## Clause structure and verb series

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# Clause Structure and Verb Series

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This article 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 AspP whose head is endowed with an EPP feature. Surface word order variations in Kwa (and Khoisan) result from the EPP licensing that triggers $V_2$-object inversion, sometimes followed by $V_2$ movement past the shifted 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. Àsíbá bέ    lésì ɖù.                                                      (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 ǀ'o   djo   ki   kx'u na.                           (⧧Hoan)
      1SG PROG pour put.in water PRT pot   in
      'I am pouring water into the pot.'

Studies of serialization in Kwa and Khoisan languages suggest that examples (1a–c) are bona fide serial verb constructions (SVCs) because they obey the Argument-Sharing Hypothesis (ASH).[1] 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, Baker and Stewart 2002, Carstens 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

[1] 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.

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.

In this article, I take a different approach to serialization. I abandon the ASH and propose that in the series in (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)  $[_{CP} \ldots [_{TP} \ldots V_1 \ldots [_{VP} \ldots [V_2 \ldots]]]]$

In (2), functional $V_1$ has no internal θ-role, which is why it can merge within the functional extension of the lexical verb $V_2$.[2] This view departs radically from the well-established generative tradition on SVCs that regards the ASH as a necessary condition on serialization. In section 2, I present empirical evidence for the analysis in (2) and show 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, in section 3 I propose an analysis for Kwa series that takes into account Aux-O-V structures, which display structural similarities with series. I propose 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 that it is characterized, among other things, by verb-object inversion (Aboh 2003). I show 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, in section 4 I propose that the $V_1$-$V_2$-O sequences in (1b–c) result from subsequent movement of $V_2$ past the object. In section 5, I offer concluding remarks.

## 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 (a) separately combine with distinct (internal) arguments, (b) cooccur with I(nfl)-related markers (e.g., aspect), and (c) be separated by intervening headlike 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.

### 2.1 Abandoning the Argument-Sharing Hypothesis

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

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

(3) a. Sétù zé   kpò lɔ́   xò Kɔ́jó.
       Setu take stick DET hit Kojo
       'Setu took the stick hit Kojo (i.e., he hit him with the stick).'
    b. Sétù nyàn  Kɔ̀jó yì  Kútɔ̀nù.
       Setu chase Kojo go Cotonou
       'Setu chased Kojo go to Cotonou (i.e., he chased him to Cotonou).'
    c. Àsíbá ɖà             lésì ɖù.
       Asiba cook/prepare/make 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) illustrates 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.[3] 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 θ-mark the internal argument. (3c) is therefore derived as in (5).

(5)  $[_{S}$ Àsíbá $[_{I}[_{VP}[_{V'}$ [ɖà$_{V_1}$ lésì ɖù$_{V_2}$]]]]]

Assuming the Projection Principle, Baker (1989:527) concludes that because ''the object of V1 is an immediate constituent of a V′ projection of V2, V2 *must* θ-mark it, just as any other verb must θ-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 Universal Grammar includes a ''serializing parameter'' that sets serializing languages (e.g., Gungbe) apart from nonserializing ones (e.g., English). The following discussion shows that these conclusions cannot be maintained for all SVCs and that the ASH must therefore be rejected.

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[3] For more than two verbs, see da Cruz 1993, 1995, Tossa 1993, Ameka 2004, 2005.

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 Baker's sense:[4]

(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 my car into the wall)!'

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

*2.1.1 Coordinate Structures in Gungbe*   Gungbe sentence coordination involves two types of conjunction: *bɔ̀* coordinates two IPs involving two distinct subjects (7a) or coreferential pronouns, while *bò* coordinates two IPs where the subject of the first IP necessarily controls that of the second (7b).

(7) a. Sésínú ɖà   lésì *bɔ̀*   Súrù ɖù nǔsɔ́nú.
       Sesinou cook rice COORD Suru eat soup
       'Sesinou cooked rice and Suru ate soup.'
    b. Sésínú$_i$ ɖà   lésì *bò*   pro$_i$ ɖù nǔsɔ́nú.
       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 ɖù lésì     *(bò)   ná yì xɔ̀mè.                    (Gungbe)
    b. Kòfí ná ɖù mɔ́lìnkún *(bò)   ná yì xɔ̀mè.                  (Fongbe)
    c. Kòfí á  ɖù mɔ́lú    . . .  á  yì xɔ̀mè.                   (Ewegbe)
       Kofi FUT eat rice      (COORD) FUT go room
       'Kofi will eat rice and will go into the room.'

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[4] Example (i) shows that series can also involve inherent complement verbs (ICVs).

(i) Yɔ̀kpɔ́ lɛ́ yì *dó-wèzùn gbɔ̀n* àxìmè.
    child   PL go plant-race pass  market
    'The children went running through the market.'

In their citation form, these verbs require an internal argument. I will not discuss these examples here because such discussion requires a proper syntactic analysis of ICVs that would lead us too far afield (Manfredi 1991, Agbedor 1994, Essegbey 1999). What matters here is that if the ICV in (i) takes an (incorporated) argument on its own, there can be no argument sharing with $V_2$, contra Baker (1989).

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 has its own tense marker.[5] The same holds of the examples in (9), where negation and tense markers may occur in either conjunct (or both).

> (9) a. Kòfí *má ná* wá   fí   bò     *ná* ɖú   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* ɖú   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, I(nfl) specifications occur on $V_1$ only and cannot precede $V_2$. The negation *má* and tense marker *ná* precede $V_1$ *kùn* 'drive' in (10a), but they cannot occur with $V_2$ *sɔ́* 'hit', as shown in (10b).

> (10) a. Sésínú! À *má ná* sɔ̌   kùn mótò cè      sɔ́ 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 today!'
>      b. *Sésínú! À *má ná* sɔ̌   kùn mótò cè      *má ná* sɔ́ 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 the verb series in (6) and (10a), though the latter violate the ASH (4a).

Nevertheless, given that covert coordination does exist in Gbe (8c), and in serializing languages generally (Baker 1989), one can imagine that covert coordination in Gungbe is restricted to VP coordination. 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 formation (11b–g).

> (11) a. Sésínú ná kùn mótò cè      sɔ́ àdó!
>         Sesinou FUT drive car   1SG.POSS hit wall
>         'Sesinou will drive my car hit the wall!'
>      b. Sésínú wè ná kùn mótò cè      sɔ́ àdó!
>         Sesinou FOC FUT drive car   1SG.POSS hit wall
>         'SESINOU will drive my car hit the wall!'
>      c. Mótò cè      wè Sésínú ná kùn sɔ́ àdó!
>         car   1SG.POSS FOC Sesinou FUT drive hit wall
>         'Sesinou will drive MY CAR hit the wall!'

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[5] Gungbe differs from English, where future tense or negation may take scope over the second conjunct as in *Everybody will jump or dance* versus *Everybody will jump or will dance*.

    d. Àdó wὲ Sέsínú ná kùn mótò cè      sɔ́!
       wall FOC Sesinou FUT drive car   1SG.POSS hit
       'Sesinou will drive my car hit THE WALL!'

    e. Ménù wὲ ná kùn mótò cè      sɔ́ àdó?
       who  FOC FUT drive car   1SG.POSS hit wall
       'Who will drive my car hit the wall?'

    f. Étέ  wὲ Sέsínú ná kùn sɔ́ àdó?
       what FOC Sesinou FUT drive hit wall
       'What will Sesinou drive hit the wall?'

    g. Étέ  wὲ Sέsínú ná kùn mótò cè      sɔ́?
       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 which location it binds a null pronoun within the IP. In Aboh 2004c:chap. 7, I show 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) *$Étέ_i$ wὲ ùn kànbíɔ́ ɖɔ̀ *hwèténù*$_j$ wὲ Sέsínú ná kùn $t_i$ sɔ́ àdó $t_j$?
    what FOC 1SG ask   that when   FOC Sesinou FUT drive  hit wall
    'What did I ask you when Sesinou will drive hit the wall?'

In Aboh 2004c:chap. 7, I analyze *wh*-questions and focus constructions as involving movement to the specifier of a FocP headed by the focus marker *wὲ*. With this analysis in mind, let us consider (7a), repeated here, in the context of extraction.

 (7) a. Sέsínú ɖà  lésì *bɔ̀*  Súrù ɖù nŭsɔ́nú.
     Sesinou cook rice COORD Suru eat soup
     'Sesinou cooked rice and Suru ate soup.'

Unlike the examples in (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, as in (13c) (Ross 1967):

(13) a. *$Étέ_i$ wὲ Sέsínú ɖà  $t_i$ *bɔ̀*  Súrù ɖù nŭsɔ́nú?
      what FOC Sesinou cook   COORD Suru eat soup
      'What did Sesinou cook and Suru ate soup?'

    b. *$Étέ_i$ wὲ Sέsínú ɖà  lésì *bɔ̀*  Súrù ɖù $t_i$?
      what FOC Sesinou cook rice COORD Suru eat
      'What did Sesinou cook rice and Suru eat?'

    c. $Étέ_i$ wὲ Sέsínú ɖà  $t_i$ *bɔ̀*  Súrù ɖù $t_i$?
      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 coindexed 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 ɖà   lési bɔ̀   Súrù sà-ɛ̀   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 Argument-Sharing Hypothesis*    A final empirical fact that further weakens the ASH as a condition on SVCs comes from instrument series of the type in (3a). According to Baker (1989), in this context $V_2$ is a triadic verb that assigns an instrument (or manner) θ-role to the object of $V_1$. Yet the Fongbe sentence in (15) appears to be a counterexample 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) Kɔ̀kú sɔ́ [jìví ɔ́]$_i$ sɛ́n wɔ̀xúxú ɔ́   ná ec$_i$.                    (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 formation (16), unlike in coordinate structures, we have to conclude that example (15) is a well-formed SVC.

(16) Étɛ́$_i$ wɛ̀ Kɔ̀kú sɔ́   sɛ́n wɔ̀xúxú ɔ́   ná ec$_i$?                    (Fongbe)
     what FOC Koku take cut bread    DET with
     'What did Koku cut the bread with?'

If, as da Cruz (1997) convincingly argues, *ná* θ-marks the instrument/manner argument in these Fongbe examples, then $V_2$ *sɛ́n* 'cut' cannot be a triadic verb that jointly θ-marks the object of $V_1$ *jìví ɔ́* 'the knife'. Accordingly, $V_1$ and $V_2$ do not *share* the same object in a 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 analysis.

*2.2 The VP Shell Analysis of Serial Verb Constructions*

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 here 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, Spec,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, Stewart 1998).

(17) a. Àsíbá ɖà              lésì ɖù.
        Asiba cook/prepare/make rice eat
        'Asiba cooked/prepared/made the rice eat (i.e., she ate the rice).'
    b. . . . [$_{vP}$ Àsíbá [$_v$ ɖà [$_{VP_1}$ lésì$_i$ [$_{V_1}$ t$_{ɖà}$ [$_{VP_2}$ pro$_{lésì}$ [$_{V_2}$ ɖù]]]]]]

The VP shell analysis 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 those in (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 remainder 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) Kofí 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$_1$ and VP$_2$ that expresses tense/aspect specifications that match those of the I-system above V$_1$ (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$_2$.

(19) Òzó dùnmwún èmà [gié!gié] khién.                                            (Edó)
     Ozo V$_1$-pound yam  quickly V$_2$-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 AspPs, this example can be interpreted as showing that there exists an aspect position and an agreement/case position between V$_1$ and V$_2$. I therefore conclude that SVCs do not involve stacking structures where two or more finite verbs are embedded under a single vP, as in (17b). Instead, there appear to be some functional projections intervening between the two verbs. Consequently, (17b), which was adopted in previous work, must be

amended to capture these facts. As I argue here, an alternative is to propose that $V_1$ and $V_2$ belong to two different domains of the clause structure: $V_2$ merges as the head of the lexical field of which $V_1$ 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 $V_1$ and $V_2$ do not share an argument. I have also demonstrated that the space between $V_1$ and $V_2$ involves more syntactic positions than previously assumed because it may involve tense/aspect markers, adverbs, and clitic pronouns. The next question to address relates to the structure of SVCs proper. I begin by comparing SVCs with object-verb constructions.

## 2.3 Against Serializing Exceptionalism

Because SVCs are regarded as typical of some language types, much effort has been devoted to finding comparable constructions in nonserializing languages. Parallels with secondary predicates are often evoked in this respect (Larson 1991).[6] Here, I abandon this view and compare SVCs with structurally similar constructions in the same languages where SVCs are found. In Gbe (and Kwa), the best candidates are object-verb constructions (OVCs).

*2.3.1 Object-Verb Constructions versus Serial Verb Constructions* Examples (20a–d) illustrate OVCs in Gungbe (Manfredi 1997, Aboh 2003, 2004c, 2005).

(20) a. Àsíbá *jè* lésì *ḍù jí*.
Asiba reach rice eat PRT
'Asiba started eating rice.'

b. Àsíbá *wá* lésì *ḍù gbé*.
Asiba come rice eat PRT
'Asiba came in order to eat rice.'

c. Àsíbá *tò* lésì *ḍù* `.
Asiba PROG rice eat.PRT[7]
'Asiba is eating rice.' (progressive)

d. Àsíbá *gbé* lésì *ḍù*.
Asiba refuse rice eat
'Asiba refused to eat rice.'

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[6] Such parallels wrongly suggest that serializing languages lack nonverbal secondary predicates. Yet Gbe languages involve adjective secondary predicates (Ameka 2005).

(i) Yé ḍù làn lɔ̃ mǔ.
3PL eat meat DET raw
'They ate the meat raw.'

[7] The sentence-final floating tone (') glossed as PRT derives from a sentence-final particle typical of progressive aspect in Gbe (Aboh 2004c).

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

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) with the SVCs in (10)–(11).

(21) Àsíbá má ná nɔ̀ wá  lésì ɖù 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 *wh*-extraction of all arguments. Compare the following OVCs with the SVCs in (11):

(22) a. Kòfí$_i$ wɛ̀ Àsíbá yì xó   ɖɔ̀ ná ec$_i$ gbé.
        Kofi FOC Asiba go word say PREP    PRT
        'Asiba left in order to talk to KOFI.'
     b. Ménù$_i$ wɛ̀ Àsíbá yì xó    ɖɔ̀ ná ec$_i$ gbé?
        who  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 $V_2$ in SVCs (recall the Akan sentence (18)), so Gungbe OVCs allow the prospective aspect marker *ná* to intervene between the object and the lexical verb.

(23) Àsíbá wá   lésì *ná*    ɖù 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 aspectual verb, or a verblike 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 monoclause that requires single expression of tense and negation and that 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 explore the possibility of extending the analysis of OVCs to SVCs.

*2.3.2 Toward a Solution*   An obvious fact about the OVC example (23) is that the aspectual unaccusative verb *wá* 'come' has no accusative case to assign to its right. In addition, Jaeggli and Hyams (1993:319ff.) have shown on the basis of English aspectual *come* and *go* that such

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

aspectual verbs only have selectional requirements on the agent. The question therefore arises whether the following lexical verb θ-marks and case-licenses the left-adjacent DP object. Put simply: is the intervening DP object in a case and θ-position? In the context of SVCs, we may inquire whether the DP object between $V_1$ and $V_2$ is θ-marked and case-licensed by $V_1$ and $V_2$, as one would expect under the ASH. 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 for case reasons. However, in discussing VO versus OV alternation in Gbe, I have shown elsewhere (Aboh 2004c:chaps. 5 and 6) that the preverbal position is not a case position. I will not review all the arguments presented there. Instead, I will mention only some points relevant for this discussion.

1. The inverted object is not in a θ-position left-adjacent to the verb; instead, it 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 θ-mark the element to its left.

(24) Xὲ lɔ́ tò  *ná*   zrɔ́n`.
     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 OVCs must be triggered by some other principle of the grammar than case checking.

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

3. The preverbal object position can be occupied by various elements that must invert in the absence of any argument. Some of these elements are certain reduplicated adverbs (26), OVV gerunds (27), and a goal argument, as in double object constructions where the theme is *wh*-extracted (28).

(26) a. Àsíbá tò   [sìn] nù  dὲdὲ`.
        Asiba PROG  water drink slowly.PRT
        'Asiba is drinking water slowly.'
     b. Àsíbá tò   [dὲdὲ] zɔ̀n`.
        Asiba PROG  slowly walk.PRT
        'Asiba is walking slowly.'

(27) Àsíbá tò   [mótò kùnkùn]   ná   kplɔ̀n`.
     Asiba PROG car   drive.drive PROSP learn.PRT
     'Asiba is just about to learn to drive a car.'

(28) a. À   tò   hàn kplɔ́n *Kòfí* `.                              (theme > V > goal)
        2SG PROG song teach Kofi.PRT
        'You are teaching Kofi a song.'

     b. Été wɛ̀ à   tò   *Kòfí* kplɔ́n`?                            (goal > V . . .)
        what FOC 2SG PROG Kofi teach.PRT
        'What are you teaching Kofi?'

It appears from the above data that verb-object inversion is not triggered by case considerations. 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 a DP object or by another maximal category (e.g., an adverb or a gerund, elements that are not case-marked or θ-marked). In addition, object clitics must occur right-adjacent 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 θ-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 realized as *ná*, has an EPP feature that must be checked before Spell-Out (Aboh 2004c:chap. 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, as shown in (26)–(28), suggests that Spec,AspP is indeed an EPP position independent of case. The following facts about verb reduplication bear out 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 in two situations. (a) The verb is intransitive; compare (29a) with its progressive equivalent (29b).

(29) a. Jíkù jà.
        rain fall
        'It rained.'

     b. Jíkù tò   jìjà`.
        rain PROG fall.fall.PRT
        'It is raining.'

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

(30) a. Súrù tò   sìsà   ɛ̀   ná   mì`.
        Suru PROG sell.sell 3SG PREP me.PRT
        'Suru is selling it for/to me.'

     b. Été$_i$ wɛ̀ Súrù tò   sìsà   t$_i$ 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 the examples in (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`.
        Suru PROG PROSP  sell 3SG PREP me.PRT
        'Suru is just about to sell it for/to me.'
    c. Étɛ́$_i$ wὲ Súrù tò   ná   (*sì)sà t$_i$ 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 Spec,AspP ((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 2004c:217). Following Rizzi and 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.[9]

(32) *É    tò    jíkù ná   jà`.
       EXPL PROG rain PROSP fall.PRT
       'It is just about to rain.'

If Spec,AspP is an EPP position (i.e., a freezing position) and Asp has no case feature to check, we expect (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 the analysis of right-edge particles in Aboh 2004b,c, 2005—which force pied-piping of their complement to their specifier—I propose that OVCs exhibit the structure in (33).[10] Aux/V$_1$ merges under an AspP that dominates the functional sequence introduced by the particle under F. The latter dominates an array of functional projections

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[9] Under Rizzi and Shlonsky's (2007) proposal, a freezing position is a criterial position that terminates the chain. I do not endorse this view here, though it is compatible with the proposed analysis. In my treatment of OVCs in Aboh 2004c:chap. 6, 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.

[10] These may include the focus marker, as illustrated in (i) (Aboh 2004b, 2004c:chap. 8).

(i) [Sέsínú ná kùn mótò cè      só àtín] *wὲ*!
     Sesinou FUT drive car  1SG.POSS hit tree FOC
     'SESINOU WILL DRIVE MY CAR HIT A TREE!'

including an AspP headed by the prospective marker and endowed with an EPP feature. AspP dominates the VP shell containing the lexical verb.

(33) $[_{AspP}$ Aux/V$_1$ $[_{FP}[_F$ PRT $[_{AspP}[_{Asp}[_{vP}[_{v_{ext}}[_{vP}[_{v_{appl}}[_{VP}$ V$]]]]]]]]]]$

Though the line of argumentation is the same, the structure in (33) differs from the one proposed in Aboh 2003, 2004c, 2005 in that it dispenses with a VP-internal Agr$_O$P 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$_2$. 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 sometimes a nearby constituent rather than the direct object (see (27) and (28)).

Following Aboh 2004c, I propose that in simple OVCs, the lexical verb merges under V$_2$, and the direct object merges as its internal argument to form VP$_2$. VP$_2$ merges with v$_{appl}$ (responsible for checking accusative case) to form vP. The latter merges with v$_{ext}$, which introduces the external argument to form a higher vP, which in turn merges with the aspect head Asp to form AspP. V$_2$ raises to Asp to check its aspect features (if the latter is not realized as the prospective aspect marker *ná*). The object raises to Spec,AspP to check the EPP feature under Asp.

Recall that Asp has no case feature to check and that the external argument cannot transit through Spec,AspP on its way to Spec,TP because Spec,AspP is a freezing position. Accordingly, Asp 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 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 to form FP. I further argue that this particle surfaces at the right periphery of the clause 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$_1$), which itself merges under a higher Asp. Under this approach, sentence (20b)—repeated as (34a)—has the partial derivation in (34b).[11]

(34) a. Àsíbá *wá*   lésì *ɖù* gbé.
       Asiba come rice eat PRT
       'Asiba came in order to eat rice.'
    b. $[_{AspP}$ wá $[_{FP}$ $[_F$ gbé $[_{AspP}$ lésì $[_{Asp}$ ɖù $[_{vP}$ t$_{Àsíbá}$ $[_{v_{ext}}$ t$_{ɖù}$ $[_{vP}[_{VP}$ t$_{ɖù}$ t$_{lésì}]]]]]]]]]]]$

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[11] Under proposals made in Aboh 2004c, 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 article.

When the object is extracted as in (35a), pronominalized, 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 a specifier-head configuration either by the prospective marker *ná* under Asp, which then blocks reduplication, or by the verb that has moved to Asp and reduplicates there. Accordingly, this null expletive is licensed by specifier-head agreement, which in these morphologically poor languages translates into verb reduplication. The derivation is partially represented in (35b).[12]

(35) a. Été wè Àsíbá *wá* *ḍùḍù* gbé?
    what FOC Asiba come eat.eat PRT
    'What did Asiba come to eat it?'

   b. [AspP wá [FP [F gbé [AspP expl [Asp ḍùḍù [vP tÀsíbá [vext tḍù [vP[VP tḍù tété ]]]]]]]]]

I will not elaborate further on derivations (34b) and (35b); for discussion, see Aboh 2004c: chap. 6, 2005, and references cited there. 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 Verb Series in Gungbe (Kwa)

Before getting into the details of analyzing SVCs in Gungbe under structure (33), we 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. In section 4, I show 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 θ-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 θ-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.

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[12] 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 the reviewer, is that SVCs never show verb reduplication because, unlike OVCs, they allow the vP/VP-to-Spec,AspP option when object inversion fails. I hope to return to this hypothesis in future work.

## 3.1 Instrument and Comitative Series

Example (36a) illustrates the so-called instrument series in Gungbe, where the intervening object is interpreted as the instrument of $V_2$, though it appears to be the theme of $V_1$. In the comitative example (36b), the indirect object of $V_2$ is interpreted as the object of $V_1$.

(36) a. Sétù zé   kpò ló   xò Kòjó.
       Setu take stick DET hit Kojo
       'Setu took the stick hit Kojo (i.e., Setu hit Kojo with the stick).'
    b. Sétù kplán       Kòjó yì  Kútònù.
       Setu accompany Kojo go Cotonou
       'Setu accompanied Kojo to Cotonou (i.e., Setu went to Cotonou with Kojo).'

Starting with the structure in (33), I argue that $V_2$ in (36a) merges with the theme to form $VP_2$. The latter merges with $v_{appl}$, which introduces the instrument in its specifier. The 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 (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 to form FP, which merges as the complement of the first verb ($V_1$), itself merged under a higher Asp. Since F 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. (36a) is derived as in (37a). This analysis extends mutatis mutandis to the comitative series (36b), as shown in (37b).

(37) a. $[_{TP}$ Sétù $[_{AspP}[_{Asp}$ zé $[_{FP}[_{AspP}$ kpò ló $[_{Asp}$ xò $[_{vP}$ $t_{Sétù}$ $[_{v_{ext}}$ $t_{xò}$ $[_{vP}$ $t_{kpò ló}$ $[_{v_{appl}}$ $t_{xò}$ $[_{VP_2}$ $t_{xò}$ Kòjó$]]]]]]]]]]]]$

    b. $[_{TP}$ Sétù $[_{AspP}[_{Asp}$ kplán $[_{FP}[_{AspP}$ Kòjó $[_{Asp}$ yì $[_{vP}$ $t_{Sétù}$ $[_{v_{ext}}$ $t_{yì}$ $[_{vP}$ $t_{Kòjó}$ $[_{v_{appl}}$ $t_{yì}$ $[_{VP_2}$ $t_{yì}$ Kútònù$]]]]]]]]]]]]]$

Note from this analysis that when the instrument/comitative argument and the direct object are both present, the former—being higher and having had 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 that the latter must raise to Spec,TP to check case/agreement and EPP features under T (recall from the previous discussion that Spec,AspP is a pure EPP—that is, freezing—position, and Asp has no case to assign). In addition, subject movement in (37a) ensures that the subject DP *Sétù* will be understood as the cause of the hitting (i.e., the external argument of *xò* 'hit'; see also section 3.2).[13] 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,

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[13] The absence of an intervention effect between the instrument/comitative in Spec,AspP and the subject raising to Spec,TP is reminiscent of discussions on dative intervention effects or on the ''experiencer paradox'' in Germanic and Romance (e.g., Boeckx 1999, Cormack 2006).

and SVCs are seen as ''LF compounds.'' The analysis defended here renders LF incorporation superfluous.

Summarizing, the analysis of instrument and comitative series shows that $V_1$ and $V_2$ do not form a complex 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) θ-role to assign.[14] As I now show, 'take' series in Gungbe 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 a theme role 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 the main predicate in (38c), where it assigns a θ-role to its object (for discussion, see Lefebvre 1991, Den Dikken and Sybesma 1998).

(38) a. Dáwè lɔ́   ɖó àɖì   xòmὲ ná mì káká, àmɔ́n má     ɖɔ̀ xó   ɖé.
       man   DET put anger bell.in for 1SG until but   1SG.NEG say word one
       [Ùn zé   nùkún kpɔ̀n-ὲ] bò     wlé   àlìò cè.
        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   àwájìjὲ yí     yé.
       Setu take joy     receive 3PL
       'Setu received them with joy.'
    c. Sétù zé   gbɔ́ ɖɔkpó.
       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 θ-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.'

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[14] See also Grimshaw and Mester 1988, Hagemeijer 2001.

    b. *Kofi de   Yaw.
       Kofi take Yaw
       'Kofi took Yaw.'

Together, these examples indicate that $V_1$ lacks a θ-role in such 'take' SVCs. This would mean that the instrument to the right of $V_1$ 'take' does not occur in that position for θ/case reasons. This observation is compatible with the previous conclusion about the preverbal object in OVCs and is reinforced by example (15), repeated here.

(40)  Kòkú sɔ́  [jìví  ɔ́]$_i$ sɛ́n wòxúxú ɔ́   ná  ec$_i$.               (Fongbe)
      Koku take  knife DET cut bread    DET with
      'Koku cut the bread with the knife.'

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

## 3.3 Object Movement over Control

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

    However, if $V_1$ does not assign the θ-role theme in 'take' series, as suggested by (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 (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, e.g., Hornstein 1999).

    Taking this into account, and in the absence of compelling evidence favoring 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 nondistinct from the head of the chain (Chomsky 1995, Nunes 2004). Under this view, a number of seemingly unrelated facts within Gbe languages fall into place more naturally 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  mɔ̌tò ɔ́   nú/*ná Àsíbá.                  (Fongbe)
      Koku sell car   DET to/for  Asiba
      'Koku sold the car to/for Asiba.'

When the goal is *wh*-extracted as in (42a), however, only the form *ná* can be used. The *wh*-island effect observed in (42b) suggests that the construction involves movement.

(42) a.  Mɛ̌  wɛ̀  Kɔ̀kú  sà  mɔ̌tò  ɔ́  ná/(*nú).                    (Fongbe)
         who FOC Koku sell car   DET to/for
         'To/For whom did Koku sell the car?'

     b.  *Mɛ̌  wɛ̀  Àsíbá kànbyɔ́ ɖɔ̀  hwétènù wɛ̀ Kɔ̀kú sà  mɔ̌tò  ɔ́  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/for?'

This description carries over to the series in (43), where *nú/ná* alternation also occurs in the context of extraction.

(43) a.  Kɔ̀kú  sɔ́  jìví  ɔ́  sɛ́n wɔ̀xúxú ɔ́  ná/*nú.                (Fongbe)
         Koku take knife DET cut bread    DET with
         'Koku cut the bread with the knife.'

     b.  Étɛ́  Kɔ̀kú  sɔ́  sɛ́n wɔ̀xúxú ɔ́  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 *ɖò/ɖè* or *tò/tè* variation that occurs in Fongbe and Gungbe, respectively. As shown in Aboh 2004c:255, the auxiliaries (or verbal elements) *ɖò* and *tò* typically occur in progressive sentences and 'be-located' constructions (see section 2.3), where the forms *ɖè* and *tè* are excluded.

(44) a.  Àsíbá  ɖò/*ɖè  [mɔ̌tò ɔ́  sà  wɛ̀].                        (Fongbe)
     b.  Àsíbá  tò/*tè  [mótò lɔ́  sà  `].                         (Gungbe)
         Asiba  PROG   car   DET sell PRT
         'Asiba is selling the car.'

Under focus movement of the complement, however, *ɖè/tè* must be used, not *ɖò/tò*.[15]

(45) a.  [Mɔ̌tò ɔ́  sà  wɛ̀]ᵢ Àsíbá ɖè/*ɖò tᵢ.                     (Fongbe)
     b.  [Mótò lɔ́  sà  `]  Àsíbá tè/*tò  tᵢ.                      (Gungbe)
         car   DET sell PRT Asiba PROG
         'Asiba is SELLING THE CAR.'

In (45), the fronted OV strings represent FP in structure (33). Therefore, the gap to the right of *ɖè/tè* is comparable to the gap created by VP-fronting and sanctioned by *do*-support in English (see Chomsky 1995, Aboh 2004c:chap. 7). Since the *nú/ná*, *ɖò/ɖè*, and *tò/tè* alternation occurs

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[15] The same alternation occurs in 'be-located' constructions involving *ɖò/tò* (Aboh 2004c:252ff.).

in extraction contexts in Fongbe and Gungbe, I conclude that it serves to license a gap—a deleted copy. In this regard, I argue in Aboh 2004c:256 that *tò/tè* (or *ḍò/ḍè* in Fongbe) is a functional head whose specifier serves as an escape hatch for movement of its complement. The alternating form *tè* (*ḍè*) is treated as an agreeing form (i.e., *tè* = *tò* + agr; *ḍè* = *ḍò* + agr) that reflects movement of the complement through the specifier of *tò* (or *ḍò*). Unlike the default form, therefore, the agreeing form acquires the ability to license a deleted copy to its right (see also Shlonsky 1991 for a similar view). Applied to *ná* (40), this proposal means that *ná* 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 that is required in resultative series (46) but excluded from transitive constructions where the verb assigns accusative case (47).

(46)  Me nya  ḍevi-ɛ   dzo  (yi).                                                    (Kpele)
      1SG chase child-DET leave  PRT
      'I chased the child away.'

(47)  Kofi *f*o  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. To put this differently, we can analyze *yi* as an agreeing preposition (i.e., $\emptyset$ + 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, like Fongbe *ná*, the Kpele preposition *yi* cannot precede an in-situ object (48). Instead, the element *ku* 'with', which determines instrumental case, must be used (Collins 1997:488).

(48)  *Kofi *f*o  Yao yi   ati-ɛ.                                                    (Kpele)
       Kofi hit Yao PRT stick-DET

(49)  Kofi *f*o  Yao ku   ati-ɛ.
      Kofi hit Yao with stick-DET
      'Kofi hit Yao with the stick.'

This analysis sheds a new light on microvariation in Gbe 'take' series ((50a) is repeated from (15)/(40)).

(50) a. Kɔ̀kú sɔ́  jìví  ɔ́  sɛ́n wɔ̀xúxú ɔ́  *ná*.                                   (Fongbe)
        Koku take knife DET cut bread   DET with
        'Koku cut the bread with the knife.'
     b. Kofi tsɔ ati-ɛ     *f*o Yao *yi*.                                            (Kpele)
        Kofi take stick-DET hit Yao with
        'Kofi hit Yao with the stick.'

c. Kòfi zé àtín lɔ́ xò Kɔ̀kú —. (Gungbe)
Kofi take stick DET hit Koku
'Kofi hit Koku with the stick.'

The Fongbe and Kpele sentences, (50a–b), are parallel. 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 $V_2$ that introduces the instrument/manner argument. That Fongbe and Kpele exhibit agreeing prepositions in this context provides evidence that the instrument/manner argument has raised to a position between $V_1$ and $V_2$.

This analysis fares better than Collins's (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* among the Gbe postpositions, which generally (unlike *yi*) derive from nouns, fail to assign case, and cannot be stranded (Ameka 2003, Aboh 2004a).

(51) me nya ɖevi-ɛ$_i$ [$_{VP}$ dzo [pro$_i$ (yi)]]

I conclude from this discussion that the constituent following $V_1$ in 'take' series has 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 an internal θ-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 both accounts for these series and suggests that certain causative series allow $V_1$ to introduce the external argument, as causer. Consider these examples, where the relevant sequence is italicized and the following sentences provide the context:

(52) a. *Kpɔ̀nɔ̀n lé nyàn àjòtɔ́ bíɔ́ zùngbó mè* bò gbé má xòdó è. Acé
policeman PL chase thief enter forest in COORD refuse NEG follow 3SG in.fact
yé ɖó àvún ɖàxó ɖòkpó ní-ɛ̀ dɔ́n bò é má nyɔ́-ɛ́. Káká àvún
3PL plant dog big one for-3SG there COORD 3SG NEG know-3SG before dog
lɔ́ ná gbó ɖɔkpó, tɔ́n dáwè tòwè tɔ́n bò yé zé-è kéɖè bò
DET FUT bark one exit guy 2SG.POSS exit COORD 3PL take-3SG quietly COORD
yì zé sú ɖó gànkpámè.
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. *Kpɔ̀nɔ̀n    lé nyàn àjòtɔ́ bíɔ́   zùngbó mὲ* bò      yì jὲ      kínìkíní jí. Ní à
policeman PL chase thief enter forest in COORD go bump lion     on if 2SG
mɔ̀ wὲzùn, mὲ    ɖé    nyì    sò gbɔ̀n dé,   mὲ    ɖé    nyi    gbákú gbɔ̀n
see race     some INDEF throw gun pass there some INDEF throw hat      pass
dé.   Àjòtɔ́ bà!  Kéɖékéɖé wὲ é     bàí    bò    xέ     àtín jí. À   má mɔ́ ɖɔ̀
there thief   not slowly    FOC 3SG make COORD climb tree on 2SG NEG see that
sέ    ɖὲ    dá    àjòtɔ́ tò vò!
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 into a tree. Well, the creator
of thieves is of a different kind!'

In (52a), the italicized 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 θ-roles, there are series where $V_1$ introduces the canonical
subject (here, the policemen).[16] 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 ('thief' in this example) would move
to Spec,AspP for EPP reasons, while the higher subject ('policemen') 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 Gungbe causative series in (52a) is akin to
the French causative in (53a) or more readily to the Hungarian and Japanese causatives in (53b–c).

(53) a. Marie a    fait   traverser la  ville à  Pierre.
        Marie has made cross     the city  to Pierre
        'Marie made Pierre cross the city.'
     b. Péter el-mesél-tette              Pál-lal  a    történet-et.
        Péter PV-tell-CAUS.PAST.DEF.3SG Pál-COM the story-ACC
        'Péter made Pál tell the story.'
        (Anikó Lipták, pers. comm.)
     c. Isya-wa    kanzya-ni   hoorensoo-o tabe-sase-ta.
        doctor-TOP patient-DAT spinach-ACC eat-CAUS-PAST
        'The doctor caused the patient to eat spinach.'
        (Vinka and Hirota 1995:179)

In these languages, the causee is transparently a syntactic dative or comitative argument, even
though it is understood as the subject of the embedded reduced clause. Morphosyntactic differences
aside, the Gbe causative SVCs are reminiscent of the Hungarian and Japanese causatives, where

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[16] Under proposals made in Stewart 1998 and Baker and Stewart 2002, a Voice head embedding $V_1$ and $V_2$ assigns
an agent role. See also Roberts 1997 and Wurmbrand 2001 for a similar view on restructuring, contra Cinque 2004.

the causee bears comitative or dative case, with the exception that in Gbe, the causee raises to Spec,AspP because of the EPP. More precisely, I suggest that in causative series of the type in (52a), the external argument of $V_2$ is suppressed, and the causee (i.e., 'thief') is introduced by $v_{appl}$, on a par with an instrument/comitative argument, and must move to Spec,AspP for EPP reasons. The series in (52a) is therefore derived as in (54).

(54) [$_{TP}$ kpònɔn lɛ́ [$_{AspP}$ t$_{kpònɔn\ lɛ́}$ [$_{Asp}$ nyàn [$_{FP}$[$_{AspP}$ àjòtɔ́ [$_{Asp}$ bíɔ́ [$_{vP}$[$_{v_{ext}}$ t$_{bíɔ́}$ [$_{vP}$ t$_{àjòtɔ́}$

[$_{v_{appl}}$ t$_{bíɔ́}$ [$_{VP_2}$ t$_{bíɔ́}$ zùngbó mɛ̀]]]]]]]]]]

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 the absence of *yi*, however, the series is ambiguous and both readings in (55a) and (55b) are allowed (Collins 1997:465).

(55) Ekpe *f*o kɔpo yi xɔ-me   yi.
    rock  hit cup  go room-in PREP
    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 Collins's (1997) terms, this reading results from a covert coordinate structure as opposed to the reading in (52a), which results from an SVC proper. I pointed out in section 2.1.2 that the Gungbe examples discussed here contain bona fide series. Therefore, I cannot resort to the SVC-versus-coordinate-structure distinction here. An idea I would like to explore instead is that the reading in (52b) is not encoded in syntax. To put this 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 favoring this characterization is that the meaning where the canonical subject is affected by the event is not available in the Gungbe series italicized in (56a), though only this reading is available in (56b), where both the car and the pushers went up the hill.[17]

(56) a. É  má fá  bɔ̀   *mí dó sísé Rèmí xé   àtín lɔ́ jí*.
        3SG NEG easy COORD 1PL have push Remi climb tree DET on
        'It was not easy for us to push Remi to climb the tree.'
        '*It was not easy for us to push Remi and climb the tree (with him).'

b. É   má   fá   bò   *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, Den Dikken and Sybesma 1998). In other SVCs, however (e.g., instrument or comitative), all arguments are associated with 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 θ-roles, let us now consider consecutive series. In this section, I show that consecutive series come in two forms: consecutive SVCs with two internal arguments, and consecutive series with one internal argument.

*3.5.1 Consecutive Series with Two Internal Arguments*    The Gungbe example (6), repeated here, represents consecutive series with two internal arguments.

(57) 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 that (57) could be understood (or paraphrased) as 'Sesinou caused my 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 $v_{appl}$, like 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 for case/agreement and EPP reasons, while the comitative/instrument *mótò cè* moves to Spec,AspP to check the EPP feature under Asp. The derivation is represented in (58).[18]

(58) [$_{TP}$ Sésínú [$_{AspP}$ t$_{Sésínú}$ [$_{Asp}$ kùn [$_{FP}$[$_{AspP}$ mótò cè [$_{Asp}$ só [$_{vP}$[$_{vext}$[$_{vP}$ t$_{mótò}$ [$_{v_{appl}}$ t$_{só}$

[$_{VP_2}$ t$_{só}$ àdó]]]]]]]]]]]

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[18] Alternatively, (57) may be treated like 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, and *àdó* 'wall' merges as the internal argument of $V_2$. Choosing between (i) and (58) requires more study, and I leave the matter for future work.

(i) [$_{TP}$ Sésínú [$_{AspP}$[$_{Asp}$ kùn [$_{FP}$[$_{AspP}$ mótò cè [$_{Asp}$ só [$_{vP}$[$_{v_{ext}}$ t$_{Sésínú}$ [$_{vP}$ t$_{mótò}$ [$_{v_{appl}}$ t$_{só}$ [$_{VP_2}$ t$_{só}$ àdó]]]]]]]]]]]]

Under this analysis, functional $V_1$ *kùn* 'drive' is a CAUSE verb that introduces the causer and specifies how the event expressed by $V_2$ has been carried out (e.g., driving the car rather than pushing it into the wall).[19] While this analysis of $V_1$ as a functional verb lacking an internal θ-role is conceivable on the basis of examples like (57), things become more complicated when we look at consecutive series with just one internal argument.

*3.5.2 Consecutives with One Internal Argument* In the following sections, I discuss instances of SVCs where two seemingly transitive verbs appear to share a single internal argument. I show that these SVCs do not support the ASH because $V_1$, a functional verb, does not select for an internal argument.

3.5.2.1 On Apparent Argument Sharing and Obligatory Control Example (3c), repeated here, illustrates consecutive SVCs with one internal argument. In this example, it appears as if $V_1$ and $V_2$ share the internal argument because the meaning includes two events, that is, the two VPs [$_{VP}$ cook rice] and [$_{VP}$ eat rice] jointly interpreted.

(59) Àsíbá ɖà lésì ɖù.
Asiba cook/prepare/make 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 $V_1$ here is a functional verb with no θ-roles (i.e., agent, theme) to assign to the subject and the object. An apparently easy way out would be to restore the ASH to life and restrict it to consecutive SVCs of this sort, where obligatory control applies. However, some properties of $V_1$ in such series suggest that this will not work. Consider again (17b), repeated here.

(60) . . . [$_{vP}$ Àsíbá [$_v$ ɖà [$_{VP_1}$ lésì$_i$ [$_{V_1}$ t$_{ɖà}$ [$_{VP_2}$ pro$_{lésì}$ [$_{V_2}$ ɖù]]]]]]

3.5.2.2 Object Movement over Control: The Epilogue The control mechanism in (60) guarantees the recoverability of *pro* and allows object sharing under the ASH. In formulating this analysis, Collins (1997:474ff.) tentatively chose *pro* as the best candidate for the empty category in SVCs because (a) this empty category is assigned case by the particle *yi* in Kpele, and (b) it occurs in a governed position. Observation (a) eliminates NP-traces, which cannot be assigned case according to Chomsky and Lasnik (1993), and (b) 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 whether the gap in series is created by movement, as I am assuming here, rather than by first Merge of *pro* (as in Collins 1997). Second, given Hornstein's (1999) analysis of obligatory control as movement from one θ-position to another θ-position, under which PRO is

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[19] English *drive* is also causative: *The police drove them out by playing loud music*.

comparable to NP-trace, the view in (b) becomes less straightforward. In Hornstein's terms, representation (60) is formally indistinguishable from (61), where obligatory control arises as a consequence of the internal argument of $V_2$ moving into the θ-position of $V_1$, where it is assigned the θ-role theme. Here, PRO behaves like a locally bound reflexive.

(61) ... [$_{vP}$ Àsíbá [$_v$ dà [$_{VP_1}$ lésì$_i$ [$_{V_1}$ t$_{dà}$ [$_{VP_2}$ PRO$_i$ [$_{V_2}$ dù]]]]]]

Given these competing representations, the crucial question is not whether obligatory control in consecutive series with a single argument derives from the ASH (60) or raising (61), but whether $V_1$ ever assigns a θ-role to the linearly following object.

One fact pointing to $V_1$'s inability to assign an internal θ-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.

(62) a. *Kòfí ná    kwé$_i$    xɔ̀ xwé pro$_i$.
        Kofi give money buy house
        'Kofi gave money buy a house (i.e., he gave money to buy a house).'
     b. *Kòfí ná    wémá$_i$ mì    wà àzɔ́n pro$_i$.
        Kofi give book   1SG.ACC do work
        'Kofi gave me a book to work (i.e., he gave me a book to work with).'

The VP shell analysis in (60), where object control guarantees the ASH, rules in (62a–b), contrary to fact. In principle, the shared argument (*kwé* 'money') can control the instrument argument of $V_2$ (*pro*). Observe from the parenthesized interpretations that these examples are perfectly grammatical in English.[20]

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 some examples where it turns out that verbs that have both a functional and a lexical usage display certain syntactic and semantic restrictions in their functional usage. This also suggests a thematic restriction on $V_1$. Let us reconsider example (1a), repeated as (63a), where the verb *bé*, which means 'collect' when used lexically, does not encode this meaning when used functionally. Instead, examples (63a–b) indicate that $V_1$ *bé* does not assign an internal θ-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'.

(63) a. Àsíbá bɛ́    lésì dù.
        Asiba collect rice eat
        'Asiba collected rice eat (i.e., Asiba ate a lot of rice).'
     b. Àsíbá bɛ́    xó   dɔ̀.
        Asiba collect word say
        'Asiba collected word say (i.e., Asiba said a lot of nonsense).'

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[20] Baker (1989:522) excludes (62b) by assuming that $V_1$ 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.

Similarly, the verb *ɖín* means 'look for' or 'search for' when used lexically. However, the intended meaning of (64) is (64a), not (64b).

(64) Àsíbá, ɖín    nú    ɖé    ɖù tò àdòkɔn.
     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 *ɖín* in this example literally corresponds to that of English *get* (or *have*) in its causative usage, then there seems to be no basis for assuming that it shares an object with $V_2$, to which it assigns a θ-role. Similarly, the verb *kpɔ́n* means 'look at/for' when used lexically. But this meaning is not available in its functional usage as $V_1$. Therefore, the sequence *kpɔ́n xɔ́ ɖɔ̀* 'look word say' means 'be careful about (or watch) what one says' rather than 'look for something to say'. The same observation holds for the verb *ɖà*, which is often translated as 'cook' but also means 'prepare, make/get X ready'.

(65) Mìgàn ɖà      kpònɔ̀n lɛ́ yì àhwàn.
     Migan prepare soldier PL go war
     'Migan prepared the soldiers go to war (i.e., by making some magic).'

If lexical *ɖà* implies both 'prepare' and 'cook', we can hypothesize that series such as (59) are hidden causatives that actually mean 'make/get/cause rice (to be) ready to eat', where only the meaning 'prepare' is available.

Now consider the verb *ɖù*. In its lexical use in (63a) and (64), *ɖù* means 'eat'; but when it is used as $V_1$, it can be followed by various elements, including the DP *tò lɔ́* 'the country' in (66), which cannot be said to receive the θ-role theme from $V_1$.

(66) Yé ɖù [tò       lɔ́]  vɔ̀.
     3PL eat country DET finish
     'They ate the country finish (i.e., they ruined the country by misappropriating funds).'

What appears from the discussion is that when used functionally, these verbs are immediately followed by a wide range of constituents that cannot fulfill the semantic function of theme. Accordingly, these examples are reminiscent of 'take' series (38a–b), where it cannot be argued that $V_1$ 'take' θ-marks the DP object to its right. I propose to treat verbs like *bɛ́* 'collect', *dín* 'search for/get', *kpɔ́n* 'look/watch', *ɖù* 'eat', and *ɖà* 'cook/prepare' as $V_1$ in 'take' series.[21] 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 θ-role, while the functional meaning corresponds to situations where $V_1$ has no internal θ-role to assign but

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[21] Many verbs have different meanings when used as $V_1$ or $V_2$. *Hèn* means 'hold' but *hèn* X *gblé* means 'cause X to spoil', while *hèn* X *wá* means 'cause X to come, i.e., bring'.

selects for a complement inside which the element to its right is being licensed.[22] Building on this, I propose that consecutive series with one argument should be derived as in (67) by movement of the object of $V_2$ to Spec,AspP, for EPP reasons as argued previously.

(67) $[_{TP}$ Àsíbá $[_{AspP}$ t$_{Àsíbá}$ $[_{Asp}$ ɖà $[_{FP}[_{AspP}$ lésì $[_{Asp}$ ɖù $[_{vP}[_{v_{ext}}$ t$_{Àsíbá}$ $[_{vP}[_{v_{appl}}$ t$_{ɖù}$ $[_{VP_2}$ t$_{ɖù}$ t$_{lésì}]]]]]]]]]]]]$

From 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.[23] The proposed analysis has further implications for the analysis of verbal compounds, to which I now turn.

## 4 Verbal Compounds in Kwa and Khoisan

With the discussion of $V_1$-(XP)-$V_2$ SVCs in mind, let us now consider the verbal compounds (VCs) in (1b–c), reproduced here, where $V_1$ and $V_2$ are adjacent.

(68) a. Obi kwa-da-ra    Eze.                                    (Igbo, Kwa)
        Obi push-fall-rV Eze
        'Obi pushed Eze down.'
        (Stewart 1998:183)
     b. Ma a-    q‖hu ǀ'o   djo   ki   kx'u na.                   (≠Hoan, Khoisan)
        1SG PROG pour put.in water PRT pot   in
        'I am pouring water into the pot.'
        (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 the previous discussion, that $V_2$ moves to F in languages where the latter must be overtly realized.

Manfredi (1997) shows on independent ground that Igbo 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 reason 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. Unlike the lexical verb in Gungbe, however, the Igbo lexical verb under $V_2$ must raise to Asp and further to F, as sketched in (69).

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[22] This description extends to verbs like *consider* when they select for an argument or a small clause: *I consider this matter seriously* versus *I consider this matter too serious*.
    [23] 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).

(69) $[_{TP}[_{AspP}$ V$_1$ $[_{FP}[_F$ V$_2$ $[_{AspP}$ Object $[_{Asp}$ t$_{v_2}$ $[_{vP}[_{v_{ext}}$ t$_{v_2}$ $[_{vP}[_{v_{appl}}$ t$_{v_2}$ $[_{VP_2}$ t$_{v_2}$ t$_{object}]]]]]]]]]]]]$

Within the Kwa languages, therefore, the difference between Igbo-type languages, which exhibit 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 movement in the former but not in the latter.

With regard to VCs in ǂHoan (68b), 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 (70) (using English glosses for ease of exposition).

(70) $[_{vP}[_v$ pour-put.in $[_{FP}$ water $[_F$ ki $[_{VP_1}$ t$_{water}$ $[_{V_1}$ t$_{pour}$ $[_{VP_2}$ PRO$_{water}$ $[_{V_2}$ t$_{put.in}$ $[_{PP}$ pot in]]]]]]]]]$

Collins's 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 ǂHoan VCs in a way similar 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 Asp. On the other hand, V$_2$ raises to Asp and subsequently to F. 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, to appear, for discussion of such locative phrases). The derivation is sketched in (71), ignoring irrelevant layers.

(71) $[_{TP}[_{AspP}[_{Asp}$ V$_1$ pour $[_{FP}[_F$ V$_2$ put $[_{AspP}$ water $[_{Asp}$ t$_{v_2put}$ $[_{vP}[_{v_{ext}}$ t$_{v_2put}$ $[_{VP_2}[_V$ t$_{v_2put}$ t$_{water}$ $[_{PP}$ 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 need be made. Unlike derivations in previous approaches, the derivation proposed here does not enrich the theory with more complex apparatus such as multiple verb movement to a single head.

Summarizing, I have argued here 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 crosslinguistic 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 much with current approaches to restructuring verbs in Romance and Germanic, for which it has been proposed that the restructuring verb merges as the head of a functional projection within the clause (e.g., Wurmbrand 2001, Cardinaletti and Shlonsky 2004, Cinque 2004). If it is 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 as Kwa and Khoisan. Indeed, the examples in (72), taken from Cardinaletti and Giusti 2001, are very good candidates for Romance and Germanic SVCs, where F is possibly realized by a complementizer preposition.

(72) 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)

According to Cardinaletti and Giusti (2001), the motion verbs in these sentences directly merge in the functional layer of a monoclause. This conclusion is compatible with Jaeggli and Hyams's (1993) treatment of English motion verbs (e.g., *come*, *go*) as expressions of an AspP 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

In this article, I have proposed a unified analysis for verb series and verbal compounds in Kwa and Khoisan. I have argued 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 AspP whose head is endowed with an EPP feature. I have shown that surface word order variations in Kwa (and Khoisan) result from the EPP licensing that triggers $V_2$-object inversion, sometimes followed by $V_2$ movement past the shifted object. The proposed analysis in terms of functional versus lexical verbs implies that, if anything, the serializing parameter has to do with the lexicon rather than with core syntax. In a sense, the Kwa and Khoisan languages are more serializing than, say, Romance and Germanic, because they allow more functional elements of the type $V_1$ than the Romance and Germanic languages do.

     In most of the 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 θ-roles. Yet the proposed necessary distinction between functional (verbal) elements and their lexical cognates bears on the fact that many purely functional items in Gbe (e.g., complementizer, mood marker, aspect marker, preposition) derive from verbs. Example (73), even though a bit unnatural, perfectly illustrates this point. The derived element is in italics and the source in boldface. Also notice that *na* can be understood both as a preposition and as the verb 'give'.

(73) Ùn **ɖɔ̀** na-ɛ̀        *ɖɔ̀*   Súrù ná *wá*   **wá**   *nɔ̀*   **nɔ̀**  fí   tò hwèmὲ.
     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 light of (73), 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.

# References

Aboh, Enoch Oladé. 2003. Les constructions à objet préposé et les séries verbales dans les langues Kwa. In *Typologie des langues d'Afrique et universaux de la grammaire: 'Benue-Kwa, Soninke, Wolof'*, ed. by Patrick Sauzet and Anne Zribi-Hertz, 15–40. Paris: L'Harmattan.

Aboh, Enoch Oladé. 2004a. The category P: The Kwa paradox. *Linguistic Analysis* 32:615–646.

Aboh, Enoch Oladé. 2004b. Left or right? A view from the Kwa periphery. In *Peripheries*, ed. by David Adger, Cécile de Cat, and George Tsoulas, 165–180. Dordrecht: Kluwer.

Aboh, Enoch Oladé. 2004c. *The morphosyntax of complement-head sequences: Clause structure and word order patterns in Kwa*. New York: Oxford University Press.

Aboh, Enoch Oladé. 2005. Object shift, verb movement and verb reduplication. In *The handbook of comparative syntax*, ed. by Guglielmo Cinque and Richard Kayne, 138–177. New York: Oxford University Press.

Aboh, Enoch Oladé. To appear. The P-route. In *The cartography of syntactic structures*. Vol. 6, *Mapping spatial PPs*, ed. by Guglielmo Cinque and Luigi Rizzi. New York: Oxford University Press.

Agbedor, Paul. 1994. Verb serialization in Ewe. *Nordic Journal of African Studies* 3:115–135.

Ameka, Felix. 2003. Prepositions and postpositions in Ewe (Gbe): Empirical and theoretical considerations. In *Typologie des langues d'Afrique et universaux de la grammaire: 'Benue-Kwa, Soninke, Wolof'*, ed. by Patrick Sauzet and Anne Zribi-Hertz, 41–67. Paris: L'Harmattan.

Ameka, Felix. 2004. Multiverb constructions in a West African areal typological perspective. Ms., University of Leiden.

Ameka, Felix. 2005. Forms of secondary predication in serializing languages: On depictives in Ewe. In *Secondary predication and adverbial modification: The typology of depictives*, ed. by Nikolaus P. Himmelmann and Eva F. Schultze-Berndt, 355–378. Oxford: Oxford University Press.

Ansre, Gilbert. 1966. The verbid: A caveat to serial verbs. *Journal of West African Languages* 1:29–32.

Awóyalé, Yiwola. 1988. Complex predicates and verb serialization. MIT Lexicon Working Papers 28. Cambridge, MA: MIT, MIT Working Papers in Linguistics.

Baker, Mark C. 1989. Object sharing and projection in serial verb constructions. *Linguistic Inquiry* 20:513–553.

Baker, Mark C., and Osamuyimen T. Stewart. 2002. A serial verb construction without constructions. Ms., Rutgers University, New Brunswick, NJ.

Bamgbose, Ayo. 1974. On serial verbs and verbal status. *Journal of West African Languages* 8:37–52.

Boeckx, Cedric. 1999. Conflicting c-command requirements. *Studia Linguistica* 53:227–250.

Campbell, Richard. 1989. The grammatical structure of verbal predicates. Doctoral dissertation, UCLA, Los Angeles, CA.

Campbell, Richard. 1992. Serial verbs and unaccusativity. In *Proceedings of the Kwa Comparative Syntax Workshop, MIT*, ed. by Chris Collins and Victor Manfredi, 41–51. MIT Working Papers in Linguistics 17. Cambridge, MA: MIT, MIT Working Papers in Linguistics.

Campbell, Richard. 1996. Serial verbs and shared arguments. *The Linguistic Review* 13:83–118.

Cardinaletti, Anna, and Giuliana Giusti. 2001. Semi-lexical motion verbs in Romance and Germanic. In *Semi-lexical categories: The function of content words and the content of function words*, ed. by Norbert Corver and Henk van Riemsdijk, 371–414. Berlin: Mouton de Gruyter.

Cardinaletti, Anna, and Ur Shlonsky. 2004. Clitic positions and restructuring in Italian. *Linguistic Inquiry* 35:519–557.

Carstens, Vicki. 2002. Antisymmetry and word order in serial constructions. *Language* 78:3–50.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, Noam, and Howard Lasnik. 1993. The theory of principles and parameters. In *Syntax: An international handbook of contemporary research*, ed. by Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld, and Theo Vennemann, 506–569. Berlin: Mouton de Gruyter.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. New York: Oxford University Press.

Cinque, Guglielmo. 2004. Restructuring and functional structure. In *The cartography of syntactic structures*. Vol. 3, *Structures and beyond*, ed. by Adriana Belletti, 132–191. New York: Oxford University Press.

Collins, Chris. 1996. *Local economy*. Cambridge, MA: MIT Press.

Collins, Chris. 1997. Argument sharing in serial verb constructions. *Linguistic Inquiry* 28:461–497.

Collins, Chris. 2001. The internal structure of the verb phrase in Juǀʼhoan and ǂHoan. In *Khoisan linguistics*, ed. by Arthur Bell and Paul Washburn, 1–27. Cornell Working Papers in Linguistics 18. Ithaca, NY: Cornell University, CLC Publications.

Collins, Chris. 2002. Multiple verb movement in ǂHoan. *Linguistic Inquiry* 33:1–29.

Collins, Chris. 2004. The agreement parameter. In *Triggers*, ed. by Anne Breitbarth and Henk van Riemsdijk, 115–136. Berlin: Mouton de Gruyter.

Cormack, Annabel. 2006. Dative interveners. *Lingua* 116:1580–1594.

da Cruz, Maxime. 1993. Les constructions sérielles du Fongbe: Approches sémantique et syntaxique. Doctoral dissertation, University of Quebec at Montreal, Quebec.

da Cruz, Maxime. 1995. Aspectual verbs *fó*, *vɔ̀* 'finish' in Fongbe. *The Linguistic Review* 12:361–380.

da Cruz, Maxime. 1997. Serial verb constructions and null arguments in Fon. In *Object position in Benue-Kwa*, ed. by Rose-Marie Déchaine and Victor Manfredi, 31–45. The Hague: Holland Academic Graphics.

Dikken, Marcel den, and Rint Sybesma. 1998. *Take* serials light up the middle. Paper presented at the GLOW Colloquium, Tilburg University, 15 April 1998.

Essegbey, James. 1999. *Inherent complement verbs revisited: Towards an understanding of argument structure in Ewe*. MPI Doctoral series. Wageningen: Ponsen and Looijen.

Grimshaw, Jane, and Armin Mester. 1988. Light verbs and θ-marking. *Linguistic Inquiry* 19:205–232.

Hagemeijer, Tjerk. 2001. Underspecification in serial verb constructions. In *Semi-lexical categories: The function of content words and the content of function words*, ed. by Norbert Corver and Henk van Riemsdijk, 415–451. Berlin: Mouton de Gruyter.

Hoekstra, Teun. 1988. Small clause results. *Lingua* 74:101–139.

Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30:69–96.

Jaeggli, Osvaldo, and Nina M. Hyams. 1993. On the independence and interdependence of syntactic and morphological properties: English aspectual *come* and *go*. *Natural Language and Linguistic Theory* 11:313–346.

Kayne, Richard S. 1984. *Connectedness and binary branching*. Dordrecht: Foris.

Larson, Richard K. 1991. Some issues in verb serialization. In *Serial verbs: Grammatical, comparative and cognitive approaches*, ed. by Claire Lefebvre, 185–211. Amsterdam: John Benjamins.

Lefebvre, Claire. 1991. Take serial verb constructions in Fon. In *Serial verbs: Grammatical, comparative and cognitive approaches*, ed. by Claire Lefebvre, 37–79. Amsterdam: John Benjamins.

Lord, Carol. 1973. Serial verbs in transition. *Studies in African Linguistics* 4:269–295.

Manfredi, Victor. 1991. Agbo and Ehugbo: Igbo linguistic consciousness, its origins and limits. Doctoral dissertation, Harvard University, Cambridge, MA.

Manfredi, Victor. 1997. Aspectual licensing and object shift. In *Object position in Benue-Kwa*, ed. by Rose-Marie Déchaine and Victor Manfredi, 87–122. The Hague: Holland Academic Graphics.

Manfredi, Victor. 2005. Tense parameters and serial verbs. Ms., Boston University, Boston, MA. Available at http://people.bu.edu/manfredi/svc.pdf.

Marantz, Alec. 1993. Implications of asymmetries in double object constructions. In *Theoretical aspects of Bantu grammar*, ed. by Sam Mchombo, 113–150. Stanford, CA: CSLI Publications.

Nunes, Jairo. 2004. *Linearization of chains and sideward movement*. Cambridge, MA: MIT Press.

Rizzi, Luigi, and Ur Shlonsky. 2007. Strategies of subject extraction. In *Interfaces + Recursion = Language?*, ed. by Hans-Martin Gärtner and Uli Sauerland, 115–160. Berlin: Mouton de Gruyter.

Roberts, Ian. 1997. Restructuring, head movement, and locality. *Linguistic Inquiry* 28:423–460.

Ross, John Robert. 1967. Constraints on variables in syntax. Doctoral dissertation, MIT, Cambridge, MA.

Shlonsky, Ur. 1991. Quantifiers as functional heads: A study of quantifier float in Hebrew. *Lingua* 84: 159–180.

Stewart, John M. 1963. Some restrictions on object in Twi. *Journal of West African Languages* 1:145–149.

Stewart, Osamuyimen T. 1998. The serial verb construction parameter. Doctoral dissertation, McGill University, Montreal.

Sybesma, Rint. 1992. *Causatives and accomplishments: The case of Chinese* ba. Dordrecht: ICG Printing.

Sybesma, Rint. 1997. *Take* and the theme in Chinese and Kwa. In *Object position in Benue-Kwa*, ed. by Rose-Marie Déchaine and Victor Manfredi, 169–188. The Hague: Holland Academic Graphics.

Tenny, Carol L. 1987. Grammaticalizing aspect and affectedness. Doctoral dissertation, MIT, Cambridge, MA.

Tossa, Comlan Z. 1993. Auxiliaires et séries verbales dans les langues Gbe. *Canadian Journal of Linguistics* 38:331–352.

Veenstra, Tonjes. 1996. *Serial verbs in Saramaccan: Predication and creole genesis*. The Hague: Holland Academic Graphics.

Veenstra, Tonjes. 2000. Verb serialization and object position. *Linguistics* 38:867–888.

Vinka, Mikael, and Norio Hirota. 1995. Case checking in Japanese causative constructions. In *Working papers 44*, 179–196. Lund: Lund University, Centre for Language and Literature.

Westermann, Diedrich. 1930. *A study of the Ewe language*. London: Oxford University Press.

Wurmbrand, Susanne. 2001. *Infinitives: Restructuring and clause structure*. Berlin: Mouton de Gruyter.

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