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SERIAL VERBS AND VERBAL PROJECTIONS

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Serial verb constructions are described informally as clauses which contain more than one verb, where the verbs match in inflectional features and have no overt marking of subordination or coordination. (1) gives typical examples of such constructions from Yoruba, a Kwa language spoken in Nigeria.

(1) Basic Serial Verb Constructions--Yoruba

- | | |
|--|--|
| <p>a. ó mú ìwé wá.
 he take book come
 'He brought the book.'</p> | <p>c. Titi rìn ló ni, kò sáré ló.
 Titi walk go is not run go
 'Titi left walking, not running.'</p> |
| <p>b. Bólá sè eran tà.
 Bola cook meat sell
 'Bola cooked some meat
 and sold it.'</p> | <p>d. ó ra isu fún mi.
 he buy yam give me
 'He bought a yam for me.'</p> |

The first striking thing about these constructions is that they do not occur in English, as seen by the fact that one cannot naturally translate the sentences in (1) into English in a unified way. Thus, SVCs present an interesting case of syntactic variation. SVCs are found in West African languages, in Caribbean Creole languages, and in certain languages of New Guinea and Southeast Asia. In this paper, I seek to account for the major properties of such constructions, drawing primarily on data from Yoruba, and from Sranan -- a creole language spoken in Surinam. In particular, I will focus on SVCs in which the first verb is transitive, because the theoretical issues are sharper in such cases.

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Perhaps the biggest theoretical issue posed by SVCs is the fact that the verbs show up with fewer arguments than one would expect. This poses a problem for the Projection Principle. Thus, in (1b) the verb *ta* "sell" does not take a subject or an object of its own. In fact, (2a) shows that it is impossible to add an object pronoun, even though the verb is transitive (Lord (1974); cf. Stewart (1963)):

(2) a. *Bólá sè eran tà (*á).*
 Bola cook meat sell it
 'Bola cooked some meat and sold it.'

b. Bola cooked some meat and sold *(it).

This contrasts with English VP conjunction, where there must be an object after the second verb, as in (2b). Thus, it seems that the lexical properties a verb are systematically NOT represented when the verb appears in an SVC. This contradicts the second clause of the Projection Principle, as stated in (3).

(3) The Projection Principle (PrPr) (Chomsky (1981))

Suppose α is a lexical category and β a position of argument type.

- (i) If β is an immediate constituent of α' at some level,
 then α takes β as a semantic argument (θ -marks β) in α' .
- (ii) If α takes β as a semantic argument (θ -marks β) as a lexical property, then α does so at all syntactic levels.

This raises the question of whether the PrPr is valid for serializing languages at all. I will show that in fact the PrPr does hold in such languages. Indeed, once the correct phrase structure is given for SVCs, the PrPr helps to explain interesting restrictions on the phenomenon of serialization.

1. SVCs with Two Transitive Verbs

From an interpretive perspective, it is clear what to say about (2a): the understood object of the second verb is the same as the object of the first verb. In other words, the two verbs share the one object semantically. I suggest that exactly the same is true in the syntax as well. Suppose the phrase structure system of serializing languages is minimally different from that of English in the way defined in (4):

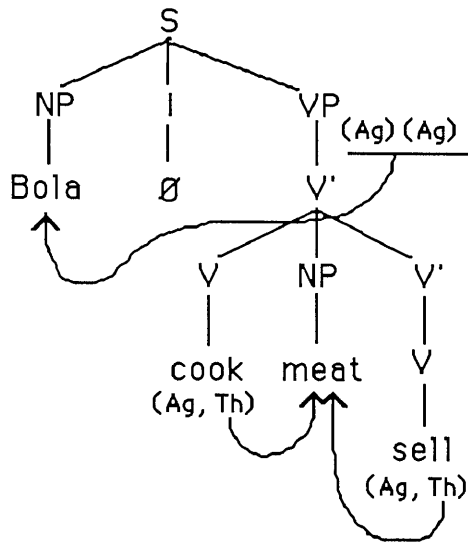
(4) The Serialization Parameter:
 The structure [$V' \dots V \dots V'$] is allowed.
 YES: Yoruba, Sranan...
 NO: English, French...

Jansen, Koopman and Muysken (1978) and Oyelaran (1982) have suggested that serializing languages allow a VP to be generated within VPs; (4) is similar, with the crucial difference that it is a nonmaximal projection that is embedded, rather than a maximal one. For the time being, let us simply assume that this is possible; I will discuss the implications of the suggestion more carefully in section 4.2.

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(4) allows us to assign the structure in (5) to SVCs like (2a):

(5)



Note that the VP in (5) is the smallest maximal projection that dominates two distinct verbs. I will assume that it is in fact a kind of doubly-headed VP, and as such it counts as a projection of both Vs. How will θ -marking apply in such a structure? The standard structural conditions on theta-role assignment are given in (6) (Chomsky (1986a)):

(6) α may θ -mark β only if:

- (i) α and β are phrase-structure sisters, OR
- (ii) a projection of α is a structural sister of β .

According to these conditions, the second verb 'sell' in (5) can θ -mark both 'Bola' and 'meat', since both are sisters of projections of 'sell'. Furthermore, 'meat' is an NP within the maximal projection of 'sell'. In this sense, it is an object (internal argument) of 'sell', as well as of 'cook'. This is the big advantage of saying that the embedded verb phrase is a nonmaximal projection. I will call NPs in this position 'the shared object'. Meanwhile, 'Bola' is sister to the maximal projection of 'sell', and thus qualifies to be sell's subject, as well as the subject of 'cook'. Thus, both verbs θ -mark 'meat' as an object; both θ -mark 'Bola' as a subject. In this way, the lexical properties of both verbs are fulfilled, in accordance with the Projection Principle. Most current versions of the Theta Criterion allow NPs to get two θ -roles as long as both are assigned to the same position. Thus, (5) is grammatical. Other examples of SVCs in which two transitive verbs with the same structure are given in (7):

- (7) a. Ikán jẹ iwé Adio run. YORUBA (E&A)
 Termite eat book Adio destroy
 'Termites completely devoured Adio's book.'

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- b. Wón bú omi mu. (Carstens 1988)
 they pour water drink
 'They poured water and drank it.'
- c. Kofi naki Amba kiri. SRANAN
 Kofi hit Amba kill
 'Kofi struck Amba dead.'

Thus, we already account for a whole class of SVCs.

In fact, this result should be strengthened. Not only may the second V do without a distinct object NP of its own, it in general *cannot* have such an object, as shown in (9a). This can be derived from the Projection Principle as follows. Suppose that 'sell' had an NP in the embedded V'. Then there would be two NPs within V's headed by 'sell', and 'sell' would have to θ -mark two internal arguments, by the first clause of the Projection Principle (3i). This is inconsistent with 'sell's lexical properties. Thus, Object sharing is not only possible in this type of SVC; it is obligatory.

- (8) *Bola [V' take meat [V' sell it/yams]

Therefore, not only can the Projection Principle be maintained for Yoruba and Sranan, it restricts the range of possible SVCs in important ways.

2. SVCs with one transitive and one intransitive Verb

Now let us consider SVCs that are made up of a transitive first verb and an intransitive second verb. Typical examples of this class from Yoruba and Sranan are given in (9):

- (9)a. Olú ù omò náà ubú. YORUBA (Bamgbose (1974))
 Olu push child the fall
 'Olu pushed the child down.'
- b. Olópàá na olè náà bẹ́. (Oyelaran (1982))
 police whip thief the bleed
 'The police whipped the thief until he bled.'
- c. Fémi fò aso náà mọ́. (Lord (1974))
 Femi washed cloth the be.clean
 'Femi washed the cloth clean.'
- d. Kofi fringi a buku fadon. SRANAN (Sebba (1987))
 Kofi throw the book fall
 'Kofi threw the book down.'

Looking at these and other examples, two generalizations emerge. First, only a restricted class of verbs can appear as the second verb in such a construction. Specifically, verbs in this position are characteristically of the unaccusative (or

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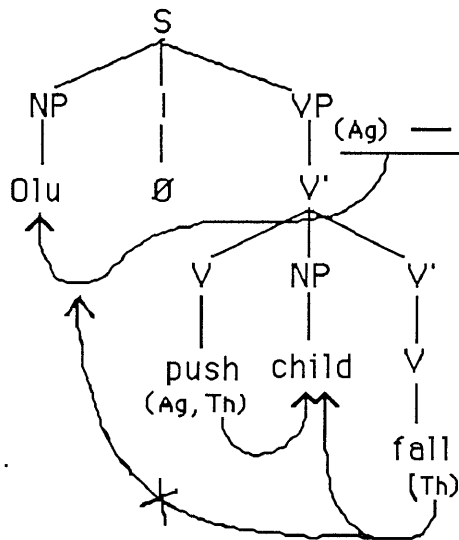
"ergative") class: e.g. 'fall', 'be-clean', 'bleed'. Sebba (1987) lists the following as the possible second verbs in Sranan: *tanupu* 'stand', *gwe* 'go-away'; *kba* 'finish'; *kon* 'become'; *komoto* 'come out of, exit'; *go* 'go'; *komopo* 'come from'; *kon* 'come'; *fadon* 'fall'; *opo* 'arise'; *didon* 'lie (down)'. (10) shows ungrammatical examples from Yoruba, where the second verb is from the unergative class of intransitives:¹

- (10) a. *Mo bú omi mumi. (Carstens (1988); compare (7b))
 they pour water drink(intrans)
 'I poured water and drank.'
- b. *Mo se eran jeun. (Laniran (personal communication))
 I cook meat eat (intrans)
 'I cooked the meat and ate.'

The second property of this class of SVCs is that the object of the first verb is generally interpreted as the argument of the second. Thus Bamgbose (1974) points out that (9a) -- 'Olu push child fall' -- means that the child falls, and not Olu, even though either meaning would potentially be meaningful. In this way, the SVC is different from English conjunctions like 'Olu pushed the child and fell'.

These two generalizations follow from the serialization parameter, together with the Projection Principle. The structure associated with (9a) is (11):

(11)



The first clause of the Projection Principle (3(i)) states that verbs must θ -mark every NP in their V' projection(s). There is no similar requirement that verbs θ -mark the subject position however. In English, this difference between subjects and objects is seen in the fact that expletive NPs are found in subject position, but not in object position, as shown in (12):

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- (12) a. *It* seems that we will be late.
 b. *There* arrived three men.
 c. *Linda ate *it/there* . (NOT = 'Linda ate')

In (11), this means that the intransitive verb must θ -mark the object 'child' and not the subject 'Olu'. This explains the second generalization. Furthermore the verb must be the type of intransitive verb that selects an object argument, rather than a subject argument. This is exactly the definition of the unaccusative class of verbs. Thus, the first generalization is explained as well. Again, the Projection Principle restricts the class of possible SVCs in important ways.

3. SVCs with three-argument verbs

Next, we turn to SVCs that contain a three-argument verb. These are possible if the three-argument verb is the second verb of the SVC, and the first verb is transitive. Examples are given in (13):

- (13) a. Bábá mi ra èwù bùn mi. YORUBA
 father my buy garment present me
 'My father bought me a garment.'
- b. Olè fi òbè gún oba.
 thief use knife stab chief
 'The thief stabbed the chief with the knife.'
- c. Kofi hari a ston puru na ini a olo. SRANAN
 Kofi pull the stone remove LOC in the hole
 'Kofi pulled the stone out of the hole.'

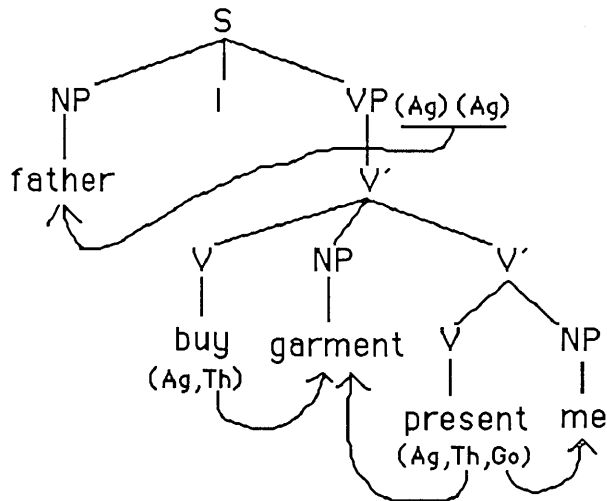
(14) shows that the second verbs in these examples are in fact triadic when they are the only verb in the clause:

- (14) a. Bábá mi bùn mi ní èwù. YORUBA
 father my present me PRT garment
 'My father presented me (with) a garment.'
- b. Olè gún oba ní òbè.
 thief stabbed chief PRT knife
 'The thief stabbed the chief with a knife.'
- c. Kofi puru a ston na ini a olo. SRANAN
 Kofi remove the stone LOC in the hole
 'Kofi removed the stone from the hole.'

Such SVCs are a straightforward extension of what has already been said. The structure of (13a) would be (15). The only innovation is that an extra argument appears inside the embedded V' projection of the second verb.

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(15)



Here there are two NPs in the V' projections of 'present', in accordance with its lexical properties. There is only one NP that is sister to projections of 'buy' -- namely 'garment'. Thus, 'buy' θ -marks only this argument, consistent with its lexical properties. In addition, both verbs θ -mark the subject. Thus, the thematic roles in the sentence are essentially those of 'My father bought the garment and he presented it to me,'--which gives the correct interpretation.

The Projection Principle again makes object sharing obligatory. Thus, the second verb cannot have two NPs following it in an SVC, even though it does when it appears by itself. This is seen in (16), from Sebba (1987).

- (16) Kofi tyari nyan go gi Amba (*ptata). SRANAN
 Kofi carry food go give Amba potatoes
 'Kofi carried food and gave Amba the potatoes.'

Here 'give' would have to θ -mark the shared object 'food' as well as Amba' and 'potatoes'. This creates a violation of the Theta Criterion and the Projection Principle. In this way, (16) is ruled out parallel to (8).

Three-argument verbs raise a new issue, however. Notice that in (13a) the shared object is the theme argument of the second verb, rather than the goal argument. In fact, this is a general property of SVCs. When one picks a first verb which could plausibly share the goal argument, the result is ungrammatical, as shown in (17a). Similarly, when the second verb takes an instrumental NP, this instrument is always the argument shared with the first verb. When one tries to share the patient argument instead, the result is ungrammatical, as indicated in (17b) (Laniran (personal communication)).

- (17) a. *Olú bá Femì b̀n ̀ašo.
 Olu catch.up.with Femi present dress
 'Olu met Femi and gave her a dress.'

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- b. *Olú mú búrédi gé òbè.
 Olu take bread cut knife
 'Olu took the bread and cut it with a knife.'

These asymmetries do not follow directly from the Projection Principle in its standard form. However, Larson (1988) has argued that three-place verbs semantically compose with their goal or benefactive arguments before they compose with their theme argument. This order of semantic composition then projects into the syntax in English, such that the argument that composes with the verb first forms a constituent with the verb that excludes the arguments that compose later. This idea accounts elegantly for the difference between (13a) and (17a). In (15), the embedded V' is a constituent that contains the goal phrase and the three argument verb, but not the theme argument. Thus, the order of composition is correctly represented. On the other hand, in (17a) the theme and the verb form a constituent that excludes the goal. This is contrary to the fixed order of composition. Thus, Larson's condition explains the restrictions on object sharing in these constructions.

The same line of reasoning can be used to account for the range of SVCs found with instrumental verbs. We explain why (13b) is found but not (17b) if we simply assume that instruments are true arguments of the verb and compose with the verb after patients. This order of composition is in fact the one motivated in Marantz (1984). It then follows that the instrument must be the outer argument in the syntax, and it is the outer and not the inner object that is shared with the first verb in an SVC.

4. The Serialization Parameter: A Closer Look

To this point, we have seen that if one assumes that [\sqrt{V} V... V'] structures exist in the serializing languages, then the standard lexical properties of the verbs in those languages interact in accordance with the Projection Principle to restrict the range of serial constructions found. In this way, an important fragment of the language is explained with only one new assumption.

These empirical successes notwithstanding, the V'-in-V' proposal may seem strange. It stretches the standard view of X' theory in a suspicious way. It also seems like a peculiar difference to stipulate as a parameter distinguishing two major classes of languages. In this last section, we will look at this structure more closely, first giving independent arguments for it, and then discussing a more satisfactory way of embedding it in a theory of Universal Grammar.

4.1. Further evidence for a [\sqrt{V} ...V...NP...V'...] structure

One unusual aspect of the SVC structure is that the VP is considered to be a projection of both verbs. This crucially allows both Vs to assign an internal θ -role to the NP between them. Independent support for this idea comes from inflectional morphology. Traditionally, features of Infl are spelled out on the head of the verb phrase that the Infl governs. In some languages, these features show up only the V of an SVC that is adjacent to the Infl. In others, however, the same features are

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spelled out on every verb in the SVC. (18) shows an example of this type in Akan (Schachter (1974)):

- (18) *Ma -yee* *adwuma* *ma -ma* *Amma.*
 1sS/perf-do work 1sS/perf-give Amma
 'I have done work for Amma.'

This confirms the idea that both verbs are heads of the VP in serializing languages.

The other odd thing about the proposed structure for SVCs is the fact that a category appears in V' which is neither maximal nor minimal. Independent support for this part of the analysis comes from word order facts. The principles that determine word order are summarized in (19), based on Travis (1984):

- (19) a. X^0 θ -marks phrases to its {right/left}.
 b. X^0 Case-marks phrases to its {right/left}.
 c. If X^0 is in a direct relationship with Y, and Z is between X and Y, then Z must be in the same direct relationship with X or Y. (direct relationship = Case-marking or θ -marking).
 d. For $m > 0$, X^m is predicated of an NP to its left (right?).

Crucial here is the difference between direct θ -role assignment from a head and θ -role assignment from a phrase by predication. In SVO languages like Yoruba and Sranan, heads assign θ -roles to the right, whereas phrases assign θ -roles to the left. Thus, if a 'shared object' gets θ -roles from both a head and a phrase, it will have to appear between the two verbal categories. This is exactly what we find in Yoruba and Sranan, as the examples throughout the paper show (see, for example, (7) and (13)).

It is interesting to compare this with the pattern of serialization found in SOV languages, such as Ijo, also spoken in Nigeria. Examples are given in (20) (from Williamson (1965))

- (20) a. *áráú* *ingo* *dérì* *pítè-mí.*
 she trap weave set-past
 'She wove and set a trap.'
- b. *dúma* *tun-nì* *a-pírì*
 song sing- \emptyset her-give
 'sing a song for her'
- c. *erí* *ogidi* *akí-nì* *indi* *pei-mí.*
 he matchet take- \emptyset fish cut.up-past
 'He cut up a fish with a matchet.'

In SOV languages, both heads and phrases assign θ -roles to the left. Therefore, the shared objects in these languages should be to the left of both verbs. This is what we find. Moreover, heads but not phrases must be adjacent to the NP they θ -mark ((19c)). Hence the V' cannot come between the V and the NP. Rather, the V'

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follows the V in Ijo, as in Yoruba. The result is that the relative order of the verbs and the relative order of the NPs is the same in both Yoruba and Ijo; the only difference is in the order of each NP with respect to its governing verb. These relationships are summarized in (21):

- (21)
- | IJO | YORUBA |
|---|--|
| a. [ψ' trap weave [ψ' set]] | a' [ψ' cook meat [ψ' sell]] |
| b. [ψ' song sing [ψ' her give]] | b' [ψ' do work [ψ' give Amma]] |
-

Thus, word order principles treat the second verb in an SVC as a phrase rather than as a bare head. This independently confirms the SVC structure that we motivated on the basis of Theta theory.

4.2. Generalizing the Parameter

We have found converging evidence as to what the structure of SVCs is. Let us close by seeing if we can find a way of stating the difference between serializing languages like Yoruba and non-serializing languages like English that is more natural and less stipulative than (4).

Chomsky (1986b) suggests that heads and other nonmaximal projections are licensed by virtue of their relationship to maximal projections -- i.e. by X' theory. In this spirit, (22) rephrases the standard X' convention as a licensing condition:

- (22) The Head Licensing Condition (HLC):
 A category β is licensed if there is a set of categories $\{\alpha_1 \dots \alpha_n\}$ such that:
- (i) $\beta = \alpha_1$
 - (ii) α_n is a (properly licensed) maximal projection, and
 - (iii) for $i, 1 < i \leq n$, α_i immediately dominates α_{i-1} , and is a projection of α_{i-1} of the same or one greater bar-level.

Note that the crucial third clause states that the bar-level of a category need not necessarily be higher than its head; this allows "base-generated adjunction" structures (such as [$_{NP}$ NP S'] for relative clauses), as well as SVC structures.

(22) leaves open the possibility that a single maximal projection can license two or more heads, as long as it is at the top of a sequence of projections for both. Whether this possibility can actually be exploited in a given language will then be the serialization parameter. This is stated in (23):

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(23) Generalized Serialization Parameter:

VPs projected from more than one head are possible.

YES: Yoruba, Sranan...

NO: English, French...

This is a more general statement than our original proposal, in that it leaves open which X'-theoretic categories are actually involved in multiply-headed constructions. Indeed, it stipulates little beyond an obvious pretheoretic observation about the languages involved.² Thus, our task is to show that independent principles prevent it from over-generating to allow structures that are not attested. To this end, we briefly survey the different structures that could potentially appear under a V' node other than the one that in fact underlies SVCs.

The first possibility is that a V' could have two bare V⁰s. This would give a structure like (24a) or (24b):

- (24) a. [V' V NP V]
 b. [V' V V NP]

Both possibilities are immediately ruled out by the principles of word order, however. Each V must θ -mark the NP, by the Projection Principle. However, in (24a) the second V is on the wrong side of the NP to θ -mark it in an SVO language (see (19a)). In (24b), on the other hand, the second V intervenes between the first V and the NP, thereby preventing the first verb from assigning its θ -role (see (19c)). Thus, a phrase with two V⁰ heads is impossible.

The next possibility is that one category could be a V⁰ and the other could be a full maximal projection, as in (25):

- (25) [V' V NP VP]

In this case, however, the V' could not be a projection of the second V, because of the decrease in bar-level from VP to V' (cf. (22iii)). Thus, the embedded VP must be licensed independently from the matrix VP. This will happen if it is θ -marked by the first V. Furthermore, by Theta theory the VP can only assign an external θ -role to the object of the first V. Such a configuration is possible: in fact, it describes accurately the structure of causative constructions such as English 'I made him eat the beans.' Since (23) is not involved in the licensing of (25), (25) can be found in both serializing and nonserializing languages.

It follows that in any doubly-headed V' at least one of the verbal categories must be a V'. If the other is a V⁰, the result is the structure that we have attributed to SVCs. Thus, the last structure to be considered is one in which both of the verbal constituents in the double-headed V' are V' level categories. This will be impossible if there is a shared object outside both V's, because neither verb will be able to assign Case to the object. We could, however, get surface strings similar to those we have been considering if the NP between the two verbs were actually inside the V' projection of the first verb. This possibility is shown in (26):

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(26) [V' [V' V NP] V']

This is consistent with all the principles we have discussed. It does however imply that the second verb will not θ -mark the NP in question, because the NP is not a sister of the second verb or any of its projections. (26) is essentially a coordinate structure, in that it is a complex category formed out of two equal categories. Thus, the generalized serialization parameter would seem to allow a kind of coordination with no lexical conjunction.

In fact, such 'covert coordination' is found in serializing languages. This is illustrated for Sranan in (27) and (28) from Sebba (1987). In (27), the middle NP is a shared object, bearing the instrumental role of the second verb, as well as the patient role of the first verb. Thus, it is a well-formed SVC, with essentially the structure in (15). In (28), on the other hand, the middle NP is the object of the first verb but bears no thematic relationship to the second verb. Thus, by the Projection Principle, it cannot be an SVC, and must rather be a covert conjunction with the structure in (26). This theoretical difference is confirmed by the fact that either object can be extracted out of the VP in (27), but neither can be extracted in (28):

Instrumental SVC:

- (27) a. Kofi fringi a tiki naki Amba.
 Kofi throw the stick hit Amba
 'Kofi threw the stick at Amba and hit her.'
- b. Suma Kofi fringi a tiki naki --- ?
 who Kofi throw the stick hit
 'Who did Kofi hit with the stick?'
- c. San Kofi teki --- koti a brede ?
 what Kofi take cut the bread
 'What did Kofi cut the bread with?'

Covert Conjunction:

- (28) a. Kofi sutu Amba kiri Kwaku.
 Kofi shoot Amba kill Kwaku
 'Kofi shot Amba and killed Kwaku.'
- b. *Suma Kofi sutu Amba kiri --- ?
 Who Kofi shoot Amba kill
 'Who did Kofi shoot Amba and kill?'
- c. *Suma Kofi sutu --- kiri Kwaku ?
 Who Kofi shoot kill Kwaku
 'Who did Kofi shoot and kill Kwaku?'

Extraction in (28) but not (27) is blocked by the Coordinate Structure Constraint.

A similar contrast between covert coordination and SVCs is found in Yoruba. Thus, for some speakers an intransitive second verb may take the subject of the first verb as its argument, rather than the object, contrary to what I claimed in

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section 2. (29), for example, can be interpreted in two ways (Laniran (personal communication); see also Awoyale (1988)):

- (29) Olú lu màálù kú
 Olu beat cow die
 a. 'Olu beat the cow dead.' (i.e. the cow died)
 b. 'Olu beat the cow and died.' (i.e. Olu died)

On the (b) reading, there is no object sharing. We therefore predict that the (b) reading is a covert conjunction, while (a) is a true SVC. This can be confirmed by the predicate cleft construction in Yoruba. This construction is a way of focusing the VP by placing a nominalized form of the verb at the beginning of the clause. If and only if the clause contains a true SVC, both verbs can appear clause initially in this construction in Yoruba (Manfredi and Laniran (1988)). (30) is a straightforward example of this type (compare (2)):

- (30) Sí-sè tà ni Bólá se gran tà.
 Nom-cook-sell that Bola cook meat sell
 'It was cook and sell the meat that Bola did.'

Crucially, when the two verbs are clefted together in (29), the second, 'shared subject' reading disappears as predicted (Laniran (personal communication)):

- (31) Li-lù kú ni Olú lu màálù kú
 nom-beat-die that Olu beat cow die
 a. 'Olu beat the cow dead.' (i.e. the cow died)
 b. *'Olu beat the cow and died.' (i.e. Olu dies)

This confirms that covert conjunction constructions exist in Yoruba as well, and that their behavior is different from that of true SVCs in systematic ways.

To conclude, we find that that the minimal serialization parameter in (23) does not overgenerate. If a language allows double headed VPs, then the only two constructions that satisfy the principles of the theory are an attested covert coordination construction, and the true Serial Verb Construction that has been the primary focus of this paper. The Projection Principle applies to the latter to limit the possible combinations of verbal categories in interesting and important ways.

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NOTES

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The following abbreviations are used in the attributions of examples: A, Awoyale (1988); E&A, Ekundayo and Akinnaso (1983); O, Oyelaran (1982); S, Sebba (1987). Sranan examples are from Sebba (1987) unless otherwise stated. Where Nigerian typography has dots underneath vowels and s, I have used underlines, for convenience. In tree structures, I represent the clause as S and do not include an I' node containing Infl and VP; this is purely for graphic simplicity, since the details of clause structure are not directly relevant to the matters considered.

1. A complication is that momi and jeun are both bimorphemic in a relevant way: momi 'drink' (intrans) is mu 'drink-transitive' plus omi 'water'; jeun 'eat' (intrans) is je 'eat' plus oun 'something'. The noun occurring with the verb in these examples is called the "bound verb complement" (BVC), and essentially all unergative verbs in Yoruba have one. It is controversial among Yoruba-speaking linguists whether the BVCs are syntactic objects of the verb, or whether they compound lexically with the verb root to form true intransitive verbs. I assume the latter view. If the former view proves correct, then the examples in (10) are not relevant to the current point, but rather illustrate the point as (8).

2. One would of course still like to relate this property of serializing languages more deeply to their other properties, if possible. One possibility would be to appeal to the relationship between V and Infl. Roberts (1985) argues that Vs must receive the verbal equivalent of Case features from a governing Infl in order to be able to assign their θ -roles. The difference between serializing languages and nonserializing languages could then be traced to the fact that Infs can 'Case-mark' more than one verb in Yoruba and Sranan, but not in English. In fact, Infs in the well-known serializing languages tend to be lexical (rather than inflectional) in nature, giving encouragement to this line of inquiry. This approach might also give insight into why double-headed (i.e. serial) VPs are found, but not double-headed (i.e. serial) NPs. Developing it is left to future research.

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REFERENCES

- Awoyale, Y. (1988) "Complex Predicates and Verb Serialization," ms., University of Ilorin and MIT, Cambridge, Mass.
- Bamgbose, A. (1974) "On Serial Verbs and Verbal Status," Journal of West African Languages 9, 17-48.
- Carstens, V. (1988) "Yoruba Serial verbs," paper presented at 2nd Niger-Congo Syntax and Semantics Workshop, MIT, Cambridge, April 1988.
- Chomsky, N. (1981) Lectures on Government and Binding, Foris, Dordrecht.
- Chomsky, N. (1986a) Barriers, MIT Press, Cambridge, Mass.
- Chomsky, N. (1986b) Knowledge of Language: Its Nature, Origins, and Use, Praeger, New York.
- Ekundayo, S.A. and F.N. Akinnaso (1983) "Yoruba Serial Verb String Commutability Constraints," Lingua 60, 115-133.
- George, I. (1985) "Complex Verbs in Nupe and Yoruba," Studies in African Linguistics 16, 295-321.
- Larson, R. (1988) "On the Double Object Construction," Linguistic Inquiry 19, 335-392.
- Lord, C. (1974) "Causative Constructions in Yoruba," Studies in African Linguistics, supplement 5, 195-204.
- Manfredi, V. and Y. Laniran (1988) "Extraction from Yoruba Serializations," paper presented at the 2nd Niger-Congo Syntax and Semantics Workshop, MIT, Cambridge, Mass., April 1988.
- Marantz, A. (1984) On the Nature of Grammatical Relations, MIT Press, Cambridge, Mass.
- Oyelaran, O. (1982) "On the Scope of the Serial Verb Construction in Yoruba," Studies in African Linguistics 13, 109-146.
- Schachter, P. (1974) "A Non-Transformational Account of Serial Verbs," Studies in African Linguistics, supplement 5, 253-270.
- Sebba, M. (1987) The Syntax of Serial Verbs, John Benjamins, Amsterdam.
- Stahlke, H. (1970) "Serial Verbs," Studies in African Linguistics 1, 60-99.
- Stewart, J. M. (1963) "Some Restrictions on Objects in Twi," Journal of African Languages 2, 145-149.
- Travis, L. (1984) Parameters and Effects of Word Order Variation, Ph.D. dissertation, MIT, Cambridge.
- Williamson, K. (1965) A Grammar of the Kolokuma Dialect of Ijo, University Press, Cambridge.