A First Look at Ewe VP Fronting and Derivation by Phase*

Leston Chandler Buell, University of Amsterdam

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Comments are welcome.

1. Introduction

Wh and focus movement is generally assumed to be successive cyclic. That is, if an element originates in an embedded clause and surfaces in the complementizer field of the matrix clause, it is assumed to move through the complementizer field of that embedded clause and that of any intervening clauses before finally reaching the matrix clause. Most direct evidence for this cyclicity comes from complementizer-domain phenomena such as partial *wh* movement. However, it is now generally assumed that movement proceeds by phase and that simple clauses have a phase boundary not only in the complementizer field, but also at the top of the theta domain, generally spec-vP. According to this assumption, it is to be expected that *wh* movement and other sorts of A′-movement proceed cyclically through both vP and CP (Chomsky 2001). Unfortunately, we have very little direct evidence for this. As an example of what direct evidence for an intermediary move between CP's would look like, consider the quantifier *all* in the two questions in (1).

(1) a. $[_{CP}$ [What all]$_i$ does $[_{IP}$ she $[_{vP}$ think $[_{CP}$ that you want t_i ?]]]]

b. *$[_{CP}$ What$_j$ does $[_{IP}$ she $[_{vP}$ [t_j all]$_i$ think $[_{CP}$ that you want t_i ?]]]]

We will assume that *what all* is inserted as a constituent in the embedded clause. The grammatical sentence in (1a) provides no direct evidence for the movement through spec-vP indicated by the trace. In contrast, in the ungrammatical (1b), the quantifier is stranded in the spec-vP of the matrix clause. Were this sentence grammatical, it would provide direct evidence that A′-movement proceeds through an intermediary phase on its path from CP to CP.

In this paper, it will be argued that under certain conditions, a certain construction in Ewe, a Kwa language of the Gbe subgroup, spoken primarily in Ghana and Togo, provides precisely the sort of direct evidence for an intermediary move from CP to CP which is so sorely lacking. Specifically, there is a focus-related construction in this language ("nominalized VP fronting") in which the matrix verb root and an embedded *wh* phrase are fronted in a single constituent to the matrix complementizer domain. An example is given in (2).

(2) [Àfíkà$_i$ dí-ḿ]$_j$ nè-lè $[_{XP}$ t_j $[_{CP}$ $[_{vP}$ bé má-dà àɖákà-nyè ɖô t_i?]]]
where want-PROG 2SG-be.at that 1S:FUT-put box-1S go.to
'Where do you want me to put my suitcase?'

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The word *àfíkà* 'where' in this example is thematically related to the verb *dà* 'put' in the shows that its complement has been extracted. It should be further obvious that *àfíkà* is not thematically related to the matrix verb *dí* 'want' in the matrix clause. According to Aboh's (2005) analysis, sequences such as *dí-ḿ*, which also appear below elements like the auxiliary verb *lè* (2) are formed on the spine of the clausal derivation. If this is so, then the only way the *wh* element *àfíkà* could come to form a constituent with *díḿ* would be that it first moved to some sub-IP position in the matrix clause, providing direct evidence for cyclic movement through a low position like spec-vP. This line of reasoning obviously hinges on the claim that *àfíkà díḿ* forms a single constituent as bracketed, but is that necessarily the case? Do *àfíkà* and *díḿ* really form a single constituent? Couldn't the structure of (2) actually be more like that of the Spanish question in (3) instead, in which the fronted *wh* phrase *con quién* and fronted verb *cree* clearly do not form a single constituent?

(3) ¿[Con quién]$_i$ cree$_j$ Juan t_j que saliste t_i? [Spanish]
with who believe:3SG Juan that go.out:2SG
'Who does Juan think that you went out with?'

In this paper, the constituency of the fronted material in (2), which we will call the VP nominalization will be rigorously argued for.

The remainder of the paper is structured as follows. Section 2 discusses the basic word order properties of Ewe and the essentials of the VP nominalization fronting construction. Section 3 discusses various types of evidence that the VP nominalization is fronted as a single constituent. Additional properties of the VP nominalization are discussed in Section 4. Section 5 discusses VP fronting in multiclausal sentences, like the one in (2). Section 6 concludes.

2. Word order and VP nominalization fronting

In this section some of the basic properties will be laid out concerning word order and VP nominalization fronting. Ewe is an S V O language, exemplified by the simple sentence in (4), which also illustrates the fact that any adjunct will follow the object.

(4) Mè-*ƒ*lè ʋǔ sià Ghănà sídì àkpé blâ èvè.
1sg-buy car this Ghana cedi thousand twenty
'I bought this car for GH₵20,000.'

Constituent questions require fronting of the *wh* phrase, as shown in (5). A question with a postverbal *wh* phrase, as in (5b), is acceptable only as an echo question.

(5) a. Àmékà-é nè-kpɔ̂?
who-FOC 2SG-see
'Who did you see? '
b. *È-kpɔ́ àmékà?
2SG-see who

Fronted focused elements, including *wh* phrases, often occur with the focus marker *-é/yé*, which occurs only in the left periphery of the clause (Badan and Buell 2011). This is illustrated in (6), with a DP modified by *kò* 'only'. While such a phrase can either occur postverbally (i.e., in situ) or be fronted, the focus marker *yé/é* can only be used in the latter case.

(6) Àgbàlɛ̃ sià kò-(é) Yàwò xlɛ̃.
book this only-FOC Yawo read
'Yawo only read this book.'

We will now discuss an aspect-related phenomenon on nominalized VP fronting beginning with clauses in which the verb has no complement. In progressive and prospective aspect, the verb reduplicates in this case. The reduplicated verb is followed by a nominalizing particle indicating which of the aspects is intended (*ḿ* for progressive, *gé* for prospective), as shown in (7a) and (7b).

(7) a. Kòfí dzó.
Kofi leave
'Kofi left.'
b. Kòfí lè dzò-dzó gé.
Kofi be.at REDUP-leave PROSP
'Kofi is about to leave.'
c. Kòfí lè dzò-dzó-ḿ.
Kofi be.at REDUP-leave-PROG
'Kofi is leaving.'

Now we turn to verbs having a complement. The SVO word order we have described as basic holds in both default and habitual aspect, as shown in (8). However, in progressive and prospective aspect, the object must invert with the verb, as in (9). In this case the verb does not undergo reduplication.

(8) a. Đèví lá ɖù àkɔ̀ɖú. (default aspect)
child DET eat banana
'The child ate a banana.'
b. Đèví lá ɖù-nà àkɔ̀ɖú. (habitual aspect)
child DET eat-HAB banana
'The child eats bananas.'

(9) a. S V O
Đèví lá ɖù àkɔ̀ɖú.
child DET eat banana
'The child ate a banana.'
b. S Aux O V Asp
Đèví lá lè àkɔ̀ɖú ɖù-ḿ.
child DET be.at banana eat-PROG
'The child is eating a banana.'
c. *S Aux (Redup)-V-Asp O
*Đèví lá lè (ɖù-)ɖù-ḿ àkɔ̀ɖú.
child DET be.at eat-PROG banana

The string consisting of either the reduplicated verb and the nominalizing particle or of the object, verb and nominalizing particle is standardly analysed as a nominalization (Aboh 2004, ch. 6). Accordingly, the aspectual particles *ḿ* and *gé* will be labelled as Nom° heads in the schematizations. We will need a term to refer to this string and it will henceforth be called a "VP nominalization". The nominalization process is clearly not one which takes place in the morphological component, since the constituent can contain phrasal material. This fact is illustrated in (10), in which the object is modified by a relative clause.

(10) Mè-lè [[$_{DP}$mɔ́lì sì Ámà ɖà lá] ɖù ḿ.]
1SG-be.at rice REL Ama cook DET eat PROG
'I'm eating the rice that Ama made.'

This VP nominalization may undergo focus-related fronting, a process which will henceforth be referred to as "VP (nominalization) fronting".

(11) a. Mè-lè [dzò-dzó gé.]
1SG-be.at REDUP-leave PROSP
'I'm about to leave.'
b. [Dzò-dzó gé] mè-lè.
REDUP-leave PROSP 1SG-be.at
'I'm about TO LEAVE.'

(12) a. Mè-lè [mɔ́lì ɖù gé.]
1SG-be.at rice eat PROSP
'I'm about to eat some rice.'
b. [Mɔ́lì ɖù gé] mè-lè.
rice eat PROSP 1SG-be.at
'I'm about to EAT SOME RICE.'

The fronted constituent may contain either a *wh* phrase or an object modified by a focus-related particle such as *kò* 'only', as in (13) and (14). In both of those cases, movement to the left periphery is driven by focus on a sub-constituent. However, (15), in which the focus-related particles *kò* and *(y)é* follow the nominalization shows that the whole constituent is focused.

(13) [Núkà ɖù-ḿ] nè-lè?
what eat-PROG 2SG-be.at
'What are you eating?'

(14) [[Mɔ́lì kò] ɖù-ḿ] mè-lè.
rice only eat-PROG 1SG-be.at
'I'm just eating rice.'

(15) [Zɔ̀-zɔ̀-ḿ]$_i$ kò-é mè-lè t_i lè àfísià.
REDUP-walk only-FOC 1SG-be.at be.at here
'I'm just walking here.'

VP nominalization is always motivated by some focus-related operation: focus, *wh* movement, or relation clause formation. When the focus does not include the verb, then the focused element may be fronted alone, as in (16b). In other words, in that case, VP nominalization fronting is optional.

(16) a. Núkà ɖù-ḿ nè-lè?
what eat-PROG 2SG-be.at
b. Núkà nè-lè ɖù-ɖù-m̂?
what eat-PROG REDUP-2SG-be.at
'What are you eating?'

Since Ewe VP fronting can be a kind of predicate focus (as in (15)), it must be mentioned, for the sake of completeness, that two other types of predicate focus exist in Ewe (Badan and Buell 2011, Fiedler in press). The first employs the particle *ɖě*, as in (17). The other type, which is not available in all dialects of the language, involves a copy of the verb root in the left periphery, as in (18):

(17) Ðè wò-dzè ànyí.
POL 3SG-fall ground
'She/he fell down. / Fall down, he/she did.' (Ameka 1992:2, adapted)

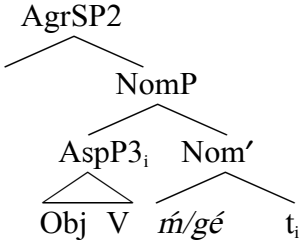
(18) Ƒò-ƒò-é wò-ƒò ɖèví-á.
red-hit-FOC 3SG-hit child-DEF
literally: ‘Beating, he beat the child.’
‘He gave the child a thorough beating.’ (Ameka 2010)

These two constructions are not dependent on any particular aspect and arguably do not involve phrasal movement. The constructions do not have any bearing on the central topic of this article and will not be discussed further.

Now that the most basic facts concerning word order have been discussed, we can turn to the question of justifying the constituency of the nominalized verbal complex.

3. Constituency of the verbal complex

In Aboh (2004, ch. 6) the Gungbe aspectual suffixes analogous to Ewe progressive *ḿ* and prospective *gé* are treats as Nom° heads. Nom° selects an AspP, which subsequently moves to spec-NomP, as sketched in (19), adapted for Ewe:

(19)


Under Aboh’s analysis, the VP nominalization is thus a constituent, namely a NomP. Assuming this analysis, it is natural to assume that it is this constituent which moves intact, as one piece, to the left periphery when fronted. However, because the main point of this article depends so heavily on this point, a variety arguments will now be provided for the constituency of the fronted Ewe VP nominalization, going from the simplest arguments to the more involved ones.

3.1. Analogy with [V-O Nom] order

The first argument rests on an analogy between the [O V Nom] discussed in section 2 and a different order found with certain clitics. The 1SG and 2SG object clitics follow the verb within the nominalization. In this case, a single-constituent analysis is forced by the morpheme order. This is shown with the 2SG clitic *wò* in (20).

(20) a. Kòfí ƒò-wò.
Kofi hit-2SG
‘Kofi hit you.’
b. Kòfí lè [ƒò-wò gé.]
Kofi be.at hit-2SG PROSP
‘Kofi is about to hit you.’
c. [Ƒò-wò gé] Kòfí lè.
hit- 2SG PROSP Kofi be.at
‘Kofi is about to hit you.’

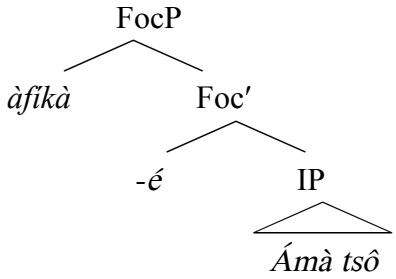
Note that the verb does not undergo reduplication even though nothing precedes it. Because a preverbal object also inhibits reduplication, this fact reinforces the analogy. Two separate analyses, one claiming that the V-O Nom string fronts as a single constituent and the other claiming that the O V Nom string fronts as two constituents, would be unparsimonious.

3.2. Focus marker *-é/yé*

The second argument involves the focus marker *-é/yé* introduced in section 2. Following Aboh (2004) and Badan & Buell (2011), this particle is a Foc° head in the complementiser domain, as diagrammed in (21b).

(21) a. Àfíkà-é Ámà tsô?
where-FOC Ama exit
'Where does Ama come from?'

b.



Now note that the focus marker can be placed after the fronted VP nominalization.

(22) [Núkpɔ́mɔ̀ kpɔ́-ḿ] yé mè-lè.
television see-PROG FOC 1SG-be.at
'I'm WATCHING T.V.'

This is most succinctly explained by assuming that the whole nominalization occupies spec-FocP.

3.3. Subjects

The third argument also involves the focus marker *-é/yé*. While this particle is optional with some types of focused constituents, such as questioned objects and adjuncts, it is obligatory with questioned and focused subjects (Aboh 2007, Badan & Buell 2011), as seen in (23):

(23) Àmékà *(yé) yì àʃútà?
who FOC go beach
'Who went to the beach?'

Assuming that the focus marker *-é/yé* is a Foc° head, as in the previous subsection, the grammatical question in (23) thus shows that the subject can (or must) move to spec-FocP, because the focus marker appears to its right, as diagrammed in (24).

(24) [$_{FocP}$ Àmékà$_j$ [$_{FocP}$ yé [$_{TP}$ t_j [$_{cP}$ yì àʃútà?]]]]
who- FOC go beach

Now observe that subjects cannot participate in predicate fronting, as shown in this subject question:

(25) a. Àmékà-é lè [dzò-dzó gé] ?
who-FOC be.at REDUP-leave PROSP
'Who is about to leave?'
b. *Àmékà-(é) (dzò-)dzó gé lè?
who-FOC REDUP-leave PROSP be.at

This ban on subjects fronting with the predicate extends to relative clauses, shown in (26). (27) shows that VP fronting is generally possible in relative clauses.

(26) a. àmè sì lè [dzò-dzó gé]
person that be.at REDUP-leave PROSP
'the person who's about to leave.'
b. *àmè sì (dzò)-dzó gé lè
person that REDUP-leave PROSP be.at

(27) àwù [sì dó gé]$_j$ mè-lè t_j á-yì àzã̀ lá mè
garment that wear PROSP 1SG-be.at FUT-go party DET inside
'the dress that I'm going to wear to the party'

If the *wh* portion and the V+Asp portion of the nominalization fronted independently, we would expect (26b) to be grammatical.

3.4. *Why* questions

The fourth argument concerns *why* questions (reason questions). It was noted that a fronted VP nominalization can contain a *wh* phrase. In (28) that *wh* phrase is the object, while (29) shows that adjuncts can also appear in this construction:[1]

(28) [Núkà dù-ḿ] nè-lè?
what eat-PROG 2SG-be.at
'What are you eating?'

(29) [Álékế zɔ̀-ḿ] wǒ-lè?
how walk-PROG 3SG-be.at
'How is he walking?'

However, *why* questions are incompatible with VP nominalization fronting (Buell 2012a, 2012b):

(30) a. Núkàtà nè-lè dzò-dzó-ḿ?
why 2SG-be.at REDUP-leave-PROG
'Why are you leaving?'
b. *Núkàtà (dzò)-dzó-ḿ nè-lè?
why REDUP-leave-PROG 2SG-be.at

This fact extends to the multiclausal constructions to be discussed in section 5, as seen in the contrast between (31) and (32). The ungrammaticality of *núkàtà* in this sort of question is so strong that speakers often judge such questions as ungrammatical after just reading the first couple of words.

(31) Núkà gblɔ̀-ḿ nè-lè bé Kòfí lè wɔ̀-wɔ̀-ḿ?
what speak-PROG 2sg-be.at that Kofi be.at REDUP-do-PROG
'What are you saying that Kofi is doing?'

(32) *Núkàtà gblɔ̀-ḿ Ámà lè bé Kòfí lè sì-sí-ḿ?
why speak-PROG Ama be.at that Kofi be.at REDUP-run.away-PROG
'Why is Ama saying that Kofi is running away?'

Assuming that the VP nominalization fronts as a constituent, this is explained as follows. Unlike other *wh* constituents, *núkàtà* 'why' is introduced in the C-domain rather than below IP (Buell 2011), as has been shown for a variety of unrelated languages since

1 One of the four informants consulted did not accept *àlékế* 'how' in a monoclausal question like this.

Rizzi (1991). *Núkàtà* is thus introduced far too high to be incorporated inside the nominalization. The verbal complex can be fronted only if either it or an element inside it is focused.

3.5. Reduplication

The fourth argument for the constituency of the fronted nominalization involves reduplication. We will first consider the simple case and thereafter reduplication in relative clauses.

Reduplication in the simple case. We first consider reduplication and the inclusion of a single object in it. First, observe that an objectless verb like *zɔ̀* 'walk' appears as reduplicated in a nominalization, whether in situ or fronted, as in (33). Conversely, a nominalization with a preposed object, like the one in (34), the verb does not undergo reduplication in either position. The pattern is schematized in (35).

(33) a. Mè-lè [zɔ̀-zɔ̀-ḿ.]
1SG-be.at REDUP-walk
'I'm walking.'
b. [Zɔ̀-zɔ̀-ḿ]$_i$ kò-é mè-lè t_i .
REDUP-walk only-FOC 1SG-be.at
'I'm just walking here.'

(34) a. Mè-lè [núkpɔ́mɔ̀ kpɔ́-ḿ.]
1SG-be.at television see-PROG be.at
'I'm watching television.'
b. [Núkpɔ́mɔ̀ kpɔ́-ḿ]$_i$ kò-é mè-lè t_i .
television see-PROG only-FOC 1SG-be.at
'I'm just watching television.'

(35) With object → no reduplication
a. Sbj-Aux [$_{XP}$ Obj V Asp]
b. [$_{XP}$ Obj V Asp]$_i$ Sbj-Aux t_i
Without object → reduplication
c. Sbj-Aux [$_{XP}$ Redup-V Asp]
d. [$_{XP}$ Redup-V Asp]$_i$ Sbj-Aux t_i

This pattern is best understood if reduplication is regulated by what happens within a certain constituent. If that constituent contains only the verb and the nominalizing particle, reduplication occurs; if the constituent contains an element in addition to the verb, then no reduplication takes lace. If it is further assumed that this constituency, holds both before and after movement, then the fact that the reduplication or lack thereof is identical in situ and in the left periphery is explained. Conversely, if it is assumed that the object moves separately from the verb and nominalizing particle, then the account of reduplication is necessarily complicated by a rule that specifies the point in the derivation at which the decision of whether to reduplicate is made.

Having presented this simple case, comparing the presence and absence of a single phrase in addition to the verb within the nominalization, we now turn to the cases showing the upper limit on the contents of that constituent.

Reduplication in relative clauses. We now turn our attention to relative clauses. These generally have the form of (36b):

(36) a. Mè-kù ʊ̌ŭ sià.
1SG-drive car this
'I drove this car.'
b. ʊ̌ŭ sì mè-kù (lá)
car that 1SG-drive ART
'the car that I drove'

Collins (1994) analyses the particle *sì* in such relatives as a relative pronoun. He convincingly argues that *sì* moves from its argument position to the left periphery, as in (37).

(37) ʊ̌ŭ [sì]$_i$ mè-kù t_i (lá)
car that 1SG-drive ART
'the car that I drove'

Such an analysis easily accounts for the pied-piping facts in (38) and (39). In (38b) it is the possessor which is relativized, but the possessive particle *ƒé* and the possessum also appear in the left periphery. These elements both follow *sì* just as they follow the possessor in base position. That is most easily accounted for if all three elements move as a single constituent as bracketed. A similar situation holds in (39), in which the postposition-like light nominal element *dzí* is pied-piped along with *sì*.

(38) Possessive construction with *fé*
a. Mè-kù [Kòfí ƒé ʊ́] lá.
1SG-drive Kofi POSS car ART
'I drove Kofi's car.'
b. ŋútsù [sì ƒé ʊ́]$_i$ mè-kù t_i lá
man that POSS car 1SG-drive ART
'the man whose car I drove'

(39) Postposition-like noun
a. Mè-túú [kplɔ̃ lá dzí.]
1SG-wipe table ART top
'I wiped the (top of the) table.'
b. kplɔ̃ [sì dzí]$_i$ mè-túú t_i lá
table that top 1SG-wipe ART
'the table (whose top) I wiped'

A similar analysis can capture the way in which a preposition can be pied-piped along with the relative pronoun *which* in English:

(40) the pot [in which]$_i$ John boiled the potatoes t_i

Collin's analysis appeared in the same year as Kayne's (1994) "raising analysis" of relative clauses, in which the head of the relative raises to the left periphery from its clause-internal position. Collins's analysis of *sì* could be easily extended to be compatible with the Kaynean analysis as in (41), but whether that is the correct approach remains an open question.

(41) [ʊ̌ŭ sì]$_i$ mè-kù t_i (lá)
car that 1SG-drive ART
'the care that I drove'

The bracketing in the following relative clause examples thus follows Collins's original analysis. Assuming this analysis, consider relative clauses with predicate fronting, as in (42b) and (42c)

(42) a. àwù sì$_i$ mè-lè [t_i dò-dó gé] á-yì àzã̌ lá mè
garment that 1SG-be.at REDUP-wear PROSP FUT-go party DET inside
'the dress that I'm going to wear to the party'
b. àwù [sì dó gé]$_j$ mè-lè t_j á-yì àzã̌ lá mè
garment that wear PROSP 1SG-be.at FUT-go party DET inside
'the dress that I'm going to wear to the party'
c. *àwù [sì dò-dó gé] mè-lè áyì àzã̌ lá mè

The reduplication pattern is best explained if the verbal complex is a constituent. When the VP nominalization is fronted, we would expect the verb to reduplicate, as in (42c), is *sì* were outside this constituent. Conversely, if *sì* is inside the constitute, we expect no reduplication, as in the grammatical (42b). We then have a consistent account of pied-piping in relative clauses.

3.6. The size of the nominalization

As the sixth and final argument for constituency, we will now consider two arguments related to how many elements are inside the nominalized verbal complex constituent: *wh* questions and double object constructions. Both of these point to an analysis where either that one object or that one *wh* phrase constitutes an upper limit on how much material can appear in the nominalization. That is, maximally one item may appear inside the nominalization in addition to the verb and the aspectually differentiated nominalizing particle. Because this upper limit is constant whether the nominalization appears in situ or is moved to the left periphery, under the simplest analysis the nominalization must move to the left periphery as a single constituent.

***Wh* phrases.** Consider the question in (43). According to our analysis, the movement of the string *àlékέ zɔ̀ḿ* is motivated by the fact that *àlékέ* 'how' is focused. *Àlékέ* has pied-piped the rest of the nominalization. The verb is not reduplicated, for the same reason that the verb is not reduplicated in (43), in which the nominalization contains an object.

(43) *zɔ̀* 'walk' (simple verb)
[Àlékέ zɔ̀-ḿ] Kòfĩ́ lè?
how walk-PROG Kofi be.at
'How is Kofi walking?'

But what happens if we have both a *wh* phrase and an object? To answer this, let us choose a predicate which is semantically as close as possible to the verb in (43).

Ewe has a large number of inherent object expressions, which are a sort idiom consisting of a verb and a non-referential object. For example, 'talk' is usually rendered with the phrase *fò nŭ*, which literally means 'hit mouth'. Because the object in such phrases is non-referential, inherent object expressions are ideal to contrast with simple intransitive verbs, because they are most likely to behave in the same way. To contrast with *zɔ̀* 'walk' we will use the expression *fú dù* 'run', which might be literally translated as 'run race'. Just like other objects an inherent object like *dù* inverts with the verb in progressive and prospective aspect:

(44) a. Kòfĩ́ fú dù.
Kofi run race
'Kofi ran.'
b. Kòfĩ́ lè dù fú-ḿ.
Kofi be.at race run-PROG
'Kofi is running.'

Now note that while VP nominalization fronting can be used to question the intransitive verb *zɔ̀* 'walk', it cannot be used to question *fú dù* 'run', as shown in (45):

(45) * [Àléké dù ʃú-ḿ] Kòfí lè?
how race run-PROG Kofi be.at
intended: 'How is Kofi running?'

This is our first piece of evidence that the nominalization may contain maximally one element in addition to the verb and nominalizing particle.

Double object constructions. Double object constructions provide further evidence for the constituency of the verbal complex. Ewe has anumber of verbs that take two objects. Here we will just consider *ná* 'give'. Observe how default aspect the direct object and indirect object are freely ordered after the verb:

(47) Default aspect
a. S V DO IO
Ámà ná gà víáɖé Kòfí.
Ama give money a.bit Kofi
'Ama gave Kofi a bit of money.'
b. S V IO DO
Ámà ná Kòfí gà víáɖé .
Ama give Kofi money a.bit
'Ama gave Kofi a bit of money.'

In analogous sentences in progressive and prospective aspect, most speakers find it either odd or ungrammatical to front the indirect object before the verb (Essegbey 2003), stranding the direct object after the verb, as in (48b). Conversely, it is perfectly grammatical to front the direct object and strand the indirect object, as in (48a).

(48) Prospective aspect
a. S Aux [DO V Asp] IO
Ámà lè [gà víáɖé ná gé] Kòfí.
Ama be.at money a.bit give PROSP Kofi
'Ama is going to give Kofi a bit of money.'
b. *?S Aux [IO V Asp] DO[2]
Ámà lè [Kòfí ná gé] gà víáɖé.
Ama be.at Kofi give PROSP money a.bit

However, it is specifically the combination of fronting and stranding which renders (48b) ungrammatical. Either object may front before the verb as long as the other object is extracted. This is shown in (49) and (50), using relative clauses and *wh* questions, respectively.

(49) a. Nyè-mé-kpɔ́ gà sì Ámà lè [Kòfí ná gé] lá ò.
1SG-NEG-see money that Ama be.at Kofi give PROSP ART NEG
'I didn't see the money that Ama is going to give to Kofi.'
b. Nyè-mé-kpɔ́ ŋútsù sì Ámà lè [gà víáɖé ná gé] lá ò.
1SG-NEG-see man that Ama be.at money a.bit give PROSP ART NEG
'I didn't see the man who Ama is going to give a bit of money to.'

2 One of my informants readily accepts this configuration, while another three reject it outright. The contrast between (50b) and (51b) shows that the V DO IO order is more basic. (See Essegbey (2003) for more evidence.)

(50) a. Gà nénìé Ámà lè [Kòfí ná gê?]
money how.much Ama be.at Kofi give PROSP
'How much money is Ama going to give Kofi?'
b. Àmékà-é Ámà lè [gà ná gê?]
who-FOC Ama be.at money give PROSP
'Who is Ama going to give some money?'

Recall that the ungrammaticality of (48b) was dependent on the stranding of the direct object. If the size of the nominalized VP were unbounded, we might then expect that a simple declarative sentence in progressive or prospective aspect would be grammatical if both objects were fronted simultaneously. However, (51) shows that not to be the case, regardless of their relative ordering before the verb.

(51) a. Ámà lè [Kòfí ná gé] gà víáɖé .
Ama be.at Kofi give PROSP money a.bit
'Ama is going to give Kofi a bit of money.'
b. *Ámà lè [gà víáɖé Kòfí ná gé.]
Ama be.at money a.bit Kofi give PROSP
c. *Ámà lè [Kòfí gà víáɖé ná gé.]
Ama be.at Kofi money a.bit give PROSP

Now we can consider the fronting of the VP nominalization, using relative clauses. Recall that the relative pronoun *si* has been analysed as moving to the left periphery from a base position. It was further argued that *si* can pied-pipe material following it within the VP nominalization. The ungrammaticality (52c), (53b) and (53c) lend further support to this analysis, because the upper limit on elements appearing before the verb in the nominalization is maintained.

(52) a. a. Nyè-mé-kpɔ́ gà sì Ámà lè [Kòfí ná gé] lá ò.
1SG-NEG-see money that Ama be.at Kofi give PROSP ART NEG
'I didn't see the money that Ama is going to give to Kofi.'
b. Nyè-mé-kpɔ́ gà [sì ná gé] Ámà lè Kòfí lá ò.
1SG-NEG-see money that give PROSP Ama be.at Kofi ART NEG
c. *Nyè-mé-kpɔ́ gà [sì Kòfí ná gé] Ámà lè lá ò.
1SG-NEG-see money that Kofi give PROSP Ama be.at ART NEG

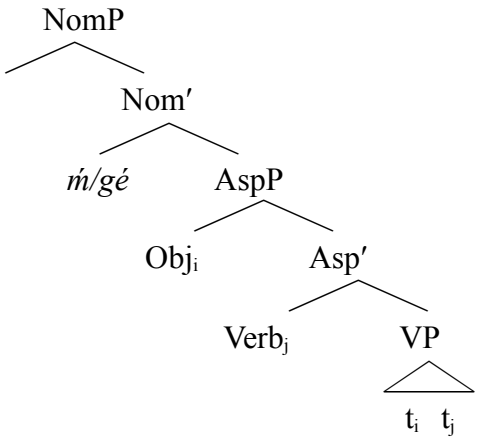
(53) a. Nyè-mé-kpɔ́ ŋútsù sì Ámà lè [gà víáɖé ná gé] lá ò.
1SG-NEG-see man that Ama be.at money a.bit give PROSP ART NEG
'I didn't see the man who Ama is going to give a bit of money to.'
b. *Nyè-mé-kpɔ́ ŋútsù [sì ná gé] Ámà lè gà víáɖé lá ò.
1SG-NEG-see man that give PROSP Ama be.at money bit.of ART NEG
c. *Nyè-mé-kpɔ́ ŋútsù [sì gà víáɖé ná gé] Ámà lè lá ò.
1SG-NEG-see man that money bit.of give PROSP Ama be.at ART NEG

This concludes our arguments that the VP nominalization moves to the left periphery as a single constituent. As is usual with such argumentation, some arguments will be deemed stronger than others, but it is hoped that the number and variety of the arguments have left the reader convinced of the constituency. In our exploration of this constituency various syntactic properties of the VP nominalization have come to light. In the following section we briefly examine how the nominalization is derived, as well as some additional properties.

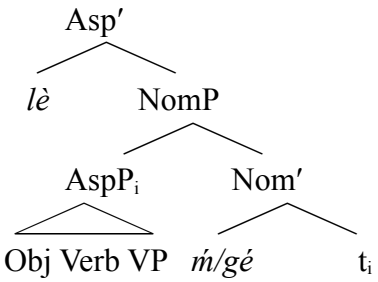
4. Deriving the nominalization

Aboh (2004) develops an analysis of what here is termed the VP nominalization constituent. While he only considers the constituent in situ, which with respect to elements fronted before the verb essentially limits him to objects, he considers aspectual phenomena and a range of Gbe languages. In his analysis, the derivation of the VP nominalization precedes along the main line of derivation. He assumes that the verb head-moves out of the verb phrase to adjoin to one of multiple Asp^0 heads which merge in different positions in the structure. The object then moves to the specifier of this Asp^0 head, resulting in the inverted O V word order. Aspect-specific nominalizing particles like the Ewe progressive *ḿ* and prosepctive *gé* are Nom^0 heads then select for an AspP complement, as in (54a).[3]

(54) a.



b.



However, this complement AspP in (54a) subsequently moves to the specifier of NomP, as in (54b), resulting in the O V Nom^0 order observed in Ewe nominalizations. The auxiliary *lè* (like its non-present counterpart *nɔ̀*) heads a higher AspP which selects this NomP.

We can call Aboh's analysis the "Spinal Derivation", because it takes place along the main line of derivation or "spine" of the clause. Although this analysis faces a challenge which will now be described, the Spinal Derivation will still be argued to be superior to an alternative employing Sideward Movement.

It should be mentioned that the characteristics of constructions involving two types of nominalization vary somewhat. For example, in some Gbe languages material can intervene between the verb and the aspectual particle (Aboh 2005, p. 157). However, no cases are known in which more than one element is fronted before the verb (Enoch Aboh, p.c.).

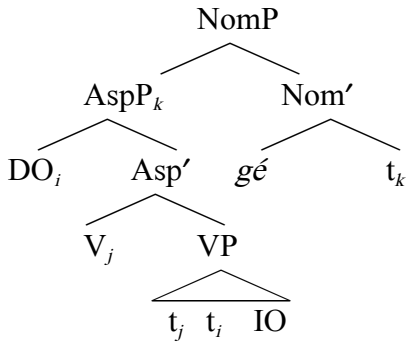
Trailing material. In most of the examples we have seen so far of in situ VP nominalization the nominalization is in sentence-final position. However, various types of material can trail after the nominalizing particle. To see the challenge of such trailing material to the Spinal Derivation, consider again the double object construction in (55).

(55) Mè-lè [gà víáɖé ná gé] Kòfí.
1SG-be.at money a.bit give PROS Kofi
'I'm about to give Kofi a bit of money.'

If the indirect object remained in the VP, then we would expect the unfronted indirect object to appear between the verb and the Nom^0 head *gé*, as sketched in (56), because the VP is contained within the AspP which moves to *gé*'s specifier.

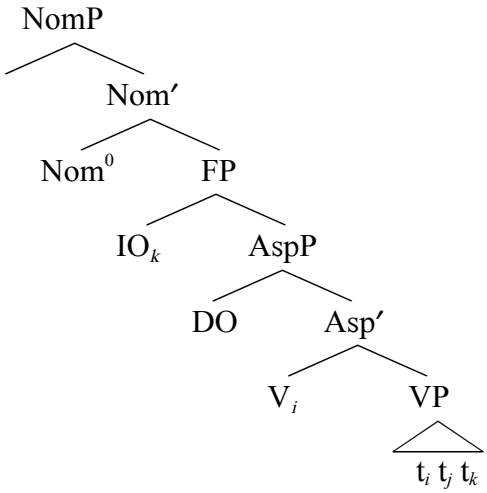
3 It was argued that both reduplication and the maximum number of preverbal elements is best understood as constraints on what happens within a certain constituent. Note that under Aboh's analysis, that constituent might be AspP rather than NomP.

(56)

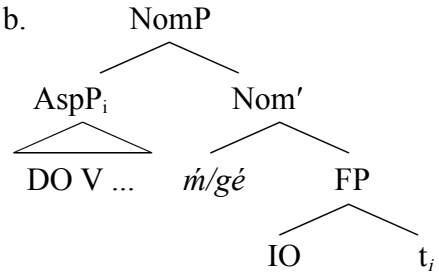


If the essence of Aboh's analysis is to be maintained, the indirect object must thus first be evacuated to the specifier of a functional projection between NomP and AspP, labelled FP in (57a). The AspP can subsequently move to spec-NomP, as in (57b), resulting in the word order observed in (55).

(57) a.



b.

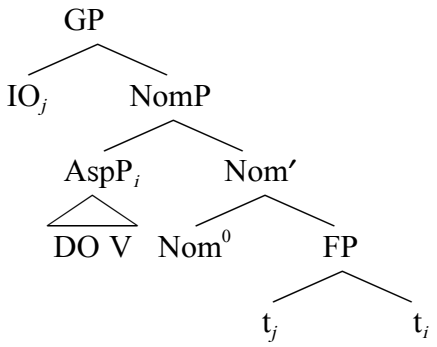


Now the correct word order has been brought about, but note that the DO V Nom^0 string does not form a constituent to the exclusion of the indirect object. This is problematic for the derivation of (58), in which the VP nominalization has been fronted, which strands the indirect object in a lower position.

(58) [Gà víáɖé ná gé]$_i$ mè-lè *t$_i$* Kòfí.
money a.bit give PROSP 1SG-be.at Kofi
'I'm going to GIVE A BIT OF MONEY to Kofi.'

To allow VP nominalization fronting, the indirect object must be moved again, this time to the specifier of another functional project above NomP, labelled as GP in (59).

(59)



Now the nominalization proper (DO V Nom^0) is a NomP, a maximal projection which can be moved to the left periphery if necessary without dragging nay extraneous material along with it.

Although it neatly avoids countercyclicity and uncomfortable subextraction, the analysis just presented is admittedly not pretty. Specifically, it requires moving the indirect object, not once but twice, to functional projections whose presence cannot be independently motivated. It might be argued that the first extraposition of the IO might have been avoided depending on the specific analysis of double object constructions in Ewe developed. While that may be so, the problem of trailing material is unfortunately not limited to double object constructions. At least three other cases of material trailing after the Nom^0 can be identified.

The second case of trailing material is that of adverbial adjuncts. As shown in (60b) and (61b), such adjuncts cannot be incorporated into the VP nominalization. This fact is remarkable because most speakers do accept the *wh* word *àléké* 'how' in the VP nominalization fronting construction, as in (62).

(60) a. É-lè [zɔ̀-zɔ̀-ḿ] fífíá.
3S-be.at REDUP-walk-PROG now
'He is walking now.'
b. *É-lè [fífíá zɔ̀-ḿ.]
3S-be.at now walk-PROG

(61) a. É-lè [zɔ̀-zɔ̀-ḿ] blèwùblèwù.
3S-be.at REDUP-walk-PROG slowly
'He is walking slowly.'
b. *É-lè [blèwùblèwù zɔ̀-ḿ.]
3S-be.at slowly walk-PROG

(62) [Àléké zɔ̀-ḿ] wǒ-lè?
how walk-PROG 3S-be.at
'How is he walking?'

Although in (61a) there is material trailing after the nominalizing particle, the nominalization *zɔ̀zɔ̀ḿ* still behaves like a constituent, because it can be fronted, leaving the adverb behind, as in (63b).

(63) a. Mè-lè [zɔ̀-zɔ̀-ḿ] blèwùblèwù.
1SG-be.at REDUP-walk-PROG slowly
'I'm walking slowly.'
b. [Zɔ̀-zɔ̀-ḿ]$_i$ yé mè-lè t_i blèwùblèwù.
REDUP-walk-PROG FOC 1SG-be.at slowly
'I'm WALKing slowly.'

The third case of trailing material is that of the serial verb construction, as in (64). In (64c), 'fell' is rendered with a series of two verbs: *gé*, which could be more precisely translated as 'fall (off of something)' and *dzè* 'fall (such as from standing to reclined position)'. In (65b), in which the clause as a whole is in prospective aspect, we see that the first verb is in prospective aspect, while the second verb is in future tense. Again, (64c) shows that the nominalized portion of the clause has the constituent-like property of being moveable, leaving the trailing material stranded.

(64) a. Đèví lá gé dzè ʋè mè. *Elicit me!*
child DET fall fall pit inside
'The child is about to fall into the pit.'
b. Đèví lá lè [gè-gé gé] á-dzè ʋè mè.
child DET be.at REDUP-fall PROS FUT-fall pit inside
'The child is about to fall into the pit.'

c. [Àfíkà gé gé] wǒ-lè á-dzè?
where fall PROS 3S-be.at fit-fall
'Where is the child about to fall into?'

An additional example, using serial verb construction with a different argument structure, is given in (65).

(65) a. Kòfí tsɔ́ é-fé gà dà ɖé gàdzràɖɔ́fé. *Ellicit me!*
Kofi take 3SG-POSS money put go.to bank
'Kofi put his money in the bank.'
b. Kòfí lè é-fé gà tsɔ̀-tsɔ́ gé á-dà ɖé gàdzràɖɔ́fé.
Kofi be.at 3SG-POSS money REDUP-take PROSP FUT-put go.to bank
'Kofi's going to put his money in the bank.'
c. Gà nénìé tsɔ̀-tsɔ́ Kòfí lè á-dà ɖé gàdzràɖɔ́fé?
money how.much REDUP-take Kofi be.at FUT-put go.to bank
'How much money is Kofi going to put in the bank?'

The fourth case of trailing material is that where a verb in progressive or prospective aspect takes a clausal complement, as in (66).

(66) Nè-lè dì-dí-ḿ bé má-ɖà mɔ́lì.
2SG-be.at REDUP-want-PROG that 1SG:SBJV-prepare rice
'You want me to make some rice.'

All four of these cases (double objects, adjuncts, serial verb constructions, and complement clauses) pose the same problem for the Spinal Derivation: material needs to be moved to a higher position for the Nom^0 head to appear in the correct position. While this movement is necessary to achieve the desired constituency, it appears to serve no other purpose and cannot be independently motivated.

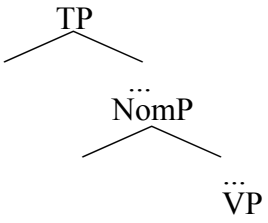
A sideward alternative. Given the drawbacks of the Spinal Derivation, one might well wonder if there is no alternative, and indeed there is. This alternative requires a mechanism called Sideward Movement (Nunes 2001), which must first be briefly explained.

First note that to derive a syntactic structure stepwise by merging elements out of the enumeration, in most cases it is necessary to work on two partial structures simultaneously. One of these structures is the clause itself (the main line of derivation or spine). The second is any phrase that needs to be merged into a specifier of the clause or adjoined to it.[4] For example, suppose we want to derive the sentence *On Tuesdays they go dancing*. When we have reached the point where we have derived *they go dancing*, we must set that phrase aside and build the phrase *on Tuesdays*. Once that is done, we can take that phrase *on Tuesdays* and merge it into an adjunct or specifier position at the top of *they go dancing*. Sideward Movement combines this idea of the need for the simultaneous existence of multiple substructures over the course of the derivation with Copy Theory's copy and remerge approach to movement, by allowing the copying of an element in one partial structure and merging it into an independent partial structure.

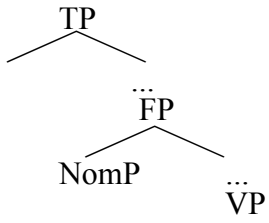
The main conceptual difference between the Spinal Derivation and the Sideward Movement analysis is captured in (67), which abstracts away from such details as aspectual projections. In the Spinal Derivation, a NomP is projected somewhere along the main line of projection between TP and VP. In contrast, under the Sideward Movement analysis, no NomP is projected along the spine. Instead, a NomP is a phrase occupying a specifier of some functional projection FP somewhere between TP and VP.

4 Sidewards movement can also be used to derive complex heads, allowing head movement without counter-cyclicity.

(67) a. Spinal Derivation



b. Sideward Movement



Because the verb and the object are pronounced inside the NomP in (67) rather than in the VP (demonstrably so because the last pronounced element in the NomP is the nominalizing particle itself), Sideward Movement is needed to move (copy and remerge) the verb and object into the constituent on the lefthand specifier of FP.

Let's assume the availability of Sideward Movement and further assume that the NomP (the phrase projected by the nominalizing particles *ḿ* and *gé*) projects not on the spine of the clause, but rather in an independently derived subtree which is merged into some specifier on the spine. To illustrate, let's partially derive the sentence in (68).

(68) Kòfí lè nŭ ƒò-ḿ blèwùblèwù.
Kafi be.at mouth hit-PROG slowly
'Kofi is speaking slowly.'

Making the assumption that manner adverbs occupy a specifier between vP (in which the external argument is introduced) and the VP (which contains the verb *ƒò* and object *nŭ*), the derivation proceeds along the spine until the following partial structure in (69) is completed. For simplicity, we omit the low AspP projection which Aboh argues for. F^0 is the functional head that takes the VP nominalization as its specifier.

(69) $[_{F'}\ F^0\ [_{vP}$ *Kofi* $[_{v'}\ v^0\ [_{AdvP}$ *blewublewu* $[_{Adv'}\ Adv^0\ [_{VP}$ *ƒò nŭ*]]]]]]

At this point the nominalization must be derived. We will consider two ways of approaching this.

The first approach is sketched in (70). A copy the verb *ƒò* from the spine is made and merged with *ḿ*. *Ḿ* projects. Next, a copy of the noun *nŭ* from the spine is made and merged into the specifier of this Nom^0 head.

(70) a. *ḿ*
Taken from the enumeration.
b. *ƒò*
Copied from the spine.
c. $[_{Nom}$ *ƒò* $[_{Nom}$ *ḿ*]]
(a) and (b) are merged. *Ḿ* projects.
d. *nŭ*
Copied from the derivation.
e. $[_{NomP}$ *nŭ* $[_{Nom}$ *ƒò* $[_{Nom}$ *ḿ*]]]
(c) and (d) are merged.

This NomP can now be merged into the specifier of the silent F^0 head in the spine in (69). This derivation makes Sideward Movement undesirably powerful because two different elements are independently copied from one structure and merged into another. Such multiple independent copying does not occur in the typical cases in which Sideward Movement has been appealed to.

There is an alternative derivation lacking this drawback, sketched in (71). Instead of independently copying *fò* and *nǔ* from the spine, first a copy is made of the VP *fò nǔ* as an intact phrase. This copy of VP is merged with the Nom^0 head *ḿ* with subsequent head movement. Technically, this means copying the *fò* head of the VP and merging it with *ḿ*, taken from the enumeration, in a separate structure. The result is a complex head, which is then merged with the VP copy. Finally, the noun *nǔ* in the VP is copied and merged as the specifier of this phrase. At this point the derivation of the NomP is completed, and it can be merged as the specifier of the spine in (69).

(71) a. [$_{VP}$ *fò nǔ*]
Copied from the spine.
b. *ḿ*
Taken from the enumeration.
c. *fò*
Copied from (a).
d. [$_{Nom}$ *fò* [$_{Nom}$ *ḿ*]]
Complex head formed by merging (b) and (c).
e. [[$_{Nom}$ *fò* [$_{Nom}$ *ḿ*]] [$_{VP}$ *fò nǔ*]]
(d) merged with (a).
f. *nǔ*
Copied from (a).
g. [$_{NomP}$ *nǔ* [[$_{Nom}$ *fò* [$_{Nom}$ *ḿ*]] [$_{VP}$ *fò nǔ*]]]
(f) merged as specifier of (e).

This alternative derivation avoids multiple remerging of elements from one substructure into another. Unfortunately, though, using the same type of derviation in the multiclausal structures about to be discussed is problematic.

5. Fronting elements from two different clauses

We now turn to biclausal structures, specifically those in which a phrase has been extracted from the lower clause. As was the case in monoclausal questions, this can be done in two different ways. Either the questioned element moves alone to the beginning of the matreix clause, as in (72b) and (73b), or it fronts inside a VP nominalization, as in (72c) and (73c). In the latter case, the verb in the nominalization is always that of the matrix clause, never that of the embedded clause.

(72) a. Nè-lè dì-dí-m bé má-ɖà mɔ́lì.
2SG-be.at REDUP-want-PROG that 1SG:SBJV-prepare rice
'You want me to make some rice.'
b. Núkà$_i$ nè-lè dì-dí-ḿ bé má-ɖà t_i?
what 2SG-be.at REDUP-want-PROG that 1SG:SBJV-prepare
'What (kind of food) do you want me to make?'
c. [Núkà$_i$ dí-ḿ]$_j$ nè-lè t_j bé má-ɖà t_i?
what want-PROG 2SG-be.at that 1S.FUT-prepare
'What (kind of food) do you want me to make?'

(73) a. Ámà lè gblɔ̀-gblɔ̀-ḿ bé yè-kpɔ́ Kòfí lè àsìmè.
Ama be.at REDUP-say-PROG that LOG-see Kofi be.at market
'Ama is saying that she saw Kofi at the market.'
b. Àmékà$_i$ Ámà lè gblɔ̀-gblɔ̀-ḿ bé yè-kpɔ́ t_i lè àsìmè?
who Ama be.at REDUP-say-PROG that LOG-see be.at market
'Who is Ama saying that she saw at the market?'

c. [Àmékà$_i$ gblɔ̀-ḿ]$_j$ Ámà lè t_j bé yè-kpɔ́ t_i lè àsìmè?
who say-PROG Ama be.at that LOG-see be.at market
'Who is Ama saying that she saw at the market?'

The relative clauses in (74b) and (74c) show that both strategies are also available to relative clauses.

(74) a. Mè-lè gbɔ̀-gblɔ̀-ḿ bé Ámà tɔ̀ àwù lá.
1SG-be.at REDUP-say-PROG that Ama sew dress ART
'I'm saying that Ama sewed the dress.'
b. Mè-kpɔ́ àwù sì$_i$ nè-lè gbɔ̀-gblɔ̀-ḿ bé Ámà tɔ̀ t_i lá.
1SG-see dress that 2SG-be.at REDUP-say-PROG that Ama sew ART
'I saw the dress that you're saying that Ama sewed.'
c. Mè-kpɔ́ àwù [sì$_i$ gblɔ̀-ḿ]$_j$ nè-lè t_j bé Ámà tɔ̀ t_i lá.
1SG-see dress that say-PROG 2SG-be.at that Ama sew ART
'I saw the dress that you're saying that Ama sewed.'

Note that in (72) through (74) the extracted item is thematically related to the embedded clause rather than to the matrix clause.

While in many cases informants preferred the variant in which the extracted item is fronted alone, all speakers consulted found a large proportion of the sentences elicited of the type with V nominalization fronting grammatical. The construction is also found in well edited texts, such as the example in (75).

(75) [$_{CP}$ [[Afika]$_i$ di-m]$_j$ nè-le t_j [$_{CP}$ be mí-a-yi
where want-PROG 2SG-be.at that 1PL-FUT-go
a-ɖa-dzra ɖo t_i ne n-a-ɖu Paskalẽvi la le mahã?]]
FUT-go-prepare prepare if 2SG-FUT-eat passover ART be.at Q
'Where do you want us to prepare the Passover meal for you?'
(Kpodzro 1998, p. 546)

The construction is essentially limited to the two matrix verbs *gblɔ̀* 'say' and *dí* 'want', which meet the hard-to-fulfil conditions on which the construction depends. First, the verb must take a complement clause. Second, it must not take any other object, such as an inherent object in addition to that complement clause. And finally, the verb must be compatible either progressive or prospective aspect.

In section 3, it was shown that a *wh* phrase followed by a verb and nominalizing particle form a constituent. If the *wh* phrase *àfíkà* in (76) has moved from the lower clause and surfaces in a VP nominalization in the left periphery of the matrix clause, it cannot have moved directly from the embedded CP to the higher CP, as is the most traditional account of *wh* movement. Such a move would place the *wh* phrase in a specifier of a C-domain head rather than embedded inside some constituent sitting in the specifier of that head.

For this reason, sentences such as (76) provide hard evidence for an intermediary move between CP's, in an area of the clause below the auxiliary verb *lè/nɔ̀*, just as required by derivation by phase. While this much is in harmony with the derivation by phase hypothesis, it is impossible to determine more precisely if movement proceeds through vP, which is standardly assumed to constitute the edge of a phase. The landing point of the move before the VP nominalization is moved to the CP differs depending on whether the Spinal Derivation or Sideward Movement is adopted. In either case, the question as to whether that move is preceded by a move from the embedded CP to the matrix vP cannot be answered with direct evidence from Ewe. Let's briefly work through those two analyses, using the question in (76).

(76) [Àfíkà$_i$ dí-ḿ]$_j$ nè-lè [$_{XP}$ t_j [$_{CP}$ [$_{vP}$ bé má-dà àɖákà-nyè ɖô t_i?]]]
where want-PROG 2SG-be.at that 1s:FUT-put box-1s go.to
'Where do you want me to put my suitcase?'

First we consider the Spinal Derivation. Recall that under this analysis, the Nom^0 head *ḿ* or *gé* projects on the spine of the clause. Assuming Aboh (2004), the item fronted from the embedded clause would have to move through spec-AspP of the matrix clause which is subsequently merged with the Nom^0 head, as sketched in (77).

(77) a. [$_{Nom'}$ ḿ [$_{AspP}$ àfíkà$_j$ [$_{Asp'}$ dí$_i$ [$_{vP}$ *pro* [$_{v'}$ t_i [$_{CP}$ t_j bé ...]]]]]]
b. [$_{Nom'}$ ḿ [$_{AspP}$ àfíkà$_j$ [$_{Asp'}$ dí$_i$ [$_{vP}$ t_j [$_{vP}$ *pro* [$_{v'}$ t_i [$_{CP}$ t_j bé ...]]]]]]]

As seen in the slightly different derivations in (77a) and (77b), the analysis can accommodate an intermediary move of the *wh* element through a specifier of vP, but does not require it as such. Thus, while the analysis requires a move in the region of vP, it cannot be ascertained whether it also requires a move specifically through spec-vP, which is standardly assumed to constitute a phase boundary.

Beyond this point, the derivation then continues in the same fashion as the monoclausal cases discussed in section 4. The Spinal Derivation of this construction suffers from the same problem of trailing material as discussed earlier. As was true with all other cases of trailing material, the embedded clause would need to be evacuated to derive a NomP in which *àfíkà dímḿ* constituted a constituent to the exclusion of all other material.

Now let's see how a Sideward Movement derivation fares. We start when the main line of derivation has reached the point in (78), either with or without moveing *àfíkà* 'where' to the specifier of vP.

(78) [$_{FP}$ [$_{vP}$ *pro* dí [$_{CP}$ àfíkà$_i$ bé má-dà àɖákà-nyè ɖó àfíkà$_i$]]]
want where that 1SG:FUT-put box-1SG go.to where

The NomP is built as sketched in (79).

(79) a. *ḿ*
Taken from the enumeration.
b. *dí*
Copied from (a).
c. [$_{Nom}$ *dí* [$_{Nom}$ *ḿ*]]
Complex head formed by merging (b) and (c).
d. *àfíkà*
Copied from the spine (spec-CP in (76a) or spec-vP in (76b)).
e. [$_{NomP}$ àfíkà [$_{Nom}$ *dí* [$_{Nom}$ *ḿ*]]]
(c) merged with (d).

When the NomP is complete, it can be merged in spec-FP on the main line of projection. Like the Spinal Derivation, the Sideward derivation requires a move in the same general region as vP between the two CPs but does not require a move through spec-vP per se.

The Sideward derivation avoids the problem of trailing material found in the Spinal Derivation, but unfortunately it suffers from another problem. Note that two distinct elements need to be copied from the main line and remerged into the nominalization: the V^0 head *dí* 'want' and the PP *àfíkà*. This multiple, independent copying process makes the Sideward Movement operation much more powerful than what its typical applications have been so far.

6. Conclusion

In the preceding sections, various aspects of VP nominalization in Ewe were discussed. In particular, it was shown, on the basis of a wide range of arguments, that an object or *wh* phrase forms a constituent with a following verb and nominalizing particle. Various types of material trailing after this constituent were shown to pose problems in the derivation of this constituent. Two different derivational approaches were presented. The Spinal Derivation, based on Aboh (2004), requires extra evacuation moves to derive the nominalized constituent, while the Sideward Movement approach does not.

The most interesting aspect of VP nominalization fronting involved phrases extracted from a complement clause. Because these phrases can appear inside a VP nominalization, such cases were shown to provide evidence for an intermediary move somwhere below IP when moving from CP to CP. However, the phenomenon falls short of providing direct evidence that such a move is required specifically through the vP phase boundary. The phenomenon also exposed a problem with the Sideward Movement derivation. It was shown that that approach requires multiple, independent copying of elements from one partial structure and remerging into another, in a way which does not occur in familiar applications of Sideward Movement. It was suggested that allowing this kind of multiple sideward moves makes the mechanism too powerful. Further research is required to determine what types of structures are predicted with such a powerful recomination mechanism and whether they actually occur in human language.

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