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On the logical structure of the serial verbal construction in Yoruba

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Most accounts assume the coordinate basis of the two or more underlying sentences that make up what is surface structure is regarded as a serial verbal construction (Stewart 1963, Williamson 1965, Bamgbose 1974). The serial verbal construction (also referred to as "serial verbs", "verbal combinations", etc.) is quite common in the languages of West Africa. Examples of this kind of construction are:

(1) Yoruba: Olu ti Femi șubu
Olu push Femi fall
(Olu pushed Femi down)
(2) Ade nsun 1q
Ade is sleeping go
(Ade is sleeping)
(3) Nupe: Kuta la foma wa nyika
Kuta took net catch fish
(Kuta used a net to catch fish)
(4) Twi: Ode sika no maa me
he-take money that gave me
(h给出了 the money)

According to most accounts, the serial verbal construction is made up of two sentences (S₁ and S₂) linked by AND in the deep structure. Thus, (1) would be analyzed as

(Olu ti Femi) AND (Femi șubu)

S₁ + S₂

In his account on Yoruba, Bamgbose distinguishes between (1) and (2) as serial constructions. He describes (1) as a "linking type" serial verbal construction while (2) is a "modifying type". His argument is that (2) is not derived from

(Ade nsun) AND (Ade ălq)

because "the string of verbs cannot meaningfully be related to more than one underlying sentence". In this paper, I shall try to show that the coordinate approach (as presented by Bamgbose and others) fails to account for several factors, notably Causality, Reversability, Sequence, and Reference. I shall postulate a different logical structure which appears to explain these features
satisfactorily. Finally, I shall try to show that the division of the serial verbal construction in Yoruba into the "linking" and the "modifying" types is just an unnecessary complication of the grammar since (as I shall show) both types can be derived from the same logical structure.

**Causality:**

According to coordinate accounts, a logical structure like

\[(Olu\ ti\ Femi)\ AND\ (Femi\ subu)\]

could come out in surface structure in two forms:

(5)  
\[Olu\ ti\ Femi,\ Femi\ si\ subu\]
\[Olu\ push\ Femi,\ Femi\ and\ fall\]
\[(Olu\ pushed\ Femi\ and\ Femi\ fell\ down)\]

(6)  
\[Olu\ ti\ Femi\ subu\]
\[(Olu\ pushed\ Femi\ down)\]

In (5), the predicate AND is realized as "si", whereas (6) results from the application of the conjunction reduction transformation on (5). One problem with this analysis is that (5) is not semantically equivalent to (6); there is therefore no justification for postulating the same logical structure

\[(S_1\ AND\ S_2)\]

for both (5) and (6). The semantic difference between (5) and (6) is matched syntactically. If we apply T-relative to (5) and (6), we get (7) and (8) respectively:

(7)  
\[*\ Femi\ ti\ Olu\ ti\ Femi\ si\ subu\]
\[Femi\ WH-\ Olu\ push\ Femi\ and\ fall\]

(8)  
\[Femi\ ti\ Olu\ ti\ subu\]
\[Femi\ WH-\ Olu\ push\ fall\]
\[(Femi\ whom\ Olu\ pushed\ down)\]

The ungrammaticality of (7) is explainable in terms of Ross' Coordinate Structure Constraint which blocks the movement by transformation of a conjunct in a coordinate structure. Whether this indicates that (5) but not (6) is a coordinate structure is not even important here. What is important is that the "intermediate" structure (5) from which the serial construction (1,6) is supposedly derived is not semantically equivalent to (6). It should therefore
be obvious that (5) and (6) do not share a common logical structure. The difference in meaning is due to the fact that the serial construction (6) contains the predicate CAUSE in the logical structure whereas (5) does not. This can be shown by adding a clause that contains "cause" to both (5) and (6):

\[(9) * \text{Olu ti Femi subu sugbọn Ade l'ọjọ but Ade cause ki Femi subu that Femi fall}\]

\[(10) \text{Olu ti Femi, Femi si subu sugbọn Ade but Ade l'ọjọ ki Femi subu cause that Femi fall}\]

(6) Olu pushed Femi but it was Ade who made Femi fall)

(10) Olu pushed Femi and Femi fell; but it was Ade who made Femi fall)

Adding a "cause-clause" to (5) makes it ungrammatical because there is now a contradiction in the new structure (9). Instead of \(S_1\) caused \(S_2\) (as in (5)), we now have \(S_1\) caused \(S_2\) but \(S_3\) caused \(S_2\). In (10) however, since there is not causal relationship between \(S_1\) and \(S_2\), we could claim \(S_3\) caused \(S_2\) and still preserve grammaticality.

Reversability:

In certain serial constructions, the verbs must occur in a particular order otherwise one of two things results: either an unacceptable sequence is produced, or a change in meaning is effected:

\[(11) \text{mo wa mu iwe I come take book}\]
\[(11a) \text{mo mu iwe wa (I brought a book)}\]
\[(12) \text{o gbe igi lọ he carry wood go (he took the wood away)}\]
\[(12a) o lọ gbe igi (he went to carry the wood)\]

(11) and (12) are types where reversability results in change in meaning. (13) and (14) are cases where the reversal results in ungrammatical sequences:

\[(13) o ji isu jẹ he steal yam eat (he stole a yam and ate it)\]
\[(13a)* o jẹ isu ji\]
(14) o wa mi ti  
    he find me fail  
    (he looked for me in vain)
(14a) o ti mi wa

(15) and (16) are rare instances where reversibility 
    does not affect either grammaticality or meaning:

(15) o lọ kẹhin gbogbo wa  
    he go last all us  
    (he went last)
(15a) o kẹhin gbogbo wa lọ  
    (he went last)
(16) o soju wa jade  
    he before us go-out  
    (he left in our presence)
(16a) o jade nisoju wa  
    (he left in our presence)

If we assume the logical structure to be S₁ AND S₂ 
without specifying the "meaning" of AND, we shall be 
missing an important generalization, and we shall not 
be able to predict when reversability is permissible.

Sequence:

There is usually a sequential relationship between 
the sentences in a serial verbal construction. Usually 
(but not always), the action described in S₁ logically 
precedes that described in S₂. Thus, in (1), "ti" (push) 
logically precedes "subu" (fall). An adequate logical 
representation should indicate this fact. Again, the 
flaw in the coordinate approach lies in the non-specific 
cation of the nature of the conjunction. For example, 
(17) has at least three meanings, depending on the 
meaning assigned to the conjunction AND in the deep 
structure:

(17) o njẹun lọ  
    he is eating go
DS 1: o njẹun + o nlọ  
    he is eating he is going  
    (he ate along the way)
DS 2: o njẹun + continuity  
    (he continued to eat)
DS 3: o njẹun + a lọ  
    (he will eat before going)

Reference:

(1) Olu ti Femi subu 
    is analyzed as Olu ti Femi + Femi subu. It is not
clear why "Femi", but not "Olu" is the subject NP of "ṣubu". Let us consider (18) which is ambiguous:

(18) Olu le Ade jade
     Olu drive Ade go-out

meaning 1: Olu le Ade + Ade jade (Only Ade went out)
meaning 2: Olu le Ade + Olu jade + Ade jade (both of them went out)

We might claim that the subject NP of the second verb is assigned in accordance with the meaning intended; the only snag is that in coordinate formulations, the logical structures for meanings 1 and 2 (above) are identical. Let us consider (19):

(19) Olu gbe aga wa
     Olu carry chair come
     (Olu brought a chair)

This is analyzed as

Olu gbe aga + Olu wa

presumably because "aga" (chair) is marked (-animate)
in the lexicon and cannot select "wa" (come). But consider (20) which does not contain any animate NP:

(20) Ategun gbe ewe wa
     wind carry leaf come
     (the wind brought leaves)

In this case, we cannot avoid structures like "ewe wa",
or "ategun gbe ewe", or "ategun wa". Furthermore, (21a-c) are well-formed sequences in the language:

(21) a. Otutu mi ti lo
cold my has gone
     (my cold is gone)

b. Ojo mbọ
     rain is coming
     (it's going to rain)

c. Iji nja
     storm is fighting
     (a storm is raging)

Thus, there appears to be no regularity in the way the coordinate approach assigns NP's to surface verbs.

**Proposed logical structure:**

In the light of the above examples, it becomes necessary to seek a logical structure that would account for some or all of the facts mentioned here. The logical structure proposed here postulates that serial constructions contain embedded predication.

The logical structure for (1) would be

(Cause) Olu, ((Subu) Femi)

There are several reasons why this logical structure is considered better than the coordinate type. For one
thing, it takes care of such features as causality, sequence, and reference. For example, the logical structure clearly shows "Olu" as the subject of "Cause", and "Femi" as the subject of "subu". Also, it explains the similarity in meaning of the following:

(22) Olu ti Femi subu
    Olu push Femi fall
(23) Olu gbe Femi subu
    Olu carry Femi fall
(24) Olu je ki Femi subu
    Olu let that Femi fall
(25) Olu mu ki Femi subu
    Olu hold that Femi fall
(26) Olu fa Femi subu
    Olu pull Femi fall

Since each sentence (from (22-26)) could be paraphrased as "Femi fell and this was caused by Olu", we may postulate CAUSE as a higher predicate which may be spelt out in different forms in the surface structure. It should be noted also that in (23), Olu gbe Femi is not a constituent, so it would be wrong to analyze it (23) as

    Olu gbe Femi + Femi subu

Similarly, we analyze

(19) Olu gbe aga wa
    (Olu brought a chair)

as

    (Cause) Olu, ((wa) aga)

- since the main point of the construction is not that "Olu took a chair" but that "the chair is here" and "Olu is the cause of that event". Let us consider (27) which is what is derived after the application of T-neg. on (19):

(27) Olu o gbe aga wa
    Olu neg. carry chair come
    (Olu did not bring a chair)

In the coordinate approach, the deep structure of (27) would look like (28):

(28) Olu o gbe aga + Olu wa
    Olu neg. carry chair + Olu come

However, non-serialization of (28) yields (29) - an ungrammatical sequence:

(29)* Olu o gbe aga, Olu si wa
Since serialization is optional, it means the deep structure postulated (in 28) is wrong. The proposed logical structure for (27) is as follows:

\[(\text{NOT})((\text{Cause}) \text{ Olu,}((\text{wa}) \text{ aga}))\]

(i.e., it is not the case that Olu caused the chair to be here).

The so-called "modifying type" serial construction as exemplified below (2)
\[
(2) \text{ Ade nsun } \text{ lo}
\]

Ade is sleeping go
(Ade is sleeping)

is really not different in logical structure from all the others we have been considering; we only need to realize that "lo" in (2) has little or nothing to do with "going"; rather, it is a surface reflex of the aspectual predicate "Continuity" which is a higher predicate in the deep structure. Consider the following:

\[
(30) \text{ O nsoro } \text{ lo}
\]

he is speaking go

(he continued to speak)

\[
(31)^* \text{ O soro } \text{ lo}
\]

he speak go

\[
(32) \text{ O jeun } \text{ lo}
\]

he eat go

(he ate before he left)

\[
(33) \text{ O njeu } \text{ lo}
\]

he is eating go

(he continued to eat)

It appears that wherever "lo" denotes continuity, the other verb must be marked for "progressiveness". Where "lo" is a true surface verb (32), this restriction does not apply. The proposed logical structure for (2) and other "modifying" serial constructions is as follows:

\[(\text{Continuity})((\text{sun}) \text{ Ade})\]

The term "modifying serial construction" is therefore found to be not only unnecessary but utterly misleading.

Serialization appears to be a complex phenomenon (especially in surface structure) but it is quite possible that the complexity is in fact due to the lack of really deep studies of the phenomenon. What is urgently needed is a detailed analysis of the type of verbs that admit of serialization as well as the implications of that for word order. It could even be that there is a relationship between serialization and complexity in lexical rules – as pointed out in George (1976).
Bibliography


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