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. Ásibá bé léṣì dů. (Gungbe)
   ‘Asiba collected rice eat (i.e., Asiba ate a lot of rice).’

b. Obi kwa-da-ra Eze. (Igbo)
   ‘Obi pushed Eze down.’

c. Ma a- q|hù |'o djo ki kx’u na. (tHoan)
   ‘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

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The following abbreviations are used in this article: ACC = accusative, CAUS = causative, COM = comitative, COMP = complementizer, COORD = coordination conjunction, DAT = dative, DEF = definite, DET = determiner, EVENT = eventuality marker, EXCL = exclamative, EXPL = expletive, FOC = focus, FUT = future, HAB = habitual, INDEF = indefinite, NEG = negation, PAST = past, PL = plural, POSS = possessive, PREP = preposition, PROG = progressive, PROSP = prospective, PRT = particle, PV = preverb affix, REL = relative, rV = verbal extension, SG = singular, TOP = topic.

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 $\theta$-role, which is why it can merge within the functional extension of the lexical verb $V_2$. 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-externally, 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 (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.
CLAUSE STRUCTURE AND VERB SERIES

(3) a. Sétù ze kpò lọ xọ Kọjọ.
   ‘Setu took the stick hit Kojo (i.e., he hit him with the stick).’
   b. Sétù nyàn Kọjọ yì Kútùnù.
   ‘Setu chased Kojo go to Cotonou (i.e., he chased him to Cotonou).’
   c. Àsìbá dà lésì dù.
   ‘Asiba cooked/prepared/made the rice eat (i.e., she ate the rice).’

Sentence (3a) illustrates an instrument SVC: the instrument of V₂ is the theme of V₁. Sentence (3b) illustrates a resultative SVC: the internal argument of the unaccusative V₂ is the theme of V₁. In the consecutive SVC (3c), V₁ and V₂ 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 V₁ and V₂ directly θ-mark the internal argument. (3c) is therefore derived as in (5).

(5) [S Àsìbá [I[VP[V' [dàv₁, lésì dàv₂]]]]]

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 V₂. In addition, V₂ 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.

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:

\[(6) \text{Ójé! Sésínu kùn móto cè sò *(àdó).} \]

\[
\text{EXCL Sesinou drive car 1SG.POSS hit wall}
\]

‘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: \( bò \) coordinates two IPs involving two distinct subjects (7a) or coreferential pronouns, while \( b`) \) coordinates two IPs where the subject of the first IP necessarily controls that of the second (7b).

\[ (7) \]

\[
\text{a. Sésínu dà lèsì bò Sùrù dò nùsònmu.}
\]

\[
\text{Sesinou cook rice COORD Suru eat soup}
\]

‘Sesinou cooked rice and Suru ate soup.’

\[
\text{b. Sésínmù dà lèsì bò pro lò nùsònmu.}
\]

\[
\text{Sesinou cook rice COORD eat soup}
\]

‘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 \( b`) \) in contexts where Ewegbe, discussed by Collins (1997:465), has covert coordination.

\[ (8) \]

\[
\text{a. Kòfì ná dù lèsì *(bò) nà yì xòmè.} \quad \text{\textit{(Gungbe)}}
\]

\[
\text{b. Kòfì ná dù mòlìnkumn *(bò) nà yì xòmè.} \quad \text{\textit{(Fongbe)}}
\]

\[
\text{c. Kòfì ú dù mòlú . . . á yì xòmè.} \quad \text{\textit{(Ewegbe)}}
\]

\[
\text{Kòfì FUT eat rice (COORD) FUT go room}
\]

‘Kofi will eat rice and will go into the room.’

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

\[ (i) \]

\[
\text{Yòkpò lè yì dò-wèzùnm gbòn àxìmè.}
\]

\[
\text{child PL go plant-race pass market}
\]

‘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, Essegby 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 *bɔ* 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. The same holds of the examples in (9), where negation and tense markers may occur in either conjunct (or both).

(9) a. Kɔfɪ má ná wá fí bɔ̀ ná dũ wɛ̀.
   'Kofi will not come here and will dance.'

b. Kɔfɪ má ná wá fí bɔ̀ má ná dũ wɛ̀.
   'Kofi will not come here and will not dance.'

In the Gungbe series, however, I(nfl) specifications occur on V₁ only and cannot precede V₂. The negation *mà* and tense marker *ná* precede V₁ kùn ‘drive’ in (10a), but they cannot occur with V₂ sɔ̀ ‘hit’, as shown in (10b).

(10) a. Sèsìnú! À má ná sɔ̀ kùn mòtò cè sɔ̀ ìdó égbè.
   'Sesinou! You will not again drive my car hit (i.e., into) the wall today!'

b. *Sèsìnú! À má ná sɔ̀ kùn mòtò cè má ná sɔ̀ ìdó égbè.

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. Sèsìnú mà kùn mòtò cè sɔ̀ ìdó!
   'Sesinou will drive my car hit the wall!'

b. Sèsìnú wè ná kùn mòtò cè sɔ̀ ìdó!
   'SESINOU will drive my car hit the wall!'

c. Mòtò cè  wè Sèsìnú ná kùn sɔ̀ ìdó!
   '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 wè Sésínú ná kùn móto cè sọ! wall FOC Sesinou FUT drive car 1SG.POSS hit ‘Sesinou will drive my car hit THE WALL!’
e. Ménù wè ná kùn móto cè sọ àdó? who FOC FUT drive car 1SG.POSS hit wall ‘Who will drive my car hit the wall?’
f. Êté wè Sésínú ná kùn sọ àdó? what FOC Sesinou FUT drive hit wall ‘What will Sesinou drive hit the wall?’
g. Êté wè Sésínú ná kùn móto cè sọ? 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) *Êté, wè ụn kànbíó dʒɔ hvêtɛnùj wè Sésínú ná kùn tì sọ àdó tì?
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 wè. With this analysis in mind, let us consider (7a), repeated here, in the context of extraction.

(7) a. Sésínú dʒɔ̀ lɛsí bɔ̀ Súrù dʒɔ̀ nùsùnù́.
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. *Êté, wè Sésínú dʒɔ̀ tì bɔ̀ Súrù dʒɔ̀ nùsùnù́?
what FOC Sesinou cook COORD Suru eat soup
‘What did Sesinou cook and Suru ate soup?’
b. *Êté, wè Sésínú dʒɔ̀ lɛsí bɔ̀ Súrù dʒɔ̀ tì?
what FOC Sesinou cook rice COORD Suru eat
‘What did Sesinou cook rice and Suru eat?’
c. Êté, wè Sésínú dʒɔ̀ tì bɔ̀ Súrù dʒɔ̀ tì?
what FOC Sesinou cook COORD Suru eat
‘What did Sesinou cook and Suru eat?’
Furthermore, in series, but not in coordinate structures, V2 cannot license a pronoun coindexed with the object of V1.

\begin{enumerate}
\item \textit{Sesinou fut drive car 1sg.poss take 3sg hit wall}
\begin{itemize}
\item \textit{‘Sesinou will drive my car take it hit the wall!’}
\end{itemize}
\item \textit{Sesinou cook rice coord Suru sell-3sg all}
\begin{itemize}
\item \textit{‘Sesinou cooked rice and Suru sold it all!’}
\end{itemize}
\end{enumerate}

Put together, these facts lead me to conclude that examples (6), (10a), and (11), where V1 and V2 appear to take different internal arguments (and therefore violate the ASH) are bona fide SVCs. This observation makes the ASH a rather weak condition.

\subsection*{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 V2 is a triadic verb that assigns an instrument (or manner) \(\theta\)-role to the object of V1. 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 V1 and V2 (da Cruz 1997).

\begin{enumerate}
\item \textit{Koku take knife det cut bread det with (Fongbe)}
\begin{itemize}
\item \textit{‘Koku cut the bread with the knife.’}
\end{itemize}
\end{enumerate}

Since this shared object can be extracted under \textit{wh}-question formation (16), unlike in coordinate structures, we have to conclude that example (15) is a well-formed SVC.

\begin{enumerate}
\item \textit{what foc Koku take cut bread det with}
\begin{itemize}
\item \textit{‘What did Koku cut the bread with?’}
\end{itemize}
\end{enumerate}

If, as da Cruz (1997) convincingly argues, \textit{nà} \(\theta\)-marks the instrument/manner argument in these Fongbe examples, then V2 \textit{sëñ} ‘cut’ cannot be a triadic verb that jointly \(\theta\)-marks the object of V1 \textit{jìvì} ‘the knife’. Accordingly, V1 and V2 do not \textit{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.

\subsection*{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 V1. The latter subsequently raises
past the object and adjoins to v, where it is licensed. On the other hand, Spec,VP₂ hosts an empty category pro, which is controlled by the object of V₁ (see Larson 1991, Collins 1997, 2002, da Cruz 1997, Stewart 1998).

(17) a. Àsábá dà lésì dù.
    Asiba cook/prepare/make rice eat
    ‘Asiba cooked/prepared/made the rice eat (i.e., she ate the rice).’
    b. . . . [vP Àsábá [v dà [VP₁ lésìi [V₁ tì dà [VP₂ pro[lésì₁ [v₂ dù]]]]]]

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 V₁ and V₂ are individually marked by a tense/aspect marker and V₂ may be followed by a pronoun.

(18) Kofì bɔ-ɔ Áma ku-u no. (Akan)
    Kofì strike-PAST Ama kill-PAST 3SG
    ‘Kofì 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 VP₁ and VP₂ that expresses tense/aspect specifications that match those of the I-system above V₁ (see also Veenstra 1996, 2000). This idea is compatible with data from Edó. In this language, certain middle-field adverbs (e.g., giélgié ‘quickly’), which Stewart (1998) treats as heads, intervene between the object and V₂.

(19) Ózó dùnmwún èmà [giélgié] khién.
    Ozo V₁-pound yam quickly V₂-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 V₁ and V₂. 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).

\begin{enumerate}
  \item \( \text{Asibá jè lésì ɖù jí.} \)
      ‘Asiba started eating rice.’
  \item \( \text{Asibá wá lésì ɖù gbé.} \)
      ‘Asiba came in order to eat rice.’
  \item \( \text{Asibá tò lésì ɖù.} \)
      ‘Asiba is eating rice.’ (progressive)
  \item \( \text{Asibá gbé lésì ɖù.} \)
      ‘Asiba refused to eat rice.’
\end{enumerate}

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

\[(i) \text{Ye’ ɖù làn 15 mù.} \]
\hspace{1cm} 3pl. eat meat det raw
\hspace{1cm} ‘They ate the meat raw.’

\(^7\) The sentence-final floating tone (’') glossed as \textit{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., V1/Aux-O-V2), 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) Àsibá má ná ǹ wá lési dù 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):

(a) Koﬁ wè Àsibá yì xo dù ná ecì gbé.
    Kofi FOC Asiba go word say PREP PRT
    ‘Asiba left in order to talk to KOFI.’
(b) Mënù wè Àsibá yì xo dù ná ecì 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 V2 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) Àsibá wá lésì ná dù 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

8In 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 V1 and V2 is θ-marked and case-licensed by V1 and V2, 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 underlingly 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 na (23). This marker also occurs with unergative verbs, where there is no accusative case to assign (24). Therefore, prospective na does not case-license or θ-mark the element to its left.

   (24) Xè lọ tò ná zrón`
   bird DET PROG PROSP fly.PRT
   ‘The bird is just about to fly.’

2. Weak (or clitic) object pronouns—which show case morphology in Gungbe—cannot precede the prospective aspect marker, but must follow the verb (25). This can be interpreted as evidence that case is determined to the right of the lexical verb (i.e., within vP). Accordingly, verb-object inversion in OVCs must be triggered by some other principle of the grammar than case checking.

   (25) a. Ásibá tò ná sà è ná mì`
   Asiba PROG PROSP sell 3SG PREP me.PRT
   ‘Asiba is just about to sell it for me.’
   b. *Ásibá tò è 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. Ásibá tò [sìń] nù dèdè`
   Asiba PROG water drink slowly.PRT
   ‘Asiba is drinking water slowly.’
   b. Ásibá tò [dèdè] zòn`.
   Asiba PROG slowly walk.PRT
   ‘Asiba is walking slowly.’
(27) Æsibá to [móto kùnkùn] ná kplôn`.  
Asiba PROG car drive drive PROSP learn.PRT  
‘Asiba is just about to learn to drive a car.’

(28) a. À to hán kplôn Kofi`.  
2SG PROG song teach Kofi.PRT  
‘You are teaching Kofi a song.’

b. Été wè à tò Kôfì kplôn`?  
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).

rain fall  
‘It rained.’

b. Jìkù tò jìjà`.  
2SG PROG fall fall.PRT  
‘It is raining.’

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

(30) a. Sûrû tò sisà è ná mi`.  
Suru PROG sell sell 3SG PREP me PRT  
‘Suru is selling it for/to me.’

b. Été wè Sûrû tò sisà tî ná mi`?  
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. Jı \textasciitilde ku\textasciitilde to\textasciitilde na\textasciitilde (*jı)jà\textasciitilde .
   rain PROG PROSP fall.PRT
   ‘It is just about to rain.’

b. Sûrû tò nà (*sì)sà è nà mì\textasciitilde .
   Suru PROG PROSP sell 3SG PREP me.PRT
   ‘Suru is just about to sell it for/to me.’

c. Ètê\textasciitilde  wè Sûrû tò nà (*sì)sà tì nà mì\textasciitilde ?
   what FOC Suru PROG PROSP sell PREP me.PRT
   ‘What is Suru just about to sell for/to me?’

That \textit{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 \textit{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 jı\textasciitilde ku\textasciitilde nà jà\textasciitilde .
   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\textsubscript{1} merges under an AspP that dominates the functional sequence introduced by the particle under F. The latter dominates an array of functional projections

\(^9\) 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) [Sës\textsc{\textntsc{\textit{s}}} mû kûn mût\textasciitilde cè s5 ât\textasciitilde f\textasciitilde]
   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) \[ AspP \text{ Aux/V}_1 \ [FP \text{ PRT} \ [AspP\{\text{vP}\text{[vext\{\text{vP\{vappl\{VP V\}\}\}\}\}\}\}\}\]\]

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 AgrO.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\textsubscript{2}. Furthermore, v\textsubscript{appl} introduces the
indirect object (or the instrument) and checks the case of the direct object, while v\textsubscript{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\textsubscript{2},
and the direct object merges as its internal argument to form VP\textsubscript{2}. VP\textsubscript{2} merges with v\textsubscript{appl} (responsible
for checking accusative case) to form vP. The latter merges with v\textsubscript{ext}, which introduces the
external argument to form a higher vP, which in turn merges with the aspect head Asp to form
AspP. V\textsubscript{2} raises to Asp to check its aspect features (if the latter is not realized as the prospective
aspect marker na’). 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\textsubscript{1}), which itself merges under a higher Asp.
Under this approach, sentence (20b)—repeated as (34a)—has the partial derivation in (34b).\textsuperscript{11}

\begin{align*}
(34) \text{a. } & \text{Asibá wá lësì Qù gbé.} \\
& \text{Asiba come rice eat PRT} \\
& \text{‘Asiba came in order to eat rice.’} \\
\text{b. } & \text{[AspP wá [FP [F gbé [Asp lësì [Asp Qù [vP tÀsibá [vext tQù [vP [vP tQù t\text{ext}]]]]]]]]]}
\end{align*}

\textsuperscript{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).

\[(35)\]

\[\text{Étè wè Àsībá wá dùqù gbé?} \]

\[\text{what FOC Asiba come eat.eat PRT} \]

\[\text{‘What did Asiba come to eat it?’} \]

\[\text{I will not elaborate further on derivations (34b) and (35b); for discussion, see Aboh 2004c: chap. 6, 2005, and references cited there. The relevant conclusion for the present discussion is that the inverted object moves to a derived position that counts as an EPP position. Returning to SVCs, which I regard as an instance of OVC, the question now arises how they can be analyzed under structure (33).} \]

### 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 V1, which is comparable to an Aux, apparently case-marks and θ-marks the following object in a V1-O-V2 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 V1 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 V₂, though it appears to be the theme of V₁. In the comitative example (36b), the indirect object of V₂ is interpreted as the object of V₁.

(36) a. Sétù ze kpò ló xo 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 yí Kútnú.
    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 V₂ in (36a) merges with the theme to form VP₂. The latter merges with v aplik, which introduces the instrument in its specifier. The vP then merges with vext, the external argument introducer, to form a higher vP. This vP merges with the aspect to form AspP. Under aspect licensing and the EPP, V₂ raises to Asp (via v aplik and vext) to check its aspect features, followed by movement of the aspect to Spec,AspP. AspP then merges with F to form FP, which merges as the complement of the first verb (V₁), 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 V₁-(XP)-V₂ 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 ze [FP[AspP kpò ló [Asp xo [vP tSétù [vext t xo [vP tkpò ló [v aplik t xo [vP₂ txó Kòjó]]]]]]]]]]]]]

b. [TP Sétù [AspP[Asp kplán [vP[AspP Kòjó [Asp yí [vP tSétù [vext tyí [vP tkòjó [v aplik tyí [vP₂ tyí Kútnú]]]]]]]]]]]]]

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 vext (associated with V₂) 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 xo ‘hit’; see also section 3.2).¹³ In Collins’s (1997:485) terms, this reading is obtained through LF incorporation of V₂ into V₁. Thus, Baker’s (1989) double-headed VPs are moved to LF,

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) $\theta$-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 (Awóyále 1988). This is so even though $V_1$ ‘take’ is used as the main predicate in (38c), where it assigns a $\theta$-role to its object (for discussion, see Lefebvre 1991, Den Dikken and Sybesma 1998).

(38) a. Dàwè ló dób ãdji xómè ná mi káká, àmón má dɔ xó dje.  
man DET put anger bell.in for 1SG until but 1SG.NEG say word one  
[Ún zé nükün kpɔn-ɛ] bɔ wle ìliò 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. Sètù zé ãwájjë yí yé.  
Setu take joy receive 3PL  
‘Setu received them with joy.’

c. Sètù zé gbó ðkɒpó.  
Setu take goat one  
‘Setu took one goat.’

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

(39) a. Kofi de Yaw kɔɔ Kumase.  
Kofi take Yaw go Kumase  
‘Kofi took Yaw to Kumase.’

\(^{14}\) 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 $\theta$-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 $\theta$/case reasons. This observation is compatible with the previous conclusion about the preverbal object in OVCs and is reinforced by example (15), repeated here.

$\text{(40) } K\text{\textdegree}ku s\text{\textdegree} j\text{\textdegree}v\text{\textdegree} n\text{\textdegree} ce_j.$

\begin{quote}
Koku take knife DET cut bread DET with
‘Koku cut the bread with the knife.’
\end{quote}

This example shows that the instrument appearing between $V_1$ and $V_2$ is actually introduced by the preposition $\text{n\textdegree}$ 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 $\theta$-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 $\theta$-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 $\text{n\textdegree}$ in (40) takes this form only when followed by an empty category. Observe in sentence (41) that the benefactive/instrument preposition surfaces as $\text{n\textdegree}$. $\text{N\textdegree}$ is excluded in such contexts.

$\text{(41) } K\text{\textdegree}ku s\text{\textdegree} m\text{\textdegree}to s\text{\textdegree} n\text{\textdegree}/n\text{\textdegree} A\text{\textdegree}sib\text{\textdegree}.$

\begin{quote}
Koku sell car DET to/for Asiba
‘Koku sold the car to/for Asiba.’
\end{quote}

When the goal is $\text{wh}$-extracted as in (42a), however, only the form $\text{n\textdegree}$ can be used. The $\text{wh}$-island effect observed in (42b) suggests that the construction involves movement.
CLAUSE STRUCTURE AND VERB SERIES

(42) a. Mè wè Kòkú sà mòtò ọ ná/*nú. (Fongbe)
   who FOC Koku sell car DET to/for
   ‘To/For whom did Koku sell the car?’
   b. *Mè wè Ásíbá kànbyó nò hwiętèn wè Kòkú sà mòtò ọ 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. Kòkú sò jìvì sèn wà xù xù sè ná/*nú.
   Koku take knife DET cut bread DET with
   ‘Koku cut the bread with the knife.’
   b. Étè Kòkú sò sèn wà xù xù sè 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 dò/tò variation that occurs in Fongbe and Gungbe, respectively. As shown in Aboh 2004c:255, the auxiliaries (or verbal elements) dò and tò typically occur in progressive sentences and ‘be-located’ constructions (see section 2.3), where the forms dè and té are excluded.

(44) a. Ásíbá dò/*dè [mòtò ọ sà wè]. (Fongbe)
   b. Ásíbá tò/*tè [mòtò ló sà ‘]. (Gungbe)
   Asiba PROG car DET sell PRT
   ‘Asiba is selling the car.’

Under focus movement of the complement, however, dè/tè must be used, not dò/tò.15

(45) a. [Mòtò ọ sà wè], Ásíbá dè/*dò tì. (Fongbe)
   b. [Mòtò ló sà ‘] Ásíbá té/*tò tì. (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 dè/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, dò/dè, and tò/tè alternation occurs

15 The same alternation occurs in ‘be-located’ constructions involving dò/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 \textit{tòltè} (or \textit{dòldè} in Fongbe) is a functional head whose specifier serves as an escape hatch for movement of its complement. The alternating form \textit{tè} (\textit{dè}) is treated as an agreeing form (i.e., \textit{tè} = \textit{tò} + agr; \textit{dè} = \textit{dò} + agr) that reflects movement of the complement through the specifier of \textit{tò} (or \textit{dò}). 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 \textit{nà} (40), this proposal means that \textit{nà} displays an agreeing form (i.e., \textit{ná} = \textit{nú} + agr) when its complement has been extracted.

This analysis extends to the particle \textit{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).

\begin{align*}
(46) \quad \text{Me nya } \text{qèvi-è } \text{dzo } (\text{yi}). \\
& \quad \text{1sg chase child-DET leave PRT} \\
& \quad \text{‘I chased the child away.’} \\
(47) \quad \text{Kofi } \text{fo } \text{Yao } * (\text{yi}). \\
& \quad \text{Kofi hit Yao PRT} \\
& \quad \text{‘Kofi hit Yao.’}
\end{align*}

An analysis that comes to mind here is that Kpele involves a null oblique case assigner whose presence is signaled by \textit{yi} when movement has taken place. To put this differently, we can analyze \textit{yi} as an agreeing preposition (i.e., \textit{Ø} + 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 \textit{nà}, the Kpele preposition \textit{yi} cannot precede an in-situ object (48). Instead, the element \textit{ku} ‘with’, which determines instrumental case, must be used (Collins 1997:488).

\begin{align*}
(48) \quad * \text{Kofi } \text{fo } \text{Yao yi } \text{ati-è}. \\
& \quad \text{Kofi hit Yao PRT stick-DET} \\
(49) \quad \text{Kofi } \text{fo } \text{Yao ku } \text{ati-è}. \\
& \quad \text{Kofi hit Yao with stick-DET} \\
& \quad \text{‘Kofi hit Yao with the stick.’}
\end{align*}

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

\begin{align*}
(50) \quad \text{a. } \text{Kákù } \text{sò } \text{jìvi } \text{ sèn } \text{wòxúxú } \text{ sò } \text{nà}. \\
& \quad \text{Koku take knife DET cut bread DET with} \\
& \quad \text{‘Koku cut the bread with the knife.’} \\
\quad \text{b. } \text{Kofi } \text{tsò } \text{ati-è } \text{fo } \text{Yao yi}. \\
& \quad \text{Kofi take stick-DET hit Yao with} \\
& \quad \text{‘Kofi hit Yao with the stick.’}
\end{align*}
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 V2 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 V1 and V2.

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 ḍevi-ọ [vP dzo [proi (yi)]]

I conclude from this discussion that the constituent following V1 in ‘take’ series has its case checked within the vP shell (e.g., against vEXT, (36)), but raises to a derived EPP position right-adjacent to V1. Therefore, functional V1 ‘take’ lacks an internal θ-role, a property that generalizes to all verbs representing V1. V2, 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 V1 and lexical V2 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 V1 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. Kpọ̀ǹ̀n ọ̀n̄ yän jọ́t biʃ ọ̀n̄gbọ̀ mè bò gbé má x̣ọ̀dó è. Acé policemen PL chase thief enter forest in COORD refuse NEG follow 3SG in.fact yé ọ̀jù àvún òjìọ̀ dọ̀kpó ní-è dón bò é má nỵṣ-è. Káká àvún 3PL plant dog big one for-3SG there COORD 3SG NEG know-3SG before dog lè ná gbé dọ̀kpó, tón dàwè tówè tón bò yé zè-è kédè bò DET FUT bark one exit guy 2SG.POSS exit COORD 3PL take-3SG quietly COORD yi zé sú dọ̀ gànkpáhmè. 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.’
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 V₂ because V₁ lacks θ-roles, there are series where V₁ introduces the canonical subject (here, the policemen). At first sight, one could think that v₉ ext associated with V₂ 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

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) \[
\begin{align*}
\text{TP } & kpo'\text{n} : [\text{Asp} \ t_kpo'\text{n} : [\text{Asp} \ ny\text{a}n \ [\text{FP} \ [\text{Asp} \ ajot\text{\'} \ [vP \ [v_{\text{ext}} \ b\text{\'} \ ] \ [vP \ ta'\text{jo'} \ ] \\
\text{[} v_{\text{appl}} \ b\text{\'} \ ] \ [vP \ t_b\text{\'} \ zugb\text{\'} \ m\text{\'} ]]]]]]]
\end{align*}
\]

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 \textit{cup} enters the room, and the \textit{rock} is understood as the instrument with which the \textit{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 fo kapo yi xa-me \( yi \).

\begin{enumerate}
\item \textit{A rock hit a cup into the room.}
\item \textit{*A rock hit a cup and then went into the room.}
\end{enumerate}
(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. Ê ma fá bò mít dò síté Rèmí xé àtín lõ jì.
\( 3SG \text{ NEG easy COORD 1PL have push Remi climb tree DET on} \)
\textit{‘It was not easy for us to push Remi to climb the tree.’}
\textit{*‘It was not easy for us to push Remi and climb the tree (with him).’}

\(^{17}\) I’m grateful to Marcel den Dikken, Michel DeGraff, and two anonymous \textit{LI} reviewers for their comments and suggestions on this issue.
b. É má fá bò mí dò sısé móto l'é ké kpó l'é 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 V₁ (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 V₂.

3.5 Consecutive Series

Taking this line of thinking seriously, and following the hypothesis that V₁ 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) Ôjé! Sésínú kún móto cè sós âdó.
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 V₁ and V₂ 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 V₁, while the DP móto cè ‘my car’ is introduced by vappl, like an instrument or a comitative. The DP âdó ‘wall’, on the other hand, merges as the internal argument of V₂, whose external argument is suppressed. Following previous discussion, the external argument of V₁ moves to Spec,TP for case/agreement and EPP reasons, while the comitative/instrument móto cè moves to Spec,AspP to check the EPP feature under Asp. The derivation is represented in (58). 18

(58) [TP Sésínú [AspP tSésínú [Asp kún [FP[AspP móto cè [Asp sós [vP[vext[vP tmóto [vappl tâdó]}}}]

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 vext introduces the external argument Sésínú, vappl introduces móto cè ‘my car’ as an instrument, and âdó ‘wall’ merges as the internal argument of V₂. Choosing between (i) and (58) requires more study, and I leave the matter for future work.

(i) [TP Sésínú [AspP kún [FP[AspP móto cè [Asp sós [vP[vext[vP tSésínú [vP tmóto [vappl tâdó]]]]]]]]}
Under this analysis, functional V₁ ńin ‘drive’ is a CAUSE verb that introduces the causer and specifies how the event expressed by V₂ has been carried out (e.g., driving the car rather than pushing it into the wall). While this analysis of V₁ 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 V₁, 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 V₁ and V₂ 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) ńśibá ḋá ńlésićá ḋá.
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 V₁ 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 V₁ in such series suggest that this will not work. Consider again (17b), repeated here.

(60) . . . [vP ńśibá [v ń ḋá [vP₁ ńlésić́ [v₁ tńá [vP₂ prońśa [v₂ ḋá]]]]]]

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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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 \( \theta \)-position of \( V_1 \), where it is assigned the \( \theta \)-role theme. Here, PRO behaves like a locally bound reflexive.

\[
(61) \ldots [vP \text{Àsìábá} [v \text{ɗà} [vP_1 \text{lési}i [v \text{ɗà} [vP_2 \text{PRO}_i [v_2 \text{ɗù}]]]]]]
\]

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 \( \theta \)-role to the linearly following object.

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

\[
(62) \begin{align*}
\text{a.} & \quad \text{Kofi} \text{ give money buy house} \\
& \quad \text{‘Kofi gave money buy a house (i.e., he gave money to buy a house).’} \\
\text{b.} & \quad \text{Kofi} \text{ give book lSG.ACC do work} \\
& \quad \text{‘Kofi gave me a book to work (i.e., he gave me a book to work with).’}
\end{align*}
\]

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 \( \theta \)-role to the object to its right since the intended meaning is that of a modifier of \( V_2 \): ‘there has been a lot of eating or talking nonsense’.

\[
(63) \begin{align*}
\text{a.} & \quad \text{Àsìábá bě lésì dù.} \\
& \quad \text{Asiba collect rice eat} \\
& \quad \text{‘Asiba collected rice eat (i.e., Asiba ate a lot of rice).’} \\
\text{b.} & \quad \text{Àsìábá bě xó dʒ.} \\
& \quad \text{Asiba collect word say} \\
& \quad \text{‘Asiba collected word say (i.e., Asiba said a lot of nonsense).’}
\end{align*}
\]

\(^{20}\) 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 *dîn* means ‘look for’ or ‘search for’ when used lexically. However, the intended meaning of (64) is (64a), not (64b).

\[(64) \text{Àsìbá, dîn nú dê dù tò àdòkôn.}
\]
\[\text{Asiba search thing INDEF eat at kitchen}
\]
\[\text{a. ‘Asiba, get yourself something to eat in the kitchen.’}
\]
\[\text{b. ‘Asiba, look for something in the kitchen and eat it (in the kitchen).’}
\]

If the meaning of *dîn* 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 *V₂*, to which it assigns a θ-role. Similarly, the verb *kpôn* means ‘look at/for’ when used lexically. But this meaning is not available in its functional usage as *V₁*. Therefore, the sequence *kpôn xō dô ‘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 *dâ*, which is often translated as ‘cook’ but also means ‘prepare, make/get X ready’.

\[(65) \text{Mìgàn dâ kpôn n lé yì àhwàn.}
\]
\[\text{Migan prepare soldier PL go war}
\]
\[\text{‘Migan prepared the soldiers go to war (i.e., by making some magic).’}
\]

If lexical *dâ* 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 *dù*. In its lexical use in (63a) and (64), *dù* means ‘eat’; but when it is used as *V₁*, it can be followed by various elements, including the DP *tò lô ‘the country’ in (66), which cannot be said to receive the θ-role theme from *V₁*.

\[(66) \text{Yeù dù [tò lô] vô.}
\]
\[\text{3PL eat country DET finish}
\]
\[\text{‘They ate the country finish (i.e., they ruined the country by misappropriating funds).’}
\]

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 *V₁* ‘take’ θ-marks the DP object to its right. I propose to treat verbs like *bê ‘collect’, dîn ‘search for/get’, *kpôn ‘look/watch’, *dû ‘eat’, and *dâ ‘cook/prepare* as *V₁* in ‘take’ series. 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 *V₁* has no internal θ-role to assign but

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21 Many verbs have different meanings when used as *V₁* or *V₂*. *Hên* means ‘hold’ but *hên X gblé* means ‘cause X to spoil’, while *hên X wé* means ‘cause X to come, i.e., bring’.
selects for a complement inside which the element to its right is being licensed. Building on this, I propose that consecutive series with one argument should be derived as in (67) by movement of the object of V₂ to Spec,AspP, for EPP reasons as argued previously.

(67) [TP ǹsibá [AspP tǹsibá [Asp q̀dà [FP[AspP lǹsì [Asp qù [vP v Gwen tǹsibá [vP v appraisal qù [vP tqù tǹsì]]]]]]]]

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. 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 V₁-(XP)-V₂ SVCs in mind, let us now consider the verbal compounds (VCs) in (1b–c), reproduced here, where V₁ and V₂ 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 |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 V₁-XP-V₂ versus V₁-V₂-XP variation derives from movement of V₂ past the intervening object in VCs but not in SVCs. More specifically, I argue, on the basis of the previous discussion, that V₂ 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 V₂ 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).
Within the Kwa languages, therefore, the difference between Igbo-type languages, which exhibit V1-V2-XP order, and Gungbe-type languages, which exhibit V1-XP-V2 order, reduces to the presence of V2-to-F movement in the former but not in the latter.

With regard to VCs in Hoan (68b), Collins (2002:12–13) proposes that they involve multiple verb movements, where V1 and V2 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) $[vP[v{\text{pour-put.in}}[FP{\text{water}}[F{\text{ki}}[VP1{\text{twater}}[V1{\text{tpour}}[VP2{\text{tput.in}}[PP{\text{pot}}\text{in}]]]]]]]])$]

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 Hoan VCs in a way similar to their Igbo equivalents. I therefore propose that V2 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, V2 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 náłyí (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) $[TP[AspP[Asp\quad V1\quad pour\quad [FP{\text{F}}\quad V2\quad put\quad [AspP\quad water\quad [Asp\quad t_{\text{water}}\quad [VP1{\text{v}}\quad t_{\text{v,1}}\quad [VP2{\text{v}}\quad t_{\text{v,2}}\quad t_{\text{object}}]]]]]]]]$

In terms of this analysis, that V1 always precedes V2 in both VCs and SVCs follows naturally from the structure of verb series: V1 is a functional (or light) verb that merges in the functional field associated with V2. 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 V1 that merges within the functional domain of the lexical verb V2. Under this view, the internal argument is always introduced within the vP shell associated with V2, 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 V1-XP-V2 versus V1-V2-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.

\[(72)\]
\[
a. \text{Vaju a pigghiu u pani.} \quad \text{(Marsalese)}
\]
\[
\quad \text{go.1SG to fetch.1SG the bread}
\]
\[
\quad \text{‘I go to fetch bread.’}
\]
\[
b. \text{I go (and) buy bread.} \quad \text{(American English)}
\]

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 V₁-XP-V₂ and V₁-V₂-XP series, V₁ merges in the functional domain of the lexical verb (V₂) 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 V₂-object inversion, sometimes followed by V₂ 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 V₁ 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 0-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’.

\[(73)\]
\[
\text{Ún dɔ̀ na-è dʒɔ̀ Sù̀rù̀ ná wá wá nò nò fí tò hwèmè.}
\]
\[
\text{1SG tell PREP/give-3SG COMP Suru FUT EVENT come HAB stay here at noon}
\]
\[
\quad \text{‘I told him that Suru will eventually come to stay here frequently at noon.’}
\]

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


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