WORD ORDER AND WORK ORDER CHANGE IN SWAHILI

A Categorical Grammatical Study

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This paper has two principal aims. Firstly, it shows that a very general word-order rule can be formulated for Swahili syntax, and that any deviation from it can be explained as an influence of some universal pragmatic rules. Secondly, it analyzes Swahili morphology as a relic of former syntax, showing that the general word-order rule is a result of recent developments. Finally, it outlines a theory of word-order change which can explain these developments. - A good part of the paper is informal and inexhaustive, especially the treatment of the pragmatic rules, and should be regarded as a preliminary study.

0. INTRODUCTION

0.1 Postspecification and Topic-initiality

This paper would like to show, in the first place, that the following fundamental syntactic rule holds for Swahili:

POST(S): Swahili is a postspecifying language, i.e.: if the syntactic constituent A specifies the syntactic constituent B, then the unmarked order of these constituents is B-A.

Since Meinhof (1906) such a rule has been accepted: he claimed that for all Bantu languages the 'dependent word' follows the 'governing word'.[1] As dependent, i.e. specifying constituent he took the adnominal (adjective, possessive, demostrative) relative to the noun, the object relative to the verb and also the predicate relative to the subject. In this paper, I will regard subjects, like objects, as terms specifying the verb.[2]

To explain the position of subjects, there must then be assumed at least one more rule superimposed on POST(S):

TOP(S): Swahili is a topic-initial language, i.e. if the constituent A is topic of a sentence, then A will appear at the beginning of this sentence in unmarked word order.

Formulation of regularities like POST(S) have a long tradition. They have been explained by Bartsch and Vennemann (1972: 131 ff.) with the 'principle of natural serialization': languages tend to serialize their specificative relations in one direction, i.e. pre-specifying or postspecifying. Formulations of regularities like TOP(S) also have a long tradition. They are substantiated by the theory of the 'functional sentence perspective' of the Prague school (cf. Danes 1966): sentences are made up of two parts: the topic, which refers to the entity about which something is stated, and the comment, which makes the statement about it. As a universal rule, the topic tends to precede the comment in unmarked word order. Note that regularities like POST describe the correspondence between syntax and semantics, whereas regularities like TOP describe the correspondence between syntax and pragmatics.

In this paper, I am concerned mainly with POST(S). I am going to refer to rules like TOP(S) mostly to explain some deviations from POST(S). In the course of the paper I will discuss some other pragmatical regularities which influence word order in Swahili. But I am not yet able to formulate the exact conditions for application of these rules, because they depend on the discourse context and situation and are connected with other subtle phenomena, like intonation change.[3] Therefore they only can be detected by informant work, but up to now I have not had the opportunity to work with Swahili native speakers.

0.2 Specificative Relations in Categorial Grammar

To show the universality of POST(S), one must have a formal definition of the specificative relation. This definition can best be given in a categorial grammar framework, as developed, for example, by

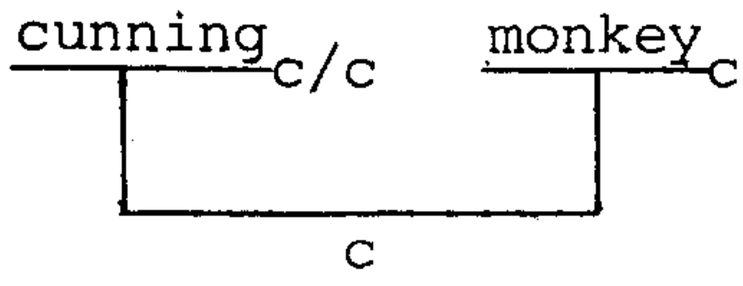
Ajdukiewicz (1935) and Bar-Hillel (1964). The semantic criterion that A specifies or modifies B in some way corresponds to the syntactic criterion of the constancy of category (cf. Bartsch and Vennemann 1972): in a given syntagma AB the constituent A specifies the constituent B if and only if AB belongs to the same grammatical category as B, i.e. has in general the same combinatory properties to other constituents. The syntagma AB can be of exactly the same category as B (in this case, A will be called 'attribute' of B), or AB and B differ in their valence because A binds a free place of B (in this case, A will be called 'complement' of B). Both attribute and complement are called 'specifier', whereas B is in both cases called 'specificate' or 'head' of the syntagma. The following examples will make these definitions clearer:

1.a cunning monkey — cunning monkey is of the same category (common noun) as monkey, therefore cunning is attribute, or specifier, of monkey and monkey is head, or specificate, of cunning.

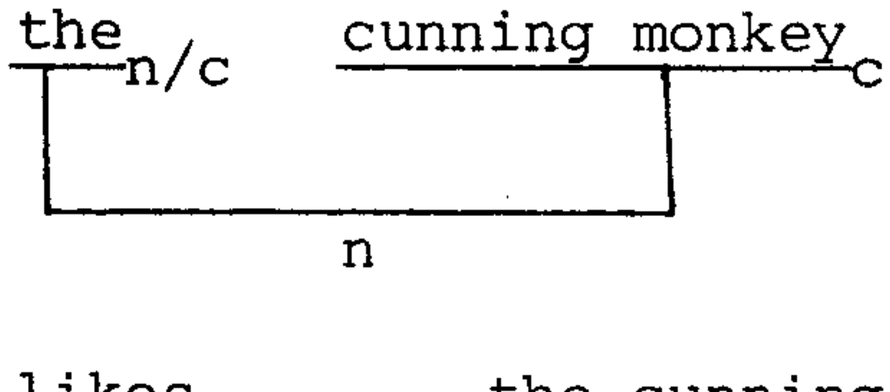
1.b likes John — likes John is of the same category (verb) as likes, except that likes is a transitive verb, and likes John an intransitive one. Thus, the proper noun John binds a free place of likes, therefore John is complement, or specifier, of likes and likes is head, or specificate, of John.[4]

In the following, a "quasi-arithmetical notation" (Bar-Hillel 1964) will be used to identify the specificative relations. By indentifying the category 'sentence' with a zero-place verb, one can assign to every constituent a category which is derived from a very limited set of basic categories. For English, a rather extensive categorial grammar could be built on the basic categories 'sentence' (s), 'term' or '(proper) noun' (n) and 'common noun' (c) (cf. Lewis 1970). The assignment of categories to other constituents follows automatically from the kind of their syntagmatic relation to more basic categories. Thus we must assign to adjectives, which together with common

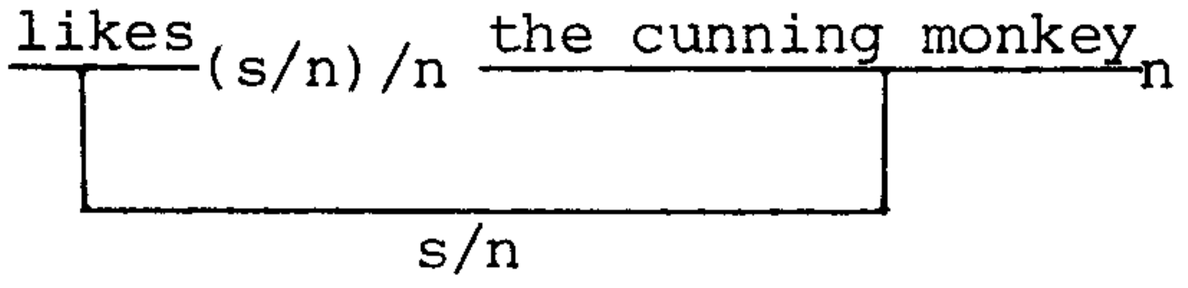
nouns constitute common nouns again, the category c/c because c . c/c = c, and so on:

2.a 

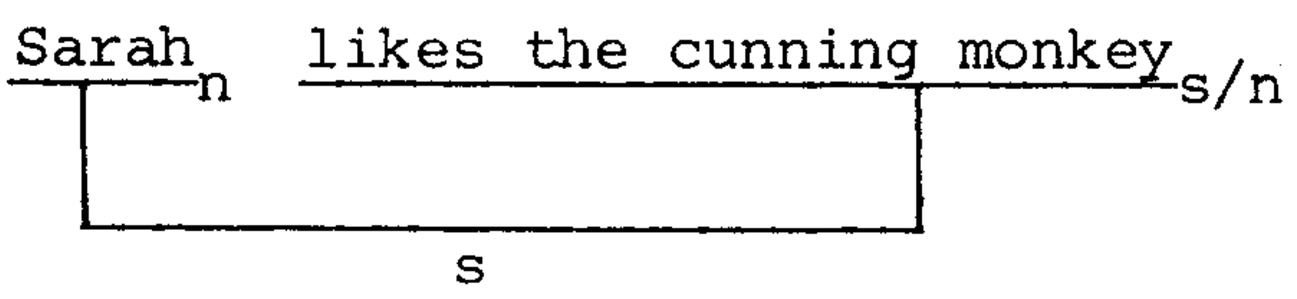
c/c . c = c

2.b 

n/c . c = n

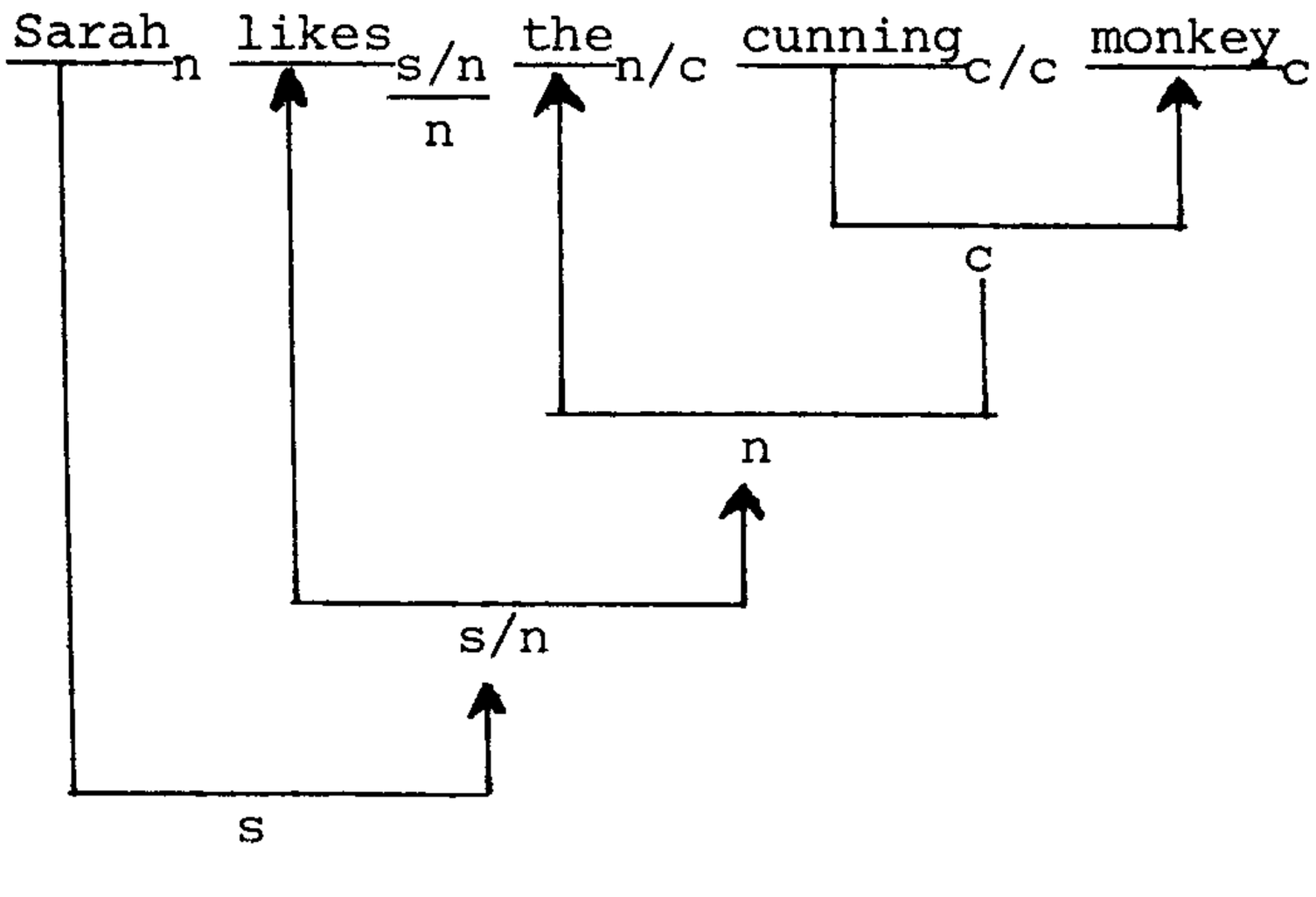
2.c 

(s/n)/n . n = s/n

2.d 

n . s/n = s

In this way, the entire sentence can be analyzed by an analysis tree. I am using here a somewhat shorter category notation and arrows indicating the direction of specification:

2.e 

For Swahili, which seems to lack the category 'article', it is sufficient for a similar grammar to use as basic categories only s and n. Scince I do not intend to formulate a categorial grammar of Swahili but

only to use the categorial grammar notation to show the direction of specification, I will restrict myself in general to these categories.

An exact theoretical foundation of the categorial grammar notation is provided by Vennemann and Harlow (1977). They define a specificative relation between two constituents A, B as follows (with g, h, k as category variables):

$ATTR(A_h, B_k)$: <==> h . k = k

$COMP(A_h, B_k)$: <==> k = g/h, with g ≠ h

$SPEC(A_h, B_k)$: <==> $ATTR(A_h, B_k)$ or $COMP(A_h, B_k)$

The hypothesis that Swahili is a postspecifying language then can be formalized in the following way (cf. the analogous rule for Maori in Vennemann and Harlow 1977: 248):

POST(S): Let CON(S) be the set of syntactic constituents of Swahili, and A-B the unmarked order of the two constituents A, B in a syntagma; then: For all A, B < E = CON(S): SPEC(A,B) ==> B-A

1. WORD ORDER IN MODERN SWAHILI

1.1 The Order of Adnominals

1.1.1 Adnominal Attributes

The following examples show that POST(S) holds for the specificative relation between a noun, as head of a syntagma, and some other constituent as attribute. The internal structure of complex attributes will be discussed later.

3.a	mtoto$_{n}$ mwerevu$_{nn}$	"cunning child"	noun + adjective
3.b	watoto$_{n}$ watatu$_{nn}$	"three children"	noun + numeral
3.c	mtoto$_{n}$ yule$_{nn}$	"that child"	noun + demonstrative

3.d	mtoto$_{n}$ wangu$_{nn}$	"my child"	noun + possessive
3.e	mtoto$_{n}$ wa Ali$_{n/n}$	"Ali's child"	noun + genitive
3.f	mtoto$_{n}$ asomaye$_{n/n}$	"child who reads"	noun + relative
3.g	mtoto$_{n}$ ambaye ameki-soma kitabu$_{n/n}$	"child who has read the book"	noun + rel. clause

In these examples, the right constituent specifies the left one. Any construction with the opposite order would be ungrammatical or would, in the case of (3.c), have a different meaning.

There are some further noun phrase constructions which obey POST(S). For example, we have adnominal interrogatives, which can be considered as adnominal variables:

3.h	mtoto$_{n}$ yupi$_{n/n}$	"which child"
3.i	watoto$_{n}$ wangapi$_{n/n}$	"how many children"

And we have combinations of two or more nouns, with conjunctives such as na:[5]

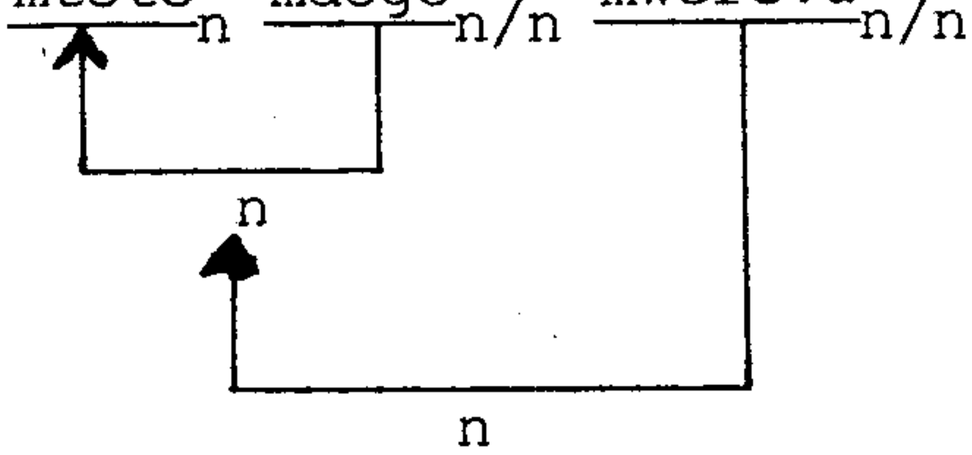
3.j	mtoto$_{n}$ na wazazi$_{n/n}$	"(the) child and (the) parents"

Postspecification is also at work in noun composition:

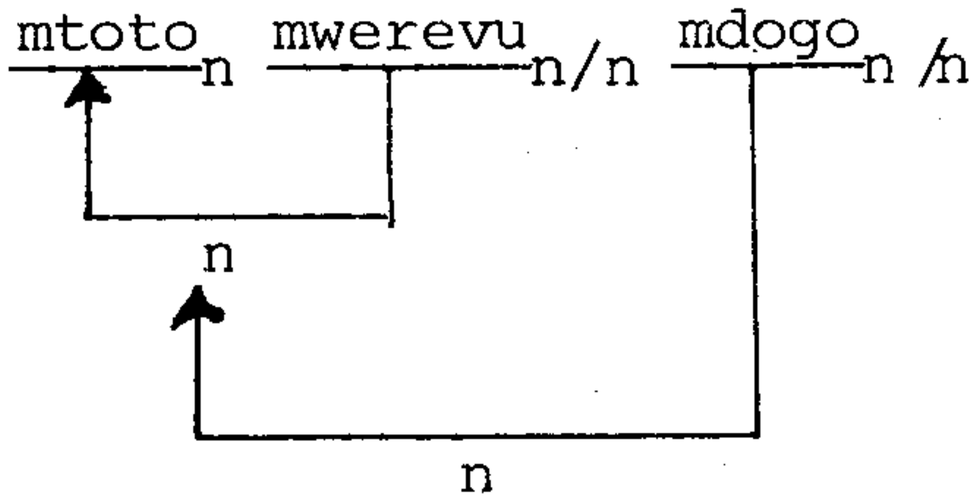
3.k	mbwa$_{n}$ mwitu$_{n/n}$	"dog" + "wood": "jackal"
3.l	sukari$_{n}$ mchanga$_{n/n}$	"sugar" + "sand": "powdered sugar"

In these constructions, the second noun specifies the first one: a mbwa mwitu is some kind of dog, not a kind of wood, and so on. According to Maw (1969: 78), they can also serve as genitive constructions, as in mama Rosa "Rosa's mother". That means that a noun may change its category to that of an adnominal merely by occuring in post-nominal position. This is an important indication of the strength of POST(S) in the noun phrase.

Postspecification can also be recognized in more complex noun phrases. If they consist of a sequence of adnominal specifiers, the order of these specifiers is significant:

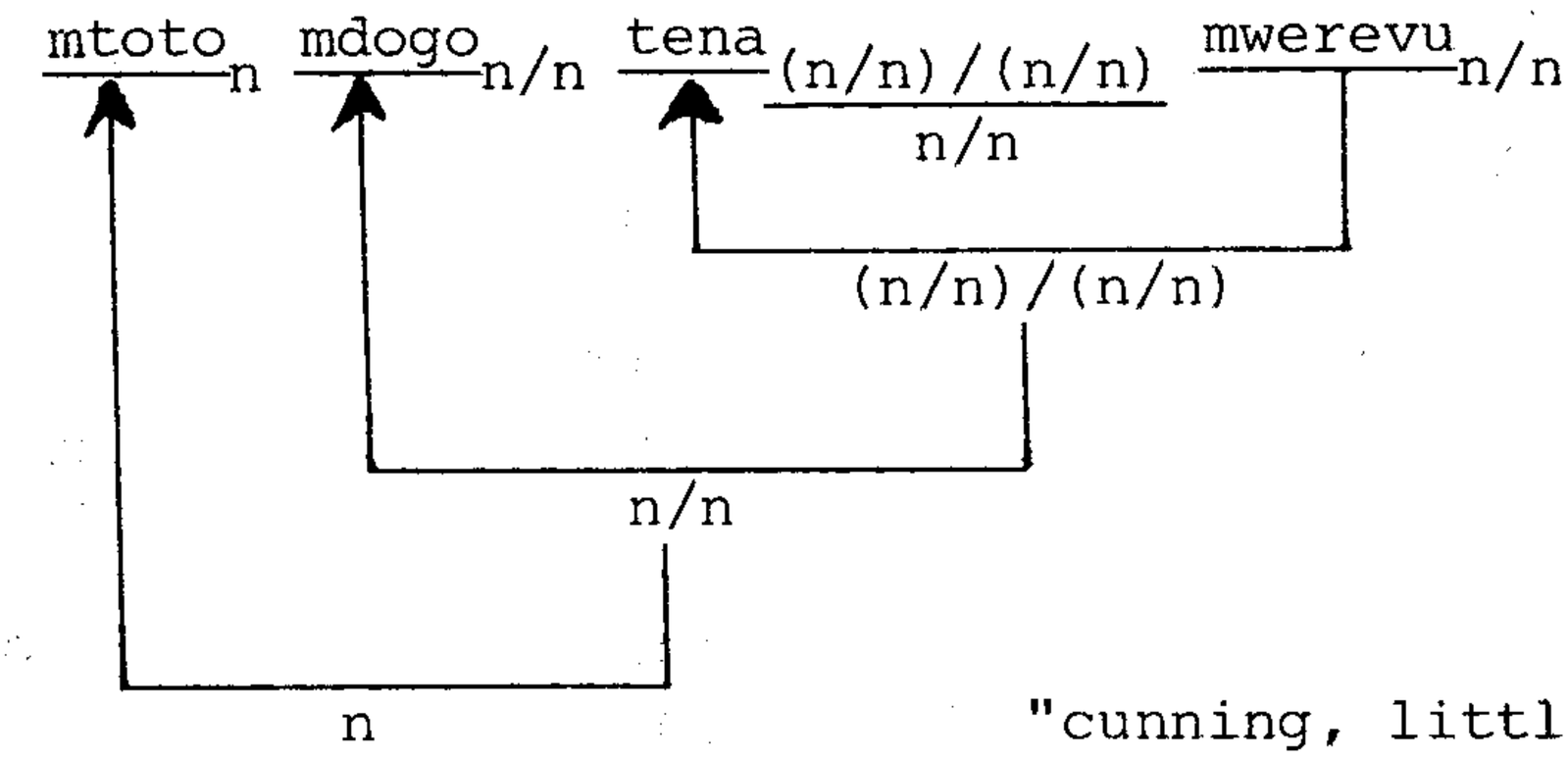
3.m 

"cunning little child (...not stupid ones)"

3.n 

"cunning little child (...not tall ones)"

The difference of meaning between (3.m) and (3.n), which was often noticed before (cf. Ashton 1974: 52; Polome 1967: 143) can be explained by POST(S) in a very natural way, namely in terms of the different scope of specification: each attribute specifies the whole noun phrase in front of it, the last one thus serving as the main specifier. It is because the noun phrase is rigidly structured in this way that the last place can serve as slot for focus constituents (but see chapter 3 for a more detailed discussion of a universal pragmatical law of focus-postposing). Consequently, if two adjectives are understood to be of the same importance they must at first be connected by an adnominal conjunctor like tena or na to a new syntagma which is then applied to the noun:

3.o 

"cunning, little child"

This is the only way to avoid the interpretation of the final constituent as main specifier according to POST(S).

In the examples (3.m) and (3.n), only adjectives have been examined as adnominal specifiers. But POST(S) imposes a structure upon sequences of mixed adnominals as well:

3.p mtoto$_{n}$ wangu$_{n/n}$ mdogo$_{n/n}$ "my little child"

3.q mtoto$_{n}$ mdogo$_{n/n}$ wangu$_{n/n}$ "my little child (...not yours)"

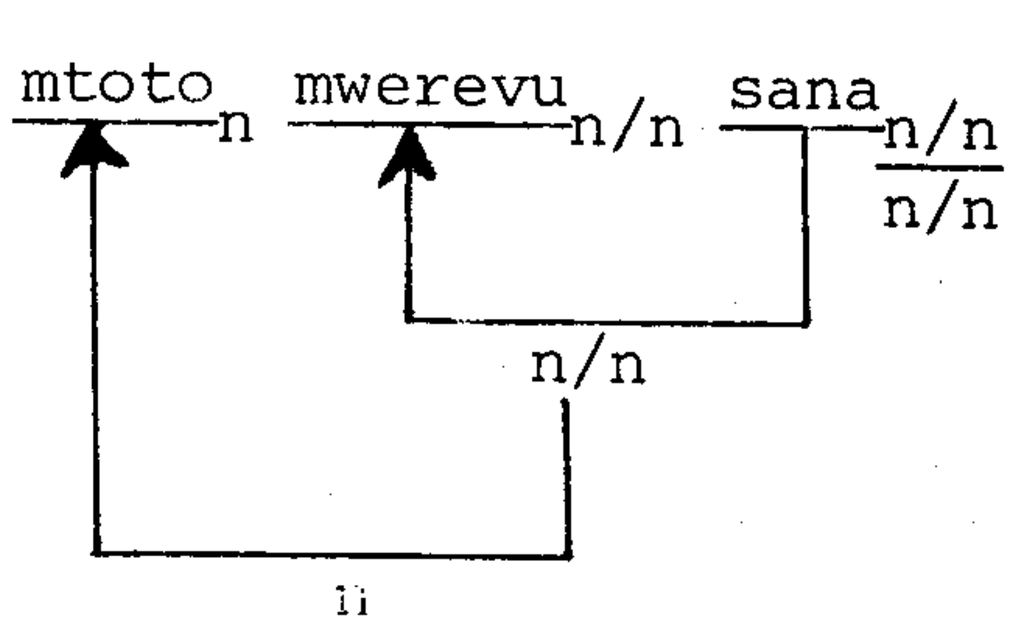
But in this case (3.p) is not felt to be focused on mdogo. It seems that a certain order of adnominal subtypes has developed to the unmarked order in focusing. This order is said to be:

noun-possessive-adjective-demonstrative-numeral

Probably this sequence is unmarked for focusation because it is the most frequent one. Any deviation from it will be understood according to POST(S). See 2.2.6 for further discussion.

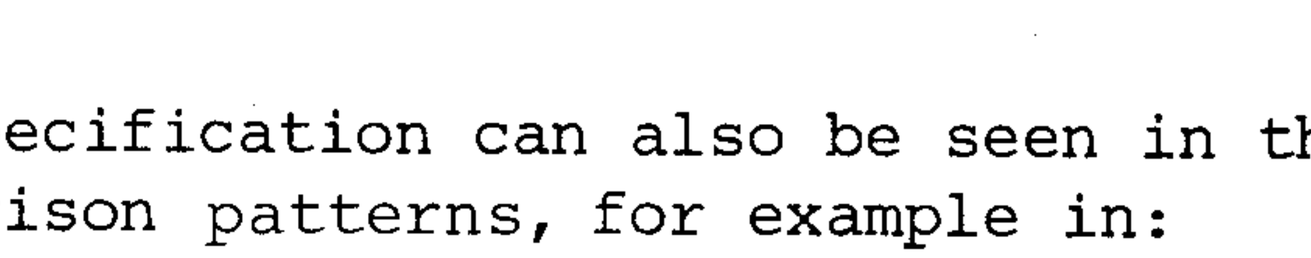
There are some constructions in the noun phrase which do not directly affect the head noun but rather an adnominal. One example is the conjunctor construction of (3.o), another is the use of grading adverbs like sana 'very' with adnominals. As stated by POST(S), they follow their head constituents:

3.r mtoto$_{n}$ mwerevu$_{n/n}$ sana$_{\frac{n/n}{n/n}}$ "very cunning child"

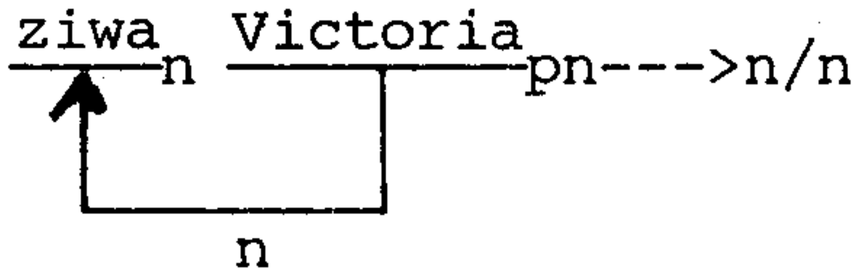


Postspecification can also be seen in the syntactic comparison patterns, for example in:

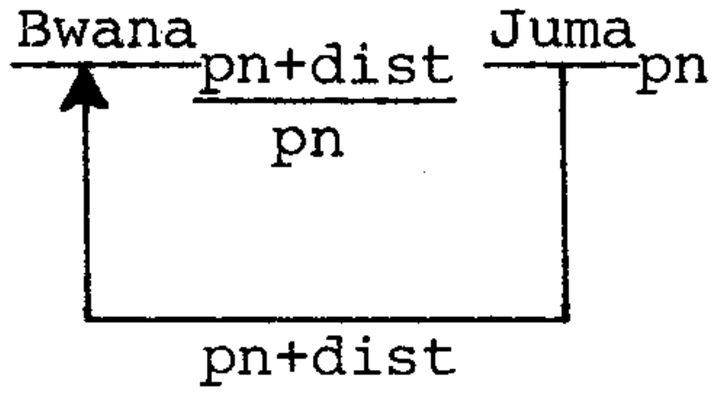
3.s mwerevu$_{n/n}$ kuliko mtoto wangu$_{\frac{n/n}{n/n}}$ "more cunning than my child"



In concluding this section, I will give a sketch of the treatment of syntagmas which consist of a proper name (pn) and a common noun. In these constructions, the proper name specifies the common noun and follows it according to POST(S):

3.t 

"Victoria lake"

3.u 

"Mister Juma"

These examples show two different ways of categorization. In the first one, the proper name has the same function as an adnominal and therefore should be categorized in the same way. Actually, most of those geographical names are genitive constructions, e.g. mto wa Kongo, 'Kongo river'. It is more intricate to assign proper categories to the constituents of the second example. This is because Bwana Musa itself can function as a proper name, just as the basic proper name Musa, whereas bwana cannot.[6] Therefore I propose that status or title designations like bwana should be analyzed as a special kind of determiner (see next chapter for this notion) which take proper names and yield proper names again. The constancy of category would consist in some subcategorial characteristic of the determiner and the syntagma as well, for example '+idist' for 'social distinction' (note that only designations of high social rank occur in this position, e.g. mzee 'elder, leader' or inspekta 'inspector'). This analysis is empirically validated by the fact that in prespecifying languages, such determiners tend to follow the basic proper noun, whereas in postspecifying languages, they rather precede it (cf. Greenberg 1966).

1.1.2 The Rise of Determiners

It seems that POST(S) has to allow some exceptions: the preposed demonstratives (4.a-c) and some preposed quantifiers (4.d,e):

4.a. <u>yule mtoto</u>$_n$ (away from speaker)

4.b <u>huyu mtoto</u>$_n$ the child (near the speaker)

4.c <u>huyo mtoto</u>$_n$ (previously mentioned)

4.d <u>kila mtoto</u>$_n$ every child

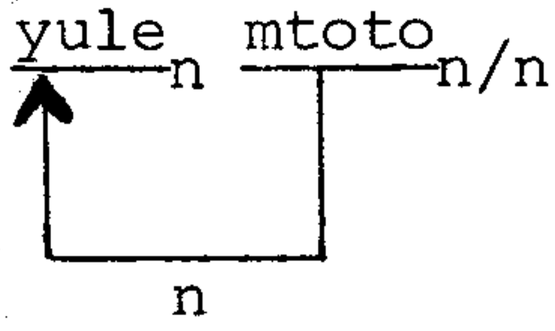
4.e <u>kina mtoto</u>$_n$ the children

An explanation of the position of the demonstratives in the examples (4.a-c) has to take into consideration that they have a different function than postposed demonstratives: they are mainly markers of definiteness, corresponding to the English definite article (cf. Ashton 1974: 59, 181).[7] This is not the only means in Swahili to indicate definiteness of a noun phrase.[8] Others are the initial position of the noun phrase in a sentence; the later reference to it by pronominals or finite verbs; the specification by certain adnominals (e.g. demonstratives, possessives); sometimes, if the noun phrase is object, the agreement with the verb; finally definiteness can be expressed by intonation[9] or gesture, or simply be inferred from the context (cf. Ashton 1974: 45). But with all these methods, definiteness is either not marked overtly at all or not clear enough because its marking is linked with some other grammatical process. Apparently the method illustrated in examples (4.a-c) is the only means of marking definiteness in a clear-cut manner.

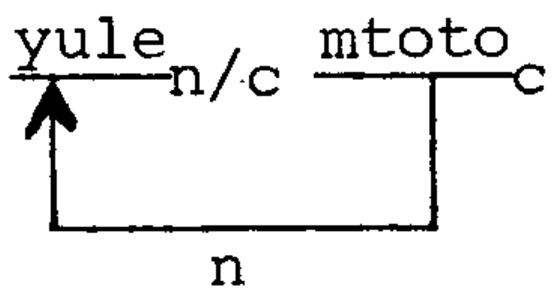
It is quite natural that demonstratives serve as markers of definiteness: they have the strongest 'definitizing' force of all adnominals. In many languages the definite article is thus genetically related to the demonstrative; for example in English <u>the</u> and <u>this</u> (cf. Kramsky 1972: 32 f.). It is more difficult to explain why the demonstrative in Swahili is placed in front of the noun to mark it as definite. But there are several possibilities of treating this position as compatible with POST(S) or even as a logical consequence of it. To begin with, the initial position of the definiteness marker could be explained by the assumption that it is caused by some pragmatical rule which states that the definiteness marker has a signal function, namely to announce that the reference of the noun is already known to the hearer, and that such signals tend to precede their constituents (cf. Kramsky 1972: 20 f.).[10] Or the definiteness markers could

be analyzed as prefixes which together with the noun constitute a single word (cf. Doke 1954 for some southern Bantu languages). Or they could be introduced as 'syncategorematic' constituents, which belong to no category at all (cf. Montague 1970 for the treatment of articles in English).

But I would prefer to analyze the position of the definiteness marker in Swahili as a consequence of POST(S). There are two possibilities. Firstly, the noun could be categorized as an attribute of the demonstrative:



This is not an ad-hoc thesis, because most adnominals can function as pronominals and therefore must be assigned the category n, and nouns can function as adnominals if they follow a noun constituent, as we have seen. A second possibility would be to analyze the preposed demonstrative on the analogy of the article in languages like English, i.e. as head of a complementary relation which takes common nouns (c) and yields terms (n):



This analysis would have the consequence that every Swahili noun would have to be assigned the category n as well as the category c (and of course every adnominal the category n/n as well as c/c, etc.). But this ambiguity could be explained as a transitional phenomenon, characteristic of developments from a non-article language, in which all nouns are terms, to an article language, in which common nouns and terms must be categorially differentiated at a very basic level. There are quite a lot of hints that Swahili is actually undergoing this change, for example the higher frequency of the preposed demonstrative in oral speech relative to the more conservative written language (cf. Maw 1974: 63).[11] Double categorization may simply be the regular reflection of such transitional stages in categorical grammar.

Evidently, the two explanations do not exclude each other if they are interpreted diachronically: the first can be seen as the bridge-head for the development of the category 'article'. For instance, there is a difference of meaning between the examples (4.a), (4.b), and (4.c) which correspondes to the difference in meaning between the ordinary demonstratives. This is a hint in favour of the first analysis. If it is true that Swahili is on the way to an article language, one would expect that construction like (4.a-c) occur more and more often, and that one of them, probably the least marked -le, would tend to replace the others as the only definiteness marker.

The second group of constituents which seem to be exceptions to POST(S) are the quantifiers kila and kina (or (w) akina, cf. Longman 1965: 65, Maw 1969: 76). I consider them as relatively recent definiteness markers. They can be analyzed exactly like the preposed demonstratives: together with them they would constitute the new category 'determiner'. Even the way which has led to constructions like (4.d,e) would be parallel to the way which has led to constructions like (4.a-c): both kila and kina can be used as pronominals. Moreover, kina is genetically related to the noun (w)akina 'relations, folk'

I do not at present have sufficient data to decide which of the suggested solutions should be chosen for the problem of the preposed demonstratives and quantifiers. Probably this question can only be solved in a universal framework, for example by a general examination of the position of definiteness markers in unidirectionally specifying languages.

1.2 The Order of Adverbals

1.2.0 Term or Adverb?

I consider both terms and adverbs as specifiers of the verb, the first as complements and the second as attributes. Unfortunately, a clear and universal distinction between terms and adverbs, i.e. 'nuclear' and 'adjunct' constituents (cf. Maw 1969) has not yet been developed.

There are several proposals to answer this question. Close to the traditional line of demarcation comes the

distinction of Relational Grammar, with subject, direct and indirect object as terms and all other constituents as non-terms, i.e. adverbs (cf. Perlmutter and Postal 1974; cf. also the treatment of this theory in Dik 1978). The criterion, or set of criteria, for this distinction is that terms can control some grammatical processes which non-terms cannot, for example verb agreement, reflexivization, coreferential deletion or launching of floating quantifiers.

A treatment which seems to reflect the Swahili data especially well is given by Whiteley (1972; cf. Driever 1976 for further developments). Going back to Fillmore's Case Grammar, it tries to assign every verb a special 'case frame', which could be translated as 'complement frame' into categorial grammar terminology: all constituents which fit into a slot of this frame would be complements and all others attributes. But this leads to some difficulties, which were noted by Whiteley himself. For instance, the complement frame of a verb need not be completely filled to make a sentence. Therefore, one would have to assume several different complement frames for each verb. Consider the following example (with n_{sub} as subject nouns and n_{loc} as locative object nouns):

5.a $\underline{\text{Sarah}}_{n_{sub}}$ $\underline{\text{alikuja}}_{(s/n_{sub})/n_{loc}}$ $\underline{\text{mjini}}_{n_{loc}}$

"Sarah came into the town"

5.b $\underline{\text{Sarah}}_{n_{sub}}$ $\underline{\text{alikuja}}_{s/n_{sub}}$

"Sarah came"

But then one could hardly decide whether karibu 'near' should be categorized as attribute or complement:

5.c $\underline{\text{Sarah}}_{n_{sub}}$ $\underline{\text{alikuja}}_{(s/n_{sub})/n_{loc}}$ $\underline{\text{karibu}}_{n_{loc}}$

5.d $\underline{\text{Sarah}}_{n_{sub}}$ $\underline{\text{alikuja}}_{s/n_{sub}}$ $\underline{\text{karibu}}_{(s/n_{sub})/(s/n_{sub})}$

"Sarah came near"

A rather narrow definition of 'term', tailored to Swahili and other subject-object agreement languages,

would be to categorize an adverbal constituent as complement only if it agrees with the verb. For Swahili this would mean that a definite non-animate object would be a complement and an indefinite one an attribute:

5.e Sarah a-na-u-kata m-kate "Sarah cuts the bread"
n (s/n)/n n

5.f Sarah a-nakata mkate
n s/n s/n
s/n

a) "Sarah cuts a bread"

b) "Sarah cuts bread (Sarah bread-cuts)"

If this analysis is correct, the Swahili sentence (5.f) should equally express the meanings of the two English sentences.

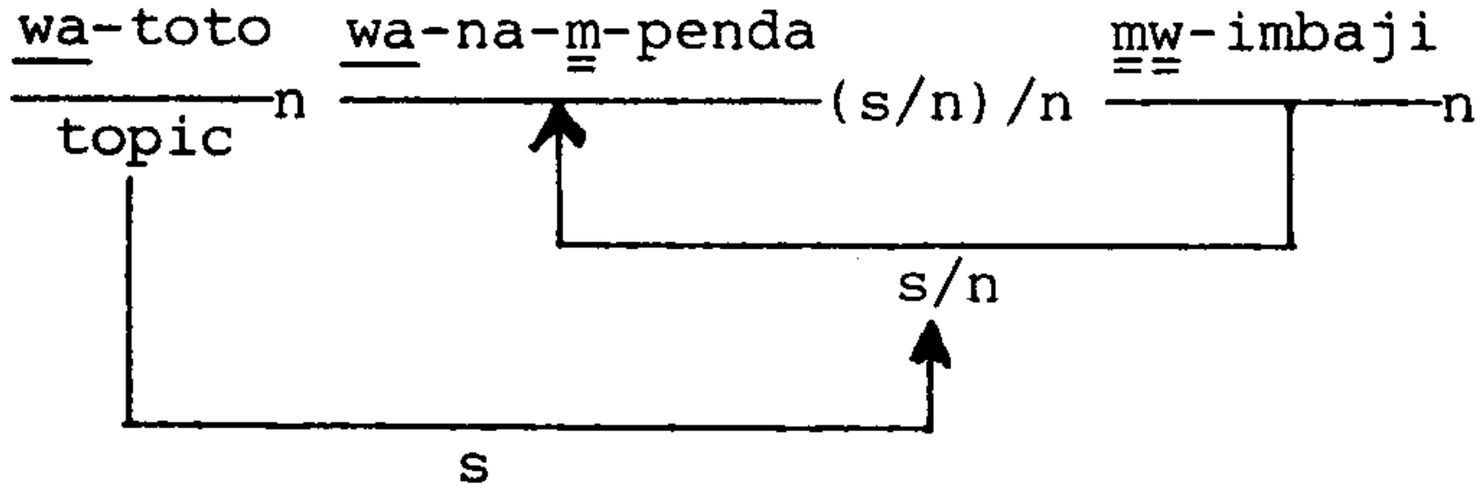
An unorthodox solution of this problem is suggested in Vennemann (1976): namely, to categorize every adverbal as attribute, and consequently to assign every verb the category 'sentence'. Surprisingly, this would render the Swahili facts quite well because of the double function of the personal prefixes as agreement markers and as bound personal pronouns. Note that Sarah anaukata, Sarah anakata, anaukata mkate, anakata mkate and even anaukata and anakata on their own are correct Swahili sentences.

In this paper, it is not may task to develop a neat formal distinction between terms and adverbs, but to explain the order of adverbals relative to the verb; and to do this it is of secondary importance whether the adverbal is an attribute or a complement. Therefore, I will use the traditional distinction in this paper: subject, direct and indirect object will be categorized as terms (this includes, for example, the verbal complements of auxiliary verbs, sentential complements, and so on); all other adverbals will be categorized as adverbs.

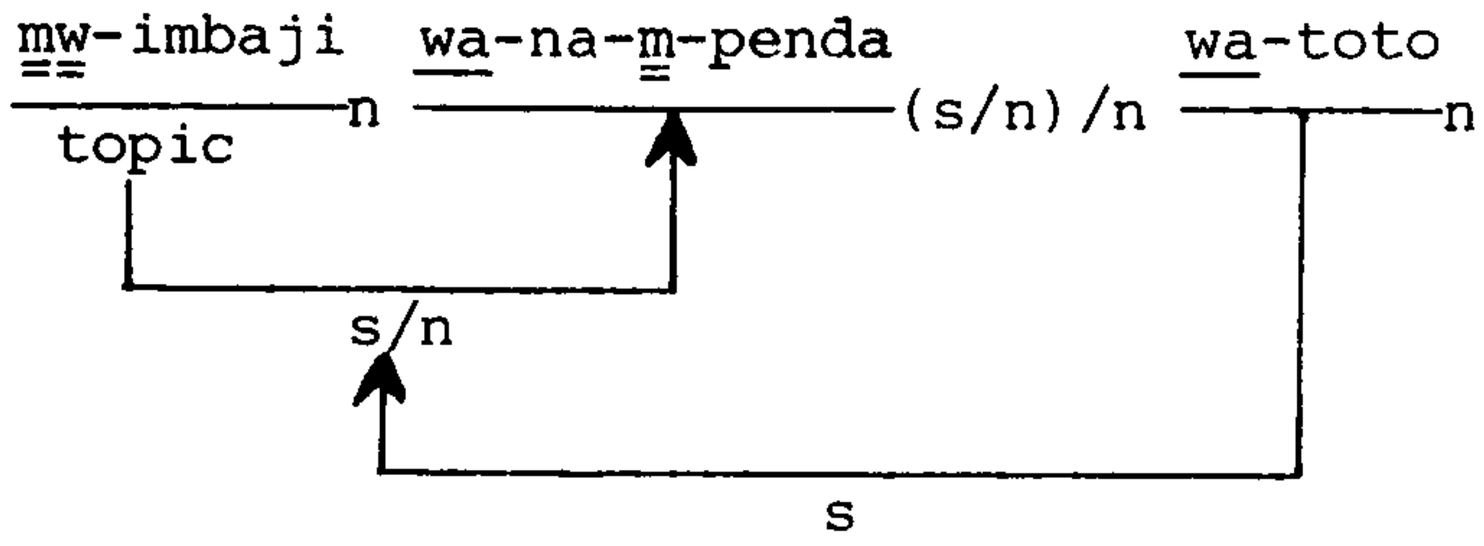
1.2.1 Adverbal Complements

The syntactic function of the different terms is sufficiently expres_d in many cases by agreement with the verb: the subject nearly always agrees with the verb, and so does the object if it is animate and/or definite. Consequently, term order can be rather free, i.e. it can be influenced by rules other than POST(S). The most

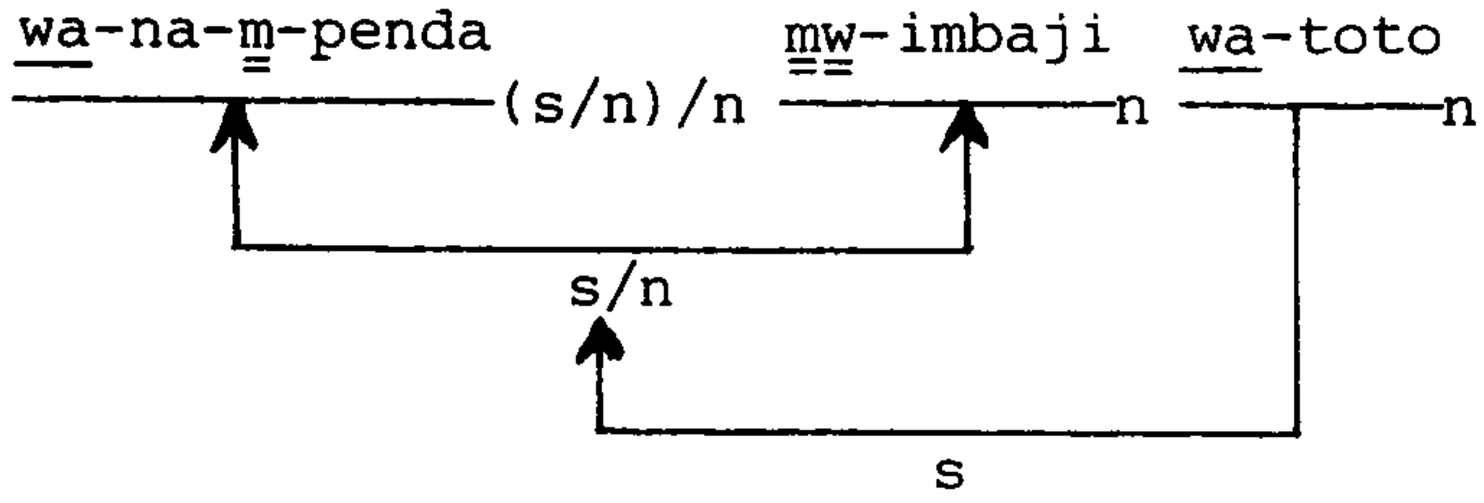
important of these rules is TOP(S): topical constituents are placed at the beginning of the sentence. As topics necessarily are definite, this position also serves as a marker of definiteness (cf. 1.1.2):

6.a 

"the children like the/a singer"

6.b 

"the singer is liked by children/by the children"[12]

6.c 

"children like a singer"

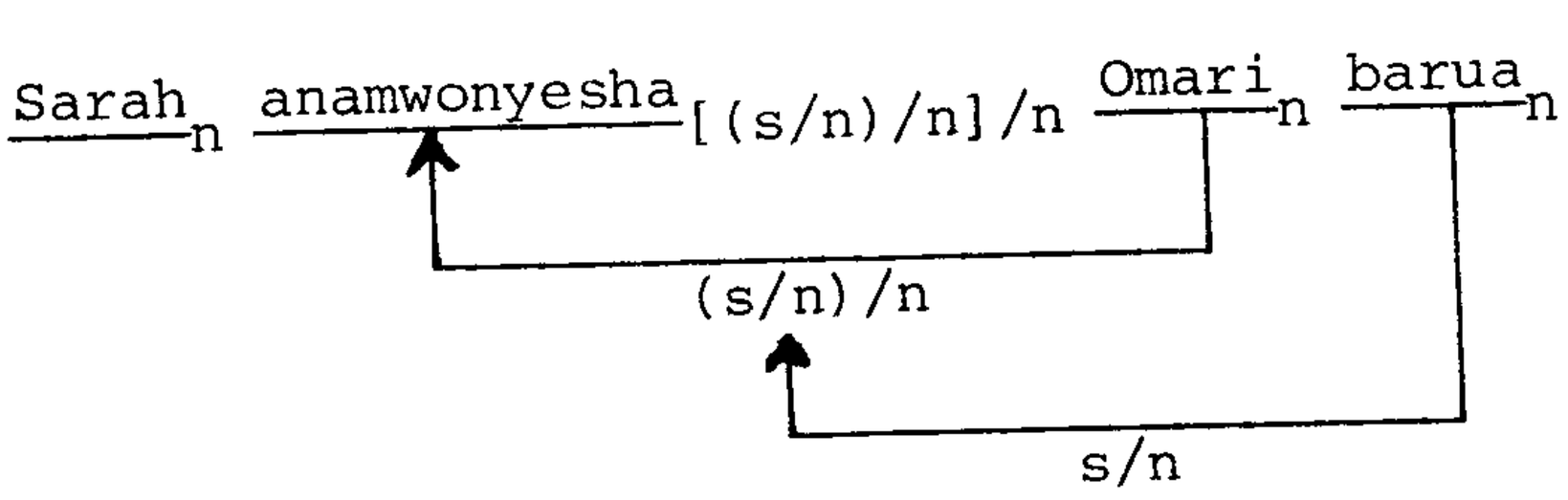
In traditional analyses (cf. Greenberg 1966) Swahili is classified as a language with basic SVO word order. The examples above show, however, that it is rather a TVX language: not the subject, but the topic of the sentence occupies the initial position. An important hint for this analysis is that objects which do not agree with the verb, i.e. which are not definite and therefore cannot be topic of the sentence, can hardly take the initial position. The basic word order, without any pragmatical modifications,13 would then be VOS or VSO, as shown by example (6.c).

Since in most cases the subject, rather than the object, is the topic constituent, one can expect that the

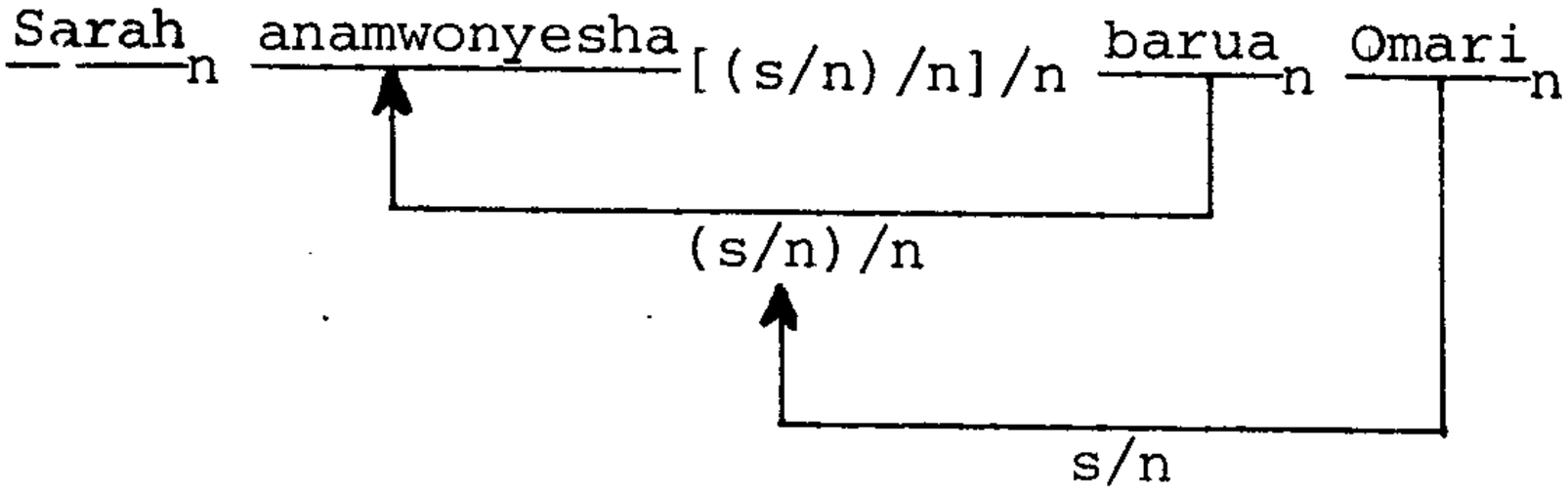
TVX order will change to a SVO order by generalization. Today, orders deviating from SVO seem to be marked by intonation. In cases where verb agreement cannot serve as a means of determining the syntactic function of the terms because they agree by means of the same morpheme, the SVO order is obligatory.

In the examples (6.a-c), I have analyzed the two verb-term relations as unsymmetrical ones: the verb is categorized as (s/n)/n, and not s/n,n. I also have given the verb-object relation a certain prominence because in my analysis the verb is first specified by the object and only then the verb-object complex is specified by the subject.[14] There are universal semantic and syntactic reasons to assume that the (basic) verb is more closely related to the object than to the subject. In many languages, for example, the object, but not the subject, can be incorporated in the verb.

It is more difficult to determine the hierarchy of specification with more than two terms, i.e. with an additional object. It is said that direct objects tend to follow the verb immediately and thus precede indirect objects (cf. Polome 1967: 161); this would indicate that direct objects have a closer relation to verbs than indirect ones. But I think that the relative order of the direct and indirect object is submitted to some pragmatical rules which makes it difficult to determine an unmarked order. Constituents, for example, which are focused tend to be transferred to the end of the sentence. This can easily be explained in categorial grammar by the different scope of specification, similar to the case of a sequence of adnominals (but see again chapter 3 for the universal pragmatical rule of focus-postposing.

7.a 

"Sarah shows Omar the letter (...not the book)"

7.b 

"Sarah shows the letter to Omar (not to Ali)"

As in the noun phrase, the last place in the verb phrase can serve as a slot for focus constituents simply because it is the position of the main object specifier of the verb.

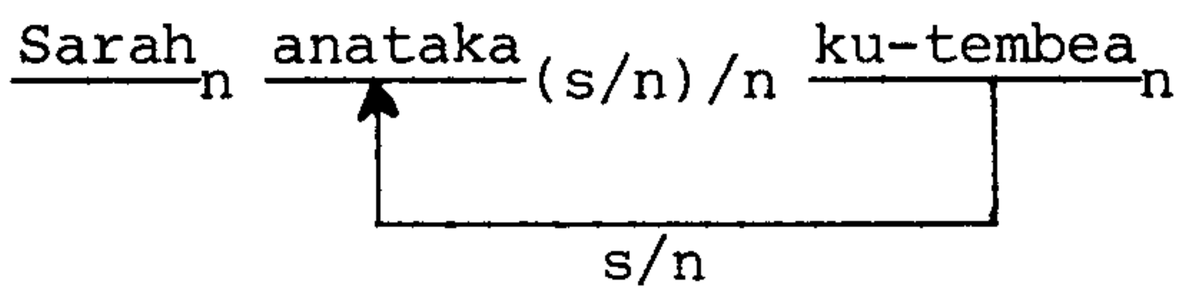
But this rule is in conflict with other pragmatical laws, mainly with the 'euphonical rules' (cf. Loogman 1965; Polome 1967: 212). According to them, constituents with the most syllables tend to be placed at the end of the sentence. Polome quotes the following examples:

7.c	Juma alimpa baba kitabu	"Juma gave father a book"
7.d	Juma alimpa kitabu baba yake	"Juma gave a book to his father"
7.e	Juma alimpa baba yake kitabu kizuri	"Juma gave his father a beautiful book"

It seems to be a universal rule that the more extensive a constituent is, the more it tends to be realized at the end of a syntagma (cf. Dik 1978: 189 ff.; cf. also Behaghel 1932: 6 for German with his 'law of increasing constituents'). I would explain it psycholinguistically: the more extensive or complex a constituent is, the more it burdens the short-term memory, and the more the structure of the whole syntagma is in danger of becoming unintelligible if the constituent is embedded into it. Therefore, extensive or complex constituents are realized only when the structure of the syntagma is already clear, i.e. at the end of it. Presumably, the 'euphonical rules' in Swahili, which seem to make use of this psycho-linguistic principle in a very elaborate manner, are not a basic pragmatic rule but rather a stylistic require-

ment which operates near the surface of linguistic expressions.

In my treatment of verbal complements the subordinated constituents of auxiliaries are also to be analyzed as terms. This reflects the fact that a verbal constituent must be nominalized to become a term, in Swahili (by ku-) as well as in English (by to):

8.a 

"Sarah wants to stroll"

Compare this construction to the following which has a normal nominal complement:

8.b Sarah$_n$ anataka$_{(s/n)/n}$ ushanga$_n$ "Sarah wants beads"

Auxiliary verbs, which have a de-lexicalized 'grammatical' meaning, tend to abolish the nominalization marker of their complements. Thus we have with taka as an auxiliary for immediate future:

8.c Sarah$_n$ anataka$_{(s/n)/n}$ tembea$_n$

"Sarah is going to stroll"

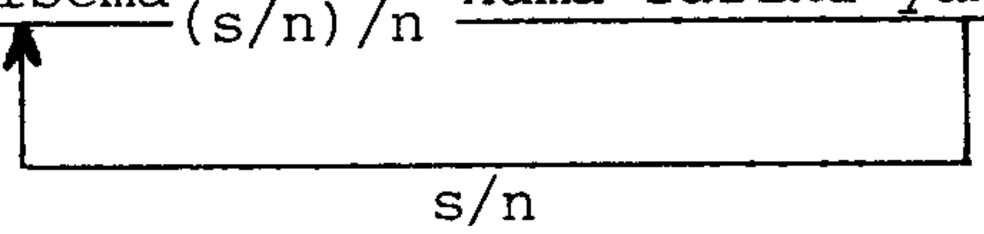
But the treatment of kuwa 'to be' and a few other auxiliaries for the expression of compound tenses is a serious problem, because they have their complement verb in inflectional form:

8.d Sarah a-likuwa a-nacheza "Sarah was just playing"

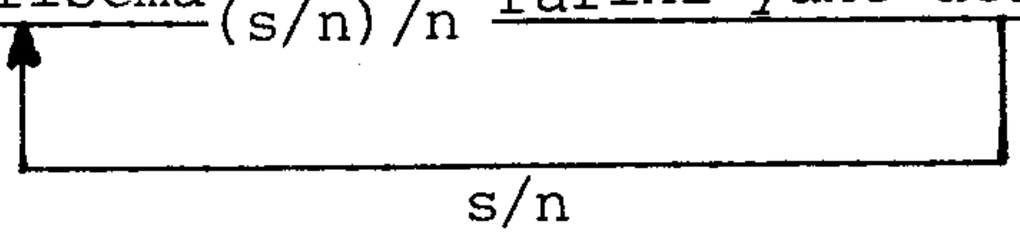
I have no idea why the second verb has re-introduced or never lost agreement with the subject. I think, however, that this case can be treated similar to the examples (8.a,c) because the meaning of the first verb is modified by the meaning of the second one: the auxiliary conveys the more general notion and tense marking, whereas the main verb 'specifies' it with its concrete meaning and aspect marking.

The sentential complement of a verb can more easily be treated as term. Sentential complements nearly always have an element, be it syntactical (for example the sentence subordinator kama) or morphological (the subjunctive verb form) which can be regarded as nominalizer:

8.e Sarah$_n$ alisema$_{(s/n)/n}$ kama rafiki yake atakuja jioni



8.f Sarah$_n$ alisema$_{(s/n)/n}$ rafiki yake atakuja jioni



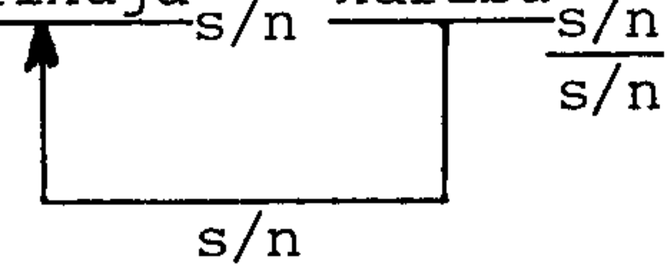
"Sarah said that her friend comes/would come in the evening"

It is remarkable that the position of deverbal or desential terms seems to be less influenced by pragmatic rules like TOP(S). Probably this is because they are seldom topicalized and normally are rather extensive and therefore tend to be realized at the end of the sentence.

1.2.2 Adverbal Attributes

A lot of constituents which are traditionally differentiated can be regarded as adverbs, i.e. adverbal attributes: genuine 'adverbs', locative adverbs consisting of a noun with the suffix -ni, adjectives with a stereotyped prefix, simple nouns or noun phrases (the 'nominal construction'), noun phrases or sentences with prepositions, or even ideophones:

9.a Sarah$_n$ alikuja$_{s/n}$ karibu$_{s/n}$ $\frac{}{s/n}$ "Sarah came near"



9.b Sarah$_n$ anatembea$_{s/n}$ mji-ni$_{s/n}$ $\frac{}{s/n}$ "Sarah strolls to the town"

9.c Sarah$_n$ aimba$_{s/n}$ vizuri$_{s/n}$ $\frac{}{sn}$ "Sarah sings beautifully"

9.d $\underline{\text{Sarah}}_{n}$ $\underline{\text{atakula}}_{s/n}$ $\underline{\text{usiku huu}}_{\frac{s/n}{sn}}$ "Sarah will eat this night"

9.e $\underline{\text{Sarah}}_{n}$ $\underline{\text{alitazamwa}}_{s/n}$ $\underline{\text{na Ali}}_{\frac{s/n}{s/n}}$ "Sarah was watched by Ali"

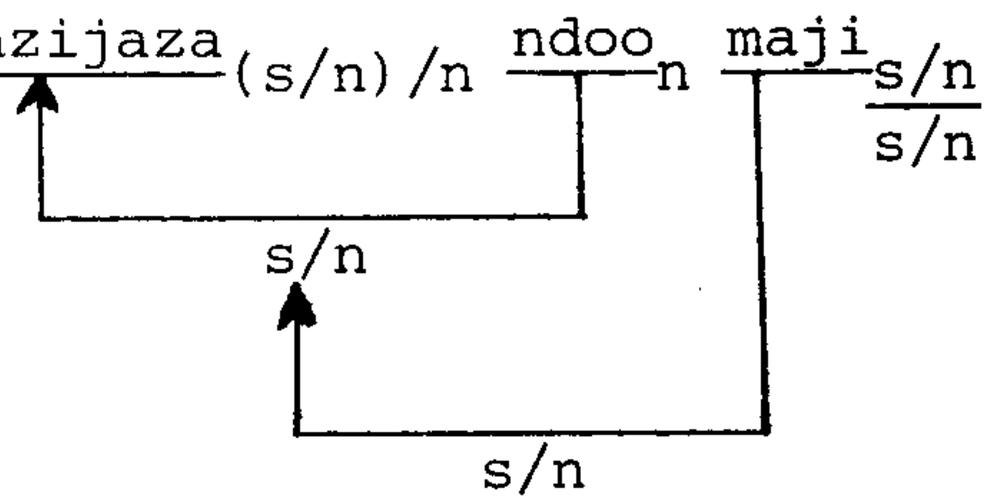
9.f $\underline{\text{Sarah}}_{n}$ $\underline{\text{anadansi}}_{s/n}$ $\underline{\text{ili Ali acheke}}_{\frac{s/n}{s/n}}$ "Sarah dances to make Ali laugh"

9.g $\underline{\text{Sarah}}_{n}$ $\underline{\text{alikwenda zake}}_{s/n}$ $\underline{\text{sssh!}}_{\frac{s/n}{s/n}}$ "Sarah went off with a swish"

Adverbs do not only specify intransitive verbs, but also transitive verbs or sentences, and adnominals and other adverbs as well. Therefore they must be assigned different categories of the form g/g, if their head constituent is of category g.

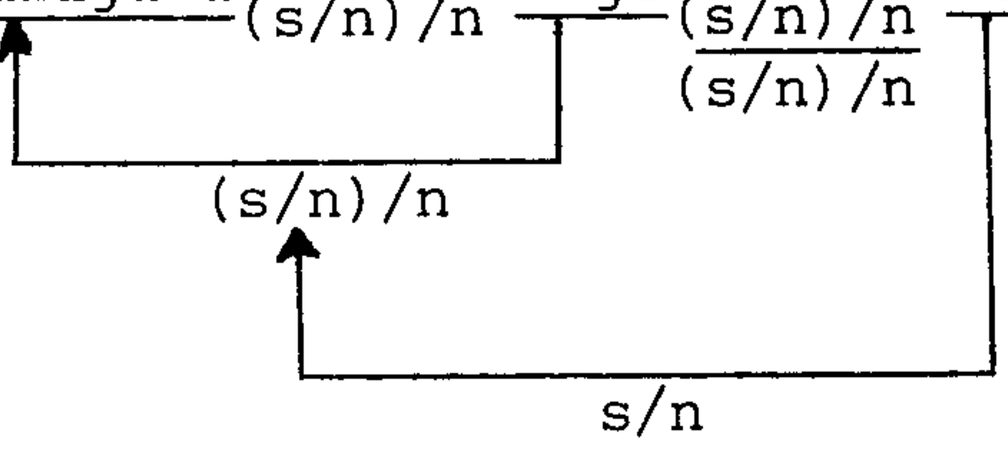
Adverbs and terms are both specifiers of the verb. Therefore, mixed sequences of terms and adverbs should also obey POST(S). In particular, the position of an adverb relative to verb and object should change if it is applied to the (transitive) verb or to the (intransitive) verb-object syntagma. The Swahili grammars do not consider this problem but there are hints that such a distinction is made in the language:

10.a $\underline{\text{Sarah}}_{n}$ $\underline{\text{anazijaza}}_{(s/n)/n}$ $\underline{\text{ndoo}}_{n}$ $\underline{\text{maji}}_{\frac{s/n}{s/n}}$



"Sarah fills the buckets <u>with water</u> (not milk)"

10.b $\underline{\text{Sarah}}_{n}$ $\underline{\text{anazijaza}}_{(s/n)/n}$ $\underline{\text{maji}}_{\frac{(s/n)/n}{(s/n)/n}}$ $\underline{\text{ndoo}}_{n}$



"Sarah fills <u>the buckets</u> with water (not the tin cans)"

The treatment of this example (Ashton 1974: 301, slightly modified)is similar to the treatment of focused constituents in examples (3.m,n) and (7.a,b) for sequences of adnominals and object terms: the main specifier place is the slot for focus constituents.

There is a very interesting phenomenon in the order of adverb constituents which seems to be a result of TOP(S). I mean the initial position of temporal and locative adverbs:

11.a leo$_{\frac{s/n}{s/n}}$ atafika$_{s/n}$ mwimbaji$_{n}$ "Today a singer will come"

11.b mwituni$_{\frac{s/n}{s/n}}$ mmelala$_{s/n}$ wanyama$_{n}$ "In the wood there sleep animals"

Most of these initial adverbs do not seem to be topics per se. They occupy this position rather because there is no real topic term in the sentence and therefore the adverb is put as a 'dummy topic![15] at its beginning. Especially temporal and locative adverbs can accomplish this function, because they naturally express definite concepts: sasa 'now', hapa 'here', juzi 'some days before', mjini 'in, from, to the town![16] and so on. It becomes clear that those dummy topics have the function of occupying the initial position in otherwise topic-less sentences if one considers the fact that in sentences with a definite noun phrase, there is a very strong tendency to replace the dummy topic by this noun phrase. This is particularly obvious with proper names; according to Driever (1976: 68), the following example is hardly acceptable:

11.c ?mwituni mmelala Sarah "In the wood there sleeps Sarah"

Notice that in dummy-topic sentences the unmarked word order is not TSV, but rather TVS. It seem that the dummy topic has displaced the subject from its initial position to a position which is determined solely by POST(S). This confirms my analysis of the basic word order as an out-come of two successive rules, POST(S) and TOP(S).[17]

1.3 Syntactic Derivations

In Swahili, like in any other language, constituents of a certain category can be transformed into another category by derivational procedures. These procedures can be syntactical or morphological, or the derivation is not marked at all (cf. for this possibility the denominal adverb of example (9.d). If the derivation is syntactical, then it should work according to the general syntactic serialization rule POST(S). As the basic constituent specifies the derivation constituent, it should follow the derivation constituent. The following examples show that this is indeed the case.

Firstly, denominal adnominals are constructed with a preposition -a or -enye: it takes nominals and yields adnominals:

12.a baisikeli$_n$ ya$_{(n/n)/n}$ mtoto$_n$ "bicylce of the child"

n/n

Conjuctors like na can be treated similarly (cf. footnote 6). But notice that they mostly are applicable not only to nouns but also to adnominals, verbs, sentences and so on. Therefore they should have different categorizations of the form (g/g)/g:

12.b Sarah hakutaka chakula$_s$ lakini$_{(s/s)/s}$ alikunywa divai$_s$

s/s

"Sarah didn't want food but she drank wine"

The syntactic comparison markers, for example kuliko 'where there is', can be regarded as constituents which take a noun (the standard) and yield an ad-adnominal:

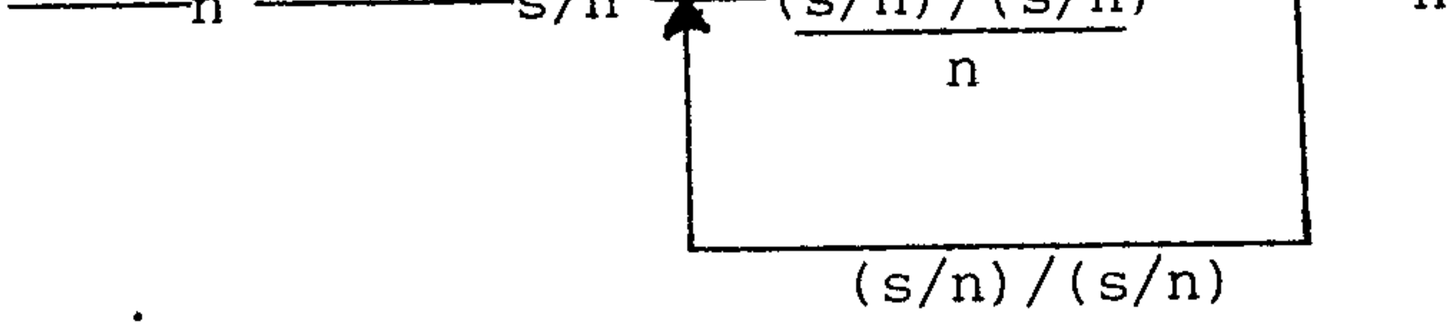
12.c mwerevu$_{n/n}$ kuliko$_{(n/n)/(n/n)}$ Juma$_n$ "more cunning than Juma"

n

(n/n)/(n/n)

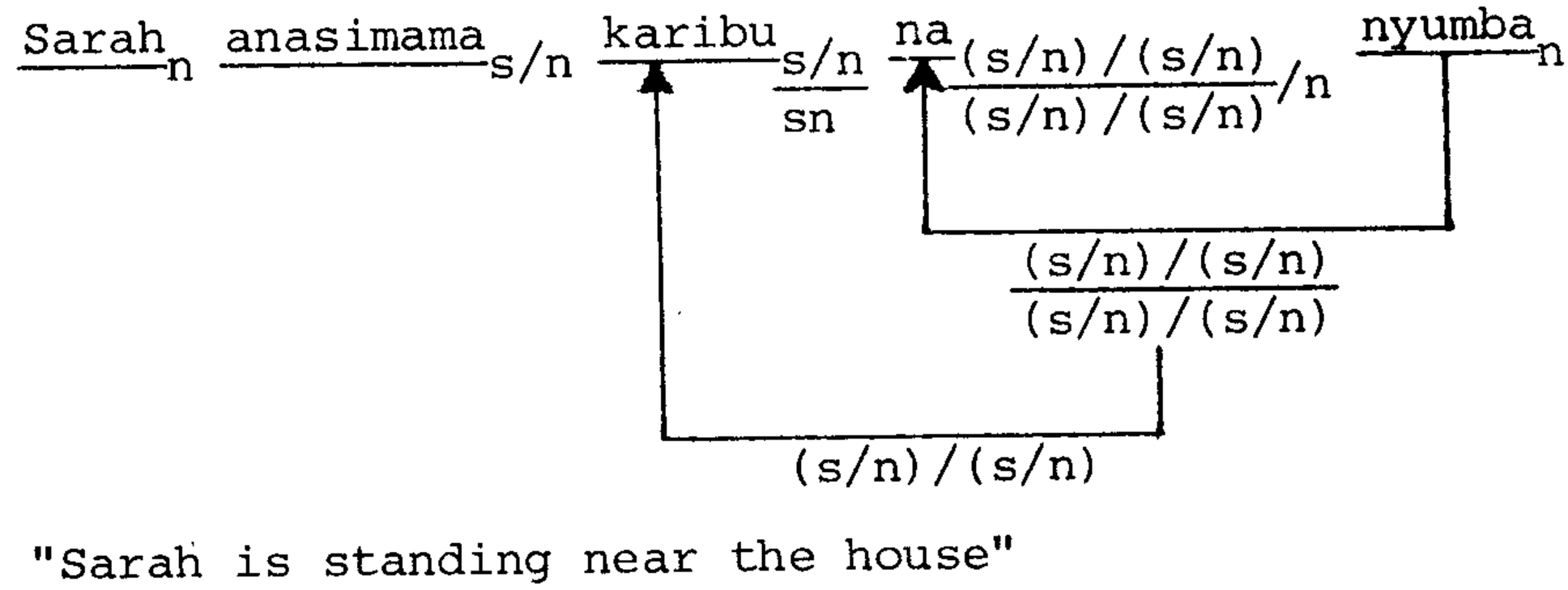
Denominal adverbs can be constructed by a preposition -a with a stereotyped prefix. Like the resulting

adverb, the preposition must be assigned different categories, which are all of the form (g/g)/n. Confer the following example:

12.d 

"Sarah eats with (her) fingers"

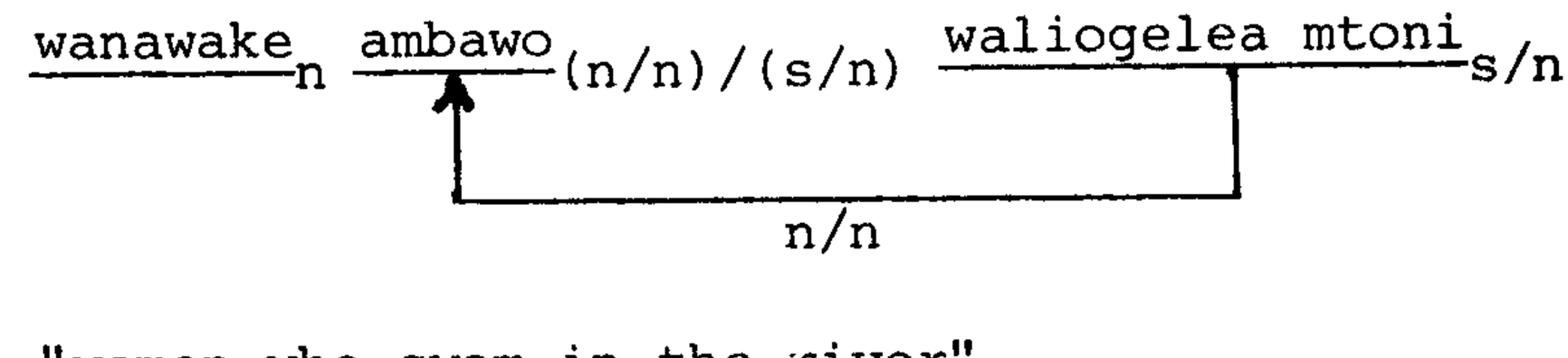
Denominal adverbs can, of course, also specify other adverbs. In this way complex prepositions are developing in Swahili, for example karibu na 'nearby'. Their categorial structure obeys exactly POST(S):

12.e 

"Sarah is standing near the house"

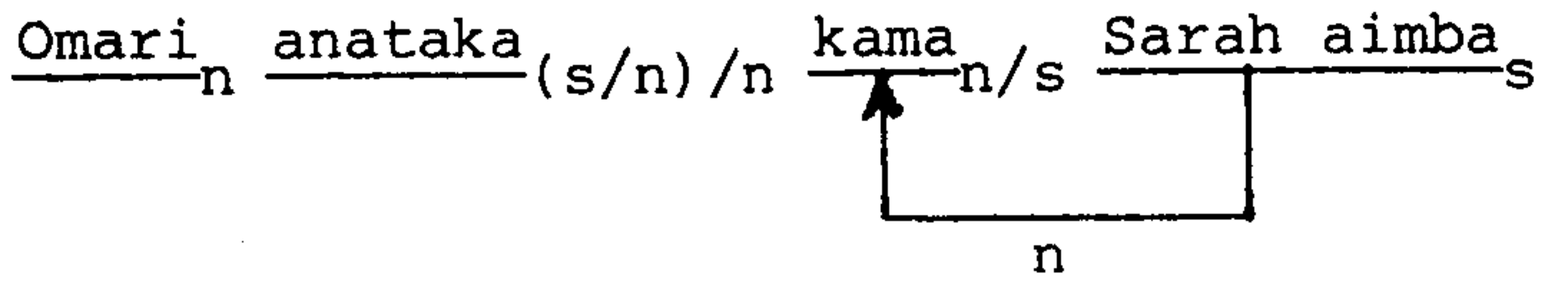
Of course, karibu na could also be treated as a single constituent which takes a noun and yields an adverb.

The relative pronoun amba- -o can be categorized as a contituent which takes verbs and yields adnominals:

12.f 

"women who swam in the river"

Finally, the conjunctions for the generation of subordinate clauses can be considered as constituents which take sentences and yield nouns:

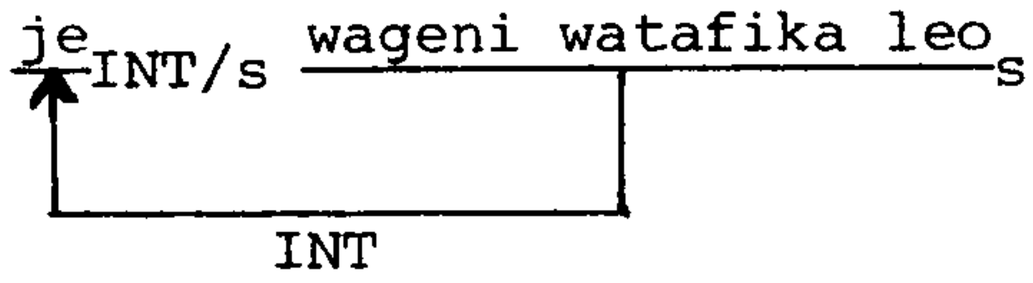
12.g 

"Omar wants that Sarah sings"

1.4 Sentence Mood Markers

The different sentence moods can be treated with the means of categorial grammar if the sentence is divided into two components: the 'sentence radical' and the 'sentence mood marker', e.g. for declarative, imperative and interrogative. In this analysis, the sentence radical would specify the sentence mood marker (cf. Lewis 1970). This renders the linguistic facts quite well because in consistent pre or postspecifying languages the syntactic sentence-mood markers behave exactly like all other specificates (cf. Greenberg 1966: universal 9 for interrogative markers; Lehmann 1973).

For Swahili, one would expect that syntactic mood markers stand in front of the sentence radical. There is only one syntactic mood marker, namely the interrogative marker je. According to POST(S), it precedes the sentence radical (which is, as in many languages, identical in form with the declarative sentence):

13.a 

2. WORD ORDER CHANGE IN SWAHILI

2.0 Word Order Change in Niger-Congo Languages

Swahili, as a Bantu language, belongs to the Niger-Congo family. Today, most of the Niger-Congo languages have a similar word order as Swahili, i.e. they are postspecifying and topic-initial. The main exception is a cluster of languages spoken in West Africa, mainly of the Mande, Gur, and Western Kwa branch, which show no unidirectional specification. In these, the basic word order tends to be SOV, but with adverbial phrases following the verb. They have postpositions, and the demonstrative, possessive and genitive phrase precedes the head noun,

whereas numerals and adjectives follow (cf. Heine 1976 for his 'type B languages').

There are different possibilities of explaining the syntactic development from Proto-Niger-Congo to these two subgroups. The first is to assume that the postspecifying character shown by the bulk of the present-day Niger-Congo languages represents the syntactic patterns of the proto--language, whereas the word order of Mande and the neighbouring languages are areal innovations. This position is held by Heine (1976:59). The second is to assume that Proto-Niger-Congo had a prespecifying syntax which changed to postspecification, with Mande and its neighbouring languages showing syntactic relics of the older prespecifying patterns. This position is held by Givon (1975 a) and Hyman (1975). In the following, I will discuss Swahili morphology and show that it supports the second hypothesis.

The morphology of a language normally consists of relics of its former syntax: independent syntactic units which served to express grammatical functions, and therefore occurred in characteristic positions, merge with their specifier constituents by intonatoric processes, thus becoming bound morphemes: "today's syntax is tomorrow's morphology" (Givon 1971 a:413). The former order of syntactic units is preserved in the order of the morphemes descended from them, because new word order rules can only affect syntactic units and not morphological ones. Thus, the order of bound morphemes relative to each other can serve to determine the direction of serialization in earlier periods of a language. In the present section, some morpheme orders in modern Swahili will be illustrated in order to reconstruct diachronic changes in Swahili and other Bantu languages.

2.1 The Position of the Auxiliary: From Pre- to Postspecification

The verb suffixes in Swahili, as in other Bantu languages, serve to express certain modal or diathetical concepts. The 'suffix', in the terminology of Polome (1967: 110), sticks between 'verb root' and 'final (vowel)'. Some of these derivative suffixes are productive today (14.a-c), whereas others can only be inferred from lexicalized forms (14.d,e), cf. Driever 1976: 24 ff.:

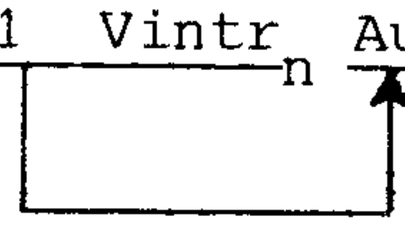
14.a	passive	w	pend-w-a	"be liked"
14.b	applicative	E(l)-	pend-e-a	"like for"
14.c	causative	Ez [18]	pend-ez-a	"cause to like, please"
14.d	conversive	O·	funga	"shut"
			fung-u-a	"open"
14.e	Contactive	at	kumba	"press against"
			kumb-at-a	"hold in the hand"

Note that there is vowel harmony between verb root and suffix: E is realized as i or e, O is realized as u or o (cf. Ashton 1974: 217 ff.; Polome 1967: 84).

Givon (1971 b) has pointed out that most of the verb suffixes have developed from former verbs. The suffixes have the same grammatical function as auxiliary verbs, i.e. they are specificates of the root. Therefore, the auxiliary construction, exemplified by the causative, must have functioned in the archaic syntax as follows:

NP1 $Vintr_s$ ---> (NP1 Vintr NOM_n) ---> $NP2_n$ $Vintr_n$ $Aux_{(s/n)/n}$

NP1 $Vintr_s$ ---> (NP1 Vintr NOM_n) ---> $NP2_n$ NP1 $Vintr_n$ $Aux_{(s/n)}$



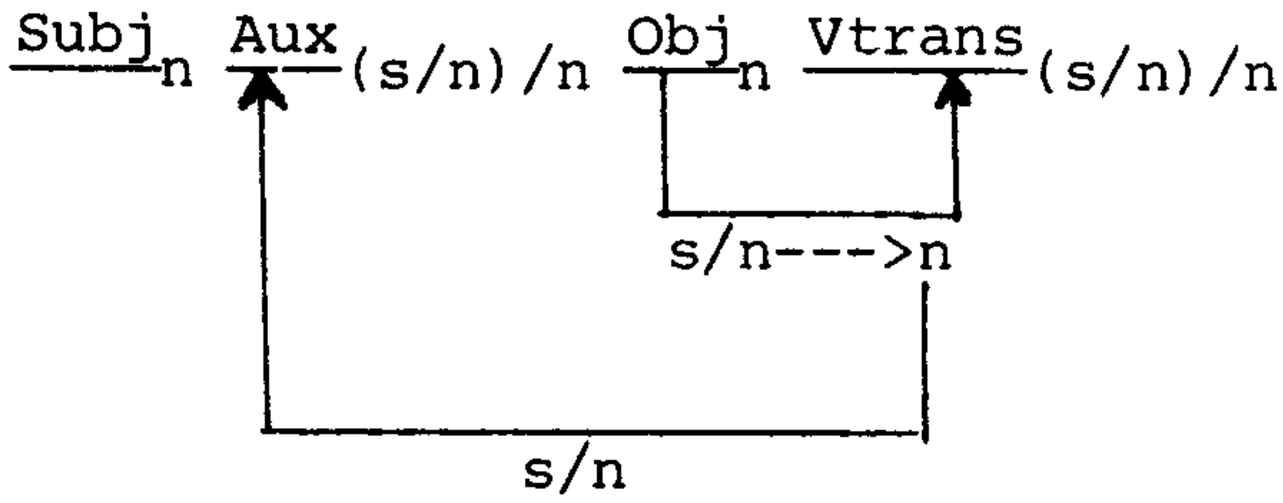
Sarah aimba (Sarah ku-imba) Ali Sarah aimb- ish-

Sarah sings (Sarah to sing) Ali Sarah to sing causes

It can be assumed that generally such processes lead to the resultant construction via nominalization of the embedded sentence, but this stage does not seem to have left any traces in modern Swahili. The verb suffixes have even greater resemblance to auxiliary verbs; namely, they can be serialized, e.g. in pig-an-ish-wa 'be caused to fight', which reflects the serialization of auxiliaries quite well. However, it has not yet been possible to establish etymological relations between existing verbs and verb suffixes

in Bantu languages.[19] Together with the fact that the verb suffixes of many Bantu languages can be traced back to common roots, this indicates the great age of syntactic constructions like the one quoted above. I would like to call it the 'antiquity' of Bantu language, but note that this stage could easily represent an epoch in which Bantu was not yet separated from other Niger-Congo branches. As evident from the position of the auxiliary of the example, this language should have been prespecifying.

A later period of syntactic development is represented by the order of verb prefixes. They consist mainly of agreement or pronominal morphemes and certain tempus/aspect or modality markers. The agreement prefixes are identical with the pronominal prefixes of the corresponding noun; presumably they have developed from anaphoric pronouns similar to those in Romanic languages. The tempus/aspect and modality morphemes can be traced back to temporal, modal, or aspectual auxiliary verbs (cf. Givon 1972 a: 129 ff.). Corresponding to the modern morpheme order, the following order must be assumed to be the original syntactic structure:

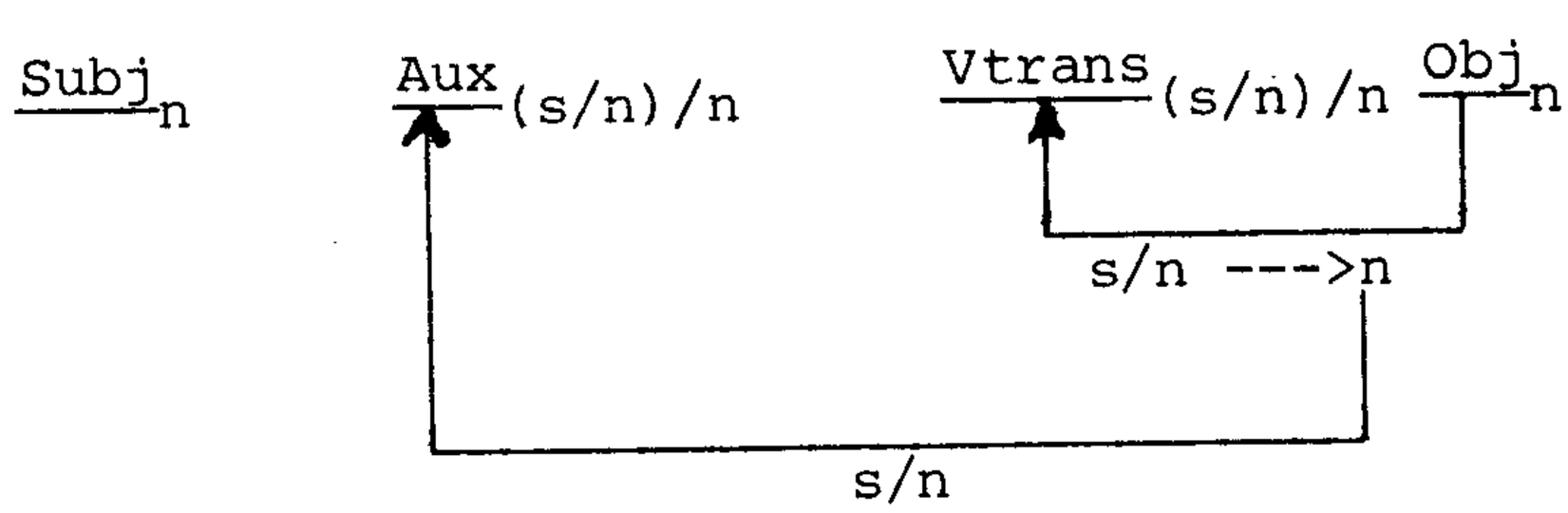


ni-	li-	ku-	penda
I	did	you	love

Notice that the object still precedes the (main) verb whereas the object-verb syntagma follows the auxiliary, thus constituting a mixed serialization scheme in the verb phrase. Such 'bracing constructions', which are a result of mixed directions of specification, seem to be characteristic for transitions from one direction of specification to the other; see for example the 'sentence brace' of modern German (cf. Vennemann 1974 a). Consequently, the syntax which is represented by the diagram above seems to be a more recent one. This is confirmed by the two following facts. Firstly, the tempus/aspect or modality markers can easily be traced

back to cognate words; for example the future marker -ta- to taka 'want', the preterite marker -li- to li 'be', the perfect marker -me- to Proto-Bantu *maal which is related to Swahili maliza 'finish', the concessive marker -japo- to ja 'come' + po, a temporal relative particle. Secondly, the same tempus/aspect or modality is often[20] expressed by non-cognate prefixes in different Bantu languages which contrasts with the uniformity of the verb suffixes (cf. Givon 1972 a, 1975 a). Therefore, syntactic structures like the one shown above should represent an epoch where the different Bantu dialects were beginning to develop separately from each other and which is more recent than the first. I will call it the 'middle ages' of Bantu languages.

The formation of auxiliary verbs from normal verbs is an important diachronic process which goes on even today. A lot of verbs can function as auxiliaries, for example kwisha 'to finish' for immediate perfect, kwenda 'to go' for continuative, weza 'be able' for potentiality (cf. Ashton 247 ff.). According to the general postspecification in modern Swahili syntax, the present serialization of the constituents is post-specifying:



This order represents the syntactic structure in the 'modern times' of Bantu languages, in which post-specification has succeeded as the basic syntactic principle.

I have already drawed attention to the fact that some verb suffixes are no longer productive today, but can only be inferred from a few lexicalized forms. Generally, it seems that a language tends to abandon its morphologic derivative means - either because they become too complicated (i.e. unsystematical), or because they

back to cognate words; for example the future marker -ta- to taka 'want', the preterite marker -li- to li 'be', the perfect marker -me- to Proto-Bantu *maal which is related to Swahili maliza 'finish', the concessive marker -japo- to ja 'come' + po, a temporal relative particle. Secondly, the same tempus/aspect or modality is often[20] expressed by non-cognate prefixes in different Bantu languages which contrasts with the uniformity of the verb suffixes (cf. Givon 1972 a, 1975 a). Therefore, syntactic structures like the one shown above should represent an epoch where the different Bantu dialects were beginning to develop separately from each other and which is more recent than the first. I will call it the 'middle ages' of Bantu languages.

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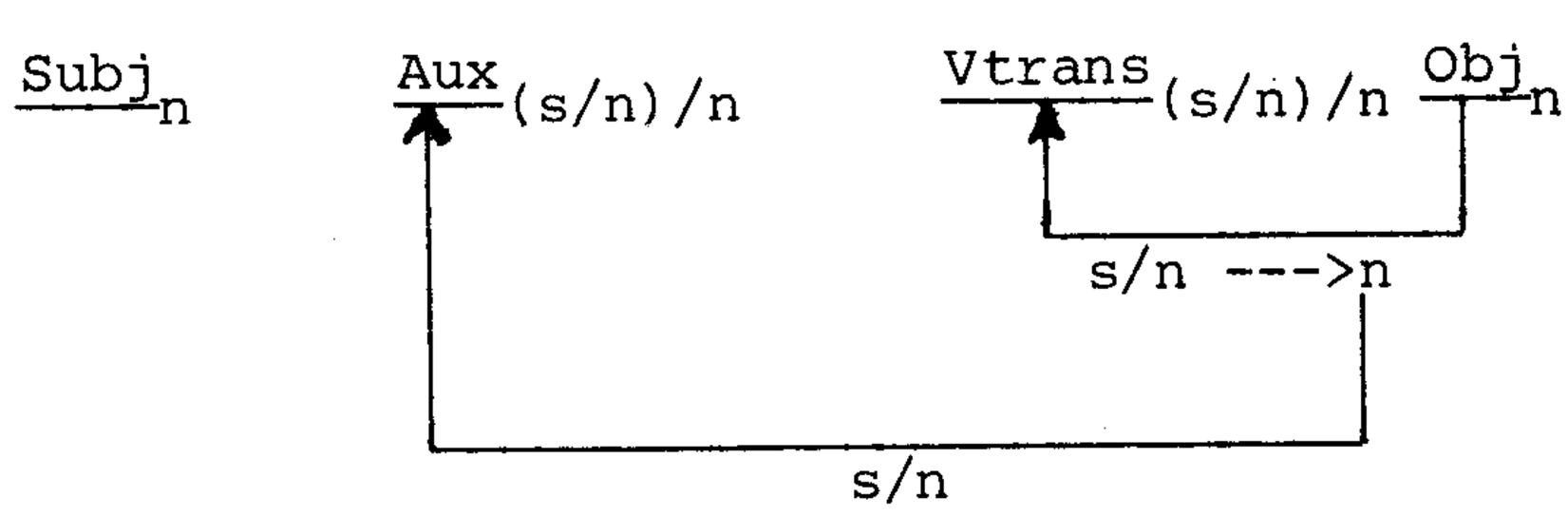


watoto wamekwisha (ku)soma kitabu

the children have already read a/the book

This order represents the syntactic structure in the 'modern times' of Bantu languages, in which post-specification has succeeded as the basic syntactic principle.

I have already drawed attention to the fact that some verb suffixes are no longer productive today, but can only be inferred from a few lexicalized forms. Generally, it seems that a language tends to abandon its morphologic derivative means - either because they become too complicated (i.e. unsystematical), or because they

run counter to the present syntactic direction of specification, or perhaps simply because they are eroded by intonatoric and phonological processes. In any event, they are replaced in time by syntactic means which express the same grammatical function. Some syntactic derivations explained in 1.3 can be shown to replace older morphological ones in this fashion. For instance, the applicative form of the verb is replaced by prepositions like kwa ajili ya 'for the sake of', or the causative form by the auxiliary fanya 'do' (cf. Driever 1976: 44). The change of tempus/aspect and modality marking by means of prefixes to the marking by means of auxiliaries is also an example for syntactic derivations replacing morphological ones. These changes do not occur abruptly; rather old and new forms coexist, expressing slightly different grammatical functions in the transition period. This is particularly clear with taka 'want' which in the 'middle age' and in 'modern times' has served as auxiliary (cf. Givon 1972 a):

14.a nina-taka kucheza "I want to play"

nina-taka cheza "I'm going to play"

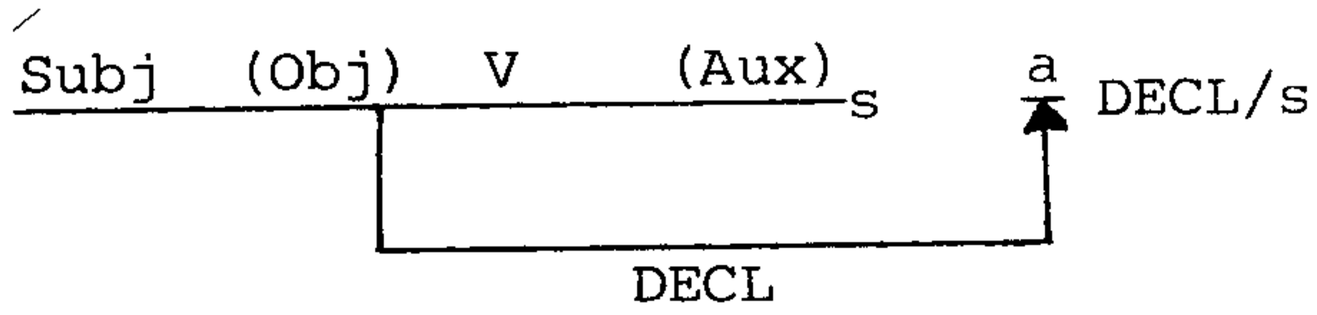
ni-ta-cheza "I shall play"

A similar case is isha 'finish' which can function at least in some dialects as both a bound aspect morpheme and an auxiliary (cf. Maw and Kelly 1975: 3).

2.2 More Relics and New Constructions

2.2.1 Verb Finals

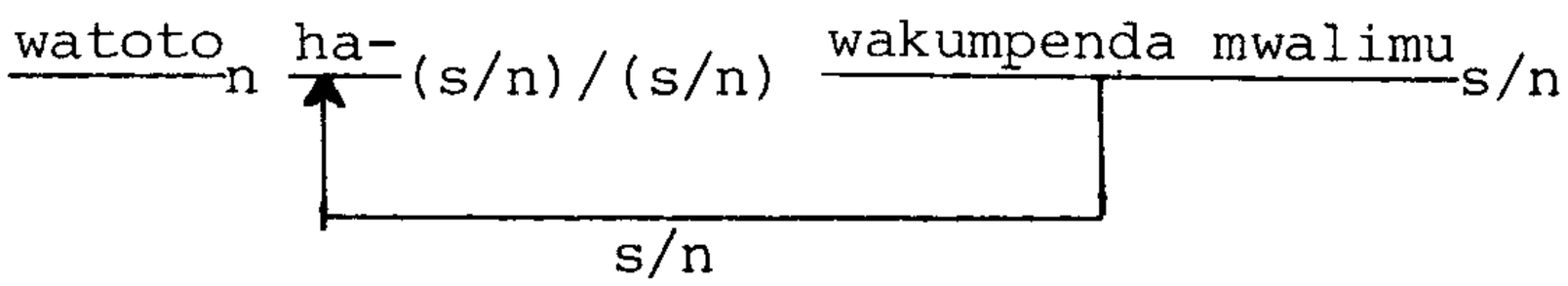
The verb finals -a (declarative), -e (subjunctive), and -i (negation), which occur in many Bantu languages, may also have developed from old modality verbs. But at least the declarative marker -a may alternatively be analyzed as an archaic sentence-mood marker (cf. Lehmann 1973: 54 f. for such syntactic declarative markers):



na-	mw-	imb-	ish-	a
I	him	sing	cause	(fact)

As syntactic mood markers seem to be employed mainly in very consistent pre- or postspecifying languages (other languages, like English, normally express sentence-mood by intonation or word order), this analysis may suggest a very high degree of prespecification in archaic Bantu.

The final -i can be reconstructed as a negation marker in 'antiquity'. It has probably developed from an archaic negation auxiliary which had the same position as the other auxiliaries. In the contemporary language, negation is expressed by -i only in the indefinite present tense, and even there it has to co-occur with a negation prefix ha- or si-, as in ha-tuwapend-i 'we don't like them'. I would trace such discontinuous morphemes back to bracing constructions: They indicate that a change was on the way in the serialization of the specificative relations when the two components became bound morphemes (cf. Vennemann 1974 a). In all other tenses negation is expressed exclusively by a prefix whose most probable source was likewise a negation auxiliary:

15.a 

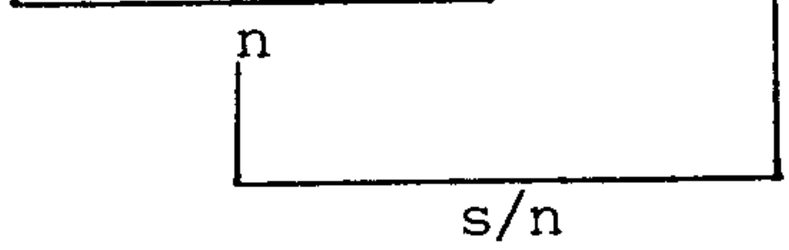
"(the) children did not like (the) teacher"[21]

But note that according to Dahl (1979) there are reasons independent of the specification structure for negation particles to precede the verb. - The position of the subjunctive negation marker -si-, as in tu-si-wapende 'that we don't love them', can be traced back to the negative copula si serving as an auxiliary in the 'middle ages'.

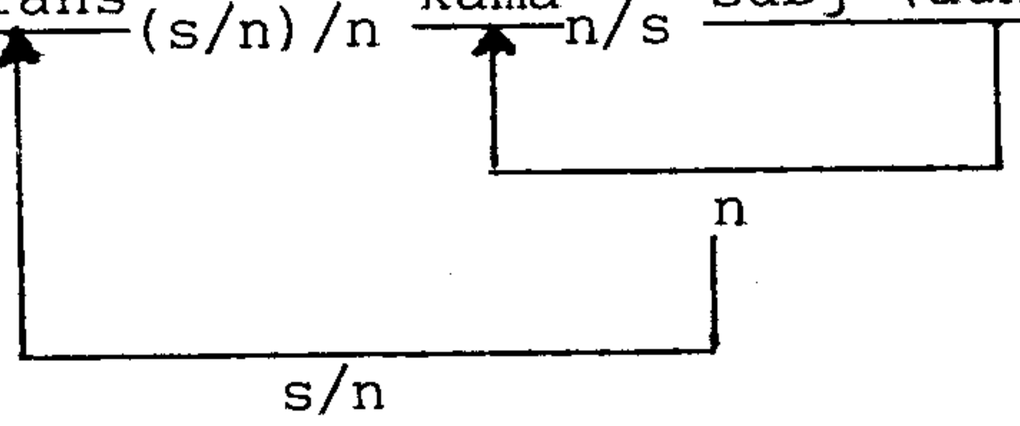
The final -e, which probably has developed from a modal verb and now serves to express the subjunctive modality, is also being replaced by processes which are in better agreement with the postspecifying syntactic structure of present-day Swahili. In the 'middle ages' some of its functions may have been expressed by auxiliaries from which the modern conjuctive markers -ki-, -nge- and -ngali- have developed. In modern times, the subjunctive mainly serves to express commands and to mark subordinate clauses. In the latter function, it is often replaced by conjunctions like kama (cf. 1.3). The

transition is continuous: subordinate clauses can be marked in certain cases exclusively by the subjunctive form of its verb, or by conjunctions together with the subjunctive, or exclusively by conjunctions (cf. Polome 1967: 163). If one accepts the hypothesis that the precursor of the subjunctive marker had the same function as today's conjunctions, then the regular character of the transition from pre- to postspecification is again borne out:[22]

antiquity: $\underline{\text{Subj}}_{n}$ $\underline{\text{subj (obj) v (aux)}}_{s}$ $\underline{\text{e}}_{n/s}$ $\underline{\text{Vtrans}}_{(s/n)/n}$



modern times: $\underline{\text{Subj}}_{n}$ $\underline{\text{Vtrans}}_{(s/n)/n}$ $\underline{\text{kama}}_{n/s}$ $\underline{\text{subj (aux) v (obj)}}_{s}$



In all these processes replacing verb finals by other means, an important driving force seems to have been the extensive borrowing of words from Arabic. This introduced verbs which in their basic form ended with a vowel different from a and therefore did not fit into the old modality pattern, cf. samehe 'forgive', jibu 'answer', sali 'pray'. In this way the generality of the modality distinction was infringed, and the development of new marking devices initiated.

2.2.2 Relative Clauses

There are three different forms of relative clauses in Swahili. Generally, a relative particle -o is used which agrees with the head noun, but this particle can occur as a verb suffix, as a verb prefix following the tempus/aspect marker, or as a suffix of a relative pronoun amba-. Consider the following examples, the first member of each pair showing a subject relative clause and the second, an object relative clause:[23]

16.aa $\underline{\text{wanafunzi}}_{n}$ $\underline{\text{wakisoma-wo kitabu}}_{n/n}$

"(the) pupils who read the book"

16.ab kitabu$_n$ wakisoma-cho wanafunzi$_{n/n}$
"the book which is read by (the) pupils"

16.ba wanafunzi$_n$ wata-wo-kisoma kitabu$_{n/n}$
"(the) pupils who will read the book"

16.bb kitabu$_n$ wata-cho-kisoma wanafunzi$_{n/n}$
"the book which will be read by (the) pupils"

16.ca wanafunzi$_n$ amba-wo wamekisoma kitabu$_{n/n}$
"(the) pupils who have read the book"

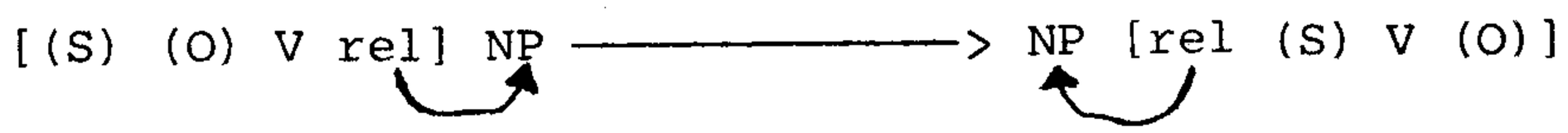
16.cb kitabu$_n$
amba-cho wamekisoma wanafunzi$_{n/n}$
amba-cho wanafunzi wamekisoma$_{n/n}$
"the book which has been read by the pupils"

These three forms can easily be interpreted as relics of three different stages of syntax development. The relative pronoun is a specificate of the sentence which is to be relativized: it takes a sentence and yields an adnominal (cf. 1.3). In 'antiquity', the relative pronoun was placed at the end of the relative clause according to the assumed general prespecification; this position is conserved in example (16.a). In the 'middle ages', the relative particle was a suffix of the auxiliary, as can be seen in example (16.b). In modern times, a new syntactic method to construct relative clauses has been developed, and this functions according to POST(S) as can be seen in (16.c). This hypothesis is backed up by some other facts. For instance, there are heavy restrictions for constructions like (16.a): they can only be used in the indefinite present, probably the most archaic tense. There are also some restrictions for constructions like (16.b): they can only be used with the simple present, preterite and future tense. But there are no such restrictions for constructions like (16.c). Furthermore, (16.c)-type relative clauses can easily be expanded to complex relative clauses, which is hardly possible with (16.a) or (16.b). Finally, the relative pronoun amba- -o is clearly related to the old verb amba 'say'. Therefore, (16.c) should be regarded as

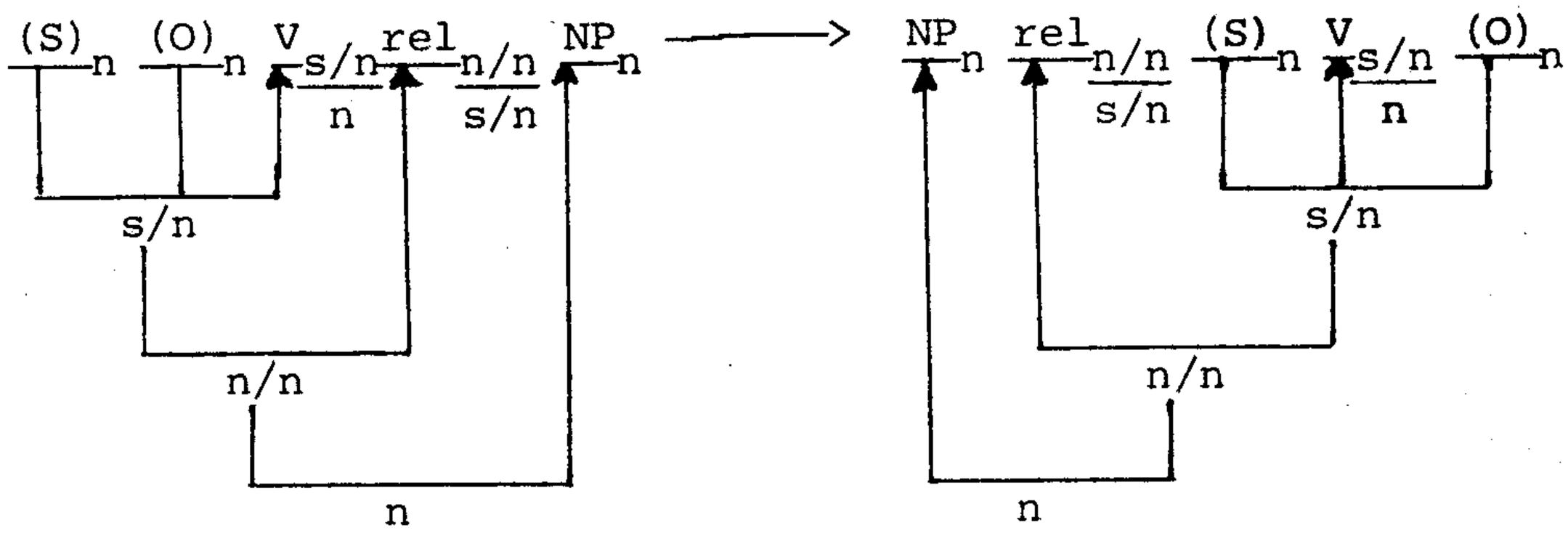
a new construction, and (16.b) and (16.a) as older ones which are relics in modern Swahili.

There is another theory which intends to explain the development from (16.a) to (16.c) by syntactic change. Givon (1972 b,c) regards these three stages as exemplifications of a principle of 'pronoun attraction', that is, of an attraction between the relative pronoun and its head noun. According to it, the relative pronoun should migrate from the end of the relative clause to its beginning as a result of the change from Modifier-Noun to Noun-Modifier as basic constituent order. Thus, both theories make very similar predictions:

theory of pronoun attraction:

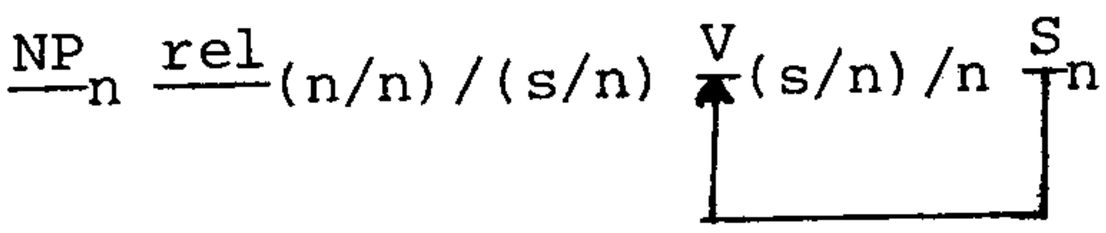


theory of unidirectional serialization:



According to whether the NP is coreferential with S or O, i.e. whether it refers to subject or object relative clauses, S or O is expressed by the relative pronoun.

Because of the position of the subject in front of the verb, it seems that with the categorial grammatical interpretation of object relative clauses there would be no unidirectional specification. However, as Givon remarks himself, the following order, which is clearly postspecifying, is also possible (see for example the first part of (16.cb):



I would consider the NP-rel-S-V order of the second part of example (16.cb) as an analogous construction to the order of the main clause (and thus as a hint that Swahili is on the way to a subject-initial language). According to Givon, the NP-rel-S-V order would be the basic one, and he explains the other as an exception which is obligatory for constructions like (16.a) and (16.b) and optional for (16.c): it would be a consequence of the tendency of pronoun attraction, because the relative pronoun is a bound morpheme of the verb in (16.a) and (16.b), and therefore the whole verb is attracted by the NP and becomes the constituent closest to it. In (16.c), however, the pronoun is a free morpheme and can be attracted by the NP without disturbing the order of the rest of the sentence. The optional NP-rel-V-S order in constructions with the free relative pronoun probably would be explained by Givon by analogy with the former relative clause structure.

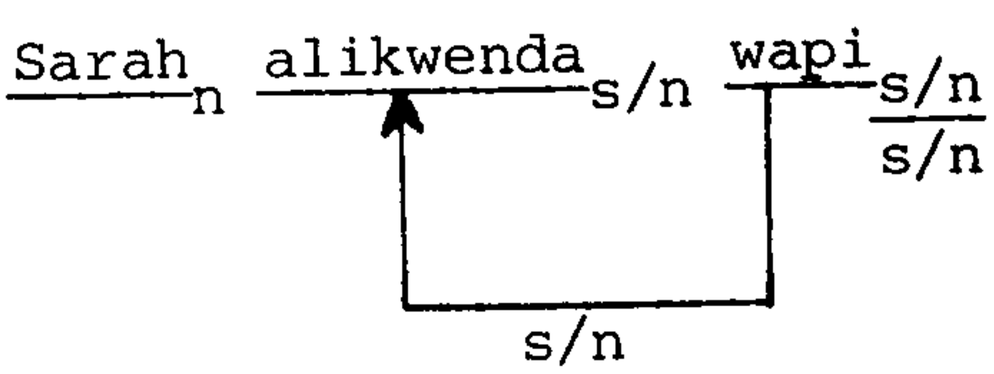
I have not enough information to decide which of the two theories should be preferred. But note that there are two arguments which favour the theory of unidirectional serialization. Firstly, it explains the co-occurence of Mod-N and OV on the one hand and N-Mod and VO on the other. Secondly, it explains the position of the relative pronoun by principles which are needed anyway to describe Swahili syntax, whereas Givon has to introduce a new principle for this case.

2.2.3 The Sentence Mood Marker *je*

As pointed out in 1.4, there is a syntactic sentence-mood marker in Swahili: the interrogative *je*. I regard this marker as a relatively recent innovation which has developed from the interrogative verb suffix *-je*, as in:

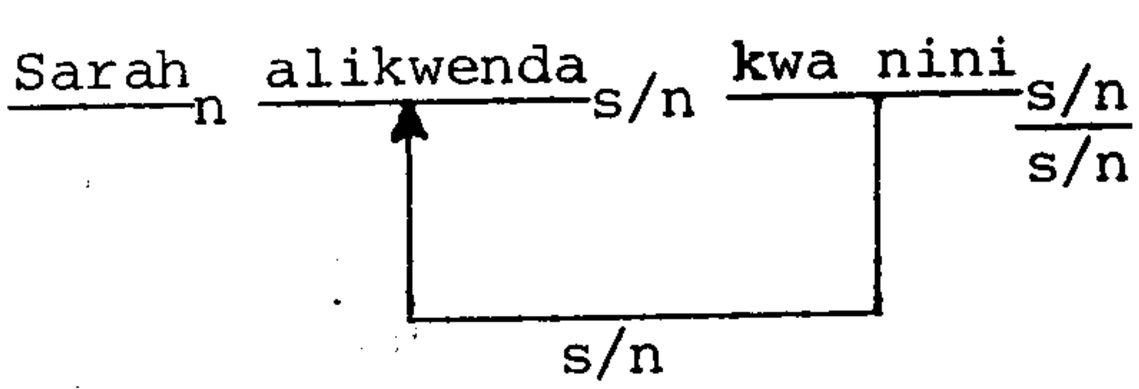
17.a *Sarah alifanya-je?* "What did Sarah do?
How did Sarah do?"

I do not think that *-je* is a relic of a sentence-mood marker of the archaic syntax. It has its origin rather in adverbal interrogatives of a more recent time, which can be clearly seen in the case of other interrogative enclitics, like *-pi* or *-ni*:

17.b 

> Sarah alikwenda-pi

"Where did Sarah go?"

17.b 

> Sarah alikwenda-ni

"What was Sarah going for? Why did Sarah go?"

It seems that -je developed from a quite similar construction. When developing to a general interrogation marker, i.e. a sentence-mood marker, it was placed at sentence-initial position, according to POST(S):

17.d je$_{INT/s}$ Sarah aliifanya$_{s}$ "Did Sarah do it?"

The development of a syntactic mood-marker seems to be unique in Bantu languages. Probably one of its reasons is the breaking-down of the former sentence intonation system in Swahili (cf. 2.3).

2.2.5 Class Prefixes

The morphological structure of the noun poses difficult problems for categorial grammar, mainly with the explanation of the class prefixes. Two different, but related syntactic structures have been assumed as sources of this morphological feature, namely the classifier construction as proposed by Finck ([1909] 1961: 47) and the article-noun construction as proposed by Greenberg (1978).

According to Finck's hypothesis, Bantu nouns have the same components as classifier constructions: there is a prefix which can be regarded as reflex of an ancient classifier, and there is a pre-prefix (lost in Swahili, but still present in Bemba, Rundi, Luganda, Dzamba and others) which functions generally as a kind of determiner (cf. Meinhof 1948: 68 ff.) and can be regarded as reflex of an ancient determiner. Thus we have:[24]

18.a (Luganda) o- mu- peera
a tree guava "a guava tree"

18.b (Swahili) Ø m- nazi
tree coconut "(a) coconut tree"

The parallelism with a classifier language like Vietnamese is quite transparent:

18.c (Vietnamese) mot cay du˙o˙ng-lie*u
a tree willow "a willow tree"

In a categorial grammatical representation, the basic noun should specify the classifier, and this syntagma should then specify the determiner.[25] If one assumes this direction of specification, the morphological structure of Bantu nouns shows postspecification. The syntactic matrix structure of the noun, however, is undoubtedly a very old one and therefore should have been prespecifying. I see no other way to explain this pecularity of a postspecifying construction in the midst of a prespecifying syntax than to assume that it is a relic of a pre-archaic syntax, or that there is a pragmatic rule which is responsible for it. This possibility is substantiated by Greenberg's observation (1975) that there is a general tendency to place the determiner in front of the classifier, and the whole classifier phrase in front of the basic noun, irrespective of which direction of serialization governs specifying constructions in the language.

The treatment proposed by Greenberg (1978) would lead to similar difficulties. Greenberg analyzes the noun class prefix of Bantu languages, and gender markers in general, as relics of former articles, i.e. definiteness markers According to this interpretation, the pre-prefixes of some Bantu languages would be rather new constructions because they would develop only when the simple prefixes were de-marked and wholly incorporated in the noun. Greenberg's theory would have the consequence that we must assume a preposed article for an archaic stage of Swahili, and this would again contradict the assumed prespecification. But notice, again, that there are reasons for supposing that the position of the article may be dependent on pragmatic rules.

2.25 The Locative Noun Suffix -ni

The locative noun suffix -ni generates locative adverbs from common nouns (cf. example 9.b). In modern Swahili, it is gradually replaced by a prepositional construction with katika 'in'. Thus, there is evidence that the suffix -ni is a relic of a former epoch; it has been interpreted in this way e.g. by Givon (1974 a: 65, 104).

On the other hand, there is evidence that ni locatives are not relics of an archaic stage of Bantu syntax. They are limited to languages of some parts of East and South Africa, and they have replaced in these languages the prefixes of the locative noun classes 16, 17 and 18 (pa-, ku-, mu-), or are now on the verge of replacing them (cf. Gregoire 185 ff.). Therefore it seems that the prefixes are rather a recent development. Moreover, it must be assumed that the locative suffix has originated language-internally in some cases, because the languages in which it occurs are scattered over a large region and are often separated from each other by languages with no locative suffix. Finally, notice that -ni is not only a locative marker but also a definiteness marker. For example, it cannot be suffixed to proper nouns or to common nouns in a generic sense:

19.a	Ali anakwenda shule	"Ali attends school"
19.b	Ali anakwenda shuleni	"Ali is going to the school (building)"

Meinhof (1942) has advanced a theory to explain the development of the -ni suffix which is in keeping with these facts. It assumes a postspecifying syntactic matrix structure and has been corroborated in its essential points by the thorough examination of Gregoire (1975). According to Meinhof, the prefix of noun class 18 mu- eroded in the eastern and south-eastern Bantu dialects (the reduction of mu in initial position can be shown in general for these languages) and was replaced by a demonstrative carrying mu as an agreement affix. This demonstrative marked the nouns of class 18 and consequently, by generalization, the nouns of the other locative classes as well. This stage can be seen in Herero which has such a demonstrative, namely imui. From this, the form ini or ni can be derived in a regular fashion. The introduction of the mu demonstrative as a

locative marker must have occurred recently, because the position of the bound morpheme (i)ni in modern Bantu languages indicates that their noun phrases must have been postspecifying at that time.

Thus, the development of suffixes in postspecifying languages can be explained by assuming that the syntactic matrix constituent had originally a specifying function. The words of classes 16, 17 and 18, which were probably never 'normal' nouns, have been categorially reinterpreted as locative adverbs.[26] The demonstrative or suffix (i)ni, by which the locative adverb was differentiated from the basic noun, consequently was re-interpreted as a derivation morpheme which takes nouns and yields locative adverbs. Thus, the development consisted of three components: firstly, a marking change; secondly, a categorial mutation; and finally a morphemization of a former syntactic constituent. With nyumba 'house' these components can be exemplified as follows:

1) *mu-nyumba > *m-nyumba > *nyumba imui

2) *nyumba$_{n}$ imui$_{n/n}$ > *nyumba$_{n}$ imui$_{\frac{(s/n)/(s/n)}{n}}$

n

s/n

3) *nyumba imui > *nyumba-ini > nyumba-ni

2.2.6 The Plural Verb Suffix -ni

The verb suffix -ni occurs mainly with imperatives and marks the plural:

20.a Pika samaki! "Cook (the) fish!"

20.b Pikeni samaki! "Cook (pl.)(the) fish!"

Note that the verb final -a has changed to -e by assimilation to the following -i (umlaut). Meinhof (1942) assumes that an original verb prefix m- eroded and was replaced by a postponed element, similar to the case of the locative nouns.

Furthermore, the verb suffix -ni is used in some Swahili dialects in addition to the object prefix of the

second person and serves to distinguish the collective and the distributive plural (cf. Polome 1967: 105, 113, 188):

20.c nina-ku-omba "I beg you (sing.)"

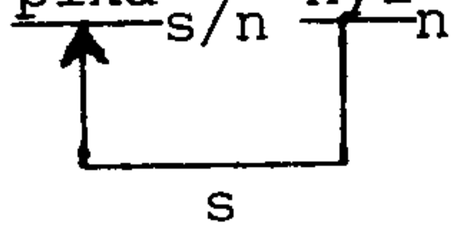
20.d nina-wa-omba "I beg you (pl,)"

20.e nina-ku-ombe-ni "I beg you (pl., distributive)"

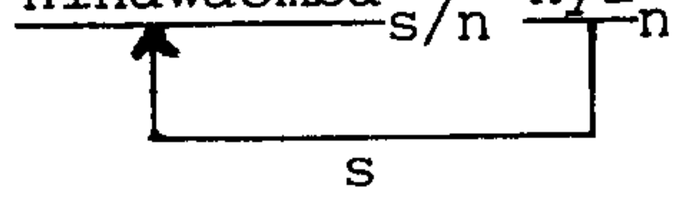
20.f nina-wa-ombe-ni "I beg you (pl., collective)"

Obviously, the verb suffix -ni only marks the plurality of objects. There is no doubt that it is related to the pronoun of the second person plural ninyi (bound form -nyi, as in 'nanyi and you (pl.)'). As ni is a suffix to the verb, it should have developed from a relatively recent syntactic construction, that is to say in an epoch in which the basic word order was VO even for pronominal objects:

20.g *pika$_{s/n}$ nyi$_{n}$ > pike-ni



20.h *ninawaomba$_{s/n}$ nyi$_{n}$ > ninawaombe-ni



In (20.h), nyi has object function, thus reflecting VO structure. In (20.g), nyi can also be assumed to have some object function because it denotes the receiver of a command, with the speaker as the underlying subject. In other VO languages we have similar construction; cf. for example English cook ye! or cook you folks!

2.2.6 The Unmarked Order of Adnominals

There is an unmarked order of adnominals in the Swahili noun phrase in which the last constituent is not likely to have focus function. According to Maw (1969: 85), who gives the most extensive sequence, this order is[27]:

noun - (spec. noun) - genitive - possessive - adjective - demonstrative - numeral - relative - relative clause

This order is noteworthy because it deviates from Greenberg's universal 20 which requires the following orders:

1.	dem - num - adj - noun		(in Mod-N languages)
2.a)	noun - dem - num - adj		(in N-Mod languages)
2.b)	noun - adj - num - dem		

Greenberg remarks that the order (2.a) is not often to be found in the languages of the world. He exemplifies it with Kikuyu; also Luganda shows this order (cf. Ashton e.a. 1954: 386 f.). I would explain it as a transitional phenomenon for the changing from prespecification to postspecification: at first, the whole sequence of adnominals is placed en bloc after the noun, and only then does a new unmarked sequence of adnominals develop. This is a quite natural succession of events because, as we have seen, the position of the adnominals relative to each other serves to express different meanings and an unmarked order of adnominals can develop only very slowly, as the most frequent one. According to Greenbergs universal, it seems that there is such an unmarked order relative to the head noun on a universal basis.[28]

The unmarked order of adnominals in Swahili can be explained as a stage in a reorganisation process of this universally unmarked order. I would put it somewhere between (2.a) and (2.b): numerals are already placed after adjectives, and demonstratives should be about to move behind numerals. But note that euphonical rules (which are presumably responsible for the final position of the complex relatives and relative clauses) can distort this development; for example, numerals often have more syllables than demonstratives.

2.3 Phonology, Morphology and Syntactic Structure

The direction of serialization of a language can be shown to be universally related to some phonological and morphological properties. Lehmann (1973, 1978) pointed out that OV languages (i.e. prespecifying ones) tend to have agglutination, simple syllable structure, progressive phonological processes (e.g. vowel harmony), prefixation, and pitch accent; whereas VO languages (i.e. postspecifying ones) have inflection, complex syllable structure, regressive phonological processes (e.g. umlaut), suffixat-

ion, and stress accent. These correlations are poorly examined and have been hardly explained up to now.

Lehmann (1973) tries to explain the correlation between prespecification and agglutination by the position of bound verb specificates[29] relative to the verb: in prespecifying languages they follow the verb and should therefore be less susceptible to merging processes with the verb stem than in postspecifying ones, thus creating an agglutinative morphological structure. On the other hand, inflection is a result of such merging processes between the preposed verb specificate and the verb stem in postspecifying languages. Of course, this presupposes that phonological merging occurs more easily in one direction than in the other.

Another theory has been brought forward by Vennemann (1974 a, 1975 a). The SOV order is regarded as the most natural one when the syntactic function of the different NPs is marked clearly[30]: it ideally combines the two advantages of unidirectional serialization and initiality of topic constituents. Clear case marking is usually only achieved by agglutination (or, on the syntactic level, by adpositions) and degenerates by phonological erosion, i.e. by the transition to inflection. Now the syntactic function of S and O is no longer marked in a clear-cut way and the problem arises which of the two NPs is to be subject and which object, especially in the case of topicalized objects, i.e. objects in initial position. This is solved mainly by the use of diathetic transformations, e.g. passive constructions, and a new basic word order, namely TVX, which later develops to SVO by generalization. Thus the change from agglutination to inflection and later to isolation, i.e. the change from clear morphological case marking to no morphological case marking at all, should be the cause of the change from pre- to postspecification - not vice versa, as proposed by Lehmann.

Swahili is generally regarded as a mainly agglutinative language. But this seems to be the result of the conservatism of morphology relative to syntax in general: morphology reflects a former syntactic stage of the language, and this stage I have shown to be prespecifying. Characteristically, there is clear agglutination mainly with verb suffixes which are relics from the prespecifying epoch. The verb prefixes, which are also

generally agglutinative, have been shown to have originated mainly from auxiliaries of the 'middle ages' which can be assumed to have also represented the morphological type of 'antiquity'. But in modern Swahili, there are some phenomena which must be considered inflectional. The relatively unsystematic noun class system with its sometimes ambiguous, sometimes absent agreement morphemes is an inflectional trait. Another is the phonological merging of bound morphemes which can be seen with noun prefixes and stems (e.g. ulimi 'tongue', pl. *mlimi > ndimi) and with umlaut phenomena in constructions with the verb suffix -ni.

The correlation between prespecification and simple syllable structure on the one hand and postspecification and complex syllable structure on the other can be explained as a result of the morphological type. Agglutination favours the articulatory ideal CV-CV-CV sequences. Now, the transition to inflection is a result of phonological merging processes, which contract those sequences to a C(C)V(V)C(C) complex. Swahili, with its C(C)V syllable structure, still represents the syllable type of an agglutinative language, although with some impurities in the syllable head which is often complex.

The following correlations I have combined under the heading of progressive/regressive phonological processes. In this paper, I will discuss only vowel assimilation, i.e. vowel harmony and umlaut. Vowel harmony occurs in Swahili with verb suffixes, i.e. with constituents which reflect the prespecifying epoch. Umlaut, however, occurs with the verbal suffix -ni which we have assumed to be a rather new construction. Thus we have the following assimilation scheme:

1. prespecification: vowel harmony — pend-e-a

2. postspecification: umlaut — pike-ni

Perhaps vowel harmony and umlaut, or more generally progressive and regressive phonological processes, can be explained as processes which have the same direction as the general direction of serialization. This would explain, for example, why there are fewer umlaut phenomena in inflectional languages than vowel harmony phenomena in agglutinative languages (cf. Lehmann 1973): suffixes

usually are transitional phenomena in postspecifying languages.

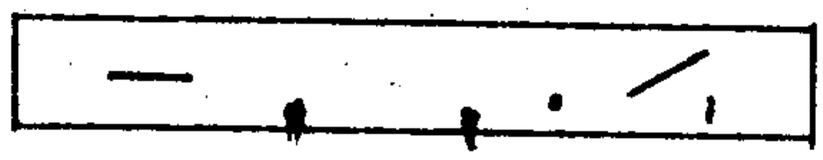
Generally, prespecifying languages tend to have suffixes, whereas postspecifying languages rather have prefixes. This can be explained by the fact that affixes mostly have the same function as, and actually originated from, specificates of the stem constituents. But we have to consider again that the morphology of a language often reflects a former direction of serialization. This explains why there are a lot of suffixes in Swahili, especially verbal ones, which presumably reflect the morphology of the prespecifying epoch. Furthermore, I have given some examples of suffixes which are not, or were not originally, specificates but specifiers and therefore reflect the more recent postspecifying stage, viz. the locative suffix -ni, the verbal suffix -ni, and the interrogative verb suffixes -pi, -ni and -je. It seems, therefore, that it is not possible to ascribe suffixation to prespecifying languages and prefixation to postspecifying ones without paying attention to the nature of the affixes and to a possible change of the direction of serialization.

Finally, Lehmann proposes a correlation between prespecification and pitch accent on the one hand and postspecification and stress accent on the other. As far as I know, the only attempt to explain this is given by Vennemann (1974 b): stress (sentence) accent should become more prominent in a language when it changes from TVX to the more rigid SVO order because stressing is, besides final position in the sentence, the natural way to point out focus constituents. Subsequently, the stress accent becomes an inherent property of every focusable word, thus ousting earlier pitch distinctions.[31]

The accent in Swahili can be regarded as a mixed stress and pitch accent (cf. Polome 1967: 50 ff.). All other Bantu languages have pitch accent, and the abolition of pitch accent in Swahili can be explained by the fact that Swahili is a lingua franca and therefore has lost the subtle pitch distinctions.

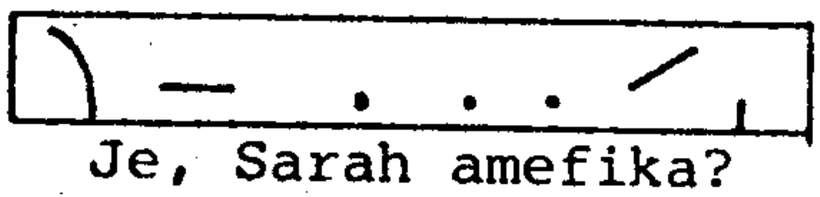
The transition from pitch accent to stress accent is particularly clear with the intonation of interrogative sentences. There are three intonation patterns:

21.a



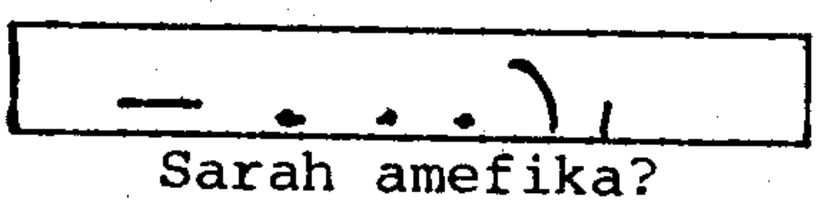
Sarah amefika? Has Sarah arrived?

21.b



Je, Sarah amefika? Has Sarah arrived?"

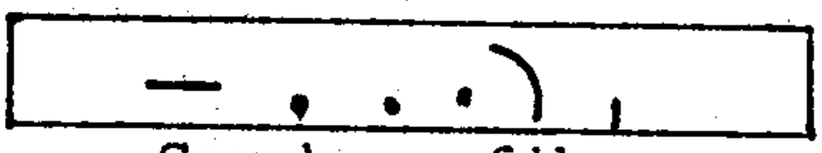
21.c



Sarah amefika?

Example (21.a) shows the unmarked intonation pattern. It is distinguished from the declarative intonation only by the last syllable, which has a rising pitch instead of a falling one:

21.d



Sarah amefika. Sarah has arrived.

Apparently, the intonation pattern (21.a) is no longer felt to be differentiated enough from (21.d) and therefore the new interrogative markings (21.b) and (21.c) have been developed. Intonation pattern (21.c) is mainly used for emphasis, but it seems that it is quite common in situations with high communicative stress (cf. Ashton 1974: 27). With pattern (21.b) interrogation is marked syntactically, and with (21.c) the difference from the declarative intonation pattern can be simply reduced to the opposition between stressing of the ultimate syllable and stressing of the penultimate syllable. This indicates that the pitch distinction rising: falling is in the process of being dissolved in favour of the distinction stressed: unstressed.

According to another consideration (cf. Vennemann 1974 a), the dominant accentuation pattern of a language should give accentual prominence to non-topical constituents, with the main accent on focus constituents. With the verb specifier most likely having focus function (except, of course, the topical subject), the typical sentence accent pattern should be [' `] in OV languages and [` '] in VO languages, ['] indicating the main and [`] the

secondary accent. This is confirmed by Swahili which has the 'topic' or main sentence accent typically on the last word of the sentence and the 'salient' or secondary accent on some previous constituent, mostly the verb (cf. Maw and Kelly 1975). But note that this pattern has already been generalized and became the unmarked pattern. Therefore, a constituent which is to be marked as focused is often shifted to a non-final position while bearing the main accent. The rest of the sentence then takes on a uniformally low pitch:

22.a mtoto yule alilivunja dirisha
"that child broke the window"

22.b alilivunja dirisha mtoto yule
"that child broke the window (...not the cup)"

Thus, a new marking of focus constituents has developed which may lead to the disintegration of the unidirectional specification pattern.

3. THE MECHANISMS OF WORD ORDER CHANGE

The principal aim of this paper has been to explain word order in Swahili by a few universal rules. I have hypothesized two basic sets of rules: firstly, semantico-syntactic rules which translate the non-linear categorial structures into linear representations; and secondly, pragmato-syntactic rules which modify the linear representations by permutation, deletion or pronominalization and apply an intonation and accentuation structure to them.

It should be stressed again that the treatment of the pragmatic rules has been very fragmentary in this paper, even if word order alone is considered. Maw (1969) cites many examples which cannot be an output of POST(S), TOP(S), and 'euphonical rules' only. To explain these word orders, however, I think it would be sufficient to assume some additional pragmato-syntactic rules rather than additional semantico-syntactic rules. These additional pragmatic rules would have to be universal, and motivated independently of the present problems. For example, there should be a 'theme' rule which directs the position of constituents which outline the general frame of discourse,[32] as in the following examples:

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23.a kupenda, Sarah anampenda Ali

"As for loving, Sarah loves Ali"

The seond part of the paper has tried to show that Swahili, and Bantu languages in general, has developed from a prespecifying language to a postspecifying one. This development has only been demonstrated but not traced back to a cause. Although I consider it preferable to investigate possible reasons for word order change in languages with a better documented history than Swahili, I will use the rest of the paper to offer some speculations on possible driving forces behind word order change in Swahili.

The semantico-syntactic system is simplest if a single rule can be applicated to all constituents. It therefore can be expected that languages tend in general to organize their basic word order according to the principle of unidirectional specification, i.e. pre- or postspecifying.[33] Of course, the actual word orders of the languages of the world show that a language may endure non-unidirectional word order for a long time; an example is English which is postspecifying in the verb phrase but prespecifying in certain simple noun phrases. Therefore the trend toward unidirectional specification should be only a very general one, delayed by forces which may create relatively stable intermediate stages.

The pragmato-syntactic rules can also be reduced to some universal tendencies, not of semantico-syntactic representation but of communication. Note that pragmatic functions can only be expressed if they modify the output of the semantico-syntactic rules in some way - by permutation, intonation, selection of appropriate representation (e.g. passive forms) and so on.

Now, according to Behaghel (1932: 5) all word order laws can be regarded as forces which interfere with each other, thus strengthening or weakening their influence on word order. Therefore, some word order variants can be favoured by a certain combination of pragmatic rules or other influences, and they can easily be generalized and become the unmarked word order. Word order change can be understood in this way as a process of mutual compensation between semantico-syntactic rules on the one hand and pragmato-syntactic rules and other influences on the other.

At this point, I would like to examine two of these other influences. One of them is language contact. Languages of a certain word order type often occur in areal clusters, regardless of their genetic relations. This can only be explained by mutual influence (cf. Hyman 1975, Heine 1976, Sasse 1977). On the other hand, language contact cannot be assumed to be the only factor of every word order change. It should be regarded rather as a subsidiary influence which can accelerate or retard word order changes which are in process anyway (cf. Vennemann 1974 a).

A second important need which is met by word order change can be the disambiguation of the syntactic function of the different NPs (cf. 2.3; cf. Vennemann 1974 a, 1975). Now, the Niger-Congo family was considered by several authors (Hyman 1975, Givon 1975 a, Sasse 1977) as a counterexample to this theory of word order change, because there are no relics of a case system which should have been a necessary concomitant of the assumed prespecifying syntax. But in Vennemann (1974 a) it is made clear that a prespecifying language need not use morphological case marking on nouns to solve the topicalization problem. There is, for example, the case of Navaho, a prespecifying language in which the topicalization problem is solved by a combination of verb agreement with a large number of agreement classes together with passive transformations of the verb. Proto-Bantu, or Proto-Niger-Congo, could easily have been a Navaho-type language because it can be assumed to have had a highly developed agreement class system which is still reflected in the noun classes of modern Bantu languages.[34]

If this interpretation is correct, one may ask why was there a change from OV to VO in Niger-Congo languages in the first place? An important reason for this seems to be the low effectiveness of the Navaho-type case marking; for instance, it does not work with NPs which belong to the same agreement class. A further reason may be that the syntactic function of the different NPs becomes clear only when the verb, i.e. the last constituent of the sentence, is uttered. Therefore such a language should be sensitive to any further influences which affect its word order. This is especially relevant when the agreement mechanism becomes ambiguous by the corruption and merging of agreement classes which can be seen in present-day Bantu languages. Note that this

process would have exactly the same effect as the phonological erosion of case marking in 'normal' SOV languages.

How did the change from prespecification to postspecification proceed? As I have outlined above, the VO order should be favoured and gradually become the unmarked order; consequently, the other specificative relations would begin to re-order themselves according to this central specificative syntagma. Now, the VO order occurs even in consistent prespecifying languages as a variant which is motivated by pragmatic rules. For example, 'afterthought' postposing may be the reason for this order, i.e. the additional utterance of 'forgotten' constituents (cf. Hyman 1975). But the rule of focus-postposing may also be responsible for the VO order.

So far, I hardly have mentioned focus-postposing as an important pragmatic rule, because it works quite in accordance with the postspecifying structure of Swahili: the main specifier of a sequence, which is likely to present the relatively most important information, is automatically the last one (cf. examples (3.m,n) for adnominals, (7.a,b) and (10.a,b) for adverbals). But focus-postposing is also a pure pragmatic rule because focus constituents are a sort of emphasized comment and therefore tend to be realized universally toward the end. This can be seen in Turkish, which has focus-postposing even though it is a consistent prespecifying language:

24.a tembel$_{n/n}$ kucuk$_{n/n}$ cocuk$_{n}$

lazy little child "lazy little child"

24.b kucuk$_{n/n}$ tembel$_{n/n}$ cocuk$_{n}$

little lazy child "lazy little child"

24.c Omer$_{n}$ kitabi$_{n}$ Ali'ye$_{n}$ veriyor$_{[(s/n)/n]/n}$

Omar book-acc Ali-dat give

"Omar gives Ali the book/gives the book to Ali"

24.d Omer$_{n}$ Ali'ye$_{n}$ kitabi$_{n}$ veriyor$_{[(s/n)/n]/n}$

Omar Ali-dat book-acc give

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Omar Ali-dat book-acc give

"Omar gives Ali the book"

Objects can even be placed after the verb if they are emphasized:

24.e Omer$_n$ kitabi$_n$ veriyor$_{[(s/n)/n]/n}$ Ali'ye$_n$

Omar book-acc give Ali-dat

"Omar gives the book to Ali"

But it is not quite clear whether post-verbal position serves as a focus marking regularly. Note that adverb phrases which would occupy the place immediately preceding the verb in unmarked word order have to be shifted to some other position if another constituent is to be focused, and this position often is the sentence-final one:

24.f Omer kitabi Ali-ye bugun$_{v/v}$ veriyor$_v$

Omar book-acc Ali-dat today give

"Omar gives the book to Ali today"

24.g Omer kitabi Ali-ye veriyor$_v$ bugun$_{v/v}$

Omar book-acc Ali-dat give today

"Omar gives the book today to Ali"

It is also possible to shift the adverb to the sentence-initial position. But this would give it topical prominence. If it is merely a non-focused comment constituent, it is likely to be added afterwards. This could be treated in terms of Hyman's afterthought-hypothesis.

Thus, afterthought, mediated by focus-postposing, could have been the bridge-head of the development of a postspecifying one. It can hardly be the cause of such a change because there is no reason why the marked word orders of (24.e) and (24.g) should become unmarked all by themselves. I have mentioned two other needs which are satisfied by the VO order: disambiguation of the syntactic function of the different NPs and assimilation to the word order of contact languages. Therefore, it can be supposed that until more refined theories of syntactic change as well as better reconstructions of syntactic change in individual languages become available, we may safely assume that the change from pre- to post-

specification in Niger-Congo was activated by the need for disambiguation, mediated by afterthought together with focus-postposing, and accelerated and diffused by language contact.

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NOTES

1 In the German original "abhangiges Wort" and "regierendes Wort".

2 Other alternatives are:

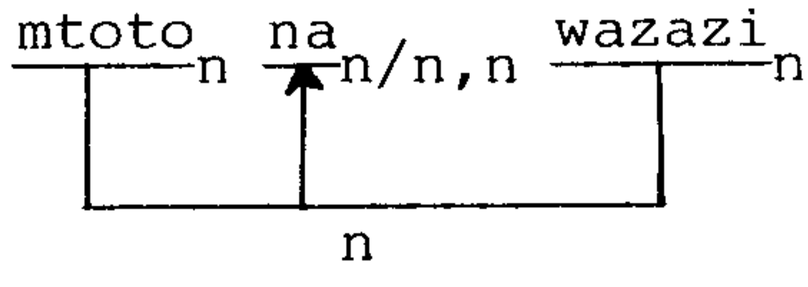
-to interprete the subject-predicate relation not as a specificative syntagma, but as a 'predicative' which is not submitted to POST(S) (cf. Trubetzkoy 1939);

-to categorize subject terms as s/(s/n) (cf. Montague 1970). But phenomena like the adverbial 'dummy topics' could hardly be explained in this way.

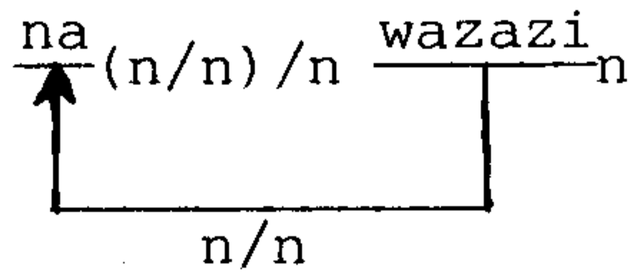
3 Although Maw (1974) considers mainly the word order properties of different text sorts, there is an important difference between oral and written texts: non-neutral word order occurs more often in the oral ones. This is probably because the non-availability of intonation marking in writing requires a kind of standardization, i.e. unmarked word order.

4 In the following, A will also be called 'attribute' 'complement' or 'specifier', and B 'head' or 'specificate', relative to the whole syntagma AB.

5 Conjuctive syntagmas can be treated differently in categorial grammar. According to Lewis (1970), conjunctors should be regarded as heads of conjunctive syntagmas:



But if one considers universal word order correlations, it seems more adequate to categorize conjunctive syntagmas as I have done in the text, and tc analyze second conjuncts as follows:



Thus, na is a preposition, and its position is in accordance with the general direction of serialization. - The treatment of other conjunctors, for example the adnominal conjuctor tena, is similar to the treatment of na.

6 Of course, this distinction is more important in languages which distinguish basically between the categories of common noun and proper name/term than Swahili. But cf. 1.2 that this distinction is becoming relevant for Swahili, too.

7 This phenomenon is not restricted to Swahili but occurs in many other Bantu languages.

8 In some other Bantu languages, a pre-prefix of the noun serves as definiteness marker (Meinhof 1948: 68 f.), for example in Dzamba (cf. Bokamba 1971). In other languages, only definite subjects agree with the verb, for example in Zulu (cf. Doke 1955: 9). Swahili does not use pre-prefixes, and subject agreement is nearly obligatory.

9 According to Maw and Kelly (1975), a complex noun phrase which is accentuated as a single word, i.e. with only the penultimate syllable of the last word being stressed, is definite. On the other hand, a noun phrase is indefinite if each of its constituents is stressed as a single word. It is

not clear, however, whether this is a general rule of Swahili or whether it holds only for some dialects or idiolects.

10 This interpretation would be suggested by Greenberg's universal 18, which states that demonstratives and numerals, i.e. the adnominals which are comparable either to the definite or to the indefinite article, tend to precede the noun even in postspecifying languages.

11 The change from a non-article language to an article language is probably related to the change from a topic-initial language to a subject-initial language which is discussed in 1.2.1. This is simply because it becomes necessary to invent new means of distinguishing definite and indefinite subjects.

12 In English with its rigid SVO order, the difference of meaning between (6.a) and (6.b) must be expressed by means of the passive construction.

13 But see the treatment of the examples (7.a,b) and chapter 3 that even in example (6.c) there could be a pragmatic rule at work, namely that of focus-finality.

14 This could easily be indicated in a more elaborate categorial grammar notation which distinguishes the syntactic function of the different terms. See the treatment of (5.a,b) for an example. Another possibility would be to indicate the noun class of the nouns and the verbal agreement morphemes:

$$\underline{\text{watoto}}_{n2}\ \underline{\text{wanampenda}}_{(s/n2)/n1}\ \underline{\text{mwalimu}}_{n1}$$

15 This term is coined parallel to 'dummy subject' which in subject-initial languages designates constituents with a similar function: cf. for example in English it in sentences like it is raining.

16 There are good reasons to assume that the locative suffix -ni is a definiteness marker; cf. 2.2.5.

17 The dummy-topic hypothesis is also able to explain a rather odd phenomenon in Swahili, namely the agreement between the verb and initial locative adverbs, also called 'adverbial subjects'. There is evidence that subject-verb agreement develops generally from an earlier topic-verb agreement by generalization (cf. Givon 1975 b). Thus, the topic-verb agreement of 'adverbial subjects' could be explained as a relic of an older general topic-verb agreement. 'Adverbial subjects' have blocked the generalization because in sentences of this type the subject is not the topic.

There are some more traces of earlier topic-verb agreement in Bantu languages. For instance, in Zulu there is no agreement between indefinite (i.e. non-topical) subjects and verbs (cf. Doke 1955). Even in Swahili, there are cases in which not the subject, but the object, if topicalized, agrees with the verb like a subject. (cf. Polome 1967: 159). Characteristically, this seems to be quite regularly the case with verbs which often occur with locative attributes (cf. Whiteley 1972 for 'L-verbs' which take a 'C-complex'):

watu kumi wa-melala nyumba hii — "Ten persons have slept (in) this house"

nyumba hii i-melala watu kumi — "This house has slept ten people"

In these cases, the generalization to subject-verb agreement was blocked, too

18 Note that Ez is not the only form of the causative suffix, but that an original j can be assumed (cf. Polome 1967: 88).

19 An exception seems to be the reciprocitive suffix an, as in pend-an-a 'love each other' which apparently is related to the conjunctor na which may have developed from a verb (cf. Givon 1975 a)

20 The present tense marker na seems to be the most important exception. But note that its presumed cognate, the conjunctor na, occurs in many Bantu languages. See the foregoing footnote for an interpretation of na as an ancient verb.

21 There are semantic reasons that the negation has as its scope the whole verb phrase, because the object is normally under the scope of it. For example, in John did not find the knife, the knife is non-referential because of the negation. - Note that in example (15.a) ha is categorized ambiguously because it could also be interpreted as adverbial specifier. Such ambiguities can easily be eliminated in a more detailed category notation.

There is an interesting difference in the behaviour of the negation marker in Swahili and other Bantu languages (cf. Heine 1976) at the one hand and the Germanic and Romanic languages on the other (in the following, exemplified only by French). Note that Swahili as well as French can be assumed to have changed their serialization from pre- to postspecification. But in French, the change of the negation marking from Latin non V via ne V pas to colloquial V pas would indicate that the negation marker is categorized as specifier of the verb (cf. Vennemann 1974 a). Perhaps negation is treated in French quantitatively, as a certain intensity of the verb and therefore expressed by adverb-like constituents, whereas in Swahili it is treated quantitatively, as a certain modality of the verb and therefore is expressed by auxiliary-like constituents. That negators may be constructed as specifiers and as specificates is pointed out also in Bartsch and Vennemann 1972: 118 ff.

- Note that ha is categorized ambiguously in the example, as an auxiliary as well as an adverb. This could easily be excluded by a more detailed category notation; cf. for example Montague (1970).

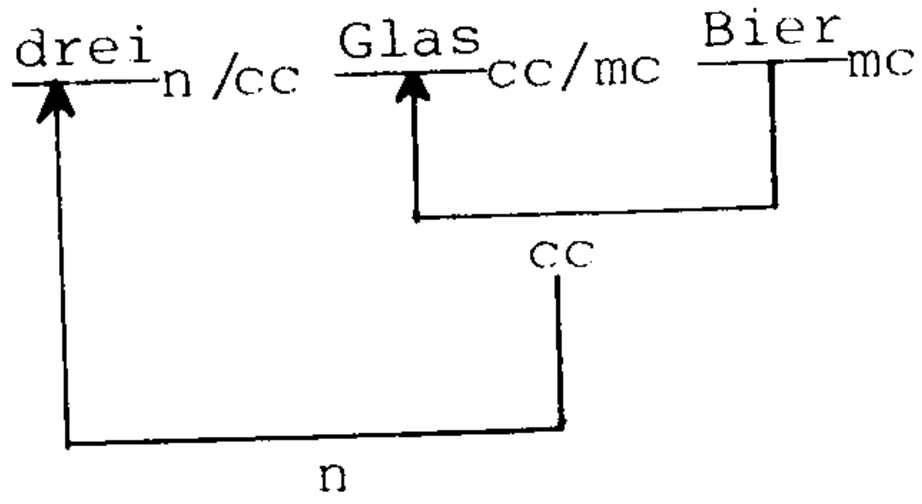
22 Note that the position of the conjunction, the subordinated clause and the verb relative to each other could also be explained on the analogy of Givon's relative pronoun attraction principle (cf. 2.2.2): This would state an attraction between the conjunction and its referent constituent, the verb of the main clause.

23 According to Maw and Kelly (1975: 27), the relative verb form definitizes the head noun, whereas the amba-relative does not. But it is

not clear whether this holds only for some idiolects or for some dialects of Swahili.

24 It is not quite correct, of course, to translate the prefix of noun class 3 with "tree", because there are a lot of other nouns in this class which do not denote a tree. However, a common semantic basis can be assumed for all these nouns, e.g. "non-autonomous individualized beings" (cf. Polome 1967: 98). For ease of reference, I have used a more specialized translation.

25 This can be checked with the criterion of constancy of categories by comparing similar classifier construction in German (it is less obvious in English). They have the function of transfering mass nouns (mc) to count nouns (cc):



three glass(es) (of) beer

26 The former noun status can still be seen in the verb agreement of topicalized locative adverbs; cf. 1.2.2

27 As far as possessive, adjective, demonstrative and numeral are concerned, Loogman (1965: 345) and Polome (1967: 194) agree to that order. But note an inconsistency with Polome p. 144 who also seems to assume the order possessive-demonstrative-adjective as unmarked.

28 This universal order probably is based on a principle of information theory which states that the most effective way to determine the denotate of an expression is to narrow its meaning by more and more restrictive descriptions. The descript-ions which are universally at least specific in the noun phrase are demonstratives; they mostly represent just the opposition distal/non-distal, cf. English that/this. The next restrictive would be the possessives, with mostly six distinctions (three persons, two numeri). Then follow the

numerals (they are, if compared with adjectives, relative homogeneous), and finally the adjectives. Therefore I would consider the following order of adnominals as universally unmarked:

1. in prespecifying languages: dem-poss-num-adj-noun

2. in postspecifying languages: noun-adj-num-poss-dem

The same principle can also serve to explain the unmarked order of adjectives in many languages, as in English small green beetle, old Japanese iron swords, and so on.

29 "Verb modifiers" in Lehmann's terminology.

30 Cf. Greenberg's universal 41 which states that SOV languages almost always have a case system.

31 But note that prespecifying languages, e.g. Japanese, can also use pitch accent to point out focus constituents. Apart from this, Vennemann's theory would explain the word accent in Swahili quite well: the sentence accent regularly falls upon the penultimate syllable of the sentence, that is upon the focus constituent, if one considers the strong tendency to word forms with at least two syllables. This corresponds to the fact that in general the penultimate syllable of every word bears the accent.

32 Maw's 'referent' (cf. 1969: 43) can be interpreted as such a theme constituent.

33 Of course, this would presuppose that syntactic constituents are represented in a similar way in the human mind as they are represented in categorial grammar.

34 This would also explain why Bantu languages have a common morphological passive. Normally, SOV languages with an unambiguous case system have a a very low prominence of passive transformations, if compared to SVO languages. This is because topicalization can be managed by simple re-ordering of S and O alone. SVO languages, on the other hand, have to transfer the object into subject position in order to topicalize it.

Therefore they should invent new means, i.e. syntactic ones, to express the passive, if they have developed from an SOV language with a case system, i.e. with no genuine original passive. On the other hand, a Navaho-type SOV language should have a high prominence of passive transformations. Therefore, an SVO language that has developed from such a language should continue to use its original passive, at least if the passive marker has developed to a bound morpheme of the verb.

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