idoma the prefix has been lost.

3.2.3 The Locative extended: Yoruba ní.

Of all the semantic role relationships, the Locative is most readily found marked by a de-verbal preposition in serial verb languages. It may well be the case that, if a serial verb language contains any de-verbal prepositions, it will contain a Locative preposition.

Yoruba grammarians differ on criteria for verb-hood, but most regard the Locative ní as a preposition or as a verb with special characteristics; if any morpheme were to be selected for preposition-hood in Yoruba, ní would probably be first choice. It is likely that the morpheme has been functioning as a preposition for a long time, since it is no longer used as a Locative verb in Yoruba.

The function of ní has been extended beyond marking of spatial location. In (40), repeated here, its object is a place noun. But it also marks nominals of time and quality, as in (54) and (55) (from Awobuluyi 1978:77).
(40) mo ẹ isẹ ní oko
I do work at farm
'I worked at the farm.'

(54) ọ wa ní àárọ
he came at morning
'He came in the morning.'

(55) aye ń lo ní melomelo
life PROG go at smoothness
'Life went on smoothly.'

The locative sense of ní can be seen in (56) if we give it a reading like 'I slapped him on the ear.' (Here l'etí is a contraction, typical of verb-object phrases in Yoruba speech, of ní + etí, in which the n is realized as l.)

(56) mo gbá a l'etí [Ward 1952:132]
I slap him (ni)ear
'I boxed his ears.'

But a literal locative reading for ní doesn't quite fit the sense of (57)-(60).
(57) la won l'oju
    open them (ni)eye
    'Open their eyes.'

(58) ojo pa mi ni aja
    Ojo kill me (ni) dog
    'Ojo killed my dog.'

(59) o sa a ni gbe
    he cut him (ni) wound
    'He wounded him.'

(60) o sa mi ni ada
    he cut me (ni) cutlass
    'He inflicted a cutlass wound on me.'

It is difficult to find one case role description that would accommodate all the objects of ni. In (59), ni introduces the NP gbe 'wound', which is a result of the action of the verb sa 'cut'; but in (60) ni introduces the NP ada 'cutlass', which is in an instrument relationship to the same verb sa 'cut'. In contexts like these, ni becomes difficult to characterize.

Generalizing about the range of functions served by ni is difficult; some other examples of its uses are (from Ogumbowale 1970:94):
(61) a ọmọ ọkùnrin náà ní oloye
  "we know man the (ni) clever-person
  'We know the man to be clever.'

(62) nwọn kùn ówọn ́ilé ní pupa
  they paint PL house (ni) red
  'They painted the houses red.'

(63) èran sú mi ní jìjì
game tire me (ni) eating
  'I am tired of eating meat.'

In (63) the object of ní is a nominalization of the verb jì. Since ní takes nominal objects, its object in (62), pupa, is probably best glossed as 'redness' or 'red-ones'.

These examples illustrate the extent to which ní has lost locative lexical content. It seems to function as an all-purpose prepositional particle which contributes little lexical semantic content and serves to introduce NPs which are somehow relevant to the sense of the sentence. Regarding ní, the redoubtable grammarian Ida Ward wrote, "...I have not found it possible to say what this word is. It is frequently untranslatable" (Ward 1952:144).

A view of ní as "introducer of relevant NPs" finds some support when we look at verbs which are classified as bitransitive in other languages. In the English sentence Give me threepence, the verb give is considered bitransitive; both its objects follow the verb.
Similarly, in Twi, the bitransitive verb *ma* 'give' is followed by two object nominals, as in

(64) ma me tɔ̀ŋ

    give me threepence

    'Give me threepence.'

However, in the Yoruba equivalent, both nominals may not follow the verb *fún* 'give' unmarked.

(65) fún ni ní tɔ̀ŋ

[Bamgboye 1966:78]

    give me (ni) threepence

    'Give me threepence.'

The prepositional particle *nì* occurs as a marker of the second post-verb nominal in (26). Among the verbs which mark a post-verb object with *nì* in this manner are those with bitransitive glosses, such as (66), as in (67)-(69) (from Ward 1952:45).

(66) fún 'give'           rán 'send'

    kò 'teach'            bi 'ask'

    je 'owe'             pà 'call'

(67) ó kò wa ní Yorùbá

    he teach us (ni) Yoruba

    'He taught us Yoruba.'
(68) ó bi wón ní ibère kan
    he ask them (nì) question one
    'He asked them a question.'

(69) àmnín ná pé mí ní ọ̀lè
    man    the call me (nì) thief
    'The man called me a thief.'

Ward (1952:144) calls these "verbs which can take two objects,"
but Bamgboye (1966:78) regards this description as misleading; he
classes nì as a verb (albeit a post verb), even in these contexts.
For Bamgboye, the category sequence in sentences like these is
NP V NP V NP.

For contexts like (65)-(69), Awobuluyi (1978:57, 100) considers
nì a particle with "no concrete meaning," completely distinct from the
five other words nì in the language (the verbs nì 'have', 'say',
'help', and 'load a ship', and the preposition nì 'in, at'). "The
item nì has no meaning that could be looked up in a dictionary." When
Awobuluyi (1969:70) asked members of a final year Yoruba Grammar class
at the University of Ibadan, they gave nì various glosses influenced
by idiomatic English usage, or "remained silent, looking quite
puzzled, or actually confessed that they were not sure about its
meaning."

Awobuluyi (1969) points out that some nì sentences have
paraphrases containing genitive constructions, and some have
paraphrases containing serial verb constructions with the "causative"
verbs da`, fi, and mu, the instrumental verb fi, or the locative verb ni. For example, (60) can be paraphrased as (70) (Awobuluyi 1978:119).

(70) o fi ada sa mi

he take cutlass cut me

'He inflicted a cutlass wound on me.'

Based on these paraphrase possibilities, he proposes a synchronic derivation of ni sentences in which the ni is introduced by transformation. (He acknowledges that not every ni sentence has a paraphrase.)

From a historical perspective, the ni in (65)-(69) looks like a fossil. If it occurred historically as a verb in serial sequences with "bitransitive" verbs like those in (66), one wonders what its lexical signification could have been. An alternative possibility is that, once the locative meaning was considerably bleached from locative ni, as in (54)-(60), speakers might have found it a conveniently colorless verb-like particle to employ with "bitransitive" verbs like (66), in order to maintain the favorite V NP V NP sequence of the language's serial verb pattern. Unfortunately, we do not have old written records to check for the presence of an earlier structure like, say, (64) in variation with (65).

In looking for clues to possible historical pathways, we can consider those ni sentences which have paraphrases with genitive

(71) la oju-uj won
    open eye-of them
    'Open their eyes.'

Paraphrases with genitive constructions can be found for some ni sentences (e.g., (56) and (58)), but not for others (e.g., (60)-(69)). The equivalence of (57) and (71) might suggest a Relational Grammar approach for such pairs in which won 'them' in (71) is promoted to direct object position (immediately following the verb) and oju 'eye' is demoted to oblique status at the end of the string, where it gets marked by the all-purpose preposition ni. As a synchronic description, such an approach would relate the existing variants.

The paraphrase possibility with genitives suggests a historical context for the semantic depletion of Locative ni. As noted above, (56) can be given a reading with ni as a Locative. Based on the near-equivalence of (56) and its genitive construction variant, speakers could have extrapolated to other genitive constructions to produce ni sentences such as (57) and (58), where the locative sense of ni is less appropriate. New speakers, hearing ni in contexts like (57) and (58), could well have interpreted it as only marginally locative, and accordingly might have extended its use by loose analogy to contexts like (59) and (60), where there is no genitive construction alternative. Then, depleted of its locative sense, the
defective verb/preposition/particle could have been employed in other contexts to introduce NPs participating in the scene. The role of the ni-marked NP would be interpreted by the hearer according to the informational redundancy present in the total context. The lack of explicit and unambiguous role-marking does not necessarily hinder communication. As pointed out by Givón (1979:145), both the semantic specificity of the various arguments and the pragmatic knowledge of the shared universe and the specific discourse context constitute an immense body of informational redundancy from which the case-function of an argument may presumably be recovered. With a non-specific preposition like ni, the case role of its NP may in fact not always be recoverable. Indeed, some ni-marked NPs provide ambiguous readings, because there is more than one plausible role for it, as in (72), from Awobuluyi (1969:69).

(72) dada di ọjọ ni oku
Dada tie Ojo (ni) rope
(a) 'Dada bound Ojo with ropes.'
(b) 'Dada tied Ojo's ropes together.'

In the (a) reading, the ni-marked NP has an Instrumental function, and in the (b) reading it is something else, presumably the Patient.

If viable paraphrases existed for many ni sentences, why did the structure take hold and proliferate with such a vengeance? Awobuluyi (1978:100, 119) observes that, when the particle ni occurs, "it indicates that the normal order of occurrence of some nouns has been
tampered with." And, "...the word order in sentences with the
particle ní is non-basic. The particle ní seems to occur in such
sentences solely as a reminder of this fact...." But why interfere
with the "normal" order of nouns? The ní alternative provided a
variant in which the person affected by the action--Fillmore's Dative
NP--occurred in a position earlier in the sentence, immediately
following the verb. This is the case for ní sentences (56)-(60) and
(65)-(69) here. When people talk, human beings tend to be discourse
topics. In terms of information flow within the sentence in general,
discourse topic NPs tend to be located earlier than new information
NPs (information the speaker assumes the hearer doesn't share with
him/her). The genitive construction (as in (71)) puts in last
position the person affected, and, given the likelihood of that NP
being a discourse topic, its placement is counter to the observed
tendency for discourse topics in SVO languages to occupy a position
earlier in the sentence. Similarly, last place in the sentence is
typically the position of the affected-person NP in the causative
serial paraphrases with dà, fi, and mù discussed by Awobuluyi (1969).
For example, Ojo, the person affected, is last in the causative serial
(73a), but follows the verb in the ní version, (73b) (from Awobuluyi

(73) (a) ọjú ọdù mù ilù kú ọjó
food the cause stomach fill Ojo
'The food gave Ojo indigestion.'

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(b) oujë ìbì ku' òjò ìì ilù
food the fill Ojo (ní) stomach
'The food gave Ojo indigestion.'

The ní version provided an alternative in which the affected individual (Ojo in 73) was placed in a more prominent location within the sentence, which would be appropriate if he is the utterance topic. (For many of the causative serial sentences with ní paraphrases, the only human NP in the whole sentence occupies last place; the typical string is [NP CAUSATIVE-VERB NP VERB AFFECTED-PERSON], in which the first two NPs are inanimate and the expression has often taken on idiomatic meaning to some extent, as in (73).)

The data cited above consist of isolated sentences removed from their discourse context, so the discourse topicality of the affected person in each example can not be confirmed. However, as a general rule, in discourse established topics will tend to take the form of definite NPs, typically pronouns, and this pattern holds true for the ní data: in the majority of the examples I have encountered, the post-verbal NP is a personal pronoun, as in (56)-(60) and (65)-(69) here.

In an effort to discern the pragmatic factors at work, Madugu (1982) took a ní sentence from a Fagunwa novel, paraphrased the ní clauses with serial verb constructions, and got reactions from native speakers. The original sentence, with ní, is given in (74); Madugu's paraphrase utilizing serial verb constructions is given in (75).
(74)  igbáti bábá rè  rí i pé  kò  gbò
        when  father  his saw  it  that  (he-)not  listen

ó fún un  ní  àdá  kan
he gave him (ni) cutlass one

ó fún un  ní  sílè  kan-àbò
he gave him (ni) shilling one-half

ó kí  i  pé  ó  dígbóṣe
he greet him say goodbye

'When his father saw that he (the son) would not listen,
he gave him a cutlass,
he gave him one and a half shilling,
and he bade him goodbye.'
(75) igbati baba re ri i pe ko gbọ
          when father his saw it that (he-)not listen

ó fi  ada kan fun un
he took cutlass one gave him

ó fi sile kan-abọ fun un
he took shilling one-half gave him

ó ki i pe ó dìgbọ̀se
he greet him say goodbye

'When his father saw that he (the son) would not listen,
he gave a cutlass to him,
he gave one and a half shilling to him,
and he bade him goodbye.'

Note that in (74) in the second and third lines the
previously-introduced discourse topic, the son, is pronominalized and
follows the verb, while the new information, the inanimate objects
cutlass and shilling, are at the end of the clause, introduced by ní.
In contrast, in (75) the cutlass and shilling are following the verb,
and the pronominalized discourse topic appears at the end of the
clause; although these clause patterns are grammatical, they are
contrary to the pattern of pragmatic order that we would expect. The
native speakers Madugu consulted regarded (75) as "odd," "unnatural,"
or "not usable." Madugu concludes that the two clause patterns are
not functionally interchangeable.

Madugu points out that given information should precede new
information, and for this reason object pronouns do not occur as
objects of *ni*, as the unacceptable (76) illustrates.

(76) * Dàda fún mi *ni* i

Dada gave me (ni) it

(?) 'Dada gave me it.'

(The principle holds for English as well; the gloss is unacceptable
or marginal for most dialects.)

The forces at work here appear to be comparable to those
observable in "dative-shift" structures in English. According to
Givón (1979:161), the most common function of the so-called
dative-shift rule involves changing the relative topicality of the
Accusative with respect to the prepositional object. When the
Accusative is the topic, it follows the verb directly, as in
When he found it, John gave the book to Mary. But when the Recipient
is the topic, it occupies the first post-verb position, as in
When he found her, John gave Mary the book. Givon sees the data as
consistent with a universal word-order principle: the left-most
constituent is the more topical one, that is, the one more likely not
to constitute new information.

The functional role of *ni* in a discourse context is examined by
Yusuf (1983), who concludes that *ni* signals NPs which are neither

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subjects nor direct objects, but follow the direct object and are coded as obliques, whatever their semantic role interpretation. Yusuf finds that ni codes arguments that are low in individuation, affectedness, topic worthiness and salience. (This helps explain why ni does not take object pronouns, a fact which otherwise might be regarded as an arbitrary syntactic property.) Further work on functional explanation of Yoruba sentence structures, using data from discourse context, supports this approach (Yusuf 1987).6

Yusuf's findings regarding the function of ni structures in discourse help to provide an explanation in terms of discourse function for the hypothesized historical development of ni. According to the historical scenario which I have suggested, once ni came to function as a preposition, it provided a structural option in which human discourse topics could occur earlier in the information sequence within the utterance, thus facilitating communication. Its usefulness in this capacity may have contributed to its widespread employment by speakers and its generalization from a locative marker to a general marker of oblique arguments. It turns out that we have increased our understanding of the historical development of this particle not only by looking at the arguments it marks, but also by looking at the arguments it doesn't mark.

3.2.4 Conclusions.

Patterns in present-day Benue-Kwa languages suggest two general paths for grammaticalization of locative verbs. One direction is from verb to marker of incompleteness of aspect. Another is from verb to

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preposition, proceeding in some cases to prefix and to zero. Along the latter path, the preposition takes place noun objects, and may allow others such as time and manner objects as well. Depending on the semantic class of the arguments present, a locative verb often allows a posession reading. In one instance, these developments appear to have co-operated with other factors to extend the preposition's use to the marking of non-topic nouns.

Many of the Benue-Kwa morphemes discussed in section 3.2 may be cognates:

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</tbody>
</table>

A Proto-Niger-Congo *na 'be at' has been proposed, and this could be a historical source for many of these forms.

The grammaticalization process could have taken place independently in each language. It is also conceivable that the functional shift began before the languages went their separate ways phonologically. It seems clear, however, that, for the languages
discussed here, the most advanced changes—from preposition to prefix, and from prefix to zero—are occurring independently in separate languages.

In a two-verb serial construction, the simplest case, the location verb is typically the second verb. The change is from a NP VP VP structure to a NP VP PP structure with a locative phrase modifying the main verb and following it. The shift is from a serial verb clause type to a single-verb clause type—or, more precisely, a shift in which the number of verbs in the serial construction is decreased by one.
3.3 Verbs of giving become prepositions marking Benefactive and Recipient NPs.

The preposition introducing Recipient and/or Benefactive noun phrases is often similar in form to or homophonic with a verb meaning 'give to' or 'show to'. Section 3.3.1 discusses Twi, section 3.3.2 Yoruba, 3.3.3 Engenni, 3.3.4 Ewe and Awutu, 3.3.5 Senufo languages, 3.3.6 Caribbean creoles, and section 3.3.7 concludes.

3.3.1 Twi verbs of giving.

For Twi, Riis noted the notional uses of the verbs ma 'give' and kyere 'show' as in (77a) and (78a) and their corresponding meanings 'for' and 'to' with noun phrases which we can identify as filling Benefactive and Recipient semantic roles, respectively, as in (77b) and (78b).

(77) (a) o-ma     mi sekaŋ
     he-give me knife
     'He gave me a knife.'

(b) o-yi     me bogyese ma-m
     he-remove my beard for-me
     'He shaves my beard for me.'

[89]
(78) (a) o-kyere mi emfoninne
    he-show me picture
    'He showed me a picture.'

(b) o-kasa kyere me
    he-speak (show) me
    'He spoke to me.'

The uses of ma range from a fairly concrete act of giving an object to someone, to relatively abstract meanings like 'for the benefit of, on behalf of, with respect to', as in (79).

(79) (a) agyɛkwɔ no wù maa yeŋ
    Saviour the die for us
    'The Saviour died for us.'

(b) dag mu ho n-so m-ma woŋ
    house in there NEG-be-large NEG-for them
    'The house is not large enough for all of them.'

[Christaller 1875:139]
[Christaller 1881:463]

Even when it conveys the abstract case-marking meaning, however, ma remains fully verbal in form; it takes the full range of tense-aspect markers, negative prefix (as in 79b), and subject-agreement prefix.

The verb kyere 'show' (kyere for Riis) may be related to the verb kye 'present, give as a gift', as in
(80) ³ kyę́-ɛ wọ́j ntoma  [Boadi 1966:27]
    he present-PAST them clothes
    'He presented them with clothes.'

In a serial verb construction its object can have a Recipient or
  Benefactive semantic role, as in (78b) and (81), respectively.

(81) wó-tów túo kyę́rɛ bọ́rhɛne  [Christaller 1875:142]
    they-fire gun (show) governor
    'They fire guns in honor of the governor.'

The verb kyę́rɛ does show syntactic irregularity in its
Recipient-marking use, however, as illustrated in (82) below, where it
can occur as the second component of a verb-verb compound, forming
kákų́yę́rɛ 'tell' (literally ka 'speak' plus kyę́rɛ 'show'). If kyę́rɛ
were a separate verb, it would have its own pronominal prefix in
(82b). The result is a bitransitive compound verb comprising two
monotransitive verbs.

(82) (a) mi-ka aṣẹ́m mi-kyę́rɛ no  [Riis 1854:30]
    I-speak word I-(show) him
    'I told him something.'

(b) me-ka-kyę́rɛ no aṣẹ́m  [Riis 1854:30]
    I-speak-(show) him word
    'I told him something.'

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In Twi, verbs are not ordinarily suffixable to other verbs in this manner; the fact that *kyere* can behave as a suffix indicates that its status as a member of the major lexical category "Verb" has been weakened somewhat. It can occur in the syntactically unusual compound in (82b) because it underwent prior semantic fading as the semantically secondary verb in serial construction like (82a).

The Twi verbs 'give' and 'show' in serial verb configurations have taken on the function of Recipient and Benefactive case markers. However, they have not yet become defective syntactically, although the behavior of 'show' is somewhat unusual.

3.3.2 Yoruba 'give to', 'to, for'

The Yoruba word *fun* functions as a verb meaning 'give to' in a serial configuration and also as a preposition with Recipient or Benefactive meaning ('to, for'). It occurs as a verb in (83)-(85), as cited in Abraham's [1958] dictionary.

(83) ó *fun* mi 1-*ówo*  
he give me PRT-money)  
'He gave me some money.'

(84) ó *f-ówo* *fun* mi  
he take-money give-to me  
'He gave me some money.'

(85) ó *fun* 1-*ówo*  
he give me PRT-money)  
'He gave me some money.'

(where *f* is the contracted form of the verb *fi*)

(where *l* is the contracted form of the particle *ni*)

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(85) obi mele mele 1-o oo (fi) fun wa
kolanuts how-many FOC-you will (take) give us
'How many kolanuts will you give each of us?'

Abraham has two dictionary entries for fun, one with the
definition 'gave as a present', as illustrated in (83)-(85), and the
other, "verb used as a preposition," as illustrated in (86)-(88),
where fun may be translated as 'for, to, against, on account of.'

(86) mo simmi fun wakati kon
I rested (give) hour one
'I rested for an hour.'

(87) on ku lo fun ebi
he PROG die go (give) hunger
'He's dying of hunger.'

(88) kin 1-o dafa fun
what FOC-it be-good (give)
'Of what use is it?' (lit., 'What is it good for?')

Examples (84)-(88) are all serial-like structures in which fun
occupies the second-verb slot. The range of functional
interpretations for fun depend on the semantic characteristics of the
preceding verb(s) and the NP object of fun. When it functions as the
verb 'give to', fun is typically preceded by a motion or action verb,
and takes an animate NP object; the subject of the first verb is
typically the understood subject of fun. When followed by an
inanimate NP object, it can mean 'on account of', and the fun-NP
phrase functions as an adverbial modifier to the rest of the sentence,
as in (87), where it is difficult to see in what sense 'he' could be
considered the semantic subject of the fun-NP phrase.

The closeness of the verb function and preposition function of
fun are illustrated by the ambiguity of (89) and (90).

(89) ó j-isei fun mi
    he reply-message (give) me

(a) 'He delivered a message to me.'
(b) 'He delivered a message for me.'

(90) ó taá fun mi
    he sell-it (give) me

(a) 'He sold it to me.'
(b) 'He sold it for me.'

With fun functioning as a verb in a serial construction, the literal
gloss for (90) is 'He sold-it gave-to me', with the translated meaning
(90a). With the fun-NP phrase functioning as an adverbial modifier of
the rest of the sentence, we get the 'on account of, on behalf of'
interpretation, with the (90b) meaning.

Different grammar models will have different ways of describing
the ambiguity of (89) and (90). The English translations can be
described in Fillmorean terms with me in the Recipient case role in (a) and in the Benefactive case role in (b); the case markers are to and for, respectively. But here the case markers are identical. One representation might be in terms of "inner locative" and "outer locative". (The object of the verb fun is, strictly speaking, a recipient rather than a locative, but recipients and locatives appear to have much in common in some languages). That is, the ambiguity could be modeled in terms of constituent structure, assigning different constituent structures to the (a) structures and (b) structures, respectively. For (a), the fun-NP phrase would be inside the VP, and for (b) it would be outside the VP. (This distinction may be fairly tidy for languages with distinct verbs and prepositions, but it is not quite so neat for languages with serial verb structures). For Fillmore [1968:26] the difference would probably be represented by the fun-NP phrase being a constituent of the Proposition in (a), and a constituent of the Modality element in (b). Fillmore suggests that the "outer" locative is in some respects similar to the Benefactive case—an observation which is consistent with the semantic interpretation of (89) and (90).

Verbs of transaction like 'send message' and 'sell' in (89) and (90) are special in that they can take inner locatives (Recipients) as well as outer locatives (Benefactives). Certain verbs take (or "are selected by") the inner locative, for example, de 'put on (top), cover', as in (91).
(91) mo dé  filà fun
   I put-on cap (give)-him
   'I put a cap on his head.'

With other verbs the fun-NP phrase has only the Benefactive
interpretation, as with pè 'call' in (92).

(92) pè  è  fun  mi
    call him (give) me
    'Call him for me.'

We can see a gradation, a continuum, from verbal to prepositional
in the functions of fun within the serial verb configuration. In (84)
and (89a) it carries the fully verbal meaning 'give to'. In (90a) the
first verb 'sell' establishes the transaction/transfer element of the
meaning of the sentence, and fun seems to make the deixis more
explicit and introduces the recipient NP. One can argue whether the
meaning here is verb-like or preposition-like. Interestingly,
Abraham, the experienced lexicographer with extensive knowledge of
West African language structure, lists fun as a verb in (89a) and as
"verb used as proposition" in (90a). But the only difference between
(89a) and (90a) is the first verb phrase. Therefore, if one judges,
like Abraham, that the use of fun in (90a) is more "prepositional"
than in (89a), the assessment of the semantic function of the fun
phrase must depend on the context, namely, the meaning of the first
verb phrase. Assessments of this nature are not easy to make.
Like Abraham, Awobuluyi [1978:99] considers the two *fun's* distinct in meaning and function. However, for a pair like (90) he disagrees with Abraham. Awobuluyi designates *fun* a verb in a sentence like (90a) and a preposition in one like (90b), whereas Abraham sees prepositions in both (90a) and (90b). Disagreements of this sort need not alarm us, because the data form a continuum resulting from a gradual historical shift in function. Both scholars would presumably agree that "verb" and "preposition" characterize the end-points of the continuum. If the demands of a synchronic model press us to make a cut somewhere on the continuum so that we may unambiguously assign the labels "verb" and "preposition", then it is not surprising that two knowledgeable and careful scholars may differ, one making the cut to the left of (90a), the other making the cut to the right of it.

Abraham considers the "outer locative" or Benefactive examples in both (89b) and (90b) to be prepositional uses, as he does the *fun* phrases in (86)-(88), where *fun* marks nominals of time and reason. Interestingly, like Yoruba, English uses the same preposition to introduce Benefactive, duration, and reason NPs; *fun* can be translated as *for* in (92) as well as (86), (87), and (88).

The verbal and prepositional usages of *fun* are illustrated by (93) and (94), a pair provided by Bamgboye [1966:78]. (Here HTJ = high tone junction.)

(93) ò ọ̀rọ̀-ọ̀ .fun won

"It is difficult-HTJ give them"

'It is difficult to give them.'
(94) o soro fun won

it is-difficult (give) them

'It is difficult for them.'

Certain Yoruba verbs have English translations as "higher verbs"; e.g., bẹrẹsi 'start', fẹ 'want', mọ 'know', soro 'be difficult'. When one of these verbs is followed by another verb, the first verb ordinarily has a high tone vowel suffix (HTV); the historical source of the suffix may have been a high tone vowel prefix on the second verb [Bangboye 1971]. When verbs such as fun 'give' and wi 'say' (called "weak verbs" by Bangboye) are used to convey a predication, the high tone junction appears, as in (93). When these same verbs are used to indicate a relation (e.g., as a preposition or a complementizer), there is no high tone junction. The use of the high tone junction is reserved for fully verbal, predicational, action-process-or-event use. ('Say' complementizers are discussed below in section 3.7.)

Yoruba fun 'give to' is an example of a verb which, in the context of a serial verb construction, has taken on prepositional function but has not (yet) become formally defective. However, even in its most verb-like uses, it has special characteristics. It occurs in serial constructions such as (84). When it occurs without another verb, such as in (93), it requires the prepositional particle ni in a configuration paralleling a serial construction (in fact, a case can be made for an ultimate verb origin for ni, via the locative de-verbal preposition ni; see section 3.2.3 above). It might be claimed that
the verb fun requires the particle ni because it is bitransitive; but such a view may be motivated by the fact that the closest English translation equivalent is bitransitive, rather than by the Yoruba data. At any rate, it is not a particularly satisfying explanation, since the particle ni is not required when fun functions as a verb in structures like (89a). In structures like (85), where the object of fi has been fronted in a question, speakers will permit the verb fun to occur unsupported (that is, with the fi unexpressed). But even in these contexts, some speakers appear to be more comfortable with an overt fi, in an explicit serial verb construction. Thus, even though fun is not defective, its use requires special contexts because of its meaning.

3.3.3 Engenni 'give', 'to, for'.

Engenni is a Kwa language some distance from Twi geographically; spoken in the Rivers State of Nigeria, it is considered a member of the Edo branch. Nevertheless, the form and behavior of the Engenni verb kye 'give; to, for' show parallels with the Twi verbs kye 'give' and kyeré 'show; to, for', described in section 3.3.1 above.

The Engenni verb occurs as a main verb as in (all Engenni examples are from Thomas 1978):

(95) kye

\[\begin{array}{l}
give(it) \text{ him}
\end{array}\]

'Give it to him.'
This parallels Twi (80) in section 3.3.1 above. (In both Twi and Engenni, third person singular inanimate pronoun objects have "zero realizations".) The verb occurs in a series configuration with literal meaning, as in:

(96) ḋ tọ́ ì kye ́
    he take(it) give him
    'He gave it to him.'

and with less literal meaning (compare Twi (78b)) as in:

(97) ́ wọ́ kye ́ ì ga ̀ à kori ́ ẹnì n' ẹna
    they say give him QUOTE stay wait-for us at here
    'They said to him, "Wait for us here."'

(98) ̀bù̀ùùà ka ̀wuru ̀ovie kye ́ edeì ́egba ̀wọ̀
    instead SEQ do good give man enemy your
    'Instead, do good to your enemy.'

It also conveys a Benefactive sense:

(99) ̀wuru kye edeì nà
    he do (give) man the
    'He did it for the man.'

It shows some signs of straying from the independent verb fold: its
vowel harmonizes (either kye or kye) with the quality of the preceding verb with respect to tongue root position. It is irregular in having the allomorph ky/ku before first and second person object pronouns. It triggers irregularity in the verb weí 'sày', which takes the form wo when kye follows, as in (97), suggesting an incipient idiomatization of the frequent combination 'say-to'. It also requires a special allomorph of bhué 'keep' in the phrase bho kye 'keep for (someone)'.

In Engenni the verb 'give' is used with Dative and Benefactive arguments, showing some syntactic irregularity in that function, and in this respect is comparable to verbs of giving in Twi and Yoruba.

3.3.4 Ewe and Awutu 'give', 'for'.

Both Ewe and Awutu have a verb na 'give' which is used to introduce Recipients and Benefactives.

Awutu is spoken in southern Ghana, to the west of Twi, Ga, and Ewe. The verb na 'give' functions as the single verb in a clause, as in (100), and also in a serial configuration to introduce a Benefactive noun role as in (101) and (102) (examples from Frajzyngier 1974a, 1974b).

(100) mò ná 'ng sámfe

he gave him key-DEF

'He gave him the key.'
(101) mɔ kɔkɔ  mɔmɔ  o  nɔ nɛ
he described his-town POSTP BEN him/her
'He described his town to her.'

(102) milɔdɔ  nɔcɛ  sɔ  nɔ mɔ
I-will-boil water-DEF POSTP BEN him
'I will boil water for him.'

In Ewe the verb na has similar functions; it shows signs of losing verb properties when it functions as a case marker. According to Westermann (1930a:50),

Many actions which we express by one verb are expressed in Ewe by two or more; should there be two objects, the first is attached to the former verb, the second to the latter. In this case the second verb is frequently na 'to give', in that, what one does to another is done for him and is, as it were, given to him, e.g.: egblɔ nya na ame 'he said a word (and) gave (it) to the person', i.e. he said a word to the person; e le sɔ nam 'he bought a horse (and) gave (it) to me, i.e. he bought me a horse. From this it follows that the verb na is often employed to render an English dative: however, it remains a verb and is conjugated as such, i.e. should the first verb be in the future, na must also be in the future....

In modern speech we often find that na is no longer conjugated when it follows a verb, but remains unchanged,
whatever the form of the verb, so that, by degrees, it is becoming a dative particle....

Westermann does not mention anything unusual about na as a main verb. However, a grammar appearing 50 years later (Kozelka 1980:74) says that na appears infrequently as a main verb. The order of constituents is "relatively fixed" as S V O IO in Ewe clauses, according to Clements (1972:204), (Subject Verb Patient Recipient). But according to Kozelka, the objects can occur in the order Patient Recipient or as Recipient Patient, as in:

(103) e-na ga la m
    he-give money the me
    'He gave me the money.'

(104) na-m edze
    give-me salt.
    'Give me the salt.'

The data suggest that the Ewe verb na may be entering its decline: it appears infrequently as a main verb, and when it does it appears to allow non-standard object ordering; in serial constructions, where it commonly functions as a Recipient/Benefactive marker, modern speakers no longer conjugate it.
3.3.5 Senufo case markers from 'come' and 'give'.

According to data on 15 Senufo languages compiled by Carlson (1988), most of the Senufo languages have a Dative/Benefactive and Locative goal marker má (or ma/ma), grammaticalized from the imperfective of the verb 'come'. Since Senufo languages have OV word order, the marker is a de-verbal postposition, not a preposition, as in, for example, Cebaara:

(105) wi ǹ gi kǔa wi má
     he PERF it give him to
     'He gave it to him.'

Some Senufo languages have grammaticalized the perfective (rather than the imperfective) of 'come', pan (Pilara pò, Nafaara pà). In some southern Senufo languages, e.g., Jimini, a newer Benefactive marker seems to be developing from the verb kan 'give', with má (from 'come') being retained for the Dative. Karaboro has the cognate Benefactive marker kò but no corresponding verb form for 'give'; as Carlson interprets the situation, Karaboro represents a later stage in the historical progression, where "another verb wàr has been introduced for 'give'." (It is not clear why it needs to have been "introduced", since the verb wàr presumably could have been around for some time, sharing the semantic space with an earlier kan verb). The comparative data supports a scenario with successive verb-to-adposition developments in the same general semantic territory, with earlier de-verbal postpositions being replaced by later ones.
3.3.6 Caribbean creole parallels.

Serial verb structures like those described here are also found in pidgin and creole languages of the Caribbean. Many of the West African languages described here were the first languages of speakers of Caribbean pidgins, and since the SVO serializing pattern is widespread in West Africa, it is not surprising that it shows up in Caribbean pidgins and creoles, for example in the Sranan (Surinam creole) sequence *waka seri* 'walk sell = peddle (merchandise)'. There is disagreement among scholars about the history of these languages and the factors responsible for their form. It has been proposed, for example, that they derive from an earlier Portuguese-based trade pidgin. Also, it has been proposed that the presence of serials is due not to West African substratum influence but rather to an innate bio-program or universal grammar (see Bickerton 1981).

Nevertheless, the Caribbean creoles show a range of serial structures that parallel those found in West African languages. Like the languages described above, they commonly use a verb 'give' to mark Recipient or Benefactive nouns. For Sranan, Voorhoeve (1975) cites *gi* 'give' as a main verb an in a serial construction marking the Benefactive, as in

(106) kofi *gi* a man one sani

'Kofi gave the man something.'
(107) mi wroko gi en
    I worked gave him
'I worked for him.'

Voorhoeve notes that some Sranan speakers interpret a serial verb as a case marker, while others regard it as a verb. In an emphatic construction, some speakers can front the complete phrase gi en, as in

(108) na gi en mi wroko
    'It's for him I worked.'

which suggests that gi is interpreted as a case marker. Other speakers can front only the object en 'him', as in

(109) na en mi wroko gi
    'It's him I worked for.'

which suggests that these latter speakers considered gi a verb. As in some West African languages, there appears to be variability in Sranan in the category to which speakers assign the 'give' marker for Benefactives.

Saramaccan, another creole of Surinam, has a verb da 'give' and homophonous Benefactive and Dative markers. As described by Byrne (1987:177-195), the Dative does not take tense or negation; Byrne concludes that there is good reason to believe that it is an infinitive within a sentential configuration.

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3.3.7 Conclusions.

Many languages with serial verbs have been observed to use a verb 'give' to introduce Recipient and/or Benefactive nouns. In its case-marking function the morpheme often exhibits a range of verb characteristics. However, when functioning as a case marker it sometimes betrays a lack of robustness, as indicated by inability to take affixes, restriction to certain contexts, replacement by irregular allomorphs, and harmonizing with the other ("principal") verb.

In some languages the shift in form and function of verbs of giving is less dramatic than that observed for locative verbs. However, the context and mechanisms in the two instances are parallel.
3.4 De-verbal Comitative prepositions and conjunctions.

Some conjunctions can be traced to verb sources, by way of comitative prepositions. Section 3.4.1 discusses Twi ne, Engenni nàà, and Awutu ng, section 3.4.2 discusses Ga ké, and section 3.4.3 discusses a set of developments in Yoruba, Ewe, and Fon. Section 3.4.4 concludes.

3.4.1 Twi ne, Engenni nàà, Awutu ng.

There are similarities in phonological form and syntactic behavior between the NP conjunctions in Twi, Engenni and Awutu. These conjunctions appear to have developed historically from verbs.

The Twi conjunction ne 'and' connects NPs but not sentences, as in

(110) (a) ó- ne nó se [Christaller 1875:116]

he (SUBJ)-and him (OBJ) be-alike

'They are alike.'

(b) mé ne wo be-ko [Christaller 1875:90]

I and you FUT-go

'I and you shall go; I shall go with you.'

Evidence suggesting that ne was formerly a verb includes the fact that when it conjoins pronouns marked for case as in (110a), the preceding pronoun is in the subject form and the following pronoun is in the object form. Appropriate English glosses are either the conjunction
'and' or the preposition 'with', as in (110b), showing that the coordination is not necessarily symmetric semantically. It occurs in a serial verb configuration in verb position, taking a subject prefix, as in

(111) wo-ne bayifo da
     you-with witch sleep
     'You sleep with a witch.'

In a corresponding negative imperative serial configuration, it takes a negative prefix, like a verb, as pointed out by Forson (1976).

(112) n-ne bayifo n-da
     NEG-with witch NEG-sleep
     'Don't sleep with a witch.'

It also takes the past tense verb suffix, as in

(113) p-ka-ne-e bayifo da-e
     he-go-with-PAST witch sleep-PAST
     'He slept with a witch.'

These facts suggest that ne has been a verb, possibly meaning 'be with', but has become defective; it does not occur as the only verb in a sentence, or as a main verb. Christaller [1881:332] lists ne as having come from the verb de 'have, hold, take' (discussed in 3.5.1

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below). Whether or not ne and de are historically related, ne is likely to have been a verb, as evidenced by the morphological baggage it carries.

A ne NP phrase can follow the verb, and then the sentence configuration resembles a NP VP VP serial verb sequence with ne as the second verb, as in:

(114) créwù nè séraw

[Christaller 1881:332]

he-PROG-die with laughter

'He almost dies with laughter.'

But if ne were a verb here it would have the Sequential a-prefix; formally and semantically ne NP in (114) is more a prepositional phrase than a verb phrase. Similarly, the ne in (110b) does not carry the tense marker, as a verb would, and the ne NP is a prepositional phrase rather than a verb phrase.

To sum up the ambivalence of ne: it occurs in serial configurations only, takes some but not all verb affixes, and functions semantically as a Comitative preposition. The synchronic mess makes sense historically: its meaning has shifted from verb to preposition, and its formal behavior is lagging but catching up.

The behavior of conjoined pronouns in Engenni shows parallels with the Twi data. The evidence for a verb source for the Twi conjunction, and the light it sheds on the otherwise peculiar behavior of conjoined pronouns, suggests that we consider a similar verb source for the Engenni NP conjunction nàà.
In Engenni the conjunction nàà is not a verb, but it can appear in a verb serial position with meaning something like '(bring) along with', as in (data from Thomas 1978):

(115) onú-amò nàà okílôlo nà yìa
    mother CONJ cutlass INC come
    'The mother was coming with a cutlass.'

(116) ̀kpilàmá á nàà ivie na nà yìa
    snail also CONJ song the INC come
    'The snail, too, came singing.'

Engenni subject and object pronouns have different morphological forms. The pronoun preceding the nàà conjunction must always be the subject form, and the pronoun following the conjunction must always be the object form; this holds true when the conjoined phrase occurs as sentence subject (as in (117)) as well as sentence object (as in (118)).

(117) mì nàà ìwò si ta nì
    I(SUBJ) CONJ you(OBJ) will go DEF
    'You and I will be the ones to go.'

(118) pò mìnì eñì nàà àsù́nù eñì
    he saw we(SUBJ) CONJ father our
    'He saw our father and us.'

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There are restrictions on the order of pronouns in a conjoined structure. A first-person pronoun can occur in first position only; when second and third person pronouns are conjoined, the second person pronoun must occupy first position. These restrictions are consistent with a hierarchy of discourse topicality with precedence order firstperson, secondperson, thirdperson. The pronoun higher in the hierarchy, the more topical one, is more likely to occur earlier in the utterance, in subject position. If the conjunction is a fossilized verb, its former subject would be expected to occupy first position within the conjoined structure—which it does. These restrictions on case form and person for pronouns in conjoined structures are consistent with the hypothesis that the conjunction has descended from a verb ancestor.

The verb source hypothesis provides a historical explanation for grammar requirements which otherwise appear peculiar and arbitrary. When a conjoined NP object includes a first person singular or second person pronoun, a more complicated structure is required: the object pronoun must also occur. Compare (118) and (119).

(119) ะ อะนิ เด มิ น้า อะสุ เด
      he saw me(OBJ) I(SUBJ) CONJ father my

      'He saw my father and me.'

This structure suggests that Engenni speakers recognize that a pronoun object of the verb 'saw' must be in object form, but the history of their language insists that there be a subject pronoun preceding น้า.
even though nàà is no longer recognized as a verb. The facts of present-day Engenni suggest that a morpho-syntactic pattern can persist long after the semantic/syntactic justification for it has been obscured by historical change.

For both Twi and Engenni, I suggest that the best historical explanation of the facts is in terms of a verb source for the present-day NP conjunctions ne and nàà, and that the context for the change from verb to conjunction was the serial verb construction.

The Twi and Engenni conjunctions may be related to the conjunction na which occurs (in various forms) widely throughout Benue-Kwa (including Bantu) languages. The conjunction may have developed, via a Comitative preposition, from the Proto-Niger-Congo locative verb *na 'be at'. This historical development would be consistent with the observation that many of the languages discussed here, as well as Bantu languages such as Luganda, allow NPs joined by a na-conjunction to be left-dislocated and clefted, in apparent violation of a coordinate structure constraint (Givón 1970). However, in many languages where a na conjunction occurs, there are no morpho-syntactic vestiges to suggest a verb source. This could be because any former verb trappings have been lost. Another possibility is that the Twi and Engenni conjunctions are much more recent developments, coincidentally bearing a phonological resemblance to an older widespread na conjunction. If Engenni nàà was formerly a verb, what might its verb meaning have been? Sentences like (115) have plausible readings with a verb 'take', i.e., 'The mother took a cutlass and came.' The Engenni contexts for the conjunction echo some
Ga sentences using ṭe 'with', described in sections 3.4.2 and 3.5.3, where a former verb meaning 'take' is likely, as first suggested by Zimmermann (1858). For Twi, a 'take' verb, ṭe, was considered the historical source of the ne conjunction by Christaller (1881). A closer look is probably warranted before throwing out the possible hypothesis that the Twi and Engenni conjunctions may have had a verb source separate from, and possibly more recent than, the widespread Niger-Congo na conjunction.

A number of related languages show a na/ne morpheme as preposition or conjunction, and it often is not clear just what the historical antecedents were and to what extent borrowing/creolization may have contributed to the present situation. Kusal, for example, a Gur language of northeastern Ghana, uses na to conjoin NPs, to conjoin clauses (in Tonde dialect but not Agole), as a prepositional marker for Comitative and Instrument NPs, and to introduce time adverbial clauses ('when'-clauses). Some scholars feel that there are not good reasons to make Gur languages a separate classification from Benue-Kwa. Whether or not Kusal is considered Benue-Kwa, the parallels with Benue-Kwa data suggest similar historical processes.

Twi ne and Engenni naa have a likely historical cognate in the Awutu conjunction na. (Awutu and Twi are both classified as Volta-Comoe languages within (Benue-)Kwa.) As described by Frajzyngier (1974, 1975), the Awutu conjunction can conjoin clause objects and clause subjects, as in (120) and (121), respectively. Awutu examples cited here are from Frajzyngier (1974, 1975).
(120) mɔ ná nɛ go ng ɔikáa pi
he gave him room CONJ money-DEF plenty

'He gave him a room and plenty of money.'

(121) mì nɛ mɔ yɔ ɔbɛ sɔ nɛ mɔ cù ɔbɛ sɔ
I CONJ he went palm-tree POSTP CONJ he left palm-tree POSTP

bɛnsi ɛsɛ nɛ mɔ nwù
came-fell down CONJ he PERF-die

'I climbed a palm tree with him; he fell down from the palm tree
and was killed.'

The conjunction has a Comitative interpretation in (122) and
(123).

(122) mɔ ng nɛ ba ciná sɛɛ
he COM her will live POSTP

'He will live with her.'

(123) me ng ɔ māyɔ nklá
I COM you NEG-FUT-go Accra

'I will not go with you to Accra.' (you might go, however)

These Awutu examples resemble Twi and Engenni in that the NPs are not
conjoined symmetrically. In (124), if the verb is to apply to both of
the participants (that is, if neither you nor I will go), in order to achieve a symmetric reading the pronoun 'we' must be explicitly stated, as in

(124) mi neg o ani m\`a\`yo n\`kl\`a
    I COM you we NEG-FUT-go Accra
    'I and you, we will not go to Accra.'

In Awutu the third person object pronoun ne (as in (11)) follows the conjunction when the sense is asymmetric (i.e., Comitative), as in (122). However, the third person subject form ma (as in (11)) can apparently follow the conjunction when the sense of the conjunction is symmetric as in (121). (The ma form can apparently also be used in other object contexts). In both Twi and Engenni, the pronoun following the conjunction must be in object form. If the historical development of the Awutu conjunction parallels that proposed for Twi and Engenni, Awutu appears to have proceeded further, allowing subject pronouns to follow the conjunction when the erstwhile verb serves to conjoin elements functioning as clause subject. Awutu is like Twi and Engenni in ordering the more "topical" pronoun first—thus, 'I and he', not 'he and I'.

If we look at conjunctions in Awutu without considering related languages, there is scant evidence for a verb source. However, the parallel with Twi and Engenni is suggestive. Furthermore, Awutu na has additional functions introducing Instrument and Patient NPs (which group together with Comitative with respect to marking in many
languages), as discussed in section 3.5, and in the light of parallel
evidence from other languages (see below) a strong case can be made
for a verb source for these functions.

In Awutu the low-tone NP-conjunction ne is phonologically similar
to, but tonally distinct from, the high-tone clause conjunction ne and
the ne which sets off fronted focused elements. The clause
conjunction might or might not be related (cf. the Twi ne conjunction
for NPs and na for clauses, and many probable cognates in Benue-Kwa).
Suggestive parallels involving focus morphemes run throughout
Benue-Kwa. I have refrained from pursuing them in this study.
Further careful historical/comparative analysis may sort out the
pathways via which verbs have arrived at these functional tasks.

3.4.2 Ga kë 'with'.

In Ga the morpheme kë functions as a preposition 'with'
introducing NPs, and as a NP conjunction. Although it does not occur
as an independent verb in the language today, there is evidence that
it was formerly a verb, and that the serial construction was the
context in which it was reanalyzed.

Kë occurs as a prepositional marker for NPs in Instrument,
Manner, and Comitative roles, as in (125).

(125) (a) aya kë ətə tsə wənə

Ayi with ladle took-out soup

'Ayi served soup with a ladle.'
(b) ̀ayì kè ̀hesìtswàa tsò ̀wònu  
    Ayì with haste took-out soup
    'Ayì served soup with haste.'

(c) ̀ayì kè ̀tètè fà ̀wònu  
    Ayì with Tete drank soup
    'Ayì drank soup with Tete', 'Ayì and Tete drank soup.'

In contexts like these, kè patterns with verbs syntactically to some extent:

(a) Kè often occupies the position within the sentence normally occupied by the first verb in a serial construction.

(b) Kè is preceded by subject pronouns and is followed by object pronouns.

(c) In the imperatives corresponding to (125), the second verb in the series (i.e., tè, fà) is in the subjunctive, as is the case in regular verb sequences in imperatives.

(d) When a third person singular inanimate object of kè is pronominalized, it is realized as zero, as is the usual pattern with verbs.

Trutenau [1973] argues for an analysis of kè as a verb, and Zimmermann [1858] and Dakibu [1970] call it an auxiliary verb. But kè has distributional and morpho-phonological properties that distinguish it from regular verbs:

(a) Kè does not occur without another verb in the sentence.

(b) Kè does not inflect; in a regular serial verb sequence the
second verb is not inflected, but verbs following kè in a serial
sequence are inflected.

(c) The verb following kè never has a pronominal subject
(contrary to what one would expect if kè were a verb).

(d) When kè occurs followed by a high tone verb prefix (e.g.,
perfect or subjunctive), kè assimilates to the high tone and the
prefix vowel is deleted.

In occurrences like those in (125), kè can be classified
synchronously as a "defective verb". Its many unmistakably verb-like
characteristics suggest that its historical source was a verb. It can
be paraphrased in Ga and translated in English using verbs like
'take', 'use'. E.g., (125a) can be 'Ayi took a ladle and served soup
with it,' or 'Ayi used a ladle to serve soup.' Zimmermann [1858] says
it was formerly a verb meaning 'take'.

If we regard kè as a defective verb in (1), its structure can be
viewed as NP VP VP, with the verb status of kè in jeopardy. To the
extent that kè has become preposition-like, we can regard (1) as
having moved along the path towards the structure NP PP VP, with kè
shifting from verb to preposition and the prepositional phrase
functioning adverbially.

In addition, kè occurs in contexts where the semantic function of
the kè NP phrase is not adverbial. In (125), kè conjoins nouns.

(126) (a) tètè nà 'ayi kè kòkò
Tete saw Ayi and Koko
'Tete saw Ayi and Koko.'
In (126a) the \textsl{NP kē NP} phrase is functioning as the semantic direct object, and in (126b) the \textsl{NP kē NP} phrase functions as a possessive NP in an associative N-N construction with 'father'.

But even within NP structures as in (126) there is evidence of the verb origins of kē. For example:

(a) Kē is preceded by subject pronouns and is followed by object pronouns, regardless of whether the [pronoun kē pronoun] is functioning as the subject or object in the sentence.

(b) In Ga, singular subjects take singular verbs, and plural subjects take multiple verbs. A subject NP of the form \textit{N₁ kē N₂} might be expected to be treated as plural, but when \textit{N₁} is singular the whole NP is treated as singular, reflecting the construction's historical development from a structure in which the first NP was the subject and therefore determined verb agreement. Thus, mī tā 'I sit' has a singular verb; wē tā 'We sit' has a multiple verb; but mī kē lē tā 'I and he sit' has a singular verb, because mī kē lē 'I and he' is not treated like a plural noun phrase. The singular verb form is consistent with an analysis of the string as a singular pronoun subject followed by a serial verb construction.

(c) When two noun phrases occur in the associative construction, there is a prefix à on the second noun only when the first noun phrase is plural. But when the first noun phrase is, say, kofi kē ama as in
(126b), there is no prefix on the second noun; thus, in (126b) the possessed NP 'father' is tsè, not à-tsè. Again the N kè N phrase, here 'Kofi and Ama', is not treated like a plural noun phrase.

(d) Either noun in a N kè N noun phrase can be fronted in a focus-placement transformation, violating the constraint on coordinate constructions proposed by Ross [1967], and suggesting the possibility that the constituents were not processed as coordinate structures at some earlier period diachronically.

The behavior of NPs conjoined by kè suggests that when kè conjoins NPs its role is a subordinating conjunction rather than a coordinating conjunction. The syntactic hierarchy within the NP kè NP phrase is better represented as [NP[Prep NP]], or [NP[Conj NP]], rather than [[NP Conj [NP]]. The syntactic asymmetry of these kè constructions has been inherited from their earlier identity as [NP][V NP] structures.

Although Zimmermann [1856] says kè was formerly a verb meaning 'take', speakers today do not recognize it as such. However, if we assume that kè was formerly a verb in a serial construction, a 'take' reading makes sense for kè in structures like (125a), where kè marks an Instrument NP: 'Ayi took a ladle and took our soup.' In the case of abstract NP objects as in (125b), a 'take' reading is still plausible--'take haste'--and can even be good idiomatic English, as in 'take care'.

When the object of kè is a Human NP as in (125c), if the following verb is a motion verb, a 'take' reading can yield something like 'Ayi took Tete and left'. In the context of actual language use,
appropriate situations for this utterance would overlap with those for 'Ayí and Tete left.' This suggests a possible pathway for the gradual reinterpretation of kè as a conjoiner.

3.4.3. Comitative verb, preposition and conjunction: Yoruba kpèlu, Ewe kple, Fon kpóòò..., kpó/kpan.

Folk history suggests that what is present-day southwestern Nigeria was the historical homeland for the Ewe and Fon people, as well as the Yoruba. The Fon moved westward into Dahomey and Togo, and the Ewe continued as far as the Volta River in Ghana. Although not mutually intelligible, these languages are strikingly similar in structure. In their present-day form, all three contain phonologically similar preposition-like morphemes which, I suggest, have developed from verbs in serial constructions.

In Yoruba the verb kpèlu 'be included among, be together with' occurs as in (127).

(127) fèmi kpèlu òwọ ọle
Femi SHT be-included-among PL thief
'Femi is one of the thieves.'

The verb status of kpèlu is supported by the fact that the Subject High Tone (SHT) precedes it, it takes tense-aspect markers, and it performs like a verb when it appears in sentence-initial position receiving verb focus [Lord 1973]. Its properties indicate that it is one of a limited set of Yoruba verbs that are derived historically

122
from verb+noun combinations. It occurs in serial-like constructions in which, depending on its object NP, it marks NPs with the case roles Comitative, Instrument, and Manner, as in (128)-(130). These three case roles share the same marking in related languages as well as in several other languages of the world, including English.

(128) ó gé ṣra kpèlu akì Comitative
he cut meat with Akin
'He cut the meat with Akin.'

(129) ó gé ṣra kpèlu ọba Instrumental
he cut meat with knife
'He cut the meat with a knife.'

(130) ó gé ṣra kpèlu èsì Manner
he cut meat with care
'He cut the meat with care.'

When kpèlu marks the case role of an NP, as it does in (128)-(130), its behavior differs from that of a verb in a serial construction. The kpèlu-NP phrase can be fronted and questioned, unlike a verb phrase, as in (131).

(131) sé kpèlu òdì ni wọ ki i
Q with respect that they greet him
'Was it with respect that they greeted him?'
In Yoruba the NP conjunction àti 'and' does not conjoin verb phrases; however, it does conjoin prepositional phrases, as in (132) with the locative preposition ni (discussed above in 3.2.3). It also conjoins kpélú-NP phrases as in (133).

(132) àa se oujè ni ile àti ni rjà
we-FUT cook food at home and at market
'Ve shall cook at home and at the market.'

(133) àa ki i kpélú ọ̀wọ̀ àti kpélú iye àa
de-FUT greet him with respect and with humility
'Ve shall greet him with respect and with humility.'

These capabilities suggest that kpélú functions more like a preposition than a verb when it marks case roles as in (128)-(133).

When kpélú marks a Comitative NP and the verb in the sentence is transitive, it is preferable for the kpélú-NP phrase to follow the subject and precede the verb phrase, as in (134).

(134) ìpùnù kpélú aki ẹ̀ge ará
Femi with Akin SHT cut meat
'Femi cut the meat with Akin.' (Also, 'Femi and Akin cut the meat.')

If we reflect on (132) in the context of actual language use, we recognize that 'Femi with Akin cut the meat' and 'Femi and Akin cut
the meat' communicate much the same information, and in many actual situations would be pragmatically interchangeable. They are grammatically distinct in English, however; one contains a prepositional phrase and the other contains conjoined NPs. I suggest that the closeness of the pragmatic message in contexts just such as these has served to blur the distinction between prepositional phrase and conjoined NP structures in Yoruba. Speakers have come to treat the kpèlu-NP phrase as a Comitative phrase within a NP rather than an adverbial phrase within the VP. The grammar reflects this in the position of the Subject High Tone which follows the subject; its position in (134) indicates that fámi kpèlu aki is treated as the subject NP. In fact, the string is ungrammatical if the Subject High Tone follows fámi, as (135) illustrates.

(135) *fámi kpèlu aki ge gérá

Femi SHT with Akin cut meat

Bamgboye [1966:34] provides the example of èmí pèluu won 'I am with them', a clause with the subject high tone junction (SHT) appearing on the final syllable of èmí 'I'. He contrasts this with a "nominal group" without the subject high tone junction: èmí pèluu won 'they and I'. The subject high tone junction serves to signal that what precedes it is the subject of the following predication; without it, as in the latter example, there is no subject and no predication.

In his Yoruba grammar, Awobuluyi lists pèlu as a complex verb meaning 'to accompany, to be added to'; as a preposition with the
comment that "this preposition's status is somewhat doubtful" [Awobuluyi 1978:99], as a sentential (adverbial modifier), and as a conjoiner of nouns 'and'. (Both Bamgbose and Awobuluyi use the orthography with 'β' representing the labiovelar and 'θ' representing open 'θ'. I have used the 'kp' digraph here to make more obvious the cognate relationships with neighboring languages.)

For 'kpɛlɛ', then, the course of historical development has been from verb in a serial construction to preposition in an adverbial phrase to prepositional subordinating conjunction in a noun phrase.

In Ewe there is a preposition 'kple' which is similar to Yoruba 'kpɛlɛ' in form and function. It marks NPs in Comitative, Instrumental, and Manner case roles, as in (136)-(138).

(136) kofi yi asime kple akuwa
Comitative
Kofi go-to market with Akuwa
'Kofi went to market with Akuwa.'

(137) akuwa gbɛ frese la kple kpe
Instrumental
Akuwa break window the with stone
'Akuwa broke the window with a stone.'

(138) mawɛ kple dzidz gbɛ
Manner
I-FUT-do-it with delight great
'I shall do it with the greatest delight.'

However, in Ewe there is no verb 'kple'. Ansre [1966a] classifies 'kple'
as a verb id, the only one without a homophonous verb partner. Like Ansre's other verbs, it occurs in serial-like constructions and does not inflect; with its NP object it forms an adverbial group. Since all the other verbs have related meanings as regular verbs, and since the syntactic behavior of *kplé* parallels that of the other verbs, it is possible that *kplé* was a verb at an earlier point in time, possibly meaning something like Yoruba *kpele* 'be together with, be among'. Westermann's 1905 Ewe-German dictionary lists the source of *kplé* as *kpe* 'meet' and *de* 'reach, arrive at' (noted by Heine and Reh 1984:86), and Clements (1972:187) relates *kplé* to the verb + verb id sequence *kpe de* 'accompany', in which the verb *kpe* takes verb form affixes but *de* does not. It is easy to find possible cognates in related languages; they include Ga *kpe* 'meet, collide' and *kplé* 'agree with'; Fon *kple* 'assemble, collect', Igbo *kpa* 'collect, keep' and *kpe* 'accompany, take along'; Engenni *kpoit* 'gather'; Yoruba *kpe* 'assemble, collect'; Ewe *kpe* 'meet, contact'; and Fe'fe' *kwee* 'join'. The Ga "multiple" verb form suggests a possible source for the 1; the typical verb root form is CV, and in the multiple form there is an 1 between the C and V; compare the Ga verbs *kpe* and *kplé* above with Ewe *kpe* 'meet' and preposition *kplé*.

In (136) the *kplé-NP* Comitative phrase follows the verb. It can also precede the verb, similar to Yoruba (134), as in (139).
(139) Kofi kple akuwa yi asime

Kofi with Akuwa go-to market

'Kofi went to market with Akuwa', or 'Kofi and Akuwa went to market.'

In this environment kple is usually translated as 'and'. Ansre [1966b] differentiates between kple as a verbid (preposition) in an adverbial group and kple as an additive linker in a nominal group. The additive linker translates the English noun phrase conjunction 'and'. In Yoruba there is another word, àti 'and', which functions as a coordinating conjunction for NPs; kple is semantically subordinating, even within noun phrases. In Ewe there is no other word functioning as coordinating conjunction, so kple has moved farther than kple, taking on coordinating as well as subordinating function.

In Fon there is a similar preposition, kpédô...kpan, for Comitative, Instrumental and Manner phrases, as in (140)-(142). The kpan follows the NP, and has the variant kpo in certain environments. Ijo has a similar morpheme, -kpo 'too, also', which optionally follows a noun phrase linked by coordination (Williamson 1965). Since Ijo has SOV word order, a de-verbal adposition would be expected to occur as a postposition or suffix—which it does. A possible cognate is Ga kpé 'bind each other, make a covenant', reported in 1858 by Zimmerman; another is Ewe kpákple, a variant of kple in certain uses.)
(140) n na i kpôdô kakpô kpan
I FUT go with Kakpo
'I shall go with Kakpo.'

(141) e hou dan kpôdô kpô kpan
he hit snake with stick
'He hit the snake with a stick.'

(142) kpôdô ahi kpan
with heart
'with sincerity'

(Fon examples are from Alapini [1969], with French glosses translated, tone not marked, ô representing a vowel between [o] and [u], un representing a nasal vowel, and ou representing [u].) There appears to be no homophonous verb in Fon, but the similarities with related languages suggest that this preposition too evolved from a verb in a serial construction. Since my data on Fon are sketchy, it is difficult to say to what extent the verb-to-conjunction shift has taken place. But it is interesting to note that apparently Comitative but not Instrumental or Manner phrases can precede the VP, as in (143).

(143) to tche kpôdô no tche kpô na wa
male parent with female parent (also?) FUT come
'My father and mother will come.'
Yoruba kpélú, Ewe kplé and Fon kpôdô...kpan are probably historically related. Today each morpheme has its own peculiar set of characteristics. Each probably started as a verb in serial constructions, and is on its own journey along the path from verb to preposition. In the case of Ewe, it has continued on to conjunctionhood.

3.4.4 Conclusions.

In a number of Benue-Kwa languages, NP conjunctions exhibit verb-like properties. In different languages, chunks of a continuum from verb to preposition to conjunction can be traced. One cognate group appears to include Yoruba, Fon, and Ewe, developing from a Comitative verb. Another group uses the widespread na/ne/ne conjunction, which shows definite verb property carry-overs. This group may have descended from a Proto-Niger-Congo locative verb via the Locative-Comitative connection. However, the possibility of a 'hold, have, take' verb source has also been suggested for some members of this group.

The same Proto-Niger-Congo Locative verb could have been the ultimate source for many of the present-day Locative prepositions as well as Comitative (plus Instrument and Manner) prepositions and conjunctions.

As noted in section 3.2, in a two-verb serial construction the Locative verb tends to follow the other verb. To the extent that this holds true, new cognate de-verbal prepositions would be expected to occur in the same post-verb position, at least until the preposition
has become so completely grammaticalized that it could be dislodged by other pressures (e.g., to preserve iconicity, maximize the match between meaning and form, or conform to other established patterns in the language's clause structure).

There are instances of prepositional phrases in post-verb position (presumably the position of the verb ancestor). There are also examples of pre-verb prepositional phrases. In Twi and Engenni, for example, a Comitative phrase occurs before the subject in clauses like 'I with you shall go.' Here considerations of meaning and the language's established Subject-Verb clausal word order would be likely to motivate speakers to group the "go-ere" together iconically in the clause sequence, preceding the verb. To the extent that both individuals perform the action, they are lumped together as contiguous constituents of a compound subject, and Comitative 'with' takes on the character of conjunctive 'and'.

As noted in section 3.2, when a verb phrase becomes a Locative prepositional phrase, the number of verbs in the serial construction is decreased by one. For Comitative prepositional phrases, the structural effect is the same. A sequence like 'I shall go with you' shifts from NP V VP to NP V PP, with the prepositional phrase modifying the verb. In some instances the prepositional phrase occurs pre-verbally, as in 'I with you shall go,' with the sequence NP PP V; the prepositional phrase can shift from modifying the verb to modifying the subject NP, i.e., NP [PP V] becomes [NP PP] V. As the preposition becomes more conjunction-like in function, the label "subordinating conjunction" becomes more appropriate. Ultimately the
semantic relation becomes one of coordination, and the structure can
be regarded as [NP CONJ NP] V, 'I and you shall go.' The new chunk,
NP CONJ NP, can be used as a direct object, as in Engenni 'He saw us
and our father.' The one-time VP 'and our father' is back in
post-verb position, but the clause structure has changed, and it does
not modify the verb—that is, the sentence does not mean that he was
with our father when he saw us.

For Yoruba, Ewe and Fon, a Comitative verb is the probable source
for the preposition/conjunction, and the nature of the development was
probably similar to that sketched for Locatives. Whether or not the
Comitative verb originally had a preferred position in the serial
string is not clear. The identity of the verb source for Ga is not
apparent. If Zimmermann's choice of 'take' is valid, then the
Instrument, Manner and Comitative phrases would be expected to occur
before the "main" verb. The source sequence would be, e.g., 'He took
up the ladle and served soup,' because one must take up a ladle before
one can serve soup with it. Serial sequences of action verbs
ordinarily follow iconic word order, with the sequence of actions in
time mirrored by the sequence of verbs in the utterance. A sequence
like 'He served soup (and) took up the ladle' would not be equivalent.
And indeed, the preferred sequence in Ga is 'He with the ladle served
soup,' with the prepositional phrase in pre-verb position.

Verbs in these languages ordinarily are restricted to certain
positions in the word order of the clause, and these positions tend to
be maintained even after the verb has undergone grammaticalization.
However, the data for conjunctions illustrate that, in time, these
constraints can be dropped, particularly if there are other factors influencing word order. Heine and Reh (1984:29) cite an example of a similar type of change in sentence position in Bağ, an Eastern Nilotic language, where a sentence-initial adverb has become "desemanticized" and functions as a future tense marker positioned between the subject and verb, which is the established position for tense markers in the language. Locatives in Chinese may reflect a similar development. In serial constructions, Mandarin locatives are typically pre-verbal, but Cantonese has de-verbal locatives in both pre-verb and post-verb positions; it has been suggested that contact with neighboring language groups with different word orders may have been a factor influencing the difference in order (Matthew Dryer, personal communication).
3.5 The verb 'take' becomes a preposition marking Instrument, Patient, direct object, and transitivity/causativity.

In many languages a verb meaning 'take', occurring as the first verb in a serial verb construction, serves to introduce an object noun functioning as semantic Instrument, Patient, means, manner, or material. In some languages the morpheme has been extended to function as a marker of direct object, transitivity/causativity, perfective aspect, definiteness/topicality, and argument reference. Section 3.5.1 is a detailed analysis of the Twi morpheme de. Section 3.5.2 discusses a similar development with evidence from written historical data in Mandarin Chinese. Synchronic data suggesting historical parallels is discussed in section 3.5.3 for Ga, 3.5.4 for Idoma, 3.5.5 for Nupe, 3.5.6 for Dagbani and Gwari, 3.5.7 for Engenzi, 3.5.8 for Awtu, and 3.5.9 for Vagala and Chickasaw. Section 3.5.10 concludes.

3.5.1 Twi de 'take': marker of oblique NPs, Patients, transitivity/causativity, and definiteness.

This section examines the syntactic behavior, meaning, and diachronic development of de in Twi. Specifically, it:

(a) examines the range of occurrence of the particle de (3.5.1.1) and reviews earlier analyses (3.5.1.2);

(b) demonstrates that de was formerly a verb meaning 'take' (3.5.1.3), and that its current functions as marker of Instrument, means, material, manner, accompaniment, Patient, and transitivity/causativity are all historically traceable to its
occurrence in the serial verb configuration (3.5.1.4–3.5.1.8);

(c) shows that cardinal Patient-hood is initially defined semantically by the verb de 'take' and the objects it selects, namely, items that can be physically manipulated; historically the Patient-marking function of 'take' becomes generalized to other Patient NPs, eventually broadening its function to include the marking of syntactic objects which are not semantic Patients (3.5.1.9); the historical development in Kwa languages parallels the ontogenetic development of the concepts of syntactic object and causation in individual children (3.5.1.10);

(d) suggests that causative readings for serial verb constructions may have originated as pragmatic inferences from sequences of verbs of direct physical manipulation followed by motion verbs (3.5.1.11);

(e) discusses conjoined sentence structures as a plausible historical source for serial verb constructions as well as de constructions, noting the respects in which the development of de constructions appears to have deviated (3.5.1.12); and

(f) illustrates that the de construction has established a contrast between definite and indefinite objects in terms of occurrence before or after the main verb (3.5.1.13).

Section 3.5.1.14 concludes.

3.5.1.1 Examples of the particle de.

The particle de occurs in a variety of contexts in Twi. As we will see, all of these uses can be traced to its earlier use as a verb in two-predicate syntactic constructions. Examples of the particle de
include (from Riis 1854:168 except as noted):

(144) (a) de marking patient:

aiyä de kanea ni ahuhuru ma asase
sun de light and warmth give earth
'The sun gives light and warmth to the earth.'

(b) o-de afoa ce boha-m
he-de sword put scabbard-inside
'He put the sword into the scabbard.'

(c) de marking instrument:

o-de enkranthya duabasa
he-de sword cut branch
'He cut off a branch with a sword.'

(d) de marking means:

O-de aivy enni nada anya ade
he-de theft and fraud get thing
'Through theft and fraud he has become rich.'
(e) de marking material:

vo-de abēn na ye afi
they-de horn CONJ make combs
'Of horn combs are made.'

(f) de marking manner:

o-de abufu na kum no
he-de anger CONJ kill him
'He killed him in anger.'

(g) de marking accompaniment:

q-de né nnipa foro bépow [Christaller 1875:71]
he-de his men ascend mountain
'He ascends a mountain with his men.'

(h) de rendering intransitive verbs transitive-causative:

o-de gwań a-ba [Riis 1854:97]
he-de sheep PERF-come
'He has brought a sheep.' ('He has caused a sheep to come.')
3.5.1.2 Analyses by Riis, Christaller, Stewart, Boadi.

The particle de has been discussed by Riis (1854), Christaller, (1875, 1881), Stewart (1963), and Boadi (1966, 1968). Their observations are outlined briefly here.

According to Riis, a prominent idiomatic feature of Twi is the use of the relational or auxiliary verb de to mark the "passive" object (i.e., semantic patient, the argument that "receives" the action of the verb), instrument, means, and material, and to render intransitive verbs of motion transitive (Riis 1854:95-98, 167-9).

Christaller agrees with Riis: de introduces the direct object, the means or instrument or material for the action of the principal verb, and the object which is caused by the subject to take the direction or occupy the place indicated by the principal verb. (Christaller 1875:70-71, 1881:68-69)

Sentences with de as object marker are analyzed by Stewart (1963) as having an underlying structure composed of two sentences, one containing the verb fa/de 'take'; he says that de functions as "a mere carrier of a direct object which another verb cannot, or preferably does not, carry itself" (Stewart 1963:147, 149).

Boadi calls de "the agentive verb". In Boadi's analysis, de is
used to express the notion of agency or accompaniment, and occurs as a verb in underlying simplex sentence structures, although it does not occur in surface simplexes (Boadi 1966:49). According to Boadi, verbs of "indirect complementation" (i.e., bitransitives) include verbs of giving and adornment, many of which can be used with de marking an object; the de paraphrase is derived from the bitransitive version by a transformational rule (Boadi 1966:27). In a later treatment, de is generated directly by phrase structure rules, as part of the expansion of VP (Boadi 1968:85). And, with regard to its restricted distribution, "It is reasonable to regard de as a verb which always combines with other verbs to form a compound with, by and large, the same distributional properties as any other single verb" (Boadi 1968:88).

Riis makes some interesting observations on the morpheme. According to Riis (1854:167-9), the verb de

seems originally to signify to carry or to hold....More frequently de occurs as a relational or auxiliary verb....The use of de as an auxiliary verb in the construction of sentences, seems to have arisen from the want of inflectional forms for the different cases, in consequence of which the immediate succession of several objects referred to the same predicate becomes frequently a heavy and unwieldy form of expression. It will be rendered more perspicuous by referring it to what has been stated above as the original signification of de, viz. to carry or to hold. If for instance the sentence
(145) Mi-de abonua na tya dua

(I-de axe CONJ fell tree, C.L.)

'I fell a tree with an axe.'

is considered as meaning originally 'I carry an axe and fell a tree,' it is at once clear, how de could come to be used in the way stated. This, however, is merely a hypothesis, and on the present stage of the language de must be considered as a merely relational word, expressing no certain idea at all, but only the relation between the object attached to it and the predicate. This purely relational character of de has even operated so far, as to make it lose all inflection of tense and mood, the tense being indicated only in the predicate and de always put in the aorist, as several of the sentences above quoted show; and in negative and imperative sentences it is not admitted at all, but here always fa ('take', C.L.) is substituted for it.

Riis makes a number of claims here that are worth noting (we will return to them later). To paraphrase Riis: (1) the casemaker de was formerly a verb; (2) the context in which the verb was reanalyzed was a sentence with two verb phrases; (3) synchronically, de does not have verb meaning, but indicates the semantic relationship between a predicate and an object; (4) de is defective in terms of morphology and distribution; (5) the loss of meaning was the cause of the loss of formal characteristics; (6) the process of change was originally
motivated by the lack of case inflections in the language.

3.5.1.3 Evidence for earlier verb status of de.

First, let us examine the evidence that de was indeed a verb at an earlier period. Riis cites the use of the verb phrase de ne-hu, 'be free, not in bondage', literally 'possess his-self', as in (146) (Riis 1854:167).

(146) Abrokirri akoa ni ho, von iniara vo-de von-hu
   Europe slave is-not there they all they-possess their-self
   'In Europe there is no slave, they are all free.'

Here de is the only verb in the second clause; it takes the third person plural subject agreement prefix vo-.

Christaller (1881:68) cites this use as well as other verb uses with which Riis was apparently not familiar. Christaller lists de as a verb meaning 'hold, have, possess, own', as in (147) and (148).

(147) ṣ-de ne ho
      he-possess his self
      'He is free, his own master, not in bondage.'

(148) ñò na ṣ-de ḷuró yi
     he FOCUS he-possess town this
     'He is the possessor of this town.'

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Christaller also provides (149), in which de is a verb meaning 'use':

(149) ḗ-n-de apëmpensi nà ṭẹ̀ n'áde
he-NEG-use extortion CONJ he-seek his-thing

'It is not his manner or way to enrich himself by extortion.'

Stewart (1963:146) cites de as a verb in a simple sentence in

(150) ṣkọm de me
hunger takes me

'I am hungry.'

which he calls an idiomatic expression; his literal gloss indicates the probable literal basis for the expression.

In single verb clauses in (146)-(149), de means 'hold, have, possess, own.' The 'take' gloss, as in (150), is pragmatically consistent, because something that is taken is typically also held or possessed. A derived nominalization meaning something taken, held, or possessed might well have come from such a verb; and, indeed, there is the widely used noun àdé 'thing, property, possession', as in (149) and (144d). The prefix a- on verbs is one of a set of (non-productive) affixes forming nominals from verbs, as for example in the verb/nominal pair gòrù (verb) 'play' and agòrù (noun) 'game, play, amusement'. Several nouns with a- prefixes show cognate relationships with verbs, and some have become lexicalized; e.g. hù (verb) 'see, discover' and aǹ (noun) 'a treasure discovered'; hùnù
(verb) 'blow' and ahúñú (noun) 'breath, puff, blast'. The existence of the noun ade meaning 'thing, property,' or 'that which is held or possessed' is strong evidence for the earlier verb status of de.

The casemarking morpheme de is in complementary distribution with another morpheme, fa. De is used in the indicative, fa is used in the negative and imperative. Note that, although fa, not de, is used for the negative today, de was used for the negative a century ago, as shown in (149). This indicates that the erosion of the verb capabilities of de has advanced since Christaller's time. Fa, meaning 'take', has the full range of formal capabilities of a verb. The fact that fa is fully verbal, both semantically and formally, is consistent with the view of its suppletive partner having once been so too. As suggested by Riis (1854:96) and Christaller, since the meaning of fa is 'take,' it is reasonable to assume that the meaning of de as a verb was similar. The meaning 'take' is in the same semantic range as 'have, possess, hold, use, employ.' Pragmatically, after one has completed the act of "taking" something, one "has, holds, possesses" it, and if one holds it while performing some action and the item is helpful or instrumental to the performance, a reasonable interpretation is that he "uses" it. Since meanings of lexical items, and shifts in meaning, reflect the circumstances of their actual use by people in communication, this sort of semantic range for a given morpheme (de or fa) is just what we would expect. Supporting comparative evidence is found in the related language Anyi, which uses the verb fa 'take' in both negative and affirmative sentences; in Anyi de is a verb meaning 'grab' (Leynseele 1978).
In Twi, the conjunction na conjoins sentences but not verb phrases. For example, in his 1966 dissertation Boadi gives (151) as an example of sentence coordination (Boadi 1966:40).

(151) Kwasi kooe na Amma baba

Kwasi go-PAST and Amma FUT-come

'Kwasi went and Amma will come.'

Verb phrases are not conjoined in this way; there is no verb conjunction morpheme in (152), with two verb phrases in a serial construction (Boadi 1966:42).

(152) Kofi kɔɔe baae

Kofi go-PAST come-PAST

'Kofi went and came back.'

In considering the structure of serial-like sentences like (10) (Boadi 1968:88),

(153) de sika baae

he de money come-PAST

'He came with money.'

Boadi notes that de does not occur today by itself as a full verb in unabbreviated sentences and thus cannot be conjoined; sentences like (154) do not occur (Boadi 1968:88).

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(154) * de sika na -baae
    he de money CONJ he-came
    'He de money and he came.'

(The occurrence of na with de is discussed further in 3.5.1.12 below.)

However, Christaller cites (149) above and (155) with de and the
conjunction na (Christaller 1875:139).

(155) anom de ako-ne-aba na e-nwene berebuw
    bird de going-and-coming and it-weave nest
    'By going and coming a bird weaves its nest.'

If (149) and (155) each have the structure [S na S], like (151), it
implies that at that time de was functioning by itself as a full verb
in a simplex sentence which was part of a conjoined sentence
structure.

It is possible that Christaller's citations are in error, but it
is probable that sentences like (149) and (155) were acceptable, for
at least some speakers, at the time Christaller was collecting
data—some 100 years before Boadi. If Christaller's citations are
valid, it is evidence that de functioned syntactically as a verb in
simplexes within conjoined structures at a time when its meaning was
less than fully concrete, that is, when a possible object was an
abstract nominal, such as 'extortion' or 'going and coming', and the
verb itself meant 'use, employ, make use of'.
3.5.1.4 Development of de as marker of oblique objects.

It is probable that de was formerly a verb, but how did it come to mark such a wide semantic range of objects as those in (144)? Synchronously, the case roles of instrument, means, material, manner, and accompaniment, as in (144c-g), share common semantic ground and can be found to share similar marking in other unrelated languages (see e.g., Lord 1973). However, there is less general precedent for the use of similar marking for semantic patients, as in (144a-b), and for markers of transitivity/causativity, as in (144h-i). The explanation lies in the former range of meaning of de as a verb, namely, 'take, hold, have, possess, use.' This meaning can be seen quite readily in two-predicate readings of the sentences cited in (144c-g) above, in which de marks instrument, means, material, manner, and accompaniment:

(156) Instrument: 'He took a sword (and) cut a branch.' (144c)

'He used a sword (to) cut a branch.'

Means: 'He used theft and fraud (and) became rich.' (144d)

Material: 'They take horn and make combs.' (144e)

Manner: 'He had anger and killed him.' (144f)

Accompaniment: 'He takes his men (and) ascends a mountain.' (144g)

For sentences like these, it is easy to assign an action verb reading to de. They are also readily translatable into English if de is glossed as 'with'; the object of de then has an oblique role. The formal deficiencies of de as a verb (no inflection for tense/aspect, a
suppletive negative, and no independent occurrence as a verb) suggest a case-marker analysis for present-day speakers.

In sentences like (144c-g), as in (156), the other verb has its own object and can stand independently as a predicate. In cases like (144a-b), however, the sense of the other verb calls for two complement NPs, and de is used to introduce one of them.

3.5.1.5 Development of de as Patient marker with verbs that take Recipient objects.

Most of the sentences with de marking Patient have bitransitive verbs. These bitransitive verbs can be sub-classified into three groups according to the semantic roles of the objects, i.e., (1) verbs which take Recipient and Patient NP objects, (2) verbs which take Patient and Factive NP objects, and (3) verbs which take Patient and Locative NP objects. The first group is dealt with in this section, the second group in 3.5.1.6, and the third group in 3.5.1.7.

The first group takes a Recipient and a Patient (both Riis and Christaller use the term "passive" object for the Patient). The verbs in this set can be characterized semantically as typically denoting transactions between persons:

<table>
<thead>
<tr>
<th>kyɛ</th>
<th>'present'</th>
<th>bua</th>
<th>'answer'</th>
</tr>
</thead>
<tbody>
<tr>
<td>bere</td>
<td>'bring'</td>
<td>mane</td>
<td>'remit'</td>
</tr>
<tr>
<td>ma</td>
<td>'give'</td>
<td>fɛm</td>
<td>'lend'</td>
</tr>
<tr>
<td>kyɛrɛ</td>
<td>'show'</td>
<td>hɛɣ</td>
<td>'wear, put on'</td>
</tr>
<tr>
<td>bisa</td>
<td>'ask'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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These verbs of transaction are illustrated below in sentences in (158)-(166). In each (a) sentence, the verb is followed by the Recipient object and the Patient; in each (b) sentence, the Patient is marked by de and precedes the verb. The two patterns are illustrated in (157).

(157) (a) Agent V Recipient Patient

(b) Agent de Patient V Recipient

The following examples have been provided as isolated sentences, without the discourse context. Some of the examples have the same idiomatic gloss for both (a) and (b) forms, with no indication as to which NP (the Recipient or the Patient) is the topic (of the preceding discourse) and which NP is the focus (of new information in this clause), differences of the sort described by Givon [1979]. It is possible that mid-nineteenth-century speakers made no systematic topic-focus distinction between (a) and (b) forms, but it is also possible that the distinction was there but was not recorded by the grammarians. There is evidence for the development of such a discourse-based distinction in the preference of the (b) form for definite Patients, as discussed below in section 3.5.1.13.

(158) kye 'present' (Riis 1854:97)

(a) okye n'efefo iniara ade....

he-present his-friends all thing

'He gave presents to all his friends....'

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(b) o-de ade kye n'emfëfo ñiara....
    he-de thing present his-friends all
    'He gave presents to all his friends....'

(159) bere 'bring'
(a) o-bere ne nua ogya
    he-bring his-brother fire
    'He brought fire to his brother.'

(b) o-de gya bere ne nua
    he-de fire bring his-brother
    'He brought fire to his brother.'

(160) ma 'give'
(a) o-ma abofrá no akútú
    he-give child the orange
    'He gives the child an orange.'

(b) o-de akútú ma abofrá no
    he-de orange give child the
    'He gives the child an orange.'
(161) kyere 'show'

(a) o-kyere nè ba mfonini
he-show his child picture
'He shows his child a picture.'

(b) o-de mfonini bi kyere nè ba
he-de picture a show his child
'He shows his child a picture.'

(162) bisa 'ask'

(a) o-bisaa me asem bi
he-ask me matter a
'He asked me something.'

(b) me-de asem no mi-bisaa no
I-de matter the I-ask him
'I asked him about that matter.'

(163) bua 'answer'

(a) ma-m-bua no fwe
I-NEG-answer him something
'I answered him nothing.'

(b) o-de nsem yi bua-à me
he-de words these answer-PAST me
'He answered me with these words.'

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(164) mane 'remit'

(a) ṣ manee woŋ sika
he remitted them money
'He remitted them money.'

(b) ṣ de sika manee woŋ
he de money remit them
'He remitted them money.'

(165) fem 'lend'

(a) ṣ femm me ne ṭwɔŋ no
he-lent me his horse the
'He lent me his horse.'

(b) ṣ de ne ṭwɔŋ no femm me
he-de his horse the lent me
'He lent me his horse.'

(166) hye 'wear, put on'

(a) ṣ hye Kwadwo atadee
he put-on Kwadwo clothes
'He puts clothes on Kwadwo.'
(b) ḏ de ataadeg hye Kwadwo
he de clothes put-on Kwadwo

'He puts clothes on Kwadwo.'

De marks semantic Patients in (158)-(166); its former verb meaning is evident in these constructions, as it was in (156) for the oblique case NPs in (1 c-g). Two-predicate readings for (158)-(166) illustrate this:

'He takes things (and) gives (them to) all his friends....' (158)
'He takes fire (and) brings his brother (some).' (159)
'He takes an orange (and) gives (it to) the child.' (160)
'He takes a picture (and) shows (it to) his child.' (161)

'He takes clothes (and) puts (them) on Kwadwo.' (166)

In these examples de marks the semantic Patient of a bitransitive verb; this group of verbs typically name transactions between persons. The former verb de functions here as a case marker of semantic Patients. In the de construction the Patient NP precedes the verb of transaction, because the word order reflects the serial verb configuration in which that NP was formerly the object of the verb de 'take'; the Agent "took" the Patient temporally prior to effecting the transaction. The serial construction word order is iconic with respect to time, and the grammaticalization of the first verb into a Patient-marker results in a string in which the Patient NP precedes the verb.
De marks Patients in constructions with verbs of other semantic classes as well; the next two sections describe verbs that take Factitive and Locative NPs.

3.5.1.6 Development of de as Patient marker with verbs that take Factitive objects.

Bitransitive verbs in the second group take two object NPs which Riis and Christaller call "passive" and "resultive or factitive." Their "passive" elsewhere corresponds with our Patient, and their "resultive or factitive" corresponds to Fillmore's Factitive—the object or being resulting from the action of the verb, or understood as a part of the meaning of the verb. Semantically, these verbs can be characterized as verbs of designation; they include:

- ye 'make'
- si 'set'
- hye 'appoint'
- to 'call, name'

The Patient can follow the verb and precede the Factitive, as in the (a) examples below, or it can be marked by de and precede the verb, as in the (b) examples below. These alternative patterns are given in (167).

(167) (a) Agent V Patient Factitive

(b) Agent de Patient V Factitive

If we compare (167) with (157) (for verbs that take Recipients and
Patients), we note that in both (167b) and (157b) de introduces the Patient. However, in the non-serial (a) form the Patient precedes the Factive in (167a), but the Patient follows the Recipient in (157a) (from Christaller 1875:116-117).

(168) ye 'make'
(a) wo-ye no sáfóhene
    they-make him captain
    'They made him captain'

(b) wo-de no ye g'safóhene
    they-de him make captain
    'They made him captain.'

(169) sî 'set'
(a) wo-sî no héne
    they-set him king
    'They set him (up as) king.'

(b) wo-de nó sî héne
    they-de him set king
    'They set him (up as) king.'

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(170) hye 'appoint'  
(a) wo-hye no ogó  
    they-appoint him priest  
    'They appointed him (to be) priest.'  

(b) wo-de nó hye ogó  
    they-de him appoint priest  
    'They appointed him (to be) priest.'  

Again, for this set of bitransitives, the historical basis for the de construction can be seen in the two-predicate readings for (168)-(170), e.g., 'They took him (and) made (him) captain.' The verb de 'take' in a serial verb construction has been reanalyzed as a marker of semantic Patients in constructions with verbs of designation that take Factive objects. As with verbs of transaction (in the preceding section), de and the Patient precede the verb because that was their position in the former serial construction, and the order of verbs in a serial construction typically is pragmatically iconic with respect to time.

It might be suggested that the NP immediately following the verb in the (a) forms meets the description for the Dative case role--the animate being affected by the action identified by the verb. Since Patients are also NPs affected by the verb, a salient difference between a Recipient and a Patient appears to be animacy, and since the NPs in question are animate, we should consider whether they might be designated Recipients rather than Patients. Calling them Recipients
would require adding "Recipient marker" to the list of functions for
the defective verb de.

A paradigm instance of a clause with both Factive and
Recipient would be something like 'They built him a house', and in Twi
this would be expressed with a different serial construction,
literally, 'They build house give him,' with the Recipient after the
Factive NP. Trying to force a clause like this into a de
construction would produce, literally, something like 'They take him
build house,' which would not retain the meaning. Serial
constructions with Recipient NPs, discussed above in section 3.3, show
verbs in pragmatically iconic word order: the house must be built
before someone can be affected by it, so the 'give NP' follows the
other VP. We can conclude that the post-verb NP with verbs of
designation in (168a)-(170a) patterns less with Recipients than with
Patients with respect to de marking, even though it is animate.

Another bitransitive verb of designation that takes both Patient
and Factive NPs is to 'call, name,' as in (171).

(171) (a) wɔ-a-to no dịŋ

they-PERF-call him name

'They have given him a name.'

(b) wɔ-tɔɔ no dịn Adow

they-call him name Adow

'They gave him the name Adow.'

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(c) \(\text{wɔ-tɔɔ ne ɖiɲ Adow}\) [Christaller 1875:117]

they-call his name Adow

'They call his name Adow.'

For this verb, there are two different possibilities for a corresponding \(\text{de}\) construction: the person being named can be marked with \(\text{de}\), or the name itself can be marked with \(\text{de}\), as in (172) [Christaller 1875:117].

(172) (a) \(\text{wɔ de nɔ toɔ ʌdɔw}\)

they \(\text{de}\) him call Adow

'They named him Adow.'

(b) \(\text{wɔ-de né wɔfa ʌdɔw dĩn toɔ no}\)

they-\(\text{de}\) his uncle Adow name call him

'They named him after his uncle Adow.' ('They called him by his uncle Adow's name.')

In (172a) \(\text{de}\) marks the Patient, and in (172b) \(\text{de}\) marks the Factitive. What constraints are there, then, on the NPs which \(\text{de}\) marks?

Looking for a synchronic generalization regarding the \(\text{de}\) forms of bitransitives, we may choose to disregard their historical development. One approach might be to ask what determines which of the bitransitive verb's objects get marked by \(\text{de}\).

First, if we consider the (a) forms in (157)-(166), we find that
in terms of word order it is the second of the two objects that can be marked by de; the first object remains in its post-verb position. This generalization holds for (172b), but not for (167)-(170) or (172a), where it is the first of the two objects that can be marked by de. This approach encounters further difficulties in the next section when we consider the third group of "bitransitives," where only the de form is grammatical.

If we look for a generalization in terms of semantic features, we see that it is the less human/animate of the two objects that is marked by de in (158)-(166) and (172b), but this generalization is not evident for (168)-(170), and for (172a) the reverse is true. A generalization on what de can mark, then, does not appear to be based on the position of the NP in non-de sentences, or on semantic features of the NP such as animacy.

The attempt to characterize the NP marked by de in terms of its position in the non-de (near) paraphrase sentence is misguided. It implies that the de construction depends on its paraphrase in some way, is "derived" from it, or is a "transform" of it. It is neither necessary nor helpful to make such an assumption. Both forms are possible sentence patterns for the language, and one need not be designated as more "basic" than the other.

A topicality hierarchy employing semantic features such as Human or Animate does not help characterize the NP marked by de, but it does predict the order of post-verb NPs in the non-de sentences. In (158a)-(170a) and (172a-b), the human NP precedes the non-human animate or inanimate NP. If the position immediately

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following the verb is regarded as one of high salience within the
discourse context, then discourse topic NPs are likely to be found in
that position. Humans are inherently topic-worthy, and this fact is
consistent with their post-verb position.

A neat synchronic characterization of the set of NPs
marked by de is not readily available. This is because the
speakers have reanalyzed de as a grammatical function word
but still observe the restrictions on possible objects of the
former verb de 'take' in serial verb constructions. These
restrictions reflect what it was pragmatically possible to
'take,' as well as the semantic/pragmatic relationship of the
'taken' items in the events that serial verb sentences were
about. As (172a-b) show, you can 'take' a child and call him by a
name, or you can 'take' a name and call a child by it. The range of
the de construction reflects the richness of the pragmatic
possibilities.

The use of the de construction with verbs of designation
may parallel its use with verbs of motion, discussed below in
3.5.1.8. In both cases, de functions to some extent as a
causative morpheme. Sentences with verbs of designation can
be viewed as the causative equivalents of "nominal" clauses;
for example, Anderson [1971:75] suggests that They appointed
him treasurer be interpreted as the causative equivalent of He
was/became treasurer. This analysis is attractive for verbs of
designation in Twi because some causative/non-causative pairs have the
same morphemic realization, like the English causative/non-causative
break. For example, \( \text{y} \) in (168) is 'make', but elsewhere is the non-causative 'become', and 'make' is the causative of 'become' (cf. 'They made him captain', 'He became captain'); \( \text{si} \) is 'set up', as in (169), but elsewhere occurs as intransitive 'stand, sit, be fixed', and to 'set up' is to 'cause to stand'; the verb \( \text{hy} \) is translated 'appoint' in (170), given its object, but elsewhere is 'stick, be set, be fixed', and a causative/non-causative relationship can be seen for the two uses of the form. Employing \( \text{de} \) gives the sentence a causative reading, in effect. The causativizing function of \( \text{de} \) with other verbs is discussed in 3.5.1.8.

3.5.1.7. Development of \( \text{de} \) as Patient marker with verbs that take Locative objects.

With verbs that take Locative NPs as objects, \( \text{de} \) introduces semantic Patients. These verbs indicate motion to a place, although their nearest English glosses may not signify motion. Each of the Twi verbs takes a Locative NP object. They include:

- \( \text{si} \) 'stand'
- \( \text{tra} \) 'sit' ('seat')
- \( \text{gu} \) 'fall, pour' ('put')
- \( \text{sgn} \) 'hang'
- \( \text{fra} \) 'mix'
- \( \text{fye} \) 'fall' ('throw')
- \( \text{tua} \) 'join'
- \( \text{to} \) 'fall' ('put')

For verbs of this group, a predicate configuration with a verb followed by two object NPs is not possible. The \( \text{de} \) form is required, with \( \text{de} \) introducing the Patient, as in (173a) and the (a) examples following. Versions with both NPs following the verb are ungrammatical, as illustrated by the (b) and (c) examples.
(173) (a) Agent de Patient V Locative
(b) *Agent V Patient Locative
(c) *Agent V Locative Patient

(174) si 'stand'

(a) p-de kanea bi sii pono no so [Stewart 1963:148]
   he-de lamp certain stood table that top
   'He stood a lamp on the table.'

(b) *o-sii kanea bi pono no so [Stewart 1963:148]
   he-stood lamp certain table that top
   'He stood a lamp on the table.'

(c) *o-sii pono no so kanea bi
   he-stood table that top lamp certain
   'He stood a lamp on the table.'

(175) tra 'sit'

(a) o-de no tra po'ko so [Riis 1854:97]
   he-de him sit horse top
   'He seated him upon the horse.'

(b) *o-tra no po'ko so
   he-sit him horse top
   'He seated him upon the horse.'
(176) gu 'fall'

(a) Kofí de ntomá nó guu adáká nó mú [Stewart 1963:149]
Kofi de cloth the fall box the inside
'Kofi put the cloth in the box.'

(b) *Kofi guu ntomá nó ádáká nó mú [Stewart 1963:148]
Kofi fall cloth the box the inside
'Kofi put the cloth in the box.'

(177) sgn 'hang'

(a) Kofí de atadé nó sgnn dadewá só [Stewart 1963:149]
Kofi de dress the hang nail top
'Kofi hung the dress on a nail.'

(b) *Kofi sgnn atade no dadewa so [Stewart 1963:148]
Kofi hang dress the nail top
'Kofi hung the dress on a nail.'

(c) *Kofi sgnn dadewa so atadeg no
Kofi hang nail top dress the
'Kofi hung the dress on a nail.'

These verbs all occur independently as monotransitives with Locative NP objects; none occur with postverbal Patients. For example, verbs like si 'stand' occur in simplexes such as (178) with place nouns as objects.
(178) duá bi sì né dán anim' [Christaller 1875:119]

tree a stand his house front

'A tree stands before his house.'

We can give (174)–(177) literal readings with de as a verb meaning 'take'; as in (179).

(179) 'He took a lamp (and it) stood on the table.' (174)

'He took him (and he) sat on the horse.' (175)

'Kofi took the cloth (and it) fell into the box.' (176)

'Kofi took the dress (and it) hung on a nail.' (177)

These readings are a bit awkward. They differ from those for the bitransitive verbs of transaction and designation discussed above. In (179) it is the object of de, not the subject, that is interpreted as the logical subject of the second verb. This reading is possible in Twi when the second verb is a motion verb, as in (174)–(177). (It is also applicable to some extent for verbs of designation as noted in the previous section.) English translations for the de constructions would come closer to the 'take, get, have' meaning of de, as in (180).

(180) (a) 'He got a lamp (to) stand on the table.'

(b) 'He had a lamp stand on the table.'

Interestingly, for these examples, in both Twi and English it is a construction with a verb meaning 'get' which provides for the intro-
duction of an Agent into a sentence which would otherwise involve only a Patient (the lamp) and a Location (the table). The two-verb phrase get Patient stand Location can be paraphrased with a single verb as stand Patient Location in English but not in Twi. The English glosses for the serial constructions in (174)-(177) have single verbs.

To summarize: as we have seen (in sections 3.5.1.4 to 3.5.1.7), serial verb constructions with the verb de 'take' have been reanalyzed as constructions in which de serves as a casemarker. De marks:

(a) semantically oblique NPs that are optional arguments of the verb (Instrument, means, material, manner);

(b) semantic Patients with bitransitive verbs of transaction and designation;

(c) semantic Patients with verbs of motion-to-a-place (the de construction is the only grammatical sentence form for these motion verbs when the Agent is specified in the sentence).

The pre-verb position of the de NP phrase reflects the pragmatic temporal ordering of the events in the earlier serial verb constructions with de as the first verb.

Instances of de as a marker of transitivity/causativity are discussed in the next section; this construction is found to parallel the motion verb sentences discussed above, and is similarly a result of reanalysis of a serial verb construction with de 'take'.

3.5.1.8 Development of de as marker of transitivity/causativity.

Sentences (174)-(177) have the form Agent de Patient VP, where the verb is a motion verb with Locative object; in the de construction

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it has a causative interpretation ((174a,b) repeated here, from Stewart 1963:148).

(174)(a) *-de kanéí bí sìi pónó nó só
        he-de lamp certain stood table that top
        'He stood a lamp on the table.'

        (b) *o-sìi kanea bi pono no so
            he-stood lamp certain table that top
            'He stood a lamp on the table.'

Sentences (144h-i) (repeated here) are similar to (174)-(177), except that for the motion verb the Locative object is optional. Riis noted that these intransitive verbs are "construed with de, assuming transitive meanings" [Riis 1854:97].

(144)(h) o-de gwañ a-ba
        he-de sheep PERF-come
        'He has brought a sheep.'

(i) ne-a o-yë bonne o-de amanne be-ba no so
    he-REL he-do evil he-de misery FUT-come him top
    'He who does evil, will bring misery upon himself.'

In (144h) ba 'come' has no object, but the English gloss for the sentence is transitive. In (144i) ba has the Locative NP object no so,
literally 'him top'; the English gloss makes amanne 'misery' the
Patient object.

Christaller reserves the label "object" for Recipient, passive
(Patient) and resultive (Factive) noun phrases, and calls Locative
noun phrases "complements" instead of "objects"; accordingly, for him
see 'stand' plus a Locative NP is intransitive; the presence of de
makes them causative [Christaller 1875:119]. In his dictionary
Christaller lists de..ba as 'bring'; similarly, for ko 'go' he notes
that in connection with de the meaning of ko becomes causative: 'take
away, take to a place, lead, conduct', as in (181) (from Christaller
1881:238).

(181) wɔ-de no kẹe
    they-de him go-PAST

'They led him away.'

Riis notes that the verbs ba 'come', ko 'go', fye 'fall', and tra
'sit' can occur "with the auxiliary verb de, being thereby rendered
transitive, and assuming the significations 'to bring--to conduct--to
throw down--to make to sit or to put'" [Riis 1854:168].

These instances of de as a transitive/causative construction
marker, like all the other instances in (144) (in sec. 3.5.1.1 above),
have readings with de as a verb meaning 'take', reflecting its earlier
analysis as a verb. For (144h-i) and (181), respectively, there are
readings like

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'He took a sheep (and) came.' (144h)

'He who does evil takes misery (and it) will come upon him.' (144i)

'They took him (and) went.' (181)

Again the inference of close pragmatic relationship inherent in the Twi serial verb construction conveys the interpretation that 'He took the sheep and came (with it)', or, to parallel the other motion verbs, 'He got the sheep to come' (as noted above, when the second verb is a motion verb, its understood object can be the preceding verb's subject or object).

The transitive/ causative marker de for intransitive motion verbs and the Patient-marker de for motion verbs with Locative objects have parallel semantic functions, i.e., introducing the semantic Patient, so that sentences like (144h-i) and (181) can be seen to have essentially the same structure as (174)-(177); the verbs are all motion verbs, with or without Locative NP objects, with de introducing the semantic Patient, which is interpretable as the logical subject of the motion verb in the serial verb construction context.

The probable historical development of (144h-i) parallels that of (174)-(177). The serial verb syntactic configuration has been reanalyzed semantically as a single action involving an Agent and a Patient. The first verb de has lost its lexical meaning; as a consequence, it has contributed its Agentive subject to the motion verb, and its Patient object is interpreted as the semantic Patient of the motion verb. The effect of the reanalysis is to add an NP argument to the motion verb, making it semantically causative.8

If one event closely follows another temporally, people will

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often infer that there is a causal relationship between the two
events, particularly if the events share the same spatial context and
the participants overlap. As Lyons [1977:490] points out,

... the distinction between a single temporally extended
situation and two distinct, but causally connected, situ-
tions is not something that is given in nature, as it were.
Let us suppose for example that X picks up a knife and stabs
Y and that Y immediately falls to the ground dead. It is
obvious that what is assumed to have happened can be
described as a single event, as a process that is extended
(albeit minimally) in time or as a sequence of two or more
situations (events, states or processes).

There are many elements in this example that could be selected for
description and presentation as components of a single situation.
According to Lyons, "The fact there are so many transitive verbs with
the same valency as 'kill', not only in English and the Indo-European
languages, but possibly in all languages, would suggest that, as human
beings, we are particularly interested in the results of our purposive
actions and in the effects that our actions have upon patients."

When a sequence of two or more causally connected events or
situations, reflected in a Twi serial verb construction like (144h),
is viewed as a single event, there are grammatical consequences. The
Agent and Patient of the first verb de 'take' are reanalyzed as the
Agent and Patient of the second verb ba 'come', bringing about its

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semantic reinterpretation from intransitive to transitive/causative 'bring'. The first verb, de 'take', stays on as a Patient-marker.

The effect of the de construction is to increase the valence of the other verb, so that the presentation is in terms of one event, not two, and the components which are most salient in human terms are included.

For instances of de marking the semantic Patient, then, the historical source was a two-predicate construction with de as a verb in the configuration Agent de Patient V NP.

Since motion verbs cannot occur with Agents and Patients in simplexes without de, their syntactic behavior can be viewed as lagging behind the semantic reanalysis. Unlike motion verbs, change of state verbs in Twi can occur in the frame [Patient ___] as well as [Agent __ Patient], as in the (a) and (b) examples respectively for bɔ 'break' and dane 'turn into' [Stewart 1963:148]:

(182)(a) toá  nó á-bɔ
bottle the PERF-break
'The bottle has broken.'

(b) Kofi á-bɔ toá  nó
Kofi PERF-break bottle the
'Kofi has broken the bottle.'
(183) (a) Akósúá danée jsebó
Akosua turned-into leopard
'Akosua turned into a leopard.'

(b) Kofi danée Akósúá jsebó
Kofi turned-into Akosua leopard
'Kofi turned Akosua into a leopard.'

(For (183) the frames also include a Factitive at the end of the string.) Motion verbs behave like (182a) but not like (182b) as illustrated with ba 'come' in (184) [Stewart 1963:148].

(184) (a) nwómá nó á-bá
book the PERF-come
'The book has come.'

(b) *Kofi á-bá nwómá nó
Kofi PERF-come book the
'Kofi has brought the book.'

As we have seen, motion verbs like ba can take Locative NPs in post-verbal object position. Christaller's dictionary lists the less common usage of ba meaning 'produce', as in asase ba aduaq, literally, 'earth come food', or 'The earth brings forth food', in which the post-verbal NP is not Locative. In terms of case roles, the NPs here are not prototypical Agent and Patient; 'earth' is closer to Locative

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or Source than to Agent, and the role of 'food' is more Factitive than Patient.

At any rate, if speakers have reanalyzed motion verbs semantically as taking Patient objects in contexts like (144h), this reanalysis has not yet progressed to the point where surface syntactic realizations like (184b) are possible. The large number of bilingual Twi/English speakers could conceivably be an added influence toward eventual acceptance of structures like (184b), since English has transitive/intransitive verb pairs for some motion/location verbs as well as change of state verbs.

Are there grounds for using the term "direct object" in describing the function of de? That is, is de in any sense a marker of direct objects? One might take a transformationalist approach and suggest that the NP V NP (NP) structure is "basic" and that the NP in post-verb position is moved to pre-verb position and marked with de. As we have seen, post-verbal NPs can number one or two (or none) and can have different semantic roles, as in the structures discussed above:

Agent V Recipient Patient, as in (157)-(166)
Agent V Patient Factitive, as in (167)-(170)
*Agent V Locative Patient

The NP in first position after the main verb, which we may choose to define as "direct object position" according to the pattern established for other SVO languages, varies depending on what case roles are present; of those NPs following the verb, it often turns out
to be the NP highest in the feature human/animacy, often the Dative. The traditional identification of "direct object" with Patient is still valid for Twi, because in monotransitive clauses with action verbs the frequent pattern comprises Agent subjects and Patient direct objects (that is, Agent Verb Patient). Of all the case roles, Patient is most closely tied to the meaning of its verb; as Fillmore [1968] puts it, the Patient role "is identified by the semantic interpretation of the verb itself." We are accustomed to hearing Patient NPs in direct object position in monotransitive clauses, so we tend to regard Patients as typical direct objects (see Givon 1984:172). But this pattern is disrupted in bitransitive clauses and de constructions.

When de is not marking an oblique NP, (i.e., instrument, means, material, manner, or accompaniment, as in (144c-g)), what de marks is the semantic Patient, as in

Agent de Patient V Recipient (157)-(166)
Agent de Patient V Factive (167)-(170)
Agent de Patient V Locative (173)-(177).

The NPs introduced by de are largely obliques and Patients. However, in the NP V NP NP sentence pattern, the NP in immediate post-verb position ("direct object position") is most frequently a Recipient. In terms of semantic role, then, the NPs marked by de do not correspond to NPs in immediate post-verb position. Based on the phenomena we have examined, it appears that post-verb word order depends on inherent semantic features, case roles, and considerations of information flow within the sentence such as discourse topic and
focus of new information, and that a more abstract grammatical
relation like "direct object" or "indirect object" is not required to
account for post-verb word order or for de constructions. (See,
however, footnote 5 in connection with section 3.5.1.11 below.)
Confirmation of this would require a close look at these structures in
discourse context. Since humans tend to talk about other humans as
individuated discourse topics, a careful analysis would probably
demonstrate the interrelationship of inherent semantic features such
as animacy with pragmatic factors such as topic-worthiness and
discourse salience.

For Christaller, an NP in the position following the verb is a
"direct object", and an NP following the "direct object" is called an
"indirect object." Stewart calls de a carrier of a direct object, but
he does not define the term "direct object". Faltz [1978] argues
strongly against a universal grammatical relation "indirect object."
He points out that in some languages so-called indirect objects can
occupy the direct object slot and displace the direct object,
according to Faltz, "...this primacy is surely due to the greater
cognitive salience of the typically animate IO argument over the
typically inanimate DO argument, a semantic criterion." He lists Akan
as one of several languages which code some or all of their IOs as
DOs; with the verb 'give', he regards the Patient marked by de as an
oblique construction. He notes the similarity of Hausa, a SVO
language with no case-marking on NPs, in which direct objects
immediately follow the verb, but the recipient occurs in direct object
position after ditransitive verbs like 'give' (as in Akan).
Linguistic investigations of the notion of discourse topic (see endnote 10) make it relevant to ask whether it is necessary or helpful to describe Twi sentence structure in terms of grammatical relations such as direct object and indirect object, or whether semantic role concepts such as Patient, Recipient, Benefactive, and Factive are sufficient.

Schachter [1976] points out that the "grammatical subject" in many languages is a result of the conflation of agent (semantic role) properties with topic (pragmatic reference) properties (see also Keenan 1976, Chafe 1976, Li and Thompson 1976 and Comrie 1981). According to Givon [1979, 1984], the subject is the "main clausal topic", and the direct object involves relative topicality relations between various objective cases; semantic Accusatives (Patients) are heard as objects most frequently, so they are most likely to become the cardinal prototype of an object. In Sherpa, for example, only Accusatives can be direct objects. In some languages which mark case morphemically, such as Ute, Bantu, English, and KinyaRwanda, some nouns (other than semantic Accusatives) can be promoted to DO by losing their original case marking. Givón calls this grammaticalization of the DO category. In the case of Twi, subject and object pronouns are distinguished from each other morphologically, but there is no morphological distinction that might be viewed as distinguishing direct object pronouns from indirect object pronouns. Twi has a subject agreement marker (first person singular prefix on verbs in a series), but no agreement markers for objects (any vestigial morphological correspondences with plural objects are no
longer systematic). In the absence of morphological markers, any coding of a direct object would have to be in terms of word order. As Givón points out, in Hebrew the word order can be Dative Accusative or Accusative Dative, depending on discourse factors: the discourse topic precedes the focus of new information. But in Hebrew the Accusative retains its morphological marking, regardless of position with respect to the Dative, so there is no category DO distinct from semantic Accusatives [Givón 1979]. The Twi case is different, because in the V NP NP construction there is no morphological distinction between Dative (Recipient) and Patient, and because there is a strong preferential word order: the Dative (Recipient) precedes the Patient. In this situation, it may be that semantic/pragmatic factors determine word order, and that notions of the grammatical relations direct object and indirect object are not relevant. Another way to describe this situation would be to define "direct object" positionally as the NP immediately following the verb, and to specify that the argument occupying the direct object position is determined by semantics and discourse topicality principles stateable in terms of a hierarchy.

This is an area which deserves further investigation within a discourse context. Studies of topicality suggest explanations for the Twi patterns. According to Givón's [1976] formulation (here paraphrased and summarized), four binary hierarchic relations are relevant to the concept of topicality of arguments in discourse:

(a) Humans tend to speak more about humans than about non-humans.

(b) Old information is the topic, and new information is the assertion, so definite NPs take precedence over indefinite NPs.

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(c) The degree of topicality of an NP correlates with the degree to which the participant named by the NP is involved in the action.

(3) Discourse is ego-centric, with the speaker as the universal point of reference and the most highly presupposed argument; the ranking is first person > second person > third person.

These four hierarchies exhibit a number of inter-dependencies. Taken together, they can be re-stated as a topicality hierarchy in terms of semantic case roles: Agent > Dative > Accusative (or, in the terms used here, Agent > Recipient > Patient). This sort of hierarchy turns out to be helpful in explaining a range of linguistic phenomena, such as the likelihood of an argument occupying primary topic (subject) position; Givón [1976] correlates degree of topicality with the likelihood of verb agreement marking for an argument.

3.5.1.9 Patient defined in terms of de.

The fact that it is semantic Patients that get marked by de, and the fact that de formerly meant 'take, hold, get, have', are not just coincidental; neither does the explanation require some highly abstract formal principle. In fact, in a sense the prototype of the category "Patient" is identified, exemplified, determined by the verb 'take', and consists of the set of elements that are take-able by semantic Agents ("typically animate perceived instigators", per Fillmore 1968:24).

This view is supported when we consider bitransitive verbs that do not have de paraphrases (these are listed as a group in the lexicon by Boadi 1966:28, 37). For example, the verb kyergw 'write' occurs
with two objects, as in

(185) w-a-kyeraw   me nhoma
    he-PERF-write me letter

'He has written me a letter.'

but it does not have a de paraphrase with de marking 'letter'. This follows from the 'take' meaning of de, because a letter must be written before it can be taken; the sequence 'He took a letter (and) wrote (it) to me' is pragmatically anomalous; it does not fit our experience of how the world operates. Accordingly, 'letter' in (42) does not qualify as a Patient; we can set it aside and call it "Factive."^11

Another bitransitive verb with no de paraphrase is gye 'get'; the de paraphrase is disallowed on pragmatic grounds because the sequence de NP gye 'take NP get (it)' doesn't make any sense. And, in terms of case roles, the subject of 'get, receive', is not an Agent.

Boadi's list includes bisa 'ask' as a bitransitive verb with no de version, but Christaller cites bisa in both versions, as in (162) above in section 3.5.1.5. However, the resulting sentence with de, literally, 'I took the matter and asked him', is a bit odd pragmatically, predictably a borderline case, given pragmatic criteria rather than airtight categories for making decisions about acceptability.

The exceptions to de marking for objects of verbs like bisa 'ask' and kyeraw 'write' in (185) show that speakers are most comfortable
with de marking unambiguous Patients; the effects of the verb's meaning, 'take', are evident. Since de marks the Agent-Patient transaction, it is interpreted as a marker of causality. This direction of development for a verb meaning 'take' is paralleled in languages such as Ga, Dagbani, Idoma, and Mandarin Chinese, among others (see below); in some cases it is eventually generalized as a marker of syntactic direct objects where no semantic Agency is involved. The course of historical development is paralleled by the progression of successive historical generalizations about object marking made by children learning to speak.

3.5.1.10 Parallel with course of development of object marking in children's speech.

Slobin (1982) suggests that "direct object manipulation", in which a causal agent brings about a change of state or location by means of direct body contact, is a "prototypical event" with significance in the development of language from sensorimotor cognitions in early child language development. According to Slobin, prototypical events, rather than categories, seem to provide the initial conceptual framework for grammatical coding. The importance of this prototypical event can be seen in the child's early under-generalizations. For example, Slobin cites Gvozdev's 1949 diary study of a child learning Russian: in adult Russian speech, all direct objects carry an Accusative suffix, but at first (age 23 months) this child used the suffix only on objects of verbs involving direct physical action—i.e., on 'pick up', 'tear', 'throw away', but not on 'see', 'read'. Slobin
also cites Braine's (1976) report of similar undergeneralization in children acquiring Swedish, English, Finnish, and Samoan, in which regularities in word order are present for events involving the moving or holding of objects, but these regularities are not immediately generalized to all events involving action on objects.

The child language data suggest that a grammatical marking initially used for the prototypical event of direct object manipulation becomes generalized later to indicate the action of a verb on an object. The language-internal and comparative evidence from languages with serial verb constructions shows a corresponding historical progression: the actual verb used for physical object manipulation, i.e., 'taking', comes to function as a more general semantic Patient marker and indicator of causality, and eventually in some cases a grammatical object marker. For these languages, diachronic development parallels ontogenetic development in that the causative-marking function is first found in constructions with motion verbs and involves moving an object by means of direct physical manipulation.

Just as the verb 'take' in the languages discussed here serves to define the class of semantic Patients historically, the child's act of grasping and moving a physical object defines the child's earliest coded Patient category. These languages may later grammaticize the 'take' morpheme for use outside of strictly Agent-Patient situations, just as the developing child later broadens the scope of his/her early coding to mark other semantic roles, eventually including all syntactic objects according to the adult model he/she hears. Developmentally as well as historically, the emergence of the category is firmly

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grounded in the context of speakers interacting with their environment.

Recent studies of language universals and Patient prototypes tend to reinforce this perspective. According to Hopper and Thompson (1980), a high degree of transitivity is associated with an Agent acting volitionally upon a definite or referential object. The verb 'take' is accordingly a good candidate for involvement in high transitivity, as it typically selects objects that are concrete and movable, and 'takers' are typically animate instigators. If transitivity is defined as "the effective carrying over of an activity from an A to a patient" (Hopper and Thompson 1980:279), then the meaning of 'take' qualifies admirably. The verb 'take' and its two noun phrase arguments, Agent and Patient, define a prototypical transitive act, and it is a descendant of this verb that can be found marking transitive/causative constructions and can eventually be generalized to mark syntactic direct objects. The findings of Hopper and Thompson are consistent with the views of Lyons and Lakoff. Lyons (1977) sees paradigm instances of agentive situations as those in which the action results in a change in the physical condition or location of the Patient. Lakoff (1977:244) proposes fourteen properties for prototypical Agent-Patient sentences; among them: an Agent volitionally directs his energies and attention toward a single, definite Patient, using his hands, body, or some instrument to effect a perceptible change, with spatio-temporal overlap between the Agent's action and the Patient's change.
3.5.1.11 Path of development of serial verb constructions with causative interpretation.

Verbs of motion are rendered transitive/causative by the Twi de construction. And, as Boadi [1966:48] has noted, only sequences of an activity verb followed by a motion verb have "causative" (as opposed to "same-subject") readings. Why should this be the case?

Serial constructions involving other VP combinations are ordinarily interpreted with a same-subject reading, as in (186) and (187), where both verbs have the same logical subject. In (186) both verbs are motion verbs; in (187) a motion verb is followed by an activity verb.

(186) Kofi kɔpe baas

Kofi went came

'Kofi went and came back.'

(187) Kwasi dui sesaa nneegma no

Kwasi arrived collected things the

'Kwasi arrived and collected the things.'

In (186) the only NP is the subject Kofi, which is interpreted as the subject for both verbs. In (187) the NP Kwasi is interpreted as the subject of both verbs; it is the only NP preceding the second verb.

For (188), with a verb of activity followed by a verb of motion in a serial construction, there are two possible readings:

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(188) י twee me baae

he dragged me came

(a) 'He dragged me and he came.'
(b) 'He dragged me and I came.'

The second verb baae 'came' has its choice of either of the two preceding NPs (both of which meet semantic/syntactic requirements for possible subjects of baae), even though one is the subject and the other is the object of the preceding verb. (A pronoun object of the first verb occurs in object form, even when interpreted as subject of the second verb.)

For a de construction like (189), reading de as the verb 'take', we have a \[ \text{NP} \quad V \quad \text{NP} \quad V \quad \text{Agent} \quad \text{Activity} \quad \text{Patient} \quad \text{Motion} \] sequence like that in (188).

(189) Kofi de Amma kọọ

Kofi (take) Amma went

'Kofi took Amma away.'

The two readings for (189) paralleling those for (188) are:

(a) 'Kofi took Amma and (Kofi) went.'
(b) 'Kofi took Amma and Amma went.'

When a sentence like (188) or (189) is used in communication, however, the pragmatic assumption is usually that both of them moved—'he' and 'I' in (188), and Kofi and Amma in (189). That is, if he dragged me and came, as in (188a), given the integral relationship of the

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predicates in a serial verb construction, the most likely pragmatic inference is that I came too. It would be difficult, or at least unexpected, for him to drag me and not come himself, and equally difficult or unexpected for him to drag me and come without me. Similarly in (189), if Kofi took Amma and went, the hearer is likely to infer that Amma went too.

Given this situation, a plausible pragmatic inference is that he is causing the motion: (188) could well be interpreted as 'He dragged me and caused me to come', and (189) could be interpreted as 'Kofi took Amma and caused her to go' (cf. the discussion in section 3.5.1.8 above). The scene is of an Agent physically manipulating a Patient and moving with it, causing it to move. This scene parallels Slobin's picture of the individual's first grasp of the concept of causality, which comes when the infant physically manipulates an object and moves with it in his hand, causing it to move. The parallel suggests the possibility that historically in Twi the first causative use of motion verbs like 'come' and 'go' may have been in contexts like (188) and (189) with preceding verbs signifying immediate and direct action by an Agent on a Patient.

Other verbs signifying direct object manipulation participate as the first verb in sentences like (188) and (189) with similar interpretations, e.g., pia 'push', prep 'prod', sum 'hurl'; they provide causative interpretations for following motion verbs like kër 'go', ba 'come', dwayne 'escape', and fi 'go out'.

Verbs signifying less immediate and direct action on a Patient, such as frr 'call' and daadaa 'trick, persuade, deceive', occur in
similar serial configurations, as in

(190) Kofi daadaa Amma ko\text{e} \quad \text{[Boadi 1968:85]}

Kofi tricked Amma went

(a) 'Kofi tricked Amma and went away.'
(b) 'Kofi tricked Amma into going away.'

However, notice that, although in an actual situation the hearer recognizes the possibility that both Kofi and Amma went away, nevertheless due to the less direct manipulation signified by verbs like 'trick', a possible pragmatic inference is that only one of them went, i.e., either Kofi or Amma. This assumption results in two distinct readings for (190): same-subject as in (a), and causative as in (b). For (190) the separation between the two readings is more distinct than for (188), where the outcomes for both readings are pragmatically equivalent due to the likelihood that both came because of the meaning of 'drag'. It is conceivable that the "together" inference for direct manipulation verbs like 'drag' and 'take' helped establish the possibility of a causative reading for serial constructions in Twi, and the dichotomy between the two readings was more clearly defined pragmatically in constructions with verbs of less direct manipulation like 'call' and 'trick'.

Mere occurrence in the string prior to the second verb is not sufficient to qualify an NP as a possible subject for it, as (191) and (192) illustrate, where (191) has two readings but (192) has only one [from Boadi 1966:47].
(191) Ꙟbaa no ḟrg Ꙟne nua Ꙟkƙ Ꙟfie
woman the called her brother went home
(a) 'The woman called her brother and went home.'
(b) 'The woman called her brother home.'

(192) Ꙟbaa no huu Ꙟne nua Ꙟkƙ Ꙟfie
woman the saw her brother went home
(a) 'The woman saw her brother and went home.'
(b) *'The woman saw her brother and her brother went home.'

In both (191) and (192) the object of the first verb, Ꙟne nua 'her brother', meets the selectional restrictions for subjects of the second verb Ꙟkƙ 'go'. The only element in (192) that is different from (191) is the first verb: ḟrg 'call' in (191) and hu 'see' in (192). The verb ḟrg 'call' is an "activity" verb in Boadi's lexical classification; the verb hu 'see' is not. (Boadi does not spell out explicit criteria for inclusion in this class; the members cited all appear to involve direct or indirect manipulation of an object by a subject.) In terms of semantic role, the subject of hu 'see' is an Experiencer rather than an Agent. The verb hu 'see' does not occur with an Agent and a Patient, in contrast to the verbs in (188)-(190), and it appears that an Agent V Patient sequence is necessary for there to be a causative reading in a serial construction.12

To summarize: in this section we have observed that a sequence of a physical manipulation verb followed by a motion verb in a serial
verb construction, as in (188) and (189), sets up a scene in which one pragmatically plausible reading attributes a causal Agent to the motion but, given the usual inference from the serial verb construction as a whole, the distinction between a causative vs. a non-causative reading for the motion verb is largely inconsequential in actual use. The consequences of the construction's pragmatic ambiguity begin to be significant to the human users, however, when an activity verb other than one specifying direct physical manipulation is used as the first verb. It is plausible that a causative reading for motion verbs in serial verb constructions may have originated historically as a pragmatic inference with verbs of direct physical manipulation as in (188) and (189), and became distinct from a same-subject reading when verbs of less direct (i.e., verbal rather than physical) manipulation were used, as in (190) and (191). If, as Slobin suggests, the child's earliest prototype for causality is physical manipulation of an object to move it, the ontogenesis of causative motion verbs in children may parallel the course of their historical development in the context of serial verb constructions.

Our view of the actual course of historical evolution of causative interpretations of Twi serial verb constructions is murky, given the lack of historical records, but the considerations sketched here of pragmatic inferences, as well as the developmental growth of the concept of causality from the act of direct object manipulation, suggest a possible path of historical development.
3.5.1.12 Coordinate structures as historical source of serial verb constructions and de construction.

In sections 3.5.1.4 to 3.5.1.8 above, we looked at how de shifted from a verb to a particle with a wide range of functions; we observed how the present functions of de follow from its original meaning and the pragmatic implications of its use in constructions implying an action-result or consequential relationship between two predicates. What evidence is there for the historical antecedent of that two-predicate structure?

In section 3.5.1.3 we considered the form of earlier two-predicate constructions with de. We noted that, because de no longer occurs as an independent verb, it does not occur in conjoined sentence constructions (S CONJ S) like (154), but does occur in serial verb constructions (NP VP VP) like (153) (repeated here). [Boadi 1968:88]

(153) \( \rightarrow \) de sika ba-a\(e \)

\[ \text{he de money come-PAST} \]

'He came with money.'

(154) \( \ast \rightarrow \) de sika na ?-ba-a\(e \)

\[ \text{he de money CONJ he-come-PAST} \]

'He de money and he came.'

Although S CONJ S conjoined sentence constructions with de like (154) are no longer grammatical, it appears that this sequence was grammatical for speakers in Christaller's day, since he cites

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sentences of this form such as (149) and (155) (repeated here).

(149) ɔ-n-de apɛmpensì nà è-pè n'-àde [Christaller 1881:68]  
he-NEG-use extortion CONJ he-seek his-thing  
'It is not his manner or way to enrich himself by extortion.'

(155) anoma de ako-ne-aba na e-nwene berebuw  
bird de going-and-coming CONJ it-weave nest  
'By going and coming a bird weaves its nest.'  
[Christaller 1875:139]

Sentences (149) and (155) have the conjunction na. This conjunction, like and in English, is used to conjoin parallel clauses, as in (193) [Riis 1854:102]. (A different morpheme, ne, as in (155), is used to conjoin NPs.)

(193) ḍẹsikre ŋẹ fremfrem, adru ye ǹwụnne, na ǹka ye nyàni  
sugar is sweet medicine is bitter CONJ lime is sour  
'Sugar is sweet, medicine is bitter, and a lime is sour.'

But unlike (193), in (149) and (155) the clauses are not parallel in terms of pragmatic function; there are means-ends or action-result relationships between the two clauses. Sentences like (149) and (155) bring to mind the observation, made by Givón [1975:106], that a structure may be syntactically coordinate but the semantic relationship between the clauses may be subordinate, i.e., structured
or hierarchized, to begin with.

In (149) and (155) the first clause expresses the instrument or means to the accomplishment of the second clause; the two clauses are not equivalent in terms of pragmatic function. It is possible that the pragmatic subordination of the de clause contributed to the eventual loss of its capacity to occur in such conjoined-sentence structures, and to the loss of independent verb status for de.

The form of de constructions differs in certain respects from other serial verb constructions, however, and citations from the 19th century suggest that the actual path of development, though parallel, was not identical. Let us consider first the development of serial verb constructions in general, and then the development of de constructions in particular.

That conjoined structures are the historical source of serial verb constructions in general has been proposed or assumed for Kwa languages by some scholars (e.g., Hyman 1974, 1975, Schachter 1974, Givon 1975). Let us examine this proposal with respect to Twi. Present-day Twi, as well as the 19th century citations of Riis and Christaller, contains conjoined-sentence structures of the form \[ S \text{ CONJ } S \], with the conjunction na. In some instances, when the relationship of the two clauses is obvious from the context, the na conjunction is superfluous and can be left out (the two structures are similar to English \[ S \text{ and } S \] constructions and \[ S \text{ and } S \] constructions written with a semicolon between the clauses). As Riis [1854:103] described it, "Two sentences are frequently connected by way of coordination,
without the connexion being indicated by a conjunction; the conjunctive relation being left unexpressed. This appears to be the case, when the particular relation, existing between the sentences, is by itself manifest from the ideas expressed in them." With the \textit{SS} parataxis construction in Twi, when the subject of the second clause is a pronoun and both clauses have the same tense/aspect, mood, and polarity, the subject pronoun can be omitted (with the exception of the first person singular), resulting in the \textit{NP VP VP} serial verb construction. The three sentence types can be represented as in (194)

(194) (a) \textit{NP VP CONJ NP VP}

(b) \textit{NP VP \& NP VP}

(c) \textit{NP VP \& \& VP}

where (a), the conjoined sentence structure, can be viewed as earliest historically; (b), the \textit{SS} structure, is intermediate historically; and (c) is the familiar serial verb structure. The representation in (51) suggests that first the conjunction was dropped, and then the second clause's subject pronoun. This order, with the conjunction dropping first, is consistent with the fact that the sequence \textit{NP VP na VP}, with no subject pronoun on the second VP, is ungrammatical today and unattested in the grammars of Riis and Christaller. (This ungrammatical sequence would have been produced at some point if the subject pronoun had dropped first.) As motivations for such a historical change, we can suggest the semantic superfluity of the conjunction and the redundancy of the second clause's subject

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pronoun as preconditions for "phonological erosion".

The progression sketched in (194) does not explain why serial verbs occurring after an initial verb in the future, progressive, or perfect take a "sequential" a- prefix (Christaller's "consecutive"), however. A possible explanation is that the redundancy in the repetition of the three tense/aspect prefixes permitted them to "fall together" on post-initial verbs; since the tense/aspect was already stated earlier in the sentence, the use of a single prefix for all three forms was more economical. The perfect tense prefix is also a-, but there is no obvious formal or semantic reason for the perfect having prevailed over the progressive and future. Phonologically, the perfect a- prefix is simpler than the progressive re- and the future be-, but even with erosion and simplification it is not obvious why re- and be- would have become a-. Additionally, the tones of the perfect and sequential constructions are different (e.g., for the verb fa 'take', the third person singular perfect is w-á-fá and the sequential is w-à-fá).

The "sequential" a-prefix on verbs often occurs in clauses with irrealis or subjunctive meaning; this fact suggests a possible historical function as a prefix carrying subjunctive meaning. Riis cites the a- prefix in both conjoined and paratactic structures, for example, in S na S constructions like (195), as well as S S constructions like (196) (from Riis 1854:104). (Note that the clauses in (195a) have different subjects; it is clearly not a serial construction.)
(195)(a) me-ce no na v-a-ba
I-compel him CONJ he-SEQ-come
'I will compel him to come.'

(b) fyę iye na w-a-m-mo ahinna no
look well CONJ you-SEQ-NEG-break pot the
'Take care that you do not break the pot.'

(196)(a) mi-ko m-a-ba
I-go I-SEQ-come
'I go (with the intention) to return again immediately.'

(b) mi-huam tā m-a-te sę e-ye ana
I-smell tobacco I-SEQ-perceive that it-good Ø
'I small the tobacco, to perceive whether it is good.'

In (105) and (196), with or without the na conjunction, the second
clause has an a- prefix marking an unrealized event. (Riis unfortu-
nately sometimes confuses this a- prefix with the perfect tense
a- prefix, glossing (196a) as literally 'I go I have come', along with
the more accurate gloss given above.)

Christaller calls the a- prefix the "consecutive" and cites it in
various contexts; e.g., it is used for "an action which is consecutive
to another action, as the expected or intended result from it, or as
merely following after it" [Christaller 1875:59]; "after a negative
verb and a nominative implying a comparison" (with a hypothetical
situation) [1875:160]; and in adverbial clauses of purpose representing "an expectation or natural consequence" [1875:173], as in (197) [Christaller 1875:173].

(197) m-aŋkasa me-a-ye, nà mo-a-şusuw so a-ye bi
    I-myself I-PUT-do CONJ you-SEQ-think on SEQ-do one
    'I myself shall do it, that you may imitate it (lit., think on it and do likewise).'

In all these uses, including (195)-(197), the a- prefix clauses have irrealis/subjunctive/consequence meaning. (In Ga, a related language geographically contiguous to Twi, a similar subjunctive construction is marked by an a- prefix.)

In (195) and (197) the two clauses have either different subjects or different moods, and the conjunction na occurs; in (196) the subjects, moods, and polarities are the same in both clauses, and no conjunction occurs. It appears likely that it is the a- prefix on verbs in clauses with subjunctive interpretation, as in (195) and (197), that also occurs in conjunctionless sentences like (196); this prefix has come to be recognized as marking the second verb phrase—the result or consequence or intention—in a serial construction, and has been referred to as the "consecutive" or "sequential" prefix.

Serial verb constructions in general, then, may be historically related to conjoined clauses with purpose or subjunctive readings, and

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their historical development could plausibly have resulted from the loss of conjunctions and pronouns from such conjoined structures. Riis suggests (section 3.5.1.2 above) that sentences with overt conjunctions were forerunners of the NP VP VP serial constructions with de. However, de constructions do not have the sequential a-prefix marking the verb following the de phrase. Looking at de constructions in particular, we have noted Christaller's citations of de in conjoined-sentence structures like (149) and (155); Riis cites similar examples like (198) (from Riis 1854:98):

(198) abantofo de abo ni dote na vo-de to adan masons de stones and mud CONJ they-de build house 'The masons build a house of stones and mud.'

Clause parataxis structures, of the form S S, without the conjunction na, also occur with de as the first verb, as in (199) (from Riis 1854:98).

(199)(a) o-de n'ensa bëŋkum o-didi he-de his-hand left he-eat 'He eats with his left hand.'

(b) o-de adarre o-tya duabasa he-de hook he-cut branch 'He cut off a branch with a hook.'
(c) vo-de ensennia vo-kari sika
    they-de scales they-weigh gold
    'In scales they weigh gold.'

The S na S structure in (198) corresponds to the first structure
in the possible historical progression for serial constructions,
namely, (194b), NP VP CONJ NP VP; the S S structure in (199)
corresponds to the intermediate structure, (194b), NP VP Ø NP VP.
Corresponding to (194c), NP VP Ø Ø VP, are serial verb constructions
with de, in which the pronoun subject of the second verb does not
occur, such as (200), in which the second verb kye 'give' does not
have the pronominal prefix o- 'he' [Riis 1854:168].

(200) o-de entama kye n-abofra
    he-de garment give his-servant
    'He presented a garment to his servant.'

Other examples of de constructions of the form NP VP VP include
(144a,b,c,g) in section 3.5.1.1. above. Riis cites de sentences like
these, without the subject concord prefix on the verb, as well as de
sentences with the subject concord prefix, as in (199); this
variability suggests to us that the loss of the prefix was happening
in the mid-nineteenth century.

Constructions with de have special features, however. First, the
verb following the de phrase does not carry the a- sequential prefix,
as shown in (201). In (201a) the verb ye 'do' follows de and has the
future prefix be, not the sequential a-. So does the verb ba 'come' in (201b).

(201)(a) ade no wo-de be-ye dpñ

thing DEF you-de FUT-do what

'What will you do with that thing?'

(b) ne-a o-yê bonne o-de amanne be-ba no so

he-REL he-do' evil he-de misery FUT-come him on

'He who does evil, will bring misery upon himself.'

[Riis 1854:168]

[In (201a) the object of de is ade 'thing'; it has been fronted.] In (201) the second verb ('do' in (a), 'come' in (b)) carries the subjunctive/irrealis/consequence meaning that was marked by a- in (195)-(197). However, the preceding verb in (201) is the former verb de 'take', now formally defective; and since de no longer can take tense/aspect affixes, they must be carried by the other verb. Additional examples are in (202), where the verb carries the perfect prefix.

(202)(a) o-de ahohyu a-yera ne neama iñiara

he-de debauchery PERF-lose his things all

'By debauchery he has lost all his property.'

[In (202) the object of de is ahohyu 'things'; it has been fronted.]
(b) o-de gwaŋ a-ba
    he-de sheep PERF-come
    'He has brought a sheep.'

A second special feature of de constructions is the use of de
with no surface object, sometimes repeated. The object of de can be
fronted for emphasis as in (201), and as in (203), where the object of
de is the preceding noun eñhuma 'leather' [Riis 1854:98].

(203) eñhuma vo-de pam kotoku
    leather they-de make bag
    'Of leather they make a bag; of leather bags are made.'

We can have a de construction in a relative clause, where the
head noun is coreferential with the object of de, as in

(204) aberriki vo mmeñ-a o-de gye nehu
    goat has horns-REL she-de have herself
    'The goat has horns with which she defends herself.'

where the relative clause is 'She takes (horns) defends herself.'

Here de has no surface object and is followed by the verb.

In (201a), (203) and (204) the object of de is fronted, leaving a
surface sequence
\[
\text{NP NP -de VP.} \quad \begin{cases} \text{Obj} \newline \text{Subj} \end{cases}
\]

We find the same sequence in sentences like (205), in which there are
two de's.

(205) o-de abonua o-de tya dua
    he-de axe he-de chop tree
  'He felled a tree with an axe.'

The first de is followed by its object noun, abonua 'ax'. The second
de can be viewed as having as its understood object the same noun,
abonua, which precedes it—much like (203), where enuma 'leather'
precedes de. The second de serves to make explicit that the tree-
chopping was done with that axe; i.e., 'He took an axe and felled a
tree with it', or 'He took an axe and used it to fell a tree.' When
de occurs objectless, its understood object is something earlier in
the sentence or discourse, and a reasonable translation is 'thereby'.

In this development de seems to be following a path of change—from
'take' to 'with' to 'thereby'—like that of the de-verbal prepositions
ke 'with' in Ga (described in Lord 1973) and lah 'with' in Fe'fe'
(described in Hyman 1971).

A similar repetition of de occurs in (198) above, which differs
from (205) in that there appear to be two clauses conjoined by na,
with a de in each clause. It might be suggested that the object of de
in these structures is actually the third person singular inanimate
pronoun, which is realized as zero. However, it appears that this is
not the case, since the understood object of de is not singular in all
instances: in (204) it is plural, and in (198) it is a conjoined NP
structure. Accordingly, if we seek a precise syntactic account of a
sentence like (203), we would probably want to say that the object of de has been moved to the front of the clause, and that other instances of "objectless" de follow the same pattern. However, in the second clause of (198) it does not appear that the object of de has been moved to the front of its clause. In (198) the object of the second de is understood to be 'stones and mud', but this NP appears only in the first clause, as the object of the first de, and is separated from the second clause by the clause conjoiner na. Inconsistencies such as these are indicators of a grammatical system in flux. They are consistent with a view of de losing verb status and surviving as a de-verbal preposition, which in its objectless condition as in (198) functions as an adverb meaning 'thereby'.

There is a third respect in which de constructions differ from other serial verb constructions. As noted earlier in this section, conjoined verb phrases, with the sequence NP VP na VP, are ungrammatical today and unattested in the 19th century grammars of Riis and Christaller. However, this configuration is cited by Riis with de in the first verb position, as in (206), (from Riis 1854:98), as well as in (144e) and (144f) above.

(206)(a) vo-de abrobua na nom ta
   they-de pipe CONJ smoke tobacco
   'In a pipe they smoke tobacco.'
(b) vo-de entrama na to dokonno
they-de cowries CONJ buy bread
'For cowries they buy bread.'

(c) vo-de dua na pam adaka
they-de wood CONJ make box
'Of wood they make a box.'

It thus appears that speakers allowed the conjoined VP configuration
NP VP na VP for the defective verb de but not for verbs in general.
This appears to be one more respect in which de is unusual.

Other interpretations of the na data are possible. One
possibility is that Riis was simply careless about recording
conjunctions and prefixes. However, given his general high level of
scholarship and the difficulty of verification of carelessness on his
part, such an interpretation is not very helpful. Another possibility
is that the historical development of na is considerably richer than
explored here, and that there was overlap between its various
functions as clause coordinator, clause subordinator, complementizer,
and marker of fronted sentence elements. This area deserves further
historical and comparative study.13

As noted above, the only surviving subject agreement prefix on
verbs in a series is the first person singular mi-/me- as in (207)
[Riis 1854:98].

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(207) mi-de ne din mi-fre no
    I-de his name I-call him
    'I called him by his name.'

But in addition to (207), Riis cites de constructions which again show de to be at variance with the usual serial verb pattern: in (208), and also (145) above, the verb following de does not take the agreement prefix [Riis 1854:168].

(208)(a) mi-de ensu a-gu ahinna no-m
    I-de water PERF-fall pot the-in
    'I have poured water into the pot.'

(b) empire mi-de bo ponko
    whip I-de strike horse
    'I strike the horse with the whip.'

The lack of the subject agreement prefix in (208) represents one more way in which de constructions are unusual, and indicates that although a series of verbs required an agreement marker, speakers viewed a sequence with de differently.

To summarize this section: conjoined sentences of the form S CONJ S with the conjunction na are grammatical in Twi with ordinary verbs, as in (193), but not with de, as in (154). But citations from the mid-19th century, as in (149) and (155), show that they were
grammatical at that time. In this two-clause structure, the clause with de came first, and with the following clause had a means/end or action/result reading.

It is plausible that, as has been suggested by others, serial verb constructions evolved from coordinate sentences historically.

The three sentence types S na S, S S, and NP VP VP occur today and in 19th century writings, a situation consistent with the development of serial from coordinate constructions via the loss of the conjunction and then the loss of the coreferential pronoun subject of the second clause. For the sequential a- prefix on post-initial verbs in a serial construction, the diachronic source may have been a subjunctive a- prefix, rather than some sort of confusion or coalescing of Future, Progressive, and Perfect prefixes.

A similar general scenario seems to be possible for the evolution of de constructions, except that:

a) when de is the first verb, post-initial verbs take regular tense/aspect markings, not the sequential a- prefix;

b) de can occur with its object understood as something earlier in the sentence or discourse, meaning 'thereby';

c) de is irregular in that with de as the first verb, instances of VP coordination, i.e., NP VP na VP, were apparently grammatical in the 19th century; and

d) de constructions were irregular in the mid-19th century in not requiring first person singular subject agreement pronouns on the verb following de.

These irregularities for de constructions reflect the status of
de as a highly deviant verb, observed in the process of changing
category membership.

3.5.1.13 The de construction and the definite/indefinite object
distinction.

Sections 3.5.1.4 to 3.5.1.7 above described the historical change
of de from a verb to a preposition marking NPs in semantic case roles
such as Patient, Instrument, and Comitative. Section 3.5.1.8 noted
the development of its function as a marker of transitivity. As a
result of these developments, there are two possible sentence
positions for Patients: after the main verb, or before the main verb
in constructions with de as a Patient marker. The communicative
function served by the de construction has led to the involvement of
de in yet another grammatical function: the distinction between
definite and indefinite objects.

For bitransitive verbs like ma 'give', there are two possible
sentence configurations for indefinite Patients, as illustrated in
(160) (repeated here from section 3.5.1.5).

(160)(a) o-ma abofra no akutu
he-give child the orange
'He gives the child an orange.'

(b) o-de akutu ma abofra no
he-de orange give child the
'He gives the child an orange.'

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The indefinite Patient NP akutu 'orange' can occur after the main verb, as in (160a), or before the main verb in the de construction as in (160b).

However, when the Patient NP is definite, only the de construction is grammatical, as illustrated in (66) (from Stewart 1963:147).

(209)(a) * ḏ-maa me siká nó
     he-gave me money DEF
     'He gave me the money.'

(209)(b) ḏ-de siká nó maa me
     he-de money the gave me
     'He gave me the money.'

This generalization is true for verbs of transfer involving physical manipulation, such as ma 'give', kye 'give', brë 'bring', and mane 'send' (as pointed out by Stewart 1963). The verb fgm 'lend' is exceptional in that it allows both the (a) and (b) configurations for definite Patients. However, when the definite Patient NP is a pronoun, the de construction is the only grammatical sentence form, even for fgm 'lend', as in (210) (from Stewart 1963:145).

(210)(a) * ḏ-famm me no
     he-lent me it
     'He lent me it.'
(b) j-de no fem me
    he-de it lent me

'He lent me it.'

The related language Anyi allows indefinite Patients to occur
after a bitransitive verb like ma 'give', but definite Patients must
occur before 'give'—specifically, in a serial construction where the
definite Patient is introduced by the verb fa 'take' [Leynseele 1978].
The Anyi situation, then, closely parallels Twi. (Recall that in Twi
fa 'take' substitutes for de in the negative and imperative, as noted
in section 3.5.1.3 above.)

The semantic concept of movement by physical manipulation is
central to the grammatical concept of transitivity. As we have
observed,

a) moving by physical manipulation was the former meaning of the
   object marker de (3.5.1.3),

b) the concept of transitivity may develop from the infant's act
   of grasping and moving an object (3.5.1.10),

c) the verbs rendered transitive/causative by de are verbs of
   motion (3.5.1.11), and

d) the bitransitive verbs for which the innovative de construc-
   tion is required for definite objects are verbs implying movement of
   an object by direct physical manipulation.

The Ga language, related to Twi, has sentence structures with the
defective verb k paralleling de, and there too the pre-verb position
for definite Patients is preferred [Lord 1982]. The same sentence configuration options exist in Mandarin Chinese, with parallel historical development, and there objects in pre-verb position must be definite [Li and Thompson 1976]. The consistency of the direction of the historical developments in these languages suggests that the choice of definite objects for pre-verb position is not idiosyncratic. It stems from the former meaning of the marker as the verb 'take', and follows a strong tendency for discourse topics to be definite, to show overt marking, and to occur earlier in the utterance, as observed by Hopper and Thompson [1980]. As a result of its use in constructions introducing discourse topics early in the utterance, de has been instrumental in establishing a grammatical relationship between word order and the definite/indefinite meaning distinction in noun phrases.

3.5.1.14 Conclusions.

At the beginning of the de section, in 3.5.1.2, I quoted the observations made by Riis regarding the de morpheme. I would like to reconsider them at this point. These observations are now seen to be impressive in the degree of insight they show.

First, Riis saw, correctly, that the casemaker de was formerly a verb. He also guessed that the context in which the verb was reanalyzed was a sentence with two verb phrases, which the evidence here supports as quite likely. He noted that de does not have verb meaning synchronically, but rather it indicates the semantic relationship between a predicate and an object. He noted the defectiveness of de in terms of morphology and distribution, and he viewed the loss of

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meaning as the cause of the loss of formal characteristics. The loss of meaning in verbs in general precedes the loss of formal capacities; many of the morphemes cited here as having been reanalyzed still show vestigial verb characteristics. Reanalyzed lexical items can retain their old formal trappings long after they have ceased to be semantically relevant (noted, for example, in Givon 1975, and Lord 1973 and 1976).

Riis also suggests that the process of change was originally motivated by the lack of case inflections in the language. He considers a verb followed by several (uninflected) objects to be "a heavy and unwieldy form of expression". It is difficult to say with confidence that speakers actually do find such sentence constructions "heavy and unwieldy" and therefore take advantage of alternate formal possibilities. Some languages appear content to remain for long periods without inflections (as noted by Hyman 1975). However, the long-term development of such alternatives is conceivably a universal process in typological change (as suggested in Givon 1975). The evidence from dé illustrates the development of prepositional case markers as well as word order shifts for Instrument and Patient noun phrases, breaking up the potentially ambiguous string of NPs after the verb. It further illustrates the correlation of word order and the definite/indefinite object distinction.

3.5.2 Mandarin Chinese à 'take', object marker.

Mandarin Chinese provides an example, documented in written records, of the evolution of an object marker from the verb 'take'.
There is no evidence of historical relationship between Mandarin and the languages of West Africa. However, Mandarin is similar typologically: it tends to be isolating, with little inflectional morphology; it is a tone language, with VO word order historically, serial verb constructions, and de-verbal prepositions. This typological profile holds true for many serial verb languages; some have OV word order. I include the Mandarin example here because it provides a clear case, supported by written records, of just the sort of change I am claiming is taking place in West Africa. (For discussion, see Li and Thompson 1974a, 1974b, 1981. Examples are from Li and Thompson 1974c, 1976a, 1976b).

In classical Chinese, 基 was a verb meaning 'take hold of', as in

(211) Yu qīng 基 tiān zhí 基 rú-lìng 基 yì zhēn 基 you Miao

Yu himself take heaven POSS mandate to conquer PARTICLE Miao

'Yu himself took the mandate of heaven to conquer Miao.'

(5th c. B.C.)

The verb 基 was used in serial verb constructions, as in (212) and (213) from the Tang dynasty (7th-9th c. A.D.).

(212) Shī jù 基 wú rén shì 基 yǐn 基 bā 基 jiàn kàn 基

poem sentence no man appreciate should hold sword see

'Since no one appreciates poetry, I should take hold of the sword to contemplate it.'

(7th-9th c. A.D.)
(213) Zuì bā zhū-gēn-zǐ xǐ kàn

drunk ba dogwood careful look

(a) 'While drunk, (I) took the dogwood and carefully looked at it.' (serial verb interpretation)

(b) 'While drunk, (I) carefully looked at the dogwood.' (object-marker interpretation)  

(8th c. A.D.)

For (213), both serial verb and prepositional phrase analyses are possible, as illustrated by readings (213a) and (213b).

In modern Chinese, bā can not take an aspect marker and can not occur as the predicate of a simple sentence, as (214) illustrates. However, so-called partitive sentences like (215) suggest its earlier verb meaning.

(214) *Tā bā NP  

he

(215) Tā bā sān-gē jīăozi chī-le liăng-ge

he ba three dumplings eat-ASPECT two

'He ate two of the three dumplings.'  

(Modern Chinese)

In modern Chinese, bā functions as an objective case marker, as in (216).
(216) Zhang-sān bā Li-sī pipēng  le
                'Zhang-san criticized Li-sī.' (Modern Chinese)

As described by Li and Thompson [1976], bā has lost all of the syntac-
tic properties of a verb, and its function as an object marker in
sentences like (216) is unmistakable. The pathway for the reanalysis
was the serial verb construction, where the verb-to-preposition change
can be seen taking place in example (213) from the 8th century.

In sentences like (217), there are two word order possibilities:
verb-medial, as in (217a), and verb-final, as in (217b).

(217) (a) háizi tāng yīfu  le
        child iron clothes ASP
        'The child ironed some clothes.'

(b) háizi bā yīfu  tāng le
        child ba clothes iron ASP
        'The child ironed the clothes.'

The newer possibility, object marking with bā, requires the object to
be definite [Li and Thompson 1976b]. The association of pre-verb
position with definite objects, then, is found in Mandarin as well as
in Twi, as discussed above for objects marked by de, in section
3.5.1.13. In both cases, the phenomenon is consistent with the
tendency for discourse topics to occur early in the utterance. The

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Twi and Mandarin examples differ in that the definite-marked NP is
disallowed in post-verb position in Twi, as in (66a), while in
Mandarin the NP in post-verb position is unmarked but is necessarily
interpreted as indefinite, as in (217a).

3.5.3. Ga kè as incipient object marker.

The development of de-verbal object markers in Twi and Mandarin
is paralleled to some extent in Ga. In Ga, direct objects occur after
the verb in the SVO pattern typical of Benue-Kwa languages. However,
a pre-verb option with kè is possible with bitransitive verbs,
particularly with definite objects; kè also marks objects with motion
verbs and polysyllabic verbs arising from former verb + noun
combinations.

Kè was discussed above, in 3.4.2, as a de-verbal marker of
Instrument, Manner, and Comitative NPs, as well as subordinating
conjunction. Although Zimmermann [1858] says it was formerly a verb
meaning 'take', speakers today do not recognize it as such. The range
of its present functions is comparable to those of Twi de and Mandarin
ba, both formerly 'take', so this etymology is quite plausible. The
semantic functions of kè as preposition and conjunction, as well as
its ossified verb characteristics and "defective verb" behavior, are
discussed in 3.4.2 above.

In examples like (218), Instrument NPs can occur before the verb,
marked prepositionally with kè, as in (218a) or after the object NP,
where they are unmarked morphologically, as in (218b).

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(218) (a) e kè tso tswà gbèkè lè
    he kè stick hit child the
    'He hit the child with a stick.'

(b) è tswà gbèkè lè tso
    he hit child the stick
    'He hit the child with a stick.'

Intransitive verbs of motion do not take post-verb objects; however, a transitive reading is possible when the semantic Patient occurs in pre-verb position marked by kè, as in

(219) tètè kè wòlò lè bà (*Tètè bà wòlò lè)
    Tete k book the came
    Tete came book the
(a) 'Tete came with the book.'
(b) 'Tete brought the book.'

The verb bà 'come' is intransitive. But when a Patient NP precedes it and is marked by kè, the sentence has a reading with ba as transitive/causative 'bring'. The kè NP phrase with the (219a) Comitative reading parallels the Instrumental, Manner and Comitative phrases discussed in 3.4.2. However, with motion verbs there is the added possibility of a transitive/causative reading for the whole sentence, as in (219b). This ambiguity is due to the pragmatic contexts in which sentences like these are used. In actual human communication events, such as for example referring to someone providing someone
else with a book, it often is not necessary to distinguish between actions such as coming with the book, bringing the book, and causing the book to come, so the single utterance (219) covers all three situations. The ambiguity, and the use of the former verb 'take' as a transitive/causative marker, parallel the development of de in Twi as described in 3.5.1.8.

Ga verbs are typically CV monosyllables; in some cases a verb + locative noun has been reanalyzed as a bisyllabic verb, as in (220) where the second syllable sì is recognizable as the former noun 'ground' which in combination with verbs simply means 'down'.

(220) (a) è kè wòlo jìme-sì (* è jìme-sì wòlo)
       she kè book lay-down she lay-down book
       'She put down a book.'

The kè construction is required for these polysyllabic verbs. In (220) the motion verb jìmesì 'lay down' occurs with the Patient noun wòlo 'book'. But historically (220) contains the motion verb jìme 'lay' followed by the Locative noun sì 'ground' in object position (literally, 'lay-to-the-ground'). Since the object position is already filled by the Locative, the kè construction is used, with the Patient in preverb position, preserving the "favorite" one-object-per-verb pattern. The situation is paralleled in Akan, as in section 3.5.1.7 above, example (174). Even though the Ga verb and its locative object have been reanalyzed as a polysyllabic verb, the inherited sentence configuration remains. Similarly, in Mandarin

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Chinese many polysyllabic verbs, historically from verb + noun compounds and verb + verb compounds, prefer the ba construction.

In the established SVX sentence pattern in Ga, bitransitive verbs like ha 'give' and wò 'put' take two postverbal complement NPs, the first a Locative or Recipient, and the second a Patient, as in (221b) and (222b). The Patient can occur before the verb, marked by the preposition kò, as in (221a) and (222a).

(221) (a) è kè wòlò ha mi

she kè book gave me

'She gave me a book.'

(b) è ha mi wòlò

she gave me book

'She gave me a book.'

(222) (a) è kè nù wò tó le mì

she kè water put bottle the inside

'She put water in the bottle.'

(b) è wò tó le mì nù

she put bottle the inside water

'She put water in the bottle.'

(Here tó le mì 'bottle the inside' is a Locative NP.)

When the Instrument noun is indefinite, as in (218), it can occur
either before the verb, with \( k\ell \), or after the verb, unmarked.

However, when the Instrument noun is definite, the pre-verb position is preferred. A similar preference seems to be emerging for Patient noun objects of bitransitive verbs, as in (221) and (222). The verbs \( h\dot{\alpha} \) 'give' and \( x\ddot{\alpha} \) 'put' can be viewed as taking two objects, one a Patient and the other a Locative or Dative recipient. Individual speakers differ on grammaticality judgments, but tend to prefer the \( k\ell \) construction; one speaker prefers pre-verb position for definite Patients in (221); one speaker disallows post-verb position for indefinite as well as definite Patients in (222). This fuzzy situation reflects the change in progress. The preference for pre-verb position for definite Patients parallels the developments in Twi and Mandarin Chinese described above.

The \( k\ell \) construction requires an Agent preceding \( k\ell \) and a Patient following it, consistent with the semantic requirements of an earlier verb meaning 'take'. For example, neither an Agent-Factitive combination as in (223), nor an Experiencer-Patient combination as in (224), is possible with \( k\ell \), as illustrated by the ungrammaticality of (223a) and (224a).

(223) (a) * e \( k\ell \) \( w\ddot{\alpha} \ddot{\alpha} \) \( y\dot{\nu} \dot{\nu} \)

she \( k\ell \) egg lay

'She laid an egg.'
(b) è ŋme wàlè

she lay egg

'She laid an egg.'

(224)(a) * Tete kà Kòkò nà

Tete kë Koko saw

'Tete saw Koko.'

(b) Tete nà Kòkò

Tete saw Koko

'Tete saw Koko.'

The Ga preposition kë, then, parallels the Akan preposition de and the Mandarin preposition bā in historical development. Plausible cognates in related languages include: Yoruba ká, kò, Fon kple, Ewe ká, ké, 'pick, take, gather, collect'; and Yoruba kpá, Fon kpla, Ewe kpé, kpé, 'join, accompany'. (Morphemes for 'take' and 'accompany' are conceivably historically related; Anderson [1975] has suggested that a universal direction of semantic change is from 'take' to 'accompany').

The evidence here suggests that kë was formerly a verb in the first verb phrase of a serial verb construction; it has been reanalyzed as a case marker, first with Instrument NPs, and then, to a limited extent so far, with Patient NPs.

3.5.4 Idoma object marking.

The Nigerian language Idoma has a morpheme similar to Akan de, Ga
kè, and Mandarin bà in function and distribution, but rather than a preposition it is a prefix. The range of its functions suggest that it may also have evolved from a former verb 'take' in a serial verb construction.

For both Idoma sentences (225) and (226) the most natural English translation includes an instrumental phrase. Sentence (225) contains a serial verb construction with the verb bi 'hold', paralleling the form and meaning of Twi sentence (144c) with de, and also Ga sentence (218) with kè. The position of the 'take' verb is occupied by the prefix l- in (226), suggesting a verb source for the prefix. (All Idoma examples are from Abraham 1951.)

(225) ô bi-ëwà guwà
    he hold-knife slash-them
    'He slashed them with a knife.'

(226) n l-ëwà guwà
    I l-knife slash-them
    'I slashed them with a knife.'

Sentence (226) comprises a single proposition in which the instrumental NP is marked by the prefix l-.

This same l- prefix provides an alternative to the basic SVO sentence pattern in Idoma. The prefix marks direct objects in preverbal position, as in (227)-(229).

217
(227) (a) ó l-ùwā nū
s/he l-them drive-away
'S/he drove them away.'

(b) ó nū ùwā
s/he drive-away them
'S/he drove them away.'

(228) (a) ó l-ỳi mà
she l-child bear
'She bore a child.'

(b) ó mà ỳi
s/he bear child
'She bore a child.'

(229) (a) ó l-ɔcí mà
s/he l-tree saw
'S/he saw the tree.'

(b) ó mà ɔcí
s/he saw tree
'She saw the tree.'

The prefix l- and the Idoma verb lè 'get, possess, have', illustrated in (230) and (231), may be historically related.
The verb ICLE is semantically comparable to Mandarin bā and Akan de; the
prefix occurs where we would expect to find a verb in a serial verb
construction. Sentence (227a) has an Agent and a Patient, and if we
read it as a serial verb construction with ICLE as 'take', we get 'S/he
took them and drove them away.' Sentences (228a) and (229a) do not
provide very meaningful paraphrases--'She took a child and bore it',
and 'She took a tree and saw it'. But neither 225) nor (229) contains
both an Agent and a Patient, suggesting that, if Idoma has followed
the same general path from verb to Patient marker as the other
languages discussed here, it has gone even farther: It no longer
requires that the subject be an Agent--for example, an Experiencer is
permitted in (229)--and it has generalized its prefixal marking of
semantic Patients to include syntactic objects.

In the languages discussed earlier, the verb 'take' has become
formally defective. In Idoma, the former verb has become both
semantically and syntactically defective to the extent that formally
it no longer exists even as a preposition, but has become
morphologically attached as a prefix on the noun it marks.

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Evidence for the prefix status of \( \mathcal{I} \)- is found in the processes of elision and linkage. Verbs participate in the processes, but the prefix \( \mathcal{I} \)- does not. As illustrated in (232), in the elision process the tone of the verb appears in the contracted form, but the prefix has no tone to contribute, not even at an underlying level.

Accordingly, the nouns retain their own tones after \( \mathcal{I} \)-.

(232) Elision: \( \mathcal{I} \mathcal{a} + \mathcal{X} \mathcal{c} \mathcal{i} \rightarrow \mathcal{M} \mathcal{c} \mathcal{i} \) 'see tree'

\[ \mathcal{I} + \mathcal{X} \mathcal{c} \mathcal{i} \rightarrow \mathcal{I} \mathcal{b} \mathcal{c} \mathcal{i} \] 'OBJ tree'

\[ \mathcal{I} + \mathcal{C} \mathcal{c} \mathcal{b} \rightarrow \mathcal{I} \mathcal{b} \mathcal{c} \mathcal{b} \] 'OBJ calabash'

As illustrated in (233), the verb contributes its mora of length, as well as its tone, to the contracted form in those combinations that undergo the linkage process, but the prefix has neither length nor tone to contribute.

(233) Linkage: \( \mathcal{E} \mathcal{e} + \mathcal{E} \mathcal{E} \rightarrow \mathcal{E} \mathcal{E} \mathcal{E} \) 'take cloth'

\[ \mathcal{I} \mathcal{E} + \mathcal{E} \mathcal{C} \rightarrow \mathcal{E} \mathcal{E} \mathcal{C} \mathcal{C} \] 'get seeds'

\[ \mathcal{I} + \mathcal{E} \mathcal{E} \rightarrow \mathcal{I} \mathcal{E} \mathcal{E} \] 'OBJ cloth'

From its present form and behavior, we would be unable to reconstruct the original vowel and tone of the object marker. A possible clue is provided, however, by its performance with borrowed consonant-initial nouns, as in (234), where the low tone of the prefix syllable corresponds to that of the (presumably) related verb \( \mathcal{I} \mathcal{E} \).
(234) Borrowed noun as object: l + lámó -- l1lámó 'OBJ lamp'

In Benue-Kwa languages and elsewhere, verbs of possession, location, and identification are sometimes historically related; in Idoma the verb lè is also used for membership in a class. The prefix is also used to mark comitative nouns, and occurs in nominalizations where a possessive/locative source related to the verb lè is plausible.14 This range of historically related meanings for lè and l- is consistent with the universal semantic shifts proposed by Anderson (1975); he suggests that universal directions of semantic drift go from 'get' to 'have' to 'with', and from get' to 'become' to 'be'. Possible cognates for lè and l- in related languages include Nupe la (see section 3.5.5), Gwari la, Bamileke la, and Babanke lye, 'take, get'.

A verb-final sentence pattern, an alternative to the established SVO pattern, has been established in Idoma, as in Mandarin, Twi, and Ga, through the deflectivization of a verb in a serial construction. In Idoma the innovative verb-final sentence pattern, morphologically marked with the l- prefix and rare in the language family, does not occur in negative sentences. This fact is consistent with Givón's (1979) observation that the negative tends to be conservative syntactically, often accepting innovations more slowly than the affirmative, due to differences in pragmatic function. Hopper and Thompson (1980) have noted that the marking of objects in negative clauses often reflects their low Transitivity; the restriction of overt morphological object marking to affirmative clauses in Idoma is
consistent with their Transitivity Hypothesis. Similarly, in Twi, de occurs only in affirmative sentences; their negative counterparts use the inflecting verb fa 'take' in serial verb constructions.

In Idoma affirmatives the 1- prefix occurs in the past and future, but not in the imperfective, consistent with Hopper and Thompson's findings. According to Hopper and Thompson, objects in imperfective clauses are less likely to be totally affected by the action of the verb, and less likely to show overt marking. Imperfective clauses are rarely part of the foreground in discourse. Verb-final Idoma sentences are possible in the imperfective, but they use the verb bi 'hold', as in (225), instead of the grammaticized prefix 1-. This usage of bi 'hold' in serial verb constructions appears to echo the much earlier use of the verb ancestor of the 1- for affirmative constructions.

According to Armstrong (1963), perfective aspect is usually expressed with the 1-prefix sentence configuration for transitive verbs with the object expressed. In fact, Armstrong calls 1è the perfective particle. This suggests the possibility that the object marker may have taken on the added signification of perfective aspect marker, a process suggested by Hyman and Magaji (1970) for Gwari (see below, section 3.5.6). In what appears to be another instance of this, the Idoma verb kwu 'take, seize' has limited use, before certain verbs, to form the perfective, according to Armstrong (1963).

According to Abraham's discussion (1951:56), Idoma apparently does not show the tendency for discourse topics, definite NPs or pronouns to occur as marked objects before the verb (as discussed

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above for Twi, for example). Thus, corresponding to the NP V NP NP structure in (235a), in which the pronoun 'her' precedes the indefinite 'knife', Abraham provides (235b), in which the pronoun 'her' precedes both the verb and the indefinite and is marked by the prefix, as well as (235c), in which the indefinite 'knife' precedes both verb and pronoun and is marked by the prefix. The example in (236) is parallel.

(225)(a) o ɠmɔɔ ɛwɔ
  he kill-her knife

(b) o l-ɔ ɠmɔ ɛwɔ
  he l-her kill knife

(c) o l-ɛwɔ ɠmɔɔ
  he l-knife kill-her

(236)(a) o tum ɗi
  he shoot-me arrow

(b) o l-um tɔi
  he l-me shoot-arrow

(c) o l-ɔi tum
  he l-arrow shoot-me

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It is possible that further examination of data within a discourse context might reveal that certain orderings are more frequent than others in certain discourse contexts, according to a hierarchy of topicality of the NP.

For Idoma, then, I suggest that the meaning of the verb ła 'get, have, be' and the range of occurrences of the ła- prefix are consistent with the claim of a common historical source. The path of historical development of the object marker function of the prefix in Idoma was probably parallel to the development in Mandarin Chinese, Twi, and Ga, a gradual continuum of change from verb to preposition—and then, in the case of Idoma, from preposition to prefix.

3.5.5 Nupe 'take'.

The verb ła 'take' in Nupe shows a (now familiar) range of uses. It functions as a main verb, as in (237), as well as an introducer of instrument, manner, and comitative NPs in serial constructions. With verbs of motion and location, it introduces the Patient NP. According to George (1975:60), it signals a causative interpretation. Compare the intransitive (238) with the causative 'take' construction in (239) (from George 1975):

(237) Sàlámì là èbi
   Salami took knife
   'Salami took the knife.'
(238) èbi ta èsákó o
knife be table LOC
'The knife is on the table.'

(239) Sâlâmì là èbi ta èsákó o
Salami took knife be table LOC
'Salami put the knife on the table.'

In (239) the causal action involves direct manual manipulation (i.e., "taking"); however, la functions as a causative in abstract contexts as well, as in (240) and (241).

(240) Sâlâmì là kàrâtun yé mi (* Sâlâmì là kàrâtun)
Salami (took) lesson be-understood me
'Salami explained the lesson to me.'

(241) yígídi là màngòrò dzú (* yígídi là màngòrò)
sun (took) mango red
'The sun reddened the mango.'

Corresponding to the causative sentence (239) there exists the literal 'take' sentence (237). The meaning of the causative (94) is not wildly incompatible with a literal interpretation of la as 'take'. But for the causative sentences (240) and (241) there is no corresponding 'take' sentence, as the starred strings in parentheses in (240) and (241) illustrate. This indicates the degree to which the
function of la as a transitive/causeative element has diverged from its lexical meaning 'take'. In Nupe the path of reanalysis of the 'take' morpheme parallels that in the other languages discussed here, but la has not progressed as far as the analogous morpheme in Idoma has.

In languages such as Twi, Mandarin and Ga, we have seen a preference for definite Patients to occur earlier in the utterance, in the pre-verb position marked by 'take'. This general preference for more-topical elements (definites) to precede less-topical elements (indefinites) shows up in Nupe for Instrument NPs. Like some other languages with the 'take' construction, Nupe provides two clause configurations for expressing instrumentality—one with a post-verbal prepositional phrase, and one with the 'take' serial construction (from Madugu, discussed in Givón 1979:259).

(242) (a) kúta wá nyika bê foma nyí
Kuta caught fish with net with
'Kuta caught the fish with a net.'

(a) kúta lá foma vá nyika
Kuta took net caught fish
'Kuta used the net to catch a fish.'

With a topical Patient and less-topical Instrument, the Instrument occurs in the post-verbal prepositional phrase, as in (242a). With a topical Instrument and less-topical Patient, the Instrument occurs in pre-verbal position marked by 'take', as in
3.5.6 'take' in Dagbani and Gwari.

Like Idoma, Dagbani, a Gur language of northern Ghana described by Wilson (1970), also shows a correlation between aspect and 'take' as a marker of Instruments and Patients. The verb zang 'take' occurs independently in simplex sentences, and introduces Instrument and Patient NPs in serial structures like those discussed earlier. In perfective clauses like (243), zang 'take' occurs, but imperfective clauses use the verb mala 'have' (which also occurs independently in simplexes), as in (244) (examples from Wilson 1970).

(243) m zang m suu nmaai námdí
I took my knife cut-PERF meat
'I cut the meat with my knife' (the knife may already be in my hand).

(244) m mala m suu nmaara námdí
I have my knife cut-IMPERF meat
'I am cutting the meat with my knife.'

In (243) zang has lost its literal meaning; as the gloss indicates, 'take' is not necessarily an element of the meaning of the sentence. This suggests that in (243) the presence of zang in conjunction with the verb morphology may signal perfective aspect (or, at any rate, the language may be headed in that direction).
Although the Dagbani verb zang 'take' has lost some literal meaning, as demonstrated, its distribution in serial constructions still reflects its literal verb meaning, as (245) illustrates.

(245)(a) o peenti loori (= o zang loori peenti)
he paint lorry
'He painted the lorry.'

(245)(b) o peenti duu (* o zang duu peenti)
he paint room
'He painted the room.'

The 'take' construction is allowable with 'lorry' (245a) but not with 'room' (245b), because objects in the 'take' construction can not be immovable (non-take-able) (Wilson 1970).

The use of the verb 'take' with pre-verbal objects is also correlated with perfective aspect and affirmation in Gwari, as described by Hyman and Magaji (1970). Gwari, a language of Nigeria, uses SVO word order for perfective negative sentences and for perfective affirmatives with contrastive emphasis on the object. However, in perfective affirmatives without contrastive emphasis, the object occurs before the verb, introduced by 'take'--la with singular objects, ku with plural objects. The Gwari 'take' morphemes may be cognates with the Idoma 'take' morphemes marking perfectivity, kwú and l- or la, as described above in 3.5.4.
In some serial verb languages the process of grammaticalization of 'take' has resulted in a correlation between verb-final word order and definite objects; affirmative and negative clauses accept the new work order differentially, with grammaticalization occurring more slowly in the negative; the change develops in perfective aspect constructions before imperfectives. All three of these correlations follow from the fact that languages change as people use them for the purpose of communicating. Utterances that are central to the momentum of the discourse, that advance the story line, that constitute foreground rather than background, are more likely to be affirmative than negative, to be perfective than imperfective, to involve definite rather than indefinite objects, and to mark those objects overtly, as Hopper and Thompson have shown. Utterances that are foregrounded with respect to discourse are likely to be at the forefront in terms of innovative change.

3.5.7 Engenni 'take'.

The Engenni verb 'take' may be acquiring a discourse function in certain serial construction contexts.

The verb tpu 'take' occurs in simple clauses, as in (examples from Thomas 1978):

(246) ә tpu ɡnuma
she take money
'She takes money.'
and in series, as in:

(247) φ tou inya dire
    she take rice cook
    'She cooks rice.'

Here the object of 'take' is the understood object of the following verb.

The morpheme often occurs more than once in a string of verbs, as in the sequence take NP take V, where the second 'take' has no overt object, as in

(248) φ tou e numa tou du inumù
    he take money take buy thing
    'He took money to buy something.'

(249) oyó za tou ni udhi me tou dha dhè ni n' œzyi
    who stay take CPL wine my take drink finish CPL in bush
    'Who has been taking my wine and drinking it all in the bush?'

In (249) the object of the first 'take' is the understood object of the verb 'drink' occurring later in the sentence. Sequences like those in (247) and (249)--specifically, 'take' NP V with the NP understood as the Patient argument of the V--resemble those which have led towards a Patient-marker function for the verb 'take' in other languages, as described above.
There is no overt object for the verb 'cook' in (247), the verb 'drink' in (249), and the second occurrence of 'take' in (248) and in (249). This sort of situation has been described in terms of a rule providing for a "zero" realization for third person inanimate pronominal objects. However, this description is not consistent with the lack of an overt object of 'take' in (250), where the understood object would be 'girl', which is not inanimate; this suggests that 'take' may be exceptional in this respect.

(250) ka à tou ñuvuramu na tou du ta obi
    SEQ they take girl the take lead go (hut)

'Then the girl was taken to the "obi".'

Since the first 'take' introduces the Patient noun in (249) and (250), the second 'take' appears to be redundant, at least with respect to an argument-introducer function.

In (251) 'take' occurs only once, and, even if our grammar model assigns it a "zero" pronominal object, an NP antecedent is not apparent.

(251) bhù ta ni akie, bhù tou gbà
    you go CPL town you will-take tell

'If you go to the town, will you tell (anyone)?'

The function of objectless 'take' in structures like these is not obvious. Although more data from a discourse context would need to be
examined to determine the pattern, it appears that in a
take NP take V sequence the NP is frequently in an Instrument or
Patient relationship with the V. When the \textit{SUBJ take V} sequence
occurs, the event has a participant which was introduced earlier in
the discourse. Objectless 'take' appears to be signalling a
previously-introduced argument relevant to the following verb.

Objectless \textit{to} 'take', then, has a close relationship with the
following verb with respect to meaning and syntax, and it appears that
this close relationship has as a formal consequence the fact that the
vowel quality of \textit{to} 'take' harmonizes with that of the following
verb. Note that there is no vowel harmony when 'take' is followed by
an overt NP object: in (250) the first 'take' has a lowered tongue
root vowel (here indicated with a dot under the \textit{o}), and the second
'take' has a raised tongue root vowel (no dot) since it harmonizes
with the quality of the following verb \textit{du} (no dot). The 'take' has
taken on an argument-signalling function for the following verb and
has become formally dependent on it.

3.5.8 \textit{Awutu parallels.}

In section 3.4 above, a verb source was suggested for the \textit{Awutu}
NP conjunction \textit{ng}, because of its functional characteristics, its
resemblance to conjunctions in other languages for which there is
evidence for a verb source, and the relationship of its asymmetrical,
or Comitative, reading to homophonous de-verbal Instrument and Patient
markers. The latter are described in this section, using examples

Awutu shares many cognates with Twi. Christaller suggests that Twi de 'take' is the source of the Twi conjunction ne. The Awutu conjunction ng may have a similar verb source, as suggested by the parallels between Twi de and Awutu ng: both mark Comitative, Instrument and Patient NPs, both provide a transitive/causative reading for intransitive verbs of motion, and both provide the option of a pre-verb placement for objects which are definite or discourse topics.

The range of semantic/pragmatic territory covered by de-verbal morphemes from 'take' overlaps with functions marked by morphemes from a Comitative verb ('be with'), as outlined in section 3.4. So a Comitative verb source should probably not be ruled out. (More complicated scenarios suggest themselves, such as prepositions developing from both sources, with the surface forms eventually merging due to phonological similarity and overlapping function; bilingual speakers could have helped by extrapolating from the range of functions covered by a comparable morpheme in a related language.) Whatever the source verb meant, the form and function of present-day ng suggest that it was indeed a verb.

Frajzyngier (1974:8) reports that when an Awutu speaker is asked for a literal translation, the morpheme ng is usually rendered 'and'. Nevertheless, it functions to mark Instrument (252), mark Patient with transitive motion verbs (253), and make possible a transitive/causative reading for intransitive verbs of motion (254), (255), (256).
(252) mè ne éyibi nye mi

he NE stick hit me

'He hit me with a stick.'

(253) mè nè mfoe kə flyie sò

he NE oil add stew-DEF on

'He adds oil to the stew.'

(254) kofi nè nou laaba ndé

Kofi NE water FUT-come today

'Kofi will bring the water today.'

(255) adó nè mɔnintiri mba tɔ

monkey NE its-head came in

'Monkey put its head inside it.'

(256) o ng mè mpɔ́ o éyibi o

you NE it PERF-hang tree on

'You have hung it on a tree.'

In the Awutu examples (as in the Twi examples discussed above in 3.5.1) we can see how the semantic distance from Instrument and Comitative to causative object is bridgeable gradually in small steps in actual language use. A structure like (254) viewed as intransitive plus Comitative—'come with the water'—corresponds to a transitive/causative plus Patient—'bring the water'—in terms of

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pragmatic implications; that is, both Kofi and the water arrive.

Both (254) and (255) have the sequence NP n e NP and the verb ba 'come'. In (254), the subject ('Kofi') will come. For (255) we can push for an Instrumental reading something like 'Monkey used its head to make a coming-inside motion,' and therefore could contend that in a sense the monkey came. But in (256), the subject himself did not hang on the tree; the subject caused the object of n6 to hang on the tree. With the intransitive verb 'hang', the use of n6 NP makes possible a transitive/causative reading for the clause. A literal reading for n6 as the verb 'take' is a plausible unifying factor for the Awutu examples and suggests a historical source. Both 'take' and a Comitative verb are pragmatically compatible as readings for a verb in sequences like (254). Many speakers in this area are multilingual, and in nearby languages (Twi and Ga, for example) it is often the case that the preposition in sequences like (254) and (256) can be traced to a former verb 'take'. If the actual historical source for n6 in (254) were a Comitative verb, its use in contexts like (256) could have arisen with bilingual speakers extending the function of the preposition to make Awutu parallel neighboring languages.

As in several other languages discussed earlier in section 3.5, the 'take' morpheme provides for an optional pre-verb placement for Patient NPs. Bitransitive na 'give' occurs in Agent 'give' Dative Patient structures, and also in Agent n6 Patient 'give' Dative structures. In such contexts, according to Fraszyngier (1974:14), it seems that when the Patient is pre-verbal with n6, more emphasis is placed on it. Closer examination of discourse contexts might

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establish that this perceived emphasis arises from the NP's discourse topicality.

Like Awutu verbs, ng apparently can occur without a surface object, in which case ng, like a verb, is understood as having an unexpressed inanimate nondemonstrative pronoun object (other Kwa languages have similar rules). As a result, an objectless ng can occur in a structure like

(257) jà ákútù o nà ng o-di

peel orange POSTP before NE you-eat

'Peel the orange before you eat it.'

In such contexts ng appears to point to an argument already in the discourse context. Although the Awutu data available to me is limited, it appears to correspond to a similar pattern in other languages. Here it appears that the unexpressed pronoun object of ng has ákútù 'orange' as its antecedent; ng signals that the antecedent (in the preceding clause here) is an argument of the following verb (here, di 'eat'). In such contexts the morpheme's case marking capacity enables it to take on a discourse function signalling anaphoric reference. Other 'take' morphemes which appear capable of functioning in this way include Ga nk, Yoruba fi, and Engenni tyo.

To conclude: Awutu ng functions as a conjunction, Instrument marker, Patient marker, transitive/causative morpheme, and discourse reference marker. The morpheme's range of meaning, its behavior, and

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its parallels with de-verbal morphemes in other languages suggest that its historical source was a verb.

3.5.9 Vagala and Chickasaw 'take'.

Pike (1966) describes a similar situation in Vagala, where the verb kpa 'take' occurs in serial constructions, introducing Instrument and Patient arguments. Pike differentiates between these case-related constructions ("clause subclusters") and regular serial constructions ("clause clusters") on semantic grounds, noting that in the subclusters "the meaning of the series is not the sum of the meanings of the included clauses. Rather, the total function is something above and beyond the individual elements" (Pike 1966:13). He considers the subclusters to be new developments, and observes that, since the language is in a state of transition, "only a dynamic view of the total system can do descriptive justice to such data" (Pike 1966:45).

The native American language Chickasaw has no known historical relationship to either Niger-Congo or Chinese, yet there is evidence of parallel development in the function of the verb 'take' (Munro and Gordon 1982 and personal communication). Typologically, Chickasaw allows verbs in series and prefers a relatively low number of noun phrase arguments per verb. 'Take' can mark instruments, as in (144c) for Twi, and has the effect of making intransitive motion verbs transitive/causative, as in (144h) for Twi. These contexts are just those in which, according to the West African data, we would expect the historical process to begin.
3.5.10 Conclusions.

It seems clear that a common historical path leads from the verb 'take' in a serial construction to a prepositional or prefixal marker of Instruments and objects. Different languages reveal different sections of the path, but the overall direction and route can be pieced together. Implications of this shift can include the establishment of a pre-verb placement for discourse-topical definite noun phrases, and the possibility for transference of semantic complexity from the verb phrase syntax to the lexicon.

The verb 'take' is typically the first verb in the series for pragmatic reasons, because the Agent in an action ordinarily takes or grasps something before he does something with (or to) it. When the verb 'take' grammaticalizes, its function depends on the meaning of its object and the other verb in the serial construction. The resulting restructurings fall into three main types.

In the first type, in a Subj [take NP] VP sequence the VP can be transitive and the NP object of 'take' can have an Instrument, Manner, or Comitative role with respect to the second verb; the role correlates largely with the NP's class (e.g., Comitative animates, Instrument inanimates, Manner abstracts). To the extent that the verb 'take' grammaticalizes, the take NP phrase shifts from VP status to prepositional status, and modifies the other verb(s).

In the second type, the other verb can be a member of the class of verbs which typically has two objects in many languages, or which may have a paraphrase with two objects in some serializing language (e.g., 'give', 'show', 'appoint'). In these environments 'take'
usually introduces a semantic Patient, and the object of the other verb is often a Dative. When 'take' becomes defective, it takes on the character of a preposition introducing a Patient, and the structure can be represented as Subj PP VP. It appears that, once the sequence \[ \text{Subj} [\text{Prep NP}] \text{Verb} \text{Obj} \] has been established, some languages allow a monotransitive verb instead of a ditransitive ("ditransitive" here in terms of the English gloss or the two-object paraphrase). The semantic object of this verb occurs as the object of the 'take' preposition. This results in the sequence \[ \text{Subj} [\text{Prep Obj}] \text{Verb}. \]

In the third type of restructuring, the VP in the \[ \text{Subj} [\text{take NP}] \text{VP} \] sequence is a motion verb, with or without a place noun complement. The object of 'take' is typically an animate or a moveable object. The pragmatic implication broadens from 'Subject takes NP (and) moves' to 'Subject takes NP and moves with it,' to 'Subject causes NP to move.' The resulting sequence is representable as \[ \text{Subj Prep NP Verb} \] where the NP is the causee. Although the inference of causation can be made, whether or not structural changes can be ascribed to such an "incipient transitive" depends on the individual language.

For all three types, the shift reduces the number of verbs in the clause by one. In the third type, if a language has reanalyzed 'he take sheep come' as 'he PARTICLE sheep come,' meaning 'he caused a sheep to come,' the language has added a causative particle and/or a causative word order. To the extent that the string is interpreted as
'he brought a sheep,' a causative reading 'bring' has been added to the meaning of 'come', and the verb can have a valence of either one or two. If 'bring' becomes a possible gloss for the verb, the result is a complication of the lexicon; the new verb meaning expresses what formerly required a serial verb construction, so in a sense the syntactic complexity of the serial construction has been exchanged for lexical complexity in the internal structure of the verb. The new grammaticalized 'take' structure has in effect provided for the introduction of an Agent into an intransitive environment.
3.6 Other prepositions and particles from verbs.

As noted earlier, not all instances of reanalysis fit neatly into a specific verb class or particle type. This reflects the general nature of the reanalysis process and the wide range of possible relationships that humans encode when they communicate.

We can categorize instances of reanalysis according to the initial verb's semantic class, or by the role-marking function of the reanalyzed morpheme. However, not all instances of reanalysis fit neatly. We might try to make them fit by revising or enlarging the list of semantic roles of NPs (possibly taking into consideration the proposals that have been made to revise or add to Fillmore's initial list of semantic roles). But regardless of any list that we might come up with, it is important to recognize that verbs are reanalyzed as speakers employ them to encode the ideas they choose to communicate, and, given the richness of human culture and cognitive capabilities, it is reasonable to expect to see some prepositional uses develop outside of the recognized major semantic role areas. As Givón notes, case roles are essentially prototypes, and metaphoric extension from these prototypes is common. But furthermore, "in principle there are as many case-roles as there are verbs, so that these most common ones are merely the most likely, most general classes of case-roles" (Givón 1984:127).

The process of semantic depletion and syntactic deflection that produces adverbs is the same as that which results in prepositions (de-verbal adverbs are discussed below in section 3.8). Adverbs do not have NP objects and accordingly are not classifiable in
terms of NP case roles. For a historical view of reanalysis that includes both transitive and intransitive verbs, both prepositions and adverbs, it is reasonable to recognize prepositions with meanings that fall outside favorite case-role-marker types.

This section describes prepositional uses of verbs in serial constructions. In some instances the semantically bleached morpheme retains verb formal capabilities, and in other instances some formal capabilities have been lost. Section 3.6.1 presents some examples from Akan (Twi and Fante). Section 3.6.2 discusses instances in Ewe. Section 3.6.3 considers de-verbal postpositional markers in OV languages. Section 3.6.4 concludes.

3.6.1 Akan de-verbal prepositions marking NPs outside traditional semantic roles.

Twi gye 'take; except' and gyaw 'leave; without' are described in sections 3.6.1.1 and 3.6.1.2, respectively. Section 3.6.1.3 describes Fante kplm 'go up to; until', and 3.6.1.4 discusses Twi seq 'surpass; more than'.

3.6.1.1 Twi gye 'take', 'except'

In Twi the verb gye means 'take, receive, get', as in

(258)       gye-e  yεj  nsa
            he get-PAST us wine
            'He got wine from us.'
It can also mean 'except', as in (259), and when it does, it occurs without tense/aspect, negation, and subject agreement affixes, becoming a "mere particle", as noted by Christaller (discussed in section 2.2.2 above).

(259) obindo fie, gye me na

one NEG-be home except my mother

'Nobody is at home, except my mother.'

Since gye can also take sentential objects in its defective state, Christaller also lists it as a conjunction in his dictionary [1881:158]. As described by Christaller, gye can occur with an adverbial clause stating an exception; with se (itself a de-verbal 'that'-complementizer) it introduces the clause, as either gye se or se gye, as in

(260) wuennu, gye se wtu mmirika

you-FUT-NEG-arrive except that you-run

'You will not arrive, except (unless) you run.'

[Christaller 1875:172]

English has verb and preposition cognates with a similar meaning relationship: save is a verb meaning 'rescue, reclaim, reserve out (take away from the rest)' and also a preposition (followed by noun phrase objects) and conjunction (followed by sentential objects, sometimes with the complementizer that), meaning 'except, unless.'
Like Twi gyaw, the English save means 'take' as a verb and 'except, unless' as a preposition and subordinating conjunction.

3.6.1.2 Twi gyaw 'leave', 'without'.

The twi verb gyaw means 'leave, abandon' (as in (261)); in a serial construction it can mean 'without', as in (262).

(261) wo-a-gyaw     me ḳukó-kóré
               they-PERF-leave me alone
'I have been left quite alone.'

(262) wo-a-di     a-gyaw    me
       they-PERF-eat SEQ-without me
'They have eaten without me.'

The prepositional meaning differs from the verb meaning, but the full range of affixes are still possible with both senses.

3.6.1.3 Fante kópín 'go up to', 'until'.

In Fante, another Akan dialect, Welmers [1946] notes that certain verbs are used only in serial constructions, not as independent verbs; e.g., kópín 'go up to, until' is used relationally in (260) [Welmers 1946:65].
(260) mi-ka-su-à ha-ú-sa ke-pìm abír å̀a mídi nfi awòkíi
   I-speak Hausa go-up-to time that I-reach years eight
   'I spoke Hausa until I was eight.'

The Fante verb ke-pìm 'until' is defective in distribution; it and its
object provide information that is semantically secondary, supplement-
al, to the preceding verb.

3.6.1.4 Twi seŋ 'surpass', 'more than'.

   The verb seŋ 'pass, surpass' is used in serial verb constructions
   in which its semantic function has shifted to the extent that it
   signals the comparison of its object to a NP earlier in the sentence.
   Its function is to introduce an adverbial complement.

   The verb seŋ occurs independently with the meaning 'pass on, pass
   by, pass away', as in (264) and (265) (from Christaller 1881:440).

(264) asu bi seŋ ne daŋ aki
      river a  pass his house behind
      'A river flows behind his house.'

(265) ade nyina be-seŋ
      thing all  FUT-pass
      'All things will pass away.'

The verb seŋ can also mean 'surpass, exceed', as in (266). In (266a)
seŋ is followed by a single nominal; in (3b,c,d) the verb seŋ is

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followed by two nominals.

(266) (a) ḍ seŋ
    me
  he surpass me
  'He is more than I am.'

(b) me-seŋ    no sika
    I-surpass him money
  'I surpass him with respect to money', 'I have more money
  than he has."

(c) me-seŋ    no adwumayas
    I-surpass him work-doing
  'I outdo him in working (I surpass him with respect to
  working)'.

(d) me-seŋ    wo adw
    I-surpass you tilling
  'I till more than you do.'

In (266b,c,d) the second nominal following seŋ tells with respect to
what item or activity or quality the first object is surpassed.

After another verb in a serial verb construction, seŋ indicates
comparison and can be translated as 'more than', as in (267), where
the message is similar to that in (266d).
(267) me-dɔw me-seŋ wo
I-till I-surpass you
'I outdo you in tilling the ground (I till more than you do).'

Similarly, the serial verb sentences in (268a) and (268b) have meanings comparable to the single-verb sentences (266b) and (266c), respectively.

(268)(a) me-ʋo sika me-seŋ no
I-have money I-surpass him
'I have more money than he has.'

(b) me-ʋɛ adwuma me-seŋ no
I-do work I-surpass him
'I surpass him with respect to working; I work harder, I do more work, than he does.'

In the serial verb sentences in (267) and (268), the first verb phrase is integrally related to the second; with respect to meaning, the area in which the surpassing occurs is that named in the first verb phrase—'tilling' in (267), 'having money' in (268a), and 'doing work' in (268b).

In terms of serial verb structure, (269) parallels the sentences in (268). (In (269) there is no subject concord prefix, because in Twi that shows up only for first person singular.)
(269) ñbetem no pé sika sëf ne nuanom  [Boadi 1966:86]
man the like money surpass his brothers
'The man likes money more than his brothers.'
(a) 'The man likes money more than his brothers like money.'
(b) 'The man likes money more than he likes his brothers.'

But (269) is ambiguous where the sentences in (268) are not. (Note that the English translation of (269) shows the same ambiguity with respect to whether the object of more than is being compared with the subject or the object of the preceding verb likes.) For (268), the subject of the first verb is interpretable as the subject of sëf 'surpass'. For (269) this is true for reading (a), where a paraphrase might be 'The man likes money, (the man) surpasses his brothers (with respect to liking money)'. But it is not true for reading (b). For this reading, if we continue to view sëf as the verb 'surpass', it becomes difficult to identify its understood subject. We might consider its subject to be the previous object noun sika 'money', thus providing a reading like 'The man likes money, (and money) surpasses his brothers (with respect to the man's affections)'. But in Twi serial verb constructions a reading in which the first verb's object is understood as the second verb's subject (a "causative" rather than "same-subject" reading) is restricted to sequences of an activity verb followed by a motion verb (cf. section 3.5.1.11 above). Interpreting (269b) explicitly while maintaining the verb status of sëf requires us to interpret the understood subject of sëf to be a complex nominalization of the previous subject, verb and object, namely 'the
man's liking for money', and to interpret its underlying object as a
nominalization incorporating its surface object with the previous
subject and verb, namely, 'the man's liking for his brothers,' with
the resulting reading: 'The man likes money, (and the man's liking for
money) surpasses (his liking for) his brothers'. Since nominaliza-
tions of this sort are not signaled in the surface structure of (269),
it appears that, for reading (b) at least, it is reasonable to regard
seg as having come to function as an indicator of comparison,
comparable to English more than, rather than as the verb 'surpass'.
It introduces a noun phrase which is being compared with a previous
noun phrase in the sentence, and its morphology and position in the
sentence reflect its syntactic origin as a verb in a serial verb
construction.

Boadi [1966] views (269) as a stylistic abbreviation of both
(270a) and (270b); his transformational analysis accounts for the
ambiguity of (269) by deriving it from the structure underlying (270a)
as well as from the structure underlying (270b) [Boadi 1966:84]. He
considers comparative constructions with seg as the second verb to be
only superficially similar to serial verb constructions.

(270a) obeena no pë sika seg sënea ne nuanom pë sika
man the like money surpass how his brothers like money
'The man likes money more than his brothers like money.'
man the like money surpass how he-like his brothers
'The man likes money better than he likes his brothers.'

Given the assumptions of a transformational descriptive framework, the ambiguity of (269) can be described synchronically in terms of two different underlying structures, corresponding to the structures underlying (270a) and (270b), respectively, as Boadi has proposed. But it does not necessarily follow that transformational operations deleting senea and identical elements mirror the actual historical development of this sentence type. The development of the relational meaning 'more than' for seq 'surpass' appears similar in nature to the type of historical change discussed here—that is, semantic depletion of a verb in a serial construction, and the emergence of new options for sentence structure and interpretation. The possibility of paraphrasing with a subordinate clause is not a compelling reason to view the historical source of seq 'more than' as other than a verb in a serial construction.

To summarize: seq occurs independently as a verb meaning 'pass, surpass' as in (264)-(266). When seq occurs as the second verb in a serial verb construction, as in (267), (268), and (269a), we can correctly predict that the understood subject of seq will be the first verb's subject, according to the general pattern for serial verb constructions. But this semantic pattern is unhinged for (269b), where the object of seq is compared with the object of the preceding verb (specifically, the object of seq surpasses the previous object.
with respect to the subject's participation in the state or activity named by the previous verb). The existence of the (269b) reading indicates that the \textit{seg} NP phrase no longer requires the standard semantic interpretation of a serial verb construction, and that the morpheme's meaning has become generalized to the extent that it signifies comparison with a preceding NP, much as the comparative phrase \textit{more than} does in English.\textsuperscript{15} Although serial-like sentences like (269) may be paraphrasable by complex sentences like (270), as pointed out by Boadi, I consider it likely that they have developed from serial verb constructions historically.

3.6.2 Ewe de-verbal prepositions.

In Ewe the verbs in a serial construction carry the same markings for tense and mood. However, Ansre (1966a) identifies six verb-like morphemes that occur in a serial context but take no markings for tense or mood. Five of these have homophonous verbs. Ansre calls these unvarying morphemes "verbids". He argues that, although they look very much like serial verbs, their function indicates that they should be regarded as part of an adverbial adjunct. Ansre's verbids include:
<table>
<thead>
<tr>
<th>MORPHEME</th>
<th>VERB MEANING</th>
<th>VERBID MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>le</td>
<td>be located at</td>
<td>at (discussed in section 3.2.4)</td>
</tr>
<tr>
<td>ná</td>
<td>give</td>
<td>to (discussed in section 3.3.4)</td>
</tr>
<tr>
<td>kpi'ẽ</td>
<td>(none)</td>
<td>with (discussed in section 3.4.3)</td>
</tr>
<tr>
<td>tsẽ</td>
<td>come from</td>
<td>from</td>
</tr>
<tr>
<td>tõ</td>
<td>pass through</td>
<td>through</td>
</tr>
<tr>
<td>قه</td>
<td>reach</td>
<td>towards</td>
</tr>
</tbody>
</table>

Westermann (1938:129) notes the special meanings and the tense and mood restrictions of 19 verbs, including some of Ansre's verbids:

"... many verbs when they stand next to others play the part of English prepositions, adverbs, or conjunctions. Now many of these verbs, in playing the part of prepositions, etc., begin to lose their verbal characteristics in that they are no longer conjugated: they thus begin to become form words." Westermann includes some of Ansre's verbs, as well as yi 'go; towards (conjugated only in future and habitual)' and yũ 'surpass; more than (conjugated in aorist, future, and habitual)'. According to Westermann, Ansre's tsẽ is conjugated in the future and habitual, and tõ is variable. Such variability, whether between speakers of different sub-dialects or within a single idiolect, is what we would expect for a change in progress. It is possible that, in the generation or so between Westermann's and Ansre's work, these verbs' capacity for conjugation diminished from partial or variable to zero.
3.6.3 *Senufo de-verbal postpositions.*

In several Senufo languages (with OV word order and, consequently, de-verbal postpositions instead of prepositions), a postposition *fún* 'without' may be related to the verb *fún* 'consider taboo, abstain or refrain from', according to Carlson (1988). The verb occurs in Supyire:

(271) ̀sànogòbìi mòha sòogi *fún*

*Saanogos-DEF HAB terrapin consider-taboo*

'The Saanogos consider the terrapin taboo (and therefore abstain from eating it).'

The postposition occurs in Cebaara:

(272) wi i seńári nyuu téële *fún*

*s/he PROG Senari speak fault without*

'S/he speaks Senari without fault.'

There is a similar parallel in Sikasso Jula, where *bali* is the verb 'prevent from, forbid' and the postposition 'without' (Carlson 1988).

A number of Northern and Central Senufo languages, according to Carlson (1988), have a preposition 'beside' (*tân, tâñ, tânnâ*) which seems to be related to the verb *taanna* 'to arrange in a line, to place side by side.'
3.6.4 **Conclusions.**

As discussed in this section, the prepositions (and postpositions) that can develop from verbs in serial constructions need not be limited to a certain set of case roles or thematic roles. Also, the object of the preposition is not necessarily a simple noun; it can have a relative clause or complement clause, or the preposition can take a clausal object. When the former verb is followed by a complementizer and a clause, like *gwe* + *se* in Twi, the verb+complementizer can in time become a frozen combination, functioning as an adverbial subordinator.
3.7 Verbs become complementizers and subordinating conjunctions.

In many languages of the world (including many of the Kwa languages of West Africa), a 'that'-complementizer can be shown to have developed historically from a verb 'say'. These developments are treated in this section.

The Twi situation is somewhat complex, because, for the complementizer sg, possible historical sources include the verb se 'say' as well as the verb se 'be like'. (Data from other languages also suggest the latter possibility.)

Section 3.7.1 contains an extensive discussion of the Twi verb sg 'be like' and its development as a comparative particle, complementizer, and subordinating conjunction. Section 3.7.2 discusses a phonologically similar morpheme, Twi se 'say', which has developed limited complementizer function. Section 3.7.3 compares Twi sg and se complementizers. Sections 3.7.4 – 3.7.10 discuss similar developments in other languages. Section 3.7.11 provides an overview, and section 3.7.12 concludes and discusses a survey of complementizers and subordinators.

3.7.1 Twi sg: from verb of comparison to complementizer and subordinating conjunction.

The morpheme sg in Twi is rather remarkable, occurring with a wide range of functions, including a verb meaning 'resemble'; a comparative particle; a factitive object marker; a 'that'-complementizer; an adverbal subordinator introducing clauses of purpose, result, reason, and condition; and a component of
miscellaneous adverbials meaning 'until', 'although', 'unless', 'or', and 'how'. I suggest that all these occurrences are historically related, despite the fact that native speakers may not consider them to be connected, and that the likely direction of historical development was from verb to complementizer and from complementizer to adverbial conjunction. The syntactic leaps involved may appear great at first, but upon closer examination of the contexts in which the morpheme occurs, the change can be seen as a plausible sequence of gradual reanalyses within a serial verb construction.

Section 3.7.1.1 establishes se as a full verb in simple sentences, and shows it as a defective verb in serial constructions where it introduces an object of comparison. Section 3.7.1.2 discusses its reanalysis as a complementizer, and 3.7.1.3 and 3.7.1.4 show its shift to subordinating conjunction. Sections 3.7.1.5 and 3.7.1.6 relate its uses as a factitive object marker and a preposition with objects of quantity. Sections 3.7.1.7 and 3.7.1.8 illustrate how it has come to be used with other morphemes, taking on new functions in frozen combinations.

3.7.1.1 se as full verb and comparative particle.

The verb se 'resemble, be like, be alike, equal, be equal, deserve, be fitting, be necessary' in its notional (lexical) and relational (grammatical) uses is discussed by Riis (1874), Christaller (1875 and 1881), and Boadi (1966 and 1972). (Different sources use differing orthographies: e for Boadi and Christaller [1881] is equivalent to e for Christaller [1875] and e for Riis.) As
the only verb in the clause, it can occur with an object, as in (273a), or without an object when the subject is plural (or "compound"), as in (273b).

(273)(a) Kofi se Amma

Kofi be-like Amma

'Kofi resembles Amma.'

(b) Kofi ne Amma se

Kofi and Amma be-like

'Kofi and Amma resemble each other.'

(c) jee him

he-be-like him

(d) j ne no se

he with him be-like 'They are like each other.'

(e) wjes 16

they-be-like

(f) opete ni akroma en-se

vulture and hawk NEG-be-like

'The vulture and the hawk do not resemble each other.'
(g) ṣe no ahọddej[Christaller 1881:432]
he-be-like him strength
'He equals him in strength.'

(h) ṣe owu[Christaller 1881:432]
he-deserve death
'He is worthy of death.'

(i) owu se no[Christaller 1881:432]
death be-fitting him
'He is worthy of death; death is fitting for him.'

(j) e se se yaba[Boadi 1972:149]
it-be-fitting that we-come
'It is necessary that we come.'

In (273), se has an object in (a) and (c). In (g), se is followed by two NPs; the second NP indicates the entity or quality with respect to which the subject and object are similar. In general, the 'resemble' or 'equal' translation is appropriate when the subject and object belong to the same noun sub-class, e.g., people in (a), and animals in (f) (where akroma is object of ni (ne)—see endnote 16). The 'deserve' or 'befit' reading occurs when subject and object are of different sub-classes, e.g., human vs. abstract in (h) and (i). The human and abstract nouns can, if we choose, be viewed as semantic deep case Datives and Patients, respectively, and either one can
serve as the grammatical subject, as exemplified in (h) and (i); with
the human subject the meaning is 'deserve', as in (h), and with the
abstract subject the meaning is 'beful', as in (i). With an
impersonal pronoun subject and a sentential object complement, as in
(j), se takes on the meaning as 'be fitting, be necessary.' (The
second se, glossed as 'that' in (j), is related historically to the
verb se, as discussed below in 3.7.1.2.)

Thus, the meanings of the verb se vary with the nature of the
NPs functioning as subjects and objects; and the range of
meaning— including intransitive 'be similar', 'be fitting' and
transitive 'resemble', 'beful'— suggests a shared basic semantic
ground of something like 'be comparable (with), be appropriate
(for)'.

Se can also occur in a serial verb configuration as in

(274) (a) oye hu se akoko
     he-be timid like fowl
     'He is as timid as a fowl.'

(b) gbere se mogya
     it-be-red like blood
     'It is as red as blood.'

(c) Kofi ye-e adwuma no se Ama
    Kofi do-PAST work the like Ama
    'Kofi did the work like Ama.'
An alternate reading for (274b) could be 'It is red and resembles blood.' But sentence (274c) does not mean 'Kofi did the work and is like Ama.' The *sg* Ama phrase tells how the work was done; it modifies the previous verb phrase. The function of the *sg*-NP phrase in this serial configuration has shifted away from verbal towards adverbial. With the shift in function, we might expect some loss of formal verb properties. Indeed, we find that *sg* is defective. In a serial verb configuration like (274c), where the first verb carries the past tense suffix, we would ordinarily expect to find the same suffix on the second verb, but instead we find the bare form *sg*. As Christaller points out (1875-76, quoted in 2.2.2 above), *sg* is a verb which has stripped off its verbal character to become a mere particle, taking no affixes for tense/aspect, subject agreement, or negation except when functioning as a principal verb. For example, it fails to take the negative prefix in (275); compare (273f) above, where the prefix is present on *sg* as a principal verb.

(275) onye adwuma me [Christaller 1875:76]
he-NEG-do work like me

'He does not (do) work like me.'

In serial constructions (274) and (275) the objects of *sg* are nouns or pronouns. But the object can also be a clause, as in (276).
(276) onye  adụma  se  meye
he-NEG-do  work  like  I-do

'He does not (do) work as I do.'

In (275), se introduces an NP which is compared with the preceding subject in terms of the state or activity designated by the verb—that is, how Ama did the work is compared with how Kofi did it. But in (277), the NP introduced by se is compared with the object of the preceding verb. Within the se clause the object is post-verbal in (277a); it is moved to the front of the clause in (277b). As (277) illustrates, se can introduce a clause or simply an NP.

(277)(a) mepe  ha  se  (mepg)  ho
I-like here as  (I-like) there
'I like this place as well as that.'

(b)  onnom  fwe  se  nsu  jko  (na  onnom)
he-NEG-drink something  like  water  only  FOCUS  he-drink'

'He drinks nothing but water.'

[Christaller 1875:76]

Christaller [1875:76] calls se a conjunction when a clause follows, as in (276) and (277). Both Riis [1854:234] and Christaller [1882:432] consider the conjunction se as coming from the verb se. They do not discuss the details of the historical pathway along which this occurred. Given the established precedent for verbs in serial constructions taking on relational meanings and losing verb

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properties, the most likely pathway for the development of the conjunction *se* 'as' is via serial-like configurations like (274), (275), and (5). The verb *se* may or may not have allowed sentential objects. But as (277a) illustrates, once the erstwhile verb has come to be regarded as a relational particle, no great syntactic leap is required to allow *se* to take sentential objects in addition to simple noun objects; the inclusion of the repeated parenthetical subject and verb *mepe* 'I like' in (277a) is redundant semantically. Sentences (275) and (276) are a comparable pair; in (276) the verb *ve* 'do' is repeated, and in (275) it is understood but not repeated. In (278), both subject and verb of the *se* clause contrast with the preceding subject and verb.

(278) owusihyey nham * ntam se anom tu* [Christaller 1875:167]
steamer NEG-run fast as bird fly
'A steamer does not run so swiftly as a bird flies.'

Sentences like (278) are of the form [S *se* S], and in this context it seems reasonable to call *se* a conjunction, as Christaller does; some might prefer the label "adverbial subordinating conjunction."17

Thus the verb *se* 'be comparable (with), be appropriate (for)' in serial verb configurations has come to signal comparison and introduce adverbial clauses, and has lost verb properties. In the next sections the further grammaticalization of the particle is illustrated.

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3.7.1.2 *se* as complementizer.

The use of *se* as a complementizer is comparable to its occurrence as the comparative particle 'as', which is in turn traceable to its use as a verb in a serial verb construction. Like (278), the sentences in (279) have the form [S se S].

(279) (a) *eye* nokware *se* wo yare [Boadi 1972:150]

    it-be fact that they be-ill

    'It is a fact that they are ill.'

(b) *eye* aniwu *se* obiara amb [Boadi 1972:150]

    it-be disgraceful that everyone PAST-NEG-come

    'It is disgraceful that nobody came.'

In (279) *se* has moved farther away from the verb 'be like' as in (273), and the comparative particle 'like, as' as in (274)-(278). It serves as a grammatical morpheme introducing a complement sentence, much like the *that* complementizer in the English translation. To use Riis' terminology, the meaning of *se* has gone from notional to relational. In its complementizer function the meaning of *se* has completely shifted from lexical to grammatical; it is merely a particle introducing an embedded sentence.

In (279a) *se* is preceded by the noun *nokware* 'fact', and in (279b) it is preceded by the adjective *aniwu* 'disgraceful'. Other nouns and adjectives which can follow *eye* 'it is' and take *se*
complements include:

(280) **NOUNS**

<table>
<thead>
<tr>
<th>Word</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>byne</td>
<td>'evil'</td>
</tr>
<tr>
<td>nhyira</td>
<td>'blessing'</td>
</tr>
<tr>
<td>nsandah</td>
<td>'an established fact; precedent'</td>
</tr>
</tbody>
</table>

(280) **ADJECTIVES**

<table>
<thead>
<tr>
<th>Word</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>fe</td>
<td>'beautiful'</td>
</tr>
<tr>
<td>abofono</td>
<td>'nauseating'</td>
</tr>
<tr>
<td>ahomeka</td>
<td>'pleasing'</td>
</tr>
<tr>
<td>anika</td>
<td>'entertaining'</td>
</tr>
<tr>
<td>nwanwa</td>
<td>'strange'</td>
</tr>
<tr>
<td>hu</td>
<td>'terrifying, strange'</td>
</tr>
</tbody>
</table>

In its complementizer role, **se** can also follow verbs, such as **hia** 'be important', as in (281a). The **se** complement can not occur in subject position, as the ungrammaticality of (281b) illustrates.

(281)(a) ehia **se** Kofi ye adwuma no

- it-be-important that Kofi do work the

'It is important that Kofi does the work.'

(b) *(se)* Kofi ye adwuma no hia

- (that) Kofi do work the be-important

'That Kofi does the work is important.'

In his synchronic analysis, Boadi [1972:150] considers the **se** clause to be a noun-phrase sentential complement. He notes that it satisfies criteria traditionally used to support noun-phrase status in English, namely: **se** and its clause can

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be replaced by a simple noun phrase, as in (282b); and a pseudo-cleft version is also possible, as in (282c).

(282) (a) ehia \text{ se } \text{ ?-ba} \quad \text{[Boadi 1972:128]}
\quad \text{it-be-necessary that he-come}
\quad '\text{It is necessary that he should come.}'

(b) ehia \quad \text{nyansa} \quad \text{[Boadi 1972:129]}
\quad \text{it-be-necessary wisdom}
\quad '\text{Wisdom is needed.}'

(c) nea \quad \text{ehia} \quad \text{ne se } \text{ ?baba} \quad \text{[Boadi 1972:129]}
\quad \text{it-REL it-be necessary be that he-FUT-come}
\quad '\text{What is necessary is that he should come.}'

Other verbs taking \text{se} complements like \text{hia 'be necessary, important'} in this "impersonal verb" category include:

(283) \text{se} \quad '\text{be necessary}' \quad \text{[Boadi 1972:149]}
\quad \text{siane } '\text{be the reason for}'
\quad \text{hye } '\text{be a pain to}'
\quad \text{twa } '\text{be inevitable}'
\quad \text{d? } '\text{be painful to}'
\quad \text{fi } '\text{be the cause of}'
\quad \text{du } '\text{come to the point when}'
\quad \text{sono } '\text{be different}'

265
Predicates like (280) and (283) take impersonal subjects as in (284a). Similar se complements occur in (284b) and 284c) with personal subjects; these are comparable to (284a) with respect to the type of meaning expressed (attitudes and emotional responses).

(a) se me nwanwa se wotumi baae
it-be me strange that you-be-able come
'It is strange to me that you were able to come.'

[Boadi 1972:150]

(b) mefre se mekasa gua mu
I-feel-embarrassed that I-FUT-speak public in
'I feel embarrassed at speaking in public.'

[Boadi 1972:159]

(c) misuro se meda wura mu
I-be-afraid that I-FUT-sleep bush in
'I am afraid to sleep in the bush.'

[Boadi 1972:159]

Other verbs with personal subjects can be followed by se + S. These include mental action and emotion verbs such as:

kyi 'hate'  gyedi 'believe'
p 'want'  nim 'know'
hw 'look'

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When these transitive verbs occur with se clauses, the se clause serves as an argument of the verb, as in

(285)(a) mikyi se menoa aduan [Boadi 1972:159]
I hate that I-FUT-cook food
'I hate to cook.'

(b) Ama pee se Kofi brye adwuma no
Ama wanted that Kofi FUT-do work the
'Ama wanted Kofi to do the work.'

(c) na Ama nim se Kofi yese adwuma no
PAST Ama know that Kofi did work the
'Ama knew that Kofi had done the work.'

In these contexts, se has moved far from its old verb meaning and syntactic behavior; it functions as a complementizer introducing a clausal argument. Boadi [1972:136] refers to it as a "surface complementizer". 19

When the se clause is a question, se gets a 'whether' translation, as in (286), where anaa 'or not' is the question marker.

(286) żywe se Kofi beba anaa [Boadi 1972:145]
he-look that Kofi FUT-come or-not
'He ascertained whether Kofi would come.'

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The meanings and functions of se exemplified here are probably historically related. Specifically, it is likely that the historical development progressed from the verb se occurring independently as in (273a-j) and in serial verb constructions as in (274) (repeated here)

(273a) Kofi se Amma
  Kofi be-like Amma
  'Kofi resembles Amma.'

(274) Kofi yge adwuma no se Ama
  Kofi do-PAST work the like Ama
  'Kofi did the work like Ama.'

to a comparative particle, introducing the object of comparison, as in (277a) and (278)

(277a) mepe há se hó
  I-like here as there
  'I like this place as well as that.'

(278) owusihyéj nnám ntém se anomá tù
  steamer NEG-run fast as bird fly
  'A steamer does not run so swiftly as a bird flies.'

to a complementizer as in (279) and also in (285) where the se clause is the object of the preceding verb.

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(279a) eye nokware se wo yare
it-be fact that they be-ill
'It is a fact that they are ill.'

(285c) na Ama nim se Kofi yee adwuma no
PAST Ama know that Kofi did work the
'Ama knew that Kofi had done the work.'

In this progression it is probable that se gradually shifted semantically from a lexical verb meaning, as in (213), to a more abstract grammatical meaning, finally coming to serve in (285) as a grammatical function word, a complementizer whose "definition" is as general as that of its English gloss, the that-complementizer—in effect a signpost indicating how the parts of the sentence are to be understood as fitting together.

As the meaning of se shifted, there was a corresponding shift in the syntactic configuration in which it occurred, from a NP-VP-VP serial verb configuration as in (277a) and (278) to a main-verb-plus-sentential-object configuration as in (285c), as indicated in (287).
(287) Simple sentence: \[ \begin{array}{|c|c|c|} \hline \text{NP} & \text{se} & \text{NP} \\ \hline \text{Subj} & \text{Verb} & \text{Obj} \\ \hline \end{array} \] (as in (273a))

Serial verb configuration: \[ \begin{array}{|c|c|c|} \hline \text{NP} & \text{V(x)} & \text{se} & \text{NP} \\ \hline & & \text{Prt} & \text{O-Comp} \\ \hline \text{Subj} & \text{VP} & \text{VP} \\ \hline \end{array} \] (as in (274), (277), (278), where the NP object of se can be an S)

Complex sentence: \[ \begin{array}{|c|c|c|} \hline \text{NP} & \text{V} & \text{se} & \text{S} \\ \hline & & \text{Cptr} \\ \hline \text{Subj} & \text{Verb} & \text{Obj} \\ \hline \end{array} \] (as in (285c))

Although the semantic and syntactic distance between a verb or a comparative particle and a that-complementizer may seem great, the distance can be bridged by a number of small steps, as illustrated by the constructions here. The historical development may well have followed a parallel course.

3.7.1.3 S as adverbial subordinator introducing clauses of purpose and result.

When se introduces a sentential noun-phrase argument of the preceding verb, it acts as a neutral that-complementizer. In other contexts, when a main verb with all its arguments (i.e., a complete sentence) is followed by a se clause, se indicates that the clause it introduces bears a purpose or result relationship with the events or

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circumstances named in the preceding main clause. Thus, another use of *se* is as an adverbial subordinator meaning 'so that'. The syntactic context in which *se* means 'so that' is a complex sentence, but the internal function of the embedded clause differs from that in complex sentences containing the complementizer *se*. As indicated in (287), the *se* complementizer introduces the sentential object. The adverbial subordinator *se* introduces an adverbial subordinate clause, as indicated in (16).

(288) *se* as complementizer:

<table>
<thead>
<tr>
<th></th>
<th>NP</th>
<th>V</th>
<th><em>se</em></th>
<th>S</th>
<th>Cptr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subj</td>
<td>Verb</td>
<td>Obj</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(289) *se* as adverbial subordinator:

<table>
<thead>
<tr>
<th></th>
<th>NP</th>
<th>V(X)</th>
<th><em>se</em></th>
<th>S</th>
<th>AdvClause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subj</td>
<td>VP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In (289abcd), *se* indicates purpose and can be translated as 'so that'. Sentences (289abcd) have animate subjects. In (289e) the main clauses have inanimate subjects, and the semantic relationship of the *se* clauses is better described as "result" than "purpose".²⁰

(289)(a) memaa no sika *se* mfa nkɔty bi

I-gave him money so-that he-IMP-take IMP-go-buy some

'I gave him money to go and buy some.'  [Boadi 1972:136]
(b) Kofi y3a adwuma no se Yaw bape n’asam
Kofi did work the so-that Yaw FUT-like his-manner
'Kofi did the work so that Yaw would like him.'

(c) osiw me kwaŋ se mennye m’adwuma
he-block me way so-that I-NEG-IMP-do my-work
'He prohibited me from doing my work (lit., blocked my way
so that I may not do my work).' [Christaller 1875:158]

(d) Ye3u Kristɔ ba3a wiase se ɔbeγye nnipa ŋkwɔ
Jesus Christ came world so-that he-FUT-save men life
'Jesus Christ came into the world to save men.'

[Christaller 1875:173]

(e) nnae no 3’warɛ se obi bètɛɛ nɛ mù wo sɔ,
bed the NEG-long so-that person stretch his self at top,
na mmuatɔm no nsɔ se ɔde bebun nɔ sɔ
and covering the NEG-wide so-that he-take wrap him top

'The bed is shorter than that (lit., not (so) long that) a
man can stretch himself on it, and the covering narrower
than that he can wrap himself in it.'

[Christaller 1875:168]

The 'so that' reading for se, indicating that the action named

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in the first clause was carried out for the purpose of or with the result of effecting the situation named in the second clause, appears to come about when the verb in the *se* clause occurs in an "unrealized" tense/aspect form such as the Future, as in (289b) and (289d), or the Imperative (carrying subjunctive or hortative meaning) as in (289a) and (289c). In comparison, note that in (278) (repeated here) the verb in the *se* is in the Present (unmarked) form.

(278) owusihyn nnâm nêm se anomâ tû [Christaller 1875:167] steamer NEG-run fast as bird fly

'A steamer does not run so swiftly as a bird flies.'

Despite the proliferation of functions for *se*, ambiguity is avoided, since the *se* clause in (278) does not have a verb in an "unrealized" tense/aspect, (278) does not mean 'A steamer does not run swiftly so that a bird will fly.' Confusion of the comparative and result functions of *se* is unlikely in communication situations because the immediate context (linguistic and non-linguistic) plus the hearer's assumptions about what is plausible set up expectations making misinterpretation unlikely. The semantic content of the propositions in the clauses, then, as well as verb tense/aspect, contributes to correct interpretation.

3.7.1.4 *se* marking conditional clauses.

A *se* clause can precede the main clause. It is then interpreted as a conditional clause, and *se* can be translated as 'if' or 'when',

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as in

(290) se Kofi ye adwuma no a metua no ka

if/when Kofi do work the COND I-FUT-pay him salary

'If/when Kofi does the work, I will pay him.'

A conditional se clause cannot follow the main clause, as shown by
the ungrammaticality of

(291) * metua Kofi ka se j-ye adwuma no (a)

I-FUT-pay Kofi salary if/when he-do work the COND

'I will pay Kofi if/when he does the work.'

(Temporally, the paying does not come before the working, so (291)
would violate iconic temporal order; Twi, like many languages,
prefers iconic order here.) The presence of the clause-introducer se
is not obligatory on conditional clauses; the clause-final particle a
is sufficient to indicate conditionality, as (292) illustrates.

(292) (se) wokɔ a kyɛɛm we

if you-go COND write me

'If you go, write to me.'

Riis [1854:109] cites conditional sentences with a but without se.
He says, "For the purpose, however, of stating a condition more
forcibly, the conjunction se is sometimes put at the head of the

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conditional sentence" (in addition to the clause-final a). Both se and a appear to mark conditional clauses. It is likely that a is the older form historically: its clause-final position is consistent with the SOV typological pattern which evidence\(^{21}\) suggests was the earlier pattern in Niger-Congo languages; its departure from the canonical CV syllable shape suggests the phonological "erosion" over time of a former initial consonant.\(^{22}\) When a sentence begins with a conditional clause as in (292) without se, the sentence begins with a subject and a verb, inviting a "garden path" processing strategy on the part of the hearer, who may assume that what he/she has just heard is the main clause subject and verb. The presence of a clause-initial marker (se) alerts the hearer to the subordinate nature of the clause at its beginning rather than at its end. The use of se in addition to a marks the conditional clause twice—"more forcibly", as Riis says.

As a complementizer and adverbial subordinator for purpose and result clauses (described in the two previous sections), se functions as an introducer of subordinate clauses which occur after the main clause. Conditional clauses occur before the main clause, with se preceding and a following. Although the clause-final a is historically the conditional marker and se is historically the subordinate clause complementizer, their use together makes possible a reanalysis of sentence-initial se as a marker of conditionality, since its complementizer and purpose/result uses are not sentence-initial. However, se and another morpheme mark sentence-initial reason clauses, as described below, and the
possibility of confusion may be limiting the reanalysis of se in these contexts.

According to Christaller, "Whenever se stands at the head of a sentence..., some ellipsis has taken place: [1881:433]. Christaller cites sentences like (293) (from Christaller 1881:433).

(293)(a) (ा) se wok a, before me it-come that you-go COND call me 'If or when (it happens that) you go, call me.'

(b) (ा) se yama a, mehye no na waba he-say that he-NEG-come COND I-compel him that he-come 'If (he says that) he is not coming, I will compel him to do so.'

What Christaller is suggesting here is that a conditional clause beginning with se is merely a reduced form of a longer conditional clause. This longer version of the conditional is not introduced by se, but the conditional sentence contains a sentential object complement introduced by se in its that-complementizer role. The occurrence of this complementizer se at the beginning of conditional clauses would then be a result of the ellipsis of the main subject and verb of the conditional clause. This demonstrates a possible (though not the only) pathway by which se could have begun to occur in sentence-initial position.
3.7.1.5 *se* marking factitive objects.

*se* also occurs as a particle marking the second ("resultive", or "factitive") object of verbs like *bu* 'esteem, consider' and *paw* 'choose, select', as in (294). Its meaning in such constructions is reminiscent of its verb meaning 'be like'. But in these constructions, the use of *se* is optional. As (294a) illustrates, *se* is optional with the verb *bu*. With the verb *paw*, the factitive object can be marked by *se*, as in (294b), or not, as in (294c).

(294)(a) obúù no (*se*) onyansafó [Christaller 1875:116]

    they-considered him as wise-man

    'They counted him (as) a wise man.'

(294)(b) onyagbópoj a-paw mó *se* n'adwùmayede

    God PERF-choose you as his-tool

    'God has chosen you (as) his instruments.'

    [Christaller 1875:116]

(294)(c) wọpaw no otitrani [Boadi 1972:167]

    they-elected him chairman

    'They elected him chairman.'

Christaller (1875:116) calls *se* here a particle, not a verb. It is not treated like a verb: in (294a) the first verb has a Past tense suffix, so in a serial verb construction the second verb would be
expected to have one also, but se does not; in (22b) the first verb has the Perfect prefix a-, so ordinarily the second verb in a serial verb construction would have the Sequential a- prefix, but se does not.

The linear sequence of elements in (294a-b) is [NP V NP se NP], similar to that in (274c) (repeated here).

(274c) Kofi ya adwuma no se Ama
Kofi did work the like Ama
'Kofi did the work like Ama.'

But the object of se in (294) plays a different role with respect to the main verb from that in (274c). The main verb in (294) can take either one or two objects; the second object can be either juxtaposed or introduced by se. When se is omitted in (294), its object becomes the second object of the main verb; but se is not optional in (274c). This difference is reflected in the English translations; 'as' is optional in (294), but 'like' is not optional in (274c). Although the verb meaning of se 'be like' is discernible in (294), and se has the position in the sentence of a serial verb, its form (defective), meaning ('as'), and function (factitive object marker) make it more like a particle than a verb synchronically. The verb is likely to be the historical source of the particle.

3.7.1.6 se as 'approximately' with objects indicating quantity.

Related to the 'like, as' meaning of se is its use with
numerals, meaning 'about', as noted by Riis and Christaller, as in

(295)(a) matɔ  eŋkoko bese aduonu  [Riis 1854:234]
I-PERF-buy fowls about twenty
'I have bought about twenty fowls.'

(b) mmofra vo ho bese aduonum  [Riis 1854:234]
children be-at there about fifty
'There are about fifty boys there.'

(c) wāya  adwuma beyɛ  se  dadu
he-has-done work INGR-be about days-ten
'He has worked about ten days.'

[Christaller 1875:134]

Here the position of se is that of a verb in a serial construction. But its form is defective. In (295a-b) se carries the Ingressive prefix be-, like a verb, but the bese combination fails to take the Sequential prefix a-, which would be expected of post-initial Ingressive-plus-verb in a series. Also in (295a) we would have expected a post-initial verb to show the first person singular subject agreement marker m-, given the first verb m-a-to 'I-PERF-buy'. Interestingly, in (295c), where the 'approximately NP' phrase modifies the verb phrase, the ingressive be occurs on ye 'be' rather than on se, but again without the a- prefix, reflecting the reanalysis in process. In (295) bese has lost verb properties and
has to some extent become a frozen combination.

Semantically, the se phrase modifies a preceding noun or verb. In (295a) the phrase besg aduonu 'about twenty' might be viewed as modifying the previous object noun egkoko 'fowls', suggesting that the construction might be considered a relative clause; but there is no relative clause marker a. A relative clause or adjective phrase would be expected to follow the head noun; in (295b) the phrase follows ho 'there', but according to the sense of the sentence, it modifies the subject, mmofra 'children'. In (295c) the object of se is a noun indicating a period of time, rather than a numeral; the se phrase indicates the duration of the action named by the main verb. In (295), with objects indicating quantity, se is not analyzable as a verb in a relative clause, but rather a preposition (or adverb) meaning 'about, approximately'.

3.7.1.7 se marking reason clauses.

Thus far in section 3.7.1 we have examined occurrences of the Twi morpheme se. These occurrences make up a progression corresponding to

a) verb in a simple S,

b) defective verb in a serial verb configuration,

c) complementizer introducing a sentential object, and

d) subordinating conjunction introducing an adverbial clause,

as charted in (287) and (288) above. The progression is from lexical verbhood to grammatical particle status for se. It is likely that the different synchronic analyses correspond to stages in the historical
development of the morpheme.

Section 3.7.1.3 above illustrates adverbial clauses of purpose and result, which follow the main clause. Section 3.7.1.4 illustrates adverbial clauses of condition, which precede the main clause and include the post-clausal marker a. The two adverbial clause semantic functions differ in terms of position with respect to the main clause, as shown in (296).

(296) purpose and result: \[ S \text{ ADV}[\text{se} S] \]

condition: \[ \text{ADV}[\text{se} S a] S \]

In this section we add another semantic function for adverbial se clauses: reason. Like purpose and result clauses, they follow the main clause. Semantic confusion of reason clauses with purpose and result clauses is unlikely because of pragmatic expectations based on the propositional content of the clauses, as well as verb tense/aspect combinations (as discussed in 3.7.1.3). The purpose clauses, as in (299abcd), have verbs in "unrealized" tense/aspect forms. In contrast, the reason clauses with activity verbs, as in (299bc) below, have verbs in the perfect. The complementary syntactic environments enable the same morpheme to serve a range of functions.

Earlier, in 3.7.1.2, we noted that verbs like fi 'come from, emerge' can be used with the impersonal pronoun e-, taking se as a complementizer. The verb fi and the complementizer se together introduce adverbial clauses which indicate the beginning of a time of
some duration, as in (297). Here e-fi se is literally 'it-comes-from that', and the literal verb reference to prior spatial position is broadened to refer to prior temporal position; thus, efi se means 'since' (in its temporal sense). The clause order is iconic with respect to time.

(297)(a) efi se wowo me, manyare pe\] [Christaller 1875:163]
\textit{since} they-bore me I-NEG-sick
'Since I was born, I was never sick.'

(b) efi se mebaa ha yi meyaré [Christaller 1875:157]
\textit{since} I-came here DEF I-be-sick
'Since I came here, I am sick.'

Christaller's dictionary [1881:129] lists this combination as efi(i) se 'since', literally 'it begins from (the fact) that'. Se is recognizable here in its 'that'-complementizer function.

A closer combination of efi and se, with different tones, has come to introduce reason clauses. The concepts of duration from an earlier time, prior condition, and cause are related in the human understanding of events, and the phrase efi se 'since' in (297) can be identified as the historical source of the compound efi se 'because' (literally 'it comes from (the circumstance) that'), as in (298). The duration clauses in (297) precede the main clauses; the reason clauses in (298) follow the main clauses.
(298)(a) oguanee efise osuro
he-ran-away because he-was-afraid
'He ran away because he was afraid.'

(b) òdè abò yiyè, efise osu atò pi
yam PERF-grow well because rain PERF-fall much
'Yam has grown well, because it has rained much.'

[Christaller 1875:169]

(c) òjaw no efise wagúan
he-scolds him because he-PERF-flee
'He scolds him, because he has fled.'

[Christaller 1875:169]

In sentences like (297) and (298), according to Christaller [1875:157], "a noun-sentence stands in the place of a complement of place after the verb fi" (which otherwise takes a place-NP object), "but we consider efise and efise as compound conjunctions of time and cause."

A comparison of (299a) and (298a) shows that (298a) is a more explicit version of (299a); it rules out possible confusion with other readings for se. But se standing alone can also introduce reason clauses, as in (299). Accordingly, "marker of reason clauses" must be added to the list of se's functions.

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(299) (a) oguanee \textsl{se} osuro
he-ran-away \textit{because} he-was-afraid
'He ran away because he was afraid.'

(b) da no \textsl{asé se} \textsl{wá bóá} wo
thank him \textit{because} he-PERF-help you
'Thank him that he has helped you.

(c) \textsl{wój} aní \textsl{gyeí se} \textsl{wáwú} \hfill \textit{[Christaller 1875:169]}
they rejoiced \textit{because} he-PERF-die
'They rejoiced that he was dead.'

The uses of \textsl{se} in this section could have arisen historically
from instances of a semantically explicit verb followed by a \textsl{se}
complementizer. The verb-plus-complementizer was reanalyzed as an
adverbial conjunction, and the conjunction was shortened by dropping
the former subject pronoun and verb. This process is illustrated by
(298a) and (299a). Literal glosses of the morphemes in (298a) can be
charted as having the constituent structure shown in (300).

(300) \hspace{1cm} \begin{array}{c}
\text{iguannee} \\
\text{he-ran-away} \\
\text{SUBJECT-VERB}
\end{array} \hspace{1cm} \begin{array}{c}
e-fi- \\
it-come-from \\
\text{SUBJECT-VERB}
\end{array} \hspace{1cm} \begin{array}{c}
\textsl{se} \\
\text{that} \\
\text{CPTTR COMPLEMENT S}
\end{array} \hspace{1cm} \begin{array}{c}
\text{osuro} \\
\text{he-was-afraid} \\
\text{S}
\end{array}
But in (298a) the phrase e-fi-se has taken on a sentence-relating function. The verb fi no longer has its former locative meaning, and the se is no longer a separate word; the efi + se combination has frozen, and serves to introduce the reason clause. The new structure is analyzable as in (301).

\[
(301) \begin{array}{c}
\text{oguanee} \\
\text{he-ran-away} \\
\text{SUBJECT-VERB}
\end{array}
\begin{array}{ccc}
\text{[efi]s} & \text{osuro} \\
\text{because} & \text{he-was-afraid} \\
\text{ADVERBIAL CONJUNCTION} & \text{S}
\end{array}
\]

The efi- can optionally be left out, leaving just se, as in (299a); with efise, the nature of the connection between the two clauses is more explicit.

Reason nominals and reason clauses can precede the main clause. An example of a reason nominal is (302a). Nouns of reason or cause occur with the noun nti 'head, source, starting point, cause', preceding the main clause, sometimes introduced by esiane 'because of' (literally 'it go along with') as in (302b) (from Christaller 1875:140).

\[
(302)\begin{align*}
\text{a} & \text{weg no nti } \text{ọkoyaree} \\
\text{coldness the source he-INGR-be-sick}
\end{align*}
\]

'From or on account of the cold weather he fell sick.'
(b) esiane ne mneye nti, wotaŋ no it-go-along-with his things-doing source they-hate him

'Because of his doings they hate him.'

Like nouns, clauses of reason or cause preceding the main clause occur with the noun nti; as illustrated in (303), the clause is introduced by esiane or efisð, or simply se. For esiane, compare the reason clause (303) with the reason NP (302). For efisð, compare (303) with (298), noting that the noun nti occurs when the reason clause comes first. For se, compare (303) with (299), where again nti follows the sentence-initial reason clause.

(303)(a) esiane se ọyẹ anèm dà di nokwàre nti,

because-of that he-do diligence always take truth' source

ajkyè nà ọnyàà opanyin bi dii

soon that he-got office a took

'Because he was always diligent and faithful, he was soon entrusted with an office.' [Christaller 1875:169]

(b) efisð wotaŋ no nti, wokùm no because they-hated him source they-killed him

'Because they hated him, they killed him.'

[Christaller 1875:169]
(c) se mafre na mokame nti, meremfre mo

because I-called and you-refused source I-NEG-call you

bio

again

'Because I have called and ye refused, I will not call you again.' [Christaller 1875:169]

Thus, se can introduce reason clauses which either precede or follow the main clause, either with or without other markers. The reason clause configurations can be charted as:

\[ S \quad [(efi)se S]_{\text{REASON}} \]

\[ \left[ \left( \text{esiane} \right) \right. \quad se \quad S \quad \text{nti} \left. \right]_{\text{REASON}} \]

The efi- of efisse and the esiane of esiane se make the meaning more explicit.

3.7.1.8 se in frozen combinations.

The morpheme se occurs in a number of more-or-less frozen combinations in which its earlier complementizer identity can be seen. The complementizer se has merged with other morphemes to form

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adverbial subordinating conjunctions. Some of the resulting combinations are:

besi se 'until'

kansa 'although'
gye se 'unless'
anasa 'or'
sena 'how'

These are discussed in this section.

In (297) we saw that an impersonal-subject construction with a se complement (efi se, literally 'it comes from that') introduces clauses stating the beginning of a time of some duration, and can be translated 'since'. A similar approach is followed in stating the end of a time of some duration, i.e., 'until'. The verb si 'stand (at/to a place)' occurs in combinations like besi se, literally 'come stand that (come to the point that)', and kosi se 'go stand that (get to the place that)', as in

(304) otiu 'mirika besi se onyu yeg

he-ran until he-saw us

'He ran until he saw us.'

(The ba/be and ko/ko in the si constructions are called "ingressive" forms, incipient futurity markers apparently related to the verbs ba 'come' and ko 'go', and probably also the Future ba, although the Ingressive is tonally distinct synchronically from the Future; cf. Christaller [1875:61]).

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The *se* complementizer also occurs in combination in kànsê 'although', which Christaller [1881:226] lists as a conjunction, coming from the phrase ká no se, literally 'speak it that'. An alternative form is kànsesə, literally 'speak it say that', as in

(305) kànsesə ćɔbə a, mèko ara [Christaller 1875:93]
*although* he-come COND I-go still

'Though he come, I shall go still.'

Earlier, in 3.6.1.1, we noted the notional-to-relational meaning shift of the verb *gye* 'take', which has come to be used prepositionally meaning 'except'. As a preposition *gye* takes NP objects, but in combination with the *se* complementizer, *gye* can take sentential objects, being translated as 'unless, until', as in (306). (The 'except' translation is also possible, though a bit old-fashioned sounding in English.)

(306)(a) wùrènnú, gye se wùtù mmirɪká [Christaller 1875:172]
you-NEG-arrive except you-run.

'You will not arrive, except (unless) you run.'

(b) mɛrɛ́ŋkɔ gye se woába ənsa [Christaller 1875:81]
I-NEG-go except you-PERF-come first

'I shall not go except (or until) you have come first.'
Ana 'or' introduces NP conjuncts as in (307a); when it occurs sentence-finally (without the conjunct), it marks yes-no questions, as in (307b). When it introduces a clause, se is required, as in (307c), resulting in the combination anase 'or'.

(307)(a) Kofi ana(se) Yaw jko asu [Christaller 1875:90]
Kofi or Yaw IMP-go water
'Kofi or Yao shall go for water.'

(b) obéba yèjkyèj aná [Christaller 1875:94]
he-FUT-come us side Q
'Will he come to us (or not):request?

(c) gyaré anásè wáda [Christaller 1875:90]
he-sick or he-PERF-sleep
'He is sick or he sleeps.'

Gye 'except' and ana 'or' take NP objects, and have developed combinations with the se complementizer which take sentential objects.

In another frozen combination, se is followed by nea 'that which' (from a pronoun plus the relative marker a). Nea 'that which' occurs independently in sentences like

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(308)(a) nea oko asu na óbò ahiná
PRON-REL he-go water FOCUS he-break pot
'He who goes for water breaks the pot.'
[Christaller 1875:45]

(b) tôwé nea wóyè
look PRON-REL they-do
'Look what they do!'
[Christaller 1875:45]

Nea occurs in combination with se, forming senea 'how' (literally 'like that which'); as in

(309)(a) mepé senea wo kò sukuu
I-like how you go school
'I like how you to school.'
[Boadi 1972:161]

(b) minim senea pbaar ha
I-know how he-came here
'I know how he came here.'
[Boadi 1972:163]

(c) misuro senea nzasa
I-fear how he-talks
'I fear the way he talks.'
[Boadi 1972:130]

(d) senea mo ágyànom yeë no, sè nso moyè nej
how your fathers did DEF as also you-do
'As your fathers did, so do ye.'
[Christaller 1875:166]
With adverbial clauses showing manner, either senea or se occur, as
in

(310) ebae se(nea) mekae no [Christaller 1875:165]

it-came as I-said DEF

'It came as I said.'

The senea combination as in (309a) is analyzed by Boadi as a manner
adverbial introducing a sentential NP complement; in a purely
synchronic analysis of the grammatical function of the lexical item,
the ultimately verbal origins of the se component are not apparent,
showing the extent to which reanalysis has taken place.

In section 3.7.1 we have examined instances of the morpheme se
as the verb 'resemble, be like', as a comparative particle, as a
complementizer introducing sentential object complements, as a
participant in marking a range of adverbial clauses, and in frozen
combinations serving as clause-introducers. In so doing, we have
charted a possible path of gradual historical change encompassing
semantic depletion, loss of syntactic capabilities, and
re-structuring of sentence components and clause relationships.

3.7.2 Twi se: the verb 'say' as quotative.

Like se, the verb se 'say' introduces sentential complements.
When the verb is used as a semantically redundant quotative, it fails
to take affixes. Citations from Riis and Christaller suggest that in
the serial configuration there has been a recent shift from verb to
quotative particle. This development is significant, because verbs of saying in related languages appear to have undergone similar shifts; moreover, these languages have extended the morpheme's function even further to introduce clauses with a range of complement and adverbial functions, comparable to the 'resemble' set discussed in the previous section.

Se 'say' occurs as a main verb, as in

(311)(a) o-n-se  biribi
       he-NEG-say something
       'He said nothing.'

       [Riis 1854:228]

(b) ko-se nô, na wanni jkwaseasgm
       go-say him CONJ he-NEG-take folly
       'Go, tell him, in order that he do not commit a folly.'
       [Christaller 1875:174]

Its grammatical object can be a semantic Objective identifying what is said, as in (311a), or a semantic Dative, identifying who is spoken to, as in (311b). It occurs in a serial verb configuration with the verb fre 'call' as in (312). (This use resembles the structure with se 'like' marking factitive objects as discussed above in 3.7.1.5.)
(312) wofré nè díg sè Kofi [Christaller 1875:117]
they-call his name say Kofi
'They call him "Kofi".'

As a main verb, se introduces direct speech, as in (313), where the exact words of the speaker are quoted.

(313)(a) onihaf sè: gkyéna meye [Christaller 1875:156]
sluggard say tomorrow I-FUT-do
'The sluggard says, "Tomorrow I will do it."'

(b) o-se: Kọ asú [Christaller 1875:165]
he-say go water
'He says, "Go for water."'

The main verb se also introduces indirect speech, where the message of the speaker is reported but not quoted directly, as in

(314)(a) ɔ-se membra [Boadi 1972:144]
he-say I-IMP-come
'He says I may come.'

(b) o-se ọmma [Christaller 1875:157]
he-say he-NEG-come
'He says he will not come.'
(In (314b) the second 'he' has two readings, one coreferential with the first 'he', and one not coreferential, as is true of the English translation.) The same verb se, with a sentential complement, can introduce thoughts or intentions which are not actually uttered, as in

(315) akura' ho o-se prènom nsú na wannyá bì
village there he-say he-drink water CONJ he-NEG-get some

"In that village he thought to drink water; but he got none."

[Christaller 1875:156]

Se introduces direct speech in serial-like constructions, as in (316). In (99a), se occurs after the verb ka 'speak' in a serial-like configuration, but without the expected negative prefix. In (316b) the negative prefix is present on the first se but absent from the second se.

(316) (a) j-ká se: Sé oyeé me no sá' nà meye no
NEG-speak say as he-did me DEF, thus FOC I-PUT-do him

'Say not, "I will do so to him as he has done to me."'

[Christaller 1875:165]
(b) obi j-hu nipa dakoro n-se no se:
person NEG-see man day-one NEG-say him say

woafog
you-PERF-be-lean

'Nobody seeing (or, having seen) a man one day (for the first time), says to him (on the same day): you have become lean.' [Christaller 1875:154]

The presence of two verbs se in (316b) appears redundant; the fact that the se introducing the quotation fails to take prefixes suggest that it is becoming defective in form, losing verb meaning and serving as a grammatical function word. Indeed, according to Christaller [1881:433], se used "after a previous verb se, kə, frə, bisa, bua (i.e., 'say', 'speak', 'call', 'ask', 'reply' (CL)), etc., introducing the words spoken... is often not to be translated, and serves as a mere quotation mark."

Christaller [1881] treats defective se introducing quotes, as in (316), as a quotative morpheme or a complementizer used with verbs of speaking. The slightly earlier treatment of Riis [1854] describes se as a verb, not a mere quotative, in such environments. Riis says [1854:108]: "The verb se, 'to say', has the accessory sentence subjoined without conjunction, as it may have in English also, e.g.,
(317) Ko ka-kyerre no se ommere
        (go speak-show him say he-shall come (CL)),
    literally: 'Go, tell him, say, he shall come.'

(The verb kakyerre 'tell' belongs to the semantic class of verbs of
speaking, along with other examples in Christaller's list immediately
above. Its formation as a compound is discussed earlier in 2.1.6.)
The point here is that Riis considers se in (317) to be a verb in a
regular serial verb construction, taking a sentential object. Riis
notes the use of the verb se to introduce quotes. He says [Riis
1854:228]: "It is used especially in quoting the words of another
person...When thus used in the negative, it is generally put twice,
e.g.

(318) Onipa reba, wo-n-se n-se: bera
        (man PROG-come-COND you-NEG-say NEG-say come (CL))
    'When a man is coming, you do not say: come.'

Riis's report of examples like (318) is significant because in
(318), unlike (316), the quotation-introducing se has a negative
prefix n-. It is reasonable to make the ability to take the negative
prefix a qualification for verb-hood, and this appears to be what
Riis has done. He does not comment on the semantic redundancy of the
presence of two verb forms nse. The presence of the negative prefix
on the second se suggests that it is formally a verb in a serial
construction. But the fact that a second verb 'say' in this context
is semantically superfluous suggests that its function may be more
grammatical than lexical--its meaning may be shifting from that of the lexical verb 'say' to that of a grammatical form-word functioning as a quotative marker. A negative prefix on a "pure" quotative marker is semantically unnecessary and formally inappropriate, and, interestingly, we find that it is missing from Christaller's later examples, as in (316). It may be that at the time of the field work of Riis and Christaller (roughly about 1850 and a generation later), speakers were in the process of discarding the functionless prefix on the verb-turned-quotative se. A clue that the situation was already unsteady for Riis's speakers is the use of the word "generally" by Riis in describing the use of the prefix with se after negative verbs (above).

For a Kwa language, this instance is about as close as we come to actual substantiation in written records at different points in time for this kind of change. By itself, it may not be very impressive to those who require extensive written documentation for every hypothesis. However, Riis and Christaller were both careful field linguists, and we have no particular reason to doubt the accuracy of these reports. The use of a prefix on a single grammatical morpheme is a relatively small detail that could reasonably be expected to shift in a single generation from "generally" to "generally not" occurring. The difference between Riis's and Christaller's reports constitutes one more small bit of evidence consistent with the type and direction of language change we have been discussing--namely, the gradual loss of verb meaning and verb status as demonstrated by decreasing ability to take the full
complement of affixes normally carried by verbs, leading eventually to syntactic reanalysis of verbs as other grammatical categories.

The reanalysis of s_ 'resemble' as a complementizer has progressed much further than the reanalysis of se 'say' has, but the fact that historically unrelated 'say' morphemes in related languages have carried out such a reanalysis to a much greater extent, comparable to Twi s_ 'resemble', suggests that the changes in se 'say' are due to the same historical process. The development in related languages is discussed below.

3.7.3 Comparison of Twi se and se complementizers.

The two Twi complementizers we have discussed are notably similar in phonological shape: se, from the verb 'say', occurring with verbs of speaking, and se, from the verb 'be like', occurring as a complementizer with a wide range of other verbs, as well as having other functions as introducer of adverbial clauses. The picture is complicated further by the fact that (as noted by Christaller [1881:433] and Ward [1945]) the quotative/complementizer has the form se in the Akuapem dialect but has the form se in the Akan dialect (including Akem and Asante). The situation can be charted as in (319).

(319)  

<table>
<thead>
<tr>
<th>DIALECT</th>
<th>VERB 'SAY'</th>
<th>QUOTATIVE</th>
<th>GENERAL COMPLEMENTIZER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akuapem</td>
<td>se</td>
<td>se</td>
<td>se</td>
</tr>
<tr>
<td>Akan</td>
<td>se</td>
<td>se</td>
<td>se</td>
</tr>
</tbody>
</table>

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If we assume that the phonological values of the vowels in the complementizers accurately reflect their verb sources, we can interpret (319) as reflecting a historical situation in which the complementizer for verbs of speaking is historically related to se 'say' in Akuapem dialect only, while in Akan the complementizer for verbs of speaking is historically related to se 'be like'; for Akan, since many other verbs also take se, verbs of speaking are not distinguished from other verbs in terms of complementizer co-occurrence.

In many related languages such as Ewe, Ga and Yoruba (as well as in a number of historically unrelated languages such as Tamil, Nepali and Ponapean) (see Lord 1976 for discussion) a verb 'say' is homophonous with a 'that'-complementizer (frequently occurring with a wider range of verbs than just verbs of speaking) and often other subordinate clause markers. As suggested in Lord [1976], these function words developed historically from the verb 'say', usually used initially as a quotative, then as a complementizer and a subordinating conjunction. If Twi followed this pattern, we would expect to see se (from 'say') used in more contexts as complementizer and subordinator, instead of just as Akuapem quotative as charted in (319).

Let us consider the possibility that Twi complementizers developed much like those in related languages, and that the present distribution is due to later changes. One factor possibly contributing to the atypicality of the Twi complementizer pattern is the closeness of the vowels /a/ and /e/ within the phonological

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system. The pronunciation of se is [sɛ], more or less, and se is somewhere between [se] and [sx]. The vowel /ɛ/ has a variant [e] in compounds in certain environments. Speakers of related languages who hear Twi may not sort out all these vowels correctly at first, especially if their own vowel harmony systems do not quite correspond to that of Twi. Furthermore, if the match of complementizer and context in their languages does not correspond to the Twi pattern, we would not be surprised to find some variability in the se/se distribution in the speech of these non-native or bilingual speakers. Children learning to speak might also show some variation in complementizer choice. In a situation in which se and se are both heard as complementizers, with the choice between them made on the basis of semantic class of the verb, it is conceivable that the hypotheses of new language learners might not correspond exactly to the adult standard, and that the resulting mistakes or inconsistencies would tend to be tolerated and perpetuated. These new learners might be children, or adults with a related language's system of verb class-complementizer-subordinator correspondences already firmly in place. The resulting change in the form used in a given environment—from se to sg, or vice versa—could mislead observers regarding the historical scenario for complementizer development.

If speakers of related languages were falling back on their own first-language patterns, we might expect to hear more se's (from 'say'). But speakers of these languages may not be aware of the historical connection between homophonous verbs and complementizers;
speakers of Ga, for example, do not consciously relate the ـــ complementizer to the verb ـــ 'say'. So the overall influence of many multi-lingual or non-native speakers would not necessarily be toward making complementizers homophonous with 'say', but would nevertheless probably be toward more Twi complementizer uniformity in general—that is, simplification to either ـــ in most contexts, or to ـــ in most contexts. This leaves open the question of whether a verb/complementizer historical relationship in one's native language could affect ('interfere' with) the learning of Twi even though the learner was not consciously aware of the connection. The widespread use of ـــ as a complementizer in English-based Caribbean pidgins and creoles suggests that the connection was probably firmly present in the grammatical systems of the West Africans who spoke them (see below).

What did Christaller have to say about the historical source of Twi complementizers and subordinating conjunctions? In his description of subordinate clauses, he distinguishes between (i) "the comparative particle ـــ 'as' (from ـــ 'to be like')" and (ii) "the explanatory particle ـــ 'that, whether, if' (probably derived from ـــ 'to say')" (Christaller 1875:91). That is, some instances of ـــ are from ـــ. Christaller does not discuss his reasons for deciding which ـــ's are from ـــ and which ـــ's are from ـــ.

From the examples Christaller cites, it appears that his sorting was made on grounds that were at least partly semantic. His list can be described as follows (using my descriptive terminology, not his).

Christaller's examples of instances of (i) the comparative
particle șe 'as', from șe 'be like', include sentences with adverbial clauses of manner, degree, and extent, including:

(a) sentences of the form [S șe(nea) S], with șe(nea) translatable as 'as, as if'; and

(b) sentences with an initial clause introduced by șe, which is translatable as 'as far as, to the extent that, just as'.

Other instances of this "comparative particle" șe are exemplified (by Christaller) in sentences with sentential complements introduced by şenea 'how' (or by șe, apparently when a şenea paraphrase exists), including:

(a) sentences of the form [șe(nea) S VP] (e.g., "How he did it was fearful"): where the sentential complement serves as the subject; and

(b) sentences of the form [NP V șe(nea) S], (e.g., 'Look how he did it'), where the sentential complement serves as the direct object.

Most of the other environments in which we have previously encountered șe are considered by Christaller to be instances of "the explanatory particle șe 'that, whether, if', probably from șe 'say'."

In this category Christaller includes:

(a) sentences with adverbial clauses of result and purpose, of the form [S şe S] with şe translatable as 'so that', 'in order that';

(b) sentences with adverbial clauses of cause and condition, of the form [șe S, S], with şe translatable as 'if, when, although'; and

(c) sentences with sentential object complements, of the form [NP V şe S], with the şe complementizer translatable as 'that'.

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In his grammar [1875:91] Christaller cites sentences with sentential objects following the verbs in (320) as examples of the explanatory particle (from se 'say').

(320) te 'hear' bisha 'ask'
     hu 'see'    se 'say'
     susuw 'think' sere 'beg'
     suro 'fear'  ka kyere 'tell'

But he cites the same set of sentences as examples of the comparative particle (from se 'be like'). This double listing could reflect uncertainty, or a change of mind on Christaller's part. (It could imply that at some earlier point a se and a se complementizer for these verbs merged as se; however, if this were his view, it seems likely that he would have given an explanatory comment at some point.) Christaller's inclusion of these complements as examples of the comparative particle se (from se 'be like') is probably unintentional, since the same section does include a few samea complements. It is significant that when he cites examples of the conjunction se from se 'to be like' in his dictionary [1881:432], that particular set of examples from his grammar (specifically, section 255, 3b, p. 156) is missing; they appear as instances of se from se 'say' [1881:433]. The dichotomy is neater and more cohesive with the set of 'that'-complementizer examples with the verbs in (320) attributed to se 'say, and I assume that is what Christaller intended.
The significance of Christaller's sorting of se is that he attributes so many occurrences as having evolved from se 'say', even though the phonological form is se. Although he does not justify his sorting, he may have been assuming that the Twi historical development paralleled that of related languages in which 'say' is the source; a clue that this may have been a factor is his mention of the comparable Fante and Ga 'say' complementizers in the dictionary entry for se [1881:433].

Where does this leave us? The evidence suggests two major possibilities. In one plausible scenario, the defective verb se is used in Akuapem as a quotative to introduce direct and indirect speech after verbs of saying like 'say', 'speak', 'call', 'ask', 'reply', etc. The Akem and Asante dialects use se as a quotative, which may be the complementizer se from the verb se 'be like', whose development is discussed in 3.7.1.2. Other subordinating conjunctions, in Akuapem as well as Akem and Asante, have developed from se 'be like'.

According to the other scenario, se 'say' was the source of quotatives for all dialects; due in part to the phonetic closeness of e and e, new and/or bilingual speakers may have at some point contributed to a shift of the dividing line between se complements and se complements—that is, the Akem and Asante dialects could have shifted the semantic class of verbs of saying from se to se as a complementizer. And, it is conceivable that, as Christaller suggested, the se complementizer and the se marker on clauses of
result, purpose, and condition came from se originally but speakers shifted the vowel. Such a scenario would bring Twi complementizer development closer to what has been reconstructed for related languages such as Ewe, Ga, and Yoruba.

In conclusion: for other languages, it is relatively clear that a range of complementizers and clause introducers developed from a verb 'say'. For Akan/Twi, the picture is less clear: the history could have paralleled that of related languages to some extent and then been re-structured. However, as section 3.7.1 suggests, we do not need to resort to such a scenario to trace a plausible history of the present complementizer situation. It may well be that Twi differs from many related languages in that the historical source of most of its complementizers and subordinators is the verb 'be like' rather than the verb 'say'.

3.7.4 Ewe 'say' complementizer and clause introducer.

In a number of related languages, the verb 'say' has moved from verb to quotative morpheme to generalized 'that'-complementizer and, in some cases, to subordinating conjunction. Two Proto-Bantu roots for 'say' are gamba and ti, and each of these appears to have a string of cognates in Niger-Congo languages. The gamba-related set includes forms like qba, ka, ks, ke, kpe, be, for example, and the ti-related set appears to include ti, te, se, se, de. In some cases the shift of 'say' from verb to complementizer has been accompanied by the development of logophoric pronouns. This section discusses de-verbal 'say' complementizers in Ewe, and following sections
discuss similar developments in Ga, Engenni, Gokana, Kusal, Idoma, and pidgin and creole languages.

Like Twi se 'say', the Ewe verb bè 'say' functions as a quotative with verbs of saying. But the Ewe quotative has extended its function to serve as complementizer with verbs of mental action and perception as well. In addition, it has come to function as introducer of purpose clauses and noun complements.

The Ewe verb bè 'say' takes sentential complements representing reported direct and indirect speech, as in

(321) me-be mewè
    I-say I-do-it

'I said, "I did it."' or 'I said that I did it.'

It is used with verbs of saying to introduce reported speech, serving as a required quotation-marker in structures like (322) and (323), which would be ungrammatical without bè.

(322) megbé be mewè
    I-say (say) I-do-it

'I said, "I did it."' or 'I said that I did it.'
(323) meyó vinyéa bé adzó

I-call child-my [say] adzo

'I called my child "Adzo."' or

'I called my child Adzo.'

It also functions as a complementizer introducing sentential complements following verbs of mental action and perception such as those in (324), as in (325).

(324) gbló 'say'

bu 'think'

x̱se 'believe'

nya 'know'

se 'hear, perceive'

nya 'know'

ná 'make sure'

é jki édzi 'remember (lit., arrange eye top)'

ló jé édzi 'agree (lit., accept reach top)'

lé mó 'permit (lit., leave pathway)'

(325) me-dí bé máfie awua léwó

I-want [say] I-SBV-buy dress some

'I want to buy some dresses.'

In sentences like (325), bé is no longer a verb. It does not have the full meaning of the verb 'say'; (325) does not mean that the
speaker said 'Let me buy some dresses' (or said anything at all, for that matter). (In this context, Heine and Reh (1984:252) say that the Ewe verb is "desemanticized to a complementizer.") When it functions as a complementizer, be does not take tense-aspect markings or pronoun prefixes like true verbs in serial verb constructions. An alternative form of the be complementizer is bêna, where -na is recognizable as the Habitual suffix; however, the complementizer bêna no longer carries Habitual meaning, and the -na survives as a fossilized aspect marker on something that used to be a verb. A morphologically similar complementizer, bêê, occurs in nearby Awutu. In Akan, a proverb or parable (i.e., a 'say-ing') is e-be.

The Ewe pronoun system in be complements shows the effect of the earlier identity of be as a verb of saying. The referent for the pronoun in the complement clause in sentences like (322) is clear, whether the interpretation is direct or indirect quotation. But there may be ambiguity of reference if both main clause and indirect quotation contain a third person pronoun, as in the English sentence He said he left, where the second he may or may not be coreferent with the first he. Ewe avoids ambiguity here by using the regular third person singular pronoun e in the complement when it is not coreferent with the matrix subject, as in

(326) é-be  e-dzo

he-say he-leave

'He said he left.'
When the pronoun in the be clause is coreferent with the matrix subject, the form ye, probably historically related to the first person singular independent pronoun nyê, is used, as in (327), so that (327) is historically 'He said (quote) I left.'

(327) e-be  ye  dzo
     he-say SRP  leave
  'He said he left.'

This ye has been called the "self-reporting pronoun" (SRP here), and is described in Clements (1972 and 1975). It is not just another third person pronoun form, since it can also mark coreference with a subject in second person, as can be seen by comparing (328) and (329).

(328) e-bê  wô-a-va
     you-SG-say they-SBV-come
  'You said they would come.'

(329) e-bê  ye-wô-a-va
     you-SG-say SRP-PL-SBV-come
  'You said you (PL, including the speaker) would come.'

This system enables Ewe to avoid the hopeless ambiguity of the English translation of a sentence like (330), from Clements (1972).
(330) é₁-gbló ná é₁₁ be₁ ye₁₁ dyi₁ ye₁ gake₁ ke₁₁ dyi₁
he-tell give him (say) he-EMP he-bear SRP but SRP be-worthier
"He₁ told him₁₁ that he₁₁ begot him₁, but he₁ was worthier."

In Ewe a verb of negative import, such as gbe 'refuse', followed
by the be complementizer, takes a complement clause with overt
negation, as in (from Kozelka 1980:141):

(331) dawó gbe be ye-ma-的手" to-me-0
.sister-your refuse (say) SRP-NEG-go-to river-LOC-NEG
"Your sister refused to go to the river."

The English gloss of the complement does not contain a negative, but
one literal rendering of the Ewe morphemes might be something like
"Your sister refused, saying, I won't go to the river." This
grammatical pattern reflects the earlier status of be as the verb
'say', with a complement clause with first person pronoun subject.

This "self-reporting" pronoun ye is not a reflexive; it does not
occur in simplex. The Ewe reflexive is expressed with a different
word, .{okui}, used with possessive pronouns. The self-reporting
pronoun ye occurs only in clauses introduced by be, and it occurs
whether be is appearing as a verb or as a verb-turned-complementizer.
Clements (1975:141) calls the Ewe pronoun "logophoric," a term used
by Hagege (1974), and describes it as denoting "reference to the
individual whose speech, thoughts, or feelings are reported or
reflected in a given linguistic context."
When the morpheme bé functioned as the verb 'say', it determined the choice of pronoun in the reported-speech clause: the pronoun was semantically appropriate, given the meaning of the verb. Later, after both verb and pronoun have become largely bleached of lexical meaning, the morpheme bé still conditions the choice of pronoun, even though the clause no longer necessarily reports speech. The rule has lost its semantic motivation, and survives as a somewhat idiosyncratic requirement within the grammar system. We would expect speakers eventually to drop a rule that serves no function. The fact that this rule has been retained suggests that it has a useful function in communication; this function is apparently to maintain distinct pronoun reference.

Thus, a morphosyntactic configuration reflecting the pragmatics of reporting direct speech has, over time, lost that signification and has taken on the grammatical function of signalling pronoun reference.

Ewe resembles a number of Kwa languages in which a verb 'say' has become grammaticalized to varying degrees as a marker of reported speech or a general complementizer/subordinator. As a consequence, these languages often show a special set of pronouns, especially for reference to the speaker, in reported speech. In fact, the presence of special pronouns in this context has been suggested as a syntactic criterion for membership in the Kwa group (Armstrong 1963). But this historical development is by no means limited to Kwa or even to African languages. The pronouns themselves have not been passed along as an independent syntactic feature in either the genetic or
the areal transmission model. Rather, they are a secondary effect of the verb's metamorphosis, and remain as a clue to the nature of the earlier change.

As illustrated above, be can follow verbs of saying and mental action, where it functions as a 'that'-complementizer; the sentential complement it introduces is an argument of the verb. However, be can introduce a clause which does not function as an argument of the verb. For example, it can follow an intransitive verb, as in (332), where it serves to introduce a clause having a purpose relation with the prior clause.

(332) é-do go be ye-a-äu nú
    he-go-out (say) SRP-SBV-eat thing
    'He went out in order to eat.'

In a single utterance, the morpheme can appear as a 'say'-quotative and also as a conjunction introducing a purpose clause, as in (333) (from Duthie 1984:65).

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(333) addá bé, né hó la kpó ye-wó bó ye-a-gá-zo

hunter_i say if eagle_iii the see LOG_i-PL that LOG_iii-SBV-again-get

nyónuví lá, ye-a-fo tú-i, wó-a-kú énumáké

girl the LOG_i-SBV-hit gun-it_iii it_iii-SBV-die at-once

'Hunter_i said, if the eagle_iii sees them_1 so as to get the girl again, he'd_i shoot it_iii dead at once.' (The hunter here is rescuing the girl from the eagle.)

Here the logophoric pronouns are indexed. Note that the logophoric pronoun within the bé-marked purpose clause indicates coreference with the subject of the conditional clause, 'eagle'. Within the complement of the 'say' quotative, but outside of the purpose clause, the references to the eagle are expressed with regular pronouns, and logophoric pronouns refer to the subject of 'say', which is 'hunter'.

In other contexts bó serves to introduce result clauses, complements of impersonal-subject constructions, and subject complements, as in (334)-(336), respectively.

(334) nuka wowó mi bó mi káñá miete dzí le egbó

what he-do you (say) you all you-leave

'What has he done to you, that you should all leave him?'

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(335) e-nyo  bē  kofi wọ  dọa
   it-be-good (say) Kofi do  work
   'It is good that Kofi did the work.'

(336) bē  made wọ-gbọ  dọdọ  sọ  gbọ  ná  m
   (say) I-go them- vicinity just be-equal for me
   'That I just went to them is good enough for me.'

In (337) the function of the 'say'-complement approaches that of a relative clause (Westermann 1930b).

(337) dọ  lè  ngonye  bē  mawọ
   work be-at front-me (say) I-SBV do
   'Some work is before me that I should do' or 'I have some work to do here.'

The 'say' origins of bē can be dimly grasped in clauses with a purpose relationship like those in (332), where a literal paraphrase of the ancestral forms might be something like 'He went out saying "I would eat"'. But a 'say' signification for bē becomes increasingly difficult to find in contexts like those in (334)-(337). Example (336) is particularly interesting, because bē occurs in sentence-initial position introducing the sentential subject noun phrase. The particle in (336) is far removed functionally and syntactically from the verb in (321), but by tracing several small

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steps along a path of historical reanalysis, we can conclude that their historical relationship is likely.

3.7.5 Ga 'say' complementizer and clause introducer.

In Ga, spoken in southeastern Ghana adjacent to both Twi and Ewe, there is a verb kẹẹ 'say' and a 'that'-complementizer ákə, as in (338), as described in Lord (1976).

(338) tẹtẹ le ákə ayí tsù níi le

Tete know (say) Ayi work thing the

'Tete knows that Ayi did the work.'

Present-day speakers do not relate the verb kẹẹ 'say' and the complementizer ákə, but a historical relationship is likely. A plausible historical source for the á- prefix is the Ga subjunctive prefix á- (the Akan speakers next door mark subjunctives and verbs in series with an a- prefix). If the earlier verb form were ákẹẹ, with the á- marking subjunctive or sequential, a common tone rule of Ga could well have changed the tone sequence from HLH to HD, as in ákẹẹ, which as a grammatical morpheme could have become shortened to ákt.

The Ga complementizer can occur with verbs of saying and mental action with complements in declarative form, as above, and also with complements in alternative question form, as in the following.

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(339) ṭeṭe bi Ᾱkē ayī tsù ni 1 le 1ō
Tete ask (say) Ayi work thing the Q
'Tete asked whether Ayi did the work (or not).'

(340) ṭeṭe tsuí mii-ye Ᾱkē ayī ba’a-tsù ni 1 le 1ō
Tete heart PROG-eat-away (say) Ayi FUT-work thing the Q
'Tete is worrying whether Ayi will do the work (or not).'

(341) ṭeṭe le Ᾱkē ayī tsù ni 1 le 1ō o etsuwā
Tete know (say) Ayi work thing the or he-work-NEG
'Tete knows whether Ayi did the work or not.'

(342) eehōo ni 1 Ᾱkē ewu ba’sē 1ō
she-PROG-cook thing (say) her-husband FUT-eat Q
'She is cooking to see whether her husband will eat (or not).'

It can also occur where the preceding verb is not restricted to
saying or mental action, as in (342), there marking the relationship
between the clauses that precede and follow it. Its distribution,
properties, and form suggest that it developed from a verb 'say', as
described above for Ewe.

Ga conditional clauses are introduced by kē, which is probably
historically related to the verb kē ̣ 'say' and the complementizer
ńi, as in (343a). The conditional clause can occur in
sentence-initial position, introduced by kē with a focus morpheme, as
in (343b).
(343)(a) máha o niyenii ké oba
I-FUT-give you food (say) you-come
'I'll give you some food if/when you come.'

(b) ké dzí obá le, máha o niyenii
(say) it-be-that you-come SPEC I-FUT-give you food
'If (it's the case that) you come, I'll give you some food.'

3.7.6 Engenni 'say' complementizer and clause introducer.

The distribution and properties of the Engenni quotative ga are similar to the pattern sketched for Ewe and Ga. Because of its "defects", its verb status is marginal, and (if labels are necessary) it is probably better labeled as a "particle". Verbs in Engenni take on different tone patterns for different tenses and aspects, but ga has an invariant high tone. As described in Thomas (1978), the morpheme can be used to introduce direct and indirect speech, either alone or following a verb of saying, as in (all Engenni examples are from Thomas 1978):

(344) àlibò ga õkí dhí dhú əvù əvù a
tortoise FRT he not-eat never one one even
'Tortoise said that he would never eat a single one.'

(345) avuramu nà i wei ga mì moni wò nì
woman the SEQ say FRT 1-sg-subj see 2-sg-obj CPL
'The woman said, "I have seen you."'
Verbs of saying which can be followed by the ga particle include:

- bhine 'ask'
- kali 'rebuke'
- gba 'tell'
- gu 'promise'
- ma 'teach'
- ko 'call'
- wei, wo 'say'
- tyi 'shout'
- do 'argue'
- vye 'cry'

It also occurs as a 'that'-complementizer after verbs of perception and mental action such as:

- moni 'see'
- wa 'wish, want'
- syiene 'hear'
- tou ko 'think (lit., take call)'
- nomu 'know'
- ma moni 'perceive (lit., show see)'
- me 'agree'
- geni moni 'realize (lit., look see)'

as in:

(346) mi tou ko ga buh nomu me buh ne
I think PRT you know me keep CPL
'I thought you knew me.'

Like the Ewe quotative/particle, the Engenni particle also introduces purpose clauses:
(347) gbala ga bha kou dhou etai
        they branch PRT they will-collect take fire
        'They branched off to collect some embers.'

(348) ... o tou owutumu na kyeye i ga o tou e ti
        he take rat the give him PRT he should-take him go
        '...he gave him the rat to take there.'

Like the Twi complementizer se, it also occurs with other morphemes in combinations which are frozen to some degree, for example to introduce comparison clauses, meaning 'as if', in ee ga, and to introduce a clause expressing unfulfilled condition as o i za ga, 'it was that'. The distribution of ga resembles that of 'say' complementizers in related languages. Its form suggests its relation to the "gamba" group of 'say' verbs in Benue-Kwa.

Thomas (1978:49) calls ga a "speech particle" when it marks direct or indirect speech or reported thought. When it occurs with purpose clauses, she calls it a clause introducer, distinguishing it from the speech particle because it occurs only in a purpose sentence. Based on the behavior of ga and the comparative data from other languages, I consider it likely that the various occurrences of ga in Enganni have a common historical source in a 'say' verb. The same unusual tonal behavior is found in both "speech particle" and "clause introducer" functions for ga. Typically, a word-final vowel is elided when the following word begins with a vowel, and its tone
is lost, as in a verb + object sequence. The behavior of ga differs in that the word-final vowel is elided but the tone is retained. For example, if high-tone ga is followed by a low tone vowel, the a of ga is elided but the following tone becomes a HL glide. Thus, the tonal behavior of ga diverges from verbs in just the same way in both its quotative and clause introducer functions.

The use of pronouns in reported speech in Engenni, as described by Thomas (1978:23), suggests an intermediate stage between direct quotation and indirect quotation, providing an illustration of how a logophoric pronoun set can develop in small steps from an unremarkable pragmatic usage to a language-particular grammatical rule.

In narrations in general, the first person pronoun form is typically used for coreference with the speaker in direct quotation. In Ewe, this form apparently came to be used for coreference with the speaker/subject in indirect quotation as well, and this gave rise to the current "logophoric pronoun."

In a narrative in English, within direct quotation the addressee in the story is referred to with a second person pronoun, as in John told Bill, "You must go". In indirect quotation, the addressee is referred to with a third person pronoun, as in John told Bill that he must go. However, in the latter case the indirect quotation form is ambiguous: the he could also refer to John or to someone else, like Joe or Ed. As English does, in direct quotations Engenni uses the second person pronoun for the addressee in the story, as in (345) above. As English does, in indirect quotations it uses the third
person pronoun for the addressee, as in

(349) ëlibò  í wo kye omi ni el ga ọ yìlà
   tortoise SEQ say give child his PRT 3-sg-subj should-stand
   'Tortoise told his child to stand up.' ('Tortoise told his
   child, that he should stand up. ')

In an indirect quotation, a reported command uses the subjunctive
verb form, as in (349), which corresponds to the imperative verb form
in a direct quotation.

However, in Engenni, unlike in English, there is a third option
for reported speech, in which a reported command is in the
subjunctive, like indirect quotation, but the addressee in the story
is referred to with a second person pronoun, like direct quotation.

An example is

(350) ó wei ga...bhù  tou  eì ka ọki nàa ọwó
   hei say PRT 2-sg-subj should-take him SEQ he with 2-sg-obj
   wu     za
   should-die stay
   (a) 'He said, "Look after me, and I will die with you."'
   (b) 'He said that she should look after him, and he would
die with her.'

Thomas (1978:23) calls this third option "semi-indirect quotation."

She provides two glosses, as above; English has no exact counterpart.
In (350) the pronouns bhu and iwo are second person, and they transparently refer to the addressee, even though the reported speech verb is in the subjunctive. The pronoun oki in (350) is a special form indicating coreference with the subject of the main clause, part of a logophoric set of pronouns for singular and plural subject and plural object in Enganni. These special pronouns are used in indirect quotation, semi-indirect quotation, and purpose clauses introduced by ga. The regular third person singular subject pronoun is o, as in (351), but when the referent is the main subject, the logophoric pronoun oki is used, as in (352).

(351) ãmo nà wei ga ḍë gbei èseni nà
child_{i} the say PRT he_{i} kill fish the
'The child_{i} said that he_{i} caught the fish.'

(352) ãmo nà wei ga oki gbei èseni nà
child_{i} the say PRT he_{i} kill fish the
'The child_{i} said that he_{i} caught the fish.'

Analogy with the second person pronouns in (350) (as well as with other languages) suggests that oki might have had its origins in an earlier first person pronoun form. One clue is the present-day function of oki as a demonstrative adjective 'this', for which the speaker-directed deixis is suggestive of a first-person source.

For singular object pronouns the same form a is used in both logophoric and non-logophoric contexts, as in (350), suggesting that,
if there was an earlier distinction for singular object, it has been regularized.

Engenni has another clause-introducer, na, which is used after sensory verbs and before circumstance/manner/consequence/purpose clauses and relative clauses. The logophoric forms are not used for coreferent pronouns after na, as illustrated in (350), where the regular third person pronoun is used even though it is coreferent with the main subject. Note that the clause relationship in (353), with na as complementizer, parallels the clause relationship in (347) with ga as complementizer.

(353) ṣ̄ vow na o si bidha
   *he* pack CPTR *he* will travel
   'He packed for travelling.'

This na may be historically related to the na occurring with the sequence/consequence particle ka, in kana, introducing purpose/result clauses. In these clauses the special logophoric form is also used for coreferent pronouns. Assuming the special pronoun came from erstwhile reported speech, it is possible that, when ga came to introduce purpose clauses, the use of the special pronoun was generalized to other clauses with the same purpose relationship, including those introduced by kana. (The widespread occurrence of ka as a verb of saying in related languages suggests the additional possibility that the Engenni ka morpheme could have developed from a quotative, motivating the use of logophoric pronouns in the
complement clause.)

Interestingly, the use of direct quotation in Engenni narratives appears to correlate with the saliency or immediacy of the discourse. If the speaker is first or second person (i.e., high on a topicality hierarchy), direct quotation is used; if the speaker is third person, all three types of quotation are used, with indirect predominating. When the speaker is first or second person, in Engenni or in English, there is little danger of confusing the speaker with a third person in the context of reported speech, whether direct or indirect, because pronoun reference is straightforward and unambiguous. But when the speaker is third person, indirect quotation invites ambiguity in languages like English, as the glosses for (26) suggest (try substituting he for she, and him for her, in (26b), and the references become ambiguous). In Engenni, since according to Thomas (1978) a majority of quotations with third person subjects are indirect, a system for signalling third-person speaker coreference would have greatly facilitated communication, and would consequently have been likely to be retained in the language. It appears that this has been the case.

3.7.7 **Gokana 'say' complementizer.**

The development of a complementizer from the verb 'say' in Gokana has been accompanied by the development of a special system for pronoun reference. The occurrence of logophoric pronouns in Gokana, a Cross-River language spoken in Nigeria, is described by Hyman and Comrie (1981). According to Hyman and Comrie, the
complementizer \( k' \) is derived from the verb \( k' \) 'say'. It introduces complements after verbs of saying, mental action and perception ('know, want, show, fear, see, hear'). There is a logophoric verbal suffix, \(-\text{EE} \), similar in form to a third person singular object pronoun, phonetically \([\varepsilon]\) or \([\varepsilon]\), with length and nasality depending on preceding phonological context. A clause introduced by \( k' \) can contain the logophoric suffix under coreference with an NP in the matrix clause. As Hyman and Comrie (1981:31) describe it, when the verb 'say' becomes a grammatical morpheme, "its complement clause is grammaticized as an appropriate environment for logophoric marking."

The use of the logophoric suffix extends beyond reported speech to "verbs reflecting an individual's point of view, feelings, state of knowledge, or awareness."

In Gokana the use of 'say' complements has been extended to purpose clauses and complements of verbs with empty pronoun subjects (examples from Hyman and Comrie (1981)):

(354) \( \text{lēbārē} \ du \ k' \ ba' \ mən-\text{EE} \ \varepsilon \)

Lebare came (SAY) they see-LOG him

'Lebare came for them to see him.'

(355) \( \text{a k'y} \varepsilon \ \text{lēbārē} k' \ aë \ d\text{-EE} \)

it angers Lebare (SAY) he fell-LOG

'It angers Lebare that he fell.'

Since the logophoric morpheme is a verb suffix in Gokana,
tracing the historical route from a quotative complement is less obvious than in, say, Ewe. However, the parallels between the languages in the use of the 'say' verb and the contexts to which its uses have been extended suggest that the utilization of logophoric marking followed from the meaning of the 'say' verb and its pragmatic consequences for reference.

Hyman and Comrie note that languages providing two sets of pronouns, one logophoric, one non-logophoric, include Ewe, Yoruba, Igbo, Idoma, Mundang, Tuburi, Enganni, Aghem and Ngwo.

3.7.8 Kusal complementizer.

Data suggest that the use of the verb ye has been extended from quotations to other kinds of complements in Kusal, a Gur language spoken by the Kusasi people of northeastern Ghana. Data cited here are from a sketch of the syntax by Spratt and Spratt (1972). They consider quotations to be a specialized form of serial constructions using the verb ye 'that'. This verb can introduce direct or indirect quotations. It serves to introduce complements after verbs such as

- yal 'say,tell'
- bɔ'ɔs 'ask'
- bagj 'know'
- tɛɛs 'think'
- bɔɔd 'want'
- zigit 'try'

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In (356) it introduces a direct quotation, and in (357) it functions as a complementizer after the verb bɔɔd 'want'.

(356) o ye kukum ʃʃt
       he (say)-that "leper's liver"

(357) byraa bɔɔd ye o nu daam
       man wants that he drink pito

It also introduces purpose clauses, as in (358), and introduces a clausal complement after an existential verb, as in (359).

(358) o tim o ligidi ye o ti da...
       he give him money that he to buy...

(359) ka sida be ye m a sum
       and truth is that he-EMPH is good

Although Spratt and Spratt consider ye to be a verb, its meaning in these examples extends to the grammatical end of the lexical-to-grammatical continuum.

According to Spratt and Spratt (1972), the western (Tonde) dialect of Kusal uses ye as quotative/complementizer. The eastern (Agole) dialect uses ye similarly, except that after the verb to'ës 'think' it uses ka instead of ye; ka is used as quotative/complementizer in the related language Dagaari.
The range of functions of Kusal ye is comparable to those of 'say' in other languages. It is plausible that ye may have functioned at an earlier stage as the verb 'say'.

3.7.9 **Idoma 'say' and 'resemble' verb/complementizers.**

Like Twi, Idoma has complementizers homophonous with the verbs 'say' and 'resemble'.

The verb *ka 'say, speak' can take object nouns or direct speech imperatives, as in (360) and (361) (from Abraham 1951:41).

(360) o k-gajoje

he say-truth

'He spoke the truth.'

(361) o k-unogwu jano g'am

he say-Unogwu listen to-me

'He said, "Unogwu, listen to me!'"

It also serves to introduce indirect speech, and as a complementizer after verbs of thinking, knowing and hearing (Armstrong 1963:136, 148, Abraham 1951:62).

(362) n k-o waa

I say-he came

'I said that he came.'

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(363) n je  k-0    ge wa
   I know SAY-he FUT come
   'I know he'll come' or 'I think he will come.'

It is exceptional in that it elides both vowel quality and tone
before a following noun in a contraction (Idoma verbs ordinarily do
not elide tone in this environment).

The morpheme also appears introducing conditional clauses, where
the literal morpheme sequence comes from ɔ + wà + ðà + kà 'it be
thing SAY', or '(if) it is the case that', as in (from Armstrong
1963:151)

(364) ɔ' ðà    k-ɔcè    wà,  ɔl'  gèè  jìjè
   it be-thing SAY-chief come we  FUT dance
   'If the chief comes, we shall dance.'

In its range of uses, kà 'say' echoes the data for verbs of saying
and their related complementizers in other languages.

Idoma has another verb-complementizer pair, bè 'resemble', used
as a complementizer after verbs of thinking, seeing, knowing and
hearing, as in (365) (Abraham 1951:62).

(365) n je    b-0    ge wa
   I know RESEMBLE-he FUT come
   'I know that he'll come.'
Its form and meaning show some resemblance to the Awutu bɛɛ complementizer and to Yoruba bɛɛ 'the fact of being thus', as defined by Abraham (1958); cf. Yoruba contexts like ó yɛ bɛɛ 'It is fitting like that' (Awobuluyi 1978:60). The Idoma verb's phonological shape recalls the Ewe 'say'-complementizer bɛ, but this may be coincidence.

The bɛ complementizer behaves exceptionally for a verb: it links to a following low tone, and elides tone as well as vowel before a mid or high tone. Both the 'say' complementizer and the 'resemble' complementizer differ from verbs in the extent to which they allow assimilatory phonological processes. In this respect they show properties more characteristic of grammatical morphemes than of major lexical category items. The loss of formal independence reflects the bleaching of lexical content from the verb.

From the descriptions by Abraham (1951) and Armstrong (1963), it appears that the 'say' complementizer and the 'resemble' complementizer occur in similar contexts and have similar functions. They may differ somewhat in meaning and in the verbs they can follow. For example, je bɛ 'know RESEMBLE' is glossed as 'know that', while je kɛ 'know SAY' is glossed as either 'know that' or 'think that'; compare (365) and (363). Further investigation might show the development of a set of two complementizer morphemes in complementary distribution based on verb class, or possibly a meaning distinction with a choice of complementizers.

The situation in Idoma echoes that in Twi, described above in 3.7.1 - 3.7.3, where both 'say' complementizer (se) and 'resemble' complementizer (sɛ) occur.
3.7.10 Parallels in pidgin and creole languages.

A verb 'say' has developed complementizer functions in West African Pidgin English and in two Surinam creoles, Sranan and Saramaccan.

West African Pidgin English is a dialect continuum, a lingua franca spoken from Sierra Leone to Gabon, with dialects varying with the first language of the speaker, according to Schneider (1966). It is not generally learned as a first language except in polyglot communities by children of African parents whose only language in common is Pidgin English. The dialect spoken in the highlands of West Cameroon is described by Schneider. The lexical items are 85% of English origin, 13% from African languages, and 2% from other European languages such as French, Portuguese, German, and Spanish. The syntax, as described by Schneider, shows parallels with West African languages.

The morpheme *say*, transparently from English *say*, is used as a quotative and complementizer, but not as a verb, according to Schneider. It occurs with verbs of saying, such as *tok* 'talk', *aks* 'ask', and *ansa* 'answer', as in (all examples from Schneider (1966):

(366) mása tók say, kom-ow

master talk *(say)* come

'The master said, "Come here."

It also occurs with verbs of mental action such as *sabi* 'know', *tíŋ* 'think', *hia* 'hear', *gí* 'believe', *mímba* 'remember', *drím*
'dream', as in

(367) ðì pìpù sàbì sèy, ìòììg göì dëy
  all people know (say) meeting FUT LOC

'All the people know that there will be a meeting.'

Schneider (1966:79) calls sèy a "subordinating functor" which precedes statements and opinions and "permits the speaker or subject to express an opinion, quote directly or speak his mind. The resulting construction is always fixed and usually functions as the object or complement of a verb."

Interestingly, the speakers use a complementizer morpheme, as in English, to introduce complement clauses following verbs of speaking or mental action. However, instead of basing its phonological shape on the English complementizer that, they use the form of the English verb say. There is no relationship between the verb say and the complementizer in English, but there is such a relationship in the first languages of many pidgin speakers.

This same morpheme is used in contexts that are similar to the Twi and Idoma uses of a 'resemble' complementizer, as in (Schneider 1966:106):

(368) fo chòp yù, i bì sèy, mì a chòp som simol kòwla dasòw
  eat you it be (like) I eat some small kola

'To eat you (is like) would be only an appetizer.'
Sranan, a creole language of Surinam, has a morpheme *taki*, from English *talk*, which, according to Voorhoeve (1975), many Sranan speakers interpret as a connective, while many others recognize its verbal character. It functions as a quotative/complementizer after verbs of speaking such as *taigi* 'tell', which is a contraction of *taki gi* 'talk give' (see section 3.3.6 above regarding *gi* as a de-verbal Recipient marker). While *taki* does not take a Recipient object, *taigi* does.

According to Sebba (1987:78), there is no direct evidence that Sranan *taki* is a verb when it occurs in a serial construction in the second-verb position; it fails the Predicate Cleft test for verbhood for most speakers. It occurs as a complementizer after verbs of mental action and perception such as *sabi* 'know', *frigiti* 'forget', *si* 'see', and *yere* 'hear'. It introduces clausal objects of prepositions, as does the complementizer *dati* 'that' (cf. Dutch *dat* and English *that*), as in (examples from Sebba 1987:79):

(369) kofi gwe sondro *taki* amba si en

Kofi go without (CPTR) Amba see him

'Kofi went away without Amba seeing him.'

Like the Ewe 'say'-complementizer (section 3.7.4 above), it can also introduce clausal complements in subject position:
(370) taki kofi no kiri amba meki wi breyti

(CFTR) Kofi NEG kill Amba make us happy

'That Kofi didn't kill Amba made us happy.'

It also introduces noun complements following nouns like 'fact' or 'belief', as in

(371) a don, law bribi di abi taki...

the dumb mad belief REL have (CFTR)

'the stupid, mad belief they have that...'

where it functions like the Yoruba 'say'-complementizer pé (described in Lord 1976) which introduces noun complements in addition to complements of verbs of saying and mental action, as in (from Bamgbose 1966):

(372) òrọ pé won tiè n tänkɔn ɣi

word/statement (say) they even PROG sell-things this

'this question of people selling things'

Sebba concludes that Sranan taki following a main verb is a complementizer and not a verb.

Saramaccan, another Surinam creole, has a similar 'say'-complementizer, as described by Byrne (1987:147-154). In Saramaccan the morpheme ta' is a reduction of taki 'say'. It occurs as a quotative, as in (examples from Byrne 1987):

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(373) a tāa dì mujē bi-gō a dì kéiki
he say the woman TNS-go LOC the church
'He said the woman had gone to the church.'

It also introduces complements after verbs of saying and mental
action/perception such as tākī 'say', sābi 'know', and sī 'see',
where it does not take aspect prefixes, although some speakers
permit tense or modal prefixes. Only the most conservative speaker
of those Byrne consulted allowed both tense and modal prefixes.

Byrne demonstrates that, after verbs of saying and mental
action, constituents of the complement clause such as subject,
object, or verb can occur in focus position, either at the front of
the complement clause as in (375) or at the front of the sentence, as
in (376).

(374) a sābi tāa dì wómī bi-hondi di píngo
he know (say) the man TNS-hunt the pig
'He knows that the man had hunted the pig.'

(375) a sābi tāa dì píngo (hen) di wómī bi-hondi.
he know (say) the pig (it) the man TNS-hunt
'He knows that it was the pig that the man had hunted.'

(376) dì píngo (hen) a sābi tāa dì wómī bi-hondi.
the pig (it) he know (say) the man TNS-hunt
'It is the pig that he knows the man had hunted.'
The táa morpheme also occurs after verbs of the form be + ADJ, as in

(377) a de fandondu táa di sembe bi-gó a mátu

it be important (say) the person TNS-go LOC jungle

'It is important that the guy had gone into the jungle.'

but in this case no constituent may copy or focus to clause-initial position as in (375), and locatives but neither subjects nor verbs can occur in sentence-initial position as in (376). On the basis of such possibilities for movement, Byrne suggests that táa is a verb, not a complementizer, after verbs of saying and mental action, but it is a complementizer after be + ADJ predicates. In the theoretical model assumed by Byrne, movement to the front of the clause is not possible for structures like (377) because the subordinate COMP position is occupied by the complementizer.

Regardless of the descriptive model we adopt, or the point on the continuum at which we decide that the verb should be called a complementizer, it is clear that Saramaccan shows a gradation from a 'say' verb to a morpheme with depleted lexical content and diminished morphological capacity, occurring in structures with impaired focus options.

3.7.11 Overview of some verb/complementizer correspondences.

Many languages have related 'say' verb and complementizer forms. Some of these are listed below. Some are historically related; some
are not. Many of the Niger-Congo forms are probably cognates of the Proto-Bantu roots for 'say', *gamba* and *ti*.

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Some languages have related 'resemble' verbs and complementizer forms. Examples discussed above include Twi stē and Idoma bi. Other possible instances of this correspondence are found in Sanskrit iti, Akkadian, and Lahu (Saxena 1988), and in Japanese (Nobuko Sugamoto, personal communication).

Only complementizers are summarized in this section; many of these languages also have related subordinating conjunctions marking clause relations such as purpose, result, reason and condition.

3.7.12 Conclusions.

When you examine the set of complementizers and adverbial subordinators in a Benue-Kwa language, you sometimes feel as if you are hearing yet another rendition of a familiar story, with a few details changed but with the same basic plot. Some versions end early; others add a few minor plot developments.

The favorite version starts with a verb 'say', which might take noun objects, or direct or indirect quotation complements. People tend to say what they think, and to believe what they say; the pragmatic distance is small between saying and thinking, believing, and knowing. These verbs are used together in serial constructions, where 'say' introduces the words spoken, which correspond to what is thought or believed. When the thought is not actually uttered, the verb 'say' introduces the clause which expresses the thought. When there is no actual speaking, the sense of the verb 'say' is metaphorical rather than literal; the thought or idea is left unsaid.

The story can end here. Or, once this usage has become
accepted, the use of the metaphorical 'say' verb can be extended to constructions with other verbs of mental action and perception, and people eventually tend to forget—or fail to perceive—the connection between the regular use of 'say' and the metaphorical use. At this point in the story, the pronunciation of the metaphorical 'say' sometimes drifts away from that of the verb 'say', and it is influenced by processes in the language that regular verbs may be able to resist. It often doesn't behave like a verb, and gets labeled a "complementizer". It functions as an introducer of clausal arguments to the preceding verb.

For an introducer of clausal arguments, it is no great departure to take on the additional function of introducing clausal non-arguments, i.e., adverbial clauses expressing discourse relations such as purpose, reason or condition. There appear to be individual variations and additions to the basic plot, such as the extension of the morpheme's function to the introduction of noun complements and relative clauses, or specialized adverbial relations. But the basic story line appears to be fairly consistent.

There is another, less widespread version of the story, with a different beginning. Instead of starting with a verb 'say', it begins with a verb 'resemble, be like'. This verb also starts out in a serial construction, and as its verb meaning fades, it serves as a complementizer to verbs of mental action. From this point, the story continues as in the favorite version with 'say', and the complementizer broadens its range to mark adverbial clauses.

The second version, beginning with 'resemble', does not occur
frequently. In fact, it can even be argued that it is wrong. An alternative story has the verb 'resemble' actually developing from the complementizer morpheme (which itself may have started out as 'say'). This alternative sounds like a logical possibility, particularly for a verb with relatively bland semantic force like 'resemble', but the direction of change for other instances of cognate verb and grammatical morpheme is from verb to grammatical morpheme, not vice versa (the directionality issue is discussed below in chapter 4). The alternative to version two might become more plausible if we could find more attested examples from elsewhere of verbs having developed from complementizers or subordinators.

In a language in which 'say' is the historical source for only part of the complementizer/subordinator set, where have the others come from? Historical sources for complementizers include verbs and demonstratives. The non-'say' morphemes could represent an earlier development, from a verb or a demonstrative, even from an older 'say' verb which progressed similarly at an earlier stage.

A comparative typological survey by Saxena (1988) supports the scenario that verbs become complementizers and then adverbial subordinators. Saxena surveys 38 languages, including a number of South Asian languages. She arranges the languages in a sequence representing eleven different stages in the development from verb to complementizer to adverbial conjunction. This sequence forms an implicational hierarchy—if a language uses the morpheme at a given level on the hierarchy, it will use it at all the previous levels.

Saxena considers Givon's binding hierarchy relating verb meaning
and complement type (Givon 1980), and finds that Givon's sorting of verb meanings

\[\text{say} \ < \text{think} \ < \text{decide (that)} \ < \text{hope} \ < \text{want (to)}\]
\[\text{tell(that)} \quad \text{know} \quad \text{agree (that)} \quad \text{remember} \quad \text{believe}\]

constitutes an implicational hierarchy which the languages she has surveyed tend to follow in general with respect to the verbs which allow the complementizer.

Saxena's complete synchronic hierarchy, which presumably reflects the sequence of historical development, has the following ordering:

1. quotative particle
2. quotative/complementizer with 'say'
3. " " 'know'
4. " " 'believe'
5. " " 'hope'
6. conjunction with purpose clause
7. conjunction with reason clause
8. marker with question word
9. complementizer with embedded question
10. conjunction with conditional clause
11. comparative marker
Saxena finds a similar kind of progression in the grammaticalization of the Sanskrit verb iti 'thus'. She traces the history in written records of the environments in which the Sanskrit verb occurred. It was first used with 'say' and 'ask', then with 'think', 'hear', and 'know', then to mark purpose clauses, next with 'fear' and 'see', and later with reason clauses and question words. This sort of progression sounds familiar, given the context of Benue-Kwa de-verbals.

Saxena surveyed languages that grammaticalize either the verb 'say' or the verb 'thus.' The 'say' languages include the Benue-Kwa languages Bemba, Krio, Ewe, and Ga, plus Thai, Kotiya Oriya, Newari, Nepali, Telugu, and Kannada. The 'thus' languages include Akkadian, Lahu, and Sanskrit (for several of the languages in her sample, the verb was not identified). Since I am not familiar with the range of the meaning of the verb 'thus' in these languages, I can't judge how much common semantic ground there is between the verb 'thus' and the verb 'resemble, be like' in a language like Twi or Idoma. However, 'be like' with an object ('like something' or 'like this') is roughly equivalent to 'thus' in meaning.

Saxena's data for Newari show one morpheme, dha-k-a-a, used in most environments, except that ha is used as a quotative. The distribution is similar to that found in Akuapem Twi, described above, where se is used in most environments, except that se is used as a quotative. This distribution could mean that the quotative is a new development, or that the wave of complementizer development left the old quotative unchanged.

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Although there appear to be some exceptions to the implicational hierarchy Saxena has sketched, and some clause relations which she has not included, her data support the idea of a gradual, directional development.

When a phenomenon is observed to be common to many languages in a particular geographic area, the term "areal feature" may be suggested. Just what is implied by this term may not always be clear, but it seems reasonable to consider whether the phenomenon reflects a shared historical development, separate independent innovations, or possibly a habit which has been transmitted across large areas by contact among bilingual speakers.

Since the development and generalization of 'say' complementizers is widespread in Benue-Kwa, one might call it an areal phenomenon, suggesting that the practice spread from one language to the next when bilingual speakers of Language A (with 'say' complementizers) introduced them into Language B, upon which speakers of B introduced them into Language C, etc. This kind of borrowing is difficult to document for Benue-Kwa. Although maps of West Africa do show interesting areal correlations for some features, such as word order patterns, causal factors are hard to pin down. The development of de-verbal complementizers is not limited to Benue-Kwa. The structures have appeared many times, on different continents. Although language contact may have influenced its spread, more significant factors are probably the structures and mechanisms within a language which could cooperate to permit such a
development or to make its innovation or adoption through borrowing unlikely. Such structures and mechanisms are often common to a whole language family or subgroup, and since members of one language family often occupy contiguous geographical areas, the resulting language maps show patterns which may appear to be areal as well as familial.

Areal influences might be a factor influencing a phenomenon discussed by Saxena which appears to be absent from the Benue-Kwa picture. This is the use of the 'say' complementizer as a comparative marker, as in 'John is taller than Mary.' According to Saxena, a 'say' marker for this function occurs in Newari, Nepali, Telugu, and Kannada. However, Benue-Kwa languages typically use a verb 'pass, surpass' for this function (see section 3.6). We can attempt to explain this difference in terms of communicative need and language function by suggesting that Benue-Kwa languages have the 'surpass' option available in serial structures, so they don't "need" to draft the complementizer for this function. An arealist explanation might argue that serialization and the use of the 'surpass' construction are areal features, spread and maintained through language contact, like the 'say' comparative in South Asia. Although these are important issues, they unfortunately will not be resolved here. A language is a complex, dynamic structure, and we need to know a great deal about the interplay of formal structures, functional demands, and social influences before we can venture to predict whether a possible change will be adopted or resisted.
3.8 Verbs used as adverbs and auxiliaries.

When a transitive verb in a serial construction undergoes semantic depletion, it frequently survives as a preposition. A depleted intransitive verb often shows functions and behaviors typical of an adverb. Many adverbs are homophonous with intransitive verbs; a few are relatable to transitive verbs but do not take objects. A de-verbal adverb is comparable to an objectless preposition—objectless because it has lost the ability to take an object, or because it never did take one.

In this section the general phenomenon of verb-to-auxiliary historical development is discussed. Section 3.8.1 discusses Twi verbs with adverbial function. Section 3.8.2 discusses the verb-to-adverb continuum in Yoruba; depleted verbs in Engenni are described in 3.8.3, and Ewe de-verbal adverbs in 3.8.4. A parallel process in Tibetan is discussed in 3.8.5. Section 3.8.6 discusses Edo adverbs, and section 3.8.7 concludes.

In many Kwa languages one can predictably identify verb-like morphemes that precede or follow the verb and function as modifiers of some sort, adverbs, or aspectual or modal auxiliaries. Some of these morphemes are transparently related to verbs, often resembling verbs in meaning, function, phonological shape, and morpho-syntactic properties. Others have shifted—some marginally, some to a greater extent—from lexical to grammatical meaning, from verb to modifier function, from canonical verb shape to eroded phonological form, and from independent to dependent status with respect to tonal behavior, vowel harmony, and identity as a free vs. bound morpheme.

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"Adverb" is sometimes a label for a transitory phase in the development from verb to auxiliary. Many West African languages show evidence of this development occurring or having occurred, as almost any descriptive grammar book will illustrate—in Christaller (1875) for 'come' and 'go' as tense/aspect markers in Twi, for example. According to Welmers (1973:353), "In Akan, the future construction marker is unquestionably derived from the verb for 'come', the root of which is /bá/. As a construction marker, it has four alternant forms, /bē~bē~bō~bō/, conditioned by vowel harmony" with the next vowel. However, "it has no more reference to motion in this direction than English 'going to' as a future marker has to do with motion away." Welmers also cites the present auxiliary derived from 'come' in Jukun, and the future auxiliary derived from 'go' in Igbo. Sapir (1965) shows auxiliaries from verbs in Dyola. Verb-to-auxiliary changes are discussed by Stahlke (1970) for Yatye and by Hyman (1971) for Fe'fe'. Marchese (1979) describes auxiliary development in Kru. Developments from verbs are discussed by Givón (1975 and 1979).

Pike (1967) describes the properties of the Vagala verbs wà 'come', gå 'go', kuàri 'make, fix', bir/bitò 'turn', wèyr 'be able, kùti 'do purposely', and fùr̥ì 'do unintentionally'. They all function as auxiliaries to some extent, and can be classified into separate subgroups according to the extent to which verb capabilities have been lost. According to Pike, the auxiliaries are developing from verbs, as the synchronic data shows. The evidence is grammatical (the auxiliaries' distribution is restricted), lexical (the morpheme has special meaning in its auxiliary function), and phonological (the
tone rules differ from those for free verbs). According to Pike, if this direction of change were to be completed, we would end up with a class of particles with limited distribution and no clear relation to free verbs.

Developments of this sort are by no means limited to African languages. A locative verb is the probable source for an incompleteive aspect marker in the Kwa languages Igbo, Yoruba and Ewe, but also in Mandarin Chinese, Thai, Irish, and Finnish, as suggested in Lord (1973) and discussed above in section 3.2.2. According to Comrie (1976:19), in older stages of English one form of the progressive was expressed with a verbal noun preceded by a locative preposition, most typically at, though also in, on, or the alternant a', as in archaic and dialectal Fred's been a-singing. Where it is necessary overtly to indicate progressive meaning, Dutch has hij is aan het tuinieren 'he is gardening', literally 'he is at/on the gardening'. Icelandic has a similar progressive construction, according to Comrie: jeg er að lesa 'I am reading', literally 'I am at reading'. Comrie (1976:102) also cites the development of progressive auxiliaries from Latin stare 'stand': Italian has the verb stare 'stand' and the progressive sto cantando 'I am singing'. Spanish has estoy cantando, and Portuguese has estou cantando. Comrie cites similar constructions in North Indian languages, such as Hindi-Urdu and Punjabi, where progressive aspect is expressed with the perfect participle of the verb 'stay, remain'. As in Igbo, a verb 'go' has been grammaticalized as a prospective marker in English and French, as in I'm going to write a letter and je vais écrire une lettre.
Bybee and Pagliuca (1987) cite 18 languages in which future markers have developed from verbs of desire, such as English will. They list 22 languages in which future markers have developed from verbs of movement ('go' and 'come'). They cite Scheffer (1965), who notes that the earliest uses of be going to in English involve actual movement, as in The Merry Wives of Windsor (IV.3.3): "Sir, the Germans desire to have three of your horses; the Duke himself will be to-morrow at court, and they are going to meet him." In the seventeenth century, the construction loses the notion of change of location and is used to express movement toward a goal which may be an event, state, or activity, and the sense of prediction develops. Other sources for future markers are verbs of possession ('have'), existence ('be'), and obligation (English shall 'owe'). The verb gradually loses its specific meaning and becomes generalized as a marker of intention or prediction—a future morpheme. Bybee and Pagliuca argue that in a future marker the sense of desire and willingness, movement on a path, or obligation and necessity are all retentions from the morpheme's former lexical verb meaning, and are not a secondary development from the future meaning (that is, prediction). In other words, the development is directional, from verb to grammatical morpheme, and from specific lexical meaning to more general meaning—not vice-versa.

Not every auxiliary is traceable to a verb; if we look hard we can find the example of pas from a noun in French. But the verb-to-auxiliary hypothesis should hardly be controversial any more. In fact, DeLancey (1988) states, "It is obvious on simple inspection
of virtually any language with what we will loosely call 'auxiliary' verbs that they originate diachronically as lexical verbs."

3.8.1 Twi verbs used as adverbs.

Some Twi verbs have taken on the semantic function of modifying another verb in the sentence.

The intransitive verb kye means 'last, hold out, stand for a long time, endure' as a main verb as in (378). In a serial verb construction it indicates the duration of the state or activity named by the preceding verb, as in (379). Although its meaning is clearly relational in a serial construction—it merely indicates that the preceding event is prolonged—its form has not started to become defective. Semantically, it modifies the previous verb, and can be viewed as an adverb in sense, even though it is formally a verb.

(378) mere-g-kye ha bio [Christaller 1875:135]
I-NEG-last here again
'I shall no more be here a long time.'

(379) o-da kye [Christaller 1875:135]
he-sleep long
'He sleeps long.'

The intransitive verb patuw 'hurry' can be used in a serial verb construction to mean 'suddenly,' modifying the other verb in the construction.
The verb hintáw 'conceal, be concealed', occurs independently as a verb in (380), and in a serial construction in (381) [Christaller 1881:176].

(330) w-a-hintáw ne sika
   he-PERF-conceal his gold
   'He has concealed his gold.'

(381)(a) wo-yé hintáw
   they-do conceal
   'They do it secretly,'

(b) wo-hintáw yé
   they-conceal do
   'They do it secretly,'

The verbs do not name successive actions. The modifying verb functions as an adverb within the context of the single-event interpretation inherent in the serial verb construction.

The Twi verb nyá 'get, receive, obtain' is transitive, as in

(382) daa dɔsrɔm wu a, o-nyá n'akatua
   every-day moon die COND he-get his-wages
   'At the end of every month he gets his wages.'
When it occurs without an object, before another verb, it signals the completedness of the action named by the other verb. As Christaller puts it, "nyá, put as an auxiliary verb before another finite verb, denotes the setting in of the action expressed in the latter" (1881:355).

In (383), for example, nyá indicates that the action has already taken place; in (383), the negative form n-nyá is best translated as 'not yet' (from Christaller 1881:355).

(383) w-a-nyá a-bà
he-PERF-(get) SEQ-come
'He has come now.'

(384) o-n-nyá m-ma-e
he-NEG-(get) NEG-come-PAST
'He has not yet come.'

In serial constructions as in (383) and (384), nyá does not have its independent verb meaning 'get, receive, obtain'. It takes affixes, but its syntactic properties are altered in that it is no longer transitive. It serves to indicate something about the aspectual meaning of the following verb, and can be viewed as having taken on the role of a perfective aspect marker to some extent. The involvement of the former verb 'take/get' in perfective aspect marking in other languages is discussed in section 3.5.5 above.
3.8.2 Yoruba verbs used as adverbs

Yoruba has a complicated verb system, with a continuum ranging from full verb to restricted verb to adverb to grammatical morpheme indicating mood, polarity, aspect and tense. This makes it complicated to write a synchronic grammar of the verb system.

In his detailed grammatical description, Bamgbose [1966] sets up several classes of verbs, such as free verb, bound verb, postverb and preverb. For Bamgbose, a free verb may operate as the only verb in a verbal group (clause, minus the subject). He lists six bound verbs, which must be followed by a free verb; the transitive bound verbs, such as *fi* 'with' and *bá* 'with, for', have prepositional functions, and the intransitive bound verbs, *dá* 'alone' and *máá* or *má* 'continue', have functions as adverbial modifiers.

Bamgbose's postverbs must follow a free verb; they are transitive, they function as prepositions, and their objects function as objects of prepositions in prepositional phrases. Bamgbose's preverbs must precede a free verb; like postverbs, they perform a modifying function, but they are intransitive; lacking objects, they pattern like adverbs, not prepositions. Preverbs provide adverbial modification, and are given English translations ranging from the unrestricted preverbs 'quickly', 'together', 'usually', 'almost', 'again', 'just', 'can', to restricted preverbs like 'should', 'will', habitual, 'must', to negators 'fail', 'not'. Bamgbose lists 39 preverbs. He subdivides the class according to different distributional capabilities. Examples, from Abraham (1958), are:
(385) tún 'repeat, again'
   ó tún lù mìi
   he again hit me
   'He hit me again.'

(386) lè 'can' and mà NEGATIVE
   ó lè mà. wùn mì
   it can NEG please me
   'It can fail to please me.'

(387) màa FUTURE
   mo màa lọ
   I PUT go
   'I shall go.'

Awobuluyi [1967] lists 35 preverbs. Although he subsumes them under the category Preverb, he actually considers them "some sort of adverbs" [1967:257]. He points out that some preverbs have homophonous verbs, e.g., jẹ ẹrẹ 'together' and the verb jẹ 'to assemble', and also jẹ 'ever' and the verb jẹ 'to be; to allow'. He considers it quite possible that "the majority of these elements were verbs at some earlier stage in the history of the language.... Today, however, they no longer function as verbs."

Bamgbose [1967:28] acknowledges that many preverbs are translated into English adverbs, and it is usual to call them "adverbs" in traditional grammars; however, the fact that they are verbs can be

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demonstrated, he claims, by the fact that they are preceded by noun subjects with the subject high tone junction. But, as Awobuluyi points out [1967:255], a preverb can not serve as the sole verb in a clause, and can not be fronted and emphasized by a focus placement transformation. Both scholars recognize that these words resemble verbs in their form and behavior, but they have "adverbial" meanings and lack some of the syntactic capabilities of full verbs.

The range of meaning, from action/event/process/state to adverbial/modal, and the corresponding range of limitation on distribution and transformational capacity, are consistent with a gradual historical shift away from full verb status.

Bangboye [1973a] examines serial verb structures in which both verbs are free verbs, but the meaning of the serial construction is not quite the same as a two-clause paraphrase attempt. Examples are (388) and (389).

(388) ̀ tì 'fail, be unsuccessful'
Olù rìn ̀ tì ≠ Olù rìn Olù ̀ tì
'Olu walk fail' 'Olu walk Olu fail
'Olu was unable to walk.' 'Olu walked; Olu failed.'
(389) to 'be sufficient'  
\[\text{pbe} \quad \text{nâa} \quad \text{dùn} \quad \text{to}\]

stew this be-sweet be-sufficient

'The stew is delicious enough.'

\[\neq\quad \text{pbe} \quad \text{nâa} \quad \text{dùn} \quad \text{pbe} \quad \text{nâa} \quad \text{to}\]

stew the be-sweet stew the be-sufficient

'The stew is delicious; the stew is sufficient.'

According to Bamgbose, in these serial constructions the verbs ti and to have taken on a modifying function; they modify the meanings of the verbs with which they occur. He calls these "modifying" serial constructions, distinguishing them from other serial constructions, which he calls "linking".

Awobuluyi [1973] suggests that the problem may have to do with English translation. He prefers to avoid setting up a modifying verb class, and would categorize them as plain verbs or adverbs, prepositions, or components of splitting verbs (basically, a verb combination with one lexical entry).

Obilade [1977] argues that the term "modifying serial construction" is unnecessary. He cites the example of \textit{to}, which in certain serial constructions can behave like the verb 'go' (its usual function) but also like a modal 'continue', as in (6).
(390) o n-jeun lo

he PROG-eat (go)

(a) 'He ate along the way,' 'He will eat before going.'

(b) 'He continued to eat.'

Examples (388)-(390) are interesting because they contain intransitive verbs which follow (not precede) the other verb, and which modify the meaning of the other verb. Since these verbs exist as free verbs in the language, it would complicate the grammar to set up a separate class for them. Nevertheless, they have taken on special meanings within the serial context. We might decide to assign them a place on the continuum close to the "free verb" end.

Oke [1982] identifies a comparable set of bound verbs which cannot be preceded by the verb negator mà. Some bound verbs precede the verb, some follow it; some are transitive, some are intransitive.

In a later treatment, Awobuluyi [1982] identifies 37 pre-verbal adverbs, and six post-verbal adverbs:

sáá 'in vain'  dié 'a little'
mó 'ever'  gan-an 'really'
rí 'ever before'  póppó 'greatly'

He distinguishes these adverbs from verbs in terms of function (verbs function as predicates, and adverbs modify) and in terms of capacity to be emphasized, relativized, and questioned (verbs can, adverbs can't). Interestingly, Awobuluyi differentiates between the 43 adverbs and ideophone-type words used adverbially, like kiákiá 'quickly' and ìgàgà 'little by little'. Words of the latter type can
be emphasized and relativized, and they can occur after the preposition *ni*, which suggests that they pattern like nouns.

Ekundayo and Akinnaso [1983] have mapped out a semantic classification of verbs in serial constructions according to position in the phrase. They sketch nine different types of function. The semantic function has syntactic manifestations—for example, the tense/aspect/polarity/modality verbs, which precede the central core of the verb complex, are all bound verbs and can not constitute single-element verb phrases. A given verb can have different semantic functions in the sentence depending on its position in the serial verb phrase. This is illustrated in (391)-(394) with different functions of the verb *lo* corresponding to different positions within the verbal complex. The principal verb is underlined in each example.

(391) Titi rìn  *lo* ni, kò sáré *lo*  
Titi walk go FOC not run go
'Titi left by walking, not by running.'

(392) Titi ṅ  *lo* *sígê*  
Titi PROG go do-work
'Titi is going to work.'

(393) Titi ṅ  *sígê*  *lo*  
Titi PROG do-work (go)
'Titi carries on working.'
(394) Titi ti sùn lọ

Titi PERF. sleep (go)

'lọ has deictic function

'Titi has slept off.'

As illustrated here, the intransitive verb lọ can function as a modifier of the principal verb when it precedes, as in (392), and when it follows, as in (393) and (394). Ekundayo and Akinnaso correlate the verbal elements' semantic function with position in the phrase, and they find adverbial modifiers both before and after the principal verb. In (391) intransitive verb rìn 'walk' precedes the principal verb; it describes a mode of going, and is considered a complement modifying the principal verb lọ 'go' (in Yoruba, as in many Kwa languages, words denoting a mode of travel are translated by the nearest English equivalent such as 'walk', 'run', 'swim', but they do not indicate movement across a distance like the English words do).

In Ekundayo and Akinnaso's analysis, within the central core of the verbal complex, verbs in a catenative relationship precede those in a complement (modifying) relationship to the principal verb. This analysis implicitly recognizes that, even within the central core, semantic relationships between verbs in a serial construction can be either coordinate (catenative) or skewed (complement/modifier).

As an example of a morpheme which spans the continuum from verb to adverb, consider Yoruba kpèlù, discussed above in section 3.4.3 as the verb 'be together with' as the sole verb in a sentence, as a verb in a serial construction, as a preposition in an adverbial phrase, and as a subordinating conjunction conjoining noun phrases. When the
preposition occurs without an object, as in (395) and (396), it functions as an adverb meaning 'together with', 'also', as described in Lord [1973].

(395) ẹmì ni orúkó nì kpélú
Femi FOCUS name my also
"Femi is my name too (as well as someone else's)."

(396) ẹmì kpélú lọ
I also go
"I also went (along with someone else)."

Awobuluyi [1978:79] includes it in a small group of sentential adverbs, some of which occur sentence-initially, some sentence-finally.

A verb can migrate out of the verbal complex altogether, as illustrated by (397), where kpélú is reduplicated and functions as a sentence adverbial.

(397) kpélúkpélú n kò fẹẹ lọ
also I NEG wish go
"Moreover, I do not wish to go."

The semantic distance from verb to adverb in (397) has its syntactic parallel. In (397) the morpheme's placement is not within the verbal complex; it is completely outside the clause, preceding the subject.
Its morphemic behavior is also unusual; neither verbs nor prepositions ordinarily show this behavior in Yoruba.

Scholars may not agree on just where to make the cuts on the continuum from full verb to restricted verb to adverb, but they do recognize a range of semantic functions and a corresponding range of variations in syntactic behavior.

3.8.3 Engenni adverbials.

The assortment of verbal modifiers in Engenni is fairly typical of those commonly found in Kwa languages. According to Thomas (1978), the Engenni morphemes ná 'go in order to' and ì 'come in order to' occur in sequences such as:

(398) bha ná gbò

you(PL) go-to prevent

'Go and stop (it).'

(399) ò ngú rubhine

he go-to play

'He went to play.'

(400) ò ta ná rubhine

he go go-to play

'He went to play.'

(There are two allomorphs: ñó after third person singular pronoun

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subjects, ná elsewhere.) Thomas calls these morphemes preverbals. They can precede the main verb, as (398) and (399). In a compound verb phrase or a clause string, ná 'go to' can follow any motion verb (as in (400)), and i 'come to' can follow the verb yi 'come' (which it resembles phonologically as well as semantically).

The tones of these two preverbals are different from those of verbs. In Engenni, nouns and verbs are typically made up of high and/or low tonemes. A third tone, an upstepped high, occurs predictably in certain tonal environments; it also occurs marking grammatical constructions such as future tense, the genitive constructions, and phrase junctures. And the independent high tone occurs on the preverbals ná and i, distinguishing them from regular verbs and placing them on the grammatical side of the lexical-to-grammatical continuum with respect to tone. Additionally, the presence of the preverbal requires tonal changes in the following verb; the morphosyntactic relationship between verb and preverb is a reflex of the meaning relationship.

The connection between preverbal and verb is also shown in vowel harmony. The vowels of ná and i harmonize with the following verb with respect to tongue root position. The direction of the assimilation (the preverbal takes on the quality of the verb, not vice versa) shows that it is the preverb, not the verb, which has lost some of its formal independence.

There is another class of preverbals, in Thomas's classification, with three members: le 'in addition, again, always', i 'again', and ma 'still, yet', as in

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(401) à le ná dhî dhyomù
they again go-to eat food
'They again went to eat food.'

(402) elendýí le dhyomu
oranges always be-sweet
'Oranges are always nice.'

Within this class, le and į harmonize with the following verb, as the
above examples illustrate; in (401) the vowels in le, ná and dhî all
have lowered tongue root; in (402) the undotted vowels in both le and
dhyomu have raised tongue root. The members of this class vary
somewhat in relative position within the clause; such variability
would be expected in a group of verbs shifting gradually from lexical
to grammatical morpheme status.

These three preverbs are tonally dependent on the following main
verb. In fact, together the preverb and verb function as a
polysyllabic verb with respect to tone assignment for different tense
forms. The combination of le + mè 'again agree', for example, takes
on the pattern of a bisyllabic verb in the future tense tone pattern.
That is, the bisyllabic verb dirè 'cook' has the tone pattern HL in
the future tense, and so does the preverb + verb combination le mè
'again agree'. Similarly, the combination le dirè 'again cook' has
the hHL tone sequence (h = upstepped high) of trisyllabic verbs in the
future, corresponding to, for example, kòfilò 'cough'. Thus, with
respect to tonal behavior, these preverbs could be considered prefixes

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on the following verb. Thomas chooses not to call them prefixes, however, because the ná and ı preverbs discussed above can occur between them and the verb. This is not a tidy situation, but it is reflective of a system undergoing gradual change.

The order of verbs in a series is typically iconic with respect to the time sequence in which the actions or events occur (to the extent that the actions or events are separable and sequenceable). This is true in languages with Verb-Object word order within the clause, and is also true, with some qualifications, for languages with Object-Verb word order like ḫq. In (399) and (400) above, the 'going-in-order-to' precedes the 'playing', and so the ná morpheme precedes the verb ḥbhine 'play'. The completion of an action or an event follows the actual action or event, rather than preceding it in time, and a verb 'finish' in sequence would follow an action verb, as in

(403) ḥ kpei dhe me

he wash finish me

'He finished washing me.'

This morpheme ḥhe/pädhe 'finished, completely, thoroughly' does not occur alone as a main verb. Its vowel harmonizes with the preceding verb, and it merges with the preceding verb, the combination taking on tone patterns of a polysyllabic verb in various tense constructions. In these respects its behavior parallels that of the preverbs. Its position after the verb reflects the position it would have had as a

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verb in a serial construction in a sentence like this, since within a serial construction the order of verbs is typically iconic with respect to time. A similar verbal or de-verbal aspectual 'finish' morpheme in post-verb position is commonly found in Benue-Kwa languages.

Engenni exhibits a range of verb-like morphemes which have morpho-syntactic properties distinguishing them from verbs. Clues from their form, function and clause position are consistent with a historical identity as verbs in serial constructions. In this respect Engenni resembles many other Kwa languages.

3.8.4 Ewe de-verbal adverbs.

Some Ewe morphemes have dual functions as verbs and as adverbs. When they occur as adverbs, several are restricted in the tense/aspect forms they can take. Westermann (1939:129) describes them as "beginning to lose their verbal characteristics, in that they are no longer conjugated." He lists several, including:
<table>
<thead>
<tr>
<th>MORPHEME</th>
<th>VERB MEANING</th>
<th>ADVERBIAL MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ści</td>
<td>go down</td>
<td>beforehand (not conjugated)</td>
</tr>
<tr>
<td>gbọ</td>
<td>return</td>
<td>in the meantime (only future is conjugated)</td>
</tr>
<tr>
<td>kpọ</td>
<td>see</td>
<td>sometime, ever (only future is conjugated)</td>
</tr>
<tr>
<td>vá</td>
<td>come</td>
<td>to here (conjugated in future and habitual, rarely in progressive)</td>
</tr>
<tr>
<td>fo xiá</td>
<td>surround</td>
<td>round about, round and round (written as one word, not conjugated)</td>
</tr>
<tr>
<td>vo</td>
<td>finish</td>
<td>completely (nearly always invariable)</td>
</tr>
<tr>
<td>gba</td>
<td>come again</td>
<td>again (depending on dialect, can be gbugba or ga)</td>
</tr>
</tbody>
</table>

The lack of uniformity in the affix-taking capacities of the morphemes in their adverbial functions is characteristic of a change occurring gradually.

3.8.5 Adverbs and aspects from verbs in Tibetan.

In Lhasa, a Tibeto-Burman language, DeLancey (1988) has identified verb serialization to a limited extent with motion verbs and a few others which show signs of grammaticalization as adverbs and markers of aspect.

Lhasa has SOV word order and concatenated verb structures in which the final verb carries tense/aspect marking and nonfinal verbs must be marked with a suffix. When the final verb is 'go', 'come', or 'sit, say', the suffix on the preceding verb is optional. Some conservative speakers regard the omission of the suffix as colloquial.
or substandard, which suggests that its loss is a recent development. In the following example (from DeLancey 1988, in his phonemic transcription) the nonfinal suffix is optional, with no difference in meaning.

(404) ciu-ci khāNpaa nàN-la phir(-cææ) yòn-chū
   bird-a room(GEN) inside-LOC fly(-NONFINAL) come-PERF
   'A bird flew into the room (where I was).'

DeLancey suggests that a verb sequence with a motion verb, such as 'fly come', corresponds to an "event". According to DeLancey, the function of the suffix on the first verb is to disjoin the two predicates. In a sequence such as 'fly come', therefore, to retain the suffix is "anti-iconic", "unnatural", because of the single-event interpretation, and "it is the semantically unitary nature of sequences such as these which motivates the development of a uniclausal syntactic construction." That is, since the two verbs correspond to a single event, speakers drop the intervening suffix. With sequences such as 'VERB + finish', there is a strong pragmatic tendency for them to be interpreted as representing single events, and grammaticalization follows.

A Lhasa verb meaning 'put, leave something' can occur as the last verb in a concatenation where the preceding verb has the typical nonfinal suffix, as in
(405) kho ch'i-cææ cær-pa-re?
    he went-NONFINAL put-PERF
    'He went and put it there.'

In a serial construction (the same but without the suffix) the 'put'
verb does not carry its lexical verb meaning; it functions as a
perfect marker and adds the sense of 'improperly' or 'with deleterious
effect', as in

(406) kho ch'i ci-r-pa-re?
    he went (put)-PERF
    'He went.' (implying some lasting and probably negative
    consequence of his having gone)

Similarly, the verb /tshaæ/ 'finish' has lexical verb meaning in
a concatenation with the nonfinal suffix, as in

(407) kho ch'i-cææ tshaæ-pa-re?
    he went-NONFINAL finish-PERF
    'He went and finished it.'

However, when there is no suffix, it functions a a perfective, as in

(408) kho ch'i tshaæ-pa-re?
    he went (finish)-PERF
    'He has gone.'
Here the 'finish' morpheme takes a Perfect suffix. But with first person subjects in this context the perfect suffix does not occur on 'finish', and the verb 'finish' itself behaves like a suffix, losing independent word tone and undergoing phonological reduction, as in

(409) Nà ʔom-la  chii-tshaa
    I market-LOC went-PERF

'I've gone to the store.'

With a third person subject, as in (408), the verb 'finish' has undergone semantic bleaching to function as a modifier but retains its formal verb properties of tone and capacity for taking an aspectual suffix. With the first person, as in (409), the verb has become formally defective as well, losing its tone, and functioning as a suffix.

DeLancey identifies the verb 'taste' functioning as an experiential perfect marker, and other suffixes related to lexical verbs, some of them older forms, including:

<table>
<thead>
<tr>
<th>LEXICAL VERB MEANING</th>
<th>ADVERBIAL/ASPECTUAL FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>'come'</td>
<td>'normally'</td>
</tr>
<tr>
<td>'put'</td>
<td>inferential perfect</td>
</tr>
<tr>
<td>'go'</td>
<td>evidential perfect</td>
</tr>
<tr>
<td>'get'</td>
<td>perfective</td>
</tr>
</tbody>
</table>

These morphemes are subject to phonological reduction: they occur as

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unstressed suffixes, the nasalization on the vowel of the latter two
examples is lost, and in some cases the vowel itself is lost.

DeLancey's work illustrates historical changes in a Tibetan
language which parallel those we have identified in West African
languages. This similarity provides more evidence that these patterns
of change are phenomena characteristic of human language, not
region-specific peculiarities.

3.8.6 De-verbal adverbs in Edo.

Edo is a Kwa language of Nigeria from the North-Central branch of
the Edoid group. As described by Agheyisi (1986), Edo has a variety
of serial verb constructions. Most of the non-ideophonic manner
adverbials in Edo derive historically from verbs and retain certain
verbal characteristics such as tonal tense-markings, according to
Agheyisi. In addition, certain verb suffixes in compound verbs have
developed from verbs through grammaticalization in serial verb
contexts.

The verb re 'come', for example, occurs as a main verb:

(410) ìdzé re owa ọgbẹ
doza re house my
'Ozo came to my house.'

It occurs as a full verb in a serial construction, and also in Serials
where it modifies the other verb, as in:

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(411) ḍọ́̀zọ̀ ̀vọ̀xọ̀ ́èrù̀ ́rẹ̀

Ozo bent tree come

'Ozo bent the tree over.'

Here, where rẹ̀ 'come' has a modifying function, it can not take adverbial modifiers itself (these contexts appear to be serial structures of the "causative" rather than "same-subject" type).

When the main verb has no object, the modifying verb follows it directly and in some cases becomes a suffix on the verb, forming in effect a verb compound, as in

(412) ḍọ́̀zọ̀ ṭỳ̀̀ṣ̀̀ ̀rẹ̀ ̀nẹ̀

Ozo woke-(up) already

'Ozo has already woken up.'

It appears that the new compound comes to function as a verb unit, since many of these compounds can combine with vowel prefixes to form derived nouns.

When the main verb is transitive, the modifying verb/particle is separated from the main verb by the intervening object, as in

(413) ḍọ́̀zọ̀ yẹ̀ ̀gù̀̀ ̀ne ́ i ̀xàmè ̀̀̀ ́gù̀̀ rẹ̀

Ozo recalled matter REL I told him (up)

'Ozo remembered what I told him.'

However, when the object is a "heavy" NP, say with a relative clause,
it can be shifted to the end of the sentence (like the option with verb-particle constructions in English), leaving the verb and the modifying particle adjacent, as in

(414) ọzo yō-re, ìgù nè i xàma ìrù
Ozo remembered matter REL I told him
'Ozo remembered what I told him.'

This construction illustrates a possible pathway by which SVOV serial constructions can be the source of S V-V O structures, later S V-PRT O, and eventually SVO. The data suggest that it would probably be a historical oversimplification to hypothesize that speakers innovated V-V lexical compounds directly by adjoining lexical morphemes; the compounds have probably developed gradually from serial constructions.

3.8.7 Conclusions.

Intransitive verbs don't become case markers, because they do not have NP objects. Sometimes an intransitive verb stands alone in a single-verb clause, but in a serial construction may serve to modify the other verb. In some instances they modify the rest of the sentence. When they function as adverbs they tend to show impaired verb properties. Some de-verbal adverbs serve as markers of mood, polarity, tense or aspect, and when they have undergone significant changes in their behavior and form they may be classified as grammatical morphemes.
The position of a verb in a serial verb sequence depends on its temporal ordering with respect to the other actions in the series. Accordingly, de-verbal adverbs can originate from positions earlier or later in the sequence. The historical shift can be from a Subj V VP structure to a Subj Adv VP structure, or from Subj VP V to Subj VP-Adv.

3.9 Conclusion.

This chapter has illustrated the semantic classes of verbs that undergo reanalysis in serial verb constructions. The classes of verbs are fairly consistent across languages, and their new grammatical functions are largely parallel in different languages. The historical process in all cases is a gradual loss of meaning, accompanied by gradual loss of inflectional and grammatical capacity, with the grammatical reanalysis often lagging behind the semantic reanalysis.
CHAPTER FOUR: PRAGMATICS, TYPOLOGY AND TELEOLOGY

This chapter considers the nature of the changes described in chapter three. Their effect on typological structures is discussed in section 4.1. The meaning relationships between verbs in a serial construction are discussed in section 4.2, and 4.3 discusses the consequences for the clause position of de-verbal prepositions and auxiliaries. Section 4.4 argues for the validity of a claim of directionality for the category changes described here, and section 4.5 explores possible explanations of why these changes take place.

4.1 Implications for typological structure.

In chapter 3, changes in the function and form of verbs were described. If we focus on the morphemes themselves, we can describe the changes in terms of the grammatical categories into which the verbs shift: preposition, conjunction, complementizer, subordinating conjunction, adverb, auxiliary, and tense/aspect marker, for example. The change can introduce a new category into a language, resulting in an expansion of the number of grammatical categories in the language. If the category already exists in the language, the change can add to the inventory of lexical items in that category, and can result in an increase in the frequency of occurrence of that category in discourse. In general, the direction of the shift is from major lexical category to minor lexical category, from lexical content-word to lexical form-word, and from an open class to a closed class.

The changes can also be viewed from the perspective of the
structure of the whole clause. A consequence of the change is a
decrease in the number of verbs per clause. In general, the trend is
from a clause with a serial verb string to a clause with a single main
verb accompanied by "modifying verbs," some of which are losing verb
status. Over time, a simple two-verb serial construction can undergo
re-structuring to, for example, verb plus prepositional phrase, or
verb plus object complement and eventually subordinate clause, or verb
plus adverb or auxiliary. The change can introduce a new typological
structure, such as prepositional phrase, into the language's inventory
of possible clause structures. If the language already has the
structure—say, prepositional phrase—the shift of verb phrases to
prepositional phrases can expand the range of semantic functions for
which prepositional phrases are used in the language, and can increase
their frequency in discourse.

In a two-verb serial construction, the semantic depletion of one
verb can be balanced by the semantic enhancement of the other verb.
In a sequence like [he take book come], a 'take' verb can become
semantically depleted to the extent that it no longer indicates
physical grasp (or even a separable action) and signals a
transitive/causative reading for the following verb. The 'take' verb
can become semantically bleached, syntactically defective, and
morphologically eroded while a following intransitive verb acquires a
transitive/causative reading. The intransitive verb optionally
increases its valence by one, acquiring the capacity to take a second
argument, a causal Agent, in addition to a non-Agent. This increase
in semantic content or capacity of the verb is balanced by the
decrease in semantic content of the 'take' (transitive/causative) morpheme.

George (Madugu) (1976) has drawn a comparison between a serial verb construction such as 'take' + "come", and a single-verb clause with 'bring'; the former is more complex syntactically, and the latter is more complex lexically. Although we do not have generally-accepted ways of measuring the syntactic complexity of a clause, if we accept Madugu's point of view, we can characterize the change as shifting semantic complexity from the syntactic component to the lexical component.

The languages described here tend to share a number of typological similarities. Most, but not all, have VO (verb + object) ordering with verb serialization. Most prefer only one object per verb, but some permit two objects. Most are isolating, with little inflectional morphology. Syllable structure is typically simple, and many of the languages have lexical and/or grammatical tone distinctions. Verb roots are often monosyllabic; verb compounding sometimes occurs.

4.2 Meaning relations between verbs in a serial construction.

Within a serial verb construction, the order of verbs is typically iconic with respect to temporal order. The action, event or state named by the first verb typically precedes that of the second verb, insofar as the two are separable pragmatically. As discussed in Lord (1974), the verbs in a serial construction tend to refer to sub-parts or aspects of a single overall event, and the second verb is

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typically a further development, result, or goal of the first verb. In an Ewe construction like [he drink water die] 'he drowned', the dying followed the drinking and was a result of it. In a Twi construction like [he take sword cut branch] 'he cut the branch with a sword', the cutting followed the taking of the sword, and the taking was a purposive action done with the cutting as a goal. The same temporal sequence and action-goal relation apply in a Yoruba construction like [he buy bread eat] 'he bought bread to eat'. In a Yoruba construction like [he push me fall] 'he pushed me down', the falling follows the pushing and is a further development or outcome of it.

In some serial constructions the two events are temporally discrete and separable, as in [he buy bread eat], where there could be a time lapse between the buying and the eating. But with other verb combinations, other temporal inferences are possible. Envision someone standing on the edge of a cliff, being jostled by someone, tottering for a few seconds, and then falling over the edge. Here the temporal sequence of pushing followed by falling is obvious, but in other actual situations there may be considerable temporal overlap between the events named by the verbs. Imagine two boys running a race. One boy pushes the other and, while he is pushing, the other begins falling. It is not the case that the "pushing" event is completed before the "falling" event begins. In fact, if it happens very fast, the time of onset of the falling event can be practically indistinguishable from the time of onset of the pushing event. A speaker's experience of events in his world tells him that pushing
someone can result in his falling. In this latter instance, the two
events may be in temporal sequence, but the more pragmatically salient
relation between them is causal consequence. It is easy to see how a
construction signifying temporal sequence can invite an inference of
consequence or result.

When two events occur in temporal sequence, people are likely to
infer a causal relationship. In reporting events, speakers use
certain linguistic structures to encode events in temporal sequence;
if the hearer perceives a resultative relationship between the events,
he may associate the resultative semantic relationship with that
particular linguistic structure.

In coordinate structures which report events, the order in which
the events are reported tends to correspond to the temporal order in
which they occur. When we hear "The Lone Ranger mounted his horse and
rode off into the sunset" in English, we assume that the events
occurred in temporal sequence corresponding to the order of the verbs
in the sentence. The same structure, with the reporting order
reversed, as in "The Lone Ranger rode off into the sunset and mounted
his horse", is pragmatically anomalous, because we expect the order in
the sentence to reflect the temporal order of the events. As pointed
out by Givón (1975) and Haiman (1983) and others, coordinate
structures are not necessarily symmetrical. In English, a consequence
or result relation can be represented by a syntactically coordinate
construction, with the consequence or result as the second conjunct,
as in "Come one step closer and I'll scream!"

Coordinate constructions in English permit a range of temporal
relationships. The events can be sequential, overlapping, or simultaneous, as in "John played the piano and Mary sang." The events can even be alternating, as in "They drank coffee and talked all evening."

This same range of temporal/resultive relationships is realizable in serial verb constructions, although languages differ somewhat in the set of relations each one allows. The range can shift at different periods in a language's history; a language is a dynamic system, and structures emerge and recede as the language is used to meet communicative needs. The set of relationships expressible with serial verb constructions in a given language depends on what other kinds of structures are viable in the language and what communicative functions they serve. Mandarin serial verbs formerly were used to encode action-result relationships, but this usage is now archaic. Mandarin now employs verb compounds for expressing action-result relationships, and serial verb constructions can express sequential, purposive, simultaneous, or alternating actions (Li and Thompson 1973). Historical developments in Mandarin involving serial verb constructions and verb compounds are discussed in Li and Thompson (1974). Yoruba serial verb constructions differ from Mandarin in that the typical reading is often sequential or consequential (Lord 1974), like verb compounds in Mandarin (Thompson 1973).

Languages associate relations, such as action-result, with certain syntactic configurations, and the existence and nature of that association must be stated as part of the grammar of the language (Lord 1975). Depending on historical development and the range of
alternative structures at hand, languages differ in how they pair up relations with certain syntactic configurations. For action-result relations, for example, Mandarin and Igbo use verb compounds, while Yoruba uses serial verb constructions. Mandarin and Igbo verb compounds are often translatable as Yoruba serial verb constructions. In Yoruba there is another structural option (the "coordinate" structure with and), for which the range of possible relations is less constrained; these structures are largely translatable as Mandarin serial constructions and as Igbo consecutive constructions.

In comparison with West African languages, Mandarin appears to allow looser relations between the events in its serial constructions, possibly "because" it has verb compounds available for closer action-result relations. West African languages differ from each other in the range of possible meaning relations between verbs in a serial construction, but most of them typically prefer temporal sequentiality, with the likelihood of an action-result relation.

The types of verbs that can participate in serial verb constructions, and the orderings in which they can occur, depend largely on pragmatic constraints. To some extent, these constraints are describable in terms of a verb's membership in subclasses such as states, activities, accomplishments and achievements, which reflect semantic factors such as change, punctuality and telicity (discussed by Vendler (1967) and Dowty (1979), for example).

We can generalize about Twi by stating that serial constructions with causative interpretation (that is, the object of the first verb is the understood subject of the second verb) can have activity verbs
followed by motion verbs. Such a statement in terms of abstract categories can be seen to have an explanation in terms of pragmatic possibilities; the set of felicitous combinations consists of those motions that can be effected by activities denoting direct or indirect manipulation, where the motion is the result of the activity, as discussed above in section 3.5.1.11.

Similarly, we can draw a generalization about causative serial constructions in Yoruba: included among permissible combinations are activity verbs followed by intransitive statives. The pragmatically felicitous combinations include activity-state pairs where the state can be effected by the activity—for example, the activity of washing something can result in the state of its being clean, and so Ṣékọ 'wash' can be followed by Ṣọ́ 'be clean'.

When a verb serves to modify the event or activity named by the other verb, the time spans may not be separable or order-able. In some cases there are two possible orderings for the verbs within the serial construction, as noted above in section 3.8.1 for Twi, where 'They do it secretly' can have the order [they conceal do] or [they do conceal].

In a serial construction an intransitive verb can perform a modifying function; many (but not all) of these modifying intransitives occur in first position. Since many of them do not function as independent verbs with a temporal locus, there is not a basis for inferring a temporal sequence. To some extent, they may establish an attitude or set the scene for the performance of an action; this "logically prior" status is a possible iconic motivation.
for their apparent preference for first position in the utterance.

4.3 **Clause position of de-verbal prepositions and auxiliaries.**

What determines the position of verbs and de-verbal auxiliaries in the clause? Languages may differ in the types of verb combinations that can occur in serial constructions, but they do not reverse the general pattern of temporal/resultative iconicity. This means that serial sequences like [he eat bread buy], [he fall me push], and [he die drink water] are highly unlikely.

For verbs that have embarked on the desemanticization process, it may be difficult to establish a temporal locus. For a verb functioning as a casemaker, there is no independent temporal locus. With the verb 'take', as in [he take sword cut branch], the physical grasping of the sword precedes the cutting of the branch. Where the verb 'take' has become desemanticized and formally defective, it has ceased to denote physical grasp, and indicates that its object functions in this case as an Instrument argument of the following verb. The observed order, however, retains the temporal/resultative sequence of the earlier verb series. Consequently, prepositional phrases having developed from a 'take' verb typically occur in their pre-verb historic position. The position of case-marked Instrument and Patient phrases is seen to have an explanation rooted in language history shaped by communicative needs and pragmatic function of noun phrases.

Preposition-marked Patients are typically found in pre-verb position, but preposition-marked Recipients are typically found in
post-verb position. The verbs 'give' and 'show' typically occur as
the second verb in a two-verb series, introducing the Recipient or
Benefactive as discussed above in section 3.3. In Twi the sequence
kasa + kyere 'speak' + 'show' = 'tell' does not have an equivalent in
reverse order, because the speaking is done in order to show the
Recipient something. Similarly, the sequence is wu + maa 'die' +
'give' = 'die for', not vice-versa, because the dying was done so that
someone might consequently be the Benefactee. When verbs like 'give'
and 'show' undergo desemanticization, the Recipient and Benefactive
phrases are found in postverb position.

There appear to be some exceptions to post-verb position for
Benefactives, as in Yoruba, but the Yoruba case has a
historical/pragmatic explanation. (Benefactive phrases precede the
verb in Mandarin, and historical study would be needed to determine
the possibility of an explanation along similar lines.) The Yoruba
verb fún 'give', discussed above in section 3.3.2, introduces the
Recipient or Benefactive in post-verb position in sentences like [he
sell it give me] 'He sold it to/for me.' Another verb, bá, can occur
as the first verb in a series and can introduce a noun Benefactee,
seemingly counter to the typical temporal/resultative sequence order
for serials. The reason for the occurrence of bá + NP in first
position is the verb meaning, which is 'join (someone) in the doing of
an act'. Depending on the nature of the following verb, bá can
introduce the person with whom one does something, or the person one
helps in doing something—that is, the Benefactee. When one joins
someone and does something, or helps someone to do something, the acts
are in temporal/resultative sequence. To the extent that a verb like 
$bá$ undergoes desemanticization, the result would be a $bá$-marked 
Benefactive argument in pre-verb position, as in (from Stahlke 1970)

(415) mo $bá$ ò mú iwe wá ilé
    I \textbf{BA} you take book come house

'I brought a book home for you.'

Yoruba evidences how a potential Benefactive marker can originate in 
either first or second position in a two-verb serial; either position 
is consistent with the temporal/resultative sequence typical of serial 
constructions, depending on the verb's meaning. Verbs are an open 
class, with many possibilities for combining to meet communicative 
needs. For de-verbal prepositions, blanket rules or abstract 
principles devised to determine prepositional phrase placement may 
turn out to be incorrect if historical antecedents and pragmatic 
content are not taken into consideration.

Intransitive verbs with adverbial function are found before and 
after other verbs, as discussed above in section 3.8. The position is 
often predictable based on the meaning of the verb and the preference 
for temporal and action-result iconicity within the serial 
construction. Auxiliaries and tense/aspect markers are commonly 
traceable to verb sources. Twi "ingressives" and the Engenni 
preverbals described above in section 3.8.3 appear to be instances of 
the change in process. With the 'come' or 'go' verb in first 
position, a phrase like 'go (and) do it' or 'go (in order to) do it'

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follows the iconic order, but the reverse ordering, 'do it (and) go',
does not.

Not all de-verbal aspect markers occur in first position.
Completed action, or perfective aspect, has come to be correlated with
the 'take' construction in Idoma, Gwari, and Dagbani, as discussed
above in section 3.5. The 'take' morpheme, followed by the object,
occurs in first position. In Engenni, however (section 3.8.3),
completed action is indicated with the defective verb 'finish' in
second position, as in the sequence 'wash finish'. Although both the
'take' completives and the 'finish' completives are consistent with
temporal and action/result iconicity, the aspectual marking from
'take' is in first position, and the aspectual marker from 'finish' is
in second position. (This use of 'finish' in second position is a
common occurrence in serializing languages.) The clause position of
de-verbal tense/aspect markers can often be demystified if the
marker's verb meaning is considered in the context of the temporal
orientation of the former verb within the serial construction.

In the languages discussed here, directional and "inner"
locatives (place nouns which are arguments of the verb) tend to appear
as the object of the last verb phrase of the serial construction,
often being the spatial goal. (In Cantonese, however, locative phrases
can occur before and after the other verb in the serial construction;
contact with neighboring languages is a possible influencing factor.)
For a locative verb phrase that identifies the place of an event, the
concept of a temporal locus is not very meaningful, as in, say, [he
does work (be) at home]. The de-verbal locative phrase modifies the
other verb phrase, or the whole clause, and to the extent that it has a temporal locus, it can be considered to coincide with that of the other verb. If the location of the event or activity requires attention or emphasis, or if it is the answer to a question, it can often occur at the front of the sentence in a focus construction. Otherwise, its final position can be viewed as pragmatically appropriate, given its "accessory" or modifying function.

A "clause adverbial" has relevance for, or scope over, the whole clause. Among prototypical clause adverbials are those specifying place, time, or manner. In serial verb languages, these clause adverbials frequently have the form of a locative verb plus a place, time, or manner object. If a language has de-verbal case markers at all, it is likely to have a de-verbal Locative case marker; in an implicational hierarchy of de-verbal case markers, Locatives probably are at the top. Historically, they may be the first to form (if one assumes that in the dynamic situation of that language the development is teleological rather than cyclic and stable; but see below). Locative verb phrases appear to be conscripted to function as clause modifiers by speakers motivated to communicate places, times, and manners of events; as optional arguments, they follow the obligatory inherent arguments.

For the de-verbal Comitatives discussed in section 3.4, pre-verb position tends to be preferred, but there appears to be flexibility. Ewe, Yoruba, and Fon allow the de-verbal phrase in either first or second position. Since the meaning of the source verb is not clear, it is difficult to establish a position for it. De-verbal
prepositions tend to maintain their earlier positions in the serial construction, but when the reanalysis has proceeded to the extent that the former verb meaning has been lost, it appears that other factors can influence the position of the phrase. In Ga, for example, when the function is the conjoining of noun phrases, the phrase can follow nouns functioning as subject, object, or possessive modifier, as illustrated in section 3.4.2 above.

In SVO languages, the complements of verbs of saying ('say') and verbs of comparison ('resemble') occur at the end of the clause. When the verb undergoes desemanticization, functioning as complementizer and adverbial subordinator, the morpheme and its complement clause continue in this position. The morpheme and its complement can occur in other sentence positions, typically in cases where the reanalysis has proceeded to the point where the verb vestiges have been obliterated. Conditionals can occur in sentence-initial position in Ga (discussed in section 3.7.5). Both condition and reason clauses can be sentence-initial in Twi (section 3.7.1.7), possibly by means of an initial frozen subject and verb combination having been dropped. Often condition and reason clauses, and not purpose or result clauses, are found in first position within the sentence. A likely explanation for this is the fact that the ordering of condition and reason clauses first in the sentence is consistent with temporal/resultative iconicity between clauses. This iconicity is preserved with purpose and result clauses in second place. Although the 'say' complementizer originated as an introducer of sentential objects, it can be used to introduce sentential subjects in Ewe (section 3.7.4); after undergoing
desemanticization, it can be used for its new function (complementizer), even when that function requires its occurrence away from its former verb position.

4.4 Directionality of category change in the serial verb context.

Historical change in the context of serial verb constructions is reviewed by Lightfoot (1979). He considers the claims and evidence from Lord (1973), Givon (1975) and others, and concludes that "it can be established that categorial changes took place, although the question of the directionality of those changes must be left open" (Lightfoot 1979:216). Without historical records, he says, one cannot specify the direction of the change, and to do so is "pure speculation." According to Lightfoot, "Instead of this development of major to minor category, a reverse process might have taken place."26

Let us consider Lightfoot's position. Is it really just as likely that the data described in chapter 3 came about through a reverse process of development from minor category to major category, and from grammatical forms to lexical forms?

There are a number of cases of change involving grammatical forms for which we do have written records. Most of these documented cases illustrate a specific-to-general meaning change, from major to minor category, from lexical to grammatical morpheme. Instances of a change in the reverse direction are harder to find.

For the development of a verb into a grammaticalized object marker, we have the example of bā 'take' in Mandarin Chinese, where written records from the 5th century B.C. up to the present day show
the gradual directional change (described in section 3.5.2 above).

Examples noted in section 3.8 above illustrate the directional semantic shift from specific to general in the development of the Latin verb stare 'stand' into a progressive aspect marker in Italian, Spanish and Portuguese. Also noted are the development of a progressive marker using a locative preposition in English, and the development of future markers from verbs of desire (English will), verbs of motion (English be going to), verbs of obligation (English shall 'owe') and others.

A future morpheme carries the basic sense of prediction. As Bybee and Pagliuca (1987) point out, when a future morpheme also has the sense of desire or willingness, movement on a path, or obligation or necessity, these senses are retentions from the former verb meaning. When, at a later stage, these markers have lost these senses, the more general meaning of prediction remains. They find no instances of a general future (prediction) morpheme taking on at a later stage the more specific senses such as desire, movement, or obligation.

Bybee and Pagliuca (1985) provide further evidence for specific-to-general semantic change in aspect markers and modals. Habitual and continuous markers are more specific in meaning than are imperfective markers, and both can develop into imperfective markers. The historical development is directional, from specific to general, not the reverse. The more general meanings are more likely to be grammaticalized, as auxiliaries or verb inflections. In general, there is a correlation between the degree of semantic generalization
of a grammatical morpheme and its degree of phonological reduction and fusion with other items. The longer an affix has been attached to a stem, the more likely it is that phonetic processes of fusion and reduction will have affected the stem. Bybee and Pagliuca's cross-linguistic data show that an implicational statement can be made: stem changes conditioned by habitual or continuous markers imply the existence of stem changes conditioned by the more generalized perfective/imperfective markers. In their sample of 50 languages, selected to avoid genetic and areal bias, the presence of inflectional markers for imperfectivity was twice as frequent as the presence of inflectional markers for the continuous/habitual contrast.

The verbs which are grammaticalized as tense and aspect morphemes in periphrastic constructions are usually semantically generalized ("reduced semantically"), according to Bybee (1987). She notes that Latin sedere 'sit' became generalized to the Spanish copula ser before entering into a periphrastic tense/aspect construction. Similarly, Latin stare 'stand' was generalized to the Spanish copula estar, later undergoing grammaticalization. This path of semantic generalization is followed in the development from 'grasp, take in hand' to 'have' to grammatical morpheme, and similarly from 'walk' to 'go' to grammatical morpheme.

Investigation of the historical evolution of modals (Bybee and Pagliuca 1985) shows a similar unidirectional development from specific to general meanings: from non-epistemic (deontic or agent-oriented) modalities ("The students may check books out of the library at any time"—permission) to epistemic modalities ("The storm
may clear by tomorrow"—possibility). In becoming more generalized semantically, the epistemic modal has loosened its selectional restrictions and no longer typically requires an agentive subject. It also has a wider scope (the whole proposition, not just the agent) and can be used in a larger number of contexts. Modals also show correlation between generality and degree of phonological fusion: modalities expressed by fused inflectional forms are almost always epistemic. Shepherd (1982) shows that deontic senses pre-date epistemic senses for English must, may, will, and shall. She claims that children express deontic notions earlier than epistemic, and that evidence from Antiguan Creole supports the claim that a language does not develop grammaticalized epistemic modals unless deontic modality has already been grammaticalized. The modals evidence supports the claim of a directional change.

In the diachronic process of change from a verb to non-epistemic modal to epistemic modal, the morpheme loses syntactic capabilities. As described by McDowell (1987), epistemics can't be questioned, tags can't be formed on them (in Standard English), and they can't undergo so-pronominalization. Double-modal constructions are found in the United States in Southern English and Northern Black English dialects (as in It might could get worse). Here the second element is a normal modal but the first is an epistemic which has lost tense and verb properties; negation, for example, attaches to the second modal. The first modal, the epistemic, functions as a sentence adverbial. Dialect comparison shows that the diachronic process has gone farther in Northern Black English, where the loss of tense is complete in

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comparison with Southern English, where the loss of tense is only partial.

Harris (1980) describes semantic devaluation over time in the change from remote demonstratives to markers of anaphora (pronouns or determiners). Remote demonstratives can also develop into definite articles, non-generic articles, and finally noun class markers (marking number and gender) or markers of nominality on common nouns; changes of this sort are discussed by Greenberg (1977 and 1978).

Another area illustrating directional change is the generalization of markers of spatial or temporal relationships over time to mark discourse relationships of coordination and subordination. The semantic development is from concrete to abstract, from a spatio-temporal to a logical orientation. Pepicello (1982) finds comparative evidence from Sanskrit, Greek, and Latin. Traugott (1978, 1979 and 1986) discusses the continuing development of logical connectors from spatio-temporal connectors.

Other documented changes exemplify the direction of change from specific to generalized meaning. The English indefinite article developed from a referential presentative marker (Hopper and Martin 1987). In later stages its functional domain widened; its referentiality decreased and its presentative function weakened. Traugott (1982) cites a number of examples from English: OE na wiht 'no thing/being' became a generalized negative marker not; the directional adverb up became a particle signifying boundedness (e.g., fill up, burn up); very and quite were adjectives meaning 'true' and 'clear, quiet' in EME, and underwent bleaching to become intensifiers
in LME.

As an example of a possible change in the reverse direction, Lightfoot (1979:224) suggests that Latin amabo became the Spanish amar he. However, Heine and Reh (1984:76) interpret this change as the loss of the Latin suffixal structure and its replacement by the periphrastic construction of infinitive + 'have'.

The English phrase to up the ante is cited by Lightfoot as a possible preposition-to-verb change. Traugott (1982:268) notes a handful of possible examples of verb-to-preposition changes such as off the pig, and a possible instance of change from grammatical connective to adjective in a very iffy situation. Examples of change in this direction are hard to find (see endnote 3). In the preponderance of documented cases, and in particular those involving verbs and minor categories and grammatical morphemes, the change appears to be directional, from less general to more general semantically, and from less grammaticalized to more grammaticalized. Examples of change in the reverse direction do occur, but they are much less frequent. It appears that, once phonological erosion or fusion has attacked a morpheme, change in the reverse direction is even less likely.

Grammatical forms in general show more effects of phonological erosion than lexical forms do. If we assume the likelihood of a historical path from an eroded grammatical morpheme to a phonologically robust verb, we must grant the operation of a phonological/morphological process that produces the opposite of erosion. We do not have evidence to support such a process. To
account for the observed data for locative markers and locative verbs, discussed above in section 3.2.2, this "reverse" process would presumably start with a consonantal prefix (whose source remains murky). The prefix would innovate a tone and vocalic segment, establishing separate word status as a preposition, and later would acquire the capability of taking affixes for tense/aspect, negation, and subject agreement and undergoing tonal changes according to the language's paradigm for verbs. The scenario would apparently attribute to coincidence the observed fact that in different languages a consonantal prefix "innovates" similar vowels and tones and verb meanings. This reverse scenario would presumably have a discourse particle marking non-topical arguments gradually restrict the range of nouns it can mark, taking on locative meaning, and finally narrowing itself to accept only place noun objects, while coming to function as a clause predicate. Such a scenario is supported neither by documented case histories nor by established principles of language change drawn from comparative studies.

A "reverse process" explanation of the changes described in section 3.5 above would require a prepositional object marker with its object in pre-verb position (an unusual configuration in view of the language's other patterns and those of its neighbors) to gradually take on verb meaning, functions and affixal capabilities.

To account for the verb/complementizer/subordinating conjunction data of section 3.7 above, a reverse process would require complementizers or purpose markers or conditional markers to take on, over time, the capacity of functioning as a main verb meaning 'say' or
'resemble'. I have been unable to find documented precedents for changes of this nature.

One can invent other stories. Say that prepositions can diverge in opposite directions to become verbs on the one hand and grammaticalized morphemes on the other. Or say that anything can change in any direction. But such inventions fail to find much support.

While I agree with Lightfoot that great caution is required in discussing supposed historical changes when one lacks written records of earlier stages, I would hold that it is valid to use comparative data to develop historical hypotheses, guided by generalizations drawn from documented changes. For category changes in the serial verb context, the evidence supports the directionality hypothesis.

4.5 The "why" question.

Why do languages, and serial verb languages in particular, tend to develop de-verbal adpositions, complementizers, adverbs and auxiliaries?

There are many ways to approach a question of this sort. In some accounts of linguistic change, languages proceed to correct deficiencies or attain greater efficiency of communication. Riis (1854:203) seems to have regarded the lack of case inflections on Twi nouns as something of a problem. He considered a verb followed by several (uninflected) objects as "a heavy and unwieldy form of expression." His desire for noun inflections may be Eurocentric to some extent. However, Twi does not have verbs followed by several
uninflected objects; furthermore, many languages appear to tolerate ditransitive verbs with uninflected objects. Riis's comment appears to imply that morphemic case-marking—by means of inflections, affixes, or adpositions, presumably—is preferable to marking by word order, and that a language would proceed to correct the deficiency. But a judgment like this, presumably based on criteria of efficiency rather than aesthetics, is difficult to arrive at from simply reviewing typological data. Psychological experiments can show that certain structures take longer to process than others, and studies of child language development indicate that children learn some structures before others. However, I am aware of no psychological or developmental evidence finding casemarking by inflection easier to process or easier to learn than casemarking by word order.

The development of verbs into prepositions and auxiliaries could have the effect of reducing the number of verbs per clause, over time changing the basic clause structure from serial verbs to a single verb plus modifiers, as suggested in 4.1 above. But I am aware of no psychological or developmental evidence that indicates that single-verb typology is easier or more efficient than serial-verb typology. The grammaticalization process does not necessarily produce a change in clause typology anyway, since some languages maintain stable clause typologies while cycles of grammaticalization proceed. Mandarin Chinese, for example, has maintained a serializing typology, with some shifts in the range of meanings (see Li and Thompson 1976a), while developing de-verbal prepositions ("co-verbs") and an object marker (section 3.5.2 above).
Some explanations of linguistic change assume principles or tendencies such as economy and symmetry or typological consistency, and a language is regarded as being in a continuous struggle for an optimal compromise among partly conflicting principles. VO word order, for example, would not be typologically consistent with postpositions. The development of prepositions from verbs, along with the gradual erosion of older de-nominal postpositions in languages like Akan and Ewe, could therefore be regarded as somehow directed toward the goal of attaining typological consistency. This approach is discussed by Lehmann (1985:313). He questions whether the notion of typological consistency explains anything; either languages should avoid getting into inconsistent states, or else typological inconsistency does not make a language any less functional, since "countless languages abide for centuries in inconsistent states." If a given linguistic system functions today, asks Lehmann, why can it not function in the same way tomorrow? Lehmann's arguments question the adequacy of a view of linguistic change as movement towards typologically consistent or symmetrical patterns.

Sometimes the grammaticalization process can introduce a new typological option into a language. Among the category changes discussed here, the development of the verb 'take' into a Patient marker (discussed in section 3.5) in SVO languages provides a new ordering of verb and object. The reanalysis of S V O V as S P R T O V provides an option in which the object can occur earlier in the utterance. There is a widespread tendency for discourse topics to occur early in the utterance, and speakers appear to utilize this
structural option to encode discourse topicality of objects in some languages. This development of an \( S \text{(PRT)} \ O \ V \) option in \( S \ V \ O \) languages does not appear to be attributable to a move towards typological consistency.

The gradual supplanting of de-nominal postpositions with de-verbal prepositions as casemarkers does produce a typological change. The position of the de-verbal casemarker follows straightforwardly from the relative position of verb and object: in VO languages verb + object becomes preposition + object, and in OV languages object + verb becomes object + postposition. It is not necessary to explain the change in terms of some search for symmetry. But if a VO language already has prepositions, the grammaticalization process simply produces more prepositions, and a typological change does not result. As Lehmann (1985:316) points out, "It is intriguing to observe that a considerable number of grammatical changes are quite superfluous from the point of view of the language system, that is to say, the change leads to a state that is maximally similar to the starting point." He concludes that "system-internal explanations of linguistic change do not fit."

The cyclic nature of the grammaticalization continuum is suggested in Lord (1976) for the development of complementizers, where there appear to be differing degrees of desemanticization in verbs on the pathway to complementizer status; the Yoruba verb \( kpé \) 'say' can function as a complementizer, and the verb \( wi \) 'say' appears to be joining it in the compound \( wi-kpé \) with complementizer function. There is also evidence for the cyclic nature of the development in Senufo
(section 3.3.5 above) where one de-verbal Benefactive marker appears to be replacing another. Lehmann (1985:311) describes cyclic movement along the grammaticalization continuum for prepositions in Latin and French. The concrete, local preposition ad 'at, towards' in Latin came to be used as a Recipient marker in French (instead of the Latin dative inflection) and was eroded to à. French is now developing a new preposition for the concrete, local meaning, jusqu'à, which Lehmann calls a "secondary preposition which is gradually developing into a primary one." According to Lehmann, the cyclic nature of grammatical change was recognized by Gabelentz (1901) and Meillet (1912), who likened it to a spiral. Heine and Reh (1984) also make this analogy. Pike (1967) uses the metaphor of grammar as wave.

Two elements may be seen in this cyclicity: the process of phonological erosion of grammatical forms, and the human imperative to be expressive resulting in the utilization of metaphor. That grammatical form-words may weaken semantically and phonologically, and are subject to renovation, was noted by Meillet (1912). Their renewal may not be driven by communicative necessity; Bybee and Pagliuca (1985:75) suggest that "human language users have a natural propensity for making metaphorical extensions that lead to the increased use of certain items. The metaphorical extensions are cognitively based, and are similar across languages. Thus the paths of development leading to grammatical meaning are predictable, given certain lexical material as a starting point. As the meaning generalizes and the range of uses widens, the frequency increases and this leads automatically to phonological reduction and perhaps fusion." Similarly, Claudi and
Heine (1988) claim that it is metaphorical language use which is responsible for desemanticization, and hence for the rise of grammar. Lehmann (1985:315) attributes grammaticalization to the speaker's desire for novel, vivid expression; there are limitations on the appropriateness of the devices available to speakers, so different speakers tend to use the same devices.

A number of explanations of language change take the notion of the linguistic system as elementary and the notion of change as something secondary affecting the system. In Lehmann's view, we must reverse our basic perspective and regard the linguistic system not as given, but as created by language activity.

My intent here has been to explain some of the properties of serial verb structures in terms of the historical process which they reflect, and to show how these properties arise in the context of human communication.
AFTERWORD

After a recent colloquium presentation describing the properties of various serial verb constructions, Russ Schuh noted that the facts of serial verb constructions have been known to linguists for a long time; why have they had so little impact on linguistic theory, he wondered. One responder suggested that many of the linguists who studied serial verb languages were not primarily occupied with developing theoretical models. This has been true for some linguists, especially those sent by missions, beginning with Riis and Christaller. However, a look at the papers dealing with serial verb structures in the early 1970's shows that several linguists were trying very hard to come up with an account of these structures within some version of then-current linguistic theory. At that time, one of the givens was the sentence unit and its phrase structure rule $S \rightarrow NP\ VP$, and the theory question asked the nature of the deep structure of a serial verb sentence. The two options, coordination and subordination, were hotly debated. It turned out that there were arguments for and against both options, depending in part on the language and the subset of structures one looked at. During this period a great deal was learned about the properties of serial verb structures. However, these findings had little effect on the course of development of prevailing theoretical models, probably for socio-political reasons. As the theoretical model was challenged and revised, its imperative became less focused. Later theoretical models recast the question in other terms, for example principles or
parameters and constraints. It remains to be seen whether the cycle of model-building, like the cycle of grammaticalization of serial verbs, will be repeated. Another round of close synchronic examination of serial verb structures may further illuminate their properties as structures involved in diachronic change, shaped as they are utilized for communication among people.
ENDNOTES

1. For discussion of African language classification, see Westermann and Bryan (1952), Greenberg (1963), Stewart (1971), Williamson (1971), Welmers (1973), Givon (1975), Bennett and Sterk (1977), and Armstrong (1981), among others. Greenberg’s term Nger-Congo is used for the language family that extends across much of sub-Saharan Africa. Within this family, languages have been collected into a half-dozen or so sub-groups. Westermann and Bryan (1952) used the name "Kwa" for a group of typologically and etymologically similar languages spoken in the eastern part of Ivory Coast, southern Ghana, Togo, Benin (Dahomey), and Nigeria (the word for 'people' in many of these languages was said to contain the root kwa). Another sub-group, the Gur languages, bears a particularly close resemblance to Kwa. The Bantu languages are in Greenberg’s (1963) Benue-Congo sub-group, but he recognizes legitimate doubts concerning the validity of a division between Benue-Congo and Kwa; Givon and Hyman use the term Benue-Kwa for the larger sub-group. According to Armstrong (1981), it is increasingly hard to define a clear boundary between the "Kwa" languages and the Gur languages to the north or the Benue-Congo languages to the east.

2. Christaller (1811, revised 1933, p. 77) glosses di as basically 'have, take, use'. If the earlier meaning is basically 'take', then the reason for the 'eat' gloss is apparent when the object names a kind of food, as in 'take nourishment', 'take (and eat) food'. When
3. The similarities between verb (an open class) and preposition (a closed class), especially for prepositions of motion or direction, is recognized for English by Becker and Arms (1969), who suggest that verbs and prepositions may be considered surface realizations of the same abstract semantic categories. Certain prepositions of motion or direction can function as predicates, especially in imperatives, as in "Out, out, damned spot!" and "Up, up, and away!" Similarities are also discussed by Jackendoff (1973), who noted prepositions functioning as predicates in the context [__ with NP], as in "Off with his head!" and "Into the dungeon with the traitors!" It appears that only motion/direction prepositions (to, into, up, down, off, away, on, out...) can function in this manner. There are a very few instances without hortative force, as in "He upped his rating" and "He downed the medicine in one gulp."

4. This criterion—that verbs select nouns as subjects, but prepositions do not—is probably better viewed as true for the endpoints of the continuum, but allowing for gradual variation along the continuum (as is the case for most criteria of this sort). The Locative ni 'in, at' is probably Yoruba's best candidate for
preposition-hood; it can occur in a sentence with just about any subject. But the Dative/Benefactive ̣fún 'for, on behalf of', and the Benefactive ́ba 'on behalf of', because of the situational contexts ("scenes" or scripts or frames) in which they participate, typically occur in sentential contexts with action verbs which take Agentive subjects. Therefore it could be claimed that these prepositions "select human nouns as subjects" of the sentences in which they occur.

5. Hyman (1977) discusses "possessor promotion" for body part constructions in Bantu, in which the possessor, the affected human, occupies the direct object position immediately following the verb.

6. Dik (1978) has noted a language-independent preferred order of sentence constituents, according to which pronouns are preferably pre-verbal and tend to precede nominals, and prepositional phrases tend to follow verbs and constituents without prepositions. These observations are consistent with the data here and the overall tendency of topics to precede other arguments.

7. The verb si 'stand' also occurs with a post-verbal object, as in

\[
\begin{align*}
o-si & \quad d\dot{a}n & \quad (Riis\;1854:230) \\
\text{he-build} & \quad \text{house} \\
'He\;builds\;a\;house.'
\end{align*}
\]

with the meaning 'build'. There may be a relationship with the use in
(178), but the postverbal NP here is semantically a Factitive, not a Patient.

8. Campbell (1988) examines serial verbs in Akan with respect to the universal grammar formulations of Chomsky (1981, 1986). He classes de as a main verb with no semantic content. He notes that "it is a mistake to gloss de as 'take'. It simply assigns Case, or contributes to the external θ-role, as necessary....these facts suggest that there is more to the story than can be discussed here, perhaps involving an account of how languages develop serial verb constructions."

9. One encounters occasional instances of bitransitives with objects in other case roles, such as Patient and Instrument in

\[ \text{wɔ-kɔ́} \quad \text{no mpire} \quad \text{(Chr 1881:215)} \]

\[ \text{they-touch him whip} \]

\[ '\text{They scourged him.'} \]

and Factitive object and material in

\[ \text{q-yé} \quad \text{kanɛ́dɔ́} \quad \text{no ḷhinà sìká} \quad \text{(Christaller 1875:141)} \]

\[ \text{he-made candlestick the whole gold} \]

\[ '\text{He made the whole candlestick of gold.'} \]

In parallel de constructions the second of these objects is marked by de in each case: the Instrument, as in (144c), and the material, as in
10. The relevance of semantic features as well as case roles and
topic with respect to direct object position is discussed for Bantu
languages by Hawkinson and Hyman (1974) and Morolong and Hyman (1977),
and more generally by Faltz (1978), Hopper and Thompson (1980, 1982),
and Givon (1976, 1979, 1984). The complex intertwining of animacy
with topic-worthiness, salience, individuation and definiteness is
also discussed by Comrie (1981) and Mallinson and Blake (1981).

11." An underlying pronoun coreferential with the Factitive noun
'letter' can be introduced by de as the Patient of the following
bitransitive verb bərg 'send, bring' as in

w-a-kyérew ḫhoma de ḏ abére mè (Christaller 1875:118)
he-PERF-write letter de (it) send me
'He has written me a letter' (Lit., 'He wrote a letter, took it
and sent it to me')

The identification of 'letter' as Factitive with respect to the first
verb kyérew 'write' does not prevent it from taking the Patient role
with respect to the verb bərg 'send, bring' in the subsequent serial
verb construction. (Third person inanimate objects are realized as
zero.)
12. A sentence like

ata maa me nsu nomee
Ata gave me water drank
'Ata gave me water to drink.'

is a possible exception to Boadi's observation that only sequences of an activity verb followed by a motion verb have "causative" rather than "same-subject" readings. The fact that the understood subject of 'drank' is 'I' may illustrate the importance of pragmatic context for assignment of logical subjects in serial verb construction. Here the understood subject of the second verb is the first verb's Dative NP rather than its Patient NP. The Dative NP occupies the position immediately following the first verb; conceivably this position could become a determinant (competing with semantic role) for identifying the understood subject of post-initial verbs in "causative" serial constructions; this could be considered "grammaticalization" of the position and could justify giving its occupant a name like "direct object".

13. Unfortunately, as a non-native speaker, I may be missing possible interpretations of the data here. The picture I have drawn so far could probably be clarified considerably with some native speaker intuition and more comparative data from dialects. I see this section (3.5.1.12) as an interesting initial exploration, by no means a definitive account.
14. Examples (from Abraham 1951) of 1- used comitatively include:

\[ \text{ù yètì kpó m'-1- €jè} \]
I travel with-Eje
I travelled with Eje.'

\[ \text{ó bá 1-ùnà} \]
\[ \text{male 1-female} \]
'male and female'

Other uses resemble those for Yoruba ni/1-, where a possessive/locative source is plausible:

\[ \text{ó litènè 1-ùnwó} \]
it be-useful 1-Unogwu
'It is useful to Unogwu.'

\[ \text{ó-1-òcè (òcè 'illness')} \]
'sick person'

15. It is not easy to come up with a synchronic model that will successfully represent meanings for ambiguous seq sentence structures like (269). It is likely that, in actual use, the interpretation of these structures is affected by pragmatic factors such as plausibility and language users' expectations. Both (268a) and (269) have the structure
yet only (269) is ambiguous. One reason may have to do with the fact that not all NPs make sense as objects of any given verb. The reading for (269b), 'The man likes money more than he likes his brothers', is plausible, but the corresponding second reading for (268a) would be the implausible 'I have money more than I have him.' It may be that the reason speakers fail to find (2685a) ambiguous is that they have difficulty coming up with a situational context in which this second reading would make sense.

16. The reduplicated form, seSse, is the "multiple" form of the verb, occurring here with the plural subject wo(y) 'they'. The verb in (273b) is not reduplicated because the subject is Kofī, singular. Although ne is often called a conjunction, it does not coordinate; it is a de-verbal subordinating conjunction, sometimes translatable as 'with' (as discussed in section 3.4.1).

17. A sentence can consist of two se clauses; when this occurs, one se gets translated as 'thus, so', as in

\[
\text{se wòyè adɛ́wà ma no, sɛ métuà wɔ kàw neg} \text{(Christaller 1875:166)}
\]

as you-do work DEF thus I-pay you reward

'As you work, so will I reward you.'
18. A se clause can occur in subject position, as in

\[ \text{se } \text{o-ne } \text{woŋ } \text{dii } \text{no } \text{ye } \text{hù} \quad \text{(Christaller 1875:156)} \]

how he-with them took DEF be terrifying

'How he dealt with them was frightful.'

But here se is not a neutral that-complementizer; the gloss is not

'That he dealt with them was frightful'. (Cf. senea 'how' below, and

3.7.1.4 for conditionals.)

19. Christaller (1875:156) notes that in sentences like those in

(1)-(13) here se introduces "a noun-sentence" which is "equivalent to

an abstract noun, and stands for a subject, or complement." He notes

that a clause introduced by se can also function as "a noun-sentence

standing in the place of a nominative complement", as in

\[ \text{n'ássém } \text{mü } \text{nokwàre } \text{ne } \text{se } \text{oní } \text{slká} \]

his-story inside truth is that he-NEG-have money

'The truth in his story is, that he has no money.'

20. Twi uses the same morpheme to mark comparison/degree (as in

(278)) and purpose (as in (289)). Assuming the possible historical

relationship of the two uses, given the fact that language changes

only when people use it for communication, and given the

cross-cultural commonality of basic human situations and concerns, we
might expect to encounter similar parallels in historically unrelated languages. English provides a parallel in this case. In the English
gloss for sentences like (278), comparison/degree is marked by
so...as, in "A steamer does not run so swiftly as a bird flies." The
same marking indicates purpose in non-standard American English
versions of the glosses for (289a) and (289b), "I gave him money so as
to go and buy some," and "Kofi did the work so as Yaw would like him."
It is plausible that speakers could have extended the use of a
morphological marking from one to the other. Speakers can utilize the
same marking to do different jobs because the semantic contexts differ
enough to make confusion of meaning unlikely (for example, result
clauses are typically in an irrealis tense/aspect, and degree clauses
are not). And a hearer is unlikely to entertain a grammatically
possible but pragmatically implausible reading when the alternative is
more felicitous.

21. See, for example, Givón (1975).

22. Also, its tonal contour suggests a bisyllabic historical source.
In Twi, single syllables ordinarily carry a single level tone, and the
presence of a falling tone, as on $\hat{\text{a}}$, suggest a falling together of two
separate syllables at an earlier stage historically (a tonal
phenomenon attested elsewhere in Niger-Congo languages), i.e.,
cá + că $\rightarrow$ (c)$\hat{\text{a}}$(c)$\hat{\text{a}}$ $\rightarrow$ $\hat{\text{a}}$. So, in comparison with se, it appears
that $\hat{\text{a}}$ is much more eroded.

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23. It is also possible historically that new speakers might have sub-categorized a verb such as 'rejoice' in (299c) with verbs of mental action or emotion like 'hate', 'want', and 'know' that take se complements as in (285); hearers might have interpreted the se clause as conveying reason in these contexts, and the use of bare se to mark reason clauses could have taken hold along this route for some speakers.

Interestingly, the that-complementizer in English can mark reason clauses, as the English glosses for (299b-c) illustrate. A more comfortable version of current American English would be 'Thank him because he has helped you,' and 'They rejoiced because he was dead,' in which the that has been replaced by the more explicit marker because, even though confusion with, say, a result reading for that (?'They rejoiced so that he was dead') is unlikely, given the perfect aspect of the se clause, as well as our understanding of pragmatic possibilities for actions that are likely to cause death.

24. Christaller assumes that senea 'how' has as its source

\[ s\underline{e} + ade + a \space, \text{and Boadi (1966) analyzes senea} \]

'like' 'thing' REL

as derived from \[ s\underline{e} + no + a \space \]

'like' 'it' REL.

25. This question may be regarded as trivial, and I apologize for belaboring the obvious. However, it is frequently asked, and there

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seems to be some confusion surrounding it. I hope the discussion here helps to clarify the matter.

26. Upon hearing this claim about verbs and prepositions in Kwa languages, a respected Africanist responded, "But that's silly, of course." With apologies to like-minded Africanists, I address the claim here, because respected non-Africanists have found the claim a reasonable one.
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