Clause structure and verb series

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1 Introduction

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

(1) a. `Asiba bе lеsі dж  
Asiba collect rice eat
‘Asiba collected rice eat (i.e., Asiba ate a lot of rice).’

b. Obi kwa-da-ra Eze. 
Obi push-fall-rV Eze
‘Obi pushed Eze down.’

c. Ma a- q|hu |’o djo ki kx’u na. 
1SG PROG pour put.in water PRT pot in 
‘I am pouring water into the pot.’

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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\(^1\) 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 V₁ and V₂ to little v. These series comply with the ASH, though “multiple” verb movement distorts the underlying V₁-O-V₂ order.

In this article, I take a different approach to serialization. I abandon the ASH and propose that in the series in (1), V₁ merges as a functional (verbal) element within the extended projection of the lexical verb (i.e., V₂) that introduces the arguments (2).

\[
(2) \ \{CP \ldots \{TP \ldots V₁ \ldots \{VP \ldots \{V₂ \ldots \}}\}\}]
\]

In (2), functional V₁ has no internal θ-role, which is why it can merge within the functional extension of the lexical verb V₂. 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 V₁ is similar to certain Auxes (or light verbs) because it delimits a functional domain that embeds the lexical verb V₂ 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 V₁-V₂-O sequences in (1b–c) result from subsequent movement of V₂ 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 V₁-XP-V₂ and V₁-V₂-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, Anstre 1966, Lord 1973, Bamgbọ̀se 1974).
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. The tendencies in (4) are often considered typical of these series.

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

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

\[
[S \overset{\text{Àsibá}}{\rightarrow} [I[VP[V \overset{\text{då}}{\rightarrow} \overset{\text{lésì dù}}{\rightarrow} V_1 \overset{\text{dù}}{\rightarrow} V_2]]]]\]

Assuming the Projection Principle, Baker (1989:527) concludes that because ‘‘the object of \( V_1 \) is an immediate constituent of a \( V’ \) projection of \( V_2 \), \( V_2 \) must \( \theta \)-mark it, just as any other verb must \( \theta \)-mark its object. Thus, the Projection Principle predicts that object sharing is not only possible in SVCs, but obligatory.’’ This conclusion has far-reaching theoretical and empirical consequences. For instance, no internal argument can appear after \( V_2 \). In addition, \( V_2 \) cannot license an overt pronoun object coreferential with the first object (Baker 1989:527). Similarly, this analysis implies that 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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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:\footnote{Example (i) shows that series can also involve inherent complement verbs (ICVs).}

(6) Òjè! Sèsíñú kùn móto cè sò *(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: $bò$ coordinates two IPs involving two distinct subjects (7a) or coreferential pronouns, while $bó$ coordinates two IPs where the subject of the first IP necessarily controls that of the second (7b).

(7) a. Sèsíñú dà lèsi $bò$ Súrù dà núsñú.

Sesinou cook rice COORD Suru eat soup

‘Sesinou cooked rice and Suru ate soup.’

b. Sèsíñú, dà lèsi $bó$ prói dà núsñú.

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 $bó$) in contexts where Ewegbe, discussed by Collins (1997:465), has covert coordination.

(8) a. Kòfì ná dà lèsi *(bò) ná yì xömè.

(Gungbe)

b. Kòfì ná dù mšlnkùn *(bò) ná yì xömè.

(Fongbe)

c. Kòfì á dù mšlù ... á yì xömè.

(Ewegbe)

Kòfì FUT eat rice (COORD) FUT go room

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

\footnote{(i) Yṣkpö lé yì dó-wèzùn gbìn àxìnìè.

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 bɔ 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. Kofi má ná wá fí bò ná dú wè.
   Kofi NEG FUT come here COORD FUT dance dance
   ‘Kofi will not come here and will dance.’
   b. Kofi má ná wá fí bò má ná dú 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 V₁ only and cannot precede V₂. The negation má and tense marker ná precede V₁ kun ‘drive’ in (10a), but they cannot occur with V₂ sɔ ‘hit’, as shown in (10b).

(10) a. Sésínú! À má ná sɔ kun métò cè sɔ àdó égbè.
   Sesinou 2SG NEG FUT again drive car 1SG.POSS hit wall today
   ‘Sesinou! You will not again drive my car hit (i.e., into) the wall today!’
   b. *Sésínú! À má ná sɔ kun métò cè má ná sɔ àdó égbè.
   Sesinou 2sg NEG FUT again drive car 1SG.POSS NEG FUT hit wall today

These examples show that Gungbe coordinate structures do not obey generalization (4c), which holds of 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 kun métò cè sɔ àdó!
   Sesinou FUT drive car 1SG.POSS hit wall
   ‘Sesinou will drive my car hit the wall!’
   b. Sésínú wè ná kun métò cè sɔ àdó!
   Sesinou FOC FUT drive car 1SG.POSS hit wall
   ‘SESIONOU will drive my car hit the wall!’
   c. Métò cè wè Sésínú ná kun sɔ àdó!
   car 1SG.POSS FOC Sesinou FUT drive hit wall
   ‘Sesinou will drive MY CAR hit the wall!’

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.
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) *État, wè `ún kānbìô jìhvètènùj wè Sèsínú nà kūn tì sò ìdò 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. Sèsínú dà lèśì bò Sùrù dà nùsùnù.
  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. *État, wè Sèsínú dà tì bò Sùrù dà nùsùnù?
    what FOC Sesinou cook COORD Suru eat soup
    ‘What did Sesinou cook and Suru eat soup?’

b. *État, wè Sèsínú dà lèśì bò Sùrù dà tì?
    what FOC Sesinou cook rice COORD Suru eat
    ‘What did Sesinou cook rice and Suru eat?’

c. Êtätì wè Sèsínú dà tì bò Sùrù dà tì?
    what FOC Sesinou cook COORD Suru eat
    ‘What did Sesinou cook and Suru ate?’
Furthermore, in series, but not in coordinate structures, V₂ cannot license a pronoun coindexed with the object of V₁.

(14) a. *Sésí nú ná kún mó tô 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. Sésí nú đā lè sì bọ  
    Sürù sà-é 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 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.

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) θ-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).

(15) Kòkú só [jíví ʒ], sèn wòxúxú ʒ ná ec₁.  
    (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) Ètèjì wè Kòkú só sèn wòxúxú ʒ ná ec₁?  
    (Fongbe)  
    what foc Koku take cut bread DET with  
    ‘What did Koku cut the bread with?’

If, as da Cruz (1997) convincingly argues, ná ʒ marks the instrument/manner argument in these Fongbe examples, then V₂ sèn ‘cut’ cannot be a triadic verb that jointly ə-marks the object of V₁ jíví ʒ ‘the knife’. Accordingly, V₁ and V₂ 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 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. Àsìbá dà lèśì dù.
Asìba cook/prepare/make rice eat

‘Asìba cooked/prepared/made the rice eat (i.e., she ate the rice).’

b. . . . [vP Àsìbá [v dà [VP₁ lèśì [V₁ tì [VP₂ pro[pro [v du]]]]]]]

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) Kofi bò-ọ Áma ku-u no.
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 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., gié!gié ‘quickly’), which Stewart (1998) treats as heads, intervene between the object and V₂.

(19) Òzó dìmìwùn èmà [gié!gié] 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 V₁ and V₂ belong to two different domains of the clause structure: V₂ merges as the head of the lexical field of which V₁ 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 V₁ and V₂ do not share an argument. I have also demonstrated that the space between V₁ and V₂ 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 jé lési ɖù jí.
Asiba reach rice eat PRT
‘Asiba started eating rice.’
b. Àsíbá wá lési ɖù gbé.
Asiba come rice eat PRT
‘Asiba came in order to eat rice.’
c. Àsíbá tò lési ɖù.’
Asiba PROG rice eat PRT
‘Asiba is eating rice.’ (progressive)
d. Àsíbá gbé lési ɖù.
Asiba refuse rice eat
‘Asiba refused to eat rice.’

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

(i) Yé ɖù láń l³ mú.
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.  

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) \[\ \text{\`Asibá má nà nà wá lè\’sì dù gbé.} \]
\[\ \text{\`Asiba NEG FUT HAB come rice eat PRT} \]
\[\ \text{\`Asiba will not habitually come in order to eat rice.} \]

Second, both SVCs and OVCs allow wh-extraction of all arguments. Compare the following OVCs with the SVCs in (11):

(22) a. \[\ \text{\`Kofi wè \`Asibá yì xó dù nà ecì gbé.} \]
\[\ \text{Kofi FOC Asiba go word say PREP PRT} \]
\[\ \text{\`Asiba left in order to talk to KOFI.} \]

b. \[\ \text{Mènù wè \`Asibá yì xó dù nà ecì gbé?} \]
\[\ \text{who FOC Asiba go word say PREP PRT} \]
\[\ \text{Who did Asiba go to talk to?} \]

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 nà to intervene between the object and the lexical verb.

(23) \[\ \text{\`Asibá wá lè\’sì nà dù gbé.} \]
\[\ \text{Asiba come rice PROSP eat PRT} \]
\[\ \text{\`Asiba came in order to eat rice (and she is about to do so).} \]

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
aspectual verbs only have selectional requirements on the agent. The question therefore arises
whether the following lexical verb \( \theta \)-marks and case-licenses the left-adjacent DP object. Put
simply: is the intervening DP object in a case and \( \theta \)-position? In the context of SVCs, we may
inquire whether the DP object between \( V_1 \) and \( V_2 \) is \( \theta \)-marked and case-licensed by \( V_1 \) and \( V_2 \),
as one would expect under the ASH. 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 \( \theta \)-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
\( \theta \)-mark the element to its left.

(24) \( \langle x \rangle \ ló tó 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. \( Äsibá tó ná sà è ná mì`\).
Asiba prog prosp sell 3sg prep me.prt
‘Asiba is just about to sell it for me.’

b. *\( Äsibá tó è ná sà ná mì`\).
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. \( Äsibá tó [sín] nù dèdè`\).
Asiba prog water drink slowly.prt
‘Asiba is drinking water slowly.’

b. \( Äsibá tó [dèdè] zòn`\).
Asiba prog slowly walk.prt
‘Asiba is walking slowly.’
(27) Asiba \( \text{tò} \) [mótò kùnkùn] ná kplôn.`.
Asiba PROG car drive drive PROSP learn PRT
‘Asiba is just about to learn to drive a car.’

(28) a. Á \( \text{tò} \) hàn kplôn Kolfì`.
2SG PROG song teach Kofi PRT
‘You are teaching Kofi a song.’
b. Étè \( \text{wè} \) à \( \text{tò} \) Kolfì 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 \( \text{na} \) 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 \( \theta \)-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 \( \theta \)-marked and case-licensed—but DP objects subsequently raise to the preverbal position related to the prospective aspect marker. Under the view that this marker heads its own projection (AspP), I propose that Asp, sometimes realized as \( \text{na} \), 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. Jíkù tò jíjà`.
rain PROG fall fall PRT
‘It is raining.’

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

(30) a. Sùrù tò sisà è ná mí`.
Suru PROG sell sell 3SG PREP me PRT
‘Suru is selling it for/to me.’
b. Été \( \text{wè} \) Sùrù tò sisà tì ná mí`?
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. Jı́ku` to` ná (*jı́)ja`n`.
   rain PROG PROSP fall.PRT
   ‘It is just about to rain.’

b. Súrù to` ná (*sí)sà è ná mì`.
   Surù PROG PROSP sell 3SG PREP me.PRT
   ‘Suru is just about to sell it for/to me.’

c. Étë₁ wè Súrù to` ná (*sí)sà tf ná mì`?
   what FOC Surù 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` to` jı́ku` ná já`.
   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/V₁ 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) [Sësñú kùn mótò cè së atíñ] wè!
   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.

\[(33) \ [ \text{AspP} \ \text{Aux/V}_1 \ [\text{FP} \ \text{PRT} \ [\text{AspP} \ [\text{vP} \ [\text{vext} \ [\text{vP} \ [\text{vappl} \ [\text{VP} \ V]]]]]]]]\]

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\_OP 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).

(34) a. Ásíbá wá léši dù gbé.  
      Asiba come rice eat PRT  
      ‘Asiba came in order to eat rice.’

b. \[ [\text{AspP} \ wá \ [\text{FP} \ \text{F} \ \text{gbé} \ [	ext{AspP} \ \text{léši} \ [	ext{Asp} \ \text{dù} \ \text{tÀsíbá} \ [	ext{vP} \ \text{tàù} \ [	ext{vP} \ [\text{vP} \ \text{tàù} \ \text{tù}]]]]]]] \]

\[^{11}\text{Under proposals made in Aboh 2004c, the complement of Aux/V is a small clause involving a CP layer (here FP) and an IP layer (AspP). This formulation does not bear in any significant way on the conclusions reached in this article.}\]
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).\footnote{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.}

(35) a. Étě \(wě\) Asibá \(wá\) dűḏű gbé?
    what FOC Asiba come eat.eat PRT
    ‘What did Asiba come to eat it?’

b. \[\text{AspP } wá \left[ \text{FP } gbé \right. \text{AspP expl} \left[ \text{Asp dűḏű } \right. \text{vP } tAsibá \left[ vP t_{q₀} \left[ vP vP t_{tète} \right. \right. \right. \right. \]

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.
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. Sẹ́tù zé kpò lọ́ xò Kọ́jọ́.
    Setu take stick DET hit Kojo
    ‘Setu took the stick hit Kojo (i.e., Setu hit Kojo with the stick).’

b. Sẹ́tù kplán Kọ́jọ́ yì Kútnù.
    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 vapp, 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 vapp and vext) to check its aspect features, followed by movement of the instrument to Spec,AspP. This vP 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 Sẹ́tù [AspP[Asp zé [FP[AspP kpò lọ́ tọ́ xò [Asp xóò [vP tSẹ́tù [vext tọ́ xò [vP tkpò lọ́ tọ́ [vapp tọ́ xóò [vP₂ tọ́ xò Kọ́jọ́]])]]]]]]

b. [TP Sẹ́tù [AspP[Asp kplán [TP[AspP Kọ́jọ́ [Asp yì [vP tSẹ́tù [vext tọ́ yì [vP tKọ́jọ́ [vapp tọ́ yì [vP₂ tọ́ yì Kútnùá]])]]]]]

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 Sẹ́tù 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 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 “expericner 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 (Awóyale 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).

\[
(38) \text{a. } \text{Da`we` l } \text{dó } \text{àdji } \text{xùmì } \text{ná } \text{mì } \text{káká, } \text{àmón } \text{má } \text{dʒɔ } \text{xò } \text{dʒɛ.}
\]

\[
\text{man det put anger bell.in for 1SG until but 1SG.NEG say word one}
\]

\[
[\text{Ün zé } \text{nùkùn } \text{kpɔ̀n-ɛ] bə } \text{wâte } \text{ålìo } \text{ɛɛ.}
\]

\[
1SG \text{ take eye look-3SG COORD catch road 1SG.POSS}
\]

‘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).’

\[
\text{b. } \text{Sètù } \text{zɛ } \text{àwájìjɛ yí } \text{yɛ.}
\]

\[
\text{Setu take joy receive 3PL}
\]

‘Setu received them with joy.’

\[
\text{c. } \text{Sètù } \text{zɛ } \text{gbɔ } \text{ɖɛkɔ.}
\]

\[
\text{Setu take goat one}
\]

‘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, \( V_1 \) \textit{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).

\[
(39) \text{a. } \text{Kofi } \text{de } \text{Yaw } \text{kɔɔ } \text{Kumase.} \quad \text{(Akan)}
\]

\[
\text{Kofi take Yaw go Kumase}
\]

‘Kofi took Yaw to Kumase.’

\(^{14}\) See also Grimshaw and Mester 1988, Hagemeijer 2001.
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.

(40) Këkú sô \( [jìvì \ 5_i] \) sèn wòxúxú \( 5 \) nà \( ec_i \). \( \text{(Fongbe)} \)

\begin{quote}
Koku take knife DET cut bread DET with
\end{quote}

‘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 \( nà \) 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 \( ná \) 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) Këkú sà mëtò \( 5 \) nú/*ná Àsíbá. \( \text{(Fongbe)} \)

\begin{quote}
Koku sell car DET to/for Asiba
\end{quote}

‘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. *Këkú sà mëtò \( 5 \) ná Àsíbá.

b. Këkú sà mëtò \( 5 \) nà Àsíbá.
This description carries over to the series in (43), where *núlná alternation also occurs in the context of extraction.

(43) a. Kókú só jíví só sén wàwúxú só ná/*nú.
   Koku take knife DET cut bread DET with
   ‘Koku cut the bread with the knife.’

b. Étë Kókú só sén wàwúxú só ná/*nú?
   what Koku take cut bread DET with
   ‘What did Koku cut the bread with?’

If *núlná 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 *núlná alternation is reminiscent of other verb (or preposition) alternations where we know movement has taken place. A case in point is the *dó/dè or tólè variation that occurs in Fongbe and Gungbe, respectively. As shown in Aboh 2004c:255, the auxiliaries (or verbal elements) *dó and tólè typically occur in progressive sentences and ‘be-located’ constructions (see section 2.3), where the forms *dè and tè are excluded.

(44) a. Åsíbá *dó/*dè [mótò só sà wè].
   Asiba PROG car DET sell PRT
   ‘Asiba is selling the car.’

b. Åsíbá tól/*tè [mótò ló sà ‘‘].
   Asiba PROG car DET sell PRT
   ‘Asiba is SELLING THE CAR.’

Under focus movement of the complement, however, *dèltè must be used, not *dólò.15

(45) a. [Mótò só sà wè], Åsíbá dè/*dù tì.
   Car DET sell PRT Asiba PROG
   ‘Asiba is SELLING THE CAR.’

b. [Mótò ló sà ‘‘] Åsíbá tél/*tù tì.
   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 *délè 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 *núlná, *dólè, and tólè alternation occurs

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

This analysis extends to the particle \textit{yi} in Kpelle (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{itemize}
  \item (46) Me nya dèvi-ε dzo (yi).
    \begin{itemize}
      \item 1SG chase child-DET leave PRT
      \item ‘I chased the child away.’
    \end{itemize}

  \item (47) Kofi fo Yao (*yi).
    \begin{itemize}
      \item Kofi hit Yao PRT
      \item ‘Kofi hit Yao.’
    \end{itemize}
\end{itemize}

An analysis that comes to mind here is that Kpelle 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{θ} + 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 Kpelle preposition \textit{yi} cannot precede an insitu object (48). Instead, the element \textit{ku} ‘with’, which determines instrumental case, must be used (Collins 1997:488).

\begin{itemize}
  \item (48) *Kofi fo Yao yi ati-ε.
    \begin{itemize}
      \item Kofi hit Yao PRT stick-DET
    \end{itemize}

  \item (49) Kofi fo Yao ku ati-ε.
    \begin{itemize}
      \item Kofi hit Yao with stick-DET
      \item ‘Kofi hit Yao with the stick.’
    \end{itemize}
\end{itemize}

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

\begin{itemize}
  \item (50) a. Kòkú sò jìvì sèn wènxùxù sèn nà.
      \begin{itemize}
        \item Koku take knife DET cut bread DET with
        \item ‘Koku cut the bread with the knife.’
      \end{itemize}

  \item b. Kofi tò ati-ε fo Yao yi.
    \begin{itemize}
      \item Kofi take stick-DET hit Yao with
      \item ‘Kofi hit Yao with the stick.’
    \end{itemize}
\end{itemize}
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c. Kofi zé àtìn ló xò Kɔkù —. (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., $pro_i$) 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-ɛ [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 0-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. Kpɔ̀nɔn lé nyàn ājɔtɔ bìs zìŋbɔ̀ mè bɔ̀ gbé mà xɔ̀dɔ̀ è. Acé policeman pl chase thief enter forest in COORD refuse NEG follow 3SG in.fact yè dò àvùn ðàxò dɔ́kpɔ̀ nī-è dɔ̀n bɔ̀ è mà nyɔ-è. Kàkà àvùn 3pl plant dog big one for-3SG there COORD 3SG NEG know-3SG before dog lɔ̀ nà gbɔ̀ dɔ́kpɔ̀, tɔ̀n dàwè tɔ̀wè tɔ̀n bɔ̀ yè zè-è kɛdɛ̀ bɔ̀ DET FUT bark one exit guy 2SG.POSS exit COORD 3PL take-3SG quietly COORD yi zé sú dɔ̀ gànkpàmè. 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. Kpônôn lé nyân ajọtọ bíz zìngbó mè bọ yi jè kùnînî jí. Ní à policeman pl. chase thief enter forest in coord go bump lion on if 2SG mọ wèzùn, mè dẹ̀ nì jì sò gbòn dé, mè dẹ̀ nì jì gbákù gbòn see race some indef throw gun pass there some indef throw hat pass dé. Ajọtọ bá! Kèdèkèdé wè é bá à bọ xé àtìn jí. À mà mà dé dọ there thief not slowly foc 3SG make coord climb tree on 2SG neg see that sé dẹ̀ dá ajọtọ tô vô!
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 V₂ because V₁ lacks θ-roles, there are series where V₁ introduces the canonical subject (here, the policemen).¹⁶ At first sight, one could think that vₐₓtₐ 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-mésél-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 V₂ is suppressed, and the causee (i.e., ‘thief’) is introduced by vappl, 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) \[ TP \text{kpo`n} : [\text{Asp} \text{t} \text{kpòn} : \text{Asp} \text{n} \text{nyan} \left[ FP \text{Aj} \text{tot} 5 \left[ \text{Asp bi} 5 \left[ \text{vp} \text{t} \text{bi} 5 \left[ \text{vP} \text{a} \text{jo`t} \	ext{vext} \text{t} \text{bi} 5 \left[ \text{vP} \text{ta} \text{jo`t} \	ext{vappl} \text{t} \text{bi} 5 \left[ \text{VP2} \text{t} \text{bi} 5 \text{zungbo mè} \right] \right] \right] \right] \right] \right] \right] \right] \]

Evidence supporting this analysis comes from Kpelé (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 fó kəp o yi xy-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 bò mú dó sɨsé Rɛmí xé ətín l5 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).’

17 I’m grateful to Marcel den Dikken, Michel DeGraff, and two anonymous LI reviewers for their comments and suggestions on this issue.
b. É má fá bò mí dó sí sé mútò lî xé kpó lî 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 kùn mútò cè sò 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 mútò 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 mútò cè moves to Spec,AspP to check the EPP feature under Asp. The derivation is represented in (58).

(58) [TP Sésínú [AspP tSésínú [Asp kùn [FP[AspP mútò cè [Asp sò [VPvext[VP tmóto [vappl tš5 [VP2 tš3 âdó]]]]]]]]]]

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 mútò 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 tSésínú [Asp kùn [FP[AspP mútò cè [Asp sò [VPvext[VP tmóto [vappl tš5 [VP2 tš3 âdó]]]]]]]]]
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). While this analysis of $V_1$ as a functional verb lacking an internal $\theta$-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 $[\text{VP cook rice}]$ and $[\text{VP eat rice}]$ jointly interpreted.

(59)  Asíba $\text{dá}$ lèsì $\text{dù}$.  
Asíba cook/prepare/make rice eat  
‘Asíba 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 $\theta$-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)  ... $[\text{vp Asíba } [\text{v } \text{dá} [\text{vp$_1$ lèsì$_1$ } [\text{v$_1$ } \text{t$dì$ } [\text{vp$_2$ pro$_{dà}$ } [\text{v$_2$ } \text{dù}]]]]]]$

### 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 $\theta$-position to another $\theta$-position, under which PRO is

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19 English drive is also causative: *The police drove them out by playing loud music.*
ENOC OLADE ABOH

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.

\[
(61) \quad \cdots [vP \, \text{Âsîbá} \, [v \, \text{dà} \, [vP, \, \text{lèsi} \, [v_1 \, \text{tjà} \, [vP_2 \, \text{PRO} \, [v_2 \, \text{dù}]]]]]]
\]

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 $\theta$-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.

\[
(62) \quad \begin{align*}
\text{a.} & \quad *\text{Kôfì nà kwì xò xwè proi}.
& \quad \text{Kofi give money buy house}
& \quad \text{‘Kofi gave money buy a house (i.e., he gave money to buy a house).’}
\text{b.} & \quad *\text{Kôfì nà wèmà, mì wà àzòn proi}.
& \quad \text{Kofi give book 1SG.ACC do work}
& \quad \text{‘Kofi gave me a book to work (i.e., he gave me a book to work with).’}
\end{align*}
\]

The VP shell analysis in (60), where object control guarantees the ASH, rules in (62a–b), contrary to fact. In principle, the shared argument ($kwè$ ‘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 $bè$, which means ‘collect’ when used lexically, does not encode this meaning when used functionally. Instead, examples (63a–b) indicate that $V_1$ $bè$ 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’.

\[
(63) \quad \begin{align*}
\text{a.} & \quad \text{Âsîbá bè lèsi dù.}
& \quad \text{Asiba collect rice eat}
& \quad \text{‘Asiba collected rice eat (i.e., Asiba ate a lot of rice).’}
\text{b.} & \quad \text{Âsîbá bè xò dìsì.}
& \quad \text{Asiba collect word say}
& \quad \text{‘Asiba collected word say (i.e., Asiba said a lot of nonsense).’}
\end{align*}
\]

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

(64) ̀Asíbá, *dí*n nú dê dê tô àdókôn.
     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 *dí*n 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 *kpón* means ‘look at/for’ when used lexically. But this meaning is not available in its functional usage as V₁. Therefore, the sequence *kpón* x̣ *dí* ‘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 *gà*, which is often translated as ‘cook’ but also means ‘prepare, make/get X ready’.

(65) Mìgàn *gà* *kpón* n le yi àhwàn.
     Migan prepare soldier pl go war
     ‘Migan prepared the soldiers go to war (i.e., by making some magic).’

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

(66) Yè *dí*̀ [ tô 15] v₃.
     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 V₁ ‘take’ θ-marks the DP object to its right. I propose to treat verbs like b̀é ‘collect’, *dí*n ‘search for/get’, *kpón* ‘look/watch’, *dí*̀ ‘eat’, and *dí*̀̀ ‘cook/prepare’ as V₁ 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 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. *Hèn* means ‘hold’ but *hèn* X gblé means ‘cause X to spoil’, while *hèn* 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 $V_2$ to Spec,AspP, for EPP reasons as argued previously.

$$\text{(67)} \quad [\text{TP} \text{Asbá} \,[\text{AspP} \, t\text{Asbá} \,[\text{AspP} \, \text{lešì} \,[\text{Asp} \, \text{dù} \,[\text{vP} \, \text{vext} \, t\text{lešì} \,[\text{vP} \, \text{vappl} \, t\text{dù} \,[\text{vP} \, t\text{dù} \,[\text{t}\text{dù}]]]]]]]]]$$

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 $V_1$-(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.

$$\text{(68) a. Obi kwa-da-ra Eze.} \quad \text{(Igbo, Kwa)}$$

Obi push-fall-rV Eze

‘Obi pushed Eze down.’

(Stewart 1998:183)

$$\text{b. Ma a- q\|hu \, o \, djo ki \, kx’u na.} \quad \text{(Hoan, Khoisan)}$$

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).

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 pour-put.in [FP water [F ki [VP1 twater [V1 tpour [VP2 PROwater [V2 tput.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 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 na´/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 V1 pour [FP[F V2 put [AspP water [Asp tv2put [vP[v water [vP[v ext tv2put [VP2[V tv2put twater [PP ki-pot in]]]]]]]]]]]]]

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. Vaju a pigghiu u pani.  
      go.1SG to fetch.1SG the bread  
      ‘I go to fetch bread.’  
      (Marsalese)

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’ (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 Ḃọ na-ṭ  dọ Sùrù ná wá wá nò ni ì生殖 hrèmè.  
      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.
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