

## Clause Structure and Verb Series

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### Abstract

This paper argues that, in  $V_1$ -XP- $V_2$  and  $V_1$ - $V_2$ -XP series,  $V_1$  merges in the functional domain of the lexical verb ( $V_2$ ).  $V_2$  introduces the (internal) argument and is embedded under an aspect phrase whose head is endowed with an EPP feature. Surface word order variations in Kwa (and Khoisan) reduce to the interaction between EPP-licensing that triggers  $V_2$  object inversion, sometimes followed by movement of  $V_2$  past the object.

**Keywords:** Verb series, argument sharing, functional verb, EPP, verb object inversion.

### 1 Introduction

The following sentences illustrate serialization in Kwa (1a-b), and in Khoisan (1c):

- (1) a. Àsibá b́é lésì qù. [Gungbe]

Asiba collect rice eat

‘Asiba collected rice eat [i.e., Asiba ate a lot of rice].’

- b. Obi kwa-da-ra Eze. [Igbo]

Obi push-fall-RV Eze

‘Obi pushed Eze down.’

- c. Ma a- q||hu |'o djo ki kx'u na. [≠Hoan]  
 1SG PROG pour put.in water PART pot in  
 'I am pouring water into the pot.'

Studies of serialization in Kwa and Khoisan languages suggest that the examples (1a-c) are *bona fide* serial verb constructions (SVCs) because they obey the Argument Sharing Hypothesis (ASH).<sup>1</sup> The ASH states that “in a serial verb construction  $V_1$  and  $V_2$  must share an internal argument (Collins 1997: 463)”, see also Baker (1989), Stewart (1998), Carstens (2002), Baker and Stewart (2002). Taking the sequence  $V_1$ -O- $V_2$  in (1a) as a core case of serialization, Collins (2001, 2002) argues that the  $V_1$ - $V_2$ -O order in (1b-c) derives from ‘multiple’ verb movement of  $V_1$  and  $V_2$  to little *v*. These series comply with the ASH, though ‘multiple’ verb movement distorts the underlying  $V_1$ -O- $V_2$  order.

This paper takes a different approach to serialization. It abandons the ASH and proposes that, in the series under (1),  $V_1$  merges as a functional (verbal) element within the extended projection of the lexical verb (i.e.,  $V_2$ ) that introduces the arguments (2).

- (2) [<sub>CP</sub>.....[<sub>TP</sub>... $V_1$  .....[<sub>VP</sub>...[ $V_2$ .....]]]]

Under (2), functional  $V_1$  has no internal  $\theta$ -role, which is why it can merge within the functional extension of the lexical verb  $V_2$ .<sup>2</sup> This view departs radically from well-established generative tradition on SVCs which regards the ASH as a necessary condition on serialization. Section 2 motivates the analysis in (2) on empirical ground, and shows that the ASH and its theoretical correlates (e.g., double-headed VPs and object control) cannot be maintained for all the relevant cases. Therefore, the ASH cannot be a defining

condition on serialization nor can it be related to a serializing parameter. The discussion further indicates that we reach a better understanding of verb series by comparing them, language-internally, with structurally similar constructions. In this regard, section 3 proposes an analysis for Kwa series that takes into account Aux-O-V structures, which display structural similarities with series. It is proposed there that  $V_1$  is similar to certain *Auxes* (or light verbs) because it delimits a functional domain that embeds the lexical verb  $V_2$ , and is characterized, among other things, by verb object inversion (Aboh 2003). It is shown that the inverted object is not in a case position, but occurs in a derived position that better qualifies as an EPP position related to an aspect head. Accordingly, the intervening object in (1a) has moved there to check the EPP feature under Asp. Building on this, section 4 proposes that  $V_1$ - $V_2$ -O sequences (1b-c) result from subsequent movement of  $V_2$  past the object. Section 5 concludes the paper.

## **2 Revisiting Verb Series: The Empirical Facts**

In this section, I provide empirical evidence that the ASH is inaccurate. I further demonstrate that a VP-shell approach to SVCs that translates the ASH into obligatory object control (Collins 1997) cannot be maintained. For instance, the verbs in a series can: (i) separately combine with distinct (internal) arguments, (ii) cooccur with INFL-related markers (e.g., aspect), and (iii) be separated by intervening head-like adverbs. I conclude from these facts that the sequences  $V_1$ -XP- $V_2$  and  $V_1$ - $V_2$ -XP in (1) involve more structure than a simple VP-shell allows for. Finally, I argue against a view of series that makes them exceptional even in languages where they occur. I first discuss the ASH.

## 2.1 Abandoning the ASH

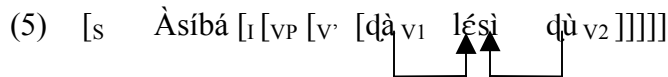
The Gungbe sentences under (3) illustrate SVCs often described as object sharing series (e.g., Westermann 1930, Stewart 1963, Ansre 1966, Lord 1973, Bamgbose 1974).

- (3) a. Sétù zé kpò ló xò Kójó.  
Setu take stick DET hit Kojo  
‘Setu took the stick hit Kojo [i.e., he hit him with the stick].’
- b. Sétù nyàn Kòjò yì Kútònù.  
Setu chase Kojo go Cotonou  
‘Setu chase Kojo go to Cotonou [i.e., he chased him to Cotonou].’
- c. Àsíbá qà lési qù.  
Asiba cook/prepare/made rice eat  
‘Asiba cooked/prepared/made the rice eat [i.e., she ate the rice].’

Sentence (3a) illustrates an instrument SVC: the instrument of  $V_2$  is the theme of  $V_1$ . Sentence (3b) represents a resultative SVC: the internal argument of the unaccusative  $V_2$  is the theme of  $V_1$ . In the consecutive SVC (3c),  $V_1$  and  $V_2$  share the same internal argument.<sup>3</sup> The tendencies in (4) are often considered typical of these series.

- (4) a. The verbs in SVCs ‘share’ the same arguments,  
b. SVCs tend to force a ‘single event’ reading,  
c. The verbs in SVCs are associated with a single tense specification,  
d. SVCs involve no coordinating conjunction.

Early transformational analyses of SVCs assumed that object sharing (4a) results from deletion of the internal argument under *identity*. Baker (1989) abandons the notion of deletion under *identity*, and reinterprets the facts in (4) in terms of the ASH. The latter is a consequence of double-headed VPs where  $V_1$  and  $V_2$  directly  $\theta$ -mark the internal argument. (3c) is therefore derived as in (5).



Assuming the projection principle, Baker (1989: 527) concluded that because “the object of  $V_1$  is an immediate constituent of a  $V'$  projection of  $V_2$ ,  $V_2$  must  $\theta$ -mark it, just as any other verb must  $\theta$ -mark its object. Thus, the Projection Principle predicts that object sharing is not only possible in SVCs, but obligatory.” This conclusion has far reaching theoretical and empirical consequences. For instance, no internal argument can appear after  $V_2$ . In addition,  $V_2$  cannot license an overt pronoun object coreferential with the first object (Baker 1989: 527). Similarly, this analysis implies that UG embeds a ‘serializing parameter’ that sets serializing languages (e.g., Gungbe) apart from non-serializing ones (e.g., English). The following discussion shows that these conclusions cannot be maintained for all SVCs and the ASH must therefore be rejected.

Consider, for instance, the following Gungbe SVC where  $V_1$  and  $V_2$  apparently select for an internal argument and there is no argument sharing in the sense of Baker:<sup>4</sup>

(6) Òjé ! Sésínú kùn mótò cè só \*(àdó).

Excl. Sesinou drive car 1SG-POSS hit wall

‘Sesinou drove my car hit the wall [i.e., he drove the car into the wall]!’

In discussing Sranan examples comparable to this sentence, Baker (1989) indicates that they involve covert coordination and should be formally distinguished from SVCs proper. The latter, he claims, must obey the ASH. Some crucial syntactic tests used by Baker to distinguish between coordination and serialization involve (i) the single tense and negation constraint: SVCs involve a single tense and negation marker, while coordinate structures involve distinct tense and negation markers in each conjunct. (ii) SVCs show no sensitivity to extraction of the arguments, while coordinate structure display island effects typical of such structures. In order to make sure that (6) is not a (covert) coordinate structure, let us first consider Gungbe coordinate structures.

### 2.1.1 Coordinate Structures in Gungbe

Gungbe sentence coordination involves two types of conjunctions: *bɔ* coordinates two IPs involving two distinct subjects (7a), or coreferential pronouns, while *bó* coordinates two IPs where the subject of the first IP necessarily controls that of the second (7b).

- (7) a. Sésínú      dǎ      lésì      bɔ      Súrù      dǔ      nǔsónú.  
           Sesinou      cook    rice      COORD Suru    eat      soup  
           ‘Sesinou cooked rice and Suru ate soup.’
- b. Sésínú<sub>i</sub>      dǎ      lésì      bò      pro<sub>i</sub>      dǔ      nǔsónú.  
           Sesinou      cook    rice      COORD            eat      soup  
           ‘Sesinou cooked rice and ate soup.’

It is crucial to stress that Gungbe does not have covert coordination of any sort. Within the Gbe languages, Gungbe and Fongbe require an overt coordinator (i.e., *bò* or *bɔ̀*) in contexts where Ewegbe, discussed by (Collins 1997: 465), has covert coordination.

- (8) a. Kòfí ná qù lési \*(bò) ná yì xòmè. [Gungbe]  
 b. Kòfí ná qù mólínkún \*(bò) ná yì xòmè. [Fongbe]  
 c. Kòfí á qù mólú ... á yì xòmè. [Ewegbe]
- Kofi FUT eat rice (COORD) FUT go room  
 ‘Kofi will eat rice and will go into the room.’

Given that the required conjunction *bò* or *bɔ̀* is missing in (6), we already have an indication that this example does not involve coordination.

### 2.1.2 Distinguishing between Coordinate Structures and Verb Series in Gungbe

The coordinate structures in (8) also indicate that each conjunct involves its own tense marker.<sup>5</sup> The same holds of examples under (9), where negation and tense markers may occur in any (or both) conjuncts.

- (9) a. Kòfí **má** **ná** wá fí **bò** **ná** qú wè.  
 Kofi NEG FUT come here COORD FUT dance dance  
 ‘Kofi will not come here and will dance.’
- b. Kòfí **má** **ná** wá fí **bò** **má** **ná** qú wè.  
 Kofi NEG FUT come here COORD NEG FUT dance dance  
 ‘Kofi will not come here and will not dance.’

In the Gungbe series, however, INFL specifications occur on  $V_1$  only and cannot precede  $V_2$ . In (10a), the negation *má* and tense marker *ná* precede  $V_1$  *kùn* ‘drive’, but cannot occur with  $V_2$  *sɔ* ‘hit’ (10b).

(10) a. Sésínú! À **má ná** sɔ kùn mótò cè sɔ àdó égbè.

Sesinou 2SG NEG FUT again drive car 1SG-POSS hit wall today

‘Sesinou! You will not again drive my car hit (i.e., into) the wall!’

b. \*Sésínú! À **má ná** sɔ kùn mótò cè **má ná** sɔ àdó égbè.

Sesinou 2sg NEG FUT again drive car 1SG-POSS NEG FUT hit wall today

These examples show that Gungbe coordinate structures do not obey generalization (4c) which holds of verb series (e.g., 6, 10a) though these violate Baker’s ASH (4a).

Nevertheless, given that covert coordination does exist in Gbe (8c), and generally in serializing languages (Baker 1989), one can imagine that covert coordination in Gungbe is restricted to VP coordination. Additional evidence that this view is not tenable comes from extraction facts. Example (11a), a variant of (9a) without the negation marker, allows wh-extraction of all arguments under focusing or wh-question (11b-g).

(11) a. Sésínú ná kùn mótò cè sɔ àdó!

Sesinou FUT drive car 1SG-POSS hit wall

‘Sesinou will drive my car hit the wall!’

b. Sésínú wè ná kùn mótò cè sɔ àdó!

Sesinou FOC FUT drive car 1SG-POSS hit wall

‘SESINO will drive my car hit the wall!’



- c. Mótò cè wè Sésínú ná kùn só àdó!  
 car 1SG-POSS FOC Sesinou FUT drive hit wall  
 ‘Sesinou will drive MY CAR hit the wall!’
- d. Àdó wè Sésínú ná kùn mótò cè só!  
 wall FOC Sesinou FUT drive car 1SG-POSS hit  
 ‘Sesinou will drive my car hit THE WALL!’
- e. Ménù wè ná kùn mótò cè só àdó?  
 Who FOC FUT drive car 1SG-POSS hit wall  
 ‘Who will drive my car hit the wall?’
- f. Été wè Sésínú ná kùn só àdó?  
 What FOC Sesinou FUT drive hit wall  
 ‘What will Sesinou drive hit the wall?’
- g. Été wè Sésínú ná kùn mótò cè só?  
 What FOC Sesinou FUT drive car 1SG-POSS hit  
 ‘What will Sesinou drive my car hit?’

Such extractions are unexpected under a coordination analysis. An *LI* reviewer suggests that these examples could involve base generation of the focused element or wh-phrase in clause-initial position from where it binds a null pronoun within the IP. Aboh (2004a: chapter 7) shows that this option is not available in Gungbe, because these constructions display minimality effects typical of movement operations. In (12), for instance, an argument wh-phrase cannot cross an intervening adjunct wh-phrase.

(12) \*Étɛ́ɪ wɛ̀ ùn kànbíó dɛ̀ hwèténùɪ wɛ̀ Sésínú ná kùn tᵢ sɔ̀ àdó tᵢ?

What FOC 1SG ask that when FOC Sesinou FUT drive hit wall

‘What did I ask you when Sesinou will drive hit the wall?’

Aboh (2004a: chapter 7) analyzes wh-questions and focus constructions as involving movement to the specifier of a focus phrase headed by the focus marker *wɛ̀*. With this analysis in mind, let us now consider (7a), repeated below, in the context of extraction.

(7) a. Sésínú dà lési bɔ́ Súrù d̀ nũsónú.

Sesinou cook rice COORD Suru eat soup

‘Sesinou cooked rice and Suru ate soup.’

Unlike in the series under (11), the following examples indicate that extraction out of a coordinate structure is possible only in an across-the-board fashion such that the two conjuncts contain a variable bound by the same wh-operator (13c) (Ross 1967).

(13) a. \*Étɛ́ɪ wɛ̀ Sésínú dà tᵢ bɔ́ Súrù d̀ nũsónú?

What FOC Sesinou cook COORD Suru eat soup

‘What did Sesinou cook and Suru ate soup?’

b. \*Étɛ́ɪ wɛ̀ Sésínú dà lési bɔ́ Súrù d̀ tᵢ?

What FOC Sesinou cook rice COORD Suru eat soup

‘What did Sesinou cook rice and Suru eat?’

c. Étɛ́ɪ wɛ̀ Sésínú dà tᵢ bɔ́ Súrù d̀ tᵢ?

What FOC Sesinou cook COORD Suru eat

‘What did Sesinou cook and Suru ate?’

Furthermore, in series, but not in coordinate structures,  $V_2$  cannot license a pronoun co-indexed with the object of  $V_1$ .

- (14) a. \*Sésínú ná kùn mótò cè zé é só àdó!  
 Sesinou FUT drive car 1SG-POSS take 3SG hit wall  
 ‘Sesinou will drive my car take it hit the wall!’
- b. Sésínú qà lési bɔ́ Súrù sà-è kpó!  
 Sesinou cook rice COORD Suru sell-3SG all  
 ‘Sesinou cooked rice and Suru sold it all!’

Put together, these facts lead me to conclude that examples (6), (10a), and (11), where  $V_1$  and  $V_2$  appear to take different internal arguments (and therefore violate the ASH) are *bona fide* SVCs. This observation makes the ASH a rather weak condition.

### 2.1.3 Instrument Series and the ASH

A final empirical fact that further weakens the ASH as a condition on SVCs comes from instrument series of the type in (3a). Under Baker (1989)  $V_2$ , in this context, is a triadic verb that assigns instrument (or manner)  $\theta$ -role to the object of  $V_1$ . Yet, the Fongbe sentence in (15) appears to be a counter-example to this claim because the instrument is introduced by a preposition. The latter is associated with a gap, presumably an empty category whose antecedent is the object sandwiched between  $V_1$  and  $V_2$  (da Cruz 1997).

- (15) Kòkú sò [jìvì sò]<sub>i</sub> sɛ́n wàxúxú sò ná ec<sub>i</sub>. [Fongbe]  
Koku take knife DET cut bread DET with  
'Koku cut the bread with the knife.'

Since this shared object can be extracted under wh-question (16), contrary to coordinate structures, we have to conclude that example (15) is a well-formed SVC.

- (16) Été<sub>i</sub> wè Kòkú sò sɛ́n wàxúxú sò ná ec<sub>i</sub>? [Fongbe]  
what FOC Koku take cut bread DET with  
'What did Koku cut the bread with?'

If, as convincingly argued by da Cruz (1997), *ná*  $\theta$ -marks the instrument/manner argument in these Fongbe examples, then  $V_2$  *sɛ́n* 'cut' cannot be a triadic verb that jointly  $\theta$ -marks the object of  $V_1$  *jìvì sò* 'the knife'. Accordingly,  $V_1$  and  $V_2$  do not *share* the same object in Fongbe 'take' series (see also Campbell 1996). This closes the case of the ASH which must be rejected (see also Manfredi 2005). I now turn to the VP-shell hypothesis.

## 2.2 The VP-shell Analysis to SVCs

Given that Baker's (1989) ternary structure is at odds with standard assumptions of X-bar theory, certain authors propose to translate the ASH into syntactic structures involving VP-shells. A sentence like (3c), repeated as (17a), is therefore said to involve the partial derivation in (17b) where all arguments are symmetrically introduced to the left. The external argument is introduced by little *v*, while the direct object is introduced by  $V_1$ . The latter subsequently raises past the object and adjoins to *v* where it is licensed. On the

other hand,  $\text{Spec}, \text{VP}_2$  hosts an empty category *pro*, which is controlled by the object of  $V_1$  (see Larson 1991, Collins 1997, 2002, da Cruz 1997, and Stewart 1998).

- (17) a. Àsíbá dà lésì qù.  
Asiba cook/prepare/made rice eat  
'Asiba cooked/prepared/made the rice eat [i.e., she ate the rice].'
- b. ....[<sub>VP</sub> Àsíbá [<sub>v</sub> dà [<sub>VP1</sub> lésì<sub>i</sub> [<sub>V1</sub> t<sub>dà</sub> [<sub>VP2</sub> pro<sub>lésì</sub> [<sub>V2</sub> qù ]]]]]]

The VP-shell hypothesis *per se* solves the technical problems of ternary structures. It also offers a technical solution to cases of object mismatch and instances of deletion under identity, without any further stipulation. However, a VP-shell approach to SVCs that relies on obligatory control only to meet the ASH cannot accommodate series such as (6, 9, and 11) where control cannot hold.

With the ASH gone, we now face the question of whether obligatory control holds of series in general, or is used selectively in cases like (17a) where the verbs apparently share the same internal argument. I postpone this question until section 3.5 where I discuss consecutive series. In the remaining of this section, I show that the VP-shell in (17b) must be expanded to include other syntactic positions. Indeed, structure (17b) cannot handle the Akan example (18) where  $V_1$  and  $V_2$  are individually marked by a tense/aspect marker, and  $V_2$  may be followed by a pronoun.

- |      |                                |             |     |           |     |                  |
|------|--------------------------------|-------------|-----|-----------|-----|------------------|
| (18) | Kofi                           | bɔ-ɔ        | Áma | ku-u      | no. | [Akan]           |
|      | Kofi                           | strike-PAST | Ama | kill-PAST | 3SG |                  |
|      | ‘Kofi hit Ama and killed her.’ |             |     |           |     | [Ameka 2004: 14] |

Under the assumption that tense/aspect is a syntactic category (e.g., Tenny 1987, Cinque 1999), I hypothesize that there must be some I-type functional projection (e.g., AspP) between VP<sub>1</sub> and VP<sub>2</sub> that expresses tense/aspect specifications that match those of the inflectional system above V<sub>1</sub> (see also Veenstra 1996, 2000). This idea is compatible with data from Edó. In this language, certain middle field adverbs (e.g., *gié!gié* ‘quickly’), which Stewart (1998) treats as heads, intervene between the object and V<sub>2</sub>.

(19) Òzó dùnmwún èmà [gié!gié] khién. [Edó]

Ozo V<sub>1</sub>-pound yam quickly V<sub>2</sub>-sell

‘Ozo pounded the yam and quickly sold it.’ [Stewart 1998: 34]

Given Cinque’s (1999) analysis of event modifiers as expressions of dedicated functional projections, sometimes corresponding to aspect phrases, this example can be interpreted as showing that there exists an aspect position and an Agreement/Case position between V<sub>1</sub> and V<sub>2</sub>. I therefore conclude that SVCs do not involve stacking structures where two or more finite verbs are embedded under a single vP (17b). Instead, there appear to be some intervening functional projections between the two verbs. As a consequence (17b), which was adopted in previous work, must be amended to capture these facts. As I argue here, an alternative is to propose that V<sub>1</sub> and V<sub>2</sub> belong to two different domains of the clause structure: V<sub>2</sub> merges as the head of the lexical field of which V<sub>1</sub> realizes a functional head within the extended functional field (see section 3).

Summarizing, the discussion shows that the ASH is not a necessary condition on serialization because it is freely violated by series where V<sub>1</sub> and V<sub>2</sub> do not share an argument. I also demonstrate that the space between V<sub>1</sub> and V<sub>2</sub> involves more syntactic

positions than previously assumed because it may involve tense/aspect markers, adverbs, and clitic pronouns. The next question to address now relates to the structure of SVCs proper. In order to do so, I first compare SVCs to object-verb constructions (OVCs).

### 2.3 Against Serializing Exceptionalism

Because SVCs are regarded as typical of some language-types, a great deal of effort has been devoted to finding comparable constructions in non-serializing languages. Some parallels with secondary predicates are often evoked in this respect (Larson 1991).<sup>6</sup> This paper abandons this view and compares SVCs with language-internal structurally similar constructions. In Gbe (and Kwa), the best candidates are OVCs, which I now turn to.

#### 2.3.1 Object Verb Constructions versus Serial Verb Constructions

Example (20) illustrates OVCs in Gungbe (Manfredi 1997, Aboh 2003, 2004a, 2005a).

- (20) a. Àsíbá **jè**      lésì   **qù**    **jí**.  
Asiba reach rice eat PRT  
‘Asiba started eating rice.’
- b. Àsíbá **wá**      lésì   **qù**    **gbé**.  
Asiba come rice eat PRT  
‘Asiba came in order to eat rice.’

- c. Àsíbá **tò** lésì **qù`**.  
 Asiba PROG rice eat.PRT<sup>7</sup>  
 ‘Asiba is eating rice.’ [Progressive]
- d. Àsíbá **gbé** lésì **qù**.  
 Asiba refuse rice eat  
 ‘Asiba refused to eat rice.’

Most SVCs superficially differ from OVCs in lacking an overt sentence-final morpheme (20a-c), which in conjunction with the pre-verbal *Aux*, encodes mood/aspect specifications (e.g., inceptive, progressive, purpose). Yet, that example (20d) lacks a sentence-final particle makes the comparison between OVCs and SVCs worth pursuing.<sup>8</sup>

In addition to word order (i.e.,  $V_1/Aux-O-V_2$ ), OVCs and SVCs display other striking structural similarities and transparency effects, which cannot be accidental. First, both constructions require a single tense and negation. Compare (21) to the SVCs in (10-11).

- (21) Àsíbá má ná nò wá lésì qù gbé.  
 Asiba NEG FUT HAB come rice eat PRT  
 ‘Asiba will not habitually come in order to eat rice.’

Second, both SVCs and OVCs allow for wh-extraction of all arguments. Compare the following OVCs to the SVCs examples under (11).

- (22) a. Kòfì<sub>i</sub> wè Àsíbá yì xó qù ná ec<sub>i</sub> gbé.  
 Kofi FOC Asiba go word say PREP PRT  
 ‘Asiba left in order to talk to KOFI.’



- b. Ménù<sub>i</sub> wè Àsíbá yì xó q̀ò ná ec<sub>i</sub> gbé?  
 Kofi FOC Asiba go word say PREP PRT  
 ‘Who did Asiba go to talk to?’

Third, just as certain Kwa languages exhibit an aspect marker associated with V<sub>2</sub> in SVCs (recall the Akan sentence (18)), Gungbe OVCs allow the prospective aspect *ná* to intervene between the object and the lexical verb.

- (23) Àsíbá wá lési **ná** q̀ù gbé.  
 Asiba come rice PROSP eat PRT  
 ‘Asiba came in order to eat rice [and she is about to do so].’

Summarizing, OVCs and SVCs display structural similarities. Both constructions involve an auxiliary, an aspect verb, or a verb-like element that delimits a functional layer inside which the object must front to the left of the lexical verb. This functional layer is embedded in a monoclausal structure that requires single expression of tense and negation, and exhibits transparency effects in allowing free extraction of its arguments. Taking these facts to be the core properties of OVCs and SVCs, I propose that these constructions form a natural class different from coordinate structures. I now turn to the possible extension of the analysis of OVCs to SVCs.

### 2.3.2 Towards a Solution

An obvious fact from the OVC example (23) is that the aspectual unaccusative verb *wá* ‘come’ has no accusative case to assign to its right. In addition, Jaeggli & Hyams (1993:

319ff) showed on the basis of English aspectual *come* and *go*, that such aspectual verbs only have selectional requirements on the Agent. The question therefore arises whether the following lexical verb  $\theta$ -marks and case-licenses the left adjacent DP object. Put simply: Is the intervening DP object in a case- and  $\theta$ -position? In the context of SVCs, we may inquire whether the DP object between  $V_1$  and  $V_2$  is  $\theta$ -marked and case-licensed by  $V_1$  and  $V_2$ , as one would expect under the ASH (Baker 1989). Let us first consider OVCs, hoping to extend our findings to SVCs.

Given sentence (23), and assuming that Gbe languages are underlyingly SVO, it is in principle possible to claim that the object has inverted due to case reasons. However, Aboh (2004a: chapters 5 and 6) discusses VO versus OV alternation in Gbe and shows that the preverbal position is not a case position. I will not review all the arguments presented there. Instead, I only limit myself to some relevant points for this discussion.

1. The inverted object is not in a  $\theta$ -position left adjacent to the verb, but is left adjacent to the prospective aspect marker *ná* (23). This marker also occurs with unergative verbs where there is no accusative case to assign (24). Therefore prospective *ná* does not case-license or  $\theta$ -mark the element to its left.

(24) Xè ló tò **ná** zrón`.

bird DET PROG PROSP fly.PRT

‘The bird is just about to fly.’

2. Weak (or clitic) object pronouns—which show case morphology in Gungbe—cannot precede the prospective aspect marker, but must follow the verb (25). This can be interpreted as evidence that case is determined to the right of the lexical verb (i.e., within

vP). Accordingly, verb object inversion in OVC must be triggered by some other principle of the grammar than case checking.

- (25) a. Àsíbá tò ná sà è ná mì`.  
 Asiba PROG PROSP sell 3SG PREP me.PRT  
 ‘Asiba is just about to sell it for me.’
- b. \*Àsíbá tò è ná sà ná mì`.  
 Asiba PROG 3SG PROSP sell PREP me.PRT

3. The preverbal object position involves heterogeneous elements which must invert in the absence of any argument. Such elements involve certain reduplicated adverbs (26), OVV gerunds (27), or a goal argument, as in double object constructions where the Theme is wh-extracted (28).

- (26) a. Àsíbá tò [sìn] nù dèdè.  
 Asiba PROG water drink slowly.PRT  
 ‘Asiba drinking water slowly.’
- b. Àsíbá tò [dèdè] zòn`.  
 Asiba PROG slowly walk.PRT  
 ‘Asiba is walking slowly.’
- (27) Àsíbá tò [mótò kùnkùn] ná kplòn`.  
 Asiba PROG car drive.drive. PROSP learn.PRT  
 ‘Asiba is just about to learn to drive a car.’

- (28) a. À tò hàn kplón **Kòfí**. [Theme > V > Goal]  
 2SG PROG song teach Kofi.PRT  
 ‘Asiba is teaching Kofi a song.’
- b. Été wè à tò **Kòfí** kplón`. [Goal > V....]  
 wh. FOC 2SG PROG Kofi teach.PRT  
 ‘What is Asiba teaching Kofi?’

It appears from the data above that verb object inversion is not triggered by case motivations. All in all, there seems to be a constraint in Gungbe OVCs that a position left adjacent to the prospective aspect marker *ná* must be filled in overt syntax by DP objects as well as other maximal categories (e.g., adverbs, gerund, which are not case-marked or theta-marked). In addition, object clitics must occur in a right adjacent position to the verb, itself following the prospective marker. I conclude from this that both DP objects and clitic pronouns first merge in a position to the right of the verb—where they are  $\theta$ -marked and case-licensed—but DP objects subsequently raise to the preverbal position related to the prospective aspect marker. Under the view that this marker heads its own projection (AspP), I propose that Asp, sometimes encoded by *ná*, has an EPP feature that must be checked before spell out (Aboh 2004a: chapter 6). Put another way, the inverted object moves to Spec,AspP to check the EPP feature under Asp. That various elements can target this position (26-28) suggests that it is indeed an EPP position independent of case. The following facts on verb reduplication underscore this hypothesis.

We have seen that OVCs exhibit inversion of an argument or an adjunct to Spec, AspP. When inversion is impossible, the verb reduplicates. This happens when:

(i) The verb is intransitive: compare (29a) to its progressive equivalent (29b).

- (29) a. Jíkù           jà.  
rain           fall  
‘It rained.’
- b. Jíkù   tò    jìjà`.  
rain    PROG   fall.fall.PRT  
‘It is raining.’

(ii) The internal argument is a clitic pronoun (30a), or is being wh-extracted (30b).

- (30) a. Sùrù   tò    sìsà    è    ná    mì`.  
Suru   PROG   sell.sell 3SG   PREP   me.PRT  
‘Suru is selling it for/to me.’
- b. Été<sub>i</sub>   wè    Sùrù   tò    sìsà    t<sub>i</sub>    ná    mì`?  
what   FOC   Suru   PROG   sell.sell       PREP   me.PRT  
‘What is Suru selling for/to me?’

Interestingly, however, the prospective aspect marker blocks reduplication in all contexts. Consider the following counterparts of examples (29) and (30):

- (31) a. Jíkù   tò    ná    (\*jì)jà`.  
rain    PROG   PROSP   fall.PRT  
‘It is just about to rain.’

b. Súrù tò ná (\*sì)sà è ná mì`.

S. PROG PROSP sell 3SG PREP me.PRT

‘Suru is just about to sell it for/to me.’

c. Été<sub>i</sub> wè Súrù tò ná (\*sì)sà t<sub>i</sub> ná mì`?

what FOC Suru PROG PROSP sell PREP me.PRT

‘What is Suru just about to sell for/to me?’

That wh-extraction in (30b) triggers reduplication suggests that Spec,AspP, which otherwise hosts the inverted constituent, acts as if it were empty. Recall that reduplication applies only if nothing fronts to this position (29b, 30). Accordingly, reduplication in the context of wh-extraction (30b) indicates that the displaced constituent cannot transit through Spec,AspP on its way to the left periphery (Aboh 2004a: 217). Following Rizzi & Shlonsky (2007), I take this property to relate to the freezing nature of EPP positions in general. I therefore conclude that the extracted constituent cannot check the EPP feature under Asp on its way to the left periphery because Spec,AspP is a freezing position. This conclusion leads to another interesting fact about this position: it never attracts the canonical subject. Consequently, example (32), with an expletive in the canonical subject position and the subject frozen in Spec,AspP, is ruled out.<sup>9</sup>

(32) \*É tò jíkù ná jà`.

rain PROG rain PROSP fall.PRT

‘It is just about to rain.’

If Spec,AspP is an EPP position, that is, a freezing position, and Asp has no case feature to check, we expect example (32) to be correctly ruled out in Gungbe because the subject is frozen in Spec,AspP where it checks the EPP, but receives no case.

With this in mind, and adopting Aboh's (2004a, b, 2005a) analysis of right-edge particles—which force pied-piping of their complement to their specifier—I propose that OVCs exhibit the structure in (33).<sup>10</sup> Aux/V<sub>1</sub> merges under an aspect phrase that dominates the functional sequence introduced by the particle under F. The latter dominates an array of functional projections including an AspP headed by the prospective marker and endowed with an EPP feature. AspP dominates the VP-shell containing the lexical verb.

$$(33) \quad [_{\text{AspP}} \text{Aux/V}_1 [_{\text{FP}} [_{\text{F}} \text{PRT} [_{\text{AspP}} [_{\text{Asp}^\circ} [_{\text{VP}} [_{\text{v-ext}} [_{\text{VP}} [_{\text{v-appl}} [_{\text{VP}} \text{V} ]]]]]]]]]]]]]]]]]]]$$

Though the line of argumentation is the same, the structure in (33) differs from the one proposed in Aboh (2003, 2004a, 2005a) in that it dispenses with VP-internal AgroP responsible for accusative case licensing. Here, I follow Marantz (1993) and Collins (1996) in assuming an extended VP-shell structure where the object merges as complement of V<sub>2</sub>. Furthermore, v-appl introduces the indirect object (or the instrument) and checks the case of the direct object, while v-ext introduces the external argument and checks the case of the indirect object. Given that Spec,AspP is subject to an EPP-requirement, I suggest that Gbe languages meet this requirement thanks to verb object inversion. In what follows, I keep the term verb object inversion even though what fronts is not always the direct object but some nearby constituent (see examples 27 and 28).

Following Aboh (2004a), I propose that, in simple OVCs, the lexical verb merges under  $V_2$  with the direct object merged as its internal argument to form  $VP_2$ , which merges with  $v\text{-appl}$  (responsible for accusative case) to form  $vP$ . The latter merges with  $v\text{-ext}$ , which introduces the external argument to form a higher  $vP$ , which in turn merges with the aspect head  $Asp^\circ$  to form  $AspP$ . Under aspect licensing and the EPP,  $V_2$  raises to  $Asp^\circ$  to check its aspect features (if the latter is not encoded by the prospective aspect marker *ná*). The object raises to  $Spec,AspP$  to check the EPP feature under  $Asp^\circ$ .

Recall that  $Asp^\circ$  has no case feature to check and the external argument cannot transit through  $Spec,AspP$  on its way to  $Spec,TP$  because it is a freezing position. Accordingly,  $Asp^\circ$  cannot attract the external argument, even though the latter is a closer target. Instead, the external argument must move to the canonical subject position to check both case and EPP features under  $T$  (I thus assume that the pure EPP feature under  $Asp^\circ$  should be formally distinguished from Case/Agreement EPP features under  $T$ , see also Collins 2004).  $AspP$ , now containing the fronted object, merges with the particle expressing  $F^\circ$  to form  $FP$ . I further argue that this particle surfaces to the clausal right periphery because it belongs to the class of Gbe functional items that attract the phrase under their scope (here  $AspP$ ) into their specifier position. Finally,  $FP$  merges as the complement of the first verb ( $Aux/V_1$ ) that merges under a higher aspect head. Under this approach, sentence (20b)—repeated as (34a)—has the partial derivation in (34c).<sup>11</sup>

(34) a. Àsíbá **wá** lési **dù** gbé.

Asiba come rice eat PRT

‘Asiba came in order to eat rice.’



- b. **Été wè Àsíbá wá dùdù gbé?**

what FOC Asiba come eat.eat PRT

‘What did Asiba come to eat it.’

- c.  $[_{\text{AspP}} \text{wá}] [_{\text{FP}} [_{\text{F}^\circ} \text{gbé}} [_{\text{AspP}} \text{lésì} [_{\text{Asp}^\circ} \text{dù}} [_{\text{VP}} \text{t}_{\text{Àsibá}} [_{\text{v-ext}} \text{t}_{\text{dù}} [_{\text{VP}} [_{\text{VP}} \text{t}_{\text{dù}} \text{t}_{\text{lésì}} ]]]]]]]]]]$

When the object is extracted (34b), pronominalised or simply missing, I propose that a null expletive is merged in Spec,AspP that has to be licensed. This null expletive, I claim, is licensed under spec-head configuration either by the prospective marker *ná* under Asp, which then blocks reduplication, or else by the verb that has moved to Asp and reduplicates there. Accordingly, this null expletive is licensed by spec-head agreement, which in these morphologically poor languages translates into verb reduplication. The derivation is partially represented in (34d).<sup>12</sup>

- (34) d.  $[_{AspP} \text{wá}]_{FP} [_{F^\circ} \text{gbé}] [_{AspP} \text{Expl} [_{Asp^\circ} \text{qùdù}] [_{VP} \text{t}_{\text{Àsibá}} [_{v\text{-ext}} \text{t}_{\text{qù}}] [_{VP} \text{t}_{\text{qù}} \text{t}_{\text{été}}]]]]]$

I will not further elaborate on derivations (34c-d) and the interested reader is referred to Aboh (2004a: chapter 6, Aboh 2005a) and references cited there for discussion. The relevant conclusion for the present discussion is that the inverted object moves to a derived position that counts as an EPP position. Returning to SVCs, which I regard as an instance of OVC, the question now arises how they can be analyzed under structure (33).

### 3 Back to Verb Series in Gungbe (Kwa)

Before getting into the details of the analysis, we first need to make one crucial observation: SVCs, like the OVC example (20), never exhibit a sentence-final particle. This leaves open the question of whether SVCs also involve the projection FP headed by a null morpheme (which may trigger pied-piping of AspP to Spec,FP), see section 2.3.1. For the sake of the discussion, I tentatively assume that SVCs involve FP even though it is not overtly realized in Gbe. I show in section 4, that certain Kwa (and Khoisan) languages may make use of this position in verbal compounds.

Another question that arises under the unified structure for OVCs and SVCs in (33) is how  $V_1$ , which is comparable to an Aux, apparently case-marks and  $\theta$ -marks the following object in a  $V_1$ -O- $V_2$  sequence. This question remains, even if we abandon the ASH as proposed in section 2. In answering this question, I take the strong position that  $V_1$  has no internal  $\theta$ -role to assign, and does not determine the case-feature of the object to its right. Several facts support this view. I start with instrument and comitative SVCs.

### 3.1 Instrument and Comitative Series

Example (35a) illustrates the so-called instrument series, where the intervening object is interpreted as the instrument of  $V_2$ , though it appears the theme of  $V_1$ . In the comitative example (35b), the indirect object of  $V_2$  is interpreted as the object of  $V_1$ .

- (35) a. Sétù      zé      kpò      ló      xò      Kójó.  
Setu      take stick      DET      hit      Kojo  
‘Setu took the stick hit Kojo [i.e., S. hit Kojo with the stick].’

- b. Sétù kplán Kòjò yì Kútònù.

Setu      accompany      Kojo    go   Cotonou

‘Setu accompanied Kojo to Cotonou [i.e., S. went to Cotonou with Kojo].’

Starting with the structure in (33), I argue that  $V_2$  in (35a) merges with the theme to form  $VP_2$ . The latter merges with *v-appl*, which introduces the instrument in its specifier. The formed *vP* then merges with *v-ext*, the external argument introducer, to form a higher *vP*. This *vP* merges with the aspect to form *AspP*. Under aspect licensing and the EPP,  $V_2$  raises to *Asp*<sup>o</sup> (via *v-appl* and *v-ext*) to check its aspect features, followed by movement of the instrument to *Spec,AspP*. *AspP* then merges with *F*<sup>o</sup>, to form *FP* which merges as the complement of the first verb ( $V_1$ ) itself merged under a higher aspect head. Since *F*<sup>o</sup> has no PF content, in Gungbe SVCs (as is the case in certain OVCs), the interaction between verb-movement and verb object inversion gives rise to the sequence  $V_1-(XP)-V_2$  that is often found in SVCs. (35a) is derived as in (36).

- (36) [<sub>TP</sub> Sétù [<sub>AsP</sub> [<sub>AsP°</sub> zé [<sub>FP</sub> [<sub>AsP</sub> kpò ló [<sub>AsP°</sub> xò [<sub>vP</sub> t<sub>Sétù</sub> [<sub>v-ext</sub> t<sub>xò</sub> [<sub>vP</sub> t<sub>kpò</sub> ló [<sub>v-appl</sub> t<sub>xò</sub>  
[<sub>vP2</sub> t<sub>xò</sub> Kɔ́jọ]]]]]]]]]]]]]]]

This analysis extends *mutadis mutandis* to the comitative series (35b), shown in (37).

- (37) [TP Sétù [AspP [Asp° kplán [FP [AspP Kàjò [Asp° yì [vP tSétù [v-ext t<sub>yì</sub> [vP tKàjò [v-appl t<sub>yì</sub>  
[vP2 t<sub>yì</sub> Kútònù ]]]]]]]]]]]]

Note from this analysis that when the instrument/comitative argument and the direct object are both present, the former being higher and having its case features checked, will always check the EPP feature in Spec,AspP. This analysis also assumes that v-ext

(associated with  $V_2$ ) introduces the subject, but the latter must raise to Spec,TP to check off case/agreement and the EPP features under T (recall from previous discussion that SpecAspP is a pure EPP, i.e., a freezing position, and  $Asp^0$  has no case to assign). In addition, subject movement in (37) assures that the subject DP *Sétù* be understood as the cause of the hitting (i.e., the external argument of *xò* ‘hit’, see also section 3.2.).<sup>13</sup> In Collins’s (1997: 485) terms this reading is obtained through LF-incorporation of  $V_2$  into  $V_1$ . Thus, Baker’s (1989) double-headed VPs are moved to LF, and SVCs are seen as “LF compounds”. The analysis defended in this paper renders LF-incorporation superfluous.

Summarizing, the analysis of instrument and comitative series shows that  $V_1$  and  $V_2$  do not form a constituent (in syntax or at LF). Instead,  $V_1$  heads a projection in the higher functional field, while  $V_2$  merges in the lexical field inside the VP-shell. Taking the discussion one step further, I propose that  $V_1$  is a functional (or light) verb that has no (internal)  $\theta$ -role to assign.<sup>14</sup> As I now show, ‘take’ series support this new analysis.

### 3.2 On Light $V_1$

In the Gungbe bracketed SVC in (38a) and the example in (38b), the canonical subject is interpreted as the external argument of  $V_2$  only.  $V_1$  ‘take’, on the contrary, does not seem to assign any Agent role, nor does it assign Theme to the following object ‘eye’ or ‘joy’, which cannot fulfill such a semantic function. Instead,  $V_1$  encodes the way the event expressed under  $V_2$  has been carried out (Awóyalé 1988). This is so, even though  $V_1$  ‘take’ is used as main predicate in (38c) where it assigns a  $\theta$ -role to its object (see Lefebvre 1991, den Dikken and Sybesma 1998 for the discussion).

- (38) a. Dáwè ló dǒ àdì xòmè ná mì káká, àmón má  
 man DET put anger bell.in for 1SG until, but 1SG.NEG  
 dǒ xó dé. [Ùn zé nùkún kpòn-è] bò wlé àlìò cè.  
 say word one, 1SG take eye look-3SG COORD catch road 1SG-POSS  
 ‘The man really annoyed me, but I didn’t say anything. I looked at him  
 angrily and went my way [i.e., I stared at him with anger].’
- b. Sétù zé àwájìjè yí yé.  
 Setu take joy receive 3PL  
 ‘Setu received them with joy.’
- c. Sétù zé gbó dǒkpó.  
 Setu take goat one  
 ‘Setu took one goat.’

Despite the existence of a lexical verb *take* in Gungbe (38c), the following Akan examples confirm the idea that functional *take* in (38a-b) has no  $\theta$ -role. Indeed, in this language,  $V_1$  *de* (also glossed as ‘take’) can occur in an SVC (39a) even though it cannot license an internal argument on its own (39b), (see Campbell 1989, 1992, 1996).

- (39) a. Kofi de Yaw kɔɔ Kumase. [Akan]  
 Kofi take Yaw go Kumase  
 ‘Kofi took Yaw to Kumase.’
- b. \*Kofi de Yaw.  
 Kofi take Yaw  
 ‘Kofi took Yaw.’

Put together, these examples indicate that  $V_1$  lacks  $\theta$ -roles in these ‘take’ SVCs. This would mean that the instrument to the right of  $V_1$  *take* does not occur in that position for theta/case reasons. This observation is compatible with our previous conclusion about the preverbal object in OVCs and is reinforced by the example (15), repeated here as (40).

- (40) Kòkú    sɔ    [jìví ɔ]<sub>i</sub>    sɛ́n    wòxúxú ɔ    ná    ec<sub>i</sub>    [Fongbe]  
Koku    take    knife DET    cut    bread    DET    with  
‘Koku cut the bread with the knife.’

What this example shows is that the instrument appearing between  $V_1$  and  $V_2$  is actually introduced by the preposition *ná* that has been stranded to the right edge.

### 3.3 Object Movement over Control

In Collins’ (1997) account for SVCs, a sequence like (40) is analyzed in terms of control:  $V_1$  assigns the  $\theta$ -role Theme to the instrument, which controls the empty category *pro* introduced by the preposition (see also Collins 2001, 2002, Da Cruz 1997, Stewart 1998, Baker and Stewart 2002, Veenstra 1996, 2000).

Yet, if  $V_1$  does not assign the  $\theta$ -role Theme in ‘take’ series, as suggested by examples (38) and (39), then it is not clear to me what the formal reason would be to merge the instrument as a Theme of  $V_1$  and have it control the empty category introduced by the preposition. In addition, an analysis of example (40) in terms of control has to face the puzzling fact that this instance of obligatory control does not respect the Minimal Distance Principle often typical of obligatory control (see for instance Hornstein 1999).

Taking this into account and in the absence of compelling evidence in favor to a control analysis for these cases, I opt for a much simpler analysis: the empty category to the right of the preposition is a copy of the inverted object. Put differently, series involve a copy of the inverted object in the extraction site. I argue that this copy is subsequently deleted under *identity*, or because it is non-distinct from the head of chain (Chomsky 1995, Nunes 2004). Under this view, a number of seemingly unrelated facts within Gbe languages fall in place in a more natural way than they would under a control analysis.

With regard to Fongbe, da Cruz (1997) shows that the preposition *ná* in (40) takes this form only when followed by an empty category. Observe in sentence (41) that the benefactive/instrument preposition surfaces as *nú*. *Ná* is excluded in such contexts.

- (41) Kòkú      sà      mǎtò    ɔ      nú/\*ná      Àsíbá.      [Fongbe]  
          Koku      sell      car      DET      to/for      Asiba  
          ‘Koku sold the car to/for Asiba.’

However, only the form *ná* must be used in case of wh-extraction of the Goal (42a). The wh-island effect observed in (42b) suggests that the construction involves movement.

- (42) a. Mě      wè      Kòkú    sà      mǎtò    ɔ      ná/(\*nú).      [Fongbe]  
          who      FOC      Koku    sell      car      DET      to/for  
          ‘To/for whom did Koku sell the car?’  
       b. \*Mě      wè      Àsíbá    kànbyɔ    ɔ̀      hwétènù    wè    Kòkú    sà    mǎtò    ɔ      ná ?  
          who      FOC      Asiba    ask      that    when      FOC    Koku    sell    car    DET    to/for  
          ‘Lit. Who did Asiba ask when Koku sold the car to.’

This description carries over to the following series, where *nú/ná* alternation also occurs in the context of extraction.

- (43) a. Kòkú sò jìvì sò sèn wòxúxú sò ná/\*nú. [Fongbe]  
 Koku take knife DET cut bread DET with  
 ‘Koku cut the bread with the knife.’
- b. Été Kòkú sò sèn wòxúxú sò ná/\*nú?  
 what Koku take cut bread DET with  
 ‘What did Koku cut the bread with?’

If *nú/ná* alternation signals a deleted copy to its right rather than general emptiness, then we have a strong argument for an object movement analysis of SVCs. Indeed, the *nú/ná* alternation is reminiscent of other verb (or preposition) alternations where we know movement has taken place. A case in point is the *qò/qè* or *tò/tè* variation that occurs in Fongbe and Gungbe, respectively. According to Aboh (2004a: 255), the auxiliaries (or verbal elements) *qò* and *tò* typically occur in progressive sentences and be-located constructions (see section 2.3), where the form *tè/qè* is excluded (44).

- (44) a. Àsibá qò/\*qè [mǒtò sò sà wè] [Fongbe]  
 b. Àsibá tò/\*tè [mǒtò ló sà `] [Gungbe]  
 Asiba PROG car DET sell PRT  
 ‘Asiba is selling the car.’

Under focus movement of the complement, however, *qè/tè* must be used, not *qò/tò*.<sup>15</sup>



- (45) a. [mɔ̀tò    ɔ        sà        wɛ̀]ᵢ    Àsíbá    qè/\*qò        tᵢ        [Fongbe]  
       b. [mɔ̀tò    lɔ        sà        ʼ]        Àsíbá    tè/\*tò        tᵢ        [Gungbe]  
           car        DET    sell    PRT    Asiba    PROG  
           ‘Asiba is SELLING THE CAR.’

In example (45), the fronted OV strings represent FP in structure (33). Therefore, the gap to the right of *qè/tè* is comparable to the gap created by VP-fronting and sanctioned by do-support in English (see Chomsky 1995, Aboh 2004a, chapter 7). Since *nú/ná*, *qò/qè*, and *tò/tè* alternation occurs in extraction contexts in Fongbe and Gungbe, I conclude that it serves to license a gap—a deleted copy. In this regard, Aboh (2004a: 256) argues that *tò/tè* (or *qò/qè* in Fongbe) is a functional head whose specifier serves as escape hatch for movement of its complement. The observed alternation is treated as an agreeing form (i.e., *tè*= *tò* + agr; *qè*= *qò* + agr) that reflects movement of the complement through the specifier of *tò* (or *qò*). Unlike the default form therefore, the agreeing form acquires the property to license a deleted copy to its right (see also Shlonsky 1991 for a similar view). Applied to *ná* (40), this means that this preposition displays an agreeing form (i.e., *ná*= *nú* + agr) when its complement has been extracted.

This analysis extends to the particle *yi* in Kpele (Ewegbe), which Collins (1997) regards as a default case assigner required in resultative series (46), but excluded from transitive constructions where the verb assigns accusative case (47).

(46) Me nya dɛvi-ɛ dzo (yi) [Kpele]

1SG chase child-DET leave PRT

‘I chased the child away.’

(47) Kofi fo Yao (\*yi).

Kofi hit Yao PRT

‘Kofi hit Yao.’

An analysis that comes to mind here is that Kpele involves a null oblique case assigner whose presence is signaled by *yi* when movement has taken place. Put differently, we can analyze *yi* as an agreeing preposition (i.e.,  $\emptyset + \text{agr}$ ) that licenses the copy of the moved complement (i.e., these Gbe examples are comparable to Germanic particle constructions involving movement of the object past the oblique case assigner, see Kayne 1984, Hoekstra 1988). This analysis correctly predicts that, similarly to the Fongbe *ná*, the Kpele preposition *yi* cannot precede an in situ object (48). Instead, the element *ku* ‘with’, which determines instrument case, must be used (Collins 1997: 488).

(48) \*Kofi fo Yao yi ati-ɛ. [Kpele]

Kofi hit Yao PRT stick

(49) Kofi fo Yao ku ati-ɛ.

Kofi hit Yao with stick-DET

‘Kofi hit Yao with the stick.’

This analysis sheds a new light on micro-variation in Gbe ‘take’ series repeated here.

- (50) a. Kòkú sɔ jiví ɔ sén wàxúxú ɔ ná. [Fongbe]  
 Koku take knife DET cut bread DET with  
 ‘Koku cut the bread with the knife.’
- b. Kofi tsɔ atin-ɛ fɔ Yao yi. [Kpele]  
 Kofi take stick-DET hit Yao with  
 ‘Kofi hit Yao with the stick.’
- c. Kòfi zé àtín lɔ xò Kòkú --. [Gungbe]  
 Kofi take stick DET hit Koku  
 ‘Kofi hit Koku with the stick.’

As the reader may observe, the Fongbe and Kpele sentences are parallel (50a-b). They involve the agreeing form of the instrument preposition of which Gungbe manifests the null counterpart only (50c). Therefore, series involve a functional head within the extended projection of  $V_2$  which introduces the instrument/manner argument. That Fongbe and Kpele exhibit agreeing prepositions in this context is taken as evidence that the instrument/manner argument has raised to a position between  $V_1$  and  $V_2$ .

This analysis fares better than Collins’ (1997) original account, where the postposition *yi* case-marks the complement (i.e., *pro*) of the resultative series (46), represented in (51). This representation wrongly assigns a special status to the particle *yi* within the Gbe postpositions. These generally derive from nouns, fail to assign case, and cannot be stranded, unlike the particle *yi* (Ameka 2003, Aboh 2004c).

- (51) Me nya ɖevi-ɛ<sub>i</sub> [<sub>VP</sub> dzo [<sub>pro<sub>i</sub></sub> (yi)]]

I conclude from the discussion that the constituent following  $V_1$  in ‘take’ series gets its case checked within the vP-shell (e.g., against v-ext, 36), but raises to a derived EPP position right adjacent to  $V_1$ . Therefore, functional  $V_1$  *take* lacks internal  $\theta$ -role, a property that generalizes to all verbs representing  $V_1$ .  $V_2$ , on the contrary, introduces the internal argument. I now turn to causative and resultative SVCs, which support this view.

### 3.4 Causative Series, Resultative Series, and Subject Mismatch

With the distinction between functional  $V_1$  and lexical  $V_2$  in mind, let us consider causative and resultative series. Here, I show that the proposed analysis accounts for these series, and further suggests that certain causative series allow  $V_1$  to introduce the external argument, as causer. Consider the following examples, where the relevant sequence is in bold, and the following sentences provide the context:

- (52) a. **Kpònòn lé nyàn àjòt́ bíṣ zùngbó mè** bò gbé má xòdó  
 Policeman PL chase thief enter forest in COORD refuse NEG follow  
 è. Acé yé q́ó àvún q̀axó q̀òkpó ní-è dón bò é má  
 3SG in.fact 3PL plant dog big one for-3SG there COORD 3SG NEG  
 nyó-é. Káká àvún ló ná gbó q̀òkpó, tón d́awè tòwè tón  
 know-3SG before dog DET FUT bark one exit guy 2SG-POSS exit  
 bò yé zé-è kéq̀è bò yì zé sú q́ó g̀ànpámè.  
 COORD 3PL take-3SG quietly COORD go take shut PREP prison

‘The policemen chased the thief into the bush, but didn’t follow him. Actually, they had a big dog waiting for him in the bush. As soon as the dog barked, he quickly came out and they quietly caught him and put him in jail.’

- b. **Kpònòn lé nyàn àjòtò bíó zùngbó mè** bò yì jẹ́ kìnìkìnì  
 policeman PL chase thief enter forest in COORD go bump lion  
 jí. Ní à mò wèzùn, mè dẹ́ nyí sò gbòn dé, mè dẹ́  
 on if 2SG see race some INDEF throw gun pass there, some INDEF  
 nyí gbákú gbòn dé. Àjòtò bà! Kéḍékéḍé wè é báí bò  
 throw hat pass there. Thief not! Slowly FOC 3SG make COORD  
 xé àtín jí. À má mó dẹ́ sẹ́ dẹ́ dá àjòtò tò vò!  
 climb tree on 2SG NEG see that spirit that.REL create thief is different

‘The policemen chased the thief into the bush and bumped into a lion. Could you imagine the race that followed? Some threw their gun away, some threw their hat away. But certainly not the thief! He quietly climbed in a tree. Well the creator of thieves is of a different kind!’

In example (52a), the bold series has a causative reading: the policemen chased the thief such that he entered the bush. This example suggests that even though the canonical subject is generally introduced by  $V_2$  because  $V_1$  lacks  $\theta$ -roles, there are series where  $V_1$  introduces the canonical subject (here the policemen).<sup>16</sup> At first sight, one could think that v-ext associated with  $V_2$  also introduces an external argument, such that series of this type would involve two separate subjects, each linked to a verb. Under this analysis, the lower subject (the thief in this example) would move to Spec,AspP due to EPP reasons, while the higher subject would move to the canonical subject position. Given that

Spec,AspP is not a case position, it is not clear how the lower subject is case-licensed under this view. I will therefore not follow this analysis.

There are indeed good reasons to think that the causative series (52a) is akin to the French causative (53a) or more readily to the Hungarian or Japanese examples in (53b-c).

- (53) a. Marie a fait traverser la ville à Pierre.  
 Marie have make cross the city to Pierre  
 ‘Marie made Pierre cross the city.’
- b. Péter elmeséltette Pállal a történetet.  
 Péter pv-tell-CAUSE.PAST.DEF.3SG Pál-WITH the story-ACC  
 ‘Péter made Paul tell the story.’ [Anikó Lipták, personal communication]
- c. Isya-wa kanzya-ni hoorensoo-o tabe-sase-ta.  
 doctor-TOP patient- DAT spinach- ACC eat- CAUSE- PAST  
 ‘The doctor caused the patient to eat spinach.’ [Vinka and Hirota 1995: 179]

As transparently shown by these languages, the causee is a syntactic dative or comitative argument, even though it is understood as the subject of the embedded reduced clause. Morphosyntactic differences aside, these data suggest that the Gbe causative SVCs are reminiscent to the Hungarian and Japanese causatives where the causee has a dative or comitative case, with the exception that in Gbe, the causee raises to Spec,AspP due to the EPP. More precisely, I suggest that in causative series of the type under (52a), the external argument of  $V_2$  is suppressed, and the causee (i.e., the thief) is introduced by v-appl, on a par with instrument/comitative argument, and must move to Spec,AspP due to EPP reasons. The series in (52a) is therefore derived as in (54).

(54) [TP Kpònòń lẹ́ [AspP t<sub>Kpònòń</sub> lẹ́ [Asp° nyàń [FP [AspP àjòtós [Asp° bíś [vP [v-ext t<sub>bíś</sub> [vP t<sub>ájòtós</sub>  
[v-appl t<sub>bíś</sub> [VP2 t<sub>bíś</sub> zùngbó m̀è]]]]]]]]]]]

Evidence supporting this analysis comes from Kpele (Ewegbe) resultative series that allow subject mismatch of the type discussed here. In such a situation, the sentence involves the particle *yi*, which I analyzed in section 3.3 as a preposition. Interestingly, the presence of this particle forces one reading only, namely that in (55a) where only the *cup* enters the room, and the *rock* is understood as the instrument with which *the cup was hit into the room*. In absence of *yi*, however, the series is ambiguous and both readings in (55a) and (55b) are allowed (Collins 1997: 465).

(55) Ekpe fo kɔpo yi xɔ-me yi.

rock hit      cup      go      room-in   P

a. ‘A rock hit a cup into the room.’

b. \*‘A rock hit a cup and then went into the room.’ [Collins 1997: 483]

The (coordinate) reading in (55b) is similar to that of (52b), where the policemen found themselves in the bush as a result of chasing the thief. In terms of Collins (1997), this reading results from a covert coordinate structure as opposed to the reading in (52a) which is an SVC proper. I pointed out in section 2.1.2 that the Gungbe examples discussed here are *bona fide* series. Therefore, I cannot resort to the SVC versus coordinate structure distinction, here. An idea that I would like to explore instead is that the reading in (52b) is not encoded in syntax. Put differently, only the causative meaning results from the syntactic configuration of such series, and whether the canonical subject

is affected or not by the event CAUSE (e.g., that the policemen ended up in the bush as a result of chasing the thief) is left vague. Evidence that this could be the right characterization is that the meaning where the canonical subject is affected by the event is not available in the Gungbe series in bold in (56a), though only this reading is obtained in (56b) where both the car and the pushers got on the hill.<sup>17</sup>

(56) a. É    má    fǎ    b̀̀    **mí    dó    sísé**    **Rè mí**    xé    àtín    ló    jí.

3SG   NEG   easy   COORD 1PL   have push   Remi   climb   tree   DET   on

‘It was not easy for us to push Remi climb the tree.’

‘\*It was not easy for us to push Remi and climb the tree [with him].’

b. É    má    fǎ    b̀̀    **mí    dó    sísé**    **mótò ló**    xé    **kpó    ló    jí.**

3sg   NEG   easy   COORD 1PL   have push   car   DET climb hill   DET   on

‘It was not easy for us to push the car up the hill.’

If only the causative reading derives from the syntactic structure of these series, we can conclude that subject mismatch SVCs are akin to causative structures where the subject or causer is introduced by the CAUSE light verb, here  $V_1$  (see also Lefebvre 1991, Sybesma 1992, 1997, and den Dikken and Sybesma 1998). In other SVCs, however (e.g., instrument or comitative), all arguments are associated to the lexical verb under  $V_2$ .

### 3.5 Consecutive Series

Taking this line of thinking seriously, and following the hypothesis that  $V_1$  is always a functional verb that lacks internal  $\theta$ -roles, let us now consider consecutive series. In this



section, I show that consecutive series come in two forms: consecutive SVCs with two different internal arguments, and consecutive series with a single argument.

### 3.5.1. Consecutive Series with two Internal Arguments

The Gungbe example (5), repeated here as (57a), represents consecutive series with two different internal arguments.

- (57) a. Òjé! Sésínú kùn mótò cè só àdó.  
EXCL. Sesinou drive car 1SG-POSS hit wall  
'Sesinou drove my car hit the wall!'

With the analysis of instrument and resultative series in mind, I propose that consecutive series of this type only look superficially like cases where both  $V_1$  and  $V_2$  have an internal argument. More specifically, I suggest that these consecutive series are akin to causative series and could be understood (or paraphrased) as *Sesinou caused the car to hit the wall*. Under this description, the subject *Sésínú* is introduced as the external argument of  $V_1$ , while the DP *mótò cè* 'my car' is introduced by v-appl similarly to an instrument or a comitative. The DP *àdó* 'wall', on the other hand, merges as the internal argument of  $V_2$ , whose external argument is suppressed. Following previous discussion, the external argument of  $V_1$  moves to Spec,TP due to case/agreement and EPP reasons, while the comitative/instrument *mótò cè* moves to Spec,AspP to check off the EPP feature under Asp. The derivation is represented in (57b).<sup>18</sup>

- (57) b. [TP SÉsínú [AspP t<sub>SÉsínú</sub> [Asp° kùn [FP [AspP mótò cè [Asp° sɔ́ [vP [v-ext [vP t<sub>mótò</sub> [v-appl t<sub>sɔ́</sub> [VP2 t<sub>sɔ́</sub> àdó ]]]]]]]]]]

Under this analysis, functional V<sub>1</sub> *kùn* ‘drive’ is a CAUSE verb that introduces the causer and specifies how the event expressed by V<sub>2</sub> has been carried out (e.g., driving the car rather than pushing it into the wall).<sup>19</sup> While this analysis of V<sub>1</sub> as a functional verb lacking an internal  $\theta$ -role is conceivable on the basis of examples like (57), things look a little bit harder when it comes to consecutive series with one internal argument only.

### 3.5.2. Consecutives with one Internal Argument

Example (3c), repeated here as (58), illustrates consecutive SVCs with one internal argument. In this example, it appears as if V<sub>1</sub> and V<sub>2</sub> share the internal argument because the meaning includes two events, that is, the VPs [vP cook rice] and [vP eat rice] jointly interpreted.

- (58) Àsíbá            qà                            lésì    qù.  
 Asiba            cook/prepare/made    rice    eat  
 ‘Asiba cooked/prepared/made the rice eat [i.e., she ate the rice].’

Under this description, it is at first sight doubtful that V<sub>1</sub> here is a functional verb with no  $\theta$ -roles (i.e., Agent, Theme) to assign to the subject and the object. An apparently easy way out could be to restore the ASH to life, and restrict it to consecutives SVCs of this sort, where obligatory control applies. Consider again (17), repeated as (59).

- (59) ....[vP Àsíbá [v qà [VP1 lésì<sub>i</sub> [V1 t<sub>qà</sub> [VP2 pro<sub>lèsì</sub> [V2 qù ]]]]]]

Some properties of  $V_1$  in such series suggest that things might not be so easy.

### 3.5.2.1. Object Movement over Control: The Epilogue

The control mechanism in (59) guarantees the recoverability of *pro* and allows object sharing under the ASH. In formulating this analysis, Collins (1997: 474,ff) *tentatively* chose for *pro* as the best candidate for the empty category in SVCs because (i) this empty category is assigned case by the particle *yi* in Kpele, and (ii) it occurs in a governed position. Observation (i) eliminates NP-traces, which cannot be assigned case under Chomsky and Lasnik (1993), and (ii) excludes PRO which cannot be governed.

Under the analysis I propose here, and current minimalist approaches, these two observations are not without problems. First, I have shown that the particle *yi* is not a special case assigner that only shows up to assign case to *pro*, contra Collins (1997). Instead, this particle is a null preposition that takes the agreeing form *yi* when its complement has been extracted. This raises the question of the gap in series being created by movement, as I am assuming here, rather than first merge of *pro* (as in Collins 1997). Second, under Hornstein's (1999) analysis of obligatory control as movement from a  $\theta$ -position to another  $\theta$ -position, with PRO being comparable to an NP-trace, the view in (ii) becomes less straightforward. In terms of Hornstein, representation (59) is formally indistinguishable from that in (60) where obligatory control arises as a consequence of movement of the internal argument of  $V_2$  into the  $\theta$ -position of  $V_1$  where it is assigned the  $\theta$ -role Theme. Here, PRO behaves like a locally bound reflexive.

(60) ....[<sub>VP</sub> Àsíbá [<sub>V</sub> qà [<sub>VP1</sub> lésì<sub>i</sub> [<sub>V1</sub> t<sub>qà</sub> [<sub>VP2</sub> PRO<sub>i</sub> [<sub>V2</sub> qù ]]]]]]

Given these competing representations, the crucial question is not whether obligatory control in consecutive series with a single argument derives from the ASH (59) or raising (60), but whether  $V_1$  ever assigns a thematic role to the linearly following object.

One aspect of  $V_1$  that points to its inability to assign internal  $\theta$ -role in SVCs is that not all transitive verbs freely occur as  $V_1$ . A fact, not much discussed in the literature, is that triadic verbs (e.g., *ná* ‘give’) never occur as  $V_1$  in series (61).

- (61) a. \*Kòfi ná kwé<sub>i</sub> xò xwé pro<sub>i</sub>.  
Kofi give money buy house  
‘Kofi gave money buy a house [e.g., he gave money to buy a house].’
- b. \*Kòfi ná wémá<sub>i</sub> mì wà àzón pro<sub>i</sub>.  
Kofi give book 1SG-ACC do work  
‘Kofi gave me a book to work [e.g., he gave me a book to work with].’

The VP-shell analysis in (59), where object control guarantees the ASH, rules in the sentences under (61) contrary to facts. In principle, the shared argument (*kwé* ‘money’) can control the instrument argument of  $V_2$  i.e., *pro*. Observe from the interpretations in brackets that these examples are perfectly grammatical in English.<sup>20</sup>

That there is a general ban on triadic verbs as  $V_1$  suggests a thematic restriction on elements that realize this position. I now review a few examples where it turns out that verbs that have a functional and a lexical usage display certain syntactic and semantic restrictions in their functional usage. This suggests a thematic restriction on  $V_1$ . Let us reconsider example (1a), repeated as (62a), where the lexical verb *bé* ‘collect’ does not encode this meaning when used functionally. Instead, the examples in (62a-b) indicate

that  $V_1$  *bé* does not assign an internal  $\theta$ -role to the object to its right since the intended meaning is that of a modifier of  $VP_2$ : ‘there has been a lot of eating or talking nonsense’.

- (62) a. Àsíbá bé        lésì    qù.  
           Asiba collect    rice    eat  
           ‘Asiba collected rice eat [i.e., Asiba ate a lot of rice].’  
       b. Àsíbá bé        xó        qò.  
           Asiba collect    word    say  
           ‘Asiba collected word say [i.e., Asiba said a lot of nonsense].’

Similarly, the verb *qín* means ‘to look for’ or ‘to search for’ when used lexically. In example (63), however, the intended meaning is that in (63a) not in (63b).

- (63) Àsíbá,        qín    nú    qé    qù    tò    àdòkòn.  
           Asiba        search thing INDEF eat    at    kitchen  
       a. ‘Asiba, get yourself something to eat in the kitchen.’  
       b. \*Asiba, look for something in the kitchen and eat it (in the kitchen).’

If the meaning of *qín* in this example literally corresponds to that of English *get* (or *have*) in their causative usage, then there seems to be no ground in assuming that it shares an object with  $V_2$ , to which it assigns a  $\theta$ -role. Similarly, the verb *kpón* means ‘to look at/for’ when used lexically. But this meaning is not available in its functional usage as  $V_1$ . Therefore, the sequence *kpón xó qò* /look/word/say means *to be careful about (or to watch) what one says* rather than *to look for something to say*. The same observation

holds of the verb *qà*, often translated as ‘cook’ but which also means ‘to prepare, to make/get X ready’ as the following example shows.

(64) Migàn      qà              kpònòn      lé      yì      àhwàn.

Migan      prepare      soldier      PL      go      war

‘Migan prepared the soldiers go to war [i.e., by making some magic].’

If lexical *qà* implies both *prepare* and *cook*, we can hypothesize that series such as (58) are hidden causatives that actually mean ‘to make/get/cause rice (to be) ready to eat’, where only the meaning *prepare* is available.

Now consider the verb *qù*, which in its lexical use in (62a) and (63) means ‘eat’ but when used as  $V_1$  can be followed by various elements, including the DP *tò ló* ‘the country’ in (65), which cannot be said to receive the  $\theta$ -role Theme from  $V_1$ .

(65) Yé      qù      [tò      ló]      vò.

3PL      eat      country      DET      finish

‘They ate the country finish [they ruined the country misappropriating funds].’

What appears from the discussion is that, when used functionally, these verbs are immediately followed by a wide range of constituents which cannot fulfill the semantic function of Theme. Accordingly, these examples are reminiscent to ‘take’ series (38a-b) where it could not be argued that  $V_1$  *take*  $\theta$ -marks the DP-object to its right. I propose to treat verbs like *bé* ‘collect’, *dín* ‘search for/get’, *kpón* ‘look/watch’, *qù* ‘eat’, and *qà* ‘cook/prepare’ as  $V_1$  in ‘take’ series.<sup>21</sup> The unifying property behind all these cases is that the lexical meaning corresponds to situations where the verb selects for a DP internal

argument to which it assigns an internal  $\theta$ -role, while the functional meaning coincides with situations where  $V_1$  has no internal  $\theta$ -role to assign but selects for a complement inside which the element to its right is being licensed.<sup>22</sup> Building on this, I propose that consecutive series with one arguments should be derived as in (66) by movement of the object of  $V_2$  to Spec,AspP, due to the EPP as argued for previously.

(66) [TP Àsíbá [AspP t<sub>Àsíbá</sub> [Asp° dà [FP [AspP lésì [Asp° dù [vP[v-ext t<sub>Àsíbá</sub> [vP[v-appl t<sub>dù</sub> [VP2 t<sub>dù</sub>  
t<sub>lèsì</sub> ]]]]]]]]]]

Based on this new approach to series, we can reasonably conclude that object sharing does not and cannot exist in syntax. Therefore, the search for a serializing parameter designed only to produce double-headed VPs or object sharing VP-shells (e.g., Baker 1989, Collins 1997) is unnecessary and undesirable.<sup>23</sup> The proposed analysis has further implications for the analysis of verbal compounds (VCs) which I now turn to.

#### 4. Verbal Compounds in Kwa and Khoisan

With the discussion on V<sub>1</sub>-(XP)-V<sub>2</sub> sequences SVCs in mind, let us now consider the verbal compounds (VCs) in (1b-c), reproduced as (67a-b), where V<sub>1</sub> and V<sub>2</sub> are adjacent.

(67) a. Obi        kwa-da-ra        Eze.  
           Obi        push-fall-RV    Eze  
           ‘Obi pushed Eze down.’        [Igbo, Kwa; Steward 1998: 183]

b. Ma a- q||hu |'o djo ki kx'u na.  
 1sg PROG pour put.in water PRT pot in

‘I am pouring water into the pot.’ [≠Hoan, Khoisan; Collins 2002: 1]

In the following paragraphs, I adopt the traditional view that VCs and SVCs share the same underlying structure (Collins 1997, 2002). I propose that the observed  $V_1$ -XP- $V_2$  versus  $V_1$ - $V_2$ -XP variation derives from movement of  $V_2$  past the intervening object in VCs but not in SVCs. More specifically, I argue, on the basis of previous discussion, that  $V_2$  moves to  $F^\circ$  in languages where the latter must be overtly realized.

Starting with Igbo, Manfredi (1997) shows on independent ground that it has verb object inversion of the type observed in Gungbe OVCs. Keeping the parallels between SVCs and OVCs, I take the existence of verb object inversion in Igbo as an independent motivation for assuming that the process applies to VCs as well. The object must move to Spec,AspP to check the EPP feature under Asp, just as in Gungbe. But unlike Gungbe, the Igbo lexical verb under  $V_2$  must raise to  $Asp^\circ$  and further to  $F^\circ$ , as sketched in (68).

(68) [TP [AspP  $V_1$  [FP [F  $V_2$  [AspP Object [ $Asp^\circ$   $t_{V2}$  [vP [v-ext  $t_{V2}$  [vP [v-appl  $t_{V2}$  [VP2  $t_{V2}$   $t_{object}$  ]]]]]]]]]]

Within the Kwa languages, therefore, the difference between Igbo-type languages, which display  $V_1$ - $V_2$ -XP order and Gungbe-type languages, which exhibit  $V_1$ -XP- $V_2$  order reduces to the presence of  $V_2$ -to- $F^\circ$  movement in the former but not in the latter.

With regard to VCs in ≠Hoan (67b), Collins (2002: 12/13) proposes that they involve multiple verb movements where  $V_1$  and  $V_2$  undergo shortest move past the pure case assigning particle *ki*, and adjoin to the same functional head *v*, as represented in (69).



(69) [<sub>VP</sub> [<sub>V</sub> pour-put.in [<sub>FP</sub> water [<sub>F</sub> ki [<sub>VP1</sub> t<sub>water</sub> [<sub>V1</sub> t<sub>pour</sub> [<sub>VP2</sub> PRO<sub>water</sub> [<sub>V2</sub> t<sub>put</sub> in [<sub>PP</sub> pot  
in]]]]]]]]]]]

Collins' analysis respects the ASH and yields the right surface order, though it is not clear what the status of multiple verb movement is within the theory, and what parameter it relates to (if any). On the other hand, if we abandon the ASH and adopt the analysis proposed here for Kwa, we can easily derive these  $\neq$ Hoan VCs in a similar way to their Igbo equivalents. I therefore propose that  $V_2$  merges with the direct object as its internal argument. The object moves to Spec,AspP to check the EPP feature under  $\text{Asp}^\circ$ . On the other hand  $V_2$  raises to  $\text{Asp}^\circ$ , and subsequently to  $F^\circ$ . Keeping the parallel with Gbe instrument and resultative series, I tentatively assume that the particle *ki* is an agreeing preposition comparable to *ná/yi* (section 3.3) that introduces the complex locative PP (see Aboh forthcoming for discussion of such locative phrases). The derivation is sketched in (70), ignoring irrelevant layers.

(70) [TP [AspP [Asp° V<sub>1</sub> pour [FP [F° V<sub>2</sub> put [AspP water [Asp° t<sub>v2put</sub> [vP [v-ext t<sub>v2put</sub> [VP2 [V  
t<sub>v2put</sub> t<sub>water</sub> [PP ki-pot in]]]]]]]]]]]]]

In terms of this analysis, that  $V_1$  always precedes  $V_2$  in both VCs and SVCs follows naturally from the structure of verb series:  $V_1$  is a functional (or light) verb that merges in the functional field associated with  $V_2$ . No other stipulation needs be made. Unlike in previous approaches, the derivation proposed here, does not further enrich the theory with more complex apparatus such as multiple verb movement to a single head.

Summarizing, this paper argues that the ASH is not a condition on verb series. I propose that SVCs involve a functional verb  $V_1$  that merges within the functional domain

of the lexical verb  $V_2$ . Under this view, the internal argument is always introduced within the vP-shell associated with  $V_2$  where it is licensed. I further argue that cross-linguistic variation in SVCs derives from the interaction between object movement and verb movement that may lead to  $V_1$ -XP- $V_2$  versus  $V_1$ - $V_2$ -XP sequences in Kwa and Khoisan.

Word order aside, the proposed analysis shares a lot with current approaches to restructuring verbs in Romance and Germanic for which it has been proposed that the restructuring verb merges as head of functional projection within the clause (e.g., Wurmbrand 2001, Cinque 2004, Cardinaletti and Shlonsky 2004). If true that SVCs involve similar derivations and represent yet another facet of clause union phenomena, we may expect Romance and Germanic to exhibit SVCs as well. Indeed, the examples in (69), taken from Cardinaletti & Giusti (2001), are very good candidates for Romance and Germanic SVCs, where  $F^0$  is possibly realized by a complementizer preposition.

- (69) a. Vaju     a     pigghiu     u     pani.     [Marsalese]  
         go-1SG   to     fetch-1SG   the   bread  
         ‘I go to fetch bread.’  
      b. I go (and) buy bread.     [American English]

Under Cardinaletti and Giusti (2001) the motion verbs in these sentences directly merge in the functional layer of a monoclaus. This conclusion is compatible with Jaeggli and Hyams’ (1993) treatment of English motion verbs (e.g., come, go) as expressions of an aspect phrase within the inflectional domain. There is an obvious convergence between these views and the analysis proposed here for SVCs. I will not discuss these facts any further, but the matter looks pertinent enough to merit exploration.

## 5. Concluding Remarks

This paper proposes a unified analysis for verb series and verbal compounds in Kwa, and Khoisan. It argues that, in  $V_1$ -XP- $V_2$  and  $V_1$ - $V_2$ -XP series,  $V_1$  merges in the functional domain of the lexical verb ( $V_2$ ) that introduces the (internal) argument and is embedded under an aspect phrase whose head is endowed with an EPP feature. It is shown that surface word order variations in Kwa (and Khoisan) reduce to the interaction between EPP-licensing that triggers  $V_2$  object inversion, sometimes followed by subsequent movement of  $V_2$  past the object. The proposed analysis in terms of functional versus lexical verb implies that, if anything, the serializing parameter has to do with the lexicon rather than with core syntax. In a sense, the Kwa/Khoisan languages are more serializing than, say Romance/Germanic, because they allow more functional elements of the type  $V_1$  than the Romance/Germanic languages do.

In most of serializing languages discussed here, the functional and lexical verbs have the same morphological form. This creates the illusion that SVCs involve lexical verbs that must discharge their respective theta roles. Yet, the proposed necessary distinction between functional (verbal) elements and their lexical cognates bear on the fact that many purely functional items in Gbe (e.g., complementizer, mood marker, aspect marker, preposition) derive from verbs. The following example, even though a bit unnatural, perfectly illustrates this point. The derived element is in *italic* and the source in **boldface**. Also notice that *na* can be understood as both a preposition and the verb give.

(71) Ûn ɖ̀ na-è ɖ̀ Súrù ná wá wá nɔ̀ nɔ̀ fí tò hwèmè.

1sg tell PREP/give-3SG COMP Suru FUT EVENT come HAB stay here at noon

‘I told him that Suru will eventually come to stay here frequently at noon.’

In face of (71), the relevant question remains what properties of the lexicon in Gungbe (and Kwa) allow this development. I hope to come back to this in future work.

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<sup>1</sup> All examples are from Gungbe, unless otherwise specified. The ungrammatical English translations are meant to give the reader a flavor of the intended meaning. Data from the literature are cited as in the sources.

<sup>2</sup> This view recalls Cinque's (2004) recent proposal for restructuring verbs in Romance and Germanic. For the view that restructuring can also take place between two lexical verbs, see Wurmbrand (2001), Cardinaletti and Shlonsky (2004).

<sup>3</sup> For more than two verbs, see Tossa (1993), da Cruz (1993, 1995), Ameka (2004 2005).

<sup>4</sup> Example (i) shows that series can also involve inherent complement verbs (ICVs). In their citation forms, these verbs require an internal argument. I will not discuss these examples here because this requires a proper syntactic analysis of ICVs that will lead us too far afield (Manfredi 1991, Agbedor 1994, Essegbey 1999). What matters for this discussion is that if the ICV in (i) takes an (incorporated) argument on its own, there can be no argument sharing with V<sub>2</sub>, contra Baker (1989).

- (i) Yòkpó lé yì **dó-wèzùn** **gbòn** àxìmè  
 child PL go plant-race pass market  
 ‘The children went running through the market.’

<sup>5</sup> Gungbe differs from English where future tense or negation may scope over the second conjunct as in “*Everybody will jump or dance*” versus “*Everybody will dance or will jump*”.

<sup>6</sup> Such parallels wrongly suggest that serializing languages lack non-verbal secondary predicates. Yet, Gbe languages involve adjective secondary predicate (Ameka 2005).

- (i) Yé qù làn ló mǔ [Gungbe]  
 3 PL eat meat DET raw  
 ‘They ate the meat raw.’

<sup>7</sup> The sentence-final floating tone [ˈ] glossed as PRT derives from sentence-final particle typical of progressive aspect in Gbe (Aboh 2004a).

<sup>8</sup> In what follows, I use a purpose sentence for expository reasons, but the reader should keep examples such as (20d) in mind.

<sup>9</sup> Under Rizzi and Shlonsky (2007) a freezing position is a criterial position that terminates the chain. I do not endorse this position here though it is compatible with the

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proposed analysis. In Aboh's (2004a, chapter 6) treatment of OVCs, I suggested that the OV sequence, here FP, is a lower predicate of which the element in Spec,AspP behaves like a subject. This of course is compatible with Rizzi and Shlonsky's subject criterion.

<sup>10</sup> These may include the focus marker as illustrated in (i) (Aboh (2004a chapter 8, b)).

(i) [Sésínú ná kùn mótò cè sɔ àtín] wè!

Sesinou FUT drive car 1SG-POSS hit tree FOC

'SESINOUE WILL DRIVE MY CAR HIT A TREE!'

<sup>11</sup> Under (Aboh 2004a), the complement of Aux/V is a small clause involving a CP layer (here FP) and an IP layer (AspP). This formulation does not bear in any significant way on the conclusions reached in this paper.

<sup>12</sup> A reviewer points out that, in principle, vP/VP can move to Spec,AspP to satisfy the EPP. Though possible, this option seems unavailable in Gungbe OVCs, for reasons still unclear to me. An interesting hypothesis, also suggested by this reviewer, could be that SVCs never show verb reduplication because, unlike OVCs, they allow this option when object inversion fails. I hope to return to this in future work.

<sup>13</sup> The absence of intervention between the instrument/comitative in Spec,AspP and the subject raising to Spec,TP reminds us of discussions on dative intervention effects or on the 'experiencer paradox' in Germanic and Romance (e.g., Boeckx 1999, Cormack 2006).

<sup>14</sup> See also Grimshaw and Mester (1988), Hagemeijer (2001).

<sup>15</sup> The same alternation occurs in *be*-located constructions involving *qò/tò* (Aboh 2004a: 252 ff).

<sup>16</sup> Under Stewart (1998) and Baker and Stewart (2002), a Voice head embedding V<sub>1</sub> and V<sub>2</sub> assigns Agent-role. See also Roberts (1997) and Wurmbrand (2001) for a similar view on restructuring, contra Cinque (2004).

<sup>17</sup> I'm grateful to Marcel den Dikken, Michel DeGraff and two anonymous *LI* reviewers for their comments and suggestions on this issue.

<sup>18</sup> Alternatively, (57a) may be treated on a par with instrument/comitative series, as in (i), because it can also be paraphrased as *Sesinou hit the wall with my car*. Here, v-ext introduces the external argument *Sésínú*, v-appl introduces *mótò cè* 'my car' as an instrument, *àdó* 'wall' merges as the internal argument of V<sub>2</sub>. Choosing between (i) and (57b) requires more study and I leave the matter for future work.

- (i) [TP Sésínú [AspP [Asp° kùn [FP [AspP móto cè [Asp° só [vP [v-ext tSésínú [vP tmótò [v-appl t<sub>só</sub> [VP2 t<sub>só</sub> àdó ]]]]]]]]]

<sup>19</sup> English *drive* is also causative: "*The police drove them out by playing loud music*".

<sup>20</sup> Baker (1989: 522) excludes (61b) by assuming that V<sub>1</sub> must project to the V' level to take an unshared argument. It can do so only if it follows rather than precedes the argument. This restriction cannot be formulated in a framework that assumes binary branching.

<sup>21</sup> Many verbs show meaning alternation between V<sub>1</sub> and V<sub>2</sub>. *Hèn* means 'to hold' but *hèn X gblé* 'spoil' is 'cause X to spoil', while *hèn X wá* 'cause X to come, i.e., bring'.

<sup>22</sup> This description extends to verbs like *consider* when they select for an argument or a small clause: *I consider this matter seriously* vs. *I consider this matter too serious*.

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<sup>23</sup> The serializing parameter leads one to expect the ASH to apply also across the categories preposition, noun, and adjective. To the best of my knowledge, such series have never been attested (Larson 1991).