Bernd Heine / Mechthild Reh

Grammaticalization and Reanalysis in African Languages

HELMUT BUSKE VERLAG HAMBURG
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<td>preposition</td>
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<td>present tense</td>
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<td>PROG</td>
<td>progressive</td>
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<td>QU</td>
<td>question marker</td>
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<td>REL</td>
<td>relative clause marker</td>
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<td>S</td>
<td>1. subject; 2. sentence</td>
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<td>SHT</td>
<td>shifting tone</td>
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<td>TOP</td>
<td>topic marker</td>
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<td>V</td>
<td>verb</td>
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The main purpose of the present paper is to draw attention to one aspect of linguistic analysis which has found insufficient treatment in works on African languages. This approach is based essentially on diachronic findings in that it uses observations on language evolution, i.e. on grammaticalization processes and on reanalysis, in order both to account for structural differences between languages and to explain seeming inconsistencies within a given language. The relevance of linguistic change to the interpretation of synchronic language structure has been described by Greenberg (1977: 104) in the following way:

"Any approach to linguistic theory which has no place for generalizations based on the comparative study of linguistic change must fail to account for many phenomena which are not impervious to explanatory theory based on a process approach."

The close relationship between diachronic linguistics and language typology has been pointed out in particular by Talmy Givón. According to him, typology is "a captive of diachronic change", and "typological consistency is incomplete unless diachronic processes are taken into consideration" (Givón 1979: 204/05; see also Givón 1971b).

Thus, the proposed approach has three main goals: apart from describing and explaining typological diversity, it aims at elucidating aspects of synchronic language structure, and it can also be material to reconstructing language history. It may turn out that our approach can, in a modified form, be made applicable to languages outside Africa. This, however, is a possibility that has not been considered here.

The discussion in the following chapters will focus on two basic concepts. One of them is grammaticalization, which is the subject of chapter 1. It will be argued that grammaticalization has a phonetic, a morphosyntactic and a functional component, and that each component can be described in terms of a number of evolutorial processes. Syntactic reanalysis, which is discussed
in chapter 2, forms the second key concept. Evidence from African languages suggests that this is a complex phenomenon which is made up of two quite divergent strategies, transfer and adjustment. Chapter 3 is devoted to specific problems of African linguistics. Four topics, tense-aspect, focus, word order, and gender, are picked out and studied with reference to their evolutionary behaviour. Finally, the significance that findings on grammaticalization and syntactic reanalysis may have for our understanding of synchronic language structure will be considered in chapter 4. While it will be claimed that such findings may provide us with some clues to linguistic explanation, it goes without saying that they concern only one out of many aspects which are relevant to a theory of grammar.

The following treatment is preliminary in various ways. It is far from attempting a theory of grammaticalization and syntactic reanalysis, nor does it account for the interrelationship that appears to exist between the two. A number of notions are introduced, but in many cases their empirical basis is too weak to reliably assess their relevance. Furthermore, most claims made below are based on diachronic reconstructions. Considering the relatively unadvanced state of diachronic linguistics in Africa, however, quite a few of these reconstructions must be considered as tentative, if not conjectural.

Throughout this work, the reader will be confronted with a number of names of African languages. Concerning their genetic classification and distribution, he is referred to the General Index. Furthermore, there is an Index of Grammaticalization, which summarizes some of the more basic findings on the evolution of lexemes and grammatical morphemes.

This paper is based on research carried out within the Cologne project on language universals (UNITYP)\(^1\). The findings

\(^1\) We are deeply obliged to the Deutsche Forschungsgemeinschaft (German Research Society) for having sponsored this research.
presented have profited greatly from discussions within the research unit of UNITYP. We wish to express our gratitude in particular to Hansjakob Seiler, Jürgen Untermann, Christian Lehmann, Ulrike Mosel, and Fritz Serzisko for many valuable suggestions. Furthermore, we wish to thank many other colleagues, in particular Franz Rottland, Thilo Schadeberg and Talmy Givón, for having advised us on various aspects of this paper.

The starting point of this research was to find empirical evidence for the presence of functional scales in African languages. In the course of research, our attention was drawn to the fact that there exist certain similarities between linguistic scales which are based on a functional perspective and those that are characteristic of grammaticalization patterns. Seiler (1981: 115), for example, has demonstrated that each technique on the scale of POSSESSION "shows more syntacticization as compared to the technique immediately preceding". Such correlations as between the arrangement of techniques and the degree of syntacticization tend to be paralleled by certain sequences of grammaticalization, as we hope to display in the following chapters.
With the term "grammaticalization" we refer essentially to an evolution whereby linguistic units lose in semantic complexity, pragmatic significance, syntactic freedom, and phonetic substance, respectively. This is the case for instance when a lexical item develops into a grammatical marker. In the present chapter, an attempt is made to describe grammaticalization as consisting of a number of basic processes.

1.1 Evolutional processes

Grammaticalization is an evolitional continuum. An attempt at segmenting it into discrete units must remain arbitrary to some extent. This applies in particular to the processes we propose in the present chapter, which are meant to serve as a means of segmenting this continuum. Although most of these processes appear to be "definable" in some way or other, it is hardly possible to trace clear-cut boundaries between them. Meillet (1948: 135) touches on this problem when he discusses the transition from words that he refers to as mots principaux to mots accessoires. He presents the following examples, each suggesting a different stage of grammaticalization (p. 131):

(1) je suis celui qui je suis;
(2) je suis chez moi;
(3) je suis malade;
(4) je suis parti.

While suis in (1) is an "autonomous" word, it is less so in (2), etc., and in (4) it has been reduced to a grammatical marker. But in spite of the problem as to where a mot principal ends

---

1 Note, however, that "grammaticalization" is used here in a wider sense than with most other authors. For example, when Hoenigswald (1963: 34) describes it as "the emptying of lexically meaningful morphs (compound members, etc.) and their transformation into "function" elements", then this refers to only one, functional, aspect of grammaticalization. For some major characteristics, see 1.2.
and a *mot accessoire* starts, Meillet maintains that it is necessary to delimit the two (1948: 135):

"Mais, dans toute phrase donnée, il importe de bien marquer la distinction entre les mots principaux et les mots qui sont plus ou moins accessoires."

Our position is similar to Meillet's. On the one hand, we admit that there are serious, perhaps even insurmountable problems in delimiting processes. On the other hand, we consider them as a useful heuristic tool. We propose to define them as focal points within the evolitional continuum, rather than as discrete, segmentable entities.

1.1.1 Some basic processes

In this section, linguistic evolution is described in terms of grammaticalization processes. Three types of processes are distinguished:

(1) Phonetic processes, which change the phonetic substance of linguistic units,

(2) morphosyntactic processes, which affect the morphological and/or syntactic status of these units, and

(3) functional processes, which affect the meaning or grammatical function of linguistic units.

There are a number of chronological correlations between these three types, for which see 1.1.4.

The following is a list of processes which appear to be relevant to the description of African languages. To a large extent, the arrangement of processes within each of the three groups reflects the chronological order in which they operate.

(1) Phonetic processes: Adaptation
    Erosion
    Fusion
    Loss
(2) Morphosyntactic processes:
- Permutation
- Compounding
- Cliticization
- Affixation
- Fossilization

(3) Functional processes:
- Desemanticization
- Expansion
- Simplification
- Merger.

1.1.1.1 Phonetic processes

1.1.1.1.1 Adaptation

This process refers to the phonological adjustment of a morpheme to its environment. Neighbouring linguistic units tend to "assimilate"\(^1\) to one another in their phonological shape. A typical result of Adaptation is allomorphic variation, i.e. the presence of more than one allomorph indicates that the relevant unit has been adapted differently in different environments.

Not all cases of allomorphic variation are due to Adaptation; only morphs are in automatic alternation\(^2\), i.e. phonologically conditioned allomorphs, which are suggestive of Adaptation. For the section concerning non-automatic alternation, see 1.1.1.2.5.

Adaptation works at all levels of grammaticalization. There is, however, a noteworthy correlation with morphosyntactic grammaticalization: the more morphosyntactic processes a linguistic unit has undergone, the more susceptible it is to Adaptation.

---

\(^1\) Assimilation is used here in a wider sense; it includes, for example, dis-simulation (see below).

\(^2\) Allomorphs of a given morpheme are said to be in automatic alternation if all their shapes are derivable from an actually occurring base by phonological rules which hold for all similar combinations throughout the language (cf. Greenberg 1954: 205; 214).
Thus, an affix is more likely to be affected by Adaptation than a free morpheme.

Adaptation involving the vowels of verbal endings in Bantu languages has been described under headings such as vowel harmony or regressive vowel assimilation. In Herero (Meinhof 1910: 125-27), as in some other Bantu languages, there is double Adaptation, one in accordance with vowel quality and another with nasality. The perfect suffix -ire, for example, has four allomorphs: -ire, -ere, -ine, and -ene. Their occurrence is defined by their phonological environment: the allomorphs containing n are used if the consonant preceding them is a nasal, otherwise the suffix consonant is r, and the first vowel of the suffix is i if the vowel preceding the suffix is either i or u, otherwise i is replaced by e. Thus, we have the following Adaptation processes:

I Vowel Adaptation: -ire → -ere following a non-high vowel,

- rara 'lie': -rar-ere (perfect)
- pora 'be cool': -por-ere

but: tua 'put on': -tu-ire

II Nasal Adaptation: [-ire] → [-ine] following a nasal,

[-ere] → [-ene]

-puma 'pierce, prick'
- pīpa 'be dis-satisfied'
- tena 'threaten'
- pama 'be narrow'

Adaptation first tends to affect frequently used structures before it spreads to all other contexts.

The Jara dialect of Boni (Heine 1982) has an assimilation rule by which a velar nasal (q) is replaced by a dental nasal (n) preceding dental nasals, i.e.
This rule can generally be applied at morpheme boundaries of affirmative verb tenses and the negative imperfect. It is blocked, however, in the case of the negative perfect aspect and the negative imperative:

\[(\text{un}) \quad \text{á-baarın-na} \quad ('\text{we (shall) speak}')\]
\[(\text{we}) \quad \text{PF-speak-we.IMPF}\]
\[(\text{un}) \quad \text{má-baarın-ne} \quad ('\text{we have not spoken}')\]
\[(\text{we}) \quad \text{not-speak-NEG.PERF}\]
\[(\text{we}) \quad \text{ha-baarìn-ne} \quad ('\text{don't speak}!')\]
\[\text{NEG-speak-NEG}\]

The Adaptation process may be active for some time and then fall into disuse. The following example from Bemba suggests that it was discontinued more recently with the past ending -ile. Thus verbs that have been introduced during the last decades, such as words borrowed from English, are no longer affected by it, as Richardson (1963: 135) notes:

"Verbal lexical extensions in Cibemba follow a regular pattern of sound changes depending on the sounds of the radical to which they are affixed. A common deviation in TB (Town Bemba) is the failure to make these changes, e.g. from a Nsenga informant -fon- 'telephone' extended to -fonil- 'telephone to', and from a Lozi student -kiliin- 'clean' extended to -kiliinin- 'clean for'. Cibemba phonology requires the various -il- extensions to change to -el- after an e or o in the radical. Similarly when the radical ends in a nasal consonant, l in these components should become n, thus giving -fonen- and -kiliinin-.

It is of interest that the -ile [= PAST] suffix normally follows similar processes of sound change to the above but not when the radical is foreign origin. Thus the -ile base of the loan-word -fon- is -fonile whereas that of the indigenous -pon- 'fall' is -ponene."

**Junctural Adaptation**

Certain Adaptation processes are confined to phonemes occurring at the juncture of morphemes.
An instance of junctural Adaptation is found in the Eastern Nilotic Maa language, where a mid vowel of certain morphemes (but not of others) is replaced by a corresponding high vowel if it is immediately preceded by either /a/ or /o/ belonging to a different morpheme:

\[
\text{te yyé 'with you'} \quad \text{but: } \text{tí åq 'at home'}
\]

(cf. Tucker/Mpaayei 1955: 216)

The sequence /ea/ occurs, however, if the two vowels are not separated by a morpheme boundary, e.g.

\[
\text{ol-teani 'bamboo'}
\]

**Dissimilation**

Adaptation, however, does not always lead to phonological assimilation, it may have the opposite effect, i.e. dissimilation. In the languages of the Congo Branch of Bantu, for example, there are various dissimilation rules which qualify as Adaptation processes. Dahl's Law, originally observed in Nyamwezi, was subsequently discovered in many other languages such as Thagicu (Kikuyu, Kamba etc.), Dzaramo, Shambaa, Kinyarwanda and Kirundi. In Meinhof's wording (Meinhof/Warmelo 1932: 181), it has the following effect: "When two successive syllables each begin with an aspirate, the first of these loses its aspiration and becomes voiced." In Kinyarwanda, a voiceless consonant of a noun prefix becomes voiced when the following stem has a voiceless consonant as initial. Thus, the prefix, iki- of noun class 7 is replaced by igi- if the following consonant is voiceless, e.g.

\[
\text{iki-rar-o 'sleeping place', but (+ Adaptation):}
\]

\[
\text{igi-koko 'wild animal'}
\]

\[
\text{igi-ti 'tree'}.
\]

Other important Adaptation processes by dissimilation are the Ganda Law\(^1\) and the Kuanyama Law\(^2\).
1.1.1.1.2 Erosion

Erosion is a process by which the phonological substance of a morpheme is reduced, usually in accordance with its new evolutionary status. Thus, a bisyllabic word may be reduced to a monosyllabic morpheme once it has undergone Affixation.

Erosion may lead to a situation where the relevant morpheme (usually an affix) loses its syllabic or even segmental status, so that it is retained for example in the form of a simple consonant, vowel, or in the form of phoneme gemination, or a rule of tone/stress change or ablaut. It may therefore be responsible for the emergence of what Sapir (1921: 126) refers to as "symbolism" or internal change, i.e. the infixing of inflective morphemes.

Erosion may have various effects on the phonological structure of linguistic units, the main ones being:

(a) Syllabic Erosion

After having undergone Cliticization and/or Affixation, polysyllabic morphemes tend to be reduced to monosyllabics.

In the following example from Kituba, a pidginized variety of Kikongo, bi- and trisyllabic pronouns and aspect markers have turned into monosyllabic affixes within two generations (Fehderau 1966: 116):

(Footnotes referring to the preceding page:)

1 "When two successive syllables both begin with a nasal plus following voiced plosive, the plosive of the first syllable is lost." (Meinhof/Warmelo 1932: 183)

2 "When two successive syllables both begin with a nasal and a following plosive, the nasal of the second compound is dropped." (Meinhof/Warmelo 1932: 184)
Two generations ago 

munu imene kw-enda
I PERF INF-go
'I have gone'

munu ikele kwenda ku-sosa
I PROG go INF-search
'I am going about searching'

munu lenda ku-sala
I may INF-work
'I may work'

Present generation

mu-me-kwenda
'I have gone'

mu-ke-kwe-sosa
'I am going about searching'

mu-le-sala
'I may work'

(b) Junctural Erosion

Phonemes occurring at the boundary between two morphemes of which at least one is a bound morpheme may be lost.

In Standard Ewe, there is a drift to dropping the initial consonant of a lexical item once it comes to stand at a word-internal morpheme boundary. Thus, we observe the following instances of junctural Erosion:

(1) vá 'to come' > -á- future tense (Westermann 1907:65)
(2) nó 'to remain, stay' > -a habitual aspect
(3) lá definite article > -á definite article

The extent to which these morphemes have been affected by Erosion differs considerably: in (1), it is compulsory:

m-á-yi 'I shall go'; (< me-yá-yi);
I-FUT-go

In (2), Erosion is blocked in the case of intransitive verbs but obligatory if an object NP follows:

me-yá-na (< me-yí-na) 'I used to go'; +me-yí-a
me-wó-a dó 'I use to work'; +me-wó-na dó
I-do-HAB work

In (3), Erosion is optional following singular nouns but obligatory following plural nouns:

1 For an alternative diachronic interpretation see Westermann 1907: 60.
atí lá or atí-á 'the tree'

atí-á-wó 'the trees'; +atí-lá-wó
tree-the-PL

(c) Peripheral Erosion

Word-final, to a lesser extent also word-initial, phonemes tend to be lost.

(d) Non-segmental Erosion

Erosion does not necessarily lead to a loss in phonetic substance; it may also involve a change in marking whereby a highly marked segment is replaced by a less marked one. Usually, this has the effect of eliminating an existing phonological contrast.

Non-segmental Erosion is present, for example, when nasalized vowels are replaced by corresponding oral vowels, or when voiced obstruents become voiceless word-finally thus merging with the corresponding voiceless phonemes in this position.

In Kxoe (Köhler 1981: 503ff; 530), some verbs undergo Affixation with the result that they become verbal derivative suffixes. Once these verbs are grammaticalized, they undergo non-segmental Erosion of the following kind:

(1) they lose their tonological distinctiveness and invariably take an unmarked tone;

(2) if the verb contains a nasalized vowel, this is replaced by a corresponding oral vowel:

<table>
<thead>
<tr>
<th>Verbal source</th>
<th>Derivative suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>ei 'to remain'</td>
<td>-éi 'continuous-intensive'</td>
</tr>
<tr>
<td>må 'to give, offer'</td>
<td>-må applicative</td>
</tr>
<tr>
<td>xū 'to abandon, loosen'</td>
<td>-xū terminative</td>
</tr>
</tbody>
</table>
Verbal source | Inflectional suffix (Aktionsart)
---|---
tī | -tê 'to do s.th./standing'
†nūï | -†nûê, -ñ 'to do s.th./sitting'
|| oë | -||oë 'to do s.th./lying'

It would seem that Erosion is more likely to occur under some conditions than others. The following hypotheses, in particular, can be formulated with reference to African languages:

1. The longer the phonological sequence of a linguistic unit is, the more susceptible is that unit to Erosion.

2. The more grammaticalized a unit is, i.e. the more processes it has undergone, the more susceptible it is to Erosion.

Both (1) and (2) can be demonstrated with an example concerning peripheral Erosion in Luo. Word-final vowels in this language are deleted if the following syllable is light and begins with a vowel. This instance of Erosion applies to the following contexts (cf. Odhiambo 1983: 211ff):

(a) when the word whose final vowel is deleted is polysyllabic, or

(b) when it is monosyllabic but has undergone Desemanticization (i.e. is a function word, cf. 1.1.1.3.1).

Thus, Erosion is blocked in the case of monosyllabic content words, that is, words which are not desemanticized. (a) can be accounted for by hypothesis (1): the functional yield of a final vowel is lower in words consisting of two or more syllables than in monosyllabic Luo words, which in the case of vowel deletion are reduced to one (consonant) phoneme. The fact that peripheral Erosion has nevertheless occurred with desemanticized monosyllabics1, though not with other monosyllabics, is accounted for by hypothesis (2): a word that has undergone Desemanticization is, ceteris paribus, more grammaticalized than a word that has not.

---
1 As well as cliticized monosyllabics; cf. Cliticization (1.1.1.2.3).
Note that in the present example, (1) and (2) have identical effects, namely of triggering Erosion.

Erosion is a process that is continuously at work in language. It tends to repeat itself as long as there is phonological substance to work on. In the following example from Duala, a Cameroonian Bantu language, different stages of Erosion may be observed. This development must have started with the verbal *gide 'to have finished' (cf. Voeltz 1980: 489-491; see 1.2.1) which became a perfect aspect suffix in Proto-Bantu. The following stages may be distinguished:

I  Junctural Erosion:  *-gide > *-ide  (Proto-Bantu)
II Syllabic Erosion 1:  *-ide > -i  (after low tone),
                      -i  (after high tone)  (Duala)
III Syllabic Erosion 2:  loss of suffix vowel after nasals, but
                      its tone is retained on the nasal  (Duala),
                      e.g.
                      dum'  (from duma 'to buzz')
                      dun'  (from duna 'to grow old')
                      dim'  (from dima 'to extinguish')
                      (Ittmann 1939: 84)

Thus, the suffix has lost its segmental status after nasals in Duala but has been retained suprasegmentally.

1.1.1.1.3 Fusion

Fusion is present when the boundary separating two morphemes disappears, these morphemes thus being reduced to one phonological unit.

Fusion may either involve root morphemes, in which case it tends to, but need not (see below), be preceded by Compounding, or else it may involve one root and one non-root or two non-roots, in which case it follows processes like Cliticization or Affixation.

Like Loss (1.1.1.1.4), Fusion has the effect of reducing the
The loss of the class 5 prefix ili- (plural ama-, class 6) was probably motivated by the drift to replacing the opposition class prefix (singular)/class prefix (plural) by another opposition zero (singular)/prefix (plural), which is a characteristic of most pidgins derived from Bantu languages. Thus, it was the pressure of eliminating the singular marker, rather than any phonological motivation, that appears to be responsible for this instance of Loss.

1.1.1.2 Morphosyntactic processes

1.1.1.2.1 Permutation

Permutation is a process which changes the basic arrangement of linguistic units (morphemes, words, or constituents) in a sentence.

There are a number of factors which are responsible for Permutation (cf. Dik 1978: 174). According to our observations, the main ones are:

(a) analogy,
(b) thematic factors,
(c) LIPOC,
(d) verbal attraction.

These factors may be in conflict with each other, and the way such conflicts are solved constitutes an important parameter of typological diversity.

(a) Analogy

Analogy is seen here as an attempt at placing constituents which have the same functional specification in the same structural position (cf. Dik 1978: 174).

As such, analogy is frequently the result of other processes, in particular of Desemanticization. For example, a lexeme which is desemanticized into a function word tends to change its position in accordance with its new syntactic properties.
A relative clause marker derived from a demonstrative through Desemanticization, for example, tends to shift from the position assigned to the demonstrative modifier to the syntactic slot reserved to complementizers, for example, to the position immediately preceding the embedded clause (cf. Lehmann 1979: 450-54).

In the following example from Kenya Pidgin Swahili, the word ile 'that, those' precedes the adjective when used as a demonstrative, but it follows the adjective in its grammaticalized reading as a (definite) relative complementizer:

\[
\begin{array}{ll}
\text{miti ile kubwa} & \text{miti kubwa ile na-anguka} \\
\text{tree that big} & \text{tree big REL AORIST-fall} \\
\text{'that big tree'} & \text{'the big tree which has fallen down'}
\end{array}
\]

In Bari, an Eastern Nilotic language, the adverb de 'then, afterwards' has undergone Desemanticization, becoming a future marker. Since, however, the basic position of adverbs is sentence-initial, while that of tense markers is between subject and verb, Desemanticization was followed by Permutation:

\[
\begin{array}{l}
dé nan kon \ldots \ 'I \ shall \ do \ldots \ then' \\
\text{then I do} \\
\text{Desemanticization} \\
\text{Permutation} \\
nan dé kon \ldots \ 'I \ shall \ do \ldots' \quad \text{(Spagnolo 1933: 105/6)} \\
\text{I FUT do}
\end{array}
\]

\[b\) Thematic factors\]

Specific positions within the sentence, especially the clause-initial and the clause-final position, tend to be assigned to certain constituents having topic or focus function.

Krio, an English-based creole spoken in Sierra Leone, has introduced a word order characteristic which differs from that of English, its source language: the possessor obligatorily precedes, rather than follows, the possessed noun phrase. According to Givón (1979a: 210), this order arose from topicalization of the possessor into the left-dislocation position.
A number of African languages require Permutation to operate in interrogative sentences whereby the constituent containing the interrogative information is in some languages obligatorily, in others optionally, shifted to the sentence-initial position.

In Standard Ewe, for example, object noun phrases and adverbial phrases follow the verb\(^1\). If, however, they form interrogative constituents, they are obligatorily moved to the sentence-initial position (cf. Westermann 1907: 115):

\[
\begin{align*}
\text{wó-fle} & \quad \text{nyí eve.} & : & \text{nyí néné wó-fle.} \\
\text{they-buy} & \quad \text{cow two} & & \text{cow how many they-buy}
\end{align*}
\]

'They bought two cows.'

'How many cows did they buy?'

\[
\begin{align*}
\text{m-á-gbí-o-e} & \quad \text{ná yevú sia.} & : & \text{yevú ká m-á-gbí-o-e ná.} \\
\text{I-FUT-say-it} & \quad \text{DAT European this} & & \text{European which I-FUT-say-it DAT}
\end{align*}
\]

'I'll tell it to this European.'

'Which European shall I tell it to?'

(c) "LIPOC"

The order of meaningful elements may also be changed as a result of certain drifts referred to by Dik (1978: 192) as the language-independent preferred order of constituents ("LIPOC"). According to this principle, constituents are preferably placed from left to right in increasing order of complexity.

The following preferences in linearization may be said to be part of LIPOC (see Dik 1978: 192-211):

(a) There is no clear preference for the position of a simple noun phrase in relation to the verb: it may precede or follow the verb\(^2\).

(b) The preferred position of pronominal constituents is preverbal.

---

1 This does not apply to periphrastic constructions like the progressive and ingressive aspects, cf. 4.2.4.

2 The fact that the subject frequently precedes the verb is due to thematic (pragmatic) reasons, since the subject tends to form the sentence topic.
(c) Pronominal constituents tend to precede nominal constituents.

(d) Prepositional phrases tend to follow corresponding constituent types without prepositions.

(e) Prepositional phrases tend to follow the verb.

(f) Subordinate clauses tend to assume the last position within the sentence, followed only by other, more complex subordinate clauses.

(g) Complex noun phrases (i.e. NP + subordinate clause) tend to be placed after the corresponding simple noun phrase.

Most languages of the Congo branch of Bantu place nominal objects after, but cliticized pronominal objects before the verb. Givón (1975; 1979) has argued that these pre-verbal object pronouns are fossilized remnants of an earlier SOV syntax, which was retained in the pronominal structure but changed to SVO with nominal constituents. Since it has been shown that it is highly unlikely that the Bantu languages at any stage in their development had an SOV syntax (Heine 1980), this discrepancy between pronominal and nominal object placement is much more plausibly accounted for if one assumes that it was LIPOC which was responsible for this instance of Permutation (see (b) above).

(d) Verbal attraction

Certain word categories or constituents display an attractive power on other categories or constituents. As will be demonstrated in 1.1.3.1, the verbal word exerts a particular pressure on certain dependent constituents to move next to it. In this way, adverbial complements, or parts of them, may be removed from their basic position and attached to the verb as clitics or affixes.
1.1.1.2.2 Compounding

Compounding, as it is defined here, has the effect of combining two or more linguistic units into one single word, i.e. of eliminating the word boundary that separates them. Compounding thus resembles Affixation (see 1.1.1.2.4), the essential difference being that, while Affixation, or Cliticization for that matter, deals with linguistic units of differing morphosyntactic status, Compounding is present only if the two, or more, units share the same status of morphosyntactic evolution. This is particularly the case when all units concerned are roots.

Compounding tends to be accompanied, or followed, by Merger, which is its functional equivalent (see 1.1.1.3.4). There is, however, no obligato7y relationship between the two.

Although we noted that Compounding relates in particular to roots, this is not always the case. There are examples where the linguistic units which share the same morphosyntactic grammaticalization stage are clitics, or even affixes (cf. Jeffers/Zwicky 1980: 226). The Somali word kale 'another' appears to be a result of Compounding: it is derived from a combination of three clitics: the source preverb ka, the comitative preverb la and the derivative suffix -eh 'being' (M. Lamberti, p.c.).

There may be reason to distinguish univerbation from Compounding, but at the present stage of research we prefer to consider univerbation a special case of Compounding.

1.1.1.2.3 Cliticization

This is a process by which a full word becomes syntactically - and frequently also phonologically - dependent on other words. While Affixation is associated with a specific word or word cat-

---

1 Lehmann (1982: 151) defines the difference between the two in the following way: "while univerbation is restricted to the syntagmatic axis and may effect, in perhaps idiosyncratic ways, any two particular words which happen to be habitually used in collocation, composition, as a scheme of word-formation, presupposes a paradigm in analogy to which it proceeds."
egory, Cliticization as defined here is typically a feature of phrasal constituents.

In Indo-European languages, deaccentuation is an important criterion for defining Cliticization (cf. Jeffers/Zwicky 1980). The suprasegmental behaviour of a word is in fact important for deciding whether one is dealing with Cliticization or not. However, complicated tonal structures in many languages make it difficult to use suprasegmental features as a means of defining Cliticization in Africa.

In African languages, it turns out to be particularly difficult to trace a boundary between clitic and affixal morphemes, and there are examples to suggest that Cliticization and Affixation may have occurred simultaneously.

Perhaps the best, although by no means a satisfactory means of distinguishing clitic from affixal morphemes is to have recourse to the relevant syntactic properties: usually, affixes can be described with reference to a word, while clitics tend to be associated with phrasal constituents. A comparison between the nominal gender marker of Bantu languages and some Eastern Nilotic languages like Maa or Teso-Turkana shows that the former have undergone both Cliticization and Affixation, the latter are clitics, i.e. they have undergone Cliticization but not Affixation. In Maa, for example, the gender marker is attached to the noun. If, however, the noun is preceded by a modifier then the marker is attached to the modifier preceding it. Thus, these gender markers occupy the first position within the noun phrase; they are therefore proclitics rather than prefixes, as has been claimed frequently, e.g.

il-tuŋana kuti 'a few people' (Maasai dialect)

or il-kuti tuŋana
M.PL-few people

The presence of Cliticization can also be derived from the phonological behaviour of linguistic units. Luo has two groups of monosyllabic words. One group deletes a final vowel when followed by a light syllable beginning with a vowel, while the oth-
er group does not. The latter are content words while the former are function words, i.e. words that have undergone both Deseman-
ticization, and, as far as the evidence available suggests (cf. Okoth 1982: 21ff), Cliticization. According to Odhiambo (1983: 212ff), there are three types of boundaries in Luo. After mono-
syllabic morphemes, we may say that each type of boundary corre-
responds to a different stage of grammaticalization:

<table>
<thead>
<tr>
<th>Type of boundary</th>
<th>Grammaticalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full word boundary</td>
<td>before Cliticization</td>
</tr>
<tr>
<td>Weak boundary</td>
<td>after Cliticization</td>
</tr>
<tr>
<td>&quot;Morpheme&quot; boundary</td>
<td>after Affixation</td>
</tr>
</tbody>
</table>

(cf. also Hyman 1978).

Zwicky (1977) and Jeffers/Zwicky (1980: 221) propose to dis-
tinguish between simple and special cliticization. These may be considered as different developments in the process of Clitici-
ization. Simple clitics are morphemes which have undergone Clitici-
zation but at the same time have been retained as phonologi-
cally independent words (cf. 1.1.3.3.1). Special clitics are no
longer associated with a full form, they exist exclusively as clitics.

Following Lehmann (1982: 149), we have to distinguish between

---

1 These types are distinguished, in particular, on the basis of the behaviour of the vowel preceding them.

2 The English negative particle n't is presented as an example of special cliticization: it is no longer merely a variant of unstressed not, "since it occurs in a variety of environments in which unstressed not is barred", e.g. in tags like Can't they? (vs. + Cannot they?) (Jeffers/Zwicky 1980: 225). Using an alternative analysis, according to which n't and not are considered as al-
ломorphs occurring under certain conditions in mutually exclusive syntactic environments, one might conclude that n't could equally well be treated as a simple clitic. This may serve as an illustration of the fact that in many cases it is difficult to decide whether one is dealing with simple or special cliticization.
two principles that Cliticization may follow. On the one hand, a unit may become a clitic of another unit on account of the close morphosyntactic relationship shared by the two. On the other hand, it may cliticize in accordance with specific word order requirements, in which case it can become a clitic of a constituent with which it does not share any particular relationship. Lehmann proposes to confine the term "cliticization" to the second possibility which, according to him, blocks any subsequent grammaticalization processes.

1.1.1.2.4 Affixation

Affixation marks a process by which a function word becomes part of another word. Since a word has to undergo at least one functional process (i.e. Desemanticization) to become a function word, Affixation presupposes functional grammaticalization. Furthermore, Affixation appears to require prior Cliticization, but further research is needed on this point.

Affixation leads to either derivation or inflection. This process involves either prefixing or suffixing, but not infixing. Our observations on African languages suggest that inflexing is a complex process, it involves more than one simple process (see 1.1.3.2).

1.1.1.2.5 Fossilization

The main characteristic of Fossilization is that is turns productive morphemes into unproductive ones. Fossilized morphemes show co-occurrence restrictions of one kind or other: they can

---

1 Lehmann (1982: 147/48) proposes to use the term "agglutination" instead of Affixation. We do not follow this proposal since "agglutination" has been applied to a number of different phenomena. Tesnière (1959: 27) for example notes: "Nous appellerons agglutinés les mots auxquels l'agglutination est en train de faire perdre leur individualité. Ainsi les mots composés (français cerf-volant), les temps composés (français nous avons chanté) et les verbes en composition préverbale (français prédominer) sont, à des degrés divers, des agglutinés."

2 This use of the term "fossilization" differs from that of various other au-
only be combined with certain specific roots or stems.

A concomitant feature of Fossilization is that it leads to morphological "irregularity"; allomorphs of fossilized morphemes are no longer in automatic (phonologically conditioned) alternation (cf. 1.1.1.1.1).

1.1.1.3 Functional processes
1.1.1.3.1 Desemanticization

By this process, a lexical item receives a second, non-lexical function, which may ultimately become its only function. Thus, in addition to its lexical meaning, a word receives a grammatical function and can eventually develop into a grammatical morpheme. In many African languages, for example, a verb like 'finish' was desemanticized to an aspect, i.e. perfect marker, or a verb meaning 'say' became an object clause complementizer (see 1.2.1.2) as a result of Desemanticization.

Desemanticization may be viewed as a special instance of Expansion (see 1.1.1.3.2).

The introduction of Desemanticization does not necessarily mean that the lexical item affected by it disappears. Both the desemanticized and the non-desemanticized units may coexist, although it is likely that the two become more and more dissimilar, in particular due to non-functional processes like Affixation and Erosion.

In the following example from Yoruba, the difference between the two can be inferred only from the context (Stahlke 1970):

(1971bl, for example, introduces the term with reference to developments where a change in the order of nominal sentence constituents does not affect the order of pronominal constituents. Pronominal order, in particular that involving cliticized morphology, thus, may be interpreted as the "fossilized" remnant of an earlier, different order of sentence constituents.)
Desemanticization

(1) mo fi ãdé gê igi. 'I cut the tree with a machete.'
   I took machete cut tree

(2) mo fi ògbôn gê igi. 'I cut the tree cleverly.'
   I took cleverness cut tree

In (1), the (serial) verb fi may be said to have retained
its lexical meaning, while in (2) the same verb is desemanti­
cized and functions as an instrument or manner case marker. The
co-occurrence of a verb both as a verbal and a (desemanticized)
case marker is a common feature in the serial verb languages of

The shift, characteristic of Desemanticization, from seman­
tic to grammatical function is accompanied by a shift in syn­
tactic status, the relevant unit losing syntactic flexibility
(and syntactic properties according to Lord 1976: 189).

This shift in syntactic status may lead to significant
changes in the constituent structure. Two examples from Ewe, a
West African Kwa language, illustrate the type of syntactic
changes that accompany Desemanticization (cf. Lord 1976: 182/
83); see also chapter 2). In the first example, Desemanticiza­
tion changes a verb to a preposition, and, with regard to the
next higher node, a VP to a PP:

```
NP VP VP
  V NP V NP
me- tso déha na Kofi
I-take palmwine give Kofi
```

```
NP VP PP
  V NP Prep NP
me- tso déha na Kofi
I-take palmwine for Kofi
'I gave Kofi palmwine.'
```

In the second example, the verb bé 'say' is desemanticized
to a complementizer 'that', and the constituent of which it is
a part changes from VP to sentence complement:
A linguistic unit may undergo Desemanticization more than once, each time using different functional channels. This accounts for the fact, for example, that in various Kwa languages the erstwhile verb 'be at' occurs with three distinct functions: (1) locative verb ('be at'), (2) preposition ('at, in', etc.), and (3) aspect marker (incompletive), e.g.

Ewe (1) me-le xo me. 'I am in the house.'
   I-be-at house in
(2) me-du nu le xo me. 'I ate in the house.'
   I-eat thing PREP house in
(3) me-le nu du-âm. 'I am eating.'
   I-INCOM thing eat-PROG

While (1) represents the original function, (2) and (3) are instances of Desemanticization, thus:\footnote{For a more detailed discussion see Lord 1973: 275-79.}

Similarly, in the following example from So, a Kuliak language spoken in Eastern Uganda, the verb ac- 'come' has been desemanticized twice: as a future marker and as a venitive extension, i.e. verbal suffix denoting movements towards the speaker.
or deictic focus. Note the following examples:

\[
\begin{align*}
\text{á-c-isa} & \quad \text{come-I} \\
\text{FUT-I} & \quad \text{transfer-VEN}
\end{align*}
\]

The following examples:

\[
\begin{align*}
\text{á-c-isa} & \quad \text{I come}' \\
\text{FUT-I} & \quad \text{I shall buy.}'
\end{align*}
\]

Desemanticization usually has the effect of transferring the relevant linguistic unit from an open to a closed category, or from a major to a minor part of speech (cf. Lyons 1968: 436; Lehmann 1982: 133). Once desemanticized, a lexical item loses certain morphological properties, like the ability to take inflectional or derivative affixes (cf. Givón 1975: 84; Lehmann 1982: 132). This development, for which Lehmann proposes the term "morphological degeneration", can be seen as a result of the fact that with Desemanticization, the relevant item tends to be transferred into a morpheme or word category which has more limited morphological "flexibility".

1.1.1.3.2 Expansion

Expansion has the effect of extending the function of a linguistic unit to other contexts, categories or syntactic slots.

Desemanticization may be considered as a special case of Expansion, since it also concerns enriching an existing linguistic unit with an additional function. The main difference between the two is that, while Desemanticization adds a non-lexical function to a lexical unit, Expansion involves grammatical units receiving an extra function. For a

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\(^1\) Expansion, as we understand it here, is a process that follows Desemanticization. This process may, however, be said to occur as well with full lexical items, i.e. with words that have not been desemanticized. An example is provided by Meillet (1948: 136):

"De ce qu'un mot est groupé avec un autre d'une manière qui tend à devenir fixe dans certains cas, il résulte pour ce mot la perte d'une partie de son sens concret dans ces constructions. Soit par exemple le mot pied; employé isolément, il désigne une partie du corps humain très définie, de forme très spéciale; groupé avec le nom d'un object, dans des
distinction between Expansion and Simplification see 1.1.1.3.3 below.

Expansion may be category-internal or category-external. It is internal if it does not affect the morphological status of the relevant unit, i.e. if it takes place within the same word or morpheme unit. Internal Expansion is present, for example, if a locative preposition comes to be used as a dative preposition as well: the new function retains the morphological status of its source.

An example of double Expansion is the development from a locative adposition to a dative/benefactive, and eventually an object marker. Thus, Frajzyngier (in press: 6) notes for a number of Chadic languages: "These facts indicate the existence of the functional change by which the marker of the locative became the marker of the dative/benefactive and, in some languages, in certain syntactic contexts only, the marker of direct object."

External Expansion, on the other hand, involves a shift to another word or morpheme category: the new function is allocated to another, usually "more grammaticalized", morphological unit.

An example of Expansion following Desemanticization is provided by the development of the periphrastic future in Latin (Benveniste 1968: 89-91). Around the 3rd century A.D., a periphrastic construction consisting of the passive infinitive *ha-bére came into use which was restricted to subordinate, typically relative clauses. Its function was restricted as well: it acted as the equivalent of a future passive participle indicating predestination but not obligation. Then Expansion took place, involving the following developments:

(1) the periphrastic construction spread from subordinate to independent clauses,

(2) it was extended to deponential and intransitive verbs,

(ctd) expressions comme le pied d'une table, d'une chaise, d'une lampe ou le pied d'une montagne, le mot perd sa valeur concrète tout entière, et il n'en reste plus qu'un élément abstrait: partie d'un objet qui supporte et est en contact avec une surface portante."
and finally to all verbs,

(3) having been a marker of predestination ('what is to happen') it became generalized as a future marker ('what will happen').

Around the 7th century, this construction then entered into rivalry with the traditional, inflexional, future (-bō, -am) and succeeded in evicting it.

1.1.1.3.3 Simplification

With this label, we refer to the development of regularities for formerly irregular aspects of grammar. Simplification can be considered as an "optimalization of existing rules" or as analogical leveling (W.P. Lehmann 1963: 183/84). It has the effect of extending the range of contexts to which rules are applied.

Simplification and Expansion may be considered as different aspects of one and the same process: both have to do with analogical form, and both relate to the extension of a linguistic unit to contexts where it has not been used previously. The major difference between them is that this extension is syntagmatic in the case of Expansion but paradigmatic in that of Simplification, and one may therefore refer to the former as "syntagmatic analogy" and to the latter as "paradigmatic analogy".

Typically, Simplification involves the replacement of one linguistic unit by another, while this is not necessarily the case with Expansion.

Simplification is encountered, for example, within a paradigm where one member of the paradigm replaces others1 - a development that may lead to the loss of the relevant paradigmatic distinctions. Pidginization in African languages offers a

---

1 This happened in English when the suffix -s was generalized as the nominal plural marker, replacing various other ways of number distinction.
multiplicity of examples for this; loss of many paradigmatic distinctions being, in fact, one of the main characteristics of pidginization.

A universal feature of pidginization is, for example, the loss of noun class/gender distinctions. Simplification takes place when one gender marker replaces all other gender markers within a given paradigm. In pidginized Hausa (Hodge 1958), for example, loss of the gender system led to the replacement of feminine gender markers by masculine markers:

<table>
<thead>
<tr>
<th>Standard Hausa</th>
<th>Pidgin Hausa</th>
</tr>
</thead>
<tbody>
<tr>
<td>masc. yā zu 'he has come'</td>
<td>yā zu 'he, she has come'</td>
</tr>
<tr>
<td>fem. tā zu 'she has come'</td>
<td></td>
</tr>
</tbody>
</table>

Standard Hausa | Pidgin Hausa |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>masc. ûbâ-nà 'my father'</td>
<td>uba-na 'my father'</td>
</tr>
<tr>
<td>fem. ûwâ-tâ 'my mother'</td>
<td>uwa-na 'my mother'</td>
</tr>
</tbody>
</table>

In the following example from Kituba, a pidgin derived from Kikongo (Fehderau 1966), the possessive gender marker ya of class 9 has replaced all other gender markers:

<table>
<thead>
<tr>
<th>Kikongo (kiManyanga)</th>
<th>Kituba</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>mwana wa mbote 'child of goodness'</td>
</tr>
<tr>
<td>2</td>
<td>bana ba mbote</td>
</tr>
<tr>
<td>7</td>
<td>kima kya mbote</td>
</tr>
</tbody>
</table>

(cf. Heine 1973: 193)

The following example from Kenya Pidgin Swahili (Heine 1973: 70-118) looks like a case of Loss since it involves the disappearance of adjectival agreement markers during pidginization:

<table>
<thead>
<tr>
<th>Standard Swahili</th>
<th>Kenya Pidgin Swahili</th>
</tr>
</thead>
<tbody>
<tr>
<td>noun class 1</td>
<td>m-toto m-kubwa</td>
</tr>
<tr>
<td>2</td>
<td>wa-toto wa-kubwa</td>
</tr>
<tr>
<td>3</td>
<td>m-ti m-kubwa</td>
</tr>
<tr>
<td>4</td>
<td>mi-ti mi-kubwa</td>
</tr>
</tbody>
</table>
There is, however, reason to assume that we are dealing with Simplification rather than with Loss. The decline of gender distinctions in Kenya Pidgin Swahili in most cases led to the generalization of the class 9 gender markers\(^1\), as the example below suggests:

<table>
<thead>
<tr>
<th>Standard Swahili</th>
<th>Kenya Pidgin Swahili</th>
</tr>
</thead>
<tbody>
<tr>
<td>noun class 1 m-toto h-uyu</td>
<td>m-toto hii 'this child'</td>
</tr>
<tr>
<td>2 wa-toto h-awa</td>
<td>wa-toto hii 'these children'</td>
</tr>
<tr>
<td>5 shamba h-ili</td>
<td>shamba hii 'this farm'</td>
</tr>
<tr>
<td>9 kazi h-ii</td>
<td>kazi hii 'this work'</td>
</tr>
</tbody>
</table>

The adjectival agreement marker of class 9 is \(\emptyset\) (zero), Simplification in the adjectival agreement paradigm therefore had the effect of extending the zero gender marker of class 9, which replaced all other gender markers. The fact that this hypothesis is correct can be seen from examples where the class 9 adjectival marker has been retained. This is, for example, the case with monosyllabic adjectives, which take a nasal prefix, and with adjectives beginning with a vowel, whose class 9 prefix is ny-:

<table>
<thead>
<tr>
<th>Standard Swahili</th>
<th>Kenya Pidgin Swahili</th>
</tr>
</thead>
<tbody>
<tr>
<td>noun class 1 m-toto m-pya</td>
<td>m-toto mpya 'a new child'</td>
</tr>
<tr>
<td>m-toto mw-eupe</td>
<td>m-toto nyeupe 'a white child'</td>
</tr>
<tr>
<td>2 wa-toto wa-pya</td>
<td>wa-toto mpya 'new children'</td>
</tr>
<tr>
<td>wa-toto w-eupe</td>
<td>wa-toto nyeupe 'white children'</td>
</tr>
<tr>
<td>9 kalamu m-pya</td>
<td>kalamu mpya 'a new pencil'</td>
</tr>
<tr>
<td>kalamu ny-eupe</td>
<td>kalamu nyeupe 'a white pencil'</td>
</tr>
</tbody>
</table>

1.1.1.3.4 Merger

By this process, the meaning or function of two linguistic units merges into one new meaning/function which is different

\(^{1}\) There are a few exceptions, particularly with adjectives; see Heine 1973: 79.
Grammaticalization

from that of the combined units.

Merger is a functional process corresponding to Fusion as a phonetic and to Compounding as a morphosyntactic process.

Merger may precede Compounding. That can be seen from the following example from Krongo, a Kordofanian language: the verb t-obbu 'to close/shut (one's eyes, mouth, or hand') and the object iiyu 'eyes' have undergone Merger with the resulting meaning 'to fall asleep'. This process has been followed by the optional introduction of Compounding. The following sentences show that Compounding may be (2), but need not be applied (1):

(1) n-ôob-á’ân iiyu á-têerêkkîtî.
   l/2-IMPF:close-I eyes INSTR-sleep
   'I fall asleep because of fatigue.'

(2) n-ôob-iy-á’ân á-têerêkkîtî.
   l/2-IMPF:close.eyes-I INSTR-sleep

Sentence (1) and (2) are synonymous and can be used interchangeably.

Compounding frequently, but not necessarily, leads to Merger. The compound

êyã-tå
he/it-head/top

'therefore, that is why'

of Standard Ewe is an example of Merger while the compound

ame-kå
person-which

'who?'

is not since its meaning can be derived unambiguously from those of its constituents.

Typically, Merger affects adjacent morphemes. It may, however, apply as well to morphemes which are separated by other morphemes - and thereby be responsible for the emergence of discontinuous morphemes. The following examples from Ewe are characteristic of Merger involving a verb and a relational noun, which has assumed the function of a postposition:

qô  qkû... dzî
arrive.at eye ... on

'to remember (s.th.)'
Frequently, it is not easy to determine whether Merger has in fact taken place or not. Let us examine some compounds from Standard Ewe involving the nominal ga 'metal, money'. In the following examples, the native speakers' reaction suggests that there is no Merger:

| zé 'pot' | : ga-zé | 'metal pot, kettle' |
| só 'horse' | : ga-só | 'bicycle' |
| tsì '(wooden) spoon' | : ga-tsì | 'metal pot' |
| nú 'thing' | : ga-nú | 'any object made from metal, e.g. tin' |

In the following example, Merger appears to have taken place with meaning (1) but not with (2):

- tô 'owner' : ga-tô    (1) 'prisoner'
                           (2) 'somebody owning money, rich person'

The examples below, again, appear to be cases of Merger, although not all native speakers would subscribe to this:

| mî 'excrements' | : ga-mî | 'rust' |
| čo 'house' | : ga-čo | 'prison' |
| fo 'beat', édókúí 'of itself' | : ga-fo-dókúí | 'watch' |
| ƞkú 'eye', -í (+ -é) 'it is' | : ga-ƞkú-í | 'spectacles'. |

Merger may be said to be present when it is no longer possible to treat each component as a lexical unit of its own but rather to consider the relevant sequence as a separate lexical entry.

---

1 These examples have been selected from Westermann 1905.

2 Carol Lord's conclusion that "a compound does not have its own lexical entry until it begins to devide semantically from its components" (1975: 43) refers to roughly the same fact.
1.1.2 Other processes

Apart from the basic processes listed above there are others which may be considered as being less relevant to our understanding of linguistic evolution in Africa. The following are examples of such processes; the list could be extended considerably.

**Reduplication**

Reduplication, for example, is a process that is made use of in Africa perhaps more often than elsewhere. It may involve entire clause structures like

Ewe é-zo mó é-zo mó. 'he walked for a long time.'
he-go way he-go way

(Westermann 1944: 34)

or phrases, e.g.

Ewe dzi-kú-dzi-kú (name given to a new-born whose brothers and sisters have died)
born-died-born-died

or words, e.g.

Ewe ḷu-ṣu 'eating',
eat-eat

or even parts of word, e.g.

Rendille y̍əd, pl. yed-ád 'word'
y̍ or, pl. ur-ár 'stomach'
hóí, pl. hoi-áí 'voice'

These are only the most basic patterns. For a detailed discussion of the formal diversity of Reduplication, see Moravcsik 1978.

The exact range of functions that this process may have is largely unclear. It is hardly possible to isolate one overriding function; the following is a list of meanings that Reduplication has been associated with in African languages (cf. Westermann 1944: 100ff):

1. repeated/frequent action,
2. spacial extension,
(3) temporal extension,
(4) intensity,
(5) generalization,
(6) distributive meaning,
(7) plurality,
(8) diminutive meaning,
(9) duration, state and quality.

A bird's-eye view on African languages suggests that Reduplication may be associated with two primary functions, i.e. expressing quantity and intensity, and that most other functions can be derived from these in roughly the following way:

```
quantity                          intensity
  action                          action
   frequent                       admiration
  participant                     endearment
   durative                       augmentation
   plural                         diminutive
  habitual                      weak
   (process;)                     derogative
  state
```

This highly simplified diagram ignores the possibility of crosscuts and intersections. What is, however, more important is that it does not take the grammatical significance into consideration that Reduplication may have. The transition from process to state, for example, which is a widespread characteristic of Reduplication in Africa, tends to be paralleled by a change in word category: in this way, action or process verbs change into state verbs, or verbs into adjectives or nouns, e.g.

Ewe  dzó 'to leave' :  dzó-dzó 'left, gone away (adj)',
     dzo-dzó 'leaving, departure'.

---

1 We are grateful to Ulrike Claudi for having advised us on the scope of functions Reduplication has.
Furthermore, Reduplication may have a syntactic function. In various African languages, for example, it is used to derive intransitive from transitive verbs.

**Metathesis**

Metathesis could be considered as a special case of Permutation. However, while the latter always precedes Affixation, the data available suggest that Metathesis operates only after Affixation has taken place.

We distinguish between phonological and morphological Metathesis. In the former, a bound morpheme/clitic moves over a consonant cluster or a syllable, involving an alteration in the direction of for example a more favoured phonotactic structure. In morphological Metathesis, a bound morpheme/clitic moves over a morphological constituent (cf. Jeffers/Zwicky 1980: 227).

Metathesis is one of the primary sources of infixation. Ultan (1975: 178/79) notes, for example, that "the general Semitic Restriction on the occurrence of a sequence composed of dental obstruent + sibilant has in Hebrew resulted in the development of an infix instead of the reflexive prefix t- in stems with a sibilant as first radical", and he gives the following example from Biblical Hebrew:

\[
\begin{align*}
y-\dagger & \text{ammer} & \text{'watch', 3rd sg. perf. reflexive} \\
hi\dagger- t- \text{ammer} & \text{'watch', 3rd sg. impf. intensive}.
\end{align*}
\]

**Innovation**

Finally, we might distinguish a type of process which forms the starting-point of all grammaticalization, by which a lexical item enters a grammaticalization channel, thus introducing a new morphological cycle (see 1.2.1). We refer to this process as Innovation¹.

¹ As a technical term of grammaticalization theory, "innovation" was introduced by Benveniste (1968) and adopted by Lehmann (1982: 22). We propose to use this term in a wider sense than Lehmann does (see below).
It would be naive to assume that once a morphological unit has been lost, Innovation necessarily comes in. First, a cycle may be completed without there being the need for a new cycle. Secondly, there may be other means of maintaining the function of the lost morpheme. A language can react to Loss by increasing the number of its phonemes. For example, if Loss was preceded by Adaptation, the latter may have the effect of conserving the function of the lost segment in the form of an infix-like vowel change or suprasegmental modification. The case of the Dinka passive (see 1.1.3.2) offers an example of such a development. Innovation tends to coincide with processes which initiate a morphological cycle, i.e. usually with Desemanticization.

There may be various motivations for Innovation to come in, in particular the following:

(1) To create a new grammatical category for which there exists no previous equivalent. Innovation of this kind, which thus leads to typological change, will be called novel creation, following a proposal made by Kahr (1976: 115). In Lehmann (1982: 22) the term "innovation" is used instead.

(2) To replace an old category by a new one. Typically, this happens when a previous morpheme has lost in "functional strength", distinctiveness, or else undergoes Loss or Merger. Following Lehmann (1982: 21), we refer to this phenomenon as renovation. An alternative term used occasionally is "renewal".

(3) To reinforce an existing morpheme by adding a new lexical item to it. Innovation of this kind has been called reinforcement by Lehmann (1982: 24), and much the same phenomenon

---

1 Eliasson (1980: 132), for example, writes with reference to Old Norse:

"From this point of view the development in Old Norse can be described as a development from a code of the type A to a code of the type B, a development towards a code with a higher number of signals and shorter words."

2 Lehmann offers an interesting example of recurrent reinforcement: Proto-Indo-European *in was reinforced to *en-tos > Latin intus 'within, inside',
has been referred to as hypercharacterization by Kahr (1976: 115).

Frequently, it is not possible to unambiguously decide which of these phenomena, or even combination of them, is involved. There is some justification to separate reinforcement from novel creation and renovation with reference to subsequent grammaticalization: While reinforcement inevitably leads to Merger, novel creation and renovation may trigger a wide range of processes and channels of grammaticalization.

1.1.3 Complex processes

While the processes listed so far may be labelled simple, there are others which we propose to call complex processes since they involve more than one simple process.

Complex processes are in particular:

1. Verbal attraction,
2. Infixation and
3. Functional shift (Expansion + Loss).

1.1.3.1 Verbal attraction

Verbal attraction is a complex process by which linguistic units being part of or forming arguments of the predicate are attracted to the verb, undergoing Cliticization and/or Affixation. The endpoint of this development is reached when the relevant unit either becomes a verbal affix or merges entirely with the verb. The following categories in particular are prone to verbal attraction:

- adpositions and adverbs,
- verbs, and
- object nouns.

Furthermore, personal pronouns tend to be affected by verbal attraction.

(ctd.) which was reinforced again to *de-intus > French <i>dans</i> 'in', which was reinforced once more to yield <i>dedans</i> 'inside'.

Grammaticalization
Verbal attraction involving adpositions

An adposition can be removed from the noun phrase it governs and allocated to the verbal word, becoming a verbal clitic or affix, causing the following syntactic shift to take place:

\[
\text{verb} \rightarrow \text{[Adp. + NP]} \rightarrow \text{[verb + Adp.]} \rightarrow \text{NP.}
\]

In Kxoe, for example, the postposition /xoà 'with (comit.)' is used as a verbal suffix denoting comitative actions:

\[
\text{dj̄oa-/xoà-à-tè} \quad \text{'he collaborates'} \quad (\text{Köhler 1981: 503}).
\text{work-with-JUNC-TENSE}
\]

The processes involved are:

1. Permutation: the postposition /xoà moves from the post-nominal to the post-verbal position;
2. Affixation: /xoà becomes a verbal suffix.

Dholuo has a verb attraction rule applying to case marking prepositions: once the noun phrase governed by the relevant preposition is topicalized to the pre-verbal position the preposition is removed from the adverbial phrase and attached to the verb as a suffix (Okoth-Okombo, p.c.).

Thus, in a sentence like (1), the benefactive preposition ne 'for' undergoes verbal attraction once the following noun becomes the sentence theme and is placed before the verb. (2) offers an example of an active and (3) of a "passive" sentence containing a topicalized benefactive noun:

1. jon nego die1 ne juma.
   John is:killing goat for Juma
   'John is killing a goat for Juma.'

2. juma jon nego-ne die1.
   Juma John is:killing-for goat
   'John is killing a goat for Juma.'

3. juma i-nego-ne die1.
   Juma PASS1-kill-for goat
   'A goat is being killed for Juma.'
Sentences (5) and (6) are examples of verbal attraction involving the locative preposition e of sentence (4):

(4) *jon nego diel e wi go.*
John is:killing goat on head hill
"John is killing a goat on top of the hill.'

(5) *wi got jon nege-e (↔ nego-e) diel.*
head hill John kill-on goat
'On the top of the hill, John is killing a goat.'

(6) *wi got i-nege-e (↔ nego-e) diel.*
head hill PASS₁-kill-on goat
'On top of the hill, a goat is being killed.'

The instrumental preposition gi 'with' changes to go once it is attracted to the verb:

(7) *jon nego diel gi pala.*
John is:killing goat with knife
'John is killing a goat with a knife.'

(8) *pala jon nego-go diel.*
knife John kill-with goat
'John is killing a goat with a knife.'

(9) *pala i-nego-go diel.*
knife PASS₁-kill-with goat
'A goat is being killed with a knife.'

The relevance of verbal attraction with reference to adverbial constituents has been pointed out by de la Cruz (1977: 281) for Indo-European².

---

(Footnote 1 referring to this and the preceding page:)

1 *i-* is an imperfective aspect marker of the so-called "passive" construction of Dholuo.

2 "The evidence of Indo-European linguistics shows that the locative verbal word-like structure of the Indo-European languages arose originally from the coalescence of actual phrases into word complexes through a process of dependence (that is, loss of autonomy) on the part of the prefixes. So a verbal prefix or preverb of the type we are concerned with is originally an independent locative modifier or adverb-like word which associates itself with a verb becoming a bound morpheme."
Verbal attraction involving verbs

A verb may be attracted to another verb, eventually becoming an affix of the latter.

In Kxoe, the verb μά 'to give, offer' in this way became a derivative suffix (-må) having "applicative" function, i.e. adding a Goal case role to the verb:

djà(o)-rō-må-ā-tè tī ?ā. 'He works for me.'

This shift involved the following basic processes:

1. Desemanticization: 'to give, offer' → Goal case role;
2. Permutation: μά moves immediately behind the main verb (djà(o));
3. Affixation: μά becomes a verbal suffix;
4. Erosion: the articulation on μά is phonetically simplified (> -må): it loses nasality, and its contour tone is replaced by a register (mid) tone.

Verbal attraction involving object nouns

While in most cases verbal attraction leads to the emergence of derivative or inflexional affixes through Cliticization and Affixation, it may equally lead to Merger, thus involving word formation rather than grammatical expansion. Such a type of verbal attraction is particularly common with verb phrases where verb and object noun acquire an idiomatic significance and merge into one lexical item. In this case, the object noun becomes a verbal clitic and eventually loses its morphemic status; what results is a phonologically extended new verb.

In Krongo, a Kordofanian language, the verb t-oobu 'close/shut (one's eyes, mouth or hand)' has merged with the object noun iiyu 'eyes' to form a new verb t-oob-iiyu 'to fall asleep'. This process has not yet been concluded; there are nowadays two co-existing constructions: one that has undergone verbal attraction and another that, as yet, has not. There is apparently no difference in meaning between the two:
I fall asleep because of fatigue.'

Note that verbal attraction in this case does not involve immediately adjacent morphemes but rather morphemes which are separated by another morpheme, a clitic pronoun. Verbal attraction here leads to shifting the object noun beyond the clitic pronoun to the position immediately after the verbal root.

**Possessor promotion**

Possessor promotion may be considered as a special instance of verbal attraction. It has the effect of transferring a nominal constituent (i.e. a possessor NP) from the valency pattern of a noun into that of a verb, i.e. it typically involves the following syntactic shift:

\[
\text{verb} \rightarrow \text{verb - [poss'ed] } + \text{ [poss'or] } \rightarrow \text{GEN dir.\text{Obj.}}
\]

\[
\text{verb} \rightarrow \text{verb - [poss'or] } + \text{ [poss'ed] } \rightarrow \text{ind.\text{Obj.} dir.\text{Obj.}}
\]

Note that possessor promotion is usually confined to part/whole relations, where the possessed NP is semantically part of the possessor NP. In some languages, possessor promotion is limited to cases where the possessed NP denotes an inalienable body part, e.g. in Haya, a Bantu language of Eastern Tanzania:

\[
? \text{-}ka-h\text{á}-\text{hênd}' \text{b}m\text{ukono gw'} \text{m\text{wáana}.}
I-PAST-break \text{arm} \text{ of child}
'I broke the (detached) arm of the child.'
\]

\[
\rightarrow \text{-}ka-h\text{á}-\text{hênd'} \text{b}m\text{wâan'} \text{b}m\text{ukâno}
I-PAST-break \text{child} \text{ arm}
'I broke the child's arm.'
\]

If there is no part/whole relation, possessor promotion is blocked in Haya:
Infixation

An example of a locative noun which forms the possessed noun phrase being taken away from the genitive construction and inserted within the verbal group has been reported by Fritz Serzisko (p.c.) for Somali:

shimbirihii geedka dush-iisa ayuu fuushan yahay.  
birds tree:DEF top-its FOCUS sitting are

shimbirihii geedka ayuu dul fuushan yahay.  
birds tree:DEF FOCUS top sitting are

'The birds are sitting on the tree.'

1.1.3.2 Infixation

By infixes we refer to morphemes which are inserted into other morphemes, the latter thus turning into discontinuous morphemes. Ablaut phenomena, as can be observed in pairs such as sing: sang or man: men are included within this definition.

Following Ultan (1975), we may summarize the development leading to infixation thus:

(1) Infixes evolve chiefly from other affixes, i.e. prefixes or suffixes.

(2) Infixes are primarily inserted into roots. If there are cases of infixation within other affixes, then this is likely to imply prior root infixation.

(3) Infixes tend to undergo Merger or Loss more rapidly than other affixes.

According to Ultan (1975: 178–84), there are two primary sources of infixation: metathesis (see 1.1.2) and entrapment. In the present section, we wish to add another source that is especially relevant to account for the evolution of infixes by um-
laut in African languages. This evolution involves two consecutive processes: Adaptation followed by Loss.

In Shilluk, a Western Nilotic language, the agent of a passive construction is introduced by the preposition ye (or yi), e.g.

\[ a\text{-}pwot\ yi\ yan. \quad 'He\ has\ been\ struck\ by\ me.' \]

This preposition optionally undergoes Affixation and becomes a verbal suffix -i:

\[ a\text{-}pwot\text{-}i\ yan. \quad 'He\ has\ been\ struck\ by\ me.' \]

(Kohnen 1933: 136)

Dinka, a closely related language, distinguishes between two passive forms: one which does not allow an agent, and another which requires an agent. While the former is indistinguishable from the corresponding active form (Nebel 1948: 24), the latter can be said to be derived from the former by a vowel infix which consists of the following vowel changes\(^1\) (Nebel 1948: 69/70):

\[
\begin{align*}
\text{form without agent} & \quad \text{form with agent} \\
\text{short} & \quad \text{long} & \quad \text{vowel} & \quad \text{vowel} \\
\text{a + e} & \quad \text{anh\i\ar} & \quad \text{anh\i\r} & \quad 'to\ like,\ love' \\
& \quad \text{ak\a\p} & \quad \text{ak\r\p} & \quad 'to\ seize,\ seduce' \\
& \quad \text{ath\a\l} & \quad \text{ath\r\l} & \quad 'to\ cook' \\
\text{al\e\t} & \quad \text{al\r\e\t} & \quad 'to\ insult' \\
& \quad \text{al\o\m} & \quad \text{al\o\m} & \quad 'to\ take' \\
& \quad \text{ath\r\i\e\c} & \quad \text{ath\r\i\e\c} & \quad 'to\ ask'.
\end{align*}
\]

We may assume that the agent-marking passive form of Dinka constitutes a later development of an erstwhile preposition which became a verbal suffix *-i which nowadays is retained as ablaut, and we can reconstruct the following development stages:

---

\(^1\) As one would expect with morphemes undergoing Fusion, there is a considerable amount of phonological irregularity involved in these changes. The two cases presented appear to be the most characteristic of these changes.
Stage I: Affixation  The Western Nilotic preposition *ye is subject to verbal attraction (see 1.1.3.1) and becomes a verbal suffix -i, as has been outlined for Shilluk.

Stage II: Adaptation  The root vowel is influenced by the suffix vowel *-i, i.e. a change to e, and short vowels tend to be replaced by long vowels.

Stage III: Loss  The suffix *-i is lost but has left over an infix-like vowel change.

1.1.3.3 Split and shift

1.1.3.3.1 Split

A characteristic of virtually all developments is that when a given linguistic unit undergoes a certain process then it does not do so in all its uses; it tends rather to be retained in its former status as well, so that there are two coexisting forms of that unit: one that still represents the old status and another that marks the new status resulting from grammaticalization.\(^1\)

In Luo, a Western Nilotic language, the adverbs nende 'earlier the same day' and nene 'some considerable time ago' developed into the past tense marker n(e)- (Stafford 1967: 27/28). Since the adverbs retained their former meanings and forms, we are dealing with an example of functional split, where two different developments of one and the same unit coexist in the language (see 1.1.4).

---

\(^1\) The distinction between simple and special cliticization proposed by Zwicky (1977; see also Jeffers/Zwicky 1980) appears to relate to this developmental characteristic: simple clitics are morphemes which have undergone Cliticization but at the same time have been retained as phonologically independent words. Special clitics, on the other hand, are no longer associated with a full form, they exist exclusively as clitics.
An example of functional split involving both Desemanticization and Expansion is provided by Lord (1973: 280-86) with reference to the comitative verb kpêlus 'be included among, be together with' of Yoruba. Following Lord (1973: 286), we may assume that this verb experienced various splits, as indicated in the following graph:

1st split

verb

Desemanticization

comitative preposition

2nd split

Expansion I

instrumental preposition

3rd split

Expansion II

manner preposition

Thus, kpêlu is represented in modern Yoruba with three different prepositional functions. Furthermore, it was grammaticalized into an adverb (Lord 1973: 289). Its original function as a verb is still present, e.g.

fêmi kpêlus ãwọ ọlẹ́ 'Femi is one of the thieves',
Femi SMT be-included-among PL thief

although it has lost certain verbal properties and is liable to undergo Loss in that function.

Non-functional split can frequently be interpreted as being the result of functional split: once a morpheme undergoes Desemanticization, for example, this tends to introduce formal processes like Cliticization, Affixation, Adaptation, Erosion, etc. Its non-desemanticized counterpart, on the other hand, is unlikely to undergo such formal processes. The Ewe verb vâ 'to
come', for example, was desemanticized as a future marker and consequently underwent junctural Erosion to become -á-. In its lexical reading, vá has been retained in this shape, so that we are presented with the following case of formal split:

```
\[ \begin{array}{c}
\text{vá} & \text{'come'} \\
\downarrow & \text{Erosion} \\
\text{vá} & -á- \text{ FUTUR} \\
\end{array} \]
```

Phonetic split may, however, occur independently of functional processes. It can, for example, be caused by specific phonological contexts. The future marker kút- of the Kadam dialect of So, a Kuliak language spoken in Eastern Uganda underwent junctural Erosion to become kú- preceding consonants but is retained as kút- before vowels. Erosion thus was confined to one phonological environment and blocked in others, the resulting split being:

```
\[ \begin{array}{c}
kút- \\
\downarrow & \text{Erosion} \\
kút- & kú- \\
\end{array} \]
```

1.1.3.3.2 Shift

By functional shift we mean a complex process by which a given linguistic unit replaces its function X by another function Y. Our data from African languages suggest that this involves two simple processes: Desemanticization or Expansion, by which the relevant unit receives a second function (Y), and Loss, by which the erstwhile function (X) is abandoned.

The process of functional shift with reference to Desemanticization can be demonstrated using certain serial verb languages of the Kwa branch of Niger-Congo. In the Western languages there are preposition-like function words, referred to
as "verbids" by Ansre (1966), each having a verbal "homophone", e.g.

me-\text quo\ nù \ le \ \text a\phi\ \text me. \ 'I ate at home.' \ (le = \text \text{preposition})
I-eat \ \text{thing at home in}

me-le \ \text{af\phi} \ \text me. \ 'I am at home.' \ (le = \text{verb})
I-be.\ \text{at home in}

In Eastern Kwa languages like Yoruba and Igbo, however, such a homophone correspondence no longer exists\textsuperscript{1}. Lord (1973: 279) gives the following summary of the situation:

"Locative prepositions are homophonous with Locative verbs in Ewe, Twi and Gâ. The prepositions have developed historically from verbs in serial constructions. The Locative in a serial construction has lost its verb properties - it no longer takes tense-aspect and negation markers, and it no longer undergoes transformations that regularly apply to verbs - leaving us with a preposition. Yoruba and Igbo represent a later stage of a parallel historical development, where the homophonous Locative verb is no longer present."

Although the last statement would seem to require qualification, we can assume for the present purpose that a "homophonous" verb no longer exists in Yoruba and Igbo. The development referred to by Lord can be described graphically thus:

![Graphical diagram]

\textsuperscript{1} Lord (1973: 275/76) notes that in Yoruba there is a verb \text{n\text i} 'have, possess, be at' corresponding to the preposition-like particle \text{n\text i} 'in, at'. 
Thus, Desemanticization led to functional split into verb and preposition in the Western Kwa languages (Stage II). The Eastern Kwa languages Yoruba and Igbo, on the other hand, represent a later stage (III) where the verb is no longer present. The situation in these languages appears to be one of functional shift from verb to preposition, rather than one of functional split.

Another example of functional shift following split concerns the function word kpéé of Standard Ewe (cf. Lord 1973: 283ff). This word goes back to a serial sequence kpé 'to meet' and qé, a defective verb meaning 'reach, arrive at' (Westermann 1905: 106, 295), which probably had the meaning of a comitative verb 'be included among' or 'be with'. The subsequent development can be presented graphically thus:

---

1 Similar instances of functional split have been reported from languages outside Africa. Clark (1979: 1-3), for example, notes with reference to Hmong, a language of Southwest China:

"There are demonstrable stages in the history of the derivation, in which a given word is used first only as a (main) verb, then as both a verb and a preposition and finally only as a preposition. Some support for the universality of this process is in the cross-language similarity in the types of verbs which can become prepositions."

Her presentation in fact constitutes a typical case of functional shift:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>(The word occurs only as a verb)</td>
</tr>
<tr>
<td>II</td>
<td>1. (The word occurs both as a verb and as a preposition: the co-verb stage)</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td></td>
<td>3.</td>
</tr>
<tr>
<td>III</td>
<td>(The word occurs only as a preposition)</td>
</tr>
<tr>
<td></td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2. (Renovation; see 1.1.2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>v</td>
</tr>
<tr>
<td>(Prep)</td>
</tr>
<tr>
<td>Prep</td>
</tr>
<tr>
<td>(V) Prep</td>
</tr>
<tr>
<td>Prep</td>
</tr>
<tr>
<td>Prep</td>
</tr>
<tr>
<td>V</td>
</tr>
</tbody>
</table>
Accordingly, functional split must have occurred twice leading to the emergence of a comitative preposition (which, in addition, assumed the function of an instrumental and a manner preposition), and eventually of a coordinating particle conjoining noun phrases. It was the Loss of the erstwhile verb which gives us the impression that a functional shift verb + preposition (+ conjunction) took place.

The statements made about functional shift apply in much the same way to corresponding phonetic and morphosyntactic processes. A given morpheme may, for example, survive in its cliticized, adapted or eroded form but disappear in its original form. Shift as a purely non-functional evolution, however, appears to be rare; usually it is in some way or other a concomitant feature of functional shift.

1.1.4 Chronological relations between types of processes

At the present stage of research, it would be premature to attempt a systematic description of the relationship existing between the three types of processes; such an endeavour would have to rely on more information on linguistic evolutions in Africa than is available at present. In this section, some impressionistic observations are presented; the generalizations that we offer at the end are, of necessity, highly tentative.

It would seem that Desemanticization is the process which is responsible for most other developments.
In Luo, a Western Nilotic language, the temporal adverbs nende 'earlier the same day' and nene 'some considerable time ago' gave rise to the growth of a past tense marker n(e)- (Stafford 1967: 27/28). The stages that mark this evolution are typical for many linguistic changes in Africa. The Desemanticization process from adverb to tense marker involved the following formal processes:

**Permutation:** The adverbs nende and nene moved from the clause-initial position, which is the basic position for adverbs, to that immediately preceding the verb, which is the position of tense/aspect markers.

**Cliticization:** The adverbs became verbal proclitics.

**Erosion:** nende and nene were reduced to n(e).

**Affixation:** The proclitic became a verbal prefix n(e)-.

This example suggests that processes leading to a change in function tend to be followed by certain phonetic or morphosyntactic processes. A functional change is likely to trigger the process of Erosion as an example.

The personal pronouns (j)en 'he, she, it' and kən 'they' in Nuer were eroded to e, pl. kə, respectively, when they developed into a copula (Crazzolara 1933: 89). Thus, the Desemanticization of these personal pronouns was followed by a phonetic process involving Erosion.

In Luo, monosyllabic words which have undergone Desemanticization are retained as adverbs. Thus, they coexist in both a grammaticalized and a non-grammaticalized form:

<table>
<thead>
<tr>
<th>Non-grammaticalized:</th>
<th>Grammaticalized:</th>
</tr>
</thead>
<tbody>
<tr>
<td>nende otieno dhíyo kisumu.</td>
<td>jotich n-olo so ndara.</td>
</tr>
<tr>
<td>earlier Otieno went Kisumu</td>
<td>workmen PAST-repair way</td>
</tr>
</tbody>
</table>
| 'Otieno was going to Kisumu ear-
  lier today.'                  | 'The workmen repaired the road.' |
zation have a "weaker" word boundary\(^1\) than other monosyllabic words. This is manifested in the fact that desemanticized monosyllabics lose ("delete") their final vowel before a vowel which is in a light syllable, while other monosyllabics do not. Thus, it would seem that in the case of these monosyllabics, the functional process of Desemanticization has triggered a phonetic process, i.e. peripheral Erosion. Note that in polysyllabic words, Erosion (i.e. vowel loss) has taken place throughout - irrespective of whether Desemanticization has taken place or not\(^2\) (cf. Odhiambo 1983; see also 1.1.1.1.2).

Antoine Meillet (1948: 138) in particular has pointed out that a word, once it has undergone Desemanticization (= mot accessoire), has a phonological evolution that is different from that of a non-desemanticized word (= mot principal):

"[...\] les mots accessoires se trouvent dans des conditions particulières qui déterminent des prononciations particulières: leur éléments constituants, étant abrégés et faiblement articulés, sont exposés à s'affaiblir ou à disparaître dans des cas où les éléments d'un mot principal subsistent intacts ou subissent des modifications tout autres."

While the above examples suggest an evolution from functional to phonetic processes, developments from functional to morphosyntactic processes are equally common.

In Ewe, the definite marker lá underwent Expansion and developed into a marker of the sentence theme\(^3\). In modern ("Stan-

\(^1\) It might be that we are dealing with an "internal word boundary", rather than with a "full word boundary" (cf. Hymann 1978: 462ff).

\(^2\) The reason for this as Odhiambo (1983: 212) suggests, is probably, that final vowels in polysyllabic words are less distinctive and easier to dispense with than in monosyllabic words (cf. 1.1.1.1.2).

\(^3\) This development was probably due to the fact that since thematic constituents are likely to be definite, lá became an obligatory marker of the sentence theme.
Ewe, ła therefore has two contrasting functions, as evidenced in the following examples:

Theme:  
(1) nyônu ła e kpó e.  
woman TOP he see her

'definite: (2) nyônu ła kpó e.  
woman DEF see her

'As for the woman, he saw her.'
'The woman saw her.'

ła marks definiteness in (2) but theme in (1). This functional split (see 1.1.3.3.1) triggered morphosyntactic split, Expansion was followed by Permutation: the definite marker is placed at the end of the noun phrase but it precedes the plural marker wó. ła as a marker of theme, on the other hand, moved to the NP-final position following the plural marker wó:

(3) nyônu-wó ła wó vá.  
woman-PL TOP PL come

'As for women, they came.'

(4) nyônu-1-wó vá.  
woman-DEF-PL come

'The women came.'

Thus, when ła became a thematic marker, this affected its order behaviour, i.e. functional process must have been responsible for the morphosyntactic process of Permutation.

Hyman (1978: 451) suggests that morphosyntactic processes may cause phonetic processes like Adaptation to take place (if one assumes that there is a close correlation between the morphosyntactic status a morpheme has and the type of boundary it shares with other morphemes). Igbo has a vowel harmony rule which works across morpheme but not across (full or internal) word boundaries. Hyman (1978: 451) gives the following example:

"For the verb /bú/ 'carry on head', some will say [bútá] 'bring', and some will say [bútê]. The reason is that the historical # of /bú #tá/ is becoming weakened to a +boundary\(^2\), the reason for this being that

---

1 As a definite marker, but not as a thematic marker, ła has the allomorph -a.

2 Hyman (1978: 462) establishes a scale of boundaries, which correlates with both their historical origin and their relative strength: (1) || = pause boundary, (2) # # = full word boundary, (3) # = internal word boundary, (4)
/tä/, formerly an independent verb, has become grammaticalized. Thus, /bu#tä/ is coming to be treated with /tä/ phonologically subordinated to /bu/.

We may say, thus, that it is the morphosyntactic process from verb to a "more grammaticalized" unit which appears to be responsible for Adaptation, i.e. vowel harmony, to take place.¹

This and other examples discussed in the present paper suggest the following highly tentative generalizations on chronological relations between the three types of processes:

(1) Functional processes usually precede all other processes.²

(2) Morphosyntactic processes may trigger phonetic processes, but not vice versa. This does not mean, however, that phonetic processes necessarily follow morphosyntactic processes. There are examples which suggest that (syllabic) Erosion precedes Affixation.

(3) Of all three types, phonetic processes appear to be most strongly affected by other processes. Phonetic processes may, on the other hand, occur without being caused or influenced by other processes; they can, too, be responsible for Renovation.

(continued)

¹ Carol Lord (1975: 44), in her treatment of Igbo compounds, notes:

"When a component moves from verb to suffix status, the semantic shift probably comes before the phonological assimilation; the shifted semantics are what allows the phonological assimilation to take place."

² A similar observation has been made independently by Lynchell Marchese (1978: 130) who notes:

"Vennemann (1975) a suggéré que le changement phonologique précède le changement syntaxique. Dans nos exemples, il s'agit de la perte d'un morphème en fin de phrase (phénomène très naturel, du point de vue phonétique) et de quelques changements phonologiques dans la forme des auxiliaires. [...] Est-il vrai que, en effet, le changement phonologique a précédé le changement syntaxique (c.a.d. changement du verbe en auxiliaire)? Nous ne le croyons pas. Il semble que le changement sémantique ou syntaxique ait eu lieu avant le changement phonétique, et il est même fort possible que le changement sémantique ait précipité la réduction phonologique."
1.2 Some general observations

Grammaticalization has more recently become the subject of a number of scholarly works (see in particular Givón 1979a; Lehmann 1982). While these works reveal a considerable diversity with reference to approach and theoretical orientation, they appear to agree in a number of points. The following generalizations, for example, appear to hold for most of them. Thus, the more grammaticalization processes a given linguistic unit undergoes,

1. the more does it lose in semantic complexity, functional significance and/or expressive value;

2. the more is the number of members belonging to the same category or paradigmatic set reduced (Lehmann's paradigmaticity parameter; 1982: 132ff);

3. the more does it lose in pragmatic significance and gain in syntactic significance;

4. the more does its syntactic variability decrease, i.e., the more does its position within the clause become fixed;

5. the smaller is the number of other linguistic units combining with it;

6. the more does its use become obligatory in certain contexts and ungrammatical in others;

7. the more does it coalesce phonetically, morphosyntactically and semantically with other units;

8. the more does it lose in phonological substance;

9. the more is its morphophonological status affected by the following evolution: allophony > allomorphy > suppletion.

All these statements can be derived from the grammaticalization processes discussed in 1.1. Some relate to single processes. (8) for example involves only one phonetic process: Erosion. Other statements again generalize on a number of differ-
ent processes. Thus, (4) jointly refers to morphosyntactic processes like Compounding, Cliticization, Affixation, and Fossilization.

The purpose of the present section is to look into some issues that have been, or may be, raised with reference to grammaticalization.

1.2.1 The "morphological cycle"

1.2.1.1 Cycles or spirals?

The major topic discussed in chapter 1 concerns linguistic decay: it has been claimed that there is a largely, though not entirely, predictable evolution starting with semantically and syntactically autonomous linguistic units (lexemes) which, through grammaticalization, lose in autonomy and, eventually, may disappear altogether\(^1\). Since strongly grammaticalized or lost units tend to be replaced by new lexemes, the result is an evolutionary cycle.

Our assumptions on grammaticalization processes are not new; they were repeatedly proposed by 19th Century linguists. Georg von der Gabelentz noted in 1891 that "was heute Affixe sind, das waren einst selbständige Wörter, die nachmals durch mechanische und seelische Vorgänge in dienende Stellung hinabgedrückt wurden", and he therefore concludes that "alle Afformativen waren ursprünglich selbständige Wörter" (Gabelentz 1891: 250/51).

Instead of a morphological cycle, however, von der Gabelentz proposed a kind of morphological spiral:

"Nun bewegt sich die Geschichte der Sprachen in der Diagonale zweier Kräfte: des Bequemlichkeitstriebes, der zur Abnutzung der Laute führt, und des Deutlichkeitstriebes, der jene Abnutzung nicht zur Zerstörung

\(^{1}\) While von der Gabelentz (1891: 251) refers to grammaticalization as Abnutzung (abrasion), Meillet (1948) uses a number of notions, in particular affaiblissement (de la prononciation et de la signification) and dégradation.
der Sprache ausarten lässt. Die Affixe verschleifen sich, verschwinden am Ende spurlos; ihre Functionen aber oder ähnliche bleiben und drängen wieder nach Ausdruck. Diesen Ausdruck erhalten sie, nach der Methode der isolierenden Sprachen, durch Wortstellung oder durch verdeutlichende Wörter. Letztere unterliegen wiederum mit der Zeit dem Agglutinationsprozesse, dem Verschliffe und Schwunde, und derweile bereitet sich für das Verderbende neuer Ersatz vor: periphrastische Ausdrücke werden bevorzugt; mögen sie syntaktische Gefüge oder wahre Composita sein (englisch: I shall see, - lateinisch videbo = vide-quo); immer gilt das Gleiche: die Entwicklungslinie krümmt sich zurück nach der Seite der Isolation, nicht in die alte Bahn, sondern in eine annähernd parallele. Darum vergleiche ich sie der Spirale" (Gabelentz 1891: 251).

A position very similar to that of von der Gabelentz has been maintained by Antoine Meillet (1912; quoted from Meillet 1948: 131-48). According to Meillet, there are two processes in the evolution of grammatical forms: analogical innovation ("innovation analogique"), which corresponds to both Expansion and Simplification, and grammaticalization ("l'attribution du caractère grammatical à un mot jadis autonome"), which essentially refers to Desemanticization, and more peripherally, also to processes such as Compounding, Cliticization and Erosion. These two processes, he notes (1948: 131), "sont les seuls par lesquels se constituent des formes grammaticales nouvelles. Les faits de détails peuvent être compliqués dans chaque cas particulier, mais les principes sont toujours les mêmes."

On the basis of differences in grammaticalization, Meillet distinguishes between mots principaux (i.e. "ceux qui indiquent les idées essentielles pour lesquelles est faite la phrase") and mots accessoires. While the former are words that have not been grammaticalized, the latter are in most cases words which have undergone Desemanticization plus one or more other processes\(^1\), i.e. both formal and functional processes\(^2\).

---

\(^1\) Meillet treats the word petits as mot principal in a sentence like appor­
tez le petit paquet but as mot accessoire in laissez venir à moi les petits enfants.
Our notion of functional split (see 1.1.3.3.1) is implied in his discussion on the coexistence of *mots principaux* and *mots accessoires* (p. 134/35), he presents patterns of linguistic evolution which closely correspond to our processes of Compounding, Cliticization, Erosion, Desemanticization, and Simplification, and he points out the correlation between morphosyntactic and functional processes (1948: 139):

"L'affaiblissement du sens et l'affaiblissement de la forme des mots accessoires vont de pair; quand l'un et l'autre sont assez avancés, le mot accessoire peut finir par ne plus être qu'un élément privé de sens propre, joint à un mot principal pour en marquer le rôle grammatical. Le changement d'un mot en élément grammatical est accompli."

Meillet adopts the spiral hypothesis although he does not refer to von der Gabelentz, nor does he substantiate why he proposes a spiral; his presentation would seem to be more suggestive of a circle than a coil, e.g.:

"Les langues suivent ainsi une sorte de développement en spirale: elles ajoutent des mots accessoires pour obtenir une expression intense; ces mots s'affaiblissent, se dégradent et tombent au niveau de simples outils grammaticaux; on ajoute de nouveaux mots ou des mots différents en vue de l'expression; l'affaiblissement recommence, et ainsi sans fin." (Meillet 1948: 140/41)

There is in fact some evidence to suggest that we are dealing with a spiral rather than a cycle: Renovation (see 1.1.2), i.e. the introduction of new for frozen lexical material, usually takes place before the existing grammatical element has disappeared. The new function marker therefore is likely to be grafted on the old one, and although the latter may lose its function, its phonetic substance, or part of it, tends to be retained in some way or other.\(^2\)

\(^2\) (preceding page)"Or, de ce qu'un mot est accessoire, il résulte deux sortes d'altérations, les unes touchant le sens, les autres touchant la prononciation." (Meillet 1948: 135)

\(^1\) For examples see 1.2.1.2 below.
There are, on the other hand, examples from African languages indicating that Renovation can take the form of straight forward replacement, in that the old function marker is lost entirely and the resulting gap is filled by a newly introduced marker\(^1\). In such cases there would seem to be some justification to talk of cycles rather than of spirals. More research is needed on this point; for our discussion, however, it is of secondary importance. The term "morphological cycle" will be used in the following paragraphs in a very general sense, referring to both cyclic and spiral-like evolutions.

The term (linguistic) cycle has been proposed with reference to both the evolution of languages, i.e. of entire language structures (cf. Hodge 1970), and to individual evolutions within a given language involving specific grammatical elements. Our use of this term is strictly confined to the latter\(^2\). Although clusters of individual evolutions suggesting an overall evolutionary drift for a given language may be observed, these are not the topic of the present paper (but see 1.2.1.5), they will be reserved for a typological discussion.

\(^1\) Such examples can be found in particular in pidginization contexts. In Kenya Pidgin Swahili, for example, the demonstrative ile 'that' has assumed the function of a (definite) relative clause complementizer, replacing all previous types of complementizers based on the "reference" marker -o (cf. Heine 1973: 115).

\(^2\) Cf. Jespersen (1922: 424/25): "Now, it is often said that the history of language shows a sort of gyration or movement in spirals, in which synthesis is followed by analysis, this by a new synthesis (flexion), and this again by analysis, and so forth. [...] But this pretended law of rotation is only arrived at by considering a comparatively small number of phenomena, and not by viewing the successive stages of the same language as wholes and drawing general inferences as to their typically distinctive characters [...]"
1.2.1.2 "Recursive" cycles

The idea of a morphological cycle or spiral has repeatedly been criticized. More recently, a position challenging the relevance of such a cycle has been presented by Jeffers and Zwicky (1980). The evidence adduced by these authors, however, is not convincing in every respect, in particular since they rely mostly on reconstructed, rather than actual language, evidence. However, they are able to demonstrate that treating unidirectionality and the morphological cycle as an evolutionary "law" would be unjustified.

Once a lexeme has developed into a function word through Desemanticization and the function word is further grammaticalized (i.e. semantically and syntactically "bleached"), another lexeme of the same meaning tends to be recruited to take the place of that function word, thus introducing a new morphological cycle. In the present section, some examples are presented to demonstrate the "recursive" nature of this development.

Carol Lord (1976: 183ff) has provided a case of recursiveness involving the Desemanticization of verbs meaning 'say' as complementizers. Her examples concerning Efik and Yoruba suggest that at least three consecutive cycles may be reconstructed. For Yoruba, these cycles are (cf. Lord 1976: 184; Bamgbose 1966):

1st cycle: The verb kpé 'say' is desemanticized to a complementizer:

\[
\begin{align*}
\text{ò so kpé àdè lọ.} & \quad \text{He said that Ade went.}' \\
\text{he say (say) Ade go}
\end{align*}
\]

2nd cycle: Another verb, w1 'say' takes the place of kpé and undergoes Desemanticization in the same way as kpé did. Since kpé is not lost, the two undergo Compounding:

\[
\begin{align*}
\text{ò so w1-kpé àdè lọ.} & \quad \text{He said that Ade went.'} \\
\text{he say (say-say) Ade go}
\end{align*}
\]

3rd cycle: The above examples indicate already the possibility of an emerging 3rd cycle, in that another
verb, so 'say', turns up, which appears to be the next candidate to be desemanticized. The end of this recursive development is described by Lord thus: "But so wi-kpē is literally 'say say-say'. This kind of proliferation has to be stopped at some point, so Yoruba speakers often simply use nî, another word for 'say' [...]", e.g.

ó nî adê lo.   'He said that Ade went.'

An example involving the grammaticalization of the verb 'finish' as a perfect marker has been presented by Erhard Voeltz\(^1\) (1980: 490/91) which suggests that a cycle can be repeated several times. In the development from Benue-Congo to modern Kenya Pidgin Swahili, we may distinguish the following cycles:

1st cycle: The verb *gid 'finish' is placed after the main verb to form perfect actions. This construction is retained in Mambila (the reflex of *gid in Mambila is gi(l)):

me ndëb kël gi.
I granery tie finish  (Meyer 1939/40; quoted from Voeltz 1980: 489)

*gid receives the past suffix -e in the Bantu languages, so that the form *gide results which becomes a perfect marker, undergoes Affixation, and is lost in some languages.

2nd cycle: Another verb *mad- 'finish' is introduced in Bantu languages to form a new source of perfect markers. In Swahili, mal- (< *mad-) was fused with the suffix *-ile, which goes back to *gide, to become meele and eventually, through syllabic Erosion, the perfect marker me- of modern Standard Swahili.

3rd cycle: In Kenya Pidgin Swahili, as well as in most other pidgin varieties of Swahili, the perfect prefix me- is lost,
and its position is taken by the verb kw-isha 'finish' (kw- = infinitive, -isha = verb stem).
While -isha or -kw-isha, suffixed to me-, tends to be used in Standard Swahili as well to form perfective actions, e.g.

\[
\text{a-me-kw-isha fika.} \quad \text{He has (already) arrived.}
\]

It is usually the only perfect marker in Kenya Pidgin Swahili, occasionally preceded by the present marker na-, e.g.

\[
\text{ye ye (na-)kwisha fika.} \quad \text{He has arrived.}
\]

Once a cycle is completed, or nears completion, Renovation (see 1.1.2) comes in and introduces a new cycle. This, however, does not necessarily mean that the new marker replaces the old one. Usually, the two coexist for some time, as the Yoruba example ọ sọ wi-kpẹ adé ọ (see above) suggests. The sentence a-me-kw-isha fika of Standard Swahili even shows that up to three cycles can be retained phonetically. However, both the Yoruba and the Swahili example point to the same final outcome: the languages tend to eliminate the old markers which have become redundant.

1.2.1.3 Uni-directionality

Although the present approach is based on the assumption that language development is uni-directional, there is evidence to suggest that this evolution is not without exceptions: under certain circumstances, basic processes can be reversed. It is in particular the following instances which suggest that the uni-directionality principle may be violated:

(1) Linguistic units which have undergone Desemanticization can be re-semanticized.

In Somali, the adjectival kale 'another', which is a lexical morpheme, appears to be derived from a combination of three non-lexical morphemes through Merger: the preverbal case markers ka- (ablative) and la- (comitative), and the de-nominal
derivative suffixe -leh ('being, having') (Lamberti, p.c.).

(2) Decliticization

Jeffers and Zwicky (1980: 223/24) call attention to a phenomenon they refer to as decliticization whereby a clitic emerges, or re-emerges, as an independent word. They claim, for example, that in the early Indo-European dialects the finite verb could occur in unaccented clitic position in a clause, whereas every modern Indo-European SVO language has an accented finite verb system derived from "the ancient system whose members so commonly occurred in clisis" (Jeffers/Zwicky 1980: 224). Although the evidence they adduce has to be taken with caution since it involves reconstructed, and hence hypothetical data, the possibility that decliticization in fact occurs cannot be ruled out. In Africa, no cases have been reported so far.

(3) An inflectional structure assumes a less grammaticalized function.

The evidence available suggests that inflections expressing subjunctive moods are more grammaticalized than those expressing tense; it is, for example, easier to conceive that a past tense marker develops through Expansion into a subjunctive marker than the other way round. Yet, in Latin, the opposite appears to have occurred: there is a development from subjunctive to future inflections:

"[...] en latin par exemple, des formes comme erit ou dicet qui, de par leur origine, sont des subjonctifs, ont pris la valeur de futur et n'ont même plus d'autre valeur en latin à l'époque historique [...]" (Meillet 1948: 145).

An argument against the uni-directionality principle has been raised by David W. Lightfoot (1979: 224):

"Instead of this development of major to minor category\(^1\), a reverse pro-

\(^1\) With this, Lightfoot refers to claims made by authors like Hyman, Lord, Pike and Schachter according to whom categories change from serial verbs to prepositions and complementizers etc.
cess might have taken place. After all, historical records show that the Romance languages underwent two kinds of changes, moving at one stage from 'synthetic' to 'analytic' morphology, and at another stage in the reverse direction. Thus the synthetic Latin tense amabo became the analytic Spanish amare he, which in turn became re-synthesized as amare."

According to our understanding it is doubtful whether this in fact can be considered as a "reverse process" of linguistic evolution. After all, the relevant development may be interpreted in the following way: the Latin suffixal structure was lost (cf. 1.1.1.1.4) and replaced by a periphrastic construction infinitive + 'have' which underwent Cliticization, Affixation and Erosion, thus completing the morphological cycle.

Neither this nor any other evidence produced by Lightfoot can be regarded as relevant to the uni-directionality hypothesis. The Spanish example can rather be considered as corroborating our claim on the cyclic nature of morphological change which, in Lightfoot's wording involves a development from "synthetic" to "analytic" and eventually again to "synthetic" morphology.

1.2.1.4 Morphological explicitness and "expressiveness"

In Heine (1980a) a distinction between implicit and explicit word categories has been proposed. The former offer little or no information on their morphosyntactic and semantic properties - such information usually, though not necessarily, being provided by the linguistic or extra-linguistic context. Explicit word categories, on the other hand, contain overt expression of their morphosyntactic and semantic characteristics. It seems possible to correlate the linguistic evolution that can be observed within a morphological cycle with specific types of mor-

1 In the case of nominal categories, such characteristics relate in particular to number, noun classification, case, and definiteness, while in the case of verbals they include the marking of anaphoric reference, tense, aspect, mood, and verbal classification.
Morphological explicitness and "expressiveness"

The following idealized stages of evolution may be distinguished:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Morphological expression</th>
<th>Explicitness</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>zero (except perhaps for remnants of fossilized affixes)</td>
<td>implicit structure</td>
</tr>
<tr>
<td>II</td>
<td>introduction of a free morpheme used optionally for &quot;emphatic&quot; expressive purposes</td>
<td>implicit structure plus optional explicitness</td>
</tr>
<tr>
<td>III</td>
<td>the free morpheme becomes a clitic and eventually an affix whose use is obligatory except in cases where it would be redundant</td>
<td>explicit structure, except for cases where explicit marking would be obviously redundant</td>
</tr>
<tr>
<td>IV</td>
<td>the affix is generally used, even if redundant</td>
<td>explicit structure throughout</td>
</tr>
<tr>
<td>V</td>
<td>the affix is fossilized and eventually lost</td>
<td>decreasing explicitness</td>
</tr>
</tbody>
</table>

VI = I

In this outline of a "typical" cycle, allusion is made to the rôle played by "emphatic" or "expressive" structures in the introduction of new cycles. There are, in fact, indications that cycles tend to start with such structures. This has been hinted at by a number of earlier writers. Meillet, for example, notes (1948: 139; 147):

"Mais ce qui en provoque le début, c'est le besoin de parler avec force, le désir d'être expressif [...] Quand on veut s'exprimer avec force, on donne à chaque notion une expression séparée; on ne dit pas "je ferai", mais "j'ai la volonté de faire" ou "il faut que je fasse" ou "je suis sur le point de faire"; il ne s'agit pas ici de logique, mais de sentiment à rendre et d'action à exercer sur un interlocuteur. Et si je veux faire, je dois faire, je vais faire n'expriment plus nettement la volon-
What exactly is meant by expressive structures is open to question. As Givón (1979a: 208ff; see 1.2.1.6 below) has shown, pragmatics forms an important source for the rise of new syntactic patterns - and for explicit morphology. However, it accounts only for a small part of the explicit structures that we observe in African languages. With regard to most other structures, we are not able to proceed much beyond the position held by scholars like von der Gabelentz or Meillet.

1.2.1.5 The linguistic catastrophe theory

In accounting for dramatic changes in linguistic evolution like the one that occurred in the development from Old Irish to the modern Celtic languages, Cram (1979) suggests that we are dealing with a "linguistic catastrophe", leading to "a long-term restructuring of the same magnitude as pidginisation, but which is internally rather externally induced". By this evolution, predominantly inflectional verbal systems are replaced with ones that are essentially isolating in character.

Catastrophe theory originated as a branch of pure mathematics (Thom 1975) and has found application in various other disciplines. According to Cram (1979:5), a linguistic catastrophe is said to occur when a series of minor historical changes has a cumulative effect which results in a major shift in the overall direction of the restructuring of processes on a macro-historical level. With regard to Celtic, the following changes in particular are cited to demonstrate the presence of a linguistic catastrophe:

(1) the introduction of periphrastic verbal forms leading to a syntactic change from V-S-O to Aux-S-V-O, and

(2) stress shift, leading to a weakening of final syllables, which resulted, for example, in the merger of the fu-
None of these are unusual or rare examples of grammaticalization. (1) represents a very common procedure of introducing new aspects and tenses (see 3.1.1.2; 3.3.1), and (2) is a widespread effect of peripheral Erosion (see 1.1.1.1.2), and, possibly, of Simplification. Thus, there does not seem to be any need to have recourse to the catastrophe theory in order to account for such almost universal grammaticalization phenomena.

There are, however, some observations that suggest that a sort of "linguistic catastrophe" may indeed happen at a certain stage of the evolution of languages. The development from Old Irish to the modern Celtic languages is an example, and so is the development from Latin to the modern Romance languages, or from classical Arabic to the various present-day varieties of Arabic. This "catastrophe" leads from an inflexional or agglutinating to a predominantly isolating/analytic structure. In our view, "linguistic catastrophes" of this type simply constitute examples of massive Renovation (see 1.1.2). Whether it is only internal forces that are responsible for such morphosyntactic transformations, or whether external factors - e.g. areal linguistic or sociolinguistic phenomena - are also involved, is a matter of further research (cf. Versteegh 1981). For the time being we will follow Cram in assuming that such macro-historical transformations are primarily internally induced.

Renovation of this kind appears to be characteristic of highly grammaticalized languages which in their verbal and nominal morphology approach the end of the grammaticalization scale. Such languages have undergone large-scale Affixation, and in most cases also Fusion and Fossilization. Renovation may be triggered by one or more of the following factors:

(1) Erosion leads to the reduction or loss of phonological

---

1 Cram (1979:1) claims that we are dealing with internally induced restructuring, while pidginization involves externally induced restructuring.
entities word-finally for example. This may affect suffixes expressing gender, number, case, tense or personal deixis, to the extent that distinctions marked by these suffixes are no longer upheld and that entire paradigms collapse. Renovation is then used as a means of re-introducing lost distinctions, leading for example to the following morpho-syntactic changes:

- case endings are replaced by adpositions,
- the function of gender distinction is transferred to demonstratives or other determiners,
- affixal personal pronouns are replaced by self-standing pronouns,
- the function of tense/aspect distinctions is taken over by periphrastic constructions of the type

  \[ \text{Aux} - \text{Adpos} + \text{nominalized verb}. \]

(2) Fusion has the effect of eliminating the boundary separating two adjacent morphemes. In order to maintain a distinction between the morphemes concerned, additional words may be introduced. If a set of personal pronouns fuses with a tense or aspect marker, the language may choose another set of pronouns to maintain a distinction of personal deixis on the one hand and between person and tense on the other.

(3) Fossilization may lead to the break-down of productive patterns of derivation and/or inflection. Through Renovation, new "regular" patterns, in particular periphrastic constructions, are built up. In this way, for example, the ancient prefix conjugation was replaced by a periphrastic structure (suffix conjugation) in most Cushitic languages.

1.2.1.6 Givón's approach to "syntacticization"

Probably the most successful attempt to describe an example of grammaticalization has been made by Talmy Givón (e.g. 1971a, 1971b, 1975a, 1979, 1979a). It is his work which aroused our interest in problems of diachronic morphosyntax, and the present paper could not have been written without his pioneering studies.
In order to explain syntax as a structural level of its own, one must, according to Givón, make reference to a number of substantive explanatory parameters of language. He is able to demonstrate that pragmatic discourse structures develop into grammaticalized syntactic structures, which again erode via "morphologization" and "lexicalization", the result being a cyclic wave of the following kind:

(1) discourse → (2) syntax → (3) morphology → (4) morphophonemics → (5) zero.

Givón's analysis is concerned mainly with the first two steps of this cycle, which are motivated by communicative needs, i.e. from (1) to (2), and from (2) to (3). The other steps are said to be motivated largely by phonological attrition (Givón 1979a: 207-209). He gives the following examples for the development from (1) to (2): from topic to subject, from topicalization to passivization, and from topic sentence to relative clause.

The development from (2) to (3) relates to a process by which looser, sentential constructions are condensed into tighter syntacticized structures. His examples concern amongst others the development from paratactic to tighter subordinate patterns in the verb phrase, or from two verbs to one complex verb1.

Givón offers a convincing approach for dealing with what he refers to as syntacticization processes. However, a number of problems remain unsolved, some of which may turn out to be crucial in further discussions on grammaticalization. These relate for example to the following:

(a) Grammaticalization has been associated with specific functions of language. Givón has attempted to demonstrate that it is caused mainly by pragmatic factors. According to him, loose, paratactic, "pragmatic" discourse structures develop into tight, "grammaticalized", syntactic structures (Givón 1979a: 208). It would seem, however, that pragmatics does not form

---

1 For more details, see Givón 1979a: 213ff.
the only source, probably not even the major one. There are some other functional domains which have to be considered as well. Following Halliday (1970: 143), we will distinguish three basic functions of language:

(1) The ideational function, which is concerned with the linguistic expression of the speaker's experience of the world,
(2) the interpersonal function, according to which language serves to establish and maintain social relations, and
(3) the textual function, which links language with the situation in which it is used.

Each of these functions can be responsible for specific types of grammaticalization patterns, and there is no reason to assume that any of them has priority over any other (see below).

Givón's concern is with what Halliday refers to as the textual function. With regard to this function, there are in fact numerous examples to suggest that pragmatic roles like topic/theme or focus can be held responsible for the rise of new syntactic, and eventually morphological, structures.

But the other two functions mentioned above are in the same way relevant for the emergence of new patterns of grammaticalization. The interpersonal function, for example, comes in when modally marked lexemes develop into grammatical morphemes. This is the case when volitive or desiderative verbs are desemantized to future markers.

Most cases of grammaticalization, however, involve neither the textual nor the interpersonal function, they are rather confined to ideational structures. For example, when in Ewe a verb phrase constituent \([V + NP]\) is reanalysed as a prepositional phrase via reanalysis of the verb as a preposition (see 2.3.2.3) then the motivation for this has nothing to do with pragmatic or interpersonal considerations, it is purely syntactic: the reanalysis of a verb phrase as a prepositional phrase serves to introduce an extra verbal complement which is not encoded in the valency pattern of the verb.
Our observations suggest that not much is gained by focusing one's attention on one particular function of language only; there is a wide array of functional motivations which can be held responsible for grammaticalization.

(b) Givón tends to assume that essentially the same evolution can be claimed for both inflectional and derivational morphologies. This is not corroborated by our findings (see 3.1.3 below). Similarly, his understanding of "inflectional morphology" would seem to require qualification. For example, he cites the fact that verbs "become grammaticalized as case-markers, eventually becoming bound to their respective nominal arguments" (Givón 1979a: 220) as an example of the rise of noun inflections. Neither his own evidence nor any other data known to us indicate that the development from verb to case marker indeed leads to the emergence of noun inflections.

These as well as a number of other points that could be added are in no way intended to belittle the merits of Givón's work. Perhaps his main achievement is to have demonstrated convincingly that any attempt at explaining grammar must remain incomplete unless it takes diachronic processes into considerations (cf. Givón 1979a: 235-69). This claim will be further discussed in the following section (1.2.2) and in chapter 4.

1.2.2 Functional split and the emergence of "hybrid words"

One problem that has been the subject of various controversies in African descriptive linguistics concerns the categorical status of certain classes of morphemes. These morphemes combine properties of two different word or morpheme categories, and linguists therefore disagree as to whether they should be allocated to category X or Y, or whether they belong to neither and therefore should be treated as forming a category of their own.

In a number of West African Kwa languages, for example, there are words which in certain respects behave like verbs and in others like prepositions (cf. Ansre 1966). Furthermore,
there are words which have characteristics of both verbs and adverbs (cf. Bamgboye 1974: 38-41). Even more common is the problem of certain groups of nominals in many African languages which behave like nouns in one way and like adpositions in another. Similarly, in a number of languages there are morphemes which may be treated as either verbal auxiliaries or tense/aspect markers.

A common way of handling this problem in grammars of African languages is to state that category X contains a set of words/morphemes which are homophonous with corresponding forms belonging to category Y. Whether there is some principle underlying this homophony usually remains unclear.

Meillet (1948: 134/35) was referring to this problem when he noted that one and the same linguistic unit may occur in one context as a *mot accessoire* (= desemanticized word) and in another context as a *mot principal* (= non-desemanticized word).

Although we are not in a position to solve such descriptive problems through evolution studies alone, they can, nevertheless, be of help in understanding the mechanism that gave rise to these structures. In most cases, we are dealing with instances of functional split, which happens when a linguistic unit A undergoes a certain process to become B. This does not mean that A is eliminated in its original status: it is retained, at least for some time, so that there are two coexisting forms which differ from one another in their degree of grammaticalization. B tends to remain a "hybrid" for a certain time since, although having a new status, it retains some phonological and/or morphosyntactic properties from the period of time when it was A.

In most cases, the process involved is Desemanticization: functional split leads to the emergence of function words. The following are examples of common developments for example in West African serial verb languages:
In other cases again, the process that is responsible for the emergence of hybrid word categories is Expansion, whereby a morpheme changes its functional status without being semantically "emptied". Examples from African languages are:

The exact categorial status of the morphemes in question depends on whether the relevant process has been completed or not. If it has, then the two "homophones" may be said to belong to different word/morpheme categories. Thus, the Ewe morpheme na has developed into two different word units: in its non-desemanticized form it is a verb ('to give'), whereas in its deseman-
ticized form it is a dative/benefactive preposition. The relationship between the two units is one of grammaticalization: the preposition na is a desemanticized variant of the verb na.

Ansre (1966: 31/32) notes that there are five words\(^1\) in Ewe which behave like na, and he discovered words with similar semantic properties in Twi, Ga and Adangme. He proposes to call these words "verbids" in order to distinguish them from verbs. "Verbids" differ from verbs in that they lack verbal properties like showing agreement in polarity (Aff./Neg.), aspect and tense with the verbs of the clause in which they occur. Instead, they "combine with nominals to form adverbial groups" (Ansre 1966: 32); in other words, they behave like prepositions.

The justification for referring to these words as "verbids" remains unclear\(^2\). Ansre (1966: 31) notes that "'verbids' reminds us of the close resemblance between itself and the verb", on the other hand he warns us that "we should not appeal to history to link the two - verbid and the verb. Nor can we prove any case based on such a claim. Too often, over-emphasis on phonological similarity has led to a blurring of grammatical detail." It seems that by choosing the term "verbid" Ansre did exactly what he wanted to avoid, since the only meaningful way of describing the relationship between his "verbids" and their verbal "homophones" is by having recourse to the history of their development. He admits that the "verbids" could be called prepositions but decides to reject this term: "'Prepositions' could be used, but then a distinction between it and the other items, e.g.

\(^1\) He actually lists six words, but one, kplé 'with', has no verbal homophone and is therefore to be excluded here. Note, however, that even kplé has a verbal source: it is derived from a combination of the verbs *kpe 'meet' and *qê 'get to' (see Westermann 1905: 295; see also 1.1.3.3.2).

\(^2\) Marybeth Clark (1979:1) uses the term "coverb" for a similar category in Hmong, a language of Southeast Asia: "A coverb is a preposition which has a synchronic corresponding verb which is homophonous and broadly synonymous with the preposition."

Her diachronic interpretation of this phenomenon is largely identical with the one proposed here.
postpositions, would have to be made" (Ansre 1966: 31). There is at least one clear-cut way of making such a distinction: prepositions precede while postpositions follow the noun.

If, on the other hand, a process has not yet been completed then it is not possible to unambiguously establish a morpheme/word boundary between the two "homophones"; the two constitute morphosyntactic hybrids.

1.2.3 Pidginization

What happens to languages on their way to becoming pidgins has been described fairly well, and hypotheses to explain the linguistic development referred to as pidginization have been put forward (e.g. Mühlhäusler 1974; Heine 1973; 1978). The present framework offers another means of accounting for some of the linguistic changes that are characteristic of pidginization: it may be interpreted as a time-acceleration device in language evolution. Developments that in natural languages take several centuries or even millennia, are reduced to decades when a language becomes a pidgin. Thus, probably the most significant drift that marks pidginization is to the anticipation of developments that the relevant language would undergo anyway1. In the following, some examples are presented to illustrate this point.

Kikongo, a Bantu language, has a basic aspect distinction marked by verbal suffixes: -a for the indefinite aspect and -i2 for the perfect. Furthermore, there is a tense prefix a- denoting "distant time". By means of "accent change", a distinction between past and future can be made. We thus get the following tense-aspect pattern (cf. Laman 1912: 159/60):

---

1 We are aware of the fact that this does not account for all aspects relevant to pidginization.

2 As the following examples will show, -i is responsible for various Adaptation (regressive assimilation) processes.
This affixal structure has been expanded by a system of periphrastic aspects, the aspect markers being derived from verbs via the following processes:

(1) Lexical base

<table>
<thead>
<tr>
<th>kala</th>
<th>mana</th>
<th>sala</th>
<th>yika</th>
</tr>
</thead>
<tbody>
<tr>
<td>'to be, exist, remain'</td>
<td>'to fi-, nish'</td>
<td>'to add, put more'</td>
<td>'dwell, abide'</td>
</tr>
</tbody>
</table>

(2) Desemanticization

<table>
<thead>
<tr>
<th>pro-</th>
<th>perfective aspect</th>
<th>'still' aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>gressive</td>
<td>aspect</td>
<td></td>
</tr>
</tbody>
</table>

(3) Cliticization

the erstwhile verbs become auxiliary clitics

(4) Erosion

<table>
<thead>
<tr>
<th>ka</th>
<th>sa</th>
</tr>
</thead>
</table>

Resulting aspect markers

ka mana sa yika

Note that not all aspect markers underwent Erosion. Furthermore, in the dialect described by Laman (1912), both forms of stage (3) and (4) coexist, e.g.

y-a-kala kanga 'I was binding'
or y-a-ka kanga

The number of tenses and aspects is multiplied by the fact that the affixal structure outlined above has been retained, the relevant affixes being attached to the clitical aspect marker of the periphrastic construction. The following example, which is
confined to the perfective marker mana, illustrates the various possibilities:

- **man-a**  present indefinite perfective
- **a-man-a**  past indefinite perfective
- **men-i**  present perfect perfective
- **a-men-i**  past perfect perfective

In Kituba, a pidgin derived from Kikongo, this system was simplified considerably. Fehderau (1966: 116) notes that there are three different evolutionary forms corresponding to the speech of three different generations of Kituba speakers. The oldest generation has inherited the inflected auxiliaries of Kikongo in their perfect form, but the affixes of these auxiliaries have lost their function. In the speech of the middle-aged generation, the auxiliaries have been eroded as monosyllabic clitics, and in that of the youngest generation, these proclitics became prefixes. The following is a more formal account of the development:

| Kikongo base |  | Kituba, oldest generation |
|--------------|  | (1) Fusion | imene | ikele |
|              |  | (2) Merger | perfect | ingressive |
|              |  | Example: | munu imene kwenda | munu ikele kwenda kusosa |
|              |  |            | 'I have gone' | 'I am going about searching' |

| Kikuba, middle-aged generation |
|--------------|  | (3) Erosion | me | ke² |
|              |  | Example: | munu me kwenda | munu ke kwenda kusosa |
|              |  |            | 'I have gone' | 'I am going about searching' |

| Kikuba, youngest generation |
|--------------|  | (4) Affixation | -me- | -ke- |
|              |  | Example: | mu-me-kwenda³ | mu-ke-kwe-sosa³ |
|              |  |            | 'I have gone' | 'I am going about searching' |
Thus, within three generations of use, the pidgin has undergone four evoloutional processes - a change that with natural languages might take up to a millennium, or even more.

1.2.4 Dialect comparisons

Our description of processes is based on cases where the origin of grammatical elements is "transparent", i.e. where the lexical source of such elements can be reconstructed (cf. Kahr 1976: 146). However, only a minor part of the material available is, in fact, transparent. Especially in Africa, where there are hardly any earlier written records and where diachronic linguistics is still in a very elementary stage, most of the morphological structures one is faced with have to be classified as "non-transparent"; we know virtually nothing about their diachronic behaviour. Even in fields such as comparative Bantu, which have attained a relatively advanced state of research, most developments are still opaque to diachronic analysis. Although detailed reconstructions of the Bantu noun class systems and verbal derivative extensions exist, their origin is still largely unknown.

One of the main purposes of the present approach is to reduce the amount of non-transparent developments by proposing generalizations on diachronic processes. If, for example, under specific conditions new case forms enter the nominal morphology only through the suffixation of postpositions (Kahr 1976) then we are able to account for the history of case affixes in languages on which no diachronic information is available.

(Footnotes referring to the preceding page)

1 The change man- + men- is due to Adaptation, i.e. regressive vowel assimilation.

2 This instance of Erosion has also occurred in Kikongo.

3 This example offers another case of grammaticalization: the first person sg. pronoun munu underwent Erosion and Affixation to become mu- in the speech of the "youngest Kituba generation".
In Africa, where early written records are hardly available, systematic comparisons between closely related languages and, even more importantly, between different dialects of the same language play a crucial rôle. They form indeed the main source of information for diachronic inferences. What makes inter-dialect comparisons a particularly valuable tool to students of linguistic evolution is the fact that they offer a wealth of transparent developments: what constitutes a verb in dialect X turns up as a preposition or tense marker in dialect Y, and a noun like 'head' in X may have a preposition 'on (top of)' as its equivalent in Y. Many synchronic differences between dialects can in fact be interpreted as reflecting differing stages or ways of grammaticalization. It is usually either of the following factors that accounts for such differences:

(1) Choice of the grammaticalization channel

There are, for example, two main sources for the emergence of relative clause markers: demonstrative and interrogative pronouns. Most African languages have used the demonstrative channel. This applies also to Standard Ewe (based on the Aqlo dialect), which has grammaticalized the demonstrative *si\(^2\) 'this'. However, some western inland dialects of Ewe have opted for the interrogative channel: in these dialects, the relative clause marker is derived from the interrogative word kalâ 'who?, what?' (cf. Westermann 1907: 134).

(2) Number of processes

In the following example, the structural difference between two dialects is the result of the relative number of grammatical-

---

1 Another source of information can be seen in morphology. Givón rightly points out that "[...] synchronic morphologies and morphosyntactics are a most powerful tool for reconstructing earlier diachronic stages in the syntax of a language" (Givón 1971a: 145).

2 The modern form of the demonstrative is sia (< *si + -a definite article; see Westermann 1907: 60).
ization processes that have been undergone.

Acholi and Lango, although usually treated as different *aus-bau* languages, can be described as dialects of one and the same, Western Nilotic, language. They use future constructions differing from one another in several ways, but these differences can be accounted for essentially by looking at the processes that have been used. Compare the following synonymous sentences (Bavin 1983: 151).

<table>
<thead>
<tr>
<th>Lango</th>
<th>Acholi</th>
</tr>
</thead>
<tbody>
<tr>
<td>an a-bino cammo.</td>
<td>an a-bi-camo.</td>
</tr>
<tr>
<td>I I-FUT to.eat</td>
<td>I I-FUT-to.eat</td>
</tr>
</tbody>
</table>

'I will eat.'

Apart from the consonant gemination in Lango (mm), the difference between these two sentences is exclusively one of grammaticalization. In both dialects, the future tense goes back to a periphrastic construction bino 'go, come' + verbal infinitive form. While in Lango this construction has been retained, it has undergone the following processes in Acholi:

- *an a-bino camo
- Affixation *an a-bino-camo
- Erosion an a-bi-camo

(3) Process-internal options

But it is not always the number of processes that is responsible for dialect differences, it may also be the way in which a given process is applied.

In the following example from Akan (Dolphyne s.a.), dialect differences in stem words having the structure CVnV can essentially be accounted for by means of one process only: Erosion. Note that in the following example Erosion does not presuppose any other grammaticalization process:

---

1 In all dialects except Akuapem, nasal Adaptation has been at work. However, whereas in General Brong Adaptation is progressive, leading to the nasalization of a following vowel, it is regressive in the other dialects.
Dialect comparisons

<table>
<thead>
<tr>
<th>Dialect</th>
<th>'house'</th>
<th>'to smell'</th>
<th>'name'</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Brong</td>
<td>danĩ</td>
<td>bonõ</td>
<td>dinĩ</td>
</tr>
<tr>
<td>Akuapem</td>
<td>daŋ?</td>
<td>bɔŋ?</td>
<td>dĩŋ?</td>
</tr>
<tr>
<td>Fante</td>
<td>dãn?</td>
<td>bɔn?</td>
<td>dzin?¹</td>
</tr>
<tr>
<td>Asante</td>
<td>dãĩ</td>
<td>bɔĩ</td>
<td>dĩʔ</td>
</tr>
<tr>
<td>Brong (of Nkoranza township)</td>
<td>dãʔ</td>
<td>bɔʔ</td>
<td>dĩʔ</td>
</tr>
</tbody>
</table>

All dialects other than General Brong and Asante have undergone syllabic Erosion whereby the final vowel, and hence the final syllable, have been deleted². This has been followed by velarization of the final nasal in Akuapem. Nkoranza Brong has furthermore experienced peripheral Erosion leading to the loss of this final nasal. Asante has not applied the syllabic Erosion rule that the other dialects except General Brong have, but it has undergone Erosion in the form of internal (intervocalic) nasal loss³.

---

¹ Fante has the rule [d] + [dz] before front vowels.
² Dolphyne (s.a.: 13) treats the glottal stop [ʔ] as a feature of pause, rather than segment replacing the final vowel.
³ For a different interpretation, see Dolphyne (s.a.: 13).
CHAPTER TWO: SYNTACTIC REANALYSIS

The term "syntactic reanalysis" has been used for a number of different phenomena. Perhaps the most elaborate treatment of it is contained in Langacker (1977), where it is defined "as change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation" (p. 59).

Independent of this usage, reanalysis has become a term of grammaticalization theory. Lord (1976: 179) uses it for example to refer to a process by which a verb loses "semantic, morphological and syntactic properties, and survives as a grammatical morpheme marking the relationship between clauses". Reanalysis thus appears as a concept which is largely synonymous with our term "grammaticalization". A similar use of "reanalysis" is found in Givón (1979a). He describes, for example, the development from clitic pronoun to automatic agreement marker as a case of reanalysis (p. 243). In addition, Givón also uses the term with reference to discourse constituents. Thus, reanalysis is said to be present as well when a topic turns into a subject constituent (p. 209).

In the present paper we wish to distinguish between the evolution of lexical or grammatical morphemes on the one hand and that of syntactic or pragmatic structures on the other. Some principles underlying the former have been discusses above in chapter 1. We will reserve the label "reanalysis" to the latter phenomenon, which is the subject of this chapter. Although the two tend to be closely interrelated, there appears to be a need for discrimination. A major difference between the two can be seen in the fact that whereas grammaticalization is essentially uni-directional, this does not necessarily apply to reanalysis.

2.1 Grammaticalization and reanalysis

Once a linguistic unit enters some grammaticalization channel, this is likely to have various syntactic implications. Such implications may relate to the relevant unit only, but they may,
as well, relate to entire sentence structures. The various processes differ as to the extent to which they affect existing syntactic structures. Some, like Desemanticization or Expansion, involve remarkable syntactic transformations while others, like Adaptation or Erosion, are syntactically largely irrelevant.

In most parts of this paper, it is tacitly assumed that reanalysis of sentence constituents is the result of, or has been triggered by, certain processes like Desemanticization or Expansion. This assumption is based on the claim that grammaticalization starts with individual lexical items which, by changing their own semantic and morphosyntactic status, are responsible for an overall transformation of the syntactic structures in which they occur. For example, when a verb undergoes Desemanticization to become an adposition, then this does not only affect its own status as a word category or constituent but that of its neighbouring and/or higher constituents as well: the resulting adposition is no longer immediately dominated by a verb phrase but rather by an adverbial phrase.

There is, however, another, perhaps equally legitimate, perspective according to which it is syntactic reanalysis which leads to grammaticalization, rather than the other way round. Languages dispose of a limited number of syntactic structures, and we could say that a shift from constituent X to Y, or, more precisely, a reinterpretation of constituent X as Y may be employed as a strategy to express new semantactic functions. Within this perspective, Desemanticization or Expansion are viewed as processes which accompany reanalysis, rather than being responsible for it.

Grammaticalization is associated with specific evolutional processes involving in particular a decrease in semantic and phonetic complexity, pragmatic significance, and syntagmatic variability. The nature of reanalysis is more difficult to define. As the examples in the following sections will show, it may have pragmatic structures as its input and syntactic structures as its output, but opposite evolutions are also possible. Furthermore, while it tends to turn semantically and syntactically complex structures into less complex structures, there are cases
where the output is more complex than the input.

On the other hand, grammaticalization and reanalysis show some striking similarities. Both involve what we have referred to as split (see 1.1.3.3.1). Thus, when a given lexeme X is desemanticized to Y, this process is confined to one specific context, in other contexts X is not affected by grammaticalization. For example, the desemanticization of the Ewe verb ná 'give' to a dative/benefactive preposition took place only when ná was preceded by another verb phrase within the same sentence — otherwise grammaticalization was blocked. The same holds for reanalysis: The change from verb phrase to prepositional phrase, which accompanied the grammaticalization of ná, was confined to this particular context. In other contexts, reanalysis did not take place, i.e. a verb phrase remained a verb phrase.

At the present stage of research it is still unclear how the relationship between grammaticalization and syntactic reanalysis is to be defined. For the time being, we may interpret them as two independent principles showing a number of significant correlations.

2.2 Syntactic transfer and adjustment

Observations made in African languages suggest that syntactic reanalysis involves two distinct strategies which have to be kept apart. Probably the most common strategy languages use in order to express a new function is to take an existing syntactic structure and apply it to another context. Since this involves a transfer of the relevant structure, we will refer to this strategy as syntactic transfer.

The Yoruba sentence

olú sáré wá ilé. 'Olu ran and came home.'
Olu ran-race come home
(Bamgbose 1974: 37)

offers an example of syntactic transfer. It consists of a subject noun phrase (olú) plus two verb phrases: sáré and wá ilé. But this structure is also used to express a second function.
The first verb phrase sáré (′sá 'run' + éré 'race') came to be used as a modifying constituent of the second verb phrase, and it assumed an adverb-like meaning ('quickly'). The above sentence accordingly acquired a second meaning: 'Olu came home quickly'. In this example, transfer consists of the use of an established sentence constituent, a verb phrase, to express a concept which languages usually encode by means of other types of constituents, typically by means of adverbial phrases.

Once transfer takes place, this is likely to create a conflict between syntactic structure and the new function it is supposed to serve. To resolve this conflict, another strategy is employed which we propose to call syntactic adjustment. The purpose of this strategy is to accommodate a syntactic or morphosyntactic structure to the function it acquired through transfer.

In our Yoruba example, the use of a verb phrase as a means of introducing adverbial concepts led to a conflict between syntactic structure and its semantactic functions. For example, sáré and wá ilé are syntactically co-ordinate constituents, semantically however sáré is "subordinate" to, or dependent on, wá ilé. Adjustment had the effect of reconciling syntactic with semantactic structure by reanalysing erstwhile verb phrases like sáré as adverbial modifiers, which differ from verb phrases, e.g., in that they can no longer be topicalized and that verb + object constituents exhibit the morphosyntax of compounds. Adjustment also had the effect of transforming two co-ordinate clauses into one simple sentence, where one clause is reduced to a pre-verbal modifier of the other.

Adjustment is a long process and what we frequently meet in a given language is some intermediate stage of it rather than its end product. Our Yoruba example is characteristic of such an intermediate stage. While constituents like sáré have acquired features which set them apart from verb phrases, they are still far from behaving like other adverbial constituents, and Bamgbose (1974: 37ff) therefore proposes to refer to them as "prever-
Syntactic transfer and adjustment

bal modifying verbs". A possible endpoint of adjustment would be a situation where constituents like sáré are indistinguishable from adverbs, i.e. have lost all verbal properties and follow the verb they modify, in accordance with the basic order of adverbal phrases in Yoruba.

While there is some justification to assume that syntactic transfer and adjustment form distinct strategies, it remains to be investigated how exactly they are interrelated. For example, it is largely unclear how the boundary between them is to be defined. Furthermore, while we observe that transfer triggers adjustment, we do not know whether this is necessarily so, i.e. whether there may not be cases of transfer without adjustment.

On the other hand, there is evidence to suggest that grammaticalization may lead straight to adjustment without involving transfer. A number of African languages have developed a kind of passive construction by desemanticizing a 3rd person subject pronoun. Ewe appears to present the first stage of such an evolution. In a sentence like

\[ \text{wó-dzi kofí.} \quad \text{Kofi was born.} \]

the pronoun wó- has become a semantically empty dummy subject, the result being an agentless passive equivalent.

Usually in the second stage of this evolution an agent is introduced by means of an optional prepositional phrase. Luba uses kù-di (lit. 'there where is') as a preposition to mark the agent\(^1\) (Willems 3/1955: 143/44):

\[ \text{ba-sùm-íne mu-âna kù-di nyòka.} \]

\[ \text{they-bite-PERF child by snake} \]

\[ \text{The child has been bitten by a snake.} \]

Subsequently, adjustment had the effect of bringing such syntactic structures in line with semantactic requirements like the

\[ \text{1 In addition, Luba has inherited a passive construction from Proto-Bantu using the verbal derivative suffix \(-i'\text{bua}\) or \(-e'\text{bua}\) (Willems 3/1955: 144).} \]
following:

(1) Since the subject has been grammaticalized, the subject-topic position is now vacant. The most convenient way of filling it is by shifting the topic function to the object noun phrase which then assumes the subject position. Object topicalization as part of the adjustment strategy can be observed in Kimbundu, although it is confined to human objects (Givón 1979a: 211):

\[
\text{Nzua a-mu-mono kwa meme.}^1 \quad \text{John they-him-saw by me}
\]

(2) Since the erstwhile subject, a 3rd person plural pronoun, has lost its function, it tends to be eliminated, i.e. to undergo Loss. The Present Passive of Nuer offers an example of this effect of the adjustment strategy: The suffix \(-kè\) 'they' is optionally deleted in passive constructions\(^2\) (Crazzolara 1933: 148):

\[
\text{càm(-kè) nààdh è nyîldh.} \quad \text{'People are bitten (eaten) by gnats.'}
\]

\[
\text{eat(-they) people by gnats}
\]

It would seem that what is responsible for this type of passive construction is entirely a phenomenon of grammaticalization, i.e. the decay of a 3rd person plural pronoun. This is followed by an attempt at reconciling the subject-less clause with a basic semantactic principle requiring the new structure to be adjusted to established patterns of encoding syntactic functions. Thus, in this case it is grammaticalization without transfer which produced a "distorted" clause structure, which again raised the need for adjustment to come in.

---

1 Adjustment was not completed in Kimbundu since it did not extent to the agreement structure: In passive sentences like this, the object prefix \(-\text{mu-}\) is still used as an agreement marker for the new subject-topic constituent.

2 Crazzolara (1933: 147) notes: "Oftentimes the suffix \(-\text{kè}\) is dropped off. Its tone, however, will go back and combine with that of the stem, if this be different from it; otherwise no sign of the elision remains."
2.3 Types of reanalysis

In the present section, the main types of syntactic transfer and adjustment that have been observed in African languages are briefly discussed. The classification proposed is highly tentative, it is likely that it will require revision once we have a better understanding of the mechanics of reanalysis.

2.3.1 Clause-internal structure

2.3.1.1 From genitive construction to prepositional phrase

Most, if not all, African languages use the transfer strategy to express prepositional concepts by means of genitive constructions. The result is that the possessed noun phrase assumes the function of an adposition. It is mostly nouns denoting body parts or relational locative concepts which are affected by this process. Adjustment has the effect of turning the NP-NP constituent into a prepositional phrase, as the following example from Swahili shows:

```
mtoto a-li-panda juu ya mlima
child he-PAST-climb top of hill
```

Once adjustment has taken place, the erstwhile possessed noun phrase is grammaticalized to an adposition, and may eventually assume a case marking function.

2.3.1.2 From nominal periphrasis to tense-aspect marking

Nominal periphrasis, whose grammaticalization behaviour is discussed in 3.1.1.1.1, serves to express new distinctions of
tense, aspect or modality. These distinctions are introduced by means of verbs, while the actual verb appears in a nominalized form, either as a noun phrase or a prepositional phrase. This leads to the following structural change:

$$v_2 - v_1 > v_{\{NP\}}$$

where $v_1$ is the main verb while $v_2$ has auxiliary function. Syntactic transfer consists in the use of a verb + complement constituent for the expression of a verbal action marked for tense, aspect or modality. This creates some conflicts between morphosyntactic and semantic structure, in particular the following:

1. The verbal action is encoded as a verbal complement, i.e. as a nominal structure.

2. The auxiliary qualifying the verbal action is encoded as the main verb.

Since a complement is dependent on the valency pattern of the verb it belongs to, this means that the semantically dominant part of speech has the morphosyntax of a dependent constituent, while the semantically subordinate part appears as the governing constituent.

Conflicts like these are resolved through adjustment, which has the following effects: The nominal structure expressing the verbal action regains the morphosyntax of a verb, while the auxiliary degenerates to a marker of tense, aspect or modality, developing into an appendix of the new main verb. The following example from Swahili shows what kind of structural changes may be involved in this case of reanalysis:

*mtoto a-meele ku-ja
child he-finished to-come

mtoto a-me-kuja
child he-PERF-come

'The child has come.'
Reanalysis is accompanied by grammaticalization, which tends to have the following effects:

1. The main verb loses its noun-like features through processes like Erosion, Fusion and Loss.
2. The auxiliary verb becomes a clitic and eventually a verbal affix.
3. If there has been an adposition, it is reduced to a grammatical marker, or is lost altogether, as it happened in the case of the English progressive aspect.

2.3.1.3 From NP-NP to object-verb constituents

In the preceding section we observed that nominal periphrasis, which is a manifestation of the transfer strategy, leads to the main verb being encoded as a verbal complement, either as a direct object or as a prepositional complement. For a number of African languages (see 3.3.2.1) this resulted in the actual direct object being encoded as a kind of genitive noun phrase of that complement. Thus, sentence (2) of Standard Ewe is historically derived from (1):

(1) *me-le dọ wọ me.
I-be work doing inside

(2) me-le dọ wọ ám. 'I am working.'
I-be work do PROG

The phrase *dọ wọ 'the work's doing' in (1) behaves morphosyntactically much like an inalienable genitive construction.

The adjustment strategy then has the effect of undoing the change caused by nominal periphrasis: The possessor noun phrase is reanalysed as the direct object and the possessed noun as the main verb. The evolution

*verb > noun (=nominalized verb) > verb
*direct object > genitive NP > direct object

has, however, left some marks on synchronic sentence structure
in languages like Ewe or Kru. For example, since in these languages the possessor precedes the possessed noun phrase, the direct object came to be placed before the verb in constructions involving periphrasis, as can be seen in sentence (1). This contrasts with the SVO word order found elsewhere in these languages.

2.3.2 Complex clause structures

In this section, we will be concerned with some patterns involving complex sentences either as the input or the output of reanalysis.

2.3.2.1 From subordinate to main clause

The transfer strategy may be used to encode a new grammatical function as a main clause, while the actual main clause appears as a subordinate clause. The resulting conflict between syntactic and semantic structure is resolved by means of the adjustment strategy, which tends to reduce the main clause to a grammatical marker and to restore the subordinate clause as the main clause - in accordance with their respective semantic functions.

Such a development can be observed in Teso. The following stages can be distinguished in the transition from subordinate to main clause:

*Stage I:* There was a construction of serial periphrasis (see 3.1.1.1.2) with -bu, pl. -potu 'come' as the main verb. This verb was used to denote past (or perfective) actions.

*Stage II:* -bu/-potu was desemanticized to a past tense marker but retained its verbal inflections, e.g.

```
a-bu ke-ner I-come I-say
I-say
PAST
```

(Hilders/Lawrance 1956: 14).

\(^1\) For more details, see 3.3.2.1.
The subordinate clause becomes semantically the main clause but retains the morphology of a subordinate clause, as can be seen from the use of the subjunctive personal prefix ke-.

**Stage III:** This stage can be found with the negative markers eroko and eriŋa 'not yet', which are derived from the verbal auxiliaries *-rokó and *-riŋá, respectively. These markers are no longer inflected for person nor do they display any other verbal characteristics. However, the erstwhile subordinate clause, which is developing into the main clause, is still constructed in the subjunctive mood, as the prefix ke- in the following example shows:

```
eroko ke-buno.       'He has not yet come.'
not.yet he-come      (Hilders/Lawrance 1956: 46)
```

**Stage IV:** Teso has a negative marker mam, which goes back to the negative copula *-mam 'not to be'. In the same way as eroko and eriŋa, mam has lost all verbal properties. The transition from subordinate to main clause has been completed since the verb following mam is used in the indicative mood, e.g.

```
mam petero e-koto ekiŋok. 'Peter does not want a dog.'
NEG Peter he-want dog      (Hilders/Lawrance 1956: XIX)
```

Thus, reanalysis and grammaticalization were responsible for the following type of syntactic change:

```
main clause  > grammatical marker
subordinate clause  (> loss of subordinate morphology)  > main clause.
```

This evolution had other implications as well. It led, for instance, to a change from a VSO to an SVO syntax (see 3.3.1).

### 2.3.2.2 From prepositional phrase to embedded clause

We noted in 1.1.1.3.2 that there is a grammaticalization channel whose starting point is a locative adposition and whose endpoint is a conjunction introducing embedded clauses. This change is part of the following reanalysis pattern:
<table>
<thead>
<tr>
<th>Stage</th>
<th>Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>locative adposition + NP</td>
</tr>
<tr>
<td>II</td>
<td>dative marker + NP (Desemanticization)</td>
</tr>
<tr>
<td>III</td>
<td>infinitive marker + V (Expansion I)</td>
</tr>
<tr>
<td>IV</td>
<td>complementizer + S (Expansion II)</td>
</tr>
</tbody>
</table>

Languages using this channel do not necessarily go through all four stages. Swahili, for example, has reached stage III but appears to have left out II, and there are no indications that it will ever proceed to IV.

Bari appears to have gone straight from I to III/IV. In the following sentence (Spagnolo 1933: 231), the locative preposition ko ('to'), which tends to be used as a multi-purpose preposition, seems to have assumed the functions of both an infinitive marker and a complementizer:

\[
\text{Mørbe yóyøøø ko waddu (i) karé.}
\]

'Mørbe longs to swim (in) river

'\text{Mørbe is longing to swim in the river.}'

### 2.3.2.3 From compound (co-ordinated) to simple sentences

In a number of West African languages, verb serialization is used to express adverbial concepts, whereby one out of a series of verb phrases is reanalysed as an adverbial constituent. Adjustment brings in the following structural change:

\[
X - VP - VP > X - VP + AP.
\]

Our Yoruba example (see 2.2 above) is typical of such a change, which may be sketched as follows (cf. Lord 1976: 182/83):
This type of reanalysis has led to the emergence of a word category in Yoruba which has both verbal and adverbial characteristics, e.g. (Bamgboye 1974: 37):  

<table>
<thead>
<tr>
<th>Verb</th>
<th>Verbal meaning</th>
<th>Adverbial meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>sáéré</td>
<td>run</td>
<td>quickly</td>
</tr>
<tr>
<td>yáara</td>
<td>be quick</td>
<td></td>
</tr>
<tr>
<td>rọra</td>
<td>be careful</td>
<td>carefully</td>
</tr>
<tr>
<td>jọ</td>
<td>assemble</td>
<td>together</td>
</tr>
<tr>
<td>gira</td>
<td>strive</td>
<td>with difficulty</td>
</tr>
<tr>
<td>ṣáájú</td>
<td>proceed</td>
<td>before</td>
</tr>
<tr>
<td>ṣi</td>
<td>miss</td>
<td>in error</td>
</tr>
<tr>
<td>ọọ</td>
<td>watch</td>
<td>carefully</td>
</tr>
<tr>
<td>gán</td>
<td>trim</td>
<td>with economy</td>
</tr>
<tr>
<td>jí</td>
<td>steal</td>
<td>stealthily</td>
</tr>
<tr>
<td>tọ</td>
<td>take a little (of s.th.)</td>
<td>sparingly</td>
</tr>
<tr>
<td>yọ</td>
<td>slip</td>
<td>stealthily.</td>
</tr>
</tbody>
</table>

---

1 Our analysis differs to some extent from that of Bamgboye, who does not assume a verb > adverb shift. He notes (p. 39) that "modifying verbs do not satisfy the proposed criteria for verbal status" but comes to the conclusion that modifying verbs behave very differently from adverbs (p. 40). We do not see any problem in setting up a sub-class of adverbs which are derived from verbs and thereby show some particular syntactic behaviour (see verbal derivative suffixes in Kxoe which differ in their morphosyntactic behaviour depending on whether they are derived from postpositions or verbs).
More examples of the reanalysis of verb phrases as adverbial constituents can be found in virtually all serial verb languages. The grammaticalization of verbs to ("case-marking") adpositions, which can be observed to some extent in all these languages, leads exactly to the structural change mentioned above, i.e. in a series of verb phrases one is reanalysed as an adverbial phrase. However, whereas the result in our Yoruba example is an adverb-like word category placed before the main verb, the grammaticalization of verbs to adpositions leads to the emergence of prepositional phrases following the main verb, e.g.

Standard Ewe

```
1. "He ate inside his home."

2. "He ate at home."
```

2.3.2.4 From pragmatic to syntactic structure

That pragmatically induced structures may give rise to syntactic structures is by now reasonably well established (see esp. Givón 1979a: 207ff). We will confine ourselves here to one example which appears to have found little attention in the literature (but see Sankoff/Brown 1976).

The evidence available suggests that there are a number of different reanalysis patterns leading to the emergence of relative clauses. Here we are concerned with one particular pat-

---

The difference between Bamgboşe's "modifying verbs" and adverbs like pătăpătă 'completely' is possibly one of grammaticalization history.
tern which has a pragmatic structure as its input: "Tail", or "afterthought", constituents may present information meant to modify a given noun (cf. Dik 1978: 153) and eventually develop into relative clauses via syntactic adjustment.

An example of such an evolution is presented in 4.2.2.1. Relative clauses in Standard Ewe are likely to have evolved from a structure

\[
*NP \text{ si } X \text{ lá} \quad 'this \ NP, \ the \ X \ one', \quad \text{this \ the}
\]

where X was a "tail" or "afterthought" constituent placed outside the predication frame (cf. Westermann 1907: 106; Benveniste 1966: 210). The transfer strategy achieved two things: It established the "tail" constituent as a regular noun modifier and extended the use of X from modifiers like adjectivals to entire clauses.

Adjustment was responsible for restructuring the "tail" phrase as a relative clause. The demonstrative si was grammaticalized to a relative clause marker, while lá became a clause-final marker, whose use is optional where it would be redundant, i.e. in sentence-final position, but obligatory elsewhere.

2.3.2.5 From syntactic to pragmatic structure

There is evidence to suggest that the kind of evolution discussed in the preceding section also works in the opposite direction, i.e. that syntactic structures may form the input of pragmatic structures. As an example we may use the growth of completive focus marking in some African languages, which is described in more detail in chapter 3.2. It would seem that there is a common source of nominal focus whereby the constituent in focus is encoded as a nominal copula clause, whereas the out-of-focus constituent appears as a clause subordinate to the copula clause. This subordinate structure may be a relative clause, as is the case in English ('It is Mary who refused to eat horse meat'), but other subordinating devices can be used as well.

Transfer in this case consists in the use of a syntactic
structure, a nominal clause, to express a pragmatic function, completive focus. Adjustment has the effect to transforming the complex sentence, which arose through clefting, by a simple sentence. Typically, this was achieved by grammaticalizing the copula of the main clause to a focus marker, whereby the copula clause turned into a focalized argument, and by reanalysing the subordinate clause as the main clause. This happened for example in Somali and Rendille (see Lamberti 1982; 3.2.1.2.3) where morphological focus marking has become an obligatory feature of basic sentence structure.

2.4 Constituent-internal reanalysis

In the preceding sections we have been dealing with the reanalysis of entire constituents. There is another type of reanalysis whereby a part of a constituent is removed and allocated to another constituent. We will refer to this type, which has the effect of establishing an alternative segmentation of constituents, as constituent-internal reanalysis.

In Standard Ewe, the unmarked form of the finite verbal word consists of a pronominal subject prefix plus the verb stem:

- me-vá 'I came'
- e-vá 'you came'
- é-vá 'he, she came'
etc.

Ewe has introduced a focus construction whereby the noun phrase in focus was placed sentence-initially which was linked with the rest of the sentence by means of the 3rd person singular pronoun é-, for example

*nye é-vá. 'I (rather than s.o. else) came.'

Since focus constituents came to be followed regularly by é-, this pronoun was re-interpreted as a focus marker. The syntactic consequence was that é- was detached from the verbal constituent and became an enclitic of the noun phrase in focus,
This pragmatically induced case of reanalysis thus led to the following change:\(^1\):

\[
\text{copula} \rightarrow \text{é- + V} \rightarrow \text{focus + -é - V}
\]

\[
\text{clause} \rightarrow \text{3rd p.pronoun}
\]

Another possible source of constituent-internal reanalysis is verbal attraction (see 1.1.3.1), whereby linguistic units functioning as prepositions are removed from the adverbial phrase and allocated to the verb. This development usually involves the following change:

\[
V \rightarrow \text{Prep + NP} \rightarrow V + (\text{case-marking}) - \text{NP}.
\]

This kind of reanalysis has taken place in Dholuo (see 1.1.3.1), where prepositions like ne 'for (benefactive)', e 'at (locative)', or gi 'with (instrumental)' become verbal suffixes once the noun phrase they govern is shifted to the clause-initial position\(^2\), e.g.

\[
\text{jon nego diel ne juma.} \rightarrow \text{juma jon nego-ne diel.}
\]

'John is killing a goat for Juma.'

Similarly, in Kxoe, the comitative postposition /xoá 'with' occurs also as a verbal derivative suffix denoting comitative actions:

\[
djá-/xoá-à-tè work-with-JUNC-TENSE COM \rightarrow \text{he collaborates'}
\]

(Köhler 1981: 503)

\(^1\) See also 4.2.1.

\(^2\) The instrumental preposition gi changes to go when it is reanalysed as a verbal suffix.
3.1 Verbal morphology

Ideally, there is no more than one source for the development of a given grammatical category. However, there are only few examples where this is the case. Usually a language has several options to choose from in order to introduce a new category, or to replace an existing one. These options are referred to as channels of grammaticalization.

Channels may be defined in various ways. No attempt is made here to set up a general definition. In one case it might appear appropriate to describe a channel in terms of morphological characteristics, in another case it is preferable to rely on semantic features. The more specific a definition is, the more information does it provide. For example, to say that a prominent way of development for the complementizer 'that' in African languages is via the reanalysis of verbs is less informative than a statement to the effect that it is a semantically defined sub-class of verbs, i.e. verbs of saying, which makes up this channel of grammaticalization.

There tends to be a small number of preferred channels for each individual grammatical category. Such channels, which are called primary channels, may be the only possible source of that category. Frequently, however, there are other less common channels in addition. These are referred to as secondary channels.

This chapter is concerned with the question: what options are available to a language in the expression of a specific function? Tense-aspect marking and verbal derivative extensions have been selected in order to demonstrate how the machinery outlined in chapter 1 and 2 is made use of to develop linguistic expressions for such a function, or range of functions.
3.1.1 Tense and aspect markers

Our data on African languages suggest that there is a noteworthy difference between tenses and aspects with regard to their origin. Our investigation does not support the statement that adverbials "should never cliticize on the verb as tense-aspect markers" (Givón 1979: 219), and hence Givón's claim that "[...] the only universal source for tense-aspect affixes on verbs in language is via the reanalysis of main verbs" (1979: 218) would seem to need qualification.

The primary channel of tense and aspect markers is nominal periphrasis, whereby the tense or aspect function is introduced by an auxiliary verb while the main verb is used in an infinite, nominalized form.

In addition to nominal periphrasis, there are the following secondary channels:

(1) Serial periphrasis

This channel shares with nominal periphrasis the fact that the source of the tense/aspect marker is an erstwhile verb. However, while in nominal periphrasis the main verb is nominalized, it remains a finite verb in serial periphrasis.

(2) The adverbial channel

The starting point of this channel is an adverb which becomes desemanticized and develops into a tense marker.

3.1.1.1 The channels

3.1.1.1.1 Nominal periphrasis

The starting point of this channel is syntactic reanalysis, whereby a sequence of two verbs is re-interpreted as a VP constituent consisting of a verb and a complement.

The structure of a periphrastic construction which develops into a tense or aspect form depends on various factors. As most important factor, it depends on the valency, or case behaviour, of the verb that is desemanticized to become a tense or aspect
auxiliary. If this verb requires a PLACE or GOAL complement then the main verb is introduced as a PP (prepositional/adverbial phrase), i.e. the periphrastic construction receives the syntactic form (1)

(1) AUX - ADPOS + NP₁.

If, on the other hand, the desemanticized verb requires an OBJECTIVE case role then the main verb is introduced as an NP (noun phrase), the periphrastic construction having the form (2)

(2) AUX - NP₁.

Accordingly, we may distinguish between PP-periphrasis, relating to structures like (1), and NP-periphrasis giving rise to structure (2). However, since both structures involve the nominalization of the main verb, we will refer to them summarily as nominal periphrasis.

Verbal valency not only determines whether NP- or PP-periphrasis is chosen but also what type of preposition is selected in the case of PP-periphrasis².

The valency of the verb developing into a tense/aspect auxiliary may be such that it allows for either a PLACE or an OBJECTIVE complement. The evidence available suggests that in such cases (1) tends to be favoured as the grammaticalization channel.

In Birom (Bouquiaux 1970: 307/08; 373), for example, sé appears to be used as a general copula, allowing for both a PLACE and an OBJECTIVE complement:

1 Depending on the word order structure of the relevant language, ADPOS may be a preposition or postposition, and AUX may be phrase-final, rather than phrase-initial.

2 In Portuguese and French, for example, the verb 'come' has been desemanticized as an aspect marker. Since this verb is associated with a SOURCE complement, the PP-periphrasis based on this verb makes use of the SOURCE preposition de: Port. vem de escrever (lit. comes from writing) 'has written' Fr. vient d'écrire (Lehmann 1982: 30/31)
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yè a-sé hómó.  'He is here.' (PLACE)
yèn a-sé birom.  'They are Birom.' (OBJECTIVE)

It has given rise to a present progressive aspect\(^1\) using (2), i.e. using NP-periphrasis:

mà sè-ciŋ (± mà a sè-ciŋ)  'I am ploughing.'

(quoted from Blansitt 1975: 16)

Frequently, it turns out to be difficult if not impossible to unambiguously reconstruct the exact channel of a given verb construction. The main reason for this is that affixes marking deverbal nouns or distinguishing NPs from PPs are liable to undergo Erosion and eventually Loss or Merger, which means that no more information is available on the former constituent status of the relevant construction. In this way, what appears to be indicative of NP-periphrasis may go back to PP-periphrasis, and what appears as a verb may diachonically be a de-verbal noun which has lost its nominalization marker\(^2\). This poses a serious problem especially in Africa, where more detailed diachronic analyses are usually not available.

3.1.1.1.2 Serial periphrasis

This pattern consists of a combination of two finite verbs one of which functions as an auxiliary and the other as the main verb. It is the auxiliary which is reanalyzed as a tense or aspect marker. Accordingly, the tense/aspect marker

---

1 As in the examples above, it is preceded by the aorist marker a and followed by the verb root.

2 Marchese (1978: 129), in her comparative analysis of Kru languages, has shown that NP-periphrasis is followed by a drift to re-convert the nominalized verb back into a verb. The result is that the nominalization marker is reduced to a suprasegmental (tonal) morpheme and eventually disappears altogether:

"Dans certaines langues kru, ce morphème de nominalisation n'existe pas, et dans d'autres, il est indiqué par un ton. Ces faits suggèrent que dans quelques cas, le morphème de nominalisation a disparu."
follows the verb in type D languages\footnote{Type D languages are defined by the fact that they place adverbial phrases before the verb. A concomitant feature of this type is that the auxiliary follows, rather than precedes, the main verb (cf. Heine 1976: 44). Note that while all type D languages are "SOV", not all "SOV" languages are of type D.} but usually precedes it in languages of all other types which make use of serial periphrasis (but see below). In Kirma, which is a type B Gur language, serial tense/aspect marking therefore is confined to the pre-verbal position (Prost 1964: 56-59):

\[
present \ aorist \quad \text{mi wo} \quad 'I \ eat, \ I \ am \ eating' \\
I \ eat
\]
\[
present \ progressive \quad \text{mi ta mi wo} \quad 'I \ am \ eating' \\
I \ leave \ I \ eat
\]
\[
or \quad \text{mi di ta mi wo} \quad 'I \ be \ leave \ I \ eat'
\]

Exactly the same serial construction is found in Tyurama (Prost 1964: 103; 105), a language closely related to Kirma: both the copula na and the main verb are preceded by a personal pronoun:

\[
\text{mo wu} \quad 'I \ eat' \\
I \ eat
\]
\[
\text{me na me wu} \quad 'I \ am \ eating' \\
I \ be \ I \ eat
\]

(quoted from Blansitt 1975: 24).

In type D languages, the verb developing into an aspect marker follows the main verb, in accordance with the position of auxiliaries, which are also placed after the main verb. Thus, in Tigrinya (Conti Rossini 1940: 64), the copula allo, following the perfective pattern, is preceded by an imperfective verb form to produce a present progressive phrase, e.g.

\[
\text{\textit{\textsc{\char24}}sebb\textasciitilde r \ allok\textasciitilde u} \quad 'I \ am \ breaking' \\
I:break \ I:am
\]

(quoted from Blansitt 1975: 23).

\footnote{The meaning of \textit{ta} is given as 'partir' in Prost's French translation.}
In Duala, there is both an aspect (continuative) and a tense (past) which are formed by means of serial periphrasis (Ittmann 1939: 96/97): the continuative, or habitual aspect, uses the present tense (mabé) of bê 'to be' followed by the inflected main verb:

a mabé á nyó mao bûnya té. 'He drinks palmwine every day.'

he be he drink ...

The past tense consists of the past tense form of 'to be' (tá) plus the main verb in the aorist tense:

ná ta ná po. 'I came.'
I was I come

o tá ó po. 'You came.'
you were you come

There are some examples from African languages which suggest that serial and nominal periphrasis may be used as functionally equivalent channels.\(^1\) This applies, for example, to the past progressive in Diola Fogny (Sapir 1965: 46), in which both cases are formed by means of the auxiliary -lako 'sit', e.g.

<table>
<thead>
<tr>
<th>Serial periphrasis</th>
<th>Nominal periphrasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>i-lako i-ri 'I was eating'</td>
<td>i-lako fu-ri 'I was eating'</td>
</tr>
<tr>
<td>I-sit I-eat</td>
<td>I-sit INF-eat</td>
</tr>
</tbody>
</table>

In many cases, it turns out to be difficult or impossible to determine whether a given construction goes back to the serial or the nominal channel. This is particularly the case when the main verb has been grammaticalized to the extent that it no longer contains any information on person, tense/aspect, etc., i.e. where the marking of these functions has been transferred to the auxiliary.

A number of African languages have developed perfective markers through Desemanticization of the verb 'finish'. Strangely enough, the position of the perfective marker is frequently af-

\(^1\) See also 3.1.1.4.
After the verb, although the relevant languages place auxiliaries before the main verb, and we have no reason to assume that alternative word order arrangements existed at some earlier stage in these languages.

The Proto-Bantu perfect marker *gide, derived from the verb *gid 'finisich', developed into a verbal suffix, although there is no evidence that Bantu ever had a history of post-verbal auxiliation ¹ (see 1.2.1.2). Furthermore, in Standard Ewe, the perfect marker vo (v 'finish, be finished') follows the verb, although auxiliaries precede, e.g.

\[
\text{me-d\text{-}u n\text{-}u vo.} \quad \text{'I have eaten.'}
\]

In Standard Ewe, there is a second verb, n 'remain, stay', which shows a similar history: it gave rise to -(n)a ², a suffix which indicates habitualness:

\[
\text{me-yí-na.} \quad \text{'I (habitually) go.'}
\]

We may tentatively assume that we are dealing with instances of inverted serial periphrasis. This is confined to specific verbs, which express actions that are conceived as taking place after the one expressed by the main verb. Another alternative would be that the post-verbal position of these markers suggests that they go back to verbs which were reanalysed as adverbials, the place of adverbials being after the verb in the relevant languages. This would account for certain similarities that exist between these markers and verbal derivative extensions (see 3.1.2; 3.1.3).

¹ A different position, however, is maintained by Givón (1975).

² Note that in the "Dahome" dialect of Ewe (Westermann 1907: 139) the verb n was desemanticized as a pre-verbal aspect marker:

\[
\text{m-nô-sa} \quad \text{'I (habitually) sell.'}
\]
3.1.1.1.3 The adverbial channel

The development from adverb to tense marker is likely to go through the following grammaticalization stages:

Stage I: The adverb undergoes Desemanticization, i.e. its meaning changes/is narrowed down to that of a tense marker. Thus, the adverb dwo 'shortly afterwards' of Lotuko (Muratori 1938: 161ff) became a marker of the near past. Similarly, the Sango adverb fade 'quickly' (cf. fade-só ('quickly-this') 'now') was the source of a future marker, which is placed before the subject:

fadé lo kúi bíaní. 'He will really die.'
FUT he die truly

(Samarin 1967: 154; 80).

Stage II: Desemanticization is followed by syntactic change. In accordance with the principle of verbal attraction (see 1.1.3.1), the erstwhile adverb loses its former syntactic properties and undergoes Permutation, which has the effect of placing it next to the verbal word.

In Bari, the adverb dé 'then, afterwards' moved from the clause-initial position to that immediately preceding the verb, after having been desemanticized to a future marker. Since dé is still retained as an adverb, it is nowadays word order which indicates whether dé functions as an adverb or a tense marker (Spagnolo 1933: 105/06):

dé nan kòn ... 'I do ... then'
then I do

nan dé kòn ... 'I shall do ...'
I FUT do

The same development can be assumed for the Bari adverb kó 'actually', which became a marker of the "future of obligation" by moving to the position immediately preceding the verb:

nan kó kòn ... 'I shall do ...'
I FUT do

Lotuko offers an example of a language which overwhelmingly uses adverbs as tense markers. The following tenses are marked
by erstwhile adverbs (Muratori 1938: 161ff):

<table>
<thead>
<tr>
<th></th>
<th>Derived from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future</td>
<td>adr (adv) 'in future'</td>
</tr>
<tr>
<td>Near Past</td>
<td>dwo (adv) 'shortly afterwards'</td>
</tr>
<tr>
<td>Remote Past</td>
<td>nya (adv) 'in the past'.</td>
</tr>
</tbody>
</table>

Future: a-bak adř ni 'I shall beat'  
I-beat FUT I

Near Past (1) a-bak dwo ni 'I have just beaten'
(2) a-bak nolț ni 'I beat yesterday'

Remote Past a-bak nya ni 'I beat some time ago'

From their position between verb and subject (see above) it can be concluded that these particles are indeed tense markers rather than adverbs. Adverbs are usually placed clause-finally or -initially. The particle moi (adv) 'in the remote future', for example, is used as a marker of remote future. The fact that it has not yet developed into a tense marker can be seen from its position after the subject as well as from the fact that it requires the presence of the future marker adř:

a-bwax-a adř ni moi. 'I'll dig in the not so near future.'

or moi a-bwax-a adř ni. (= topicalized adverb).

An adverbial source for tense markers has also been reported occasionally for West African languages. Thus, Singler (1979: 25) notes that Klao, a Kru language spoken in southwestern Liberia, has

"[...] formed grammatical time markers from temporal adverbs. Both aka, 'yesterday', and kă 'tomorrow', can be shown to have been derived from peplâkă, 'one day removed, i.e. yesterday or tomorrow'. The grammaticalization of the suffixes has progressed to the point where they may co-occur with peplâkă [...]. On the other hand, the grammaticalization of oma, 'day before yesterday', and lama 'day after tomorrow', has not yet progressed to the stage where they may co-occur with susūomâ, 'two days removed, i.e. the day before yesterday or the day before tomorrow', [...]".
3.1.1.2 Aspects

The following is by no means intended to present an exhaustive treatment of aspects. It is rather a very sketchy discussion on the channels of grammaticalization that are characteristic of the evolution of aspect markers. Exemplification will be confined to three kinds of aspects: progressive/imperfective, perfective, and habitual.

While tense markers may evolve through different channels (see 3.1.1.3 below), there appears to be only one source for aspect markers: they originate from main verbs and are introduced by means of periphrastic constructions.

3.1.1.2.1 Progressive/incompletive

According to Blansitt (1975: 14), progressive markers derive essentially from four types of verbs:

1. copulas,
2. motional or postural verbs,
3. pro-verbs like 'do', and
4. progressive auxiliary verbs whose full lexical origin is unknown.

This ordering reflects a decreasing frequency of occurrence: while (1) is found more frequently than all the others combined, (3) is uncommon, and (4) very rare (Blansitt, loc. cit.).

These observations apply largely, though not entirely, to African languages as well.

Copulas in fact form the most common source of progressive, incompletive aspects in African languages. It can be demonstrated that the use of copulas may lead to both NP- and PP-periphrasis by comparing two different dialects of one and the same language: in western Ewe, which forms the basis of Standard Ewe, the progressive aspect is based on PP-periphrasis, while in the Anexo dialect of Ewe NP-periphrasis is involved:

Ewe-Anexo mu-la so-e 'I am carrying it'
I-be carry-it
Progressive/incompletive

Standard Ewe me-le é-kpʊ-m («me-le é-kpʊ me)
I-be him-see-PROG I-be him-see inside

PP-periphrasis suggests that the source of grammaticalization was a locative copula ('be at'). In Igbo (Lord 1973: 278), there is an incompletive aspect marker ná which, according to Welmers, is related to a locative verb that can be reconstructed as 'ná 'be at'.

Similarly, in Yoruba the incompletive marker ná appears to go back to a locative verb which today is represented (1) in the locative preposition-like particle ní and (2) in the verb ní 'have, possess, be at' (Lord 1973: 276-78).

In Maninka (Spears 1972: 15/16), the copula yé followed by a locative PP consisting of a nominalized verb plus postposition ('at') serves to form a "progressive or durative aspect", e.g.

a yé ná lá. 'He is (at) coming.'
he is come at

Compare the structurally equivalent construction

a yé bón ' lá. 'He is in the house.'

Comparable constructions occur in Kuranko, Bambara and Dyula. In Maninka-kan, this structure often serves as the present tense. Mende uses the postposition ma in much the same manner as lá is used in the above example. The postposition in Mende has undergone Affixation (Migeod 1908; Innes 1969):

<table>
<thead>
<tr>
<th>Tense</th>
<th>Affixation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>nya lo tewe-ma</td>
<td>'I am cutting'</td>
</tr>
<tr>
<td></td>
<td>I:PRES be cut-on</td>
<td></td>
</tr>
<tr>
<td>Past</td>
<td>ngi ye tewe-ma</td>
<td>'I was cutting'</td>
</tr>
<tr>
<td></td>
<td>I:PAST be cut-on</td>
<td></td>
</tr>
<tr>
<td>Future I</td>
<td>nga ye tewe-ma</td>
<td>'I shall be cutting'</td>
</tr>
<tr>
<td></td>
<td>I:FUT be cut-on</td>
<td></td>
</tr>
</tbody>
</table>

Similarly, in Bobo-Fing of the Southern Mande branch, the progressive aspect is formed with ti 'be' plus locative suffix -hû or -hû 'in' (Prost 1953: 20):

ma ti ya-hû Sya 'je suis en train d'aller à Bobo'.
I be go-in Bobo
Exactly the same construction is found in Bisa (Prost 1953: 20).

Postural and durative verbs form another important, though less common, source of progressive/incompletive aspect markers.

In Somali, the verb *hayn 'keep' has been the source of progressive aspects in some dialects (Lamberti, p.c.):

<table>
<thead>
<tr>
<th>Dialect</th>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Somali</td>
<td>keen-ay-a(a)</td>
<td>'I bring'</td>
</tr>
<tr>
<td></td>
<td>bring-keep-IMPF</td>
<td></td>
</tr>
<tr>
<td>Dabarro dialect</td>
<td>sheen-ow heeshø</td>
<td>'I keep bringing'</td>
</tr>
<tr>
<td></td>
<td>bring-INF keep</td>
<td></td>
</tr>
<tr>
<td>Jiddu dialect</td>
<td>jeel-aas-ta</td>
<td>'you (pl.) are beating'</td>
</tr>
<tr>
<td></td>
<td>beat-keep-ye</td>
<td></td>
</tr>
<tr>
<td>Muduug dialect</td>
<td>kari-n hay-s-ay</td>
<td>'you kept cooking'</td>
</tr>
<tr>
<td></td>
<td>cook-INF keep-you-PAST</td>
<td></td>
</tr>
</tbody>
</table>

In Acholi, a Western Nilotic language, the verb bedo 'stay, be, sit' became a marker of the continuous aspect, undergoing obligatory syllabic Erosion (+ be) and optional peripheral Erosion (+ e) (Crazzolara 1955: 138; Bavin 1983: 152).

Apart from these types of verbs, a large variety of other verbs are used in African languages to form progressive aspects, e.g. action verbs like 'seize'\(^1\) of 'say'\(^2\).

---

\(^1\) In Mamvu, the verb pēv 'seize' is used to form a progressive/ingressive aspect (Vorbichler 1971: 247).

\(^2\) In Kanuri, the continuous aspect indicates (1) present actions, (2) habitual past, and (3) future actions (Lukas 1937: 35). Kanuri divides the verbs into two morphophonological classes: one that is relatively "regular" and uses gin as its 1st ps. sg. suffix, and another that is highly irregular which uses skin as its 1st ps. sg. suffix.

While the lexical origin of the skin paradigm is unknown, the gin paradigm is derived from the verb 'say, think' which is still used. Compare the following conjugational sets (Lukas 1937: 36; 48):
Different verbal sources may be used for distinguishing tenses from aspects. Not uncommon, for example, is the use of the copula for present progressives and of postural verbs for past progressive aspects.

In Ewe, le 'to be (somewhere)' has become the present tense marker of the progressive (-rn) and ingressive (-ge) aspects. For the non-present forms of these aspects, however, the auxiliary is derived from the verb no 'to stay, remain, live':

\[
\begin{align*}
\text{me-le yi-yi-rn} & \quad \text{me-le yi-yi ge} \\
\text{I-be go-go-PROG} & \quad \text{'I am going'} \\
\text{me-no yi-yi-rn} & \quad \text{me-no yi-yi ge} \\
\text{I-stay go-go-PROG} & \quad \text{'I was going'}
\end{align*}
\]

Similarly in Diola Fogny (Sapir 1965: 46) the copula -Em is employed for the present, as well as future and past perfect, progressive. Past progressives are formed, however, with the verb lako 'to sit, stay'.

In Umbundu (Valente 1964: 281), the copulas kasi and li followed by the comitative preposition la-l' plus a verbal noun consisting of the infinitive prefix oku- and the verb stem, are used to form the present progressive:

\[
\begin{align*}
\text{tu-li l' oku-lya} & \quad \text{we-be with INF-eat} \\
\quad & \quad \text{'we are eating'}. \\
\end{align*}
\]

For the past progressive, however, the suppletive verb kala, derived from the Proto-Bantu verb *kàda 'sit, dwell', is used:

\[
\begin{align*}
\text{(ctd) Sg 1 wù-ŋin} & \quad \text{‘I am looking at’} \\
\text{2 wù-nəmín} & \quad \text{ŋin} \quad \text{‘I am saying, thinking’} \\
\text{3 wù-jín} & \quad \text{nəmín} \\
\text{Pl 1 wù-nyèn} & \quad \text{shín} \\
\text{2 wù-nəwì} & \quad \text{nyèn} \\
\text{3 wù-zài} & \quad \text{nəwì} \\
\text{4 wù-zài} & \quad \text{sai}
\end{align*}
\]
wa-kala l' oku-papala. 'He was playing.'
(quoted from Blansitt 1975: 24)

Kala is also used as a past tense copula:
wa-kala k' epya. 'He was in the country.'

Furthermore, in Mamvu (Vorbichler 1971: 248-50), there is the copula a which is used for the present progressive, but the postural ("durative") verb taju 'sit, live, stay' is used for the past progressive aspect:

Present progressive/volitive

ôro' ma` (< ôro-ná ma) 'I am going, I want to go' 
go-I be

Past progressive

jëë mu-taju 'I was dancing'
dance I-sit

or mu-taju jëë.

Serialization and nominal periphrasis are not mutually exclusive (see 3.1.1.2); not uncommonly, a language may employ both as optional variants to form progressive/incompletive aspects. This is the case, for example, in Ngambay-Moundou (Vandame 1963: 94-96). The progressive is formed with the postural verbs isi 'sit' and ãr 'stand'. The main verb is used either in a serializing, finite, form (1) or in a nominalized form involving PP-periphrasis (2). In the latter case, the purposive preposition mbâ ('pour') and the verbal nominalizer k- are employed:

(1) Serialization

m-îsî m-ûsâ dà
I-sit I-eat meat

or

m-âr m-ûsâ dà
I-stand I-eat meat

'I am eating meat'

(2) PP-periphrasis

m-îsî mbâ k-ûsà dà
I-sit for NOM-eat meat

or

m-âr mbâ k-ûsà dà
I-stand for NOM-eat meat

'I am eating meat'

(Quoted from Blansitt 1975: 27)
Perfect aspects are almost universally derived from main verbs meaning 'finish, be finished/completed'. For an example of the recursive use of such a main verb, see 1.2.1.2.

In Duala (Ittmann 1939: 94), an aspect called "verstärktes Perfektum" by Ittmann is formed by means of the prefix má- plus main verb in its infinitive form, e.g.

\[ \text{we PERF-say.good.bye teacher} \]

'We have already said farewell to the teacher.'

The prefix má- is derived from an obsolete verb má 'to complete'.

In Bari, an Eastern Nilotic language, there is a defective intransitive verb -jo 'to be complete, enough' which was the source of the pluperfect markers -jo and -je. These aspect markers are obligatorily preceded by the past tense marker a-, which is likely to originate from the copula a, e.g.

\[ \text{I PAST-PLU do} \]

(Spagnolo 1933: 105).

It seems noteworthy, that verbals denoting 'finish, be finished/completed' tend to be desemanticized as "serial verbs" rather than as auxiliaries. This accounts for their unusual position in, for example, Ewe, Sango, and Proto-Bantu (*gid) after the main verb, whereas the position of the auxiliary is before the main verb, e.g.

Ewe va 'be finished': é-du nú vɔ 'he has eaten'
he-eat thing finish

Sango awe 'it is finished': fadesó mbi ça va awe
now I record finished

'Now I have recorded completely.'
(Samarin 1967: 160)

Note that the perfect marker may develop into a tense marker, namely a past tense marker. This seems to have happened in the Ewe 'dialect of Dahome', where the verb ko 'be, have finished'
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is nowadays used as a past tense marker:

\[
\begin{align*}
m\-\text{kɔ-sa} & \quad \text{'I sold'} \\
\text{I-finish-sell} & \\
\text{(Westermann 1907: 139)}
\end{align*}
\]

A somewhat odd source of a past perfect/pluperfect aspect is found in Acholi. Crazzolara (1955: 124) notes:

"To indicate that an action had been completed before another was commenced, the Past tense of the verb nɔŋɔ 'to find', i.e. ɔnɔŋɔ 'it was found', followed by a verb in the Past or Present tense is employed. [...]"

\[
\begin{align*}
\text{ɔnɔŋɔ} & \quad \text{gi-ryɛmɛ wɔko, c} & \quad \text{dɔɔk} & \quad \text{à-dwogɔ à-nɔŋɔ ɛɛŋ pāco.} \\
\text{PLU} & \quad \text{they-drive out} & \quad \text{but again I-return I-find him home} \\
\text{'He had been driven away, but, when I came back, I found him at home.'}
\end{align*}
\]

3.1.1.2.3 Habitual

Habitual aspects, similar to progressive aspects, tend to go back to "durative" verbs like 'stay', 'live, exist', or 'remain'.

\[
\begin{align*}
\text{Ewe-Anexo nɔ 'remain, stay' : m-nɔ-sa} & \quad \text{'I (habitually) sell'} \\
\text{I-stay-sell} & \\
\text{Stand. Ewe nɔ 'remain, stay' : me-yi-na} & \quad \text{'I (habitually) go'} \\
\text{> - (n) a HABITUAL} & \quad \text{I-go-stay}
\end{align*}
\]

But a copula verb may also serve as the source of habitual aspects. In Sango (Samarin 1967: 155), the copula ᵇkɛ 'to be', preceding all other verbs except de 'to remain', is used to form incomplete or habitual actions\(^1\):

\[
\begin{align*}
\text{lo kɛ tɛ kɔbe} & \quad \text{'he is eating'} \\
\text{he is eat food}
\end{align*}
\]

\(^1\) Samarín notes that in the speech of town folk, the distinctive feature of ᵇkɛ (incomplete action) seems to be weakened. Furthermore, ᵇkɛ is "very weakly articulated" preceding other verbs (Samarin 1967: 155/56).
In Yatye (Stahlke 1970: 65), the verb aga 'wander' has been desemanticized as a habitual auxiliary in serial construction.

3.1.1.3 Tenses

The following discussion on tenses, similar to that on aspects (3.1.1.2), is confined to one question: the lexical origin of tense markers. Only two categories, past and future, are considered.

There is one primary channel for the development of verbal tenses: They originate from main verbs through auxiliaries in nominal periphrasis. This development can lead straight from main verb to tense marker or, alternatively, it may go through an intermediate stage where the relevant unit serves as an aspect marker before becoming a tense marker.

Furthermore, there are two secondary channels for the evolution of verbal tenses:

(1) Serial periphrasis

They may originate from verb-verb constructions where one of the serialized verbs is desemanticized and becomes a tense marker (see 3.1.1.2).

(2) Adverbial channel

They may originate from adverbs. Note that the adverbial channel is very rarely made use of. Nevertheless, contrary to claims made by other authors (cf. Glivón 1979: 219), there is sufficient evidence to suggest that it tends to be used in addition to the verbal channel.

3.1.1.3.1 Past

The most common source of past tense markers in African languages are motional verbs like 'come', as well as copula verbs.

Teso, an Eastern Nilotic language, has chosen the verb -bu/-potu 'come' to form a past tense (cf. 3.3.1). Similarly, in Jiddu, a Somali dialect, the near past is formed with a clitic-
ized form of the verb -ooku 'come', and the pluperfect with the past tense form of this verb, -ooti 'came' (Lamberti, p.c.).

Standard Swahili on the other hand, has grammaticalized the copula li to a past tense marker:

\[
\begin{align*}
\text{a-li-ye mwalimu} & \quad \text{'He who is a teacher.'} \\
\text{he-be-REL teacher} \\
\text{a-li-kwenda} & \quad \text{'He went.'} \\
\text{he-PAST-go}
\end{align*}
\]

Much the same development appears to have taken place in Barí, an Eastern Nilotic language. There is a copula a, e.g.

\[
\begin{align*}
\text{kömírú a gwɔrɔq} & \quad \text{'The lion is a wild beast.'} \\
\text{lion COP beast} \\
\text{karɔ a duma}' & \quad \text{'The river is big.'} \\
\text{river COP big}
\end{align*}
\]

This copula seems to have been prefixed to the verb as a past tense marker:

\[
\begin{align*}
\text{nan kon} & \quad \text{I do} \\
\text{I do} & \quad \text{nan a-kon} \quad \text{I did} \\
\text{I PAST-do} & \quad \text{(Spagnolo 1933: 101-103).}
\end{align*}
\]

The verb kɔ 'be/have finished' in the "Dahome dialect" of Ewe (Westermann 1907: 139) appears to first have developed into a perfect marker, before it became a past marker, e.g.

\[
\begin{align*}
\text{m-kɔ-sa} & \quad \text{'I sold'.} \\
\text{I-PAST-sell}
\end{align*}
\]

Adverbs form a secondary channel for the emergence of past tense markers.

In Luo, the temporal adverbs nende 'earlier the same day' and nene 'some considerable time ago' were desemanticized as past tense markers n(e)-, after having undergone Permutation, Erosion and Affixation (Stafford 1967: 27/28), and in Lotuko the adverb dwo 'shortly afterwards' developed into a near past tense marker (Muratori 1938: 161ff).
3.1.1.3.2 Future

The most common source of future markers are verbs of motion ('come', 'go', etc.), and volitive or desiderative verbs (e.g. 'want'; cf. Ultan 1978: 110-114).

In Standard Ewe the future marker á- is derived from the verb vá 'come':

\[ \text{m-á-yi} \quad (\leftarrow \text{*m-e-vá-yi}) \quad \text{'I shall go'} \]
\[ \text{I-FUT-go} \quad \text{I-come-go} \quad \text{(Westermann 1907: 65).} \]

The same applies to Acholi and Lango:

\text{Acholi bino 'come': an a-bi-camo} \quad (\leftarrow \text{*a-n-a-bino-camo})
\[ \text{I I-FUT-eat} \quad \text{'I will eat'} \]

\text{Lango bino 'come': an a-bino cammo} \quad \text{I I-FUT eat} \quad \text{(Bavin 1983: 151)}

In Swahili, the volitive verb -taka 'want' is the lexical source of the future marker, which is -taka- in relative clauses and -ta- elsewhere:

\[ \text{a-taka-ye-kwenda} \quad \text{he-FUT-REL-go} \quad \text{'he who will go'} \]
\[ \text{ni-ta-kwenda} \quad \text{I-FUT-go} \quad \text{'I shall go'}. \]

Marchese (1978: 123-25) reports that in the Western Kru languages Klae, Bassa, Wobé, Dewoin, Grebo, and Tépo the verb 'go' has developed into a near future marker, while in other Kru languages such as Neyo, Godié, Koyo, Bété, Dida, but also in Tépo, the verb 'come' has been the source of a potential, or remote future marker. Furthermore, in the Eastern Kru languages, the verb 'have' appears to have given rise to a near future, volitive or hortative marker.

Lotuko, an Eastern Nilotic language, uses two verbs of motion to form future tenses (Muratori 1938: 161ff), the main verb being used in the infinitive:
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Derived from:

a-ttu ni lɔtɔn 'I'll leave imme-
I-come I go diately'
'tuna 'to come'

a-lo ni coxuno 'I'll return imme-
I-go I return diately'
1ɔtɔn 'to go'

Similarly, in Duala, a Bantu language of Cameroon, there are two verbs of motion which are used to form future tenses (Itt-mann 1939: 93-95):

'(1) -ya (< ya 'come') immediate future, e.g.

a mə-yə nangə wase 'he will lie down right now'
he PRES-FUT lie ground

(2) -ɛndɛ + infinitive (< *ɛndɛ 'go' (obsolete)) future, e.g.

bə m-ɛndɛ janda 'they will buy'
they PRES-FUT buy

In Mamvu of Central Sudanic, the future is formed by a construction verbal noun + ibu, the latter being derived from a defective verb ibu 'do' (Vorbichler 1971: 249), e.g.

tufu mibu
'tear I:FUT

I shall tear down'.

Adverbs form a secondary source of future markers. In Sango, fadɛ (+ fadɛ 'quickly'; cf. fadeso 'now') is placed before the subject as a future marker:

fadɛ lo kúi bían 'He will really die.'
FUT he die truly
(Samarin 1967: 154; 80)

In Bari, an Eastern Nilotic language, the adverb dé 'then, afterwards' was desemanticized to a future marker. Since tense markers are placed between subject and verb, while adverbs occur sentence-initially, or sentence-finally, Desemanticization was followed by Permutation. Compare the following sentences (Spagnolo 1933: 105/06):

dé nan kɔn ... :  nan dé kɔn ...
then I do I FUT do
'I do ... then'
'I shall do ...'
There is a second future marker kó in Bari which is also derived from an adverb (kó 'actually'):

nan kó kɔn 'I shall do ...' ("future of obligation").

3.1.1.4 On the choice of channels

The three channels presented in 3.1.1.1 form the main ways in which tense and aspect markers develop in African languages. Another question to be considered is: Are there any criteria underlying the choice of a particular channel? Is it possible to relate each channel to a specific function or range of functions, or to specific morphosyntactic factors?

In Ewe, the verb no 'sit, stay' has given rise to both nominal and serial periphrasis, leading, however, to differing functions in each case: while nominal periphrasis was responsible for the growth of a past tense progressive/ingressive marker, serialization gave rise to a habitual marker:

<table>
<thead>
<tr>
<th>Nominal channel</th>
<th>Serial channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>me no nú ḍu-nú</td>
<td>me-ındu nú (&lt; *me ındu no nú)</td>
</tr>
<tr>
<td>I stay thing eat-PROG</td>
<td>I-eat-HAB thing</td>
</tr>
<tr>
<td>'I was eating'</td>
<td>'I (habitually) eat'.</td>
</tr>
</tbody>
</table>

One possible factor that determines the choice between the nominal and the serial channel can be seen in the valency structure of the verb that develops into a tense or aspect marker. Our observations suggest that verbs which obligatorily require a nominal or adverbial complement lead to the emergence of nominal periphrasis, once they are desemanticized to tense-aspect markers. The obligatory complement in this case is reanalysed as an NP, represented by a nominalized form of the main verb.

In this way, the locative copula le requires a (locative) adverbial complement in Ewe, e.g.

kofi le xo me. 'Kofi is in the house.'

Kofi be house in

\[ ^{1} \text{kofi le} \]

Kofi is

\[ ^{1} \text{In some Ewe dialects, this is an acceptable clause meaning 'Kofi exists'.} \]
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Hence when le was desemanticized to a progressive/ingressive aspect marker, it gave rise to nominal periphrasis. The Ewe verb vo 'be finished', on the other hand, does not allow an NP complement:

\[ \text{'it is finished'.} \]

Accordingly, vo triggered serial periphrasis once it developed into a completive aspect marker:

\[ \text{'he has gone'.} \]

There seem to be a number of counter-examples to this hypothesis in various languages, suggesting, for example, that one and the same verb may lead to both nominal and serial periphrasis. We have cited in this connection the case of the Ewe verb no 'sit, stay', which was desemanticized both as a past tense progressive/ingressive marker through the nominal channel and as a habitual marker through the serial channel (see above).

Although we are not able to satisfactorily account for this fact, there is one possible explanation: it seems that it is those verbs which may, but need not take a verbal complement that are open to both channels. In other words: the fact that a verb has been desemanticized through two different channels would suggest that, at the time Desemanticization took place, the relevant verb was used both with and without complement, i.e. the verb had at least two valency readings.

Another factor that may be responsible for the choice of a particular channel has been hinted at repeatedly in the previous sections: there is a certain correlation between the channel chosen and the grammatical function to be expressed. This correlation is most pronounced in the case of the adverbial channel: as far as our data suggest, this channel is used only to develop tense markers, rather than aspect markers, and the only tense markers found are future and past markers.

Serial periphrasis, on the other hand, appears to be responsible for the emergence of aspect markers, but not of tense
markers. The few counter-examples that we were able to find might turn out to involve tenses which are derived from aspects, for example past markers from perfect aspects or present markers from progressive aspects.

There are, however, other data which suggest that nominal and serial periphrasis are used as equivalent strategies in many languages. In So, a Kuliak language of Eastern Uganda, for example, both strategies can be employed after modal verbs without apparent difference in meaning:

Nominal periphrasis

câm-\(r(s)\)a gá-\(g\) éù. 'I want to go home.'
want-I go-INF home

Serial periphrasis

câm-\(r(s)\)a mo-gá-sa éù. 'I want to go home.'
want-I NAR-go-I home

We have also noted that in Diola Fogny both channels led to the emergence of a past progressive aspect (Sapir 1965: 46; see 3.1.1.2 above). More examples of this kind could be added.

3.1.2 Verbal derivative extensions

The majority of African languages have a number of productive verbal affixes or extensions whose main function is to modify the semantic and/or syntactic content of the verb root. Although there are some areas, like the West African coastal belt, where hardly any derivative affixes are found, they nevertheless occur in all major parts of Africa and in all language families. Guthrie (1971: 144) lists 19 starred verbal extensions for Bantu, and Voeltz (1977) has reconstructed the following ten extensions for Proto-Niger-Congo:

*de Applied
*ci Causative
*ti Causative
*ta Contactive
*o Passive
*to Reversive
*ko Reversive-stative
*ke Stative
*ma Stative
*na Reciprocal
In the present section an attempt is made to determine the origin of verbal extensions in African languages. A similar attempt has been made by Givón (1971a; 1975) with reference to Bantu verbal extensions.

Givón argues that in the "pre-Bantu" period the basic word order was SOV, i.e. verb-final, the complement sentence being placed to the left of the verb in the higher sentence. According to him, the present extensions developed when the verb in the higher sentence became affixed to the verb of the lower sentence and developed into a productive derivative suffix. This implies that the Bantu verb extensions evolved in much the same way as tense-aspect markers, that is via periphrasis involving verbal auxiliaries as higher verbs.

The point we wish to make here is that the evolution of verb extensions sharply contrasts to that of tense-aspect markers. This is suggested in particular by their differing morphological status: the former are grammaticalized as derivative affixes, the latter as inflections.\(^1\)

The following account has in common with that of Givón the fact that it rests on an extremely weak empirical basis. Sufficient diachronic information to allow for generalizations is available for only a small number of verbal extensions. The findings presented should therefore be considered as highly tentative.

The most common source of verbal derivative extensions are either adpositions or verbs. It can be seen from Kxoe, a Central Khoisan language (Köhler 1981: 503ff) that a language can make use of both channels simultaneously to develop verbal derivative structures.

---

1 It is not always possible to trace a clear-cut boundary between the two. For example, passive or perfective markers may combine the feature of both derivative and inflectional affixes (cf. Voeltz 1977: 1). Only unambiguous cases of verb derivation will be considered in this section.
The following derivative suffixes of Kxoe are derived from verbs:

<table>
<thead>
<tr>
<th>Derivative suffix</th>
<th>Verbal source</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ëi continuous-intensive</td>
<td>éi 'to remain'</td>
<td>/oàbà-ná-ëi-yé-tê cover-JUNC-SUFF-JUNC-TENSE 'she covers it well/solidly'</td>
</tr>
<tr>
<td>-mà applicative</td>
<td>mà 'to give, offer'</td>
<td>djà(o)-ró-mà-à-tê ti 'à work-JUNC-SUFF-JUNC-TENSE I ACC 'he works for me'</td>
</tr>
<tr>
<td>-xù terminative</td>
<td>xù 'to abandon, loosen'</td>
<td>kx’ó-ró-xù-'ê eat(meat)-JUNC-SUFF-IMP 'finish the meat!'</td>
</tr>
</tbody>
</table>

Derivative suffixes derived from postpositions are in particular:

<table>
<thead>
<tr>
<th>Derivative suffix</th>
<th>Postpositional source</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>-/xoà comitative</td>
<td>/xoà 'with' (comit.)</td>
<td>djào-/xoà-à-tê work-SUFF-JUNC-TENSE 'he collaborates'</td>
</tr>
<tr>
<td>-ò directional</td>
<td>'ò 'at' (Fr. chez)</td>
<td>tào-'ò-wà-tê pound-SUFF-JUNC-TENSE 'she pounds there'</td>
</tr>
<tr>
<td>-kà causative</td>
<td>kà 'with' (instr.)</td>
<td>djào-kà-à-tê work-SUFF-JUNC-TENSE 'he causes to work'</td>
</tr>
</tbody>
</table>

Note that the two differ in their grammatical behaviour: while the deverbal derivatives are attached to the main verb in its inflected form (with junction), postpositional derivatives are suffixed immediately to the verb.

One of the most likely adpositions to undergo verbal attraction and to become a verbal derivative extension is the comitative preposition ('with'). We have seen above that in Kxoe the comitative preposition /xoà has given rise to the comitative derivative suffix -/xoà. Similarly, the Proto-Bantu comitative
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preposition *na has repeatedly been cliticized as a verbal suffix to form comitative or reciprocal derivations.

The mechanics of the evolution from verb or adposition to verbal derivative extension are still largely unclear: On a superficial view it would seem that the process involved is Affixation: a verb or adposition turns into a verbal affix and assumes a derivative function. An example is offered by the Western Nilotic Luo language (Stafford 1967: 16/17), where the dative/benefactive preposition ni 'to, for' is suffixed to the verb if followed by a personal pronoun:

\[ o-kelo-n(i)-a \text{ kitabu.} \quad \text{he brings me a book.'} \]
\[ \text{he-bring-DAT-me book} \]

Similarly, in Shilluk, the preposition ye (yi), used after passive verbs to introduce the AGENT, optionally turns into a verbal suffix -i:

\[ dyel a-cam \text{ ye uthwon.} \quad \text{'A sheep has been eaten by the hyena.'} \]
\[ \text{sheep PAST-eat by hyena} \]
\[ \text{or dyel a-cam-i uthwon.} \quad \text{(Kohnen 1933: 136)} \]

However, it is unlikely that such an interpretation does in fact account for the growth of verbal derivative extensions. An alternative analysis is suggested by the evolution of verb-verb compounds in Igbo (Lord 1975). It would seem that, on the basis of Lord's data, we may distinguish between the following four types of compounds:

**Type I:** These compounds consist of an action verb \( V_1 \) plus an action or stative verb \( V_2 \). Within such compounds, the first verb indicates an action while the second indicates the goal or result of that action. These compounds may receive either a causative (1) or a same-subject interpretation (2):

\[ (1) \quad \text{tù 'throw' + fù 'be lost' + tù-fù 'throw away, discard, lose'} \]
\[ (2) \quad \text{gba 'run' + fù 'be lost' + gbá-fù 'run away, escape'} \]
Type II: While $V_2$ in the above compounds also occurs as an independent verb, there are other cases which Lord (1975: 30) refers to as verb-suffix compounds. The behaviour of the relevant suffixes, or at least of most of them, suggests that they, as well, go back to verbs which have undergone Desemanticization:

(i) They behave syntactically in the same way as $V_2$ components,
(ii) they also have either causative or same subject-interpretation,
(iii) they also have a resultative meaning, and
(iv) for a number of them there still exist "homophonous" verbs, or phonologically similar verbs, with related meanings" (Lord 1975: 30), e.g.

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>-kâ</td>
<td>'apart, asunder'</td>
</tr>
<tr>
<td>-lû</td>
<td>'be spoiled'</td>
</tr>
<tr>
<td>-câ</td>
<td>'be finished'</td>
</tr>
<tr>
<td>kâ</td>
<td>'be torn'</td>
</tr>
<tr>
<td>lû</td>
<td>'be faulty, defective'</td>
</tr>
<tr>
<td>cû</td>
<td>'be ripe'</td>
</tr>
</tbody>
</table>

Type III: Compounds of this type have a meaning which cannot immediately be derived from that of their constituent parts. Lord (1975: 41) notes, for example, that the meaning of the compound kâ-sà 'complain' is not fully predictable from that of its components kâ 'say' and sà 'answer'. We may say that such verbs have undergone Merger² (see 1.1.1.3.4).

Type IV: Finally, there are some verbs which are likely to go back to verb-verb compounds as well but "are not relatable to entries for any component verbs or suffixes which might provide clues as to their meanings" (Lord 1975: 42). Examples are:

---

¹ This process has not yet been completed since suffixes have retained some semantic features.

² The examples provided by Lord suggest that we may have to distinguish between cases of "weak Merger" and "complete Merger".
gùzò 'stand still'
gósi 'show'.

A diachronic interpretation of these verbs does not seem possible due to lack of additional information. Assuming that they in fact go back to verb-verb compounds, Loss of the original component verbs would appear to be the most plausible hypothesis, but Merger as well as other processes may have been involved as well.

The above is a highly simplified account of the diachronic implications of Igbo verb-verb compounds. In many cases it is not possible to unambiguously relate a given compound to a specific type of grammaticalization. The case of the verb gbú 'cut, kill' is typical in this respect. This verb has been desemanticized as a suffix meaning 'decisively' or 'to an extreme end'. With some verbs, however, it has undergone Merger (cf. Lord 1975: 42), e.g.

\[
\begin{align*}
\text{mé} & \ 'do, make' + \ gbú + \ mé-gbú \ 'oppress' \\
\text{zú} & \ 'buy' + \ gbú + \ zú-gbú \ 'cheat in marketing'.
\end{align*}
\]

Furthermore, there are cases where it is difficult to decide whether Desemanticization or Merger is involved.

We may, nevertheless, assume that the above typology roughly holds for the majority of verb-verb compounds in Igbo. The evolution of these types can be represented graphically in the following way (considering only the second component \(V_2\)):
It is type II compounds which are immediately relevant to our discussion: the second component verb comes to be associated with one specific function like MOTION TOWARDS, REPETITION, BENEFACTIVE, COMPLETIVE, or DISTRIBUTIVE (cf. Lord 1975: 45; Carrell 1970). It develops into a productive unit of word-formation in that it can be used with any action verb \( (V_1) \), as is the case in Igbo, and eventually becomes a derivative affix.

It would seem plausible that verbal extensions going back to adpositions or adverbs tend to have a similar evolution: after a stage of Compounding they are desemanticized and developed into productive affixes whose function is to modify the basic meaning of the verb, as we noticed in Kxoe, for example.

3.1.3 Inflection vs derivation

The above discourse suggests that there are at least two contrasting patterns through which verbal morphology is acquired. Section 3.1.1 contains a sketchy discussion on the evolution of tense-aspect marking, leading to the emergence of a certain type of verbal inflections. Section 3.1.2 was concerned with verbal derivation: grammaticalization had the effect of introducing derivative, rather than inflectional, affixes. The question with which we are concerned now is: Are there any factors which allow us to predict under what circumstances verbal inflection, as opposed to verbal derivation, develops, and vice versa?

One possible factor can be ruled out from the beginning: it
is not the lexical origin which determines whether a given lin-
guistic unit develops into a verbal inflectional or derivative affix. We have been able to demonstrate above, for example, that both types of affixes may be derived from verbs. More strikingly, it may be one and the same verb which is responsible for verbal inflection on the one hand and for verbal derivation on the other. In So (Tepes), a Kuliak language of eastern Uganda, the verb ac- 'come' has given rise (1) to the future prefix a-, e.g.

á-isa tí ír. 'I shall own a house.'
FUT-I have house

and (2) to the productive derivative suffix -ac venitive ('movement towards speaker'), e.g.

bus-u 'go up' : bús-ac 'come up'.
move-AND move-VEN

Similarly, in Bari (Spagnolo 1933: 181/82), the verb tu 'to go' has become an auxiliary/proclitic to denote future tense:

nan ti tu gwoja. 'I shall not (go to) dance.'
I NEG FUT dance

Independently of this, it has developed into a verbal derivative suffix with limited productivity "giving the idea of motion" (Spagnolo 1933: 182):

waran 'to dawn' : war-tu 'to go at the rising sun or moon'
'dambu 'to be a vagabond' : 'dam-tu 'to wander aimlessly'
lam 'to jump' : lam-tu 'to progress by jumps'
gwöngu 'to be on all fours' : gwöng-tu 'to walk on all fours'.

On the basis of the above examples, a noteworthy observation can be made: tense marking, leading to inflectional morphology, precedes the verb, while derivative extensions follow it. It can be seen that this is no coincidence by looking at a larger sam-
ple of African languages: tense-aspect inflections and deriva-
tive affixes each tend to be placed at opposite ends of the verb root. Which of the two precedes and which follows is largely dependent on the basic word order of the relevant languages. Thus type D (i.e. "strict SOV") languages are likely to have tense-aspect morphemes after but derivational morphemes before the verb root, while all other types usually show the opposite order.

Their evolution suggests that tense-aspect markers tend to follow the verb in type D languages but to precede it in any of the other types, for in both serial and nominal periphrasis, which form the main channels of grammaticalization, they arise from auxiliary verbs, whose position is before the main verb in all language types except D, with D showing the reversed order, i.e. main verb - auxiliary.

It is less easy to account for the position of derivative extensions. The most plausible explanation would be that their source constituent is analysed as an adverbial phrase. Adverbial phrases are placed before the verb in type D languages but after it in all other language types, and this in fact reflects the arrangement of most verbal extensions: they tend to precede the verb in D languages but follow it in all other types of languages.

This explanation does not pose any problems with extensions going back to adpositions as they are part of the adverbial phrase. But even with extensions of verbal origin one might propose that verbs which came to acquire derivative status were interpreted as adverbial constituents through syntactic reanalysis (see chapter 2): the sequence \( V_1 - V_2 \) was reanalysed as \( V_1 - \text{Adv} \)

---

1 Observations like these are of a statistical nature. Although it is easy to find counter-examples among the many African languages, the generalizations proposed nevertheless hold for most of these languages. For instance, according to a survey on word order in 300 African languages, 85 p.c. of all type D languages, but only 13 p.c. of all non-D languages, were found to place their tense markers after the verb (Heine 1976: 44).

2 The Kxoe examples provided in 3.1.2 are a noteworthy exception in that Kxoe, which is a type D language, uses derivative suffixes.
since the primary function of \( V_2 \) was to modify the semantic content of \( V_1 \). This view is supported for example, by Carrell's (1970) treatment of the "meaning modifying suffixes" in Igbo as adverbials. These suffixes go back to \( V_2 \) constituents in verb-verb compounds (cf. Lord 1975: 45; see also 3.1.2 above).

Assuming that this analysis is correct, we now notice an interesting correlation between the evolution of verbal morphology and dependency structure: tense-aspect inflections essentially go back to auxiliaries which govern main verbs, while verbal derivative extensions are said to derive from adverbials, which are governed by main verbs. Thus, underlying the development of tense-aspect inflections, there is a structure like (1), while derivative extensions have an underlying structure like (2):

\[
(1) \text{ Constituents: auxiliary } \rightarrow \text{ verb} \\
\text{ Dependency relation: governing } \rightarrow \text{ dependent}
\]

\[
(2) \text{ Constituents: verb } \rightarrow \text{ adverbial} \\
\text{ Dependency relation: governing } \rightarrow \text{ dependent}
\]

It would be tempting to conclude from these observations that verbal inflections originate from categories which govern verbs, while derivative affixes go back to categories which are dependent on the verb. Yet such an hypothesis is easy to falsify: there are verbal inflections like person markers (e.g. subject or object affixes) which are derived from dependent categories of the verb.

But there is yet another observation which appears to be relevant to the question concerning the origin of inflection vs derivation. Our example of Igbo verb-verb compounds (see 3.1.2) suggests that it was Compounding which was responsible for the growth of derivative "meaning modifying suffixes". The evidence available suggests that the first process employed in the evolution of verbal derivative affixes is, in fact, Compounding: When a compound is formed, the intention is to create a new word by combining two (or even more) lexemes, where one lexeme carries
the basic meaning while the other assumes a modifying function. Subsequently, there are three possible developments:

(a) the compound remains what it is, i.e. no further process takes place,

(b) the compound undergoes Merger: the meanings of its components coalesce, the result being a new meaning which cannot immediately be derived from the combined meanings of the components involved, or

(c) the modifying component combines with other lexical items as well and develops into a productive unit of word-formation. Once it is desemanticized, the outcome is a derivative affix.

According to this view, therefore, verbal derivation starts with Compounding followed by Desemanticization. This contrasts with the grammaticalization patterns characteristic of tense-aspect inflections. The auxiliary that eventually develops into a tense marker, for instance, is not intended to modify the meaning of the main verb, it rather serves to relate that meaning to deictic time. Thus, no Compounding is involved, but rather grammaticalization starts with the Desemanticization of a lexeme as a tense marker. Once the desemanticized unit undergoes Affixation, the result is a verbal inflection.

We noted above that tense-aspect morphology and verbal derivation tend to occur at opposite ends of the verb, and that this arrangement correlates with dependency structure: in type D languages, tense-aspect markers are likely to precede and derivative affixes to follow the verb while in non-D languages the reverse order prevails, suggesting that verbal morphology reflects the order dependent - governing in D languages but governing dependent in non-D languages. The conclusion that emerges now is that it is the position of the constituent giving rise to grammaticalization, rather than dependency structure, that can be made responsible for this arrangement. Tense-aspect markers are likely to appear as suffixes in type D languages but as prefixes elsewhere, in accordance with the position of the auxiliary,
which forms the main source of these markers. Similarly, adverbial constituents precede the verb in type D languages but follow it in non-D languages. Assuming that our position on the adverbial origin of derivative affixes is correct we can predict that they will turn up as prefixes in type D languages but as suffixes in the languages of all other types.
3.2 Completive focus marking

Focus marking forms a challenge to any theory of grammar which claims to explain, rather than to merely describe, language structure. There is a wide range of techniques that languages dispose of in order to mark a given sentence constituent as being in focus, i.e. as providing new, asserted information, and, conversely, to mark the rest of the sentence as containing given, presupposed information. The most common techniques are:

1. Stress or tone placement, or duration.
2. Word order permutation.
3. Subordination involving copula main clauses.
   These may be (a) of the insisting (cleft) or (b) the suspending (pseudo-cleft) type (cf. Lehmann 1979: 424).
4. Segmental morphological marking.

Languages differ as to which strategies they select. In English, for example, NPs are focus-marked essentially by means of (1) and (3), but in Somali by means of (4) (see 3.2.1.2.3.3).

In some languages, however, it is difficult to decide which techniques are involved since the relevant structures combine properties of several techniques, or contain features which cannot be allocated to any particular strategy. It is these structures that we will be concerned with in the present section. The claim made here is that on synchronic grounds it is not always possible to explain the morphosyntactic behaviour of focus constructions, and that a theory of language which aims at explanatory adequacy cannot dispense with a diachronic perspective as one of its components.

Our interest will be devoted mainly to strategy (4) and the interrelationship between (3) and (4). In particular, it will be morphosyntactic rather than pragmatic/thematic issues that we will address our attention to.

Focus marking usually incorporates the expression of contrast, i.e., the expression of whether a sentence contradicts some
previously uttered predication. In some languages, however, contrast is marked separately from the type of focus considered here. In Efik for example, a clause which expresses contrast is marked morphologically by partial reduplication of the verb stem (de Jong 1981: 105-7).

Our discussion will be confined to what Dik et al. (1981:60) call the **completive focus**. This type of pragmatic function does not involve contrast⁠¹, the focus information is meant rather to fill a gap in the pragmatic knowledge of the addressee. Most clearly, completive focus manifests itself in answers to WH-questions. It may refer to either arguments (term focus), or predicates (predicate focus), possibly also to entire clauses.

The following presentation will consist of three parts. In the first part (3.2.1.1), we shall briefly outline characteristics of weakly grammaticalized focus constructions, while the second (3.2.1.2) presents some morphologized focus systems, and the final part (3.2.2) will contain some general observations.

### 3.2.1 Types of focus constructions

There are various ways of classifying focus systems. In accordance with the main concern of this paper, we will distinguish here between weakly and strongly grammaticalized systems of focus marking. As will become evident below, there is no clear-cut boundary separating the two, the distinction between them being a prototypic one rather than a discrete one. While the former can be said to be closely related to other morphosyntactic structures of the same language, the latter show some idiosyncrasies which set them apart from all other structures occurring in that language. Weakly grammaticalized systems are likely to have undergone functional split but not shift, while strongly grammaticalized systems are usually marked by functional shift.

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¹ All other types distinguished by Dik et al., i.e. selective, replacing, expanding, restricting, and parallel focus respectively, do involve contrast.
3.2.1.1 Weakly grammaticalized systems

3.2.1.1.1 Some data

In this section, some examples of focus constructions are presented. While it is not claimed that they are representative in any way, the characteristics they show appear to be widespread in African languages.

Hausa and Akan

Schachter (1973) uses Hausa and Akan, together with English and Ilonggo, a Malayo-Polynesian language of the Philippines, to demonstrate some similarities that exist between restrictive relative and out-of-focus clauses. According to his presentation, Hausa and Akan share the following characteristics (Schachter 1973: 22-24):

(1) The NP which is in focus is replaced by a personal pronoun. In Hausa, however, there are some constraints on pronominalization. According to Schachter's phrasing, the NP is pronominalized obligatorily if the NP is the subject. If it is the direct object, it can (in some dialects) only be deleted, and if it is the indirect object, it can be either pronominalized or deleted.

(2) There is a marker of subordination at the beginning of both relative and out-of-focus clauses (but see below).

(3) The formation of both relative and out-of-focus clauses shows certain morphophonemic characteristics: In Hausa, the so-called "relative" person-and-aspect markers must be used, while in Akan, certain underlying low tones must be replaced by high tones (cf. Kihung' an below).

There is, however, one striking difference between relative and out-of-focus clauses in both languages: each clause type uses a subordinator of its own. Thus in Hausa it is da for relative clauses but ne m/ce f for out-of-focus clauses; in Akan it is âà for relative and nà for out-of-focus clauses.
In Kihung'an (Takizala 1972), out-of-focus clauses share a number of features with relative clauses:

1. In main, unembedded clauses, the negative particle is lo:
   \[
   \text{lo i-mween kit.} \quad \text{NEG I-saw chair}
   \]
   'I didn't see the chair.'

In both relative and out-of-focus clauses, lo cannot be used, negation being expressed by means of the negative verb -khoon-'fail'.

2. As in most Bantu languages, there is a series of verbal prefixes (OP) which serve as both object pronouns and agreement markers:
   \[
   \text{kipes ka-ki-swim-in kit zoon.} \quad \text{PA-QP-buy-PAST chair.yesterday}
   \]
   'Kipese bought the chair yesterday.'

These object prefixes cannot be used when an object NP is relativized. The same applies to out-of-focus clauses where the constituent in focus is an object NP, rather than a subject NP.

These relative-like features of out-of-focus clauses are found irrespective of whether the focus constituent involved is a nominal marked by tone-focus\(^1\), a cleft, or a pseudo-cleft clause. Furthermore, they can be observed in out-of-focus clauses following interrogative words like khi 'what?' or na 'who?' (Takizala 1972: 278/79). In addition, these interrogative words may be optionally followed by the relative pronoun:

\[
\text{khi (ki) ka-swim-in kipes.} \quad \text{REL PA-buy-PAST Kipese}
\]

'What is it that Kipese bought?'

According to Takizala (1972: 271/72; 283), all these structures, tone-focus, clefts, pseudo-clefts, and Wh-questions, can

\(^1\) Focus-marked nouns have a special tone pattern (Takizala 1972: 262):

<table>
<thead>
<tr>
<th>Focus-marked</th>
<th>No focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>kipēs</td>
<td>kipēs</td>
</tr>
<tr>
<td>kit</td>
<td>kit</td>
</tr>
<tr>
<td>'Kipese'</td>
<td>'chair'</td>
</tr>
</tbody>
</table>
be accounted for by means of a "relative clause and predicate" analysis—both on synchronic and on diachronic grounds.

**Kikuyu**

In this language, interrogative words usually come at the end of the sentence. They may, however, also appear clause-initially, in which case they are preceded by the copula nī ('it is'). The copula plus a following interrogative word ū 'who?' undergo Fusion (+ nū). What is interesting about this construction is that the verb following the [nī + interrogative word] phrase has a subject pronoun which is identical with that of verbs in relative clauses. For noun class 1, i.e. 3rd person singular human subjects, the pronominal prefix is a- for main clauses but ū- for both relative clauses and interrogative words introduced by the copula (Myers 1971: 12/13).

The same applies to subject nouns which are in focus: they are also preceded by the copula nī and require the verbal agreement marker to be that of the relative clause, rather than of the main clause, e.g.:

\[
\begin{align*}
nī \quad & \text{kamau ū-kūruga irio icio} '\text{KAMAU}^2 \text{ is cooking this food.}' \\
& \text{COP Kamau he/REL-cook food this} \\
& \text{(Myers 1971: 14)}
\end{align*}
\]

Myers (1971: 15) rightly argues that "what the speaker thinks the hearer knows will be embedded in the new information". This explains the fact that both focus-marked subjects and interrogative words are followed by a "relative-type form" of clause when they are introduced by the copula nī. We thus end up with the following structure in Kikuyu:

---

1 While our interpretation is in agreement with that of Takizala, we do not see any need for assuming, as he does, that it all started with pseudo-cleft constructions.

2 Words written with capital letters in English translations designate constituents in focus.
Some problems of African linguistics

Morphosyntax: \[ nI \ (COP) + \left\{ \text{NP} \right\} \ - \ \text{subject marker} \]
\[ \left\{ \text{Wh-word} \right\} \ - \ \text{of relative} \ + \ V \ (X) \ - \ \text{clause} \]

Clause structure: cleft construction - relative-type clause

Information structure: new (asserted) - given (presupposed)

Gude

Gude is a Chadic language of the Biu-Mandara branch, spoken in northeastern Nigeria and, to some extent, in adjacent parts of Cameroon. Hoskison (1975) distinguishes two types of focus constructions in this language. We will only consider his type I construction here. Type II, which has the overt structure of a non-verbal sentence, involves pseudo-cleft constructions.

The following constituents may be focalized: verbs, subjects, direct and indirect objects, and sentence adverbs. The focalized constituent occupies the sentence-initial position. A special form of the aspect particle\(^1\) is used to indicate focus, the aspect particle following the focus constituent.

While the basic order in Gude is

aspect particle - verb - subject - object,

it is

focus constituent - aspect particle - subject - verb - object

in focus-marked sentences. Case-marking prepositions move, together with the NP they govern, to the initial position. This applies to the following sentence, where the object preposition is te (Hoskison 1975: 228):

---

\(^1\) Hoskison (1975: 228) lists the following allomorphs for the aspect particles:

<table>
<thead>
<tr>
<th>Allomorph</th>
<th>Declarative</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuative</td>
<td>agi</td>
<td>ci</td>
</tr>
<tr>
<td>Potential</td>
<td>ka</td>
<td>no</td>
</tr>
<tr>
<td>Completive</td>
<td>kə</td>
<td>φ</td>
</tr>
</tbody>
</table>
Weakly grammaticalized systems: Some data

'te bwaya ci John a-bela andzii. OBJ leopard ASP/FOC John kill now
'John is killing a LEOPARD now.'

Hoskison (1975: 230) notes that type I focus constructions, WH-questions and relative clauses "look very similar and contrast with non-focus sentences in the same ways", but he does not elaborate on this point. His examples of WH-questions suggest, in fact, that they have the following points in common with focus constructions:

(1) The question word appears sentence-initially, followed by the focus allomorph of the aspect particle.

(2) It may be preceded by a case-marking preposition, e.g.
	'te mi ci John a-bela andzii kwa? OBJ what ASP/FOC John kill now QU
	'What is John killing now?'

Duala

In Duala (Epée 1975), focus marking involves the morpheme nđe and, optionally, a movement of the focalized constituent to the sentence-initial position. Once this movement takes place, the particle no, which is a pronominalized form of the constituent in focus, appears immediately after the verb ¹.

Any sentence constituent, including adverbs, PPs and entire sentences, may be focalized. nđe is placed after the constituent in focus if the latter precedes the verb or is the verb itself, but precedes focalized constituents following the verb ².

¹ Since no movement is involved when subjects and verbs are in focus, there is no pronominalization by means of no.

² Some ambiguities result from this kind of focus marker placement. The following sentence, for example, is ambiguous since nđe may either refer to the verb preceding it or the object noun following it (Epée 1975: 211):

Kuo a tápi nđe jombé. (1) 'Kuo TOUCHED the door.'
Kuo PA touch FOC door (2) 'Kuo touched the DOOR.'
WH-question words can, but need not, be focalized – in the same way as other constituents. Focalized WH-questions differ from other focus constructions in the fact that no focus marker must be used; focus on WH-words therefore is indicated by word order only: the WH-word moves to the position in front of the sentence.

Relativization resembles focus marking essentially in one point: There is obligatory pronominalization by means of no when an object NP forms the head of a relative clause, but pronominalization is blocked with subject head NPs (cf. Footn. 1, p. 153). The differences, on the other hand, are considerable:

1. Epée's presentation (cf. p. 217) suggests that neither adverbs nor PPs nor entire clauses can be relativized, while they can be focalized.

2. The movement transformation applies obligatorily to head NPs of relative clauses but is optional with focalized constituents.

3. While the focus marker is invariable nde (zero in the case of WH-questions), the relative pronoun is gender-sensitive, and there is no relative pronoun if the head NP has object function.

4. There is tone raising on the last syllable of the verb in relative clauses but not in out-of-focus constituents.

---

1 That a question word is focalized, therefore, can be derived from the fact (1) that it is placed sentence-initially and (2) that no other constituent can be focalized. In the following sentence, the question word is not in focus and, hence, it does not appear in front of the sentence, and another constituent can be focalized (Epée 1975: 222):

Kuo nde a-andi nje kisle. 'What did KUO buy yesterday.'
Kuo FOC he-bought what yesterday

2 The relative pronouns are apparently derived from the verbal subject agreement markers; except for noun classes 1 and 9, they are identical with them (Epée 1975: 219).
Focus marking in Duala is apparently derived from a cleft construction. The focus marker ndé, according to Ittmann (1939: 123) probably goes back to the copula verb e (< PB *de or *li according to Meinhof's reconstruction), while no is a verbal enclitic which can be linked with the o-ending demonstratives (cf. Ittmann 1939: 82).

3.2.1.1.2 Some characteristics

The data presented in the preceding section suggest that in spite of the considerable variation they manifest, there are some common features shared by most, or even all languages considered. Perhaps the most striking feature can be seen in the similarity that exists between systems of marking completive focus and relative clauses, an observation that has been made by quite a number of authors. Both relative and out-of-focus clauses tend to be associated with morphological structures which are characteristic of subordination, and in both types of clauses a "foregrounded" object is likely to be replaced by an obligatory pronoun.

Words marking WH-questions are frequently associated with the focus structure. However, whereas this appears to be an obligatory correlation in strongly grammaticalized focus systems, as far as the data available indicate, it is not so with weakly grammaticalized systems: WH-words can usually occur in a focalized and in a non-focalized form. Another characteristic of the latter systems may be that this type of completive focus marking relates typically to verbal arguments or terms, but not to finite verbs. A question that requires further investigation concerns the relationship between focus markers and the expression of tense-aspect (cf. Gude, above).

While we pointed out the similarities that exist between out-of-focus and relative clauses, the differences are perhaps even

---

Duala may be an exception here.
more noteworthy. Thus, whereas in relative clauses foregrounding is usually confined to NPs, in focalized sentences it is extended to adverbial constituents, in some cases even to entire clauses. Furthermore, subordination tends to be marked differently, involving differing subordinators and/or morphophonological features (cf. Duala).

Observations like these make it highly implausible that the focus systems sketched above are derived historically from relative constructions, as has been claimed for example by Givón (1979a: 246-48). It would rather seem that is is cleft constructions which form the source of completive focus marking in weakly grammaticalized systems\(^1\) (cf. Schachter 1973). In all cases considered so far, these systems are either identical with or most similar to cleft sentences. This accounts, for example, for the fact that the focalized constituent need not be an NP but may also be a PP, or even an entire clause - in the same way as in most types of cleft constructions.

3.2.1.2 Strongly grammaticalized systems

In systems of this type, focus marking cannot, on synchronic grounds, be immediately derived from any existing syntactic structure. Once again, we will present some case studies in order to exemplify the major characteristics of such systems. In view of the more complicated history of strongly grammaticalized focus systems more space is dedicated to reconstruction.

3.2.1.2.1 Lamang

Lamang is a VSO language belonging to the Biu-Mandara branch of Chadic. Lamang has a system of optional focus marking. The focalized constituent is shifted to the clause-initial position and receives the focus suffix -é. This construction is not confined to NPs; adverbs, even verbal predicates can be focal-

\(^1\) It remains to be investigated whether this also applies to cases where focus is expressed by means of stress or of tone.
ized in the same way (Wolff 1982: 276).

Some question words are obligatorily marked for focus, i.e., they are always used with the focus suffix (Wolff 1982: 272):

\[ w\acute{e} \leftarrow *w\acute{a}-\acute{e} \] 'who?'
\[ n\acute{e} \leftarrow *nu\acute{w}\acute{a}-\acute{e} \] 'what?'

Wolff's analysis reveals that focus marking in Lamang goes back to cleft constructions involving the copula 'yá ('it is'). The focus marker -é can be reconstructed as originating from a combination of the associative linker -á, which is derived from a definite marker, followed by the copula (Wolff 1982: 76; 275). Thus, we are dealing with a highly grammaticalized focus marker in that it is the result of both functional and phonological processes:

1. Desemanticization: associative + copula \rightarrow focus marker
2. Erosion and Fusion: \[ -\acute{a} + 'y\acute{a} \rightarrow -\acute{e}. \]

Lamang may be considered to be a borderline case between weakly and strongly grammaticalized focus systems. The justification for allocating it to the latter type is the fact that the focus marker -é cannot easily be accounted for on synchronic grounds and that there are instances of an obligatory association between focus and certain WH-words.

3.2.1.2.2 Nupe

3.2.1.2.2.1 Synchronic structure

According to George (1971), Nupe, a Kwa language spoken in the valleys of the Niger and Kaduna Rivers in central Nigeria, has a morphological system of focus marking. There are two focus particles: á predicate focus (PF), which precedes the verb phrase, and o term focus (NF), which is placed clause-finally. 

á and o are in complementary distribution: á is used when the predicate is in focus, and o when an NP or an adverb is in focus. Only one focus marker is permitted per sentence (George
1971: 92):

musa á tsu. 'Musa is dead' OR 'Musa IS DEAD.'
Musā PF died

musa tsu o. 'MUS A died.'
Musā died NF

+ musa á tsu o. Musa PF died NF

While intransitive verbs like bo 'be tired' or tsu 'die' have an obligatory focus particle, focus marking is optional with sentences with transitive verbs as their predicate nucleus, e.g.

musa zū tsukū. 'Musa broke the stick.'
Musā broke stick

musa á tsukū zū. 'Musa HAS BROKEN THE STICK.'
Musā PF stick broke

Focus marking is confined to positive clauses, the use of focus particles in negative clauses being ungrammatical (see below).

Term focus

The focus marker o is placed clause-finally. Interrogative words are obligatorily marked for term focus (George 1971: 92/93):

zé tsu o. 'Who died?'
who died NF

ké jī musa o. 'What happened to Musa?'
what happened Musa NF

While the place of the term focus marker is clause-final, the focus-marked constituent occupies the clause-initial position. In the following sentence, therefore, musa is in focus (George 1971: 93):
In order to place focus on an object NP, either the subject NP is deleted, e.g.

\[ \text{Musa broke stick NF} \]

or the object is placed sentence-initially:

\[ \text{etū mí lo o. 'I did WORK.' (George 1971: 95)} \]

Term focus is not confined to NPs, it may also be placed on adverbs:

\[ \text{tsuwó mi bé o. 'I came yesterday.'} \]

In the negative, the term focus marker does not appear: it is likely that it merges with the negative marker á. In the following sentence, the topicalization of the object NP to the sentence-initial position indicates that it is in focus (Smith 1967: 14):

\[ \text{audu mi le-yé á. 'I didn't see AUDU.'} \]

Predicate focus

The predicate focus marker á may either refer to a verb, as in (2), or to a \([V + \text{complement}]\) phrase as in (3). Sentence (1) has no focus marker (George 1971: 95):

\[ \begin{align*}
(1) & \text{mí lo-tů. 'I worked.'} \\
 & \text{I did-work}
\end{align*} \]

\[ \begin{align*}
(2) & \text{etů á lo. 'Work was done.'} \\
 & \text{work PF did}
\end{align*} \]

\[ \begin{align*}
(3) & \text{mf á etů lo. 'I WORKED.'} \\
 & \text{I PF work did}
\end{align*} \]
As can be seen in (3), the object NP precedes the verb when the sentence contains the predicate focus marker á.

A number of intransitive verbs, i.e. verbs which do not accept an object complement, require an obligatory predicate focus marker ¹.

In negative clauses, the use of the predicate focus marker is ungrammatical:

lulu á dzá. 'The cotton HAS BROKEN.'
cotton PF broke

lulu dzá à. 'The cotton did not break.'
cotton break NEG

¹ lulu á dzá à. (Smith 1969: 131)

The predicate focus marker has been associated with various functions. It has been described as a tense-aspect marker (present perfect in Banfield/Macintyre 1915; perfective aspect-tense particle in Smith 1967 and 1969), as a passive/stative, and even as a causative marker. All these functions appear to be secondary. With regard to the causative and stative functions George for instance remarks (1971: 94):

"When it occurs with stative verbs like tsu 'died' it behaves like a sort of pointer to the action of the agent that brought about the present state of the object. As it appears with active verbs it signifies the effect that the action of the agent has brought about."

The predicate focus marker can be used in imperative forms, as the examples given by Smith (1969: 114) suggest:

ā u ta bāgā o. 'Put it on there!'
Pf it put there LOC

This point is of interest in two ways. First, it suggests

¹ Such verbs are (cf. George 1971): ya 'be lost', bā 'be shattered', zo 'be finished', kpē 'be opened', lē 'be torn', tsu 'die', and bo 'be tired'.

Smith 1969: 131
that Smith's analysis of *á* as a perfective tense-aspect is wrong. Secondly, Nupe differs in this respect from other African languages which have a morphological predicate focus (see 3.2.1.2.3), the latter being ungrammatical in imperative sentences.

3.2.1.2.2.2 Diachronic analysis

**Term focus**

Nupe has a locative morpheme *bo* which alternates with *o*. A number of monosyllabic verbs, all of which can be generally designated locative, require *bo/o* at the end of the clause (Smith 1967: 40/41), e.g.

*á . ū ci tēpūrù o.* 'Put it down on the table!'

The above sentence suggests that there is one striking difference between *bo/o* as a locative particle and *o* as a term focus marker: while the former may co-occur with the predicate focus marker *á*, the latter does not.

There is, nevertheless, reason to assume that both share one and the same origin, and that the focus marker is derived from the locative particle via Desemanticization. The functional split that followed Desemanticization would then be responsible for the differing syntactic behaviour of the two particles: the term focus marker came to stand in complementary distribution with the predicate focus marker, and its use in the same clause to-

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1 Note, on the other hand, that in Gwari, language closely related to Nupe, the verb *lā/kū* 'take', which is cognate to Nupe *(l)ā*, has been grammaticalized to a marker of completed tenses. At the same time, however, *lā/kū* also serves as a focus marker: "Since *lā* and *kū* are not preferred in the presence of *nù* [i.e. the general focus marker; authors' note], it is possible that they are in fact focus markers on the completed aspect of the verb[...]". Hyman/Magaji 1971: 123)
gether with the latter was therefore blocked.

It remains to be investigated what exactly formed the syntactic model for the rise of term focus marking. Term focus constructions usually go back to cleft sentences, and markers of term focus are usually erstwhile copulas. But whereas focus markers tend to be placed adjacent to the constituent in focus, the former occurs clause-finally and the latter clause-initially in Nupe. There is, nevertheless, a possibility that bo/o did assume a copula-like function prior to developing into a focus marker, and that the out-of-focus clause became sandwiched between the focus-marked constituent and the copula. Alternatively, bo/o might be derived from a pronominal dummy which replaced the focalized constituent. The out-of-focus clause does not show any traces of subordination, but this negative evidence need not be diachronically significant.

**Predicate focus**

Predicate focus constructions are the result of nominal periphrasis, where *lá/a 'take' formed the verb and the actual verb was used in a nominalized form¹ as the verbal object NP.

There are two possibilities concerning the original function of this periphrasis. One is that periphrasis served to introduce what Smith refers to as a "perfective aspect-tense". This would be in accordance with a very widespread pattern in African languages (see 3.1.1).

The second possibility, and this is the one which is probably nearer to diachronic reality, is that there was a purely syntactic cause for periphrasis. The evolution of predicate focus marking according to this hypothesis can be sketched as follows. There is some evidence that historically, Nupe required clauses to be transitive. Since this requirement was not fulfilled with

---

¹ Nupe does not appear to need an overt marker of nominalization in certain contexts, as the following example of compounding shows (Smith 1969: 99):

\[ gā 'to (sur)pass', egwa 'hand': egwa-gā 'escape (n)' \]
inherently intransitive verbs like bo 'be tired' or tsu 'die', a transitive structure was created by introducing lá/á¹ 'take' as a dummy verb and reanalysing the actual verb as a noun. A sentence like

musa á tsu. 'Musa is dead.'
Musa PF died

would therefore go back to a structure

*musa á tsu. = subject - verb - object.
Musa took death/dying

Thus while nominal periphrasis usually serves to introduce new aspects or tenses, in Nupe it would have been used as a means of deriving transitive clauses from intransitive verbs.

In its original function, i.e. that of establishing intran- sitive sentences, the pro-verb lá/á served to lay emphasis on the verbal action, and it came to be interpreted as a marker of as- sertion/new information. When its use was extended from intrans- sitive to transitive verbs it assumed the role of a focus marker, thereby dividing the clause into two information units, roughly in the following way:

Morphosyntax: subject [á (= verb) - complement] predicate

Information structure: given á new
(presupposed) (asserted)

It follows from this evolution that á was retained as an

¹ á is the common form today. lá occurs, for example, after the progressive marker á:

musa é-lá bo. 'Musa is becoming/getting tired.' (George 1971: 86)

lá/á is also used to introduce instrumental NPs:

musa (l)á egiyékó kpé kpáko. 'Musa opened the door with a key.'
Musa took key opened door

(George 1971: 89)
Obligatory marker of intransitive verbs but assumed the function of an (optional) focus marker of the predicate with transitive verbs.

Now Nupe has diachronically the order possessor - possessed (cf. Westermann 1927: 191; Hyman 1975: 132/33; see also 3.3.2.1.3), as for example suggested by compounds like the following (Smith 1967: 46):

\begin{verbatim}
eya-pâ-ci
canoe-to.paddle-'activator'
\end{verbatim}

There is a regular compounding pattern whereby the object noun precedes the nominalized verb (Smith 1969: 99):

\begin{verbatim}
tî 'to drip', egî 'tear, drop' : egî-tî 'weeping'
kê 'to remain', ekû 'corpse' : ekû-kê 'emaciation'.
\end{verbatim}

Since the verb following là/á was reanalyzed as a noun, its object complement had to be reinterpreted as a genitive noun. In accordance with the order possessor - possessed, the object, syntactically being a genitive/possessor NP, came to be placed before the nominalized verb, e.g.

\begin{verbatim}
musa á tsûkû zû.
Musa PF stick broke
\end{verbatim}

'Musa has broken the stick.'

('< *Musa took stick breaking. ')

This explains the fact that following là/á Nupe uses an SOV word order, rather than the basic SVO (cf. Smith 1967: 7/8).

The development from là/á as a verb to focus marker offers an example of functional split. Although là/á still exists as a verb, the two differing functions have been separated to the extent that they may co-occur in one and the same clause (George 1971: 90):

1 There are some intransitive verbs which do not require á, e.g.

\begin{verbatim}
u bê  'he came'
u ge  'she is pretty' (Smith 1969: 118).
\end{verbatim}

2 It is unclear why the reduplication rule, applying to nominalized monosyllabic verbs in Nupe, does not come in following á.
Musa á egiyèkó lá kpé kpàko.
Musa PF (<'took') key took opened door
'Musa has used the key to open the door.'

3.2.1.2.3 The Sam languages
3.2.1.2.3.1 Rendille

Synchronic structure

In this language, main clauses other than imperatives contain an obligatory focus morpheme whose function it is to mark that constituent of the clause which contains the "new" information; "new" meaning here either factually new or being in "contrast with what has been said before" (Oomen 1978: 47). The rest of the clause can be said to be out of focus: it contains the "given" information, i.e. it constitutes a presupposition.

There are two types of focus markers, each being associated with a different type of clausal constituent: the marker -ê¹ (-nyé after the copula -e, -a after possessive pronouns) is an enclitic of that nominal or adverbial argument of the verb which is in focus. This may, for example, be a noun as in (1), an adjective (2), an adverb (3), or a clause (4)²:

(1) ínam-ê y-imi
    boy-NF he-came
    'THE BOY came'

(2) ínan-kí bur-é-nyé y-imi
    boy-REL big-COP-NF he-came
    'The BIG boy came'³

¹ When it follows vowels, -ê is deleted in most contexts, but its high tone is transferred to the preceding vowel (Oomen 1978: 51).
² The examples given are taken from Oomen (1977; 1978). In translations of Rendille phrases or sentences, focus-marked constituents are written with capital letters.
³ Oomen's translation suggests that the focus marker in this sentence refers only to the adjective. It is, however, more likely that it refers to the entire noun phrase.
Some problems of African linguistics

(3) ınan-kı ması-n ı-don-in, intan-é ka-jir-a.
boy-REL finish-INF NEG-want-NEG here-NF SOURCE-be-IMPF
'The boy who does/did not want to finish is HERE.'

(4) etı herti cele y-imi-ę buj-e.
man warrior yesterday he-came-NF die-PERF
'The warrior who came yesterday DIED.'

Note that although the focus marker is attached to the last component of the nominal/adverbial argument, only one part of this argument may express new information, as the translations of (2) and (4) suggest. The morpheme -e occurring in these sentences will be referred to as the term focus marker -(NF).

The second morpheme is á-, which is prefixed to the predicate. The latter may either be a verbal (5), a nominal (7), or an adjectival predicate (6):

(5) á-y-imi
PF-he-came
'he CAME'

(6) dıri á-kulel
pot PF-hot
'the pot is HOT'

(7) an á-mwalımu
I PF-teacher
'I am a TEACHER'

á- will be called the predicate focus marker (PF). It can be considered to be the unmarked morph since it is used when the entire clause is in focus, i.e. when nothing is semantically presupposed.

It is not possible here to present all characteristics of Rendille focus structure\(^1\). In the following, a few points relevant to the present discussion are added. These are:

(a) Since focus is obligatory, every main clause\(^2\) (except imperative clauses, see above) must contain either a term or a predicate focus marker. However, no more than one focus mark-

---

\(^1\) For more details see Oomen 1978.

\(^2\) For sentences containing negative markers or question words, see below.
er can occur within a clause.

(b) The term focus marker must be followed by a predicate.

(c) No formal focus marking exists when the clause is either negative or contains question words like ayó 'who?', cirôh 'when?', etc. There is every reason to assume that negative markers have a built-in predicate focus marker, and question words a term focus marker (cf. Oomen 1978: 56).

(d) The negative prefix má- is replaced by the negative relative clause prefix i- when preceded by term focus.

**Diachronic interpretation**

In the present section we shall try to find out how Rendille came to acquire such a system of obligatorily marking pragmatic function. It is claimed that both term and predicate focus marking go back to structures involving copula constructions as main clauses. The relevant copula is likely to have had the shape *-ahi, which is retained in modern Rendille as ahi 'I am', t-ihi 'you are', y-ihi 'he, she is', etc. We may assume that this copula underwent Erosion and was cliticized as é clause-finally and as à clause-initially.

Our views on the origin of term focus marking are similar to those presented in Oomen (1978: 57-59): it goes back to a cleft construction of the following kind:

\[
\begin{align*}
\text{NP} & \quad + \quad \text{copula} \\
\text{PP} & \quad (3\text{rd.p.sg}) \quad - \quad \text{relative clause.}
\end{align*}
\]

The constituent preceding the copula introduced the new information, while the relative clause presented the presupposed,

---

1 In this point we disagree with Oomen (1978: 57/58) who assumes that a gender-sensitive relative marker (k-i m, t-i f, h-i pl) plus a present subjunctive form e of the copula, rather than a simple 3rd person sg form of the copula, are involved.
"out-of-focus", content of the sentence. The copula was grammaticalized as a term focus marker: it eroded to \( \varepsilon^1 \) (< *ahi) and became an enclitic of the focus-marked constituent.

The development from copula clause to term focus constituent had drastic implications for the entire sentence structure: the relative clause was now reanalysed as the main clause. It retained, however, a number of features which distinguish it from other main clauses (see Oomen 1978: 58), in particular the use of the negative prefix 1-, which is confined to relative clauses.

We noticed above that sentences containing question words like ayó 'who?' and círhó 'when?' do not allow for a focus marker. The fact that they have a high tone and prominence on their last syllable suggests that they contain a term focus marker (cf. Oomen 1978: 56) which was lost as a distinct segment but is retained suprasegmentally - in a similar way as with nouns ending in a vowel (see above). Thus, the cleft construction leading to the emergence of the term focus marker appears to have been obligatory with WH-questions.

Predicate focus is likely to originate from a structure like

\[
\text{copula (3rd.p.sg) + predicate} (\text{subordinate structure})
\]

which might have had the purpose of foregrounding the information expressed by the predicate. The copula then came to introduce new information, thus entering into complementary distribution with the nominal cleft/focus construction. Upon developing into a focus marker, the copula was phonologically reduced to \( \varepsilon^1 \) (< *ahi) which became a proclitic of the predicate constituent.

\[\text{1 In sentences like the following, } \varepsilon \text{ (though with a low tone) still has copula function:}
\]
\[\text{án-ē mwalimu-e } \text{ 'I am the teacher.'}
\]
\[\text{I-NF teacher-be} \]
3.2.1.2.3.2 Boni

The focus system of Boni shares in particular the following features with that of Rendille:

(a) The term focus marker\(^2\) is é (or éené) which is an enclitic of the focalized verbal argument. The predicate focus marker á is a proclitic of the predicate.

(b) Only one constituent of a sentence can be focalized\(^3\), and focus marking is confined to main clauses.

(c) The negative particles hűu-, måu- etc. appear to have a built-in focus marker, i.e. no formal focus marking in negative sentences exists.

(d) The same applies to question words. While some of them (mal-é 'when?', int-é 'where?') have an overt term focus marker, others do not (ayáa 'who?', máa 'what?') – probably because the marker merged with the final vowel of the preceding question word (Sasse 1982: 26).

The Boni system differs in the following instances from Rendille:

(e) Focus marking is not obligatory; sentences may be used without focus marker or, as Sasse calls it, with neutral focus. In the following sentences, (1) displays neutral focus, (2) term focus, and (3) predicate focus (Sasse 1982: 20):

1 an biyōo ajık-a 'I drink water.'

2 an biyōo-é ajık-a 'I drink WATER.'
   I water-NF drink-IMPF

3 an biyo á-ajık-a 'I DRINK water.'
   I water PF-drink-IMPF

\(^1\) The following account is based on Sasse 1982.

\(^2\) Instead of term focus, Sasse refers to it as SPECIFIER focus.

\(^3\) Note, however, that in conjoined sentences each clause may have a term focus marker of its own (cf. Sasse 1982: 25).
(f) The focus enclitic é may occur on its own when the focalized constituent is deleted:

\[ \text{é j-iyaad-a} \quad \text{HE will come.} \]

The diachronic interpretation of this system is essentially the same as that offered for Rendille, that is, both focus markers are derived from a copula, which in Boni has the shape -ahei. Since Rendille and Boni belong to different branches of the Sam group, and since borrowing can be ruled out, the development from copula to focus marking must have occurred during the Proto-Sam period. Proto-Sam is therefore likely to have had a term focus enclitic *é and a predicate focus preclitic *á.

A noteworthy innovation can be observed in the Kilii dialect of Boni: the predicate focus marker á has been replaced by we-, which is derived from the copula wâ (cf. Heine 1982: 52; see 3.2.1.2.3.3 below)

\[ \text{wá-'ajik-a} \quad \text{I (shall) drink.} \]

\[ \text{míq hál-aa wâ} \quad \text{The house is yours.} \]

3.2.1.2.3.3 Somali

The Somali focus system has been the subject of a number of scholarly contributions. The following is a highly simplified account of its essential features. It ignores various syntactic implications as well as structures such as the "heralding construction" and, more importantly, it touches only in passing on the remarkable dialect diversity in focus marking, which we are now able to recognize thanks to Lamberti's pioneering studies.

---

1 The observations made in this section are based entirely on Lamberti (1982), which contains a much more detailed discussion of the phenomenon.

2 See, for example, Hetzron (1965), Andrzejewski (1975), Gebert (1981), and Antinucci (1981).
(1982). We shall confine ourselves largely to what Lamberti refers to as the Max-aad-tiri dialects, which include both the Northern and the Benaadir dialects.

**Synchronic structure**

The Somali system shows many similarities to those of Rendille and Boni, but also some striking differences. The similarities are in particular:

(a) There is both a term and a predicate focus marker. The former is an enclitic of the noun phrase and has to precede the predicate, while the latter is a proclitic of the predicate.

(b) Focus marking is obligatory, i.e. every main clause has to contain either a term or a predicate focus marker. In this respect, the Somali system agrees with that of Rendille but differs from that of Boni.

(c) Predicate focus is the "unmarked" one\(^1\): it is used when no particular constituent of the clause is associated with new information.

(d) Question words and negation particles are obligatorily associated with term focus.

(e) A noun phrase carrying term focus is constructed in the absolute (object) case - irrespective of its syntactic function.

The major differences to the Rendille and Boni systems are:

(f) The Somali focus markers differ both in sound shape and etymology. The term focus marker is baa, in some areas ayaa or aa, while the predicate marker is waa.

(g) If the NP carrying the term-focus marker is not the sentence subject, then there is an obligatory subject pronoun which is suffixed to the focus marker. If that NP is the sentence subject, no subject pronoun can be used and the verb is

---

\(^1\) There is alternative evidence suggesting that it is term focus on the object NP, rather than predicate focus, which is unmarked (Serzisko, p.c.).
conjugated according to the "restrictive paradigm", which is characterized by syncretism of the 2sg, 3sgm, 2pl, and 3pl agreement markers.

(h) The predicate focus marker optionally merges with the subject pronoun.

Other characteristics of the Somali system are:

(i) Both focus markers have equivalent "homophones" which serve as copulas, e.g.

<table>
<thead>
<tr>
<th>Càlì wàà màcàllìn</th>
<th>Càlì mà màcàllìn bàà</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ali COP teacher</td>
<td>Ali QU teacher COP</td>
</tr>
</tbody>
</table>

'Ali is a teacher.' 'Is Ali a teacher?'

(j) Similarly to Rendille, focus marking triggers some peculiar structures in negative sentences. Thus, for example, following the focus marker, the subjunctive negation marker aan is used rather than ma.

The above statements relate exclusively to the Max-aad-tiri dialects. It would be worth adding a description of the focus systems in the various other Somali dialects, in particular since (1) there are some dialects which display a situation which is intermediate between Max-aad-tiri on the one hand and Rendille and Boni on the other; (2) there is an enormous variety of shapes that the focus markers may take; and (3) with the exception of Af-Garre and Max-aad-tiri, no predicate focus marking exists at all. Details on these structures can be found in Lamberti (1982). Some diachronic implications of this dialectal variation are mentioned below.

---

1 Lamberti (1982: 11) lists 16 different forms of term focus markers for the various dialects. In addition, term focus may be expressed by lengthening the final vowel of the relevant NP.

2 Af-Garre differs from Max-aad-tiri in that focus marking is optional (cf. 3.2.1.2.3.2 (e)), rather than obligatory.

3 Lamberti is preparing descriptions of most Somali dialects, which contain an abundance of data on the focus behaviour.
Diachronic interpretation

While the history of focus marking in Somali, i.e. within the Max-aad-tiri group of the Somali dialect cluster, contrasts sharply with that of both Rendille and Boni, much the same evolution must have been involved. This evolution can be sketched as follows:

Both focus markers, baa and waa, are likely to go back to one and the same copula, which Lamberti reconstructs as *awa. There is a phonological rule in Somali which changes intervocalic w to b. The initial vowel of the copula was lost phrase-initially, i.e. if followed by a predicate, the resulting form was *wa. Phrase-finally, *w changed to *b, in accordance with its intervocalic position, and retained that quality even when its initial vowel was dropped in this environment as well - probably because the NP preceding it was likely to end in a vowel. The resulting shapes of the copula were thus *wa phrase-initially and *ba phrase-finally. Compare the following sentences where the copula has retained its original function:

waa Cali. 'It is Ali.'
COP Ali

ma Cali baa. 'Is it Ali?'
QU Ali COP

The fact that this copula came to be associated with two contrasting syntactic structures results from the different functions it assumed. On the one hand, it became the main verb of cleft constructions of the type

(A) NP + copula - clause
(main clause) (subordinate clause)

On the other hand, it came to introduce what Lamberti refers to as object clauses, the resulting structure thus being

(B) copula + predicate
(3rd.p.sg) (subordinate object clause)

Structures (A) and (B) are alike, both syntactically and semantically: in both the main clause is a copula construction, while the rest of the sentence consists of a subordinate clause,
and in both structures the copula serves to introduce new, asserted information, while the remainder of the sentence expresses given, presupposed information. (A) and (B), however, differ mainly in the following points:

(a) The new information is encoded to the left of the copula in (A) but to the right in (B), and

(B) the subordinate clause, which expresses the presupposed information in (A) but the new information in (B), is a kind of cleft clause in (A) but not in (B).

The subsequent evolution of these structures, however, reveals some striking convergencies. In both structures, the copula was grammaticalized as a focus marker - in (A) as a term focus marker and in (B) as a predicate focus marker. The fact that the main verb was reduced to the status of a grammatical particle had the consequence that the verb of the subordinate clause now assumed the function of a main clause verb. (A) and (B) thus came to be reanalysed as (A') and (B'), respectively:

(A') NP + term focus marker (*ba) + predicate
(B') predicate focus marker (*wa) + predicate

This is the situation found in the modern Max-aad-tiri dialects of Somali. We are now in a position to understand a number of "odd" phenomena that have worried scholars working on Somali grammar (see in particular Antinucci/Puglielli 1980; Saeed 1982). With regard to term focus marking, these are in particular (cf. Hayward/Saeed 1983):

---

1 The discussion just presented gives the impression that we were dealing with an example of functional shift (cf. 1.1.4.3.2). This is, however, not the case: we noted above that both the term and the predicate markers are still retained in their original copula function. Accordingly, we are presented with a case of functional split of the following kind:
(1) Subject noun phrases focused by baa do not have the nominative but rather the absolute case marking, e.g.

\[
\text{nin-ka-a } (+ \text{nin-ka baa}) \text{ imanaya.} \\
\text{man-DET.ABS-NF is.coming}
\]

'THE MAN is coming.'

\[
\text{nin-ku baa imanaya.} \\
\text{man-DET.NO NF is.coming}
\]

(2) Subject noun phrases focused by baa cannot occur with coreferential pronouns.

(3) Negative sentences with baa have the subjunctive negative marker aan rather than the main clause negative marker ma (see above).

(4) Verbs agreeing with subject noun phrases focused by baa show the "restrictive" paradigm rather than the full set of personal agreements.

Characteristics like these are predictable if we recall that term focus constructions in Somali go back to clefting based on the following structure:

\[
\text{NP } + \text{ copula} \quad (\text{main clause}) \\
\text{copula} \quad (\text{subordinate clause})
\]

Thus, nominal copula clauses in Somali require the relevant noun phrase to be in the most unmarked, the absolute, case. This is independent of the actual case function of that noun phrase: The absolute case form is used even if subject function is involved.

Characteristics (2) and (3) are exactly those of relative clauses. It is therefore not surprising that they turn up in out-of-focus clauses after baa. And in a similar way we can account for (4), i.e. for the fact that the "restrictive" paradigm is used after a focus-marked subject noun phrase: Rather than with the subject\(^1\), the verb agrees with the 3rd person copula ('it is') of the nominal main clause, and this agreement

\[\text{It remains to be investigated why this agreement pattern does not apply to the 1sg and 3f persons.}\]
pattern has survived the reinterpretation of the copula as a focus marker.

A problem that remains to be looked into concerns the vowel length of the two focus markers. Our reconstruction yielded morphemes having short vowels (*ba and *wa), while the modern focus forms have in fact long vowels (baa and waa, respectively). Lamberti (1982: 30) suggests that this lengthening is due to Fusion of the focus markers with the particle aa (*ba + aa, *wa + aa), which introduces subordinate clauses and thus acts as a complementizer.

Another possibility might be that this lengthening represents a relic of the Proto-Sam focus markers *é (NF) and *á (PF). These markers must have existed in the ancestor language of Somali, they are attested in both Rendille and Boni (see 3.2.1.2. 3.2, above). No trace of them is left in modern Somali, but the markers baa and waa occupy exactly the same position that *é and *á, respectively, used to have. It is conceivable that these old focus markers merged with the innovated markers *ba and *wa, thereby causing the vowel lengthening.

We mentioned above that within this brief account we are not in a position to deal with the various Somali dialects other than Max-aad-tiri. We will, though, confine ourselves here to a few observations on other dialects.

The Proto-Sam term focus marker *é is likely to have survived in the May, Af-Tunni, Af-Dabarre and Af-Garre dialects in the form of lengthening of the preceding vowel (cf. Lamberti 1982: 12). Otherwise, the term focus markers encountered appear to be innovations. But whereas in Max-aad-tiri the innovation was based on the copula *awa, in the Southern Somali dialects it was the same copula verb from which the Proto-Sam focus markers are likely to have been derived. We may, for Proto-Sam, reconstruct a 3rd person copula form *(y-)ah-ai 'it is' for which early Southern Somali forms *y-ah-ãy and *ah-y-ãy (the latter following the younger suffix conjugation) can be set up. These two forms gave rise to the multiple shapes of focus morphemes in the Southern Somali dialects.
It follows from this discussion that while Rendille and Boni represent a more archaic situation, Somali is characterized essentially by a new focus morphology which was grafted on the old one. According to Lamberti (1982: 44), this innovation started with cleft constructions leading to term focus marking. Predicate focus marking is said to be a later development. It was introduced via the reinterpretation of copula complement clauses and did not spread much beyond the Max-aad-tiri dialect cluster.

What caused the Sam languages in general and Somali in particular to develop a morphological device for marking the pragmatic distinction given/new is largely unclear. Lamberti (1982: 42) claims that 3rd person object agreement markers on verbs were lost in most Somali dialects and it is exactly those dialects which retained these agreement markers that did not evolve a new focus system (the Ashraaf dialects). This suggests that there is a causal connection between the absence of the object agreement marker and the presence of term focus marking, and, according to Lamberti (1982: 43), cleft constructions developing into term focus constituents were used as a means of taking over the reference function formerly fulfilled by 3rd person object pronouns.

3.2.2 From clefting to focus marking

It can be seen from the details presented in the preceding section that strongly grammaticalized focus systems show some striking similarities. These are in particular:

(1) The particles used for marking focus have been grammaticalized to the extent that they can no longer be linked synchronically with their lexical source.

(2) Focus marking is not confined to terms or verbal arguments, there is a separate strategy for marking predicate focus. Lamang, which is a borderline case anyway, appears to be an exception here: it also uses term focus marking for verbs.

(3) Only one constituent within a sentence can be focalized.\(^1\)

---

\(^1\) Dik et al. (1981: 43/44) note that focus differs from semantic and syntac-
This has the effect that term and predicate focus are in complementary distribution.

(4) WH-words have a built-in focus marker\(^1\) - irrespective of whether it is morphologically present or not (cf. Oomen 1978: 56).

(5) No focus marker is allowed to occur in negative sentences, usually because negation markers automatically assume focus function.

There are, however, a number of differences between strongly grammaticalized systems. Perhaps the most noteworthy is that whereas in Rendille and Somali focus marking is obligatory, it is optional in all other languages. Another difference relates to the use of focus in imperative sentences (see below).

The main purpose of the present paper is to provide clues as to the origin of completive focus systems. One possible evolution has been sketched by Givón (1979a: 246-48), using Takizala's (1972) description of Kihung'an (Hungana). This evolution is said to lead through the following major stages:

I There is a paratactic structure with a "headed" non-restrictive relative clause, which is governed by a nominal predicate,

II the relative clause loses its head,

III the relative clause loses its relative pronoun,

IV the nominal predicate loses its verbal constituent, i.e. the copula,

V the marked word order which resulted from the sentence structure in stage I is adapted to the unmarked basic order of the language, thus word order no longer being

\[(ctd)\]

\(^1\) This does not apply to all WH-words in Lamang (cf. Wolff 1982: 272).
From clefting to focus marking

a distinguishing feature of focus marking.

Since we do not know exactly how focus marking evolved in Kihung'an, or in any other language for that matter, the evolution sketched above is hypothetical. It is conceivable that such an evolution in fact took place in some languages where relative clauses are used to form cleft constructions.

According to Schachter (1973: 35ff), the common basis of focus constructions and constructions involving restrictive relative clauses consists in the insertion of a constituent from an embedded into a matrix sentence. A semantic correlate for this syntactic process of promotion can be seen in the foregrounding of one part of the sentence. At the same time, Schachter (1973: 27/28) has demonstrated that it is not possible to derive focus/cleft sentences from structures that include relative clauses, nor is a derivation in the opposite direction possible.

We noted above (3.2.1.1.2) that it is cleft constructions, irrespective of whether they are historically derived from relative constructions or not, that can be held responsible for weakly grammaticalized focus systems. The same seems to hold for strongly grammaticalized systems: with few exceptions (cf. Nupe), they go back to clefting.

There is an interesting difference between Nupe and the Sam languages with regard to imperative sentences: whereas in Nupe predicate focus can be marked in imperative sentences, this would be ungrammatical in Rendille, Boni or Somali. It would seem that once again, this difference can be explained only by recourse to diachronic considerations: Imperatives require the verbal nucleus of the sentence to have an underlying Agent case role. This is the case in Nupe: The focus marker à is derived from the verb lá 'take', which does have an Agent role in its

---

1 Apart from this channel, there are alternative channels leading to the emergence of focus constructions. One of them, involving the grammaticalization of a 3rd person subject pronoun to a focus marker, is outlined in 2.4 and 4.2.1.
case frame. Although á has lost virtually all verbal properties, it has retained the capacity of marking imperatives. In the Sam languages, on the other hand, predicate focus markers go back to copula verbs. Since copulas are agentless, the predicate focus markers are incompatible with imperative structures. An additional factor that may account for the difference between Nupe and the Sam languages can be seen in the type of syntactic structures involved: whereas in Nupe it was nominal periphrasis which gave rise to predicate focus marking, it was a complex sentence having a copula main clause which was responsible for it in the Sam languages.

The case of Rendille perhaps shows most clearly that relativization is not involved in the rise of term focus marking. This language has an obligatory relative clause marker -i. There is no evidence to suggest that such a marker ever existed in term focus constructions. More importantly, however, relative clauses use a subordinating conjugation characterized by an -o suffix, while the equally subordinate out-of-focus clauses do not, and probably never did. In spite of various similarities between relative and focus constructions, therefore, there appears to be no historical link between them.

While there are many languages which use the relativization strategy to form cleft sentences, there are others where clefting appears to have an independent source, which is suggested in particular by the following features (cf. Lehmann 1979: 428):

(1) In clefting, the argument that is removed from the clause is not necessarily an NP, it may be an adverbial phrase or a gerund clause.

(2) Clefts need not use relative pronouns as subordinating particles, they may employ a different subordinator, or dispense

---

1 Predicate focus marking appears to have involved an entirely different strategy.

2 For a different view see Oomen 1978: 57/58.
altogether with a subordinator in cases where relative clauses do not.

(3) Morphological devices like subjunctive conjugations can be used to form relative clauses but not necessarily for clefting; alternatively, differing subordinating structures can be used for the two (cf. Rendille).

Thus it would seem that Givón's stages I, II, and III can be dispensed with when attempting to reconstruct most of the focus systems treated above. His stage IV is even more dubious: The copula tends to be desemanticized as a focus marker, rather than being lost; it is usually the most resistant remnant of cleft constructions. To our knowledge, there is no empirical backing for stage V either, since the diachronics of focus marking by means of tone/stress are still largely unclear.

Although we do not dispute that an evolution as proposed by Givón might have occurred, most of the term focus structures discussed here are likely to require a different diachronic interpretation. This interpretation can be sketched as follows:

Stage I: There is a cleft structure something like

\[
\begin{align*}
\left\{ \begin{array}{c}
\text{NP} \\
\text{PP}
\end{array} \right\} \text{copula} & \quad \text{subordinate clause.}
\end{align*}
\]

This structure serves to foreground new, asserted information, expressed by the sentence-initial constituent, the presupposed part of the sentence being encoded in the subordinate clause.

Stage II: The copula is desemanticized to a focus marker. This structure is exploited to optionally emphasize WH-words. This stage is characteristic of most weakly grammaticalized systems.

Stage III: The focus construction undergoes functional shift, i.e. it is no longer possible on synchronic grounds to derive it from the cleft construction, its source. At the same time, WH-words are obligatorily marked for focus. Furthermore, focus marking spreads to the predicate: an entirely different type of con-
struction is introduced to mark verb phrase focus, term and verbal focus thus entering into a relationship of complementary distribution.

This is the situation characteristic of strongly grammaticalized focus systems. Apart from the languages treated above, Waata, a southern Oromo dialect also belongs here\(^1\) (Heine 1981).

**Stage IV:** Focus marking becomes an obligatory feature of sentence structure, i.e. any declarative sentence has to be marked for either term or predicate focus. The result is a language type whose sentence structure is dominated more by pragmatic than by syntactic or semantic functions. Languages which have reached this stage are Rendille and Somali\(^2\).

The evolution sketched above is highly tentative, and it represents only one of the channels leading to grammaticalized focus structures. The situation encountered in Nupe suggests that the diachronics of focus marking in African languages will turn out to be much more complicated once we are able to dispose of a more widely diversified empirical foundation. There is no doubt that clefting is the most important source of term focus, but it is probably not the only one, and the data on predicate focus systems are too scanty to allow for any generalizations.

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\(^1\) The diachronics of the Waata focus system are still largely unclear. However, there is no doubt that it has reached stage III - whatever channel it may have gone through (cf. Heine 1981).

\(^2\) According to Sasse's description (1982), Boni also belongs to this sub-type of strongly grammaticalized focus languages, although it does not require obligatory marking of focus.
3.3 Word order change

In various parts of this paper, the implications that observations on grammaticalization may have for our understanding of diachronic language development have been hinted at. Chapter 3.3 is confined to providing some examples which suggest that grammaticalization can be responsible for major syntactic restructuring, which eventually may lead to a change in basic word order.

Various works have been devoted to the question of basic word order change. Perhaps the most noteworthy is that of Vennemann (1973a), who proposed the following schema for possible changes in basic word order:

![Diagram of word order changes](image)

Vennemann has made extensive use of findings on grammaticalization in order to account for word order changes. However, in Vennemann's approach grammaticalization is only one of the factors contributing to such changes, as for example when phonetic processes like Erosion and Loss eliminate a system of case inflections and thus trigger word order change as an alternative means of maintaining syntactic distinctions. That grammaticalization forms the only motivation for change has been proposed in particular by Li/Thompson (1974) with reference to Chinese. They claim that a shift from SOV to SVO was actuated by the Desemanticization of the verb bā 'take hold of' to a preposition.

3.3.1 From VSO to SVO

The few data available on African languages suggest that there are two ways in which a VSO basic order may develop into an SVO order, either by auxiliation or by subject front shifting. While the former involves the grammaticalization of an
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auxiliary verb as a tense, aspect or other marker, the latter is introduced by placing a pragmatically marked subject constituent into the clause-initial position, with the resulting SVO order eventually becoming the unmarked or neutral order.

According to Frajzyngier (in print), both ways were jointly responsible for the development from VSO to SVO in many Chadic languages (see below). An example of word order change through grammaticalization can be found in Krongo, a VSO language spoken in Kordofan, Sudan. In this language, adverbial question words are placed clause-finally. However, there is one exception: áyá 'why?' precedes the clause. In addition, when áyá is used, the verb follows the subject noun phrase, so that an SVO order results:

áyá oun n-ádiyá  kítâ?à?  'Why have you come here?'
why you  1/2-PERF:come here

The reason for the presence of SVO order in sentences involving áyá becomes apparent when one looks at the use of this question word in certain contexts where it carries verbal gender agreement:

m-áyá  káaw  m-ádiyá?  'Why has the woman come?'
F-why person  F-PERF:come

This can only mean that áyá goes back to a verb functioning as the first verb in a construction involving serial periphrasis (see 3.1.1.1.2). It has been grammaticalized to a function word, losing its verbal characteristics like subject agreement in most contexts. Since the subject is placed after the first verb in Krongo, the basic VSO order changed to SVO with the grammaticalization of the verbal *-áyá, which had the effect of eliminating serial periphrasis.

How a change from VSO to SVO through auxiliation develops can be observed more clearly in Teso (Ateso), an Eastern Nilotic VSO language. There are indications that the language is replacing its VSO syntax by an SVO syntax. The fact that there is a marked SVO order, e.g.
From VSO to SVO

Basic: ekoto petero ekiŋok
        want  Peter  dog

'Peter wants a dog.'

(Hilders/Lawrance 1956: XIX)

Focus: petero ekoto ekiŋok
       Peter  want  dog

'Peter wants a dog.'

appears to be irrelevant in this connection. The change in word order is triggered rather by the Desemanticization of auxiliary verbs. The position of the subject is immediately after the first verb. If there is a sequence of two verbs, the first of which is an auxiliary, then the subject is placed between these verbs. In auxiliary constructions, therefore, the subject precedes the main verb. When the auxiliary is desemanticized as a tense marker, we have the following order:

**Tense - S - V.**

This order resulted, for example, when the verb -bu, pl. -potu 'come' became an auxiliary and eventually a past tense marker:

a-bu etelepat ko-lot ore bian.
he-come.PAST boy he-go home yesterday

'The boy went home yesterday.'

In this case, the change from verb to tense marker has not affected the inflectional structure: both the auxiliary/tense marker and the main verb retain personal inflections, e.g.:

a-bu ka-duk 'I built'
i-bu ko-duk 'you built'
a-bu ko-duk 'he built'

etc.

Furthermore, this construction reflects the original syntactic relation between the two verbs involved: the auxiliary -bu/-potu is the nucleus of the main clause while the second verb (-duk) is the nucleus of a subordinate clause, morphologically marked by the use of the subjunctive personal prefixes ka-, ko-, etc. (see Hilders/Lawrance 1956: 29/30).

A more advanced stage of grammaticalization is found in negative constructions. Essentially they are formed by means
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of the negative marker mam, which is derived from the verb -mam 'not to be'. This marker has lost virtually all verbal properties: it is no longer inflected for person, nor is the main verb following mam conjugated in the subjunctive, e.g.

\[
\text{mam peterso ekoto ekiŋok} \quad \text{'Peter does not want a dog.'}
\]

NEG Peter want dog

(Hilders/Lawrance 1956: XIX)

Thus, in negative clauses Teso has completed the change from VSO to SVO by reanalysing the negative copula verb -mam as a negation marker. Note that this word order change took place without involving Permutation, it was caused entirely by grammaticalization.

Teso and Krongo offer examples of an incipient change from VSO to SVO word order. According to Frajzyngier (in print), such a change has been accomplished in the Chadic languages. Various Chadic languages have future tenses going back to periphrastic constructions, where the verb 'to go' formed the auxiliary that was desemanticized to a future marker. Frajzyngier claims that this construction was in part responsible for a word order change from VSO to SVO, leading through the following stages in a number of Chadic languages:

\[
\begin{align*}
*V & \to S \\
> \quad *\text{Aux} & \to S \\
& \quad ('\text{go}') \\
> \quad \text{FUT} & \to S.
\end{align*}
\]

Another factor that might be responsible for the change from an alleged VSO to an SVO structure in the Chadic languages

1 In Turkana, a language closely related to Teso, -mam is still used as a negative copula (cf. Heine 1980b: 71).

2 There are two more negative particles, eroko and eriŋa, which had a similar fate, being derived from Proto-Ateker verbs *-r̥oko and *-riŋa. They are, however, less grammaticalized than mam, since they still require the main verb to be in the subjunctive mood (cf. Hilders/Lawrance 1956: 45/46).
relates to pragmatic marking. We noted above that subject nouns expressing completive focus are placed before the verb. Once this pragmatically induced front shifting rule loses in expressive strength, the clause-initial position of the subject becomes the norm - the result being an SVO basic order. Although we do not know how the two factors, auxillation and pragmatic marking, are related to one another diachronically, it would seem that both might have contributed jointly to the alleged word order shift in Chadic.

3.3.2 From SVO to SOV

In a number of West African languages there are some word order structures which are characteristic of SOV (verb-final) languages while other structures are typically those of SVO (verb-medial) languages. For these languages, which include Mande, Gur (Voltaic), Kru, and a few Kwa languages, a special word order type has been proposed. This type, referred to by Heine (1976: 41/42) as type B, is defined by the presence of a nominal syntax where the possessor precedes the possessed NP. Type B languages differ from one another with regard to their basic order of sentence constituents: Whereas in Mande the object precedes the verb, it follows the verb in most Gur and Kwa languages, and in languages like Kru or Ewe both arrangements, object-verb and verb-object, occur.

Two contrasting views have been voiced concerning the diachronic interpretation of these structures. According to Givón (1975, 1979) and Hyman (1975) the word order of all these languages must be reconstructed as having been SOV at some earlier stage of their development. Heine (1976: 61/62; 1980), on the other hand, claims that all West African type B languages are historically SVO, and that this order was also characteristic of Proto-Niger-Congo, the hypothetical ancestor of these languages.

The main purpose of the present section is to provide more evidence in favour of the SVO hypothesis. It is claimed that in all cases concerned there is one uniform cause for the rise
of SOV structures: nominal periphrasis. In the first part, lan­
guages exhibiting both SVO and SOV order are considered, while
the second part deals with languages having SOV as their basic
word order.

3.3.2.1 Co-existing structures: SVO and SOV

3.3.2.1.1 Ewe

In Standard Ewe there are two contrasting word order arrange­
ments: The object precedes the verb in the progressive and in­
gressive aspects but follows it in all other tenses and aspects.
This difference is accompanied by a remarkable difference in
morphological marking: Whereas the progressive and ingressive
aspects use a tense-marking auxiliary, which is le for the pres­
et tense and no for the past and future tenses, as well as a
verbal enclitic, which is m for the progressive and ge for the
ingressive aspect, the other aspects have no corresponding
morphology in their unmarked form. Compare the following exam­
ple:

Progressive:  me-le do wo m  'I am working.'
I-be work do PROG

Ingressive:  me-le do wo ge  'I am going to work.'
I-be work do INGR

Aorist:  me-wo do  'I work.'
I-do work

While Givón claims that SOV, as exhibited in the progressive
and ingressive aspects, is the original word order, Heine (1980)
attempts to show that the SVO order of the aorist as well as
other tenses and aspects is the earlier one. Ewe in fact offers
a clear example of the way an SVO language may acquire an SOV
structure.

1 Another discussion of the Ewe case can be found in Heine (1980: 103-06),
where more details are presented.
Both the progressive and ingressive aspects have the characteristics of periphrastic constructions, and they can in fact be reconstructed as going back to PP-periphrasis (cf. 3.1.1.1.1) involving the following structure:

\[ S \rightarrow \text{Aux} \rightarrow \text{NP} \rightarrow \text{postposition}. \]

In this structure, Aux is represented by the copula verb le 'to be (at)' (no 'to sit, stay' in the past and future tenses). NP stands for a nominalized verb, while the clause-final particles \( \text{m} \) and \( \text{g\text{ê}} \) are historically adpositions: they are in fact derived from the relational nouns me 'inside, interior' and \( \text{gbe} \) 'place' (Westermann 1907: 66), respectively, which are still used today both as nouns and postpositions.\(^1\)

The above structure is that of intransitive clauses. It can be transformed into a transitive clause structure by introducing a direct object as an inalienable genitive modifier of NP, i.e. the nominalized verb. Inalienable genitive NPs are placed before the head noun without any linking particle. Transitive clauses can therefore be reconstructed as going back to the following structure:

\[ S \rightarrow \text{Aux} \rightarrow \text{NP} \rightarrow \text{genitive} \rightarrow \text{NP} \rightarrow \text{nominalized verb} \rightarrow \text{postposition}. \]

This structure is responsible in particular for two characteristics of progressive and ingressive clauses in modern Ewe:

(1) The object-verb constituent behaves like a genitive construction where the head noun is a nominalized verb and the genitive modifier has the function of a direct object.

(2) Since genitive/possessor modifiers precede their head in Ewe, that what is functionally the direct object comes to be placed before the main verb, and the progressive and ingressive aspects therefore exhibit an SOV, rather than the basic SVO,

\(^1\) \( \text{gbe} \) is no longer present lexically in Standard Ewe but has survived in some eastern dialects.
word order.

In the same way as direct object nouns are encoded as genitive NPs so are object pronouns encoded as possessive pronouns. Direct object pronouns in progressive or ingressive clauses therefore have the morphosyntax of possessive rather than of object pronouns. Compare the following sentences:

me-wo e.  'I do it.'
I-do it

me-le è wo ñ.  'I am doing it.'
I-be its do(ing) PROG

In the first sentence, which does not involve periphrasis, the object is expressed by the object pronoun e. In the second sentence, which is in the progressive aspect, the object appears as a 3rd person inalienable possessive pronoun (è) being a proclitic of the nominalized verb.

The conclusion to be drawn from these findings is that Ewe is historically an SVO language which places the possessor before the possessed NP. As a result of PP-periphrasis, the nominal possessor - possessed syntax is transferred to the verb phrase in the progressive and ingressive aspects. The outcome is an SOV structure where the direct object has the morphosyntax of a genitive NP and the verb that of a noun. In these two aspects, the predicate function has been encoded in the auxiliary (le and nɔ, respectively), whereas the postpositions were grammaticalized roughly in the following way:

Desemanticization: *
me progressive marker
*gbé ingressive marker

Erosion:
ñ
ge

In view of the fact that the aspect markers ñ and ge were grammaticalized to the extent that they can no longer be related synchronically to their respective lexical source, we may say that we are dealing with an example of functional shift (cf. 1.1.3.3.2).
3.3.2.1.2 The Kru languages

In the Kru languages of southern Liberia and southwestern Ivory Coast, word order offers another case of typological inconsistency. We may consider the following features which are characteristic of most or even all Kru languages:

1) The basic order of sentence constituents is SVO when no 'auxiliary' is involved but SOV when the verb is preceded by an auxiliary:

Go die pi suká
she prepare-INCOM rice

0 yi suká pi
she POTENT rice prepare

'she cooks rice'

'she is going to cook rice'

(Marchese 1978: 121)

2) Grammatical markers expressing tense or negation are verbal enclitics, but if the verb is preceded by an auxiliary they follow the latter:

Go die

0 li-a suká
he eat-COMPL/RECENT rice

0 yi-a suká lí
he POTENT/RECENT rice eat

Koyo

0 m̄w tá suklūn
he go NEG school

0 yi tá sáká lí
he POTENT NEG rice eat

'he has eaten rice'

'he went to eat rice'

'Marchese 1978: 122

3) Auxiliaries express distinctions of tense, aspect or modality. Their lexical origin is in most cases still apparent. Thus, future markers usually go back to verbs meaning 'go', 'come', or 'have', perfective/completive markers to verbs meaning 'see', and progressive markers to locative copulas.

---

1 The following account is based essentially on Marchese (1978).
(4) While in some Kru languages (e.g. Wobe) the verb which is preceded by an auxiliary has a suffix which Marchese (1978: 129) calls a nominalization morpheme, there is no such morpheme in other Kru languages (e.g. Tepa). This nominalization marker may be segmental or suprasegmental (i.e. tonal, e.g. in Klae).

Our diachronic interpretation of the rise of SOV order in the Kru languages is essentially the same as that presented in Marchese (1978). The Kru languages must be reconstructed as having had SVO basic order. That nominal periphrasis was responsible for the introduction of a verb-final syntax is suggested by the following observations:

- According to the data presented by Marchese, SOV order is confined to periphrastic constructions, i.e. to clauses where verbs are preceded by - more or less grammaticalized - auxiliaries.

- Within such constructions, the main verb frequently appears in a nominalized form.

While we noted above (3.3.2.1.1) that in Ewe PP-periphrasis was involved, the Kru languages appear to have used NP-periphrasis to form new aspects, tenses, etc. There would seem to be a plausible explanation for this difference: The Ewe auxiliaries le'be (at)' and no 'sit, stay', which were responsible for the rise of periphrasis, are intransitive, i.e. they require adpositional complements. In Kru, on the other hand, locative verbs like 'go', 'come', or 'be somewhere', which were desemanticized as tense-aspect markers, have a transitive usage, e.g.

Godie

3 mu dů  'he has gone to the village'
he go-CMPL village

This hypothesis requires further corroboration since adpositions which are indicative of PP-periphrasis tend to undergo Erosion and Loss more quickly than other morphemes, thus making PP-periphrasis and NP-periphrasis indistinguishable. The possibility, therefore, that PP-periphrasis might have been involved in Kru, at least in some cases, cannot be ruled out.
Following Marchese (1978: 128-31) therefore we have to assume that there was a periphrastic structure

\[
\begin{align*}
S & \rightarrow VP \\
VP & \rightarrow V \rightarrow NP \\
NP & \rightarrow auxiliary \verb \rightarrow main \verb \rightarrow nominalization marker
\end{align*}
\]

which was used to form new patterns of marking tense, aspect, negation, etc. Object complements were introduced as genitive/possession modifiers of the nominalized main verb. Since genitive modifiers precede their head noun in Kru, in the same way as in Ewe, object NPs came to be placed before the main verb in clauses involving nominal periphrasis.

This evolution appears to have occurred in all Kru languages and might be reconstructable to the language ancestral of these languages. There is, however, considerable variation both between the various languages and within a given language as to the extent to which further grammaticalization processes have come in. Although the auxiliary verb was usually desemanticized, this is not always the case. The nominalization marker underwent Erosion in some languages and Loss in others, thereby making nominalized verbs indistinguishable from genuine verbs.

3.3.2.1.3 Nupe

In his outline grammar of Nupe, Smith (1967: 31) notes that "with verbs of the structure verbal plus nominal the syllable order is reversed after the perfective aspect-tense particle /á/". Smith does not make an attempt to account for this strange
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phenomenon, and on synchronic grounds there does not appear to be a meaningful explanation as to why the syllables of the verb mátsa 'laugh' are reversed in sentence (1) but not in (2):

(1) wū á tsāmā
   he PPl laughed
   'he has laughed'

(2) u mátsā
   he laughed
   'he laughed'

Smith was probably not aware of the close connection which exists between the above phenomenon and his observation (1967: 7/8) that the verbal complement "is usually placed between the aspect-tense particle and the verb". Thus, while the basic word order of Nupe is SVO, as it is in (3), following á we find SOV to be the obligatory word order (4):

(3) musa zu tsükü.
    Musa broke stick
    'Musa broke the stick.'

(4) musa á tsükü zu.
    'Musa got the stick broken.'
    (George 1971: 88; 93)

The explanation for this strange situation is essentially the same as that given in the case of Ewe, Kru, etc.: It all started with the introduction of nominal periphrasis which was responsible for the fact that the nominal order possessor - possessed spread to the verb phrase. Via syntactic reanalysis, the possessor was re-interpreted as the verbal complement (i.e. the object NP) and the possessed as the main verb (see above).

But the situation in Nupe differs from all other cases discussed so far in one respect: It probably was not the introduction of new tenses and/or aspects that triggered off this evolution but rather the need for a new clause structure that

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1 Whereas Smith calls á a "perfective aspect-tense particle", we follow George (1971) in interpreting it as a predicate focus marker (see below; see also 3.2.1.2.2).

2 Our interpretation is here at variance with the views presented in Banfield/Macintyre 1915 and Smith 1967, according to which á constitutes a tense-aspect particle.
would cope with the characteristics of intransitive verbs. This evolution can be sketched as follows:

At an earlier stage in its development, Nupe is likely to have required clauses to be transitive. Languages tend to introduce dummy objects for verbs which are inherently intransitive, to cope with this requirement. Nupe, however, appears to have chosen a different strategy, i.e. nominal periphrasis. Accordingly, a dummy verb *(l)á 'take' was introduced and the actual verb used in a nominalized form, having the function of a verbal (object) complement. In this way, transitive clauses of the following structure resulted:

Morphosyntax: NP - *(l)á - nominalized verb

Syntactic functions: S - V - O

Later on, *(l)á was used to serve as a predicate focus marker with transitive verbs. Since the actual verb was used in a nominalized form, its object complement was introduced as a genitive NP. In view of the historical possessor-possessed syntax of Nupe, the structure of clauses involving transitive verbs came to be the following:

Morphosyntax: NP - *(l)á - NP + nominalized verb

Functions: S - V - genitive + head noun

1 For an alternative hypothesis, see 3.2.1.2.2.2.

2 Westermann (1927: 191) describes the situation in Nupe as follows: "Die Sprache hat zwei Genitivstellungen, eine Nach- und eine Voranstellung. Die Nachstellung ist die heute übliche... Nun gibt es aber zahlreiche Fälle, in denen der Genitiv voransteht, und zwar sind dies zum überwiegenden Teil feste Verbindungen, man könnte sie in vielen Fällen fast zusammengesetzte Substantive nennen, also Verbindungen, die als solche aus älterer Zeit überliefert sind". Hyman (1975: 132/33) concludes that Nupe underwent a change from poss-N to N-poss, but that nominalizations were exempted from this change.
With the Desemanticization of *(1)á as a predicate focus marker, the nominalized verb re-assumed its function as the predicate nucleus, and the genitive NP became the object NP. The outcome was a structure that is characteristic of present-day Nupe:

$$S \quad \text{predicate} \quad - \quad 0 \quad + \quad V. \quad \text{focus} \ (á)$$

This structure is reflected in sentence (4). Modern Nupe has, however, gone one step further in grammaticalization: verbs tended to merge with their immediately following object complements into one phonological unit, as is evident from the following examples taken from George (1971: 95):

(5) mi lotũ. \quad \text{I did work.}'

Compare:

(6) mi á etũ lo. \quad \text{It was me who worked.}'

In a number of cases, this phonological process was accompanied by semantic Merger, the result being a polysyllabic verb with a uniform meaning, like tsámá 'laugh'. It is the object-verb order following the predicate focus marker á which still shows us that we are dealing with historical verb-object constituents. Thus, the verb tsámá is likely to go back to a constituent V (= *tsá) + N (= *má), which survives as tsámá in sentence (1) but as mátsá following á in (2). The syllable structure rule mentioned above (cf. Smith 1967: 31) thus appears to be meaningless unless one is aware of its diachronic raison d'être.

---
1 Another structure which still reflects this order is the compounding pattern noun - verbal noun (cf. Smith 1969: 99):

gā 'to (sur)pass', egwa 'hand' : gā-gwa 'to escape' : egwa-gā 'the escape'.
3.3.2.1.4 Gwari

A similar development as in Nupe has occurred in Gwari, another Kwa language closely related to Nupe. Among the features that distinguishes Gwari from Nupe is the fact that the former has a rigid possessor-possessed order, e.g.

ōsū pâ  'the chief's skin'

mi-ya  'my canoe'

In the same way as in Nupe, SOV order has been introduced via nominal periphrasis. It is the verb lá/kú1 'take' which was responsible for the rise of an object-verb order, e.g.

wo si òbwì  'he buys groundnuts'

wo kú a-shnamá sì  'he has bought yams'

This verb has undergone functional split: On the one hand, it is still used as a full verb, on the other hand it has developed into a marker of completed tenses, which also has focus function (cf. Hyman/Magaji 1971: 123). In the following examples, lá/kú is used both in its lexical and its grammaticalized (PERF) meaning:

wó lá shnamá lá  'he has taken a yam'

wó kú a-shnamá kú  'he has taken some yams'

A number of verbs have been desemanticized in Gwari to tense/

1 lá/kú is a suppletive verb: "Very generally, lá is used for singular objects (in transitive sentences) and singular subjects of inchoative verbs, while kú is used for plural direct objects, and plural subjects of inchoative verbs" (Hyman/Magaji 1971: 56). lá is cognate with the Nupe verb lâ (see 3.3.2.1.3 above).
Some problems of African linguistics

aspect markers, e.g.

\[ \begin{align*}
10 & \quad \text{lo} \quad \text{to go} \quad \text{present continuous} \\
zhni & \quad \text{zhni} \quad \text{to do} \quad \text{past habitual} \\
6\dot{a} & \quad \text{6\dot{a}} \quad \text{to come} \quad \text{future}
\end{align*} \]

In all these cases serial periphrasis was involved, which did not affect the basic SVO order. It is only \( l\dot{a}/k\dot{u} \) which led to nominal periphrasis, and hence only this verb introduced an object-verb syntax.

3.3.2.2 The rise of SOV word order in Mande\(^1\)

3.3.2.2.1 Introduction

The Mande languages of West Africa form a genetic unit which has been classified as a sub-family of Niger-Congo\(^2\). Apart from genetic relationship, there are a number of typological features shared by most or all Mande languages which suggest that we are dealing with a rather uniform language type. The following features are among those that set these languages off from most other African languages\(^3\):

(1) Most word classes show a noun-like behaviour. This applies in particular to "verbs", which in many ways are indistinguishable from nouns. This point has frequently been alluded to in the writings on Mande languages. Delafosse (1929) for example repeatedly mentions how difficult it is to distinguish between verbs and nouns in Eastern Manding. Rowlands (1959: 145/

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\(^1\) We express our gratitude to Raimund Kastenholz for having advised us on many aspects of Mande language structure, as well as to Gabriel Manessy for critical comments on an earlier version of this section.

\(^2\) Although widely accepted, this classification has repeatedly been subjected to criticism: there are some authors who would dispute that Mande really belongs to the Niger-Congo family (cf. Mukarovskv 1966; Köhler 1975: 243-45).

\(^3\) Within Niger-Congo, Mande is the only sub-family which does not show any traces of noun class systems.
46) talks of "verb-noun stems" in Mandinka and treats main "verbs" as nouns since they are followed by postpositions and may take the nominal specific marker -o. Manessy (1962: 67) calls his "verbs" radicaux bivalents since they can be used both in a nominal and a verbal function, whereas radicaux monovalents are always used as nouns. Kastenholz (1979: 87) proposes to refer to "verbs" as "verbal nouns" in view of their nominal behaviour. In Kpelle, for example, "verbs" and nouns have the following features in common (cf. Manessy 1962: 64):

- The suffix -ni, which occurs with certain negative verb forms, is also used with nouns and pronouns.
- The nominal definite marker -i may also be suffixed to verbs.
- Consonant alternation (ba 'rice': mbai 'the rice') is not confined to nouns: both auxiliaries and main verbs show the same type of alternation if preceded by the third person singular pronoun (qe).

Other noun-like characteristics of "verbs" in Mande languages are:

- They can be governed by postpositions.
- In compounds, they may occupy the slot of nouns, e.g.

Maninka

bá ró kò 'swimming' (verbal head)
river in bath

cf. bólo lá nè 'bracelet' (nominal head)
arm on metal (Spears 1972: 10).

---

1 Manessy (1962: 58) notes however that "verbs" are "des lexèmes dotés des mêmes latitudes combinatoires que les précédents [i.e. nouns; authors' note], mais qui, en outre, peuvent servir de prédicat dans deux sortes d'énoncés: l'énoncé minimum de sense injonctif (i_bugo 'frappe!'), et l'énoncé 'développe' dont le premier terme est un syntagme formé d'un 'prédicatif' affirmant l'existence d'un sujet nominal; ainsi dans a_be_bugo 'il est frappé'.
Again on Kpelle, Welmers (1973: 315) remarks: "What follows /kāa/ is a noun or noun phrase, the head of which is frequently a relational noun indicating place". But kāa, a locative copula derived from the verb 'to see', is in the same way followed by "verbs", e.g.

\[ \text{kāa kulā-i} \quad \text{he is going out} \quad \text{(Welmers 1973: 403)} \]

(2) Predicate function is not expressed by verbs but rather by a limited set of predicate markers, also referred to as auxiliaries, single tense verbs, prédicatifs, etc., part of which are "homophonous" with copula and other verbs.

(3) Personal pronouns are identical with (inalienable) possessive pronouns in most Mande languages\(^1\). This applies to both subject and object pronouns although differences, if there are any at all, are more likely to relate to subject than to object pronouns.

(4) Verb phrase constituents consisting of an object pronoun plus a verb are likely to be structurally ambiguous since they behave in much the same way as noun phrases consisting of a possessive pronoun followed by a noun\(^2\). Furthermore, in a number of Mande languages object nouns resemble genitive/possessor noun phrases whereas the verb behaves like a possessed noun (cf. Rowlands 1959: 145/46 for Mandinka). Thus there is a remarkable similarity linking verbal and nominal morphosyntax (cf. (1) and (3) above).

---

\(^1\) Kpelle offers an interesting example in this respect: Both 3rd person subject and possessive pronouns have zero expression but the initial phoneme of the following word undergoes consonant alternation if preceded by any of them (Manessy 1962: 64):

\[ \text{dēi tēyī 'the chicken is black'} \quad : \quad \text{dēyī 'it is black'} \]

\[ \text{e kolo 'your body'} \quad : \quad \text{golo 'his body'} \]

\(^2\) There is not infrequently, however, a suprasegmental distinction. In Manding for example the two structures differ by the presence vs absence of a downstep (Kastenholz, p.c.).
(5) In all the considered Mande languages there is a set of morphemes which is derived from relational nouns denoting, in particular, body parts and locative concepts. Independent of whether they occur as free forms or are grammaticalized to enclitics or suffixes, these morphemes serve a wide range of functions\(^1\). They may be used for example as
- postpositions\(^2\),
- aspect particles,
- 'preverbs',
- possessive markers,
- clause markers, or
- derivative suffixes to form place names or de-verbal nomina agentis.

(6) In all Mande languages the verb follows both the subject and the object, the possessor precedes the possessed constituent, and postpositions, rather than prepositions, are used. But these are about the only features which Mande languages share with SOV languages; otherwise, the word order structure contrasts with what we commonly associate with 'typical' SOV languages but resembles that of SVO languages, as is suggested by the following observations:

\(^1\) Tomčina (1975: 39-41) lists eleven meanings that one of these morphemes, la, has in the Kankanka dialect of Malinke. This morpheme, which is likely to be derived from a locative noun, has been grammaticalized in various ways and is in fact associated with a wide range of functions. There is, on the other hand, reason to believe that not all meanings enumerated by Tomčina are indeed etymologically related.

\(^2\) That relational nouns form the source of postposition has been demonstrated for Maninka and Bambara, for example, by Spears (1972: 4/5). Becker-Donner (1965: 19-24) lists for Mano the following postpositions:

- tā 'under' < 'ground, earth'
- mo 'at, over, on' < 'surface'
- yi 'in' < 'interior'
- piè 'toward, after' < 'side, direction'
Whereas the object precedes the verb, adverbial and clausal complements follow it.

Auxiliary verbs precede both the object and the main verb.

With the exception of possessor constituents, nominal modifiers are placed after the head noun (cf. 4.1.2).

On the basis of such observations, Heine (1976: 41) proposed a new word order type, called "B", which differs from both SOV and SVO in that it is not the arrangement of sentence constituents but rather a special kind of nominal syntax which appears to be responsible for most of its word order behaviour. Typ B includes languages having either SOV or SVO basic order; the presence of a rectum - regens word order which is not confined to genitive constructions but permeates almost the entire language structure is what defines this type.

3.3.2.2.2 Diachronic observations

The main aim of the present section is to explain some typological idiosyncrasies of the Mande languages such as those listed above. It is claimed that in order to account for such features an approach which includes generalizations on linguistic evolution as part of a theory of grammar is required.

The sentence structure of the Mande languages has been de-

1 Givon (1979: 208) questions the necessity of establishing such a type, claiming that this "leaves the more interesting issue, i.e. the exact nature and sequence of natural typological drift, unsolved". As we hope to show in this section, the need for such a type is even more obvious when we look at the typological drift that the Mande languages as well as other type B languages have been subjected to.
termined by nominal periphrasis (see 3.1.1.1.1), and by exploit­ing nominal (locative) contructions for a wide range of syntactic functions¹, more than in many other African languages.

That Mande used to have the constituent order verb - complement, rather than complement - verb, is suggested by sentences which do not have auxiliary - main verb constructions, i.e. where the auxiliary is the only constituent carrying verbal information. This is the case with copula sentences, which usually show the order verb - nominal complement, e.g.

Bambara

di ka timi. honey COP sweet

Alla ka bon. 'Allah is great.'

mobili be yan. car COP here

(Marner 1974: 23)

Mano

é kë yiḍi kpì. 'It was a tall tree.'
it COP tree high

(Becker-Donner 1965: 42)

Mende

ti ye nu woita gboyongo. 'They were twenty persons.'
they COP person six 'twenty'

(Migeot 1908: 79)

Vai

kâĩë bë kûndû. 'The man is short.'
man COP short

(Welmers 1976: 77)

There is a two-argument structure diachronically underlying basic sentences in Mande:

---

¹ This has repeatedly been hinted at by scholars working on Mande languages. Spears (1972: 16) for example notes: "The major Manding varieties, and to a great extent all Mande languages, assign a relatively high functional load to the locative structures".
This structure, which is typically that of copula sentences in SVO languages, underwent functional split in that it was employed to form intransitive sentences from any verb by means of the following reanalysis strategy:

(1) Aux was desemanticized as a tense-aspect denoting predicate marker (PM), and

(2) the NP₂ position was filled with a nominalized verb.

The resulting structure thus was:

```
S --> VP
  /  \\  
 NP₁  Aux  NP₂
```

It is likely that there was an alternative to this structure, where NP₂ was expanded into a complex NP, the outcome being a structure like

```
S --> VP
  /  \\   
 NP₁  NP₂
```

Within such a structure, the locative noun tended to assume the function of a locative postposition.

While this was the structure of intransitive clauses, an
additional argument with the function of a direct object was introduced by expanding NP₂ into a kind of inalienable possessive construction, whereby the nominalized verb became the head (i.e. the possessed) noun governing the possessor NP, which functionally constituted the sentence object. Since Mande has a possessor - possessed syntax, the object NP came to be placed before the (nominalized) verb. Transitive sentences therefore assumed the following structure:\footnote{Synchronically, NP₄ and NP₃ can be separated by a downstep, as is the case in Manding (Kastenholz, p.c.). It remains to be investigated what historical significance this observation may have.}:

\[
\begin{array}{c}
S \\
\downarrow \\
VP \\
\downarrow \\
NP₁ \\
\text{predicate marker} \\
\downarrow \\
NP₂ \\
\text{possessor} \\
\text{(= object)} \\
\downarrow \\
NP₄ \\
\text{possessed} \\
\text{(= nominalized verb)} \\
\end{array}
\]

Diachronically therefore, what was required to turn an intransitive into a transitive sentence was NP expansion of the type

\[NP + NP₁ + NP₂\]

where NP₁ assumed object and NP₂ verbal function.

That nominal periphrasis, using copula clauses as a model, was responsible for the structural changes which the Mande languages must have experienced, is suggested, in particular, by the situation in a number of Mande languages where one and the same structure is used to form both copula sentences and periphrastic verb constructions. In the following examples from Kpelle there is a structure [NP - káa - NP - i], where káa (derived from a verb 'to see', cf. Welmers 1973: 315) is the predicate.
marker and -i a locative postposition. This construction serves
to form both copula clauses as in (1) and a present progressive
aspect as in (2):

(1) seën-kâu kâa ŋ-yêe-i 'I have money.' (Welmers 1973: 319)
   money be.at my-hand-LOC

(2) 'kâa pâ-i 'He/she is coming.'
   he-be.at come-LOC
   (Welmers 1973: 315)

A very similar situation is found in other Mande languages.
Thus, Spears (1972: 15) remarks on Maninka-kan: "In Maninka-kan
the sentence à+yê na.lâ 'He is (at) coming.' has almost the same
structure as à+yê bôn à la 'He is in the house.'"

In Vai, the situation differs in so far as the postpositions
found in locative copula clauses and in the present progressive
aspect are not the same, cf.

ò fâ bê Dhûkô3s. 'My father is in Monrovia.'
   my father COP Monrovia inside

ànú bê nyîî lôn-nà. 'They are eating fish.'
   they COP fish eat-PROG
   (Welmers 1976: 76/77)

The progressive suffix -nà corresponds to the Manding locative
postposition la (after nasals na).

This structure allows only one verbal complement to be in-
troduced via NP - NP expansion. A different strategy has to be
used to add any other arguments: they are placed as adverbal
phrases in an adjunct-like form after the "verb". For example,
in sentences requiring both a direct and an indirect object
function to be expressed, the former is introduced by NP - NP
expansion whereas the latter has to take the form NP + Post, i.
e. that of an adverbial phrase placed after the "verb", e.g.

Bambara

a be sîra jîra an ye. 'He shows us the way.'
   he IMPF way show us for
   (Brauner 1974: 56)

There are, however, a few verbal structures which possibly
escaped the nominal periphrasis pattern and thus may turn out
to be remnants from the pre-SOV period of Mande.

One of these relates to the intransitive perfect aspect in a number of northern languages. It is marked by a verbal suffix, which is -ra in Bambara, -ta in Mandinka, and ?a in Vai, where it becomes nd when combined with a preceding stem-final ñ (Welmers 1976: 83):

Bambara
à nà-ra kúnu. 'He came yesterday.'
he come-PERF yesterday

Mandinka
a tá-a-ta kårang kông. 'He went to study at Kong.'
he go-PERF study Kong

Vai
i kî ?à kâmâ. 'How did you sleep?'
you sleep PERF how

mänjåa lôn-da kéŋ-ë ?œ. 'The chief entered the house.'
chief enter-PERF2 house-DET inside (Welmers 1976: 83)

This aspect is remarkable in two ways: (1) It does not make use of the otherwise common periphrastic pattern, i.e. predicate marker and main verb are identical, and (2) it does not allow for an object NP, that is, it is inherently intransitive. These two facts are probably historically interrelated: It is likely that this aspect did not undergo nominal periphrasis and hence did not acquire the capacity of introducing object NPs by means of NP - NP reanalysis.

A similar example can perhaps be seen in a few isolated verbs occurring in some Mande languages. One of these is the

---

1 There is a regular sound correspondence between Bambara-Dyula r and Mandinka t (cf. Kastenholz 1979a: 209).

2 Welmers calls this form "situational" in opposition to the "completive" form where the aspect marker ?a precedes the verb (Welmers 1976: 82).
Bambara verb ko 'say', which Brauner (1974: 55) calls a defective verb since it forms its present/imperfect aspect without the copula bê. It is conceivable that verbs like this one also escaped the periphrastic pattern\(^1\) and, accordingly, it does not allow for an object NP before the main verb: with such verbs, object function has to be expressed by means of adverbial phrases after the main verb:

\[
\text{nzonzan ko a ye...} \quad \text{'The hare tells him...'} \quad \text{(Brauner 1974: 56)}
\]

hare  
\text{say he for}

Once desemanticized to a tense or aspect particle, the fate of the predicate marker was that of any grammatical marker: It came to be exposed to various processes of grammaticalization, in particular the following:

(1) Affixation: The predicate marker was likely to be suffixed to the preceding subject pronoun, as is the case with the imperfect marker a in Mende (Migeod 1908: 84):

\[
\text{ng-a tewe} \quad \text{'I cut' (aorist)}
\]

\[
\text{I-PM cut}
\]

(2) Erosion: Predicate markers which were reduced to the status of affixes tended to undergo Erosion. What remained in many cases was a monophonemic affix consisting only of a vowel.

(3) Adaptation: The predicate marker was assimilated to the shape of the preceding subject constituent. The negative marker of Mende, for instance, has been adapted to the extent that it has survived only in the form of vowel length on the preceding phoneme (Migeod 1908: 84):

\[
\text{ngi tewe 'I cut' (aorist): ngii tewe 'I do/did not cut'}
\]

\[
\text{ng-a tewe 'I cut' (present): ng-aa tewe 'I do not cut'}.\]

(4) Merger: In a number of cases the predicate marker coalesced with the preceding subject pronoun, the result being a

\(^1\) The alternative, according to which these verbs stripped off their periphrastic morphosyntax, would seem to be less plausible.
portmanteau morpheme combining the functions of both personal and tense-aspect markers.

(5) Loss: In a number of cases, the predicate marker was lost altogether.

All these different stages are represented in the various Mande languages. And relational nouns were grammaticalized in the same way as predicate markers, first becoming postpositions and eventually suffixes on "verbs" and nouns.

One of the most striking observations that can be made on the evolution of Mande is that it resulted in a verbal syntax which is dominated by NP structures. The predicate marker, which is derived from auxiliary verbs, constitutes the only genuinely verb-like element, the rest of the clause consists of what can be interpreted largely as nominal syntax. As we indicated above, this nominal syntax involves either adverbial adjuncts or inalienable possessive/genitive constructions.

These genitive constructions are not only employed to introduce direct object. The flexibility of this construction can be demonstrated by the Bambara adverbial phrase

Ségou dugu kənə la 'in the interior of the town of Ségou'
Segou settlement inside in

(Brauner 1974: 45)

which can be said to consist diachronically of a threefold N + N expansion:

```
   N
   |  
  N  la
     |
    N kənə
     |
    Ségou dugu
```

1 In Kpelle there is a progressive marker -i which is suffixed to the verb. It is said to be a highly grammaticalized form of the locativ nominal hu or su 'inside' (cf. Manessy 1962: 64) which was used as a postposition and underwent Erosion and Affixation.
This type of expansion may, in particular, serve the following purposes:

(1) When the first noun is a nominalized verb and the second a relational noun, it is used to transform NP-periphrasis into PP-periphrasis (see 3.1.1.1.1). In Bambara, PP-periphrasis by means of the postposition la (na after nasals), which is likely to be derived from a noun meaning 'door, opening' (cf. Spears 1972: 4), is employed to form a progressive aspect:

| a bɛ malɔ dun | 'He/she eats rice.' |
| a bɛ malɔ dun na | 'He/she is eating rice.' |
| he PM rice eat POST |

(Brauner 1974: 56; 64)

(2) It introduces direct objects (see above).

(3) It may introduce a relational noun as a modifier of the nominalized verb, the former assuming a "preverb-like" function, cf.

Mende

| pu nje-i hü. | bî hú-men₁-a? |
| put water-DET inside | you inside-hear-PAST |

'Put it in the water!' 'Do you understand?'

(Migeot 1908: 120) (Innes 1969: 31)

(4) In a number of Mande languages, it may be applied to object NPs where the head (i.e. the possessed NP) consists of a relational noun:

Kpelle

| mìnii tì su kúla | 'Explain that matter!' |
| matter that inside remove |

(Welmers 1973: 217)

Maninka-kan

| a dî a lá bɛn | 'He will drop it.' |
| he PUT its on fall |

(Spears 1972: 14)

1 The use of this aspect appears to be confined to some parts of the Bambara-speaking area (Kastenholz, p.c.).

2 In Maninka-kan this is obligatory with some transitive verbs which take locative phrases for objects (Spears 1972: 13).
The details presented above suggest that it was nominal periphrasis in connection with a possessor - possessed syntax which were responsible for the rise of SOV-like features in the Mande languages. There are however some structures which cannot be accounted for in this way. This applies in particular to the singular imperative, which shows the usual object - verb order although periphrasis does not appear to have been involved, e.g.

Bambara  liwru kalan  'Read the book!' (Brauner 1974: 79)
book  read

Mandinka  kòo nàati  'Bring the salt!' (Rowlands 1959: 23)
salt  bring

Vai nyít mèt saŋ  'Buy this fish!' (Welmers 1976: 93)
fish  this  buy

The most plausible explanation would be that this order spread to imperatives as a result of analogical levelling, i.e. that sentences like

Bambara  a ye liwru kalan.  'He/she read the book.'
he  PERF  book  read

au ye liwru kalan.  'Read (ye) the book.'
ye  PM  book  read  (Brauner 1974: 79)

served as a model to extend this order to singular imperatives. More research is required on this point.

A final question we want to address ourselves to relates to the time depth involved in the change from SVO to SOV. There is every reason to assume that this change had already been concluded during the Proto-Mande period, since all modern Mande languages show largely the same SOV structure - even those that split off early and/or are spoken far away from the Mande core area. In view of the relatively short life cycle of periphrastic tense-aspect constructions, we may assume that Renovation has occurred repeatedly in the history of the various Mande languages. Proto-Mande is claimed to be several millennia old, \(^1\)

\(^1\) According to Welmers (1971: 119) the Mande branch of Niger-Congo must be estimated to be well over 5000 years old.
and we are therefore led to assume that the periphrastic forms found today differ from those that may have existed in Proto-Mande, although it is likely that essentially the same structural pattern was employed.

3.3.2.2.3 Conclusions

We are now in a position to look again at the typological characteristics listed in 3.3.2.2.1 above. Most of them relate to what we may refer to as "hybrid" word categories: verbs show a noun-like behaviour, possessive pronouns resemble personal pronouns, certain relational nouns can in the same way be called postpositions, etc. Others relate to what can be interpreted as inconsistencies in word order typology: The Mande languages combine the properties of both SVO and SOV languages in a peculiar way.

The claim made in this paper is that all these features can be accounted for if one looks at the evolution of these languages. At an early stage, pre-dating the Proto-Mande period, there must have been an SVO clause structure but a possessor - possessed nominal syntax. The structure that is characteristic of the modern Mande languages began to evolve when nominal periphrasis was introduced to mark grammatical functions like tense, aspect and negation. This pattern, which permeated almost the entire language structure, had the following major effects:

1. A limited set of verbal auxiliaries was grammaticalized to serve as predicate markers.

2. These markers were assigned an obligatory complement consisting of the nominalized verb plus an optional relational noun, which functioned as the head of an in-

---

1 While SVO is also the order that can be reconstructed for Proto-Niger-Congo, which is likely to be the ancestor language of Mande, there are no clues as to the origin of the modifier - head order of possessive/genitive constructions, which has a wide areal distribution in West Africa but is unlikely to go back to Proto-Niger-Congo (cf. Heine 1976: 71).
alienable genitive construction and assumed a postposition-like role.

(3) Direct objects were introduced as inalienable genitive NPs of the nominalized verb and thus came to be placed before the verb.

A similar evolution has been encountered in Ewe and the Kru languages, the main difference being that, in Mande, nominal periphrasis was not confined to a few tenses, aspects or negative categories, but was imposed on the entire verbal system\(^1\) - to the effect that the SOV order spread even to structures like the imperative which did not involve periphrasis. Another peculiarity of Mande may be seen in the fact that whereas Ewe made use of PP-periphrasis and Kru, as far as we can tell, only of NP-periphrasis, both strategies were utilized in the Mande languages.

Nominal periphrasis is the most common strategy used in African languages to introduce new tenses and aspects, and in this respect Mande presents no special case - with the exception that this had remarkable implications for the arrangement of sentence constituents. Yet there is one feature which suggests that the Mande languages, nevertheless, are unusual in one respect. Once nominal periphrasis is introduced it is liable to undergo further grammaticalization. This means in particular that the main verb tends to strip off its nominal morphosyntax, which it has acquired as a result of periphrasis, and to be re-converted into a verb. But for unknown reasons this development appears to have been blocked in the Mande languages: The verb retains its nominal properties and thus appears as a hybrid category which combines the semantic behaviour of verbs with the morphosyntactic behaviour of nouns. This ambiguous status of the verb is transferred to the constituents depending on it: What semantically forms the direct object noun or pronoun is morphosyntactically largely indistinguishable from a possessive/geni-

\(^1\) Perhaps with the exception of cases like those discussed above.
tival modifier. The result therefore is a language type whose constituents and word categories are difficult to define in terms of traditional grammatical labels - at least more difficult than in most other languages.

3.3.3 On the rôle of grammaticalization

The data presented above are too meagre to allow for any noteworthy generalizations on word order change. This applies particularly to the transition from VSO to SVO order, less so to the change form SVO to SOV, for which a number of cases have been reported. There are, nevertheless, a few observations that can be derived from the case studies sketched in the preceding sections.

The analysis proposed in this chapter is at variance with that presented in particular in Givón (1975) and Hyman (1975): Our word order reconstructions do not support their claim of an earlier SOV syntax in Niger-Congo. This means that the diachronic interpretations offered here are drastically different from theirs. Hyman (1975: 124) notes that "grammaticalization, though logically applicable, does not appear to play any role in the change from SOV to SVO in Niger-Congo". We fully agree with him, but in the light of the preceding observations we are tempted to re-formulate this statement to read: Grammaticalization appears to play a major role in the change from SVO to SOV in Niger-Congo. In a similar way, Givón's claim (1979a; 1975) that the syntactic order of sentences creeps into the noun phrase via nominalization, although probably justified, can as well be reversed on account of the data presented above to read: Noun phrase order may creep into the sentence order via syntactic reanalysis.

1 Apart from Ewe, Kru, Nupe, and Mande, there are other languages for which a similar evolution has been claimed. These include Anyi, a Kwa language of the Akan group (D. Creissels, p.c.), and Moru, an Eastern Sudanic language (T. Andersen, p.c.).
The fact that our word order reconstructions strongly contrast with those of Givón and Hyman might seem to be of interest only to scholars concerned with diachronic Niger-Congo linguistics. Yet there are some issues which are of a more general import. For example, Hyman's claim (1975: 141) that there was a change from SOV to SVO in Niger-Congo which was instigated by afterthought structures is of limited use in view of the fact that such a change probably never occurred. And the same holds for Givón's serialization hypothesis (1975): There appears to be no need for such a hypothesis since the alleged change from SOV to SVO in Niger-Congo is unlikely to have taken place after all.

In previous works on word order change, a number of factors have been isolated, the most prominent being:

1) Contact/areal influence (Hyman 1975; Heine 1975; Sasse 1977),
2) disambiguation (Vennemann 1973a, 1973b, 1973c),
3) grammaticalization (Li/Thompson 1974), and
4) pragmatic/discourse-oriented factors like afterthought, topicalization, focus-marking, or presentative marking (Hyman 1975; Givón 1979a).

The observations made in this chapter suggest that (3) appears to be one of the major, if not the major, force in triggering word order change in African languages, frequently accompanied by contact phenomena. On the basis of these findings we are led to assume that it is purely morphosyntactic processes which may be responsible for such changes. In virtually all cases considered it was the introduction of new patterns of auxiliation that, in some way or other, gave rise to alterna-

1 Vennemann's disambiguation hypothesis has been shown to be irrelevant to African languages (cf. Hyman 1975; Sasse 1977).
2 This claim does not appear to be valid for language groupings outside Africa (cf. Sasse 1977).
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tive arrangements of sentence constituents.

Finally, we briefly want to point to the implications that grammaticalization may have for synchronic typology. The languages and language groups considered above display certain typological "inconsistencies": they are marked by the presence of two co-existing word order arrangements which can be said to be typologically "incompatible" with one another. We hope that the diachronic interpretations proposed above have shown that such "inconsistencies" can be accounted for only by taking the mechanics of grammaticalization into consideration (see 4.1.2). Typology does in fact turn out to be a captive of diachronic change, as Givón (1971b) has claimed.
3.4 On the genesis of gender

3.4.1 Introduction

There are languages where gender expression is confined entirely to personal pronouns. In other languages again, gender is marked on all kinds of categories but not on personal pronouns. A theory aiming at explaining the nature of gender, or noun class, systems has to account for such typological variation. In this section we wish to look at one problem that might turn out to be relevant to such a theory: the origin of gender systems. This problem has been dealt with in numerous works since the beginnings of linguistics, and it has aroused interest far beyond the limits of linguistics. The main reason for taking up this much discussed issue is that more recently some findings have become available which appear to shed new light on certain aspects of gender evolution.

For many decades, Africanists have been concerned with the
discussed issue. Some of these findings are particularly relevant to this problem.

---

1 African examples of the former can be found widely in the coastal belt of West Africa, where there is a pronominal two-gender distinction human vs non-human or animate vs inanimate. This applies, for example, to Animere, a Togo Remnant language (Heine 1968: 127), Twi, the southern Guang dialects of Ghana, and to most Kru languages of Ivory Coast and Liberia (cf. Westermann/Bryan 1952: 53; 92). The Eastern Nilotic languages are examples of the latter type (see 3.4.2.1 below). Dimmendaal (1983: 11) therefore notes with regard to Turkana, one of the Eastern Nilotic languages, that Greenberg's universal 43 ("If a language has gender categories in the noun, it has gender categories in the pronoun", Greenberg 1963: 75) is contradicted by this language. It would seem, however, that Greenberg's universal not only refers to personal pronouns; there are indeed a number of pronominal categories in Turkana as well as in all other Eastern Nilotic languages having overt gender expression.

2 No distinction is made here between "gender" and "noun class" systems. If necessary, we will distinguish between sex-based and nature-based gender systems (see Heine 1982a: 190-193).
reconstruction of Afroasiatic or Bantu gender structures back to their origins. Neither these studies nor Meinhof's attempts to prove that sex-based gender distinctions as found in Semitic or Indo-European are historically derived from nature-based genders of the Niger-Congo type have been remarkably successful. Both the Afroasiatic and the Niger-Congo systems must have developed at a time which is outside the scope of our diachronic methodology.

However, there are some gender systems in Africa which appear to have evolved much more recently. For example, there is reason to assume that Niger-Congo languages like Ijo, Mba-ne or Zande, or Eastern Nilotic languages like Bari or Maa, have developed a sex-based gender morphology whose genesis might still be recoverable. It is this kind of languages that we will be concerned with in the following paragraphs.

3.4.2 Two case studies
3.4.2.1 Eastern Nilotic

The Eastern Nilotic languages, which form one of the three branches of the Nilotic family, or sub-family, are classified into the following genetic units (Voßen 1982: 293ff):

1. Bari
2. Non-Bari (Teso-Lotuko-Maa)
   2.1 Teso-Karimojong-Turkana
   2.2 Lotuko-Maa
      2.2.1 Lotuko
      2.2.2 Ongamo-Maa
         2.2.2.1 Ongamo
         2.2.2.2 Maa (including Maasai).

All these languages have a sex-based gender morphology. While Bari, Lotuko, and Ongamo distinguish only two genders, masculine (M) and feminine (F), there is a third one in the remaining languages, which is a place gender in Maa and a common-neuter gender in Teso, Karimojong and Turkana.
With the exception of Bari and, to some extent, Lotuko, all Eastern Nilotic languages have a rigid system of overt gender marking by means of noun phrase proclitics or nominal prefixes. Gender agreement is confined to the noun phrase; neither personal pronouns nor verbal subject affixes are marked for gender. In all languages of the group, gender is used for derivative purposes. Typically, the following semantic distinctions are made, or can be made, by means of gender derivation:

<table>
<thead>
<tr>
<th></th>
<th>Animate concepts</th>
<th>Inanimate concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>male beings</td>
<td>big items</td>
</tr>
<tr>
<td>F</td>
<td>female beings</td>
<td>small items</td>
</tr>
</tbody>
</table>

A hypothesis concerning the evolution of gender in Eastern Nilotic has been outlined in Heine/Voßen (1983); we therefore confine ourselves to a brief summary. In accordance with that hypothesis, there are two gender markers, *lo M and *na F, which can be reconstructed for Proto-Eastern Nilotic (PEN). They are likely to be derived from relational nouns, *iy 'member/person of' and *nyaa- 'girl, daughter', respectively, which formed the head of genitive constructions, before they developed into pre-nominal modifiers *lo and *na. The subsequent development is described thus in Heine/Voßen (1983: 254/55):

1. *na was desemanticized to a feminine marker, and *lo was re-interpreted as a non-feminine marker, eventually becoming a masculine marker.

2. While Proto-Nilotic and PEN must be assumed to have placed their nominal qualifiers after their head noun, *lo and *na became the only pre-nominal qualifiers. Initially, they were confined to qualifying certain groups of nouns like names of places, social units, and perhaps animals.

3. Eastern Nilotic inherited the NEAR demonstrative *ni, pl. *ku from Proto-Nilotic. *lo and *na came to be used jointly with these demonstratives so that the following demonstrative structures resulted:
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\begin{align*}
\{^{*}lo\} + N + ^{*}ni, \text{ pl.} & \quad \{^{*}lo\} + N + ^{*}ku \quad '\text{this N}'.
\end{align*}

(4) The gender-sensitive markers *lo and *na became the primary means of expressing the demonstrative function, and the post-nominal demonstratives became redundant and tended to be omitted.

(5) The new demonstrative markers *lo M and *na F were responsible for the introduction of gender agreement (see 3.4.3 below).

While PEN had already gender agreement, it had no obligatory gender expression on nouns. It is only after the first split of PEN, which separated Bari from the rest of Eastern Nilotic, that *lo M and *na F developed into proclitics of the noun phrase. Since the noun usually takes the first position in the noun phrase, these demonstratives become nominal proclitics, and in many cases they underwent Affixation.

3.4.2.2 Zande\(^1\)

3.4.2.2.1 Synchronic data

Zande, as well as a number of closely related languages like Barambu, Pambia, and Nzakara, has a covert gender system distinguishing four noun classes in the singular and three in the plural, where the distinction between masculine and feminine is neutralized\(^2\):

---

\(^1\) The following presentation is based entirely on Claudi (1983), which contains a much more detailed analysis. We express our gratitude to her for having given us access to her unpublished work.

\(^2\) We are confined here to the gender system of Zande. The other languages have fewer genders than Zande, e.g. Nzakara three (animate, animal, and inanimate), Barambu and Pambia three in singular (masculine, feminine, non-human) and two in plural (human, non-human) (Tucker/Bryan 1966: 147ff).
Zande: Synchronic data

Singular | Plural
---|---
Masculine (M) | Human (H)
Feminine (F) | Animal
Animal (A) | Animal
Inanimate (I) | Inanimate

Thus, Zande combines the properties of both sex-based and nature-based gender systems. Gender expression is confined to pronouns (but see below), the relevant markers being:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sg.M kó</td>
<td>kó</td>
</tr>
<tr>
<td>F rí</td>
<td>rí</td>
</tr>
<tr>
<td>A (h)ù</td>
<td>rù</td>
</tr>
<tr>
<td>I sí, ti</td>
<td>(h)è, (h)à</td>
</tr>
<tr>
<td>Pl.H šó, ʃo</td>
<td>yô</td>
</tr>
<tr>
<td>A âmì</td>
<td>(r)à</td>
</tr>
<tr>
<td>I sì, ti</td>
<td>(h)è</td>
</tr>
</tbody>
</table>

Note that there is no number distinction in the inanimate gender. In addition to these categories, there is another 3rd person pronoun ni, which is used for referents of unknown sex and/or for indefinite human referents. The pronoun (h)ù of the animal gender appears to be used as a logophoric pronoun, e.g.

ya tâmë-rë wë u-nà wòka-wòkà.
say (younger)-my so A.SG-PRES be.sick-be.sick
brother

'My (younger) brother says that he is sick.' (Tucker 1959: 135)

There is no distinction between bound and free pronouns, and personal pronouns behave in many respects like nouns (see 3.4.2.2.2).

Apart from personal pronouns, gender is marked on the following pronominal categories:

adjective,
demonstrative,
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possessive, and reflexive.

However, once these categories are used as nominal attributes, there is no gender expression, e.g.

\[
\begin{align*}
&\text{gi ko re} & \text{'this one (M)' (Gore 1926: 37)} \\
&\text{NEAR he DEM} \\
&\text{gi boro re} & \text{'this person' (Gore 1926: 37)} \\
&\text{NEAR person DEM} \\
\end{align*}
\]

In addition, adjectives are preceded by the copula \(\text{ni}\) and followed by a gender marker when used "emphatically":

\[
\begin{align*}
&\text{gude du ni gbegberē ko} & \text{'the boy is b a d'} \\
&\text{boy be be bad he} \\
&\text{mo dua bambu ni bakere e} & \text{'build a b i g house!' (Gore 1926: 36; 39)} \\
&\text{you build house be big it} \\
\end{align*}
\]

3.4.2.2.2 Diachronic interpretation

There is evidence to suggest that the gender markers of Zande are of nominal origin, and that the gender system arose via the pronominalization of nouns. This can be seen most clearly by looking at the inanimate object marker \((h)e\) which is derived from the noun \(h\epsilon\) 'thing'. This noun has been grammaticalized in various ways, depending on what other morphemes it was combined with, e.g.

\[
\begin{align*}
&\text{gu he} & \text{'something' (Gore/Gore 1931(1952): 51/52)} \\
&\text{some thing} \\
&\text{gine} & \text{'what? ' (+ *gini 'what' + h\epsilon)} \\
&\text{ri-a-hē} & \text{'food' (-hē = derivative suffix)} \\
&\text{eat-a-thing} \\
\end{align*}
\]

When used as an object noun, \(h\epsilon\) has been grammaticalized to a 3rd person pronoun. That we are dealing with a case of func-

\footnote{There is some variation in the shape of both the noun (hēē, he, hē, e) and the inanimate pronoun (hē, e, ha, a).}
tional split can be seen from sentences like the following where \( h_e \) may refer ambiguously to a noun (1) and to a pronoun (2):

\[
\begin{align*}
\text{mï-mångî-}h_e. & \quad (1) 'I have done the thing.' \\
(2) 'I have done it.' \\
\end{align*}
\]

(Tucker 1959: 130)

There are however signs of an incipient functional shift: While the pronoun is subject to certain forms of Adaptation, the noun is not. Thus, Gore (1926: 31) notes: "The pronoun \( e \) should be distinguished from the noun \( e = \) a thing, which never changes."

The development of \( h_e \) into a 3rd person pronoun and inanimate gender marker has been confined to the object function, and as an object pronoun it has spread to other pronominal categories, e.g.

Reflexive: \( ti-e \) 'itself' (inanimate)

Possessive: \( ga-a \) (+ \( *ga-h_e \)) 'its, of it' (inanimate)

However, it has not become a subject marker, as other gender markers have. This applies, for example, to the masculine pronoun \( kó \). It is likely to be derived from a noun \( *ko 'man, male' \), which appears as \( ko(ko) \) in Banda, \( kwá \) in Ngala, or \( kwóí, kye, etc., in Barambu. The Zande noun \( kumba \) or \( komba 'man' \) is historically a compound word consisting of \( *ko \) plus another morpheme \( *mba 1 \). \( kó \) has been generalized as the only marker of the masculine gender, it is not subject to constraints as is \( (h)e \).

---

1 In Barambu and Pambia, \( *mba \) combines with the noun \( kye 'man' \) in predicative use, e.g.

Barambu: \( gu \ gëbôdô mëgu a-kye-mba. 'This buffalo is a male.' \\
Pambia: \( da \ gëbôdô mëgu ká kye-mba. ' \\

Furthermore, \( mba \) forms a personal pronoun referring to animals in these two languages.
There are two more gender markers in Zande for which Claudi (1983) offers a diachronic analysis. One is ni, which can be called a human gender marker (see 3.4.2.2.1 above). This pronoun goes back to a noun *n~ 'person', which still occurs with that meaning in Nzakara and Barambu. In addition, ni has been grammaticalized to an indefinite pronoun in Nzakara.

The other pronoun is âmì̊, the plural marker of the animal gender. In Banda, there is a noun mi 'meat, flesh' which may be etymologically related to âmì̊. In view of the fact that 'meat' and 'animal' are referred to by the same lexeme in many African languages, there may have been a noun *mi 'animal, meat' which gave rise to the animal gender marker of Zande. The prefix â- is the general plural marker of Zande nouns.

Assuming that these etymologies are correct, we are able to reconstruct the gender system of Zande as being the result of pronominalization of the following kind:

<table>
<thead>
<tr>
<th>Nominal origin</th>
<th>Gender pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td>'man, male'</td>
<td>masculine</td>
</tr>
<tr>
<td>'person'</td>
<td>human</td>
</tr>
<tr>
<td>'animal, meat' (pl)</td>
<td>animal (pl)</td>
</tr>
<tr>
<td>'thing'</td>
<td>inanimate</td>
</tr>
</tbody>
</table>

Although the etymology of the feminine, as well as of other gender markers, remains opaque, there appears to be some justification to assume a similar evolution for them.

While it is likely that the Desemanticization of nouns to personal pronouns and, hence, to gender markers, started with direct object nouns and then spread to subject constituents, it also affected other pronominal categories. The 3rd person pronouns of Zande still behave syntactically in many ways like nouns, i.e. they occur in much the same contexts as nouns:

Possessive: 

- ga gude bambu  'the boy's house'
of boy house
- gâ kâ nyâ  'his animal'
of him animal
Demonstrative: gi boro re 'this person'
NEAR person DEM

gi ko re 'this one (M)'
NEAR he DEM

There must have been a period when phrases like gà kò nyà and gi ko re were ambiguous since kɔ/ko referred to both the noun ('man, male') and to its desemanticized equivalent, the pronoun. By now, however, functional shift has been concluded and only the pronominal meaning remains\(^1\).

There are indications that Zande is evolving automatic gender agreement. According to Tucker (1959: 149), though not according to Gore (1926), adjectives which are not derived from verbs have obligatory person-gender agreement\(^2\) if in predicative use, e.g.

\[
\text{kò-nì bakérè-kò.} \\
\text{he-be big-he}
\]

'He is big.'

Furthermore, although there is no verbal gender agreement, the subject pronoun is used optionally even when preceded by a subject noun phrase\(^3\). Claudi, therefore, assumes that we are dealing with a case of "fakultative Konkordanz:"

3.4.3 From noun to gender system

In the present section we will try to review the data on the diachronics of gender systems in Africa with reference to the following questions:

(1) How does a gender distinction come into being?

---

\(^1\) The situation is different in the case of the inanimate pronoun (h)ɛ (see above).

\(^2\) Claudi rightly considers gender agreement as a concomitant feature of personal agreement.

\(^3\) The presence or absence of these pronouns does not appear to have any semantic or pragmatic significance.
(2) Once there is such a distinction - how are additional genders acquired?
(3) How do nouns acquire overt gender marking?
(4) How does gender agreement arise?

Although questions (1) and (2) appear to be closely inter-related, there is reason to keep them apart. Greenberg (1978: 79) rightly notes: "The way in which gender arises needs not be the same as that by which the system can expand by the development of new genders".

Our main concern in the preceding pages was with question (1). According to the reconstructions proposed we are led to assume that it is grammaticalization which must be held responsible for the rise of gender distinctions. In both case studies presented, the evolution started with nouns which were desemanticized to gender markers. There is however a remarkable difference with regard to the way this happened, and this difference can be made responsible for certain synchronic characteristics separating these systems.

In Eastern Nilotic, the genesis of gender took place within the noun phrase and involved what we may call the demonstrative channel: Relational nouns forming the head of N + N constructions were grammaticalized to pre-nominal qualifiers and assumed a demonstrative function. Once they were established as demonstratives, the way was cleared for the rise of both nominal gender marking and agreement.

In Zande, as well as various other languages closely related to it, an entirely different channel was responsible for the rise of gender distinctions: The grammaticalization of nouns appears to have started at the clause level, rather than within the noun phrase. Nouns denoting natural classes of concepts, like 'person', 'man', 'animal' or 'thing' were desemanticized to personal pronouns when used as either object or subject nouns. Once they were in paradigmatic opposition as 3rd person pronouns, a gender distinction was established. In addition, these nouns
were grammaticalized within pronominal categories like demonstratives, possessives, or reflexive pronouns.

It is possible that there are alternative channels leading to the emergence of gender distinctions. More information on other gender systems is urgently required. And this also applies to question (2). Only few cases have been reported where etymologies have been established for newly acquired genders. For example, a number of African languages have introduced a third gender in addition to the existing masculine/feminine distinction. Thus, in Maa there is a place gender, but no reliable information is available on its origin.

Two examples of new genders have been cited by Greenberg. The first involves the development from preposition to gender marker: A preposition may be reinterpreted as a gender marker and thus give rise to the emergence of a new gender. For example, there is reason to assume that the so-called place genders of the Congo branch of Bantu languages go back to the locative prepositions *pa, *ku and *mu (cf. Greenberg 1978: 70). The second leads from indefinite article to neuter gender marker. Greenberg (1978: 79) provides examples from Chinook, Khasi, and Nama. He quotes Meinhof (1909):

"The of the genus commune was originally an indefinite article which had nothing to do with gender and it is still used this way at the present time. It can be added to every substantive whether of masculine or feminine gender to signify an instance of the appropriate class."

Cases like these suggest that once there is a gender system, additional genders may be acquired via Expansion: Function words like adpositions or articles may develop into gender markers by becoming members of already existing paradigms of gender morphemes. Klingenehenben's work on Ful suggests, on the other hand, that the rise of new genders may also be due to morphophonological reanalysis: An "erroneous" reinterpretation of a boundary separating a noun stem from its affix can have the effect of creating a new gender (his noun class 17; Klingenehenben 1941; 1958; 1963: 91).
However, there is also evidence that additional genders may arise through the Desemanticization of nouns. The Ateker group of Eastern Nilotic, which includes languages like Teso, Karimojong, Turkana, and Toposa, have developed a common-neuter gender (C), which is apparently derived from a noun *(né)ní 'place referred to earlier' (cf. Dimmendaal 1983: 219). Although this noun no longer exists as an independent lexical item, it still occurs as a locative function word which exhibits a nominal syntax. Thus, it can be used as the head of a nominal possessive construction:

Turkana

ní a i-íŋok
"place" of C-dog

cf. á-kíriŋ a a-ítə
F-meat of F-cow

'towards the dog'

'meat of a cow, beef'.

Furthermore, it may be used with possessive suffixes in the same way as nouns:

Turkana

ní-káŋ
"place"-my

cf. na-káato-kaŋ
F-sister-my

'towards me'

'my sister'

The transition from noun to gender marker probably took place when *(né)ní was generalized as the head of locative N + N compounds, e.g.

Turkana

a ní-íŋok
from "place"-dog

a ní-káŋ
from "place"-my

'from the dog'

'from me'.

---

1 The vowel of the morpheme ní ~ ní is subject to cross-height vowel harmony (cf. Dimmendaal 1983: 19ff).
The erstwhile noun is likely to have been desemanticized to a derivative prefix before it developed into an obligatory gender indicator of certain nouns. Typically, these nouns denote either small items or concepts for which a distinction of sex is irrelevant.

The new gender has lost virtually all traces of its locative origin. When used as derivative morpheme, it usually has diminutive function, e.g.

Turkana: ɛ-kaal M 'male camel'
a-kaal F 'female camel'
i-kaal C 'baby camel'

As a nominal prefix, the gender marker was eroded to i-, as the last example shows. Although the new gender has become a regular member of the gender paradigm of the Ateker languages, it differs from the other two genders in that (1) there is only a small number of nouns which are inherently associated with it, and that (2) it is distinguished only in the singular; in the plural, nouns belonging to the common gender use the morphology of the masculine gender.

With regard to question (3), there is every reason to assume that the evolution described by Greenberg (1978) constitutes the main channel for the rise of nominal gender marking. In accordance with our framework, this evolution can be sketched thus:

(a) Desemanticization I: demonstrative > definite article
(b) Desemanticization II: definite article > non-generic article
(c) Cliticization: free word > clitic
(d) Affixation: clitic > affix
(e) Fossilization: affix > marker of nominality.

The various Eastern Nilotic languages differ in the extent to which they have been affected by this evolution. While Bari appears to have escaped this evolution altogether, only one language, Lotuko, has gone as far as (e).
This channel presupposes two things: First, that there exists a gender distinction and second that this distinction is marked on demonstrative qualifiers. Zande does not meet the second condition and, hence, was not able to make use of this channel.

As to the rise of gender agreement, i.e. question (4), there are a number of channels to be considered. First, we have to distinguish between verbal, or external, agreement and agreement within the noun phrase.

The major, if not the only, channel leading to verbal subject and object agreement has a pragmatic cause: It starts with the dislocation of thematic\(^1\) subject or object constituents. According to Givón (1975a: 151), the relevant development can be described thus:

"[...] when a language reanalyses the topic constituent as the normal subject or object of the neutral, non-topicalized sentence pattern, it perforce also has reanalysed subject-topic agreement as subject agreement and object-topic agreement as object agreement."

At least two divergent channels can be identified leading to the rise of internal concord, i.e. to agreement of nominal qualifiers with their governing noun. One channel is based entirely on grammaticalization: It involves Expansion whereby demonstratives come to develop into subordination markers. In Eastern Nilotic, for example, the erstwhile demonstratives were grammaticalized to relative clause markers. Since relative constructions are employed as an important strategy to introduce nominal qualifiers such as de-verbal adjectivals or even some numerals, these markers became the major source of gender agreement. Two examples from modern Eastern Nilotic languages may illustrate to what extent relative clause markers have been used to introduce nominal qualifiers:

---

\(^1\) The term "theme" is used here as defined by Dik (1978: 132ff).
From noun to gender system

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Turkana

ŋi-coéí lu-uni lu apol-ok lu
PL-bag REL-three REL big-PL these

'M these three big bags'

Maasai

in-kíshú na-á-pishana na-á-íbor
PL-cattle REL-PL-seven REL-PL-be.white

'seven white cows'.

One of the most noticeable outcomes of this evolution in Eastern Nilotic was that gender marking did not affect personal pronouns and, as a logical consequence of this, did not lead to verbal gender agreement. This channel appears to be confined to nominal qualifiers which can function as predicates.

The second channel involves the pragmatic use of 3rd person pronouns which are used as a kind of "afterthought" to specify the information conveyed by that category.

Kxoe, a Central Khoisan language distinguishing three genders, masculine (M), feminine (F), and common (C), may illustrate what we loosely refer to as the "afterthought strategy". There is a remarkable variety of personal pronouns. The basic ones of these pronouns, which are portmanteau morphemes expressing in the same way gender, number and person, are:

---

1 Note, however, that there exists another widely used channel of grammaticalization leading from demonstratives to personal pronouns. It is therefore conceivable that the demonstrative gender distinction will spread to personal pronouns as well and eventually be responsible for the rise of verbal agreement through thematic dislocation (topic-shift; see above). A beginning has already been made in Bari (Spagnolo 1933: 80) and Toposa (Gerrit Dimmen-daal, p.c.), where the demonstratives lo M and na F can be used as personal pronouns, 'he' and 'she', respectively.

2 The following data on Kxoe are taken from Köhler (1981).
Some problems of African linguistics

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Dual</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1M</td>
<td>tî</td>
<td>tçăm</td>
<td>//é</td>
</tr>
<tr>
<td>F</td>
<td>tî</td>
<td>câm</td>
<td>çé</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>kxâm</td>
<td>té</td>
</tr>
<tr>
<td>2M</td>
<td>tçá (-tçí)</td>
<td>tçào</td>
<td>//ào</td>
</tr>
<tr>
<td>F</td>
<td>hâ (-çi)</td>
<td>ção</td>
<td>çó</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>kxào</td>
<td>tô</td>
</tr>
<tr>
<td>3M</td>
<td>xa-má</td>
<td>xa-tçá</td>
<td>xa-//uá</td>
</tr>
<tr>
<td>F</td>
<td>xa-hé</td>
<td>xa-çá</td>
<td>xa-djí</td>
</tr>
<tr>
<td>C</td>
<td>(xa-'á)</td>
<td>xa-kxá</td>
<td>xa-ná</td>
</tr>
</tbody>
</table>

The 3rd person pronouns are diachronically compounds consisting of the demonstrative xa plus the erstwhile pronouns.

There is reason to assume that it is these pronouns which were responsible for the rise of gender, as well as number and person, agreement in Kxoe through the application of the "afterthought strategy". For example, the interrogative word mâ/mâ-'who?' may be used on its own:

mâ hî-nyé-tâ.  'Who has done it?'
who do-JUNC-ASP

Frequently, however, it is followed by one of the personal pronouns listed above in order to narrow down the range of possible referents, e.g.

mâ-mâ          'who?' (male referent)
who-he
mâ-hî          'who?' (female referent)
who-she

Since this type of structure is also used with other word categories, the result is an agreement structure as can be found in sentences like the following:

---

1 This demonstrative, in the same way as other demonstratives, may also be used with non-3rd person pronouns, in which case "emphasis" is placed on these pronouns (Köhler 1981: 523).
From noun to gender system

xà-má mà-má á-mà. 'Who (male) is this?'
that-he who-he that-he

xà-hê mà-hê á-hê. 'Who (female) is this?'
that-she who-she that-she

This strategy is used in particular to pronominalize nominal attributes, e.g.

/u /ða-hê
other child-she

but: /u-hê
other-she

'another girl'

'another one (female)'.

It would seem that once the use of the personal pronouns has become obligatory on pronouns, it tends to be extended to attributes as well. Köhler (1981: 529) presents the following attributive paradigm of the indefinite word /u 'other':

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Dual</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>/u-m (+/u-ma)</td>
<td>/u</td>
<td>/u</td>
</tr>
<tr>
<td>F</td>
<td>/u</td>
<td>/u</td>
<td>/u</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>/u</td>
<td>/u-n (+/u-nà)</td>
</tr>
</tbody>
</table>

This shows that the pronominal form has affected only the masculine singular and the common plural forms, which appear to be the most frequently used gender-number pronouns. It is likely that the pronominal form will spread to the other members of the paradigm as well, as has happened to attributive categories like demonstratives.

Furthermore, the "afterthought strategy" seems to have been applied to clause structures where it serves as a nominalization device:

kx'õxò 'à //ão-ró-tà-mà 'the one who has shot game'.
game ACC shoot-JUNC-ASP-he

That the primary function of this strategy is that of reference specification is suggested in particular by the fact that in certain constructions it may not be used if the referent is
already specified, while its use is obligatory when the referent is typically unspecific, e.g.:

(1) In possessive constructions the use of the person–gender markers is barred after inalienable possessed nouns but obligatory after alienable possessed nouns:

Inalienable: /ũwà gyǎm canoe side

Alienable: goàbá-m di ngú 'à 'the side of the canoe' 'the hut of the Mbukushu (man)'.

(2) A noun in the vocative is obligatorily followed by a 2nd person pronoun, unless it is a proper noun or a kinship term where the use of the personal pronoun is ungrammatical:

(tça) kxœé-tçè (+ -tçè è) 'man!'

(you) man-you.VOC

but: mbòngi (')è

Mbongi VOC

ndè è

mother VOC

---

1 While we are concerned here with reference specification, one might add that the "afterthought strategy" is also employed to "specify" number. In many African languages, 3rd person plural pronouns have been added to nouns and have developed into nominal plural markers, e.g. Susu -e (Friedländer 1974: 25), Bambara -u, Malinke -ru, -lu, Dyula -lu (Brauner 1974: 26), Ewe wọ, and Lugbara -(e)i (Crazzolara 1960: 19). In accordance with this strategy, the personal pronoun follows the specified unit. This applies in the same way to languages which consistently place the modifier before the head (e.g. Kxoe) as to languages having the opposite word order. One exception has been found, however: In Yoruba, which has a head–modifier syntax, the 3rd person pronoun precedes the head noun:

awọn ewe won = PL 'their leaves' (Ward 1952: 216/18).
3.4.4 Conclusions

Whether the evolutions sketched above constitute the only, or even the main, ways in which gender systems arise is open to further research. What is common to these evolutions is that they all involve grammaticalization in some way or other: Meaningful units are desemanticized, free morphemes turn into bound morphemes, and pronouns into agreement markers. It is still largely unclear to what extent this development is influenced by pragmatically induced structures; there is, however, every reason to assume that pragmatic functions play a rôle in the rise of most types of gender agreement.

Once a gender system has been established things can happen which are outside the scope of grammaticalization. Gender categories are exploited for various purposes. They may be utilized to introduce new derivative distinctions, and gender agreement can become the primary means of marking syntactic relations between sentence constituents. The main purpose of the preceding paragraphs was to suggest that it is not functions like these which lead to the emergence of gender, they are more likely to be concomitant factors in the evolution of gender structures.
CHAPTER FOUR: SYNCHRONIC STRUCTURE

There are certain linguistic structures whose raison d'être can be explained neither by native speakers nor by a language teacher, nor by a linguist confined to a strictly synchronic perspective, yet which can be accounted for in a meaningful way by looking at the way they originated. In his remarks on transformational-generative theory, Givón (1979a: 7) concludes: "To the extent that a linguistic theory makes no reference to the natural parameters of language, it remains perforce a higher level of formalism". With the following notes we wish to demonstrate that linguistic evolution constitutes one of these parameters.

4.1 Research in language universals

Chapter 4 is mostly devoted to problems of grammatical description. However, findings on grammaticalization and reanalysis are not only relevant to descriptive linguistics, they may also account for differences and similarities existing between languages, and hence be of use to both language typology and universal linguistics. In section 4.1, some examples are provided which suggest that research in language universals may profit from incorporating an evolitional perspective. We will be confined to a few points discussed in Greenberg's well-known paper "Some universals of grammar with particular reference to the order of meaningful elements" (Greenberg 1963).

4.1.1 Harmony and reanalysis

4.1.1.1 Dominance and harmonic relations

Following his presentation of 45 language universals, Greenberg has proposed some general principles "which seem to underlie a number of different universals and from which they may be deduced" (Greenberg 1963: 76). The most noteworthy of these relate to dominance and harmonic relations.

Dominance has nothing to do with frequency of occurrence. It is rather based on the mutually exclusive co-occurrence re-
lationship between certain linguistic constituents or, as Greenberg (1963: 76) puts it, "on the logical factor of a zero in the tetrachoric table". Greenberg (1963: 79) notes that there are correspondences between topic-comment structure and dominance but does not specify how these are to be defined.

Essentially four cases of dominance are discussed by Greenberg. The first involves his Universal 25, which reads:

"If the pronominal object follows the verb, so does the nominal object."

This statement apparently relates to bound (or clitical), rather than to free object pronouns. He cites, among others, Swahili as an example of a language where "the pronominal object always precedes the verb". Swahili places in fact bound pronouns before but free object pronouns after the verb, as the following example shows:

\[\text{ni-na-mw-ona yeye.} \quad \text{I-PRES-him-see him}\]

Swahili places in fact bound pronouns before but free object pronouns after the verb, as the following example shows:

\[\text{ni-na-mw-ona yeye.} \quad \text{I-PRES-him-see him}\]

In Amharic, it is the other way round: Both the object noun and the free object pronoun precede whereas the bound object pronoun follows the main verb, e.g.:

\[\text{båqlo-wa lağ-u-n räggät-ääč-aw.} \quad \text{The mule kicked the child.}\]
\[\text{mule-DEF/f child-DEF-ACC kick-she-him}\]

\[\text{but: nággar-u-ん,} \quad \text{'They told me.'}\]
\[\text{tell-they-me}\]

Amharic is not the only African language which contradicts Greenberg's Universal 25; there are various other Ethiopian Semitic languages which place the nominal object before but the bound object pronoun after the verb, as the following example from Tigre shows (Leslau 1945: 188; 203):

\[\text{'adug worot 'adog la'kam hallāw.} \quad \text{The donkeys have sent a donkey have sent donkey.'}\]

\[\text{but: habāw-na} \quad \text{'they gave us'.}\]
\[\text{gave-us}\]

A similar situation is found in some Cushitic languages.
Seidel (1900: 170/71), for example, notes that in Gorowa, a lan-
guage of the Southern Cushitic Iraqw group, the object noun pre-
cedes the verb whereas the pronominal object is suffixed to the
verb. This structure also obtains in Beja, a Northern Cushitic
language (Hudson 1974: 115):

\[
\text{bar-uu-}^\prime \text{karaaw-oo-'n ti-kteen-}^\prime \text{a. 'You know a friend of ours.'}
\]
\[
\text{you friend-of-ours know}
\]
\[
\text{but: ti-kteen-}^\prime \text{a-heeb. 'You know me.'}
\]
\[
\text{you-know-me}
\]

That the bound object pronoun follows the verb in an SOV
language like Amharic not only contradicts Greenberg's Universal
25 but also his observation that "VO is dominant over OV since
OV only occurs under specific conditions, namely when the pro-
nominal object likewise precedes, while VO is not subject to
such limitations". We are therefore left with the conclusion
that the placement of personal object pronouns vis-à-vis the
verb is of limited value with regard to the question of domi-
nance.

Two more cases of dominance are derived from Greenberg's
Universal 3, which reads (1963: 62):

"Languages with dominant VSO order are always preposition-
al."

This leads him to establish that prepositions are dominant
over postpositions, and that SV order is dominant over VS or-
der (Greenberg 1963: 77).

However, in Krongo, a VSO language spoken in Kordofan, Su-
dan, locative concepts may be expressed by nouns in the loca-
tive or ablative case followed by local specifiers. These lo-
cal specifiers have to be considered synchronically as post-
positions (Reh forthcoming):

\[
\text{ñũi ókítí kí-tínkiryá kúbú. 'The shoes are under the bed.'}
\]
\[
\text{M-be shoes LOC-bed under}
\]
\[
\text{k-ábálá kályá kú-fúnú káttí. 'The children play by the road.'}
\]
\[
\text{PL-play children LOC-way beside}
\]
With the collapse of universals like 3 and 25, Greenberg's principle of dominance loses in strength as an explanatory parameter. Heine (1976: 45/46) has interpreted dominance as a quantitative, rather than as a discretely definable principle, and he proposes to employ dominance as a means of establishing hierarchical relations between language types. One should, however, be aware of the fact that generalizations based on quantitative evidence are much weaker than those based on discrete statements.

Greenberg's notion of "harmonic relation"\(^1\) is a quantitative concept. It is based on observations on frequency of co-occurrence. He observes, for example, that since "with overwhelmingly more than chance frequency" OV is harmonic with postpositions, and, similarly, that from "the overwhelmingly association of prepositions with governing noun-genitive order and of postpositions with genitive-governing noun order but with a small number of exceptions of both types, the conclusion is drawn that prepositions are harmonic with NG and postpositions with GN" (Greenberg 1963: 77).

In addition to quantitative data, Greenberg uses other kinds of evidence in order to establish harmonic relations. Such relations are said to be present if "X parallels Y" or if "X corresponds to Y" (Greenberg 1963: 78), but it remains unclear what exactly that stands for. Furthermore he notes that the "relation of possession is assimilated to other relational notions, for example, spacial relations". We are left to guess what the predicate "is assimilated to" means. His example of English of

---

1 Greenberg (1963: 78) proposes two sets of harmony relations:

I Prepositions, NG, VS, VO, NA,
II Postpositions, GN, SV, OV, AN.

The above capital letters stand for the following: N = governing noun, G = genitive noun phrase, V = verb/predicate, S = subject, O = object, A = adjective. NA, for example, means that the head noun precedes the adjective, while AN signifies the opposite order.
which is both a preposition and a possession marker provides hardly any clues.

Although dominance and harmonic relation strike us as being important concepts of inter-linguistic comparison, both are hard to define\(^1\) and do not appear to be parameters of explanatory linguistics.

4.1.1.2 Syntactic reanalysis

In Chapter 2 we have dealt with the rôle that syntactic reanalysis plays in the evolution of linguistic structures. Languages dispose of a limited number of constituent types which, together with a few pragmatically induced strategies like dislocation, etc., are used as models for the expression of new functions, and eventually for the rise of new structures. The reanalysis of a constituent \(X\) as \(Y\) is accompanied by a certain grammaticalization process, usually Desemanticization or Expansion, affecting part or all of that constituent. The relevant evolution can be sketched as follows:

\[
\begin{align*}
\text{Input:} & \quad \text{syntactic reanalysis} \\
\text{constituent } X & \rightarrow \quad \text{constituent } Y
\end{align*}
\]

Numerous examples of such an evolution have been presented in the previous chapters. In this section we will confine ourselves to a few of them which appear to be relevant to interpreting certain Greenbergian universals as well as the principles underlying them. Consider the following cases of reanalysis:

---

\(^1\) See Mallinson/Blake (1981: 383-94) who note, for example, that it "is not obvious, for instance, that \(S\) is a modifier of \(V\) as \(A\) is a modifier of \(N\)" (1981: 394), and they conclude that "the whole notion of harmony, of modifier-modified or modified-modifier, raises questions of diachrony [...]" (1981: 383/84).
There exists an immediate diachronic relationship between the input and the output columns: the output is derived from the input via reanalysis and grammaticalization, respectively.

We are now able to come back to the harmony relations proposed by Greenberg (1963: 78). For example, when he says that there exist harmonic word order relations between Prep + N, N + Gen, V + O and N + Adj then these relations can as well be described in terms of reanalysis since there is an immediate reanalysis relationship between the following:

\[
\begin{align*}
V + O & \rightarrow \text{Prep + N} \\
N + \text{Gen} & \rightarrow \text{Prep + N} \\
N + \text{Gen} & \rightarrow V + O \\
N + \text{Gen} & \rightarrow N + \text{Adj}.
\end{align*}
\]

And the same applies to the reverse order, i.e.

\[
\begin{align*}
O + V & \rightarrow N + \text{Post} \\
\text{Gen} + N & \rightarrow N + \text{Post} \\
\text{Gen} + N & \rightarrow O + V \\
\text{Gen} + N & \rightarrow \text{Adj} + N.
\end{align*}
\]

---

1 In Rendille, for example, adjective attributes are constructed by means of the relative particles  hüküm (M), тель (F), and ้هجوم (M pl.), respectively, in the same way as genitive nouns, e.g.

_barbar_ ้هجوم _cimbir-et_ 'the bird's wing'; _inan_ ้هجوم _deer_ 'the tall boy'

(Heine 1980a: 227; 229)
Thus, it would seem that one might reinterpret Greenberg's harmony relations more profitably by having recourse to reanalysis\(^1\). This approach offers three advantages: First, it provides us with a partial explanation of the harmony relations proposed by Greenberg; second, it provides us with information on the chronological relationship between the relevant constituents; and, finally, it shows that in cases of exceptions to harmonic word order relations we may hold alternative types of reanalysis responsible. For example, we find postpositions in Kroongo, a VSO language (cf. 4.1.1.1). This fact is at variance with the concept of harmony relation as established by Greenberg. But if we take the reanalysis approach, we only learn that the postpositions in Kroongo cannot have been derived from genitive constructions since this would have led to the emergence of prepositions. Postpositions in Kroongo originate from possessive constructions, but an additional principle, possessor promotion, was involved (see 1.1.3.1): the possessor NP was promoted to the grammatical function of the whole constituent, whereas the possessed NP was demoted as a locative NP following the possessor NP (s.Reh forthcoming), e.g.

\[
*\text{k-\text{\-aa}t\text{f} m\text{\-a}c\text{\-oo}r\text{f}} > \text{ki-c\text{\-oo}r\text{f} k-\text{\-aa}t\text{f}} \quad \text{in(side) the house}.
\]

\text{LOC-belly GEN-house} \quad \text{LOC-house LOC-belly}

In the preceding discussion we have ignored the order of S and V, which is also part of Greenberg's notion of harmony. No clear evidence has been found so far to establish a grammaticalization link between the two. Greenberg (1963: 78) provides an example from Berber which suggests that the verb-subject structure could historically be a genitival construction, and perhaps a similar case of V + S being the reanalysis output of N + Gen might be reconstructed for Middle Egyptian. More empirical evidence is required on this point.

\(^1\text{Cf. Vennemann (1973a: 31ff).}\)
Mallinson and Blake (1981: 388-89) describe the development from genitival to adpositional constructions as a promising explanation for the harmonic relation between the two. They warn us, however, that this offers only a partial answer since "we should not overlook the fact that an adposition can develop from a noun or adverb without a specific genitive construction being involved". With this remark, they point to a problem that cannot be solved unless one takes all patterns of reanalysis into consideration. Adpositions are harmonic with as many other constituents as there are reanalysis patterns or channels of grammaticalization leading to the emergence of adpositions.

In Ewe, for example, the genitive always precedes the governing noun but there are both postpositions and prepositions. One can account for this situation by saying that postpositions are harmonic with the genitival syntax while prepositions are harmonic with the VO basic order of Ewe. However, a more obvious explanation would be that postpositions are derived from relational nouns while prepositions are derived from verbs. Thus, the presence of both postpositions and prepositions in Ewe results from the fact that two different reanalysis patterns have been employed: Postpositions were acquired by reanalysing \[ \text{NP} + \text{NP}_\text{gen. head} \] constituents as \[ \text{NP} + \text{Post} \], while the reanalysis of \[ \text{V} + \text{NP}_\text{obj.} \] as \[ \text{Prep} + \text{NP} \] led to the introduction of prepositions (see 4.2.3 below).

4.1.2 "Inconsistencies" in word order

In 4.1.1.1 we noted that there are African languages contradicting Greenberg's Universal 25, which states that if the pronominal object follows the verb, so does the nominal object. Amharic, as well as other Ethiopian Semitic languages, places bound object pronouns after the main verb, whereas nominal objects precede the verb. Furthermore, Greenberg's Universal 2 states that "In languages with prepositions, the genitive almost always follows the governing noun[...]" (Greenberg 1963:}
"Inconsistencies" in word order

62), while in Amharic there are prepositions but the genitive precedes the governing noun.

These are not the only typological "inconsistencies" found in Amharic and other Ethiopian Semitic and Cushitic languages, some more could be added. On synchronic grounds, there is no way of accounting for them in a meaningful way. It is only by including diachronic evidence that we are able to "explain" such inconsistencies. For Amharic, for example, this evidence can be summarized as follows: The ancestor language of Amharic, a Semitic language spoken in Southern Arabia, appears to have been a VSO language which used prepositions and post-nominal modifiers. Due to contacts with Cushitic and/or Omotic languages, Amharic replaced its VSO syntax by an SOV syntax - to the effect that it developed postpositions, a modifier - head structure, etc. Modern Amharic is thus marked by the coexistence of two conflicting word order structures: On the one hand we find relics of an earlier VSO period, like prepositions, post-verbal object affixes as well as possessive suffixes, and on the other hand there are postpositions, pre-verbal object nouns and a modifier - head syntax, all of which are the result of areal influence.

While the Amharic issue has found some treatment in the literature (see, for example, Givón 1971b, Hetzron 1980, Malinison/Blake 1981: 409-10), there are other African languages whose word order "inconsistencies" have not yet attracted scholarly attention. Among these are the Mande languages of West Africa: They have some structures which are hard to reconcile with some of Greenberg's universals, as the following examples show.

Universal 13: "If the nominal object always precedes the verb, then verb forms subordinate to the main verb also precede it" (Greenberg 1963: 66).

---

1 Note, however, that postpositions exist as well (see below).

2 For more details see 3.3.2.2. We wish to express our gratitude to Raimund Kastenholz for valuable information on the grammar of some Mande languages.
The nominal object always precedes the verb in Mande, but most verb forms subordinate to the main verb follow it, e.g.

Kuranko

à té naï, kàmasorɔn à mä këndɛ
he NEG come because he NEG healthy

'He will not come because he is sick.' (Kastenholz, p.c.)

Universal 16: "In languages with dominant order VSO, an inflected auxiliary always precedes the main verb. In languages with dominant order SOV, an inflected auxiliary always follows the main verb" (Greenberg 1963: 67).

The Mande languages clearly contradict this universal, since they have dominant order SOV, but auxiliaries always precede the main verb, e.g.

Bambara

à bì à fê kà màlo dûn. . . 'He wants to eat rice.'
he PM he at COP rice eat

(Kastenholz, p.c.)

In some Mande languages, personal pronouns are proclitics of the auxiliary while in others they form inflections.

Universal 23: "If in apposition the proper noun usually precedes the common noun, then the language is one in which the governing noun precedes its dependent genitive..."

(Greenberg 1963: 71)

In the Mande languages, the proper noun precedes the common noun, but the governing noun always follows its dependent genitive, e.g.

Kuranko Mâlî nyàmanɛ 'the state of Mali'
Mali nation:the

(Kastenholz, p.c.)

Universal 41: "If in a language the verb follows both the nominal subject and the nominal object as the dominant order, the language almost always has a case system" (Greenberg 1963: 75).

1 The subordinate clause can be placed before the main clause, but in this case the former is strongly marked, i.e. it expresses focus.
Mande languages have both dominant SOV order and postpositions, but there do not appear to be any case systems.

Most of these "inconsistencies" can be related to the historical development of Mande, which was marked by a shift from an earlier SVO syntax to an SOV syntax via reanalysis of possessor - possessed constituents as object - verb constituents (see 3.3.2.2). As in Amharic, the result was a "mixed" word order structure: Auxiliaries which precede and subordinate verb forms which follow the main verb are among the SVO relics that in the modern Mande languages exist side by side with SOV features, such as the use of postpositions, genitive - head noun, and object - verb order.

Evidence from Amharic, Mande, as well as other African languages suggests that there may be some advantages in adopting an approach which starts with disentangling the various grammaticalization patterns before proceeding to the study of language universals and language typologies. Such an approach might seem to be a detour on the way to describing language structure, but it promises to provide certain explanatory insights which make it worth using it.
4.2 Some topics of Ewe grammar

In the present section we will look at one particular language, Standard Ewe, in order to demonstrate the relevance that findings on grammaticalization have for synchronic grammar. Ewe, a Kwa language spoken in Togo, Eastern Ghana and parts of Benin, has been chosen in particular because there are some diachronic details available on this language - thanks to the work of Diedrich Westermann.

Ewe is a tone language which has a largely analytic-isolating morphosyntax and a word order syntax which is essentially SVO, but possessive modifiers (genitives) precede their head nouns. Verb serialization and a morphological distinction between alienable and inalienable (locative nouns and kinship terms) concepts are further typological features of Ewe. Any grammar which aims at accounting for the particular structures that this language presents has to cope with questions like the following:

(1) Why does the language require two contrasting word orders to express aspectual distinctions: SOV for the progressive and ingressive aspects and SVO for all others?

(2) Why are intransitive verbs reduplicated in the progressive and ingressive aspects?

(3) Why are there two sets of object pronouns, where one of them is almost identical with that of possessive pronouns?

(4) Why is there an obligatory pronominal subject expression for left-dislocated topic, but not for left-dislocated focus subject NPs? Compare the following sentences:

Topic: nye lâ me-wo e. 'I, I did it.'
I TOP I-do it

---

1 For more details on Ewe structure see Westermann 1905 and 1907, Ansre 1961 and 1966a, as well as other works cited below.
The focus marker -é (Ewe)

\[ +\text{nye \text{á} wɔ e.} \]

Focus: \[ +\text{nye-é wɔ e.} \]
\[ \text{I-FOC do it} \]
\[ +\text{nye-é me-wɔ e.} \]

(5) Is there any reason for the homophony of the logophoric pronoun ye and the 1st person pronoun ye?

(6) Why do Ewe prepositions resemble certain verbs?

(7) What accounts for the resemblance between postpositions and relational nouns?

These as well as many other questions cannot be answered satisfactorily if one is confined to a rigid synchronic approach to grammar. In the remainder of this section a few examples are given which suggest that unless certain diachronic evolutions are taken into consideration various structures of the Ewe language remain opaque.

4.2.1 The focus marker -é

As we have outlined in 3.2, cleft constructions appear to be the main channel for the rise of morphological focus marking: Focus marking is based historically on a structure where the constituent in focus is encoded as a copular nominal clause. It is possible that Ewe as well used this channel, though in a different way: If there was a copula then it must have had zero expression. This meant that Ewe was unable to grammaticalize the copula to a focus marker, as many other languages did.

But Ewe used another channel to introduce overt focus marking: it reanalyzed the 3rd person subject pronoun of the out-of-focus clause, which obligatorily followed the copula clause, as a focus marker.\(^1\) Thus, a sentence like (1) was reanalyzed as (2):

\(^1\) That a 3rd person subject pronoun assumes the rôle of a focus marker can be observed in a number of African languages, e.g. Turkana (Dommendaal 1983: 418)

\[ i-\text{yoq}, \text{gèsi' i-bal-à kèci' kàpè-si' } '\text{It is you who told them to go!} ' \]

you he you-tell-V them go-PL
(1) *nye े-वो ए   'It was I who did it.'
               it.is.I he-do it

(2) न्ये-े  वो ए.
       I-FOC do it

Later on, the erstwhile 3rd person pronoun was generalized as a focus marker, being used even in sentences where historically there has never been a 3rd person pronoun, as in (3):

(3) नू एवे गुती-े  में-ँको ए से.
       thing two because-FOC I-get it hear
       'I believe it because of two things.' (Westermann 1907: 105)

Now Ewe has a rule requiring left-dislocated subject NPs to be taken up by a co-referential pronominal marker immediately preceding the verb, as in (4)

(4) गा ला े-बु।
       money TOP it-be.lost
       'The money, it is lost.'

This rule is blocked in the case of left-dislocated focus NPs, as sentence (2) suggests. We are now in a position to account for this fact and to answer question (4) above: The use of a co-referential subject pronoun is blocked because historically there is a subject pronoun - although one which nowadays fulfills the function of a focus marker (see 2.4).

4.2.2 Subordinate clauses

Ewe has developed a number of subordinate structures all of which can be traced back to main clause constituents. In the present section, two cases of subordination are briefly looked at with a view to accounting for certain morphosyntactic characteristics of them. Both cases involve the syntactic reanalysis of noun phrases or of parts of noun phrases as subordinate clauses.

---

1 Compare sentence (4) with the following sentence which does not involve left-dislocation:

       गा ला बु।
       money the be.lost
       'The money is lost.'
4.2.2.1 The relative clause

Relative clauses are formed by means of a discontinuous morph si...lá, where si marks the beginning and lá the end of the relative clause. The use of lá is obligatory when the relative clause precedes the main clause but uncommon otherwise (cf. Westermann 1907: 106), e.g.

nyónu si vá étso lámé-ga-le o.  
woman REL come yesterday REL NEG-yet-be NEG

'The woman who came yesterday is no longer here.'

nye-mé-nyá amé-si tsó e o.  
I-NEG-know person-REL take it NEG

'I don't know who took it.'

The relative marker si is derived from the NEAR demonstrative *si₁ 'this', while the clause-final particle lá goes back to the definite article lá. The evidence available suggests that relative clauses in Ewe are historically "afterthought" or, in Dik's terminology, "tail" constituents (cf. Westermann 1907: 62), whose function was "to clarify or modify (some constituent contained in) the predication" (Dik 1978: 153). The structure

*X si, Y lá  'this X, the Y one',

where X is a noun and Y a modifier having tail function, developed from a pragmatically marked to a pragmatically unmarked noun - quantifier structure. Originally, Y was confined to non-verbal qualifiers. Once it came to accept clausal qualifiers, the result was a relative construction.

The erstwhile definite article lá was dropped in those relative clauses where it was dispensible, i.e. sentence-finally. Sentence-internally, however, it was retained in order to mark the boundary between the subordinate and the main clause.

\[1\] In modern Standard Ewe, the NEAR demonstrative is sia, which is composed of *si + -a (< *lá definite article).
4.2.2.2 From direct to indirect speech

Following mental process verbs and verbs of saying, the logophoric pronoun ye, pl. ye-wô, is used if reference is made to a 2nd or 3rd person antecedent. The subordinate object clause containing the logophoric pronoun is introduced by the verb bé 'say' which is desemanticized to a complementizer 'that' if preceded by a verb. The use of the logophoric pronoun is not restricted to any particular syntactic function: In sentence (1) it refers to a subject and in (2) to an adverbial antecedent, in (3) the logophoric pronoun has possessive and in (4) object function (Westermann 1907: 57/58; Clements 1975; Claudi 1982: 9-12):

(1) e-bé ye-á-vá. 'You said that you would come.'
you-say LOG-FUT-come

(2) me-se tsó Kofi gbô bé ye-xo núnnà. 'I heard from Kofi that he had received a gift.'
I-hear from Kofi side that LOG-get gift
(3) e-bé ye-fé ga bú a. 'You said your money was lost?'
you-say LOG-of money be.lost QU
(4) é-le vo-vô m bé wô-á-lé ye. 'He is afraid that they will catch him.'
he-be fear-fear PROG that they-FUT-catch LOG

The use of the logophoric pronoun requires co-reference in personal deixis, but not necessarily in number, as (5) shows (Clements 1975a: 151):

(5) e-bé ye-wô-á-vá. 'You (sg.) said that you (pl.) would come.'
you-say LOG-PL-FUT-come

The emergence of the logophoric pronoun is the result of syntactic reanalysis whereby direct speech came to be re-interpreted as indirect speech: The clause expressing direct speech was reanalyzed as a subordinate object clause, being introduced by the complementizer bé, the erstwhile verb 'say'. The logophoric pronoun is derived from a 1st person pronoun ye 'I', which again is likely to go back to nye 'I, my'. Sentence (1)
therefore means historically 'You said: I shall come' (see Westermann 1907: 57).

That the shift from direct to indirect speech has been concluded can be derived from the fact that in (6) object reference is with a 3rd person rather than with a 2nd person pronoun as in (7), which is an example of direct speech (cf. Clements 1975a: 152):

(6) me-gblo ná wó bé ye-á-fo wó.
   I-say to them that LOG-FUT-beat them
   'I told them that I would beat them.'

(7) me-gblo ná wó bé m-á-fo mi.
   I-say to them that I-FUT-beat ye
   'I told them: I'll beat you (pl.).'

With regard to question (6), we are now able to state that the homophony of the logophoric and the 1st person pronoun is no coincidence: We are dealing here with another relic of an earlier structure which has survived in modern grammar.

4.2.3 Examples of functional split

4.2.3.1 Prepositions

There are five prepositions in Ewe which are homophonous with certain verbs, which are:

<table>
<thead>
<tr>
<th>Verb</th>
<th>Preposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>le 'be (at)'</td>
<td>'at' (locative)</td>
</tr>
<tr>
<td>ná 'give'</td>
<td>'to' (dative, benefactive)</td>
</tr>
<tr>
<td>tsó 'come from'</td>
<td>'from' (source)</td>
</tr>
<tr>
<td>qé 'reach, arrive at'</td>
<td>'to' (goal, &quot;malefactive&quot;)</td>
</tr>
<tr>
<td>tó 'go through'</td>
<td>'through'</td>
</tr>
</tbody>
</table>

In view of their "close resemblance with verbs", Ansre (1966: 31) refers to these prepositions as "verbids", a term

---

1 He rejects the term "preposition" with the following argument (Ansre 1966: 31): "'Prepositions' could be used, but then a distinction between it and the other items, e.g. postpositions, would have to be made."
borrowed from Jespersen. However, he decides to treat the two as different lexical instances. He mentions that verbs and "verbids" may be historically related but concludes: "[...] as is well known in descriptive linguistics, we should not appeal to history to link the two [...]".

As we have suggested elsewhere (1.2.2), there is reason to disregard Ansre's advice and to link the two since they are in a systematic grammaticalization relationship: The prepositions, or "verbids", are desemanticized verbs, and this accounts for the morphosyntactic and semantic differences separating the two.

Underlying the Desemanticization of verbs like le, ná, etc. there was syntactic reanalysis of the following type (see 2.3.2.3):

```
VP  >  PP
 V  NP  Prep  NP
```

The reanalysis of the verb as a prepositional phrase had the effect of turning the verb into a preposition via Desemanticization, with the following implications:

- The meaning of the verb was reduced to one, a prepositional function,
- the verb lost certain verbal properties like inflecting for tense and aspect, as is evident from sentence (1), provided by Ansre (1966: 29):

```
(1) é-no kutsétsé-wó  gbe  ñ no ma-má  m  ná ame-wó.
he-was fruit-PL  pluck PROG was share-share PROG give]person-PL [to]

'He used to pluck fruits and share them among people.'
```

In this sentence, the verbs gbe 'pick a fruit' and má 'share' are both in their past progressive form, while ná no longer shows tense-aspect marking since it has shifted from a verb to a preposition.

Westermann (1907: 96) notes with reference to these "verbids"
that "the same word may be considered in the same combination and with the same meaning, sometimes as verbs, when they are conjugated, sometimes as invariable prepositions, etc., according to the wishes of the speaker."

Grammaticalization theory offers an easy explanation for this phenomenon. We are dealing here with an example of functional split (see. 1.1.4.3.1), i.e., the Desemanticization of verbs like le, ná, etc. did not lead to a loss of these units as verbs, it rather had the effect of adding a second, more grammaticalized, variant to these verbs. Thus, in the following sentences given by Ansre, the verb le 'be (at)' retains its verbal properties in (2) but occurs in its desemanticized form in (3):

(2) kofí le míá gbó. 'Kofi is with us.'
Kofi be our side

(3) kofí fo áma le qdí me. 'Kofi beat Ama in the morning.'
Kofi beat Ama at morning in

Ansre's list of "verbids" contains one more item, kplé, which differs from the other five in that it has no "verbal homophone". It is unclear why Ansre treats kplé, a comitative and instrumental preposition which also occurs as a conjunction ('and', joining NPs), as a verbid. Nevertheless, diachronic observations suggest that kplé had indeed a similar fate as the other "verbids": It is of verbal origin, being derived from the complex verb *kpé qér 'meet ... reach' (Westermann 1905: 295). The difference between kplé and the other "verbids" is, once again, one of grammaticalization. kplé has undergone the following processes:

Desemanticization: Verb > preposition 'with'
Fusion: *kpé qér > kplé.

In its reading as a conjunction, kplé has even gone through another process:

Expansion: Preposition 'with' > conjunction 'and'.

---

1 The second component, *qér, goes back to the verb qér appearing in the above list of verbs/prepositions.
More importantly, however, kplé can be interpreted as an instance of shift (see 1.1.4.3.2). Its stronger degree of grammaticalization vis-à-vis the other "verbids" can be made responsible for the fact that there no longer exists the usual alternation verb: preposition characteristic of "verbids": synchronically, kplé bears no more resemblance to its lexical source.

4.2.3.2 Postpositions

In the same way as Ewe prepositions have homophonous verbal counterparts, postpositions have homophones which are nouns. The most common of these are:

<table>
<thead>
<tr>
<th>Nouns</th>
<th>Postpositions</th>
</tr>
</thead>
<tbody>
<tr>
<td>dzi</td>
<td>'sky, surface'</td>
</tr>
<tr>
<td>gbó</td>
<td>'side'</td>
</tr>
<tr>
<td>gome</td>
<td>'basis, foundation'</td>
</tr>
<tr>
<td>me</td>
<td>'interior, inside'</td>
</tr>
<tr>
<td>megbé</td>
<td>'back(side)'</td>
</tr>
<tr>
<td>nu</td>
<td>'mouth'</td>
</tr>
<tr>
<td>qú(tí)</td>
<td>'outside, periphery'</td>
</tr>
<tr>
<td>ta</td>
<td>'head, top'</td>
</tr>
<tr>
<td>té</td>
<td>'underside, bottom'</td>
</tr>
<tr>
<td></td>
<td>'on (top of)'</td>
</tr>
<tr>
<td></td>
<td>'at'</td>
</tr>
<tr>
<td></td>
<td>'under'</td>
</tr>
<tr>
<td></td>
<td>'in'</td>
</tr>
<tr>
<td></td>
<td>'behind, after'</td>
</tr>
<tr>
<td></td>
<td>'according to, instead of, etc.'</td>
</tr>
<tr>
<td></td>
<td>'at, concerning, etc.'</td>
</tr>
<tr>
<td></td>
<td>'on, over'</td>
</tr>
<tr>
<td></td>
<td>'under'.</td>
</tr>
</tbody>
</table>

These postpositions are the result of functional split and hence had the same fate as prepositions (see 4.2.3.1); they are derived from nouns denoting body parts or locative concepts through syntactic reanalysis of the following type:

```
NP > PP
   /\  |
  /   \|
NP   NP
 modifier head postposition
```

---

1 For a more detailed listing of postpositions, see Westermann (1907: 53).
Once more, Desemanticization was responsible for the reinterpretation of the head noun as a postposition. The grammatical implications of this process were:

- The meaning of the noun was reduced to a relational function.
- The noun lost the capacity of taking modifiers.
- If it was an alienable noun, i.e. one which required the use of the genitive-possessive particle fé, then it changed to an inalienable concept, e.g.

\[ \text{é-fé ta'} \rightarrow \text{Desemanticization} \rightarrow \text{é-tá 'on (top of) him'.} \]

'his head'

Since we are dealing with a case of functional split, what has been said with reference to prepositions also applies to postpositions: They exist side by side with their lexical source noun, and in some cases it is difficult to decide whether the noun or the postposition is involved.

Now Ewe has a rule blocking the use of relational nouns as heads of relational nouns like the ones listed above. This rule continues to apply after Desemanticization has come in, i.e. it also holds for postpositions:

(1) \[ \text{é-le wó ta'} \]  
he-he their on

'he is on top of them'

(2) \[ +\text{é-le wó ta dzi} \]  
head on

Furthermore, this rule applies to relational nouns which have become part of other nouns via Compounding. Thus, the noun abóta 'shoulder' is composed of abó 'upper arm' and ta' 'head'. Since ta' is a relational noun which is sensitive to the above rule, sentence (4) is ungrammatical, the correct form being (3):

(3) \[ \text{é-tsó atí dê abóta.} \]  
he-take tree to shoulder

'He carried a tree on his shoulder.'

(Westermann 1907: 54)

(4) \[ +\text{é-tsó atí dê abóta dzi.} \]  
he-take tree to shoulder on
There are, however, a few compound nouns which have undergone one more process, Merger, and are no longer subject to this rule. Westermann (1907: 54) lists two of them, fome ('belly-inside') 'family' and nômome ('stay-stay-inside') 'shape, kind', e.g.

le nômome siâ me
at kind this in

'in this way'

Nouns like these are completely lexicalized, i.e. they have reached the endpoint of the cycle of grammaticalization.

4.2.4 The case of the progressive/ingressive construction

4.2.4.1 The effect of PP-periphrasis

The introduction of nominal periphrasis (see 3.1.1.1.1) to express new aspectual distinctions was responsible for a number of structural peculiarities of Ewe. Periphrasis was based on the pattern

\[ \text{NP}_1 = [\text{Aux} [\text{NP}_2 + \text{postposition}]_{\text{PP}}]_{\text{VP}} \]

where Aux = one of the auxiliary verbs le 'be (at)' or no 'stay, sit', \(\text{NP}_2\) = nominalized main verb, expressed by verbal reduplication, and postposition = one of the relational nouns *me 'inside' or *gbé 'place, direction'. While this was the structure of intransitive clauses, transitive clauses were derived by encoding the direct object as an inalienable possessive modifier of \(\text{NP}_2\), thus yielding a clause pattern

\[ \text{NP}_1 = [\text{Aux} [[[\text{NP}_3 + \text{NP}_2]]_{\text{NP}} + \text{postposition}]_{\text{PP}}]_{\text{VP}} \]

Once a modifier \(\text{NP} = \text{NP}_3\) was added, the reduplicated verb forming the head noun (= \(\text{NP}_2\)) was reduced to the simple verb form.

The postpositions *me and *gbé underwent Desemanticization and Erosion to become the aspect markers m progressive and gē ingressive\(^1\), respectively. Since these markers are now grammaticalization.

\(^1\) The ingressive aspect has also been referred to as intentional, or inceptive.
The effect of PP-periphrasis (Ewe)

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icalized to such an extent that neither native speakers nor synchronic linguists are aware of their lexical origin, there is no way of describing the relationship between them and the other aspect and tense markers of Ewe in any meaningful way, unless one takes their diachronic raison d'être into consideration. Once the periphrastic construction used to express the progressive and ingressive aspects was affected by adjustment (see 2.2), it lost some nominal properties and acquired verbal properties. This can be demonstrated most clearly by contrasting progressive/ingressive constructions with other types of periphrasis which have not been subjected to adjustment, like the following:

\[
\text{mè-lè dò wò-wo dyī.} \quad \text{I am working.}
\]

The effect of adjustment can be described thus:

1. The prepositional phrase may no longer be topicalized, nor may it be modified by adjectives or other determiners:

\[
dò wò-wo sèsè dyī mè-lè. \quad \text{Working hard, I am.}
\]

work do-do hard on I-be

but: \( +dò wò sèsè-ìì mè-lè. \)

2. The prepositional phrase may no longer be relativized:

\[
dò wò-wo hi dyī me-ìì a. \quad \text{the work which I'm doing'.}
\]

work do-do REL on I-be REL

but: \( +dò wò hi-ìì me-ìì a. \)

3. The conjunction kplé 'and', which links NPs but never VPs or clauses, may no longer be used to coordinate progressive or ingressive constructions, respectively (Clements 1975: 31).

4. Progressive/ingressive constructions may no longer be used in pseudocleft sentences (Clements 1975: 31/32).

5. They may no longer be nominalized, e.g.

\[
(ə fə)dò wò-wo dyī no-no \quad \text{'(his) being on the job'.}
\]

(his) work do-do on be-be

\[\text{1 This and the following examples are adopted from Clements (1975: 29ff), whose work is based on the Aqlo dialect.}\]
Adjustment has, however, not been confined to the erstwhile prepositional phrase marking these two aspects, it has also affected the auxiliaries le and no, which form the verbal nucleus of the relevant periphrastic constructions. In the same way as the (nominalized) main verb regains verbal properties, these auxiliaries lose them and develop into aspect marking particles. For example, while no as an auxiliary verb can combine with future, habitual and subjunctive formatives, in the progressive/ingressive aspects it has been grammaticalized to the extent that it may no longer cooccur with any of them (see Clements 1975: 34). The result is that Ewe has developed a kind of discontinuous aspect markers:

\[
\begin{align*}
\text{le} & \ldots \hat{m} \quad \text{progressive} \\
\text{no} \\
\text{le} & \ldots \hat{g} \hat{e} \quad \text{ingressive.}
\end{align*}
\]

In the Aqlo dialect, grammaticalization has gone one step further. There is a drift to eliminate the first part of these markers. Thus, in ordinary speech le, though not no, is omitted (Clements 1975: 18). Furthermore, the reduplication of intransitive verbs tends to be uplifted. A Standard Ewe sentence like

\[
\begin{align*}
\text{me-le} & \quad \text{yi-yi } \hat{m}. \\
\text{I-PROG} & \quad \text{go-go PROG}
\end{align*}
\]

therefore appears in Aqlo as

\[
\begin{align*}
\text{mè yi-}\hat{m}. \\
\text{I go-PROG} & \quad \text{(Clements 1975: 23).}
\end{align*}
\]

The last sentence has lost all features reminiscent of nominal structures, it is virtually indistinguishable from a verbal structure like

\[
\begin{align*}
\text{me } y1-na. \\
\text{I go-HAB} & \quad \text{‘I use to go.’}
\end{align*}
\]
4.2.4.2 On explaining synchronic structures

A strictly synchronic account of the progressive/ingressive constructions of Ewe has been attempted by Clements (1975). He points to the "hybrid" nature of these constructions, which he refers to as "affix verb phrases" (AVPs), and he lists seven features suggesting a noun-like behaviour, as opposed to six features separating AVPs from nouns, including gerundive nominals. He observes that AVPs behave like verb phrases with respect to grammatical and distributional relations as well as to selectional restrictions but like noun phrases with respect to transformational relations and proposes the following description:

"We may claim that the AVPs are generated as VPs by the base rules, and then at some subsequent point - perhaps at the beginning of the application of the transformational rules - they are "reanalyzed" as NPs" (Clements 1975: 38).

For this purpose he introduces a rule of tree-grafting whereby a VP substructure is added to an N node. However, he is not satisfied with describing the peculiar structure of AVPs; he goes one step further by attempting to explain why there is a need for tree-grafting rule in Ewe. In accordance with transformational generative theory, Clements is confined to synchronic language structure in looking for explanatory evidence. Diachrony or other explanatory parameters are not within the scope of his model. He notes that the effect of tree-grafting is to generalize the range of grammatical processes applying to gerundive and lexical nominals to progressive/ingressive constructions of Ewe, eliminating the primary difference between them (Clements 1975: 42). His explanation consists in invoking analogical extension as a functional principle which, he says, is responsible for rules like tree-grafting.

Thus, according to Clements (1975: 17), rules used for nomi-

---

1 Cf. Chomsky (1964: 29): "[...] a linguistic theory that aims for explanatory adequacy [...] aims to provide a principled basis, independent of any particular language, for the selection of the descriptively adequate grammar of each language."
nal formation are generalized to apply to progressive/ingressive constructions, i.e. analogy is held responsible for extending the pattern of lexical nominals like

(a) dzô + dzô + lá 'one who leaves'
(b) xo + tu + lá 'house builder'

to aspect marking structures like

(a) dzô-dzô gé 'going to leave' (ingressive)
(b) xo tù mí 'building a house' (progressive).

We do not see any convincing evidence suggesting that AVPs, i.e. progressive/ingressive constructions, "originate synchronically" as forms quite different in structure from nominals (Clements 1975: 42). If there is any evidence relating to the "origin" of AVPs then it is diachronic, as we noted above (4.2.4.1): They go back to nominal structures which were created by the nominal periphrasis strategy. It is thanks to Clements' elaborate analysis that we are now fully aware of both the syntactic similarities and the divergencies existing between progressive/ingressive constructions and lexical nominals. His proposal however that tree-grafting "eliminates the primary difference between them" does not appear to have any clear synchronic support, while it is entirely at variance with our diachronic findings: Adjustment accompanied by the grammaticalization of *me (> mí) and *gbé (> gé) had the effect of making the progressive/ingressive constructions dissimilar with gerundive nominals, as they can be observed in sentences like

me-le nú du-du dyî 'I am eating'
I-be thing eat-eat on

(Clements 1975: 42),
rather than eliminating any difference between them. We are thus dealing with an instance of structural dissimilation rather than of assimilation.

More importantly, however, the explanation offered by Clements is hardly satisfying. While it is doubtful whether analogy can be attributed any explanatory significance at all\textsuperscript{1}, a number

\textsuperscript{1} Givón (1979a: 9) considers analogy as a pseudoexplanation: "Other classics
of questions that we consider as crucial for an understanding of the strange characteristics of the progressive/ingressive constructions of Ewe remain unanswered, in particular the following:

(1) Is there any reason for encoding verbal aspects like progressive and ingressive by means of a nominal syntax? In accordance with Clements' view, this question may be reformulated to read: What motivation is there for analogical extension, i.e. why does Ewe not use a verbal morphosyntax to express verbal semantics?

(2) How can the possessive/genetival syntax characteristic of object constituents in progressive/ingressive constructions be explained?

(3) Why does the direct object in such constructions, as well as in what he refers to as lexical nominals, precede the verb while Ewe has SVO as its basic order?

(4) Is there any means of accounting for the presence of the markers m and gê? While all other constituent parts can be related in some way or other to "homophonous" morphemes occurring elsewhere in the language, this is not so in the case of m and gê.

These are questions that a grammar of Ewe aiming at "explanatory adequacy" has to answer. No model of synchronic language analysis known to us is capable of providing the necessary answers. Clements has strained the capacity of transformational generative grammar to its limits in order to account for such problems, with minimal effect. On the other hand, if one includes grammaticalization and reanalysis as explanatory parameters with-

(1) Clements (1975: 28) notes that his hypothesis "does not account for the affixes gê and m", and he continues: "[...] but let us assume that they can be accounted for in some other way, perhaps by insertion[...]".
in a theory of grammar, questions like these can easily be ac-
counted for. They have in fact been dealt with in various parts
of this paper (see in particular 3.3.2.1.1; 4.2.4.1), and the
answers can be summarized thus:

(1) Nominal periphrasis is the most common strategy lan-
guages use to express new aspect distinctions. It has the effect
of encoding the main verb syntactically as a noun phrase and
morphologically as a nominal, be it an infinitive, gerundive or
any other noun-like word category containing a verbal root. Since
the progressive and ingressive aspects of Ewe are based on nomi-
nal periphrasis, it is obvious that they exhibit features of a
nominal morphosyntax.

(2) Nominal periphrasis had the additional effect in Ewe that
the actual object was encoded as an inalienable genitive noun
phrase. The result is that the syntax of object constituents in
the progressive and ingressive aspects has more in common with
possessive than with object noun phrases.

(3) Ewe places the possessor before the possessed noun phrase.
Since the main verb is encoded as a possessed and the object as
a possessor noun phrase, the object happens to precede the main
verb in the progressive and ingressive aspects.

(4) In accordance with the valency of the auxiliaries le and
no, which require prepositional phrases as complements, Ewe makes
use of PP- rather than of NP-periphrasis. This means that the
nominalized main verb has to be accompanied by an adposition.
These adpositions, *me and *gê, underwent Erosion and were gram-
maticalized to m and ge, respectively1.

We note that there is no way of explaining certain structures
of Ewe if one is confined to a synchronic perspective. The con-
clusion therefore is that a theory of grammar gains in explana-
tory power once it incorporates findings on grammaticalization and
reanalysis. To what extent such findings are rele-

1 It remains to be investigated how m came to acquire its high tone rather
than a low tone, as one might have expected.
vant to our understanding of synchronic grammar is unclear. This is a question requiring much more research.

One should be aware, on the other hand, that the explanatory potential of grammaticalization and reanalysis is limited. For example, we have held nominal periphrasis responsible for the peculiar features observed in progressive and ingressive constructions. However, we are not in a position to state why it is nominal periphrasis, rather than any other strategy, that Ewe uses to form these two aspects. The fact that this is the most common strategy used in African languages to express new aspects is hardly more an explanation than Clements' principle of analogical extension.
4.3 Conclusions

It is widely agreed among linguists that diachrony has no place in linguistic descriptions, and that the history of a language is, as Lyons (1968: 14) notes, "in principle irrelevant to its synchronic description". This position sharply contrasts with that of earlier linguists. In 19th century linguistics, history was frequently proposed as the only explanatory parameter of language structure. Friedrich Müller (1876: 8ff) for example defined a "scientific grammar" as one which explains how the forms of a given language originated. For him and others, therefore, a "scientific grammar" was a historical grammar.

Positions like both that of Lyons and of Müller are one-sided. One of the main goals of this paper was to demonstrate that diachrony and linguistic evolution form a parameter which should be part of a theory of language aiming at "explanatory adequacy". Findings on grammaticalization and reanalysis therefore have a legitimate place in explanatory grammars - to what extent remains to be established by future research.

1 Note the following widely accepted position:

"There is one fundamental difference between synchrony and diachrony and that is that synchrony involves principles embodied in the knowledge of speaker-hearers. Diachrony, on the other hand, if indeed one can establish principles of diachrony, is not necessarily part of such knowledge." (Mallinson/Blake 1981: 374)

2 "Als Aufgabe der wissenschaftlichen Grammatik können wir kurz die Erklärung der Formen einer Sprache bezeichnen und zwar in der Weise, wie sie existieren sind [...]. Um daher eine Sprache wissenschaftlich zu erklären ist eine Kenntnis der verschiedenen auf einander folgenden Zustände - als ihrer Entwicklungsphasen - behufs Vergleich derselben mit einander notwendig. Dadurch aber, dass die wissenschaftliche Grammatik die verschieden auf einander folgenden Epochen einer Sprache mit einander vergleicht, um ein Bild ihrer Entwicklung, ihres Wachstums und Verfalls zu liefern wird sie zur historischen Grammatik [...]." (Müller 1876:8)

3 This is, however, by no means the only parameter to be considered. Givón (1979a: 3/4), for example, proposes the following list of major parameters: (1) Propositional contents, (2) discourse pragmatics, (3) the processor, (4) cognitive structure, (5) world-view pragmatics, (6) ontogenetic development, (7) diachronic development, and (8) phylogenetic evolution. This list could be extended considerably. Our concern in this paper was exclusively with (7).
The following list of channels of grammaticalizations is highly tentative. What degree of generalization can be assigned to it remains to be established by future research. Some of the cases listed are based on numerous examples, others on two or three only. While the items presented are taken mostly from African languages, observations on other languages are included as well, even in cases where we were not able to test their validity.

1 SOURCE UNITS

ablative (SOURCE) adposition  
ablative (SOURCE) case marker  
adjective  
adposition

see adposition, ablative (SOURCE)
see case marker, ablative (SOURCE)

> adverb

> 1) derivative affix; see 3.1.2
> 2) NP-coordinating conjunction 'and'
> 3) preverb (Lehmann 1982: 101)
> 4) transitive marker (verbal affix) (Mallinson/Blake 1981: 398)

ablative (SOURCE)  
comitative  
dative/benefactive

directional (GOAL) (> benefactive marker)

instrumental

locative

> genitive/possessive marker (cf. French de)
> comitative/reciprocal derivative affix; see 3.1.2
> applicative derivative affix; see 3.1.2

> dative marker (> accusative marker) (Lehmann 1982: 82)
> causative derivative affix; see 3.1.2

> 1) directional derivative affix; see 3.1.2
> 2) infinitive marker; see 1.1.1. 3.2 and 2.3.2.2
> 3) possessive marker, e.g. Krongo m-àssàlà kà-káaw y-ó'ón. F-PRF:see LOC-person M-this 'She has seen this man.'
Index of Grammaticalization

adverb
1. 'then, afterwards'
2. 'in future'
3. 'quickly'
4. 'tomorrow'
1. 'shortly afterwards'
2. 'yesterday'
'in the past'

adverbial relator
1. 'then, afterwards'
2. 'in future'
3. 'quickly'
4. 'tomorrow'
1. 'shortly afterwards'
2. 'yesterday'
'in the past'

appositional constituent

aspect marker, perfect(ive)

benefactive adposition
see adposition, dative/benefactive

benefactive case marker
see case marker, benefactive

case marker, ablative (SOURCE)

benefactive

comitative

dative

directional (GOAL)

comitative adposition
see adposition, comitative

comitative case marker
see case marker, comitative

comitative preposition
see preposition, comitative

comitative verb
see verb, comitative

copula

dative adposition

> 1) adposition (Lehmann 1982: 97)
2) preverb, e.g. Somali

soke 'near' > soœ– venitive
preverb

(Lamberti, p.c.)

3) tense marker; see 3.1.1.1.3

> tense marker FUTURE

> tense marker NEAR PAST

> tense marker REMOTE PAST

> case affix (Lehmann 1982: 103)

> attributive (e.g. genitival) constituent

> past tense marker (Lehmann 1982: 31)

> dative case marker (Lehmann 1982: 108/9)

> instrumental case marker (Lehmann 1982: 111)

> accusative case marker (Lehmann 1982: 109)

> dative case marker (Lehmann 1982: 108/9)

> 1. comitative focus marker; see 3.2
2. tense, aspect marker; see 3.1

> see adposition, dative/benefactive
Index of Grammaticalization

- dative case marker: see case marker, dative
- definite marker
  1. relative clause boundary marker; see 4.2.3.1
  2. specific marker (Greenberg 1978)
- demonstrative
  1. copula (Lehmann 1982: 28)
  2. definite article (Greenberg 1978)
  3. relative clause boundary marker (Sankoff/Brown 1976: 645)
  4. relative pronoun, e.g. Turkana
     lo M, na F 'NEAR demonstr.'
     > rel. pronoun
  5. subordinate conjunction (complementizer to embed object clauses) (Lehmann 1982: 64)
  6. 3rd person pronoun, e.g. Bari
dem. sg. lo, lu (M)
    na, nu (F)
pl. kulo (M)
kune (F)
  7. emphatic pronouns (Spagnolo 1933: 80)

- determiner
- directional (GOAL) adposition: see adposition, directional (GOAL)
- directional (GOAL) case marker: see case marker, directional (GOAL)
- durative verb: see verb, durative
- instrumental adposition: see adposition, instrumental
- interrogative pronoun: see pronoun, interrogative
- locative adposition: see adposition, locative
- locative verb phrase: see verb phrase, locative
- motional verb: see verb, motional
- noun
  1) adverb
  2) conjunction, complementizer
  3) genitive/possessive case marker
  4) indefinite pronoun
  5) personal pronoun, 1st + 2nd
  6) personal pronoun, 3rd (object)
  7) plural affix
Index of Grammaticalization

1 Frequently qualified by a possessive pronoun, e.g.

Hausa

ni da kai-na  'I myself'
I with head-my

('body, head, belly, soul, breath, person etc.')

8) reflexive pronoun
9) subordinating particle

('body, head, belly, soul, breath, person etc.')

> reflexive pronoun, e.g. Bari
nje ṛẹrẹm mugun
he kill body
'he is killing himself'

(Spagnolo 1933: 139/40)

(body part, locative)

(usually with collective meaning)

> collective marker

see noun (locative, body part)

8) reflexive pronoun
9) subordinating particle

('man, male')

> 3rd person pronoun, masculine; see 3.4.2.2.2

('meat, animal')

> 3rd person pronoun, animal; see 3.4.2.2.2

('person')

> 1) indefinite pronoun (Lehmann 1982: 51/52)
2) 3rd person pronoun, human; see 3.4.2.2.2

('person, thing') + numeral 'one'

> indefinite pronoun, e.g. Yoruba
ẹnla kan > ẹnikan  'somebody'
chun kan > ńkan  'something'

('day time')

(temporal adverb)

1) adposition; see 3.3.2.2.1
2) conjunction, complementizer

(Westermann 1907: 52/53)

3) locative adverb, e.g. Ewe

ŋgọ́ 'front(side)' > ŋgọ́ 'in front', e.g.

é le ŋgọ́ 'he is in front, ahead'

('day time')

(temporal adverb)

1) adposition; see 3.3.2.2.1
2) conjunction, complementizer

(Westermann 1907: 52/53)

3) locative adverb, e.g. Ewe

ŋgọ́ 'front(side)' > ŋgọ́ 'in front', e.g.

é le ŋgọ́ 'he is in front, ahead'

('man, male')

> 3rd person pronoun, masculine; see 3.4.2.2.2

('meat, animal')

> 3rd person pronoun, animal; see 3.4.2.2.2

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> 1) indefinite pronoun (Lehmann 1982: 51/52)
2) 3rd person pronoun, human; see 3.4.2.2.2

('person, thing') + numeral 'one'

> indefinite pronoun, e.g. Yoruba

ẹnla kan > ẹnikan  'somebody'
chun kan > ńkan  'something'
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('place')

1) genitive/possessive case marker, e.g. Ewe
   fe 'place' > genitive/possessive particle

2) temporal (> conditional) subordinating particle 'if, when', e.g. Luo
   ka 'place' > temp., cond. complementizer 'if; when'

(Stafford 1967: 19)

('property, thing') + possessive pronoun

1) indefinite pronoun (Lehmann 1982: 51/52)
2) 3rd person object pronoun, inanimate; see 3.4.2.2.2

numeral

1) singulative affix, e.g.
   East Cushitic *tokko 'one'
   > Saho -to singulative

2) indefinite (specific) article (< indefinite pronoun), e.g.
   Yoruba ṣkan 'one' > kan indef. art.
   Ewe *de 'one' > de "
   PENil. *-obo 'one'
   > Lotuko -obo indef. art.

perfect(ive) aspect marker see aspect marker, perfect(ive)

personal pronoun see pronoun, personal

plural affix (< noun, 3rd p.pl. pronoun) see number agreement marker (Lehmann 1982: 60)

postposition see adposition

> case suffix (Kahr 1976)
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preposition
comitative
pronoun, interrogative

see adposition

relative pronoun; cf. English 'who?, what?, which?' etc.

agreement marker (Givón 1975a: 154/55)

logophoric pronoun (with 2nd and 3rd person antecedent); s. 4.2.3.2

copula; see 1.1.4

1) coordinating conjunction 'and', cf. Ewe
   *é-yé > é-yé 'and' (conjoining he-he VPs and clauses)
   (Westermann 1907: 130)

2) definite article, cf. Amharic
   *hu > -u definite marker (3rd he sg.m, 3rd pl.)

3) relative pronoun, cf. Dinka
   yen 'he' > relative pronoun
   (Nebel 1948: 54)

nominal plural affix; see 3.4.3 (p. 234, footn. 1)

passive marker; see 2.2

genitive/possessive case marker, cf. Ewe (western inland)
   Kofi wó xo 'Kofi's house'
   Kofi his house
   (Westermann 1907: 132)

transitive marker (Lehmann 1982: 43)

middle voice marker, intransitivizer (Faltz 1977: 268; Lehmann 1982: 47)

pronoun, reflexive

subject constituent (Li/Thompson 1976: 484)

1) adposition; see 4.2.4.1
2) adverb; see 2.3.2.3
3) aspect marker; see 3.1.1.2
4) case marker
5) coordinating conjunction 'then'
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6) derivative affix; see 3.1.2
7) narrative marker
8) negative marker
9) NP-coordinating conjunction 'and'
10) subordinate conjunction (object clause complementizer); see 4.2.3.2
11) tense marker; see 3.1.1.3

comitative ('join, meet, be with')

1) instrumental/manner case marker (Lord 1973)
2) NP-coordinating conjunction 'and'; cf. Ewe
   *kpé...dé 'meet... reach'
   > kplé 'and (conjoin. NPs), with'
   (Lord 1973)

durative ('to remain, stay; keep; sit')

aspect marker PROGRESSIVE/HABITUAL; see 3.1.1.1.2; 3.1.1.2.1; 3.1.1.2.3

motional ('to come, go')

1) tense marker FUTURE; see 3.1.1.3.2
2) tense marker PAST; see 3.1.1.3.1

volitive ('to want, wish')

aspect marker PROGRESSIVE/HABITUAL; see 3.1.1.2.1; 3.1.1.2.3

('to abandon, loosen; to be ripe')

terminative derivative affix; see 3.1.2

('to be, to be at')

locative case marker, cf. Ewe
le 'to be s.wh.' > le case marker

('to be s.wh.')

1) tense marker FUTURE; see 3.1.1.3.2
2) tense marker PAST; see 3.1.1.3.1
3) venitive derivative affix; see 3.1.3

('to come')

aspect marker PROGRESSIVE/HABITUAL (Blansitt 1975: 14)

('to do')

negative marker (Givón 1979a: 222); see also 3.3.1

('to fail, lack, refuse; not to be')

1) aspect marker PERFECT; see 3.1.1.2.2
2) coordinating conjunction 'then'
   (Bavin 1983: 160)

('to finish, complete')
('to give')  
3) tense marker PAST (< aspect marker PERFECT); see 3.1.1.3
1) applicative derivative affix; see 3.1.2
2) causative derivative affixes; cf. Somali
   siin 'to give' > siin causative suffix
garan garan-siin 'understand' : 'make understand'
   (Lamberti, p.c.)
3) dative case marker, cf. Ewe
   nà 'to give' > nà dative case marker

('to go')  
1) andative derivative affix; see 3.1.3
2) tense marker FUTURE; see 3.1.1.3.2

('to have')  
1) aspect marker PERFECT (Givón 1979a: 222)
2) tense marker PAST (< aspect marker PERFECT) (Givón 1979a: 222)

('to join, meet, be with') see verb, comitative
('to make, cause') see causative derivative affix; cf.
Pr.-Cush. *iss-*ass- 'make'
   > Somali, Boni, Rendille -is causative suffix

('to remain, stay, sit') see verb, durative
('to say')  
1) narrative marker, cf. Manding
   ko 'to say' > ko 'and then'
   (Kastenholz, p.c.)
2) subordinate conjunction (object clause complementizer); see 2.1.2; 4.2.3.2

('to take')  
instrumental case marker; see 1.1.1.3.1

'to want'
verbal phrase, locative ('to be in one's hand') possessive verb 'to have'; cf.
Manding bönn yë jë bólo
   house is my hand
   'I have a house.' (Spears 1972: 15)

volitive verb see verb, volitive
2  GRAMMATICALIZED UNITS

accusative case marker  <  dative (< benefactive case marker)

adposition  <  1) adverb
           2) noun (locative or body part)
           3) verb

adverb  <  1) adjective
        2) noun
        3) verb

local  <  noun (locative or body part)
temporal  <  noun (day time)
agreement marker  <  1) anaphoric demonstrative
                   2) personal pronoun

of number  <  plural affix

applicative derivative affix  <  1) dative/benefactive adposition
                               2) verb 'to give'

article, definite  <  1) demonstrative
                   2) 3rd person pronoun

indefinite (specific)  <  numeral 'one' (as a nominal attribute)

aspect marker
  perfective  <  1) verb 'to have'
             2) verb 'to finish, complete, be completed'

  progressive/habitual  <  1) copula
                        2) durative verb
                        3) verb 'to do'

attribute (e.g. genitival constituent)  <  appositional constituent

benefactive marker  <  dative marker

case affix  <  adverbial relator
case marker  <  verb

instrumental  <  verb 'to take'
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instrumentsal/manner
  comitative verb

  postposition

causative derivative affix
  1) verb 'to make', 'to give', 'to cause'
  2) instrumental adposition

comitative/reciprocal derivative affix
  comitative adposition

complementizer
  1) noun (locative, body part)
  2) verb 'to say'

completer focus marker
  copula

conjunction, complementizer
  1) noun
  2) verb

  verb 'finish, complete'

coordinating 'then'
  1) 3rd person pronoun
  2) comitative preposition

coordinating 'and'
  1) comitative verb ('to join', 'to meet', 'to be with')
  2) adposition

NP-coordinating 'and'
  1) demonstrative
  2) verb 'to say'

subordinating
  1) demonstrative
  2) 3rd person pronoun

copula
  1) demonstrative
  2) 3rd person pronoun

dative case marker
  1) benefactive case marker
  2) directional (GOAL) adposition
  3) verb 'to give'

definite article
  1) demonstrative
  2) 3rd person pronoun

derivative affix
  1) verb
  2) adposition

  verb 'to go'

  verb 'to go'

andative
  1) dative/benefactive adposition
  2) verb 'to give'

applicative
  1) instrumental adposition
  2) verb 'to give', 'to make', 'to cause'

causative
  comitative adposition

directional
  local adposition
<table>
<thead>
<tr>
<th>Term</th>
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<td>venitive</td>
<td>'to be ripe'</td>
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<td>directional derivative affix</td>
<td>verb 'to come'</td>
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<td>local adposition</td>
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<td>copula</td>
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<td>indefinite (specific) article</td>
<td>1) ablative (SOURCE) case marker</td>
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<td>indefinite marker</td>
<td>2) ablative (SOURCE) adposition</td>
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<td>4) noun ('thing', 'place', etc.)</td>
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<td></td>
<td>5) 3rd person pronoun</td>
</tr>
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<td>infinitive marker</td>
<td>numeral 'one' (as a nominal modifier)</td>
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<tr>
<td>instrumental case marker</td>
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<tr>
<td>intransitivizer, middle voice marker</td>
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<td>logophoric pronoun</td>
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<td>middle voice marker</td>
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<td>verb ('not to be', 'to fail', 'to lack', 'to refuse', etc.)</td>
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<td></td>
<td>3rd person plural pronoun</td>
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<td></td>
<td>3rd person plural pronoun</td>
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<tr>
<td></td>
<td>1) verb</td>
</tr>
<tr>
<td></td>
<td>2) perfect aspect marker</td>
</tr>
<tr>
<td>terme</td>
<td>description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| plural affix | < 1) 3rd person plural pronoun  
2) (< collective marker)  
   < noun, usually with collective meaning |
| plural marker | < numeral |
| possessive marker | < locative adposition |
| possessive/genitive case marker | < 1) noun ('thing', 'place', etc.)  
2) 3rd person pronoun  
3) determiner |
| possessive pronoun, self-standing | < noun ('property', 'thing', etc.) + possessive pronoun |
| postposition | see adposition |
| preposition | see adposition |
| preverb | < 1) adposition  
2) adverb |
| pronoun | < 1) noun 'person', 'man', etc.  
2) noun ('person', 'thing', etc.) + numeral 'one' |
| indefinite | |
| logophoric | < 1st person pronoun |
| possessive, self-standing | < noun ('property', 'thing') + possessive pronoun |
| reflexive | < noun ('body', 'head', 'belly', 'soul', 'breath', 'person', etc.) |
| relative | < 1) demonstrative  
2) interrogative pronoun  
    ('who?', 'what?', 'which?')  
3) 3rd person pronoun |
| 1st and 2nd person | |
| 3rd person | |
| reciprocal/comitative derivative affix | < comitative adposition |
| reflexive pronoun | < noun ('body', 'head', 'belly', 'soul', 'breath', 'person', etc.) |
| relative clause boundary marker | < 1) demonstrative |
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relative pronoun

2) definite marker

1) demonstrative

2) interrogative pronoun

('who?', 'what?', 'which?')

3) 3rd person pronoun

singulative affix

specific marker

< numeral 'one'

< definite marker

subject constituent

< topic constituent

subordinating particle 'if, when'

< noun 'place'

< noun (day time)

temporal adverb

tense marker

< 1) copula

< 2) verb

< 3) adverb

future

< 1) motional verb

< 2) volitive verb

< 3) adverb ('then', 'afterwards', 'quickly', etc.)

near past

< adverb ('shortly afterwards', 'yesterday')

past

< 1) verb ('to come', etc.)

< 2) perfect aspect marker

remote past

< adverb ('in the past', etc.)
terminative derivative affix

< verb 'to abandon', 'to lose', 'to be ripe'

transitive marker (verbal affix)

< 1) adposition

< 2) personal object pronoun.
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guistics Club.
For each of the African languages listed below, the following information is provided: (1) language family, (2) sub-family or group, and (3) country or area of main distribution. The classification used is that of Greenberg (1963), and so are the following symbols:

I Niger-Kordofanian family
II Nilo-Saharan family
III Afro-Asiatic family
IV Khoisan family.

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