

## English VPs and why they contain more than just verbs

Sten Vikner  
Aarhus University

### Abstract

Hjulmand & Schwarz (2009:32, 2012:33) (and many others) assume that *has concluded* constitutes a verb phrase (VP) in the example *The British car industry has concluded a deal with the Japanese government*. I want to defend a different analysis, namely that *concluded* constitutes a VP together with the object, i.e. *The British car industry has concluded a deal with the Japanese government*. One advantage is that VPs are less different from other phrases, in that VPs may now contain more than just verbs, just like NPs may contain more than nouns and PPs more than prepositions. Another advantage of this analysis is a better account of examples like *Saved many a life at sea, they have*. The VP-internal structural difference between arguments (e.g. objects) and adjuncts (e.g. adverbials) will also be discussed, as well as discontinuous VPs. Finally, the appendix will discuss the analysis of Danish.

### 1. Introduction

Hjulmand & Schwarz (2009, 2012) is the textbook most frequently used in courses in English grammar at Danish universities. Although it contains no references, it clearly builds on other Danish analyses of English, including Bache, Davenport, Dienhart & Larsen (1993), Bache (1996), Bache & Davidsen-Nielsen (1997) and Preisler (1997). Hjulmand & Schwarz' (2009, 2012) analysis is also clearly within the tradition of the so-called Quirkgrammars, e.g. Quirk, Greenbaum, Leech & Svartvik (1985), Greenbaum & Quirk (1990) and Greenbaum (1996).

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In this contribution<sup>1</sup>, which is based on a hand-out from a course taught jointly with Johanna Wood since 2011, I will compare the approach to (English) clause structure taken by Hjulmand & Schwarz (2009, 2012) to the generative approach that Johanna and I (and many others) use in our teaching (Haegeman & Guéron 1999, Carnie 2013, Gelderen 2014) and in our research (Heycock & al. 2012, Vikner 1995, 1997, 1999, 2011, 2014, 2015, Wood & Vikner 2011, 2013, Wood 2002, 2013).

It should perhaps be underlined that what is here taken to be shortcomings of the clause structure analysis of Hjulmand & Schwarz (2009, 2012) are shortcomings shared with a great number of other analyses, cf. the references above and in (4)b below.

## 2. What is in a VP?

### 2.1 One VP per clause or one VP per verb?

In Hjulmand & Schwarz (2009, 2012), there is always one and only one VP in every clause, and this VP consists of verbs, all the verbs, and nothing but verbs. This I call a “homogeneous” VP, HOMG:

#### (1) 2.4.1.1. The Verb Phrase

The **head** of a verb phrase is, as the name indicates, a verb. Like other phrases, a verb phrase may be **simple** and contain only one verb (*The new coffee machine works perfectly. I called the real estate agent.*) or **complex** and contain more than one verb (*The British car industry has concluded a deal with the Japanese government. The scientists are keeping a record of radioactive levels in the area. The kids were told to look for the ball. The situation will become critical in the next few weeks. The visitor must have come on foot.*).

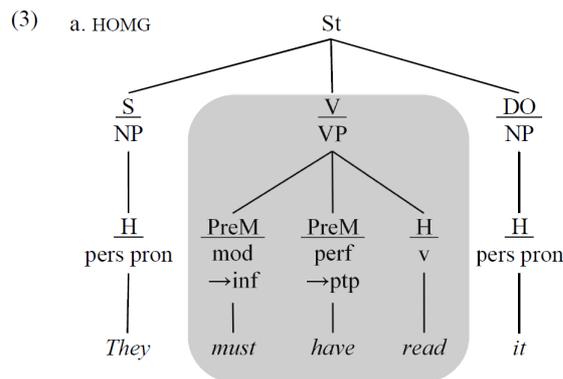
Hjulmand & Schwarz (2009:32, 2012:33)

<sup>1</sup> I am very grateful to Johanna Wood for being such a good co-teacher, so inspiring a research collaborator and such an overall great colleague over the years. Many thanks also to Carl Bache, Ken Ramshøj Christensen, Henrik Jørgensen, Lise-Lotte Hjulmand, Johannes Kizach, Michael Nguyen, Helge Schwarz, Carl Vikner and Jonathan White, to the participants in the *Grammatiknetværk* conference in Holbæk, October 2014, and not least to the students in mine and Johanna Wood’s courses on English (and Danish) syntax. The research reported here was supported by the Danish Research Council for the Humanities (Forskningsrådet for Kultur og Kommunikation) as part of the projects *Object positions - comparative syntax in a cross-theoretical perspective* and *Similarities and differences between clauses and nominals*.

The alternative is what I will call a “heterogeneous” VP, HETG, where there is one VP for each verb, and where this VP consists of a verb plus its complement (if there is one) plus its modifiers (if there are any). The heterogeneous VP is very common within the generative approach<sup>2</sup> but it is also used by others, e.g. Bolander (2001:139-141) and Declerck et al. (2006:12).

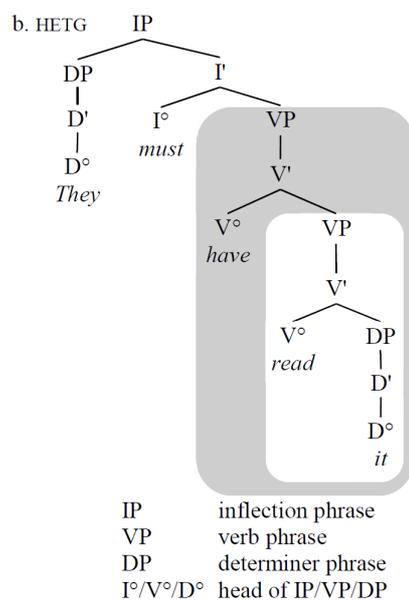
One and the same clause thus receives very different analyses in the two approaches (where (2)a=(3)a and (2)b=(3)b):

- (2) a. They [VP must have read] it. HOMG, e.g. Hjulmand & Schwarz (2009, 2012)
- b. They must [VP have [VP read it] ]. HETG, e.g. the generative approach (& others)



- St sentence
- S subject
- V verb
- DO direct object
- NP noun phrase
- H head (of a phrase)
- PreM premodifier
- v verb

<sup>2</sup> Although Chomsky (1957:111) had a heterogeneous VP ( $VP \rightarrow Verb + NP$ ), it also had the homogeneous VP as a constituent ( $Verb \rightarrow Aux + V$ ), and it was therefore not at all compatible with (2)b/(3)b, and neither was Chomsky (1965:43). One of the first generative analyses to be compatible with (2)b/(3)b was Ross (1969).



There is nothing that corresponds to the heterogeneous VP (= verb + complement/modifiers – one VP for each verb) in Hjulmand & Schwarz (2009, 2012), and typically there is nothing that corresponds to the homogeneous VP (= all verbs and only verbs / one and only VP for each clause) in generative analyses:

- (4) a. **Analyses of English that have only the heterogeneous VP** (= verb + complement/modifiers) include Aarts & Haegeman (2006:126-133), Aarts (2001:43, 104-11, 196-201, 2011:66), Altenberg & Vago (2010:126), Carnie (2013:80), Fromkin et al. (2011:130), Huddleston & Pullum (2005:13), Hurford (1994:93, 186), Johansson & Manninen (2012:67, 85-88), Payne (2011:200-203), and Radford (2009:40)

Like the above, both Börjars & Burridge (2001:77) and Declerck et al. (2006:12) have the heterogeneous VP (= verb + complement/modifiers), but in addition, both books also have the homogeneous VP under a different label: “verb string” in Börjars & Burridge (2001:143) and “verb form” in Declerck et al. (2006:15).

- b. **Analyses of English that have only the homogeneous VP** (= all and only verbs) include Andersen (2006:60), Ballard (2013:101-103), Biber et al. (1999:99-100), Collins & Hollo (2010:78), Crystal (2004:114), Greenbaum (1996:59), Hasselgård et al. (2012:21, 164), McGregor (1997:123, 2015:113-114), Preisler (1997:27, 76-79), Quirk et al. (1985:96-97) and Thomas (1993). Also Bache (1996, 2014:65) and Bache, Davenport, Dienhart & Larsen (1993:74-75) only have the homogeneous VP, but they call it “verb group”.

In Bache & Davidsen-Nielsen (1997), the “predicator” (1997:38-40), the “verb group” (1997:59), and the “verbal” (1997:277) all correspond to the homogeneous VP. However, Bache & Davidsen-Nielsen (1997:179) also very briefly mentions a “verb phrase” which comprises “the predicator and its subordinate constituents”.

Culpeper et al. (2009:146-149) also prefer the homogeneous VP (called the “small VP”), but they explicitly compare it to the heterogeneous VP (called the “large VP”).

In my opinion, there are a number of reasons to prefer the heterogeneous VP (= verb + complement/ modifiers – one VP for each verb) to the homogeneous VP (= all verbs and only verbs / one and only VP for each clause), as will be discussed in the following sections.

## 2.2 Do VPs exclude complements/modifiers?

In Hjulmand & Schwarz (2009, 2012), VP has a very special status, in that it is the only type of phrase that does not contain complements, and in that it only consists of words from a single word class (viz. verbs). As opposed to their VP, the NP of Hjulmand & Schwarz (2009, 2012) contains more than just nouns, their AdjP contains more than just adjectives, their AdvP contains more than just adverbs and their PP contains more than just prepositions:

- (5)     **Verb phrase** (H&S 2009:32, 2012:33)  
 a.     *The British car industry has concluded a deal with the Japanese government.*
- Noun phrase** (H&S 2009:34, 2012:35)  
 b.     *The house-buying market is a textbook example of how capitalism operates.*
- Adjective phrase** (H&S 2009:35, 2012:37)  
 c.     *Susan had always been fond of animals.*
- Adverb phrase** (H&S 2009:35, 2012:37)  
 d.     *He runs much faster than his brother.*
- Prepositional phrase** (H&S 2009:35, 2012:38)  
 e.     *They travelled to New York by train.*

The generative approach (and other proponents of the heterogeneous VP) would agree with Hjulmand & Schwarz (2009, 2012) that all the above are phrases (although in many generative analyses, NPs would be labelled DPs), **except** for the VPs, where *has concluded* would not be a constituent at all.

However, as the next section will show, there are also other (and perhaps better) arguments against the homogeneous VP than one based on the lack of internal consistency.

## 2.2 Should VPs be allowed to violate constituency rules?

Just like Haegeman & Guéron (1999:45-53), Aarts (2001:193-240), and Radford (2009:58-69), also Hjulmand & Schwarz (2009:45-48, 2012:48-51), Bache & Davidsen-Nielsen (1997:20-22), and Bache (2014:15-18) discuss ways of testing whether a string of words is a constituent or not. This section will argue that whereas the heterogeneous VP can be shown to be a constituent in the sense of such constituency tests, this is not the case for the homogeneous VP. (For more discussion of constituents and constituency, see the second appendix in section 7.)

VPs may be fronted in certain cases (this is often called “VP-preposing”), and such examples clearly show that VPs consist not only of verbs, but of verbs, complements, and modifiers. (6)a is from Greenbaum & Quirk (1990:409), (6)b from Quirk, Greenbaum, Leech & Svartvik (1985:125) and (6)c is a “real life” example from the *British National Corpus*:

- (6) a. They have promised to [finish the work], and [finish it] they will \_\_\_\_.
- b. Bill said that he would [win the match], and [win the match] he did \_\_\_\_.
- c. It was, it was indeed, a virus so small that the eye of man had never [seen it before]. But [see it now] we did \_\_\_\_.

Notice how it is totally impossible for *will finish* to be a constituent in (6)a, as here [*finish it*] is shown to be a constituent, and *finish* could not possibly be part of a constituent [*finish it*] and at the same time be part of another constituent [*will finish*]. This is parallel to the impossibility of one and the same day (even Sunday the 31<sup>st</sup>) being both part of the month of January and part of the month of February.

The following further examples of the same type are also from the *British National Corpus* (and it should be underlined that although it is of course positive when a particular type of example is found in the *BNC*, what is crucial is whether or not the type of example is found to be acceptable by native speakers):

- (7) a. [Been in town all afternoon], I have \_\_\_\_.
- b. [Just done the circuit], he has \_\_\_\_.
- c. [Saved many a life at sea], they have \_\_\_\_.

There is thus clear evidence in favour of the heterogeneous VP (= verb + complement/modifiers) from constituency tests of movement. What about the homogeneous VP (= all and only verbs)?

- (8) They promised to pay us all, ...
- a. \* ... but [paid] they only \_\_\_\_ him.
- b. \* ... but [pay] they only did \_\_\_\_ him.

- (9) Bill said that he would win all the matches, ...  
 a. \* ... but [won] he only \_\_\_\_\_ the first one.  
 b. \* ... but [win] he only did \_\_\_\_\_ the first one.  
 ↑
- (10) a. Finished the work, they would have \_\_\_\_\_, ...  
 b. \* Have finished, they would \_\_\_\_\_ the work, ...  
 ↑  
 ... if it hadn't started to rain.

I have actually never come across any cases where the existence of the homogeneous VP (= all and only verbs) can be supported by means of such constituency tests.<sup>3</sup> Furthermore, even if we could perhaps come up with reasons why the homogeneous VP cannot move in (8)a,b, (9)a,b, and (10) b, then e.g. (10)a clearly shows that it is impossible for *would have finished* to make up a constituent, given that *finished* is already part of a constituent together with *the work*. The evidence from constituency tests of movement thus clearly supports the heterogeneous VP rather than the homogeneous one.

### 3. Complements vs. modifiers

#### 3.1 Complements vs. modifiers at the clause/VP-level

In the generative analysis, there is a structural difference between complements and modifiers:

- (11) a. A constituent may be the sister of a  $X^{\circ}$  (a head), and then it is a complement of this head, i.e. it is **an argument** of the head (e.g. an object), and not an adjunct.  
 b. A constituent may be the sister of an XP (a phrase), and then it is a modifier of this phrase, i.e. it is **an adjunct** of the phrase (e.g. an adverbial), and not an argument.

<sup>3</sup> It should be mentioned at this point that data from ellipsis perhaps could be seen as support for both (!) the heterogeneous and the homogeneous VP. In both of the following examples from the *British National Corpus*, a sequence of words has been elided (in the underlined position) which would have been a repetition of an earlier sequence of words (surrounded by []):

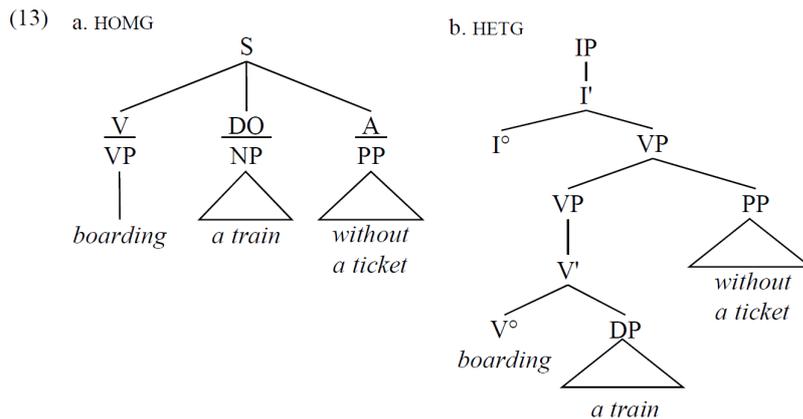
- (i) a. He must have [caught this same train many times], and all the others before and after, as I have \_\_\_\_\_.  
 b. Does it confuse you that I [should do] the talking and you \_\_\_\_ the listening?

In an analysis with a heterogeneous VP, (i)a would be analysed as ellipsis of a VP (one constituent) and (i)b as gapping of two verbs (i.e. two constituents). In an analysis with a homogeneous VP, perhaps (i)b could be seen as ellipsis of a VP (one constituent) and (i)a as ellipsis of a verb, an object and an adverbial (i.e. three constituents, presumably).

|         | HEAD<br>(V°/N°) | COMPLEMENT<br>OF V°/N° | MODIFIER<br>OF VP/NP   |             |
|---------|-----------------|------------------------|------------------------|-------------|
| (12) a. | Teaching        | English linguistics    | at Aarhus University   | (VP/CLAUSE) |
| b.      | Teachers        | of English linguistics | from Aarhus University | (DP/NP)     |

In the NP/DP, no difference at all is made between complements and modifiers in Hjulmand & Schwarz (2009, 2012), as both complements and modifiers are called “postmodifiers” (see section 3.2 below).

At the clause/VP-level, on the other hand, there is actually a difference between complements and modifiers in Hjulmand & Schwarz (2009, 2012), but it is only a difference in terminology, and not a structural one.<sup>4</sup> Complements are labelled e.g. direct objects and modifiers are labelled e.g. adverbials, cf. (13)a, which is from Hjulmand & Schwarz (2009:59, 2012:63):



In the generative VP in (13)b, only the direct object *a train* is the sister of the verb *boarding*. The adverbial *without a ticket* on the other hand is the sister of the constituent it modifies, i.e. the VP *boarding a train*.

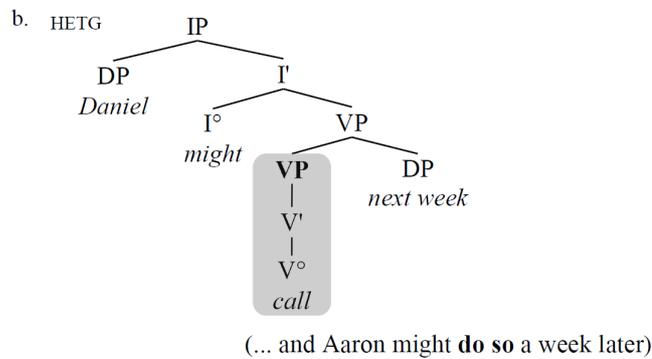
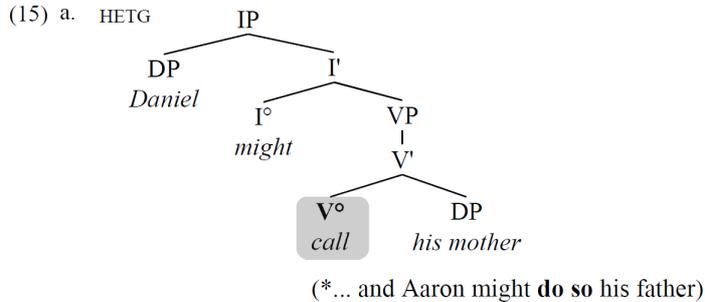
In the analysis in Hjulmand & Schwarz (2009, 2012), (13)a, both the direct object *a train* and the adverbial *without a ticket* are sisters of the verb *boarding*. This means that in a sentence with a final adverbial and without an object, this adverbial will have exactly the same structural position as the direct object would have had if it had been present (see (16)a,b below).

<sup>4</sup> Also in e.g. Bache & Davidsen-Nielsen (1997:30-31) and Bache (2014:110-111), the difference between complements and modifiers at the clause level is only one in labelling and not a structural difference.

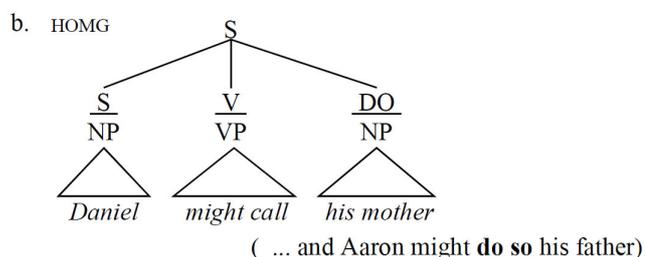
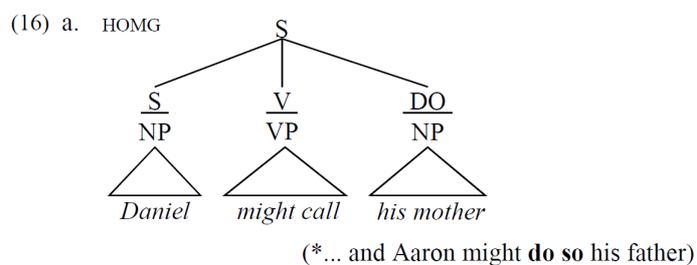
As far as I can tell, this makes a structural account of the following difference very difficult:

- (14) a. \*Daniel might call his mother and Aaron might do so his father.  
 b. Daniel might call next week and Aaron might do so a week later.

The generative account of this difference is based on the assumption that *do so* may only substitute VPs, and therefore *call* cannot be substituted by *do so* on its own in (15)a, where the smallest VP is *call her mother* (as *her mother* is the sister of V°), whereas *call* may indeed be substituted on its own by *do so* in (15)b, where the smallest VP is *call* (as *next week* is the sister not of V° but of VP):



To Hjulmand & Schwarz (2009, 2012), these two cases would have exactly the same structure:



... and then it is difficult to see why *call* may be substituted by *do so* in (16)b but not in (16)a. In other words, by not having a structural difference between complements and modifiers in the clause, it would seem very difficult to give a structural account of this systematic set of differences in approaches like Hjulmand & Schwarz (2009, 2012).

### 3.2 Complements vs. modifiers at the NP/DP-level

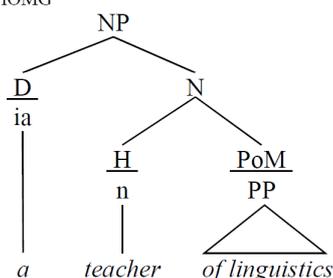
As mentioned above, no difference at all is made between complements and modifiers at the NP/DP-level in Hjulmand & Schwarz (2009, 2012)<sup>5</sup>, see (17)a and (18)a. Both complements and modifiers are here called “post-modifiers”. In a generative analysis, on the other hand, e.g. *of linguistics* in *a teacher of linguistics* will be seen as a complement of a noun, (17)b, whereas e.g. *with a blue shirt* in *a teacher with a blue shirt* will be seen as a modifier of an NP, (18)b.

<sup>5</sup> Also in e.g. Bache & Davidsen-Nielsen (1997:343) and Bache (2014:150, 154), there are no differences made between complements and modifiers at the NP/DP-level.

In this section, I will continue to use the labels HOMG for “homogeneous” and HETG for “heterogeneous”, even though this may be somewhat misleading, given that NPs are strictly speaking not homogeneous in Hjulmand & Schwarz (2009, 2012), where they may contain not just nouns but also other categories. The difference is instead that a “homogeneous” NP never contains a complement (as nouns cannot select a complement in Hjulmand & Schwarz 2009, 2012), whereas “heterogeneous” NPs/DPs may contain a complement (as some nouns, e.g. *teacher* or *breach* may select a complement in the generative analysis, whereas others, e.g. *chair* or *finger* may not).

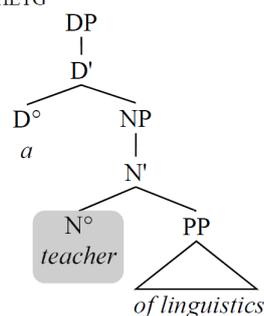
(17)a is the same structure as the one given for *a breach of railway regulations* (Hjulmand & Schwarz 2009:59, 2012:63), where *of railway regulations* (and *of linguistics*) is a “postmodifier” whereas it would be a complement in a generative analysis, corresponding to the direct object of the verb *teach*. In other words, in (17)b, *teacher* is only a  $N^\circ$ .

(17) a. HOMG



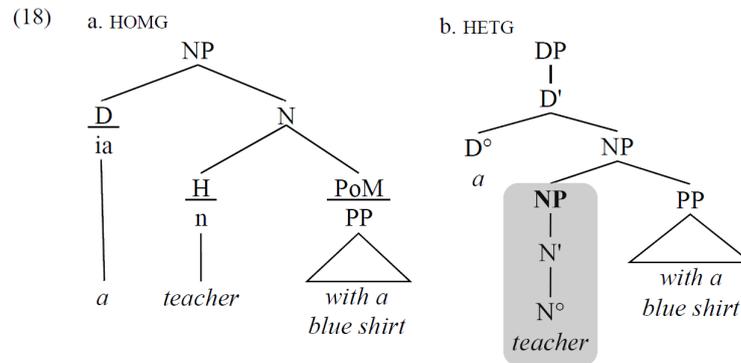
NP noun phrase  
 D determiner  
 ia indefinite article  
 N "the nominal part"  
 (H&S 2009:56/2012:60)  
 H head (of a phrase)  
 n noun  
 PoM postmodifier

b. HETG



DP determiner phrase  
 NP noun phrase  
 PP preposition phrase  
 $D^\circ/N^\circ$  head of DP/NP

(18)a is the same structure as the one given for *his career in the army* (Hjulmand & Schwarz 2009:60, 2012:64), where *in the army* is a “post-modifier”, where it would be a modifier in a generative analysis. In other words, in (18)b, *teacher* is both a  $N^\circ$  and an NP.



In the generative approach, the system is thus basically the same at the VP-level and at the DP-level: A **complement** like *of linguistics* is the sister of an  $X^\circ$ , (17)b, whereas a **modifier** like *with a blue shirt* is the sister of an XP, (18)b.

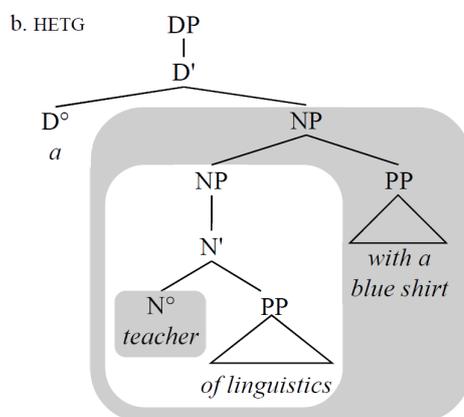
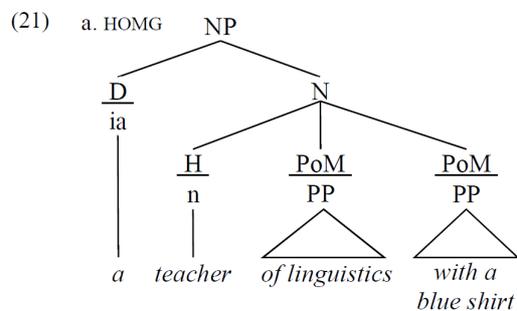
Once again, substitution is a possible test, in that *one* can substitute an NP but not an  $N^\circ$ :

- (19) a. \* The teacher of linguistics is taller than  
the one of physics.
- b. The teacher with a blue shirt is taller than  
the one with a red shirt.

(19)a shows that *of linguistics* is a complement (it is part of what has to be substituted by *one*), and (19)b shows that *with a blue shirt* is a modifier (it is not part of what has to be substituted by *one*).

The assumption from above that a complement is the sister of a head ( $X^\circ$ ), whereas a modifier is the sister of a phrase (XP) also explains the ordering restrictions seen in (20). In the analysis that distinguishes between complements and modifiers, i.e. in (21)b, the order in (20)b would require branches to cross, but (20)a would not. No such structural difference is made in the analysis in (21)a.

- (20) a. A teacher [of linguistics] [with a blue shirt]  
b. \* A teacher [with a blue shirt] [of linguistics]



Assuming that there are two NPs in (21)b furthermore leads to correct predictions concerning possible and impossible *one*-substitutions:

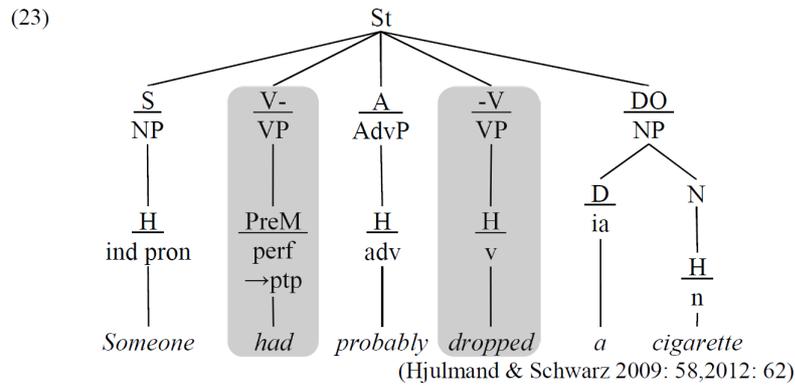
- (22) a. This teacher of linguistics with a blue shirt is taller than that **one** \_\_\_\_\_.
- b. The teacher of linguistics with a blue shirt is taller than the **one** \_\_\_\_\_ with a red shirt.
- c. \* The teacher of linguistics with a blue shirt is taller than the **one** of physics with a red shirt.

In other words, by not having any kind of difference between complements and modifiers at the NP/DP-level, approaches like Hjulmand & Schwarz (2009, 2012) fail to capture this systematic set of differences. The relevance of this subsection on nominals (NPs/DPs) for the general discussion

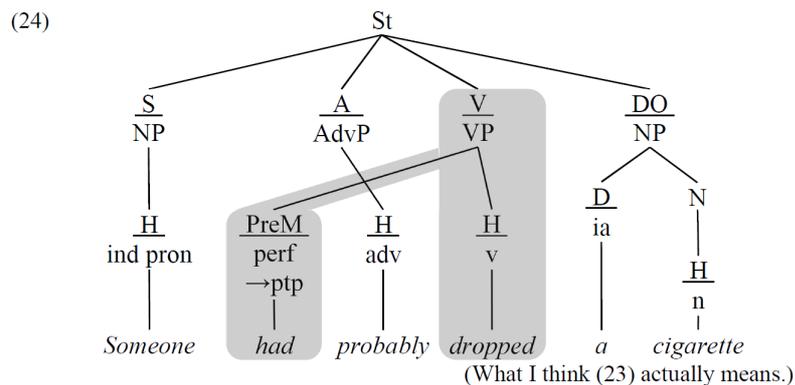
of verb phrases is thus that the generative analysis of VP receives support from the fact that the data concerning *one*-substitution in the DP can be accounted for in a very similar analysis. The Hjulmand & Schwarz (2009, 2012) analysis of nominal structure, on the other hand, did not seem to offer an account of the *one*-substitution data, and it was at any rate not at all parallel to their analysis of VP.

**4. Can VPs be discontinuous?**

Hjulmand & Schwarz (2009:57-58, 2012:62) give an example of what they call a “split phrase”<sup>6</sup>, viz. their VP *had dropped* in the example *Someone had probably dropped a cigarette*:



However, it seems to me that this analysis simply amounts to saying that branches in a syntactic tree may cross:



<sup>6</sup> Completely parallel analyses with discontinuous “verb groups” are also found in e.g. Bache & Davidsen-Nielsen (1997:151, 155) and Bache (2014:60-61).

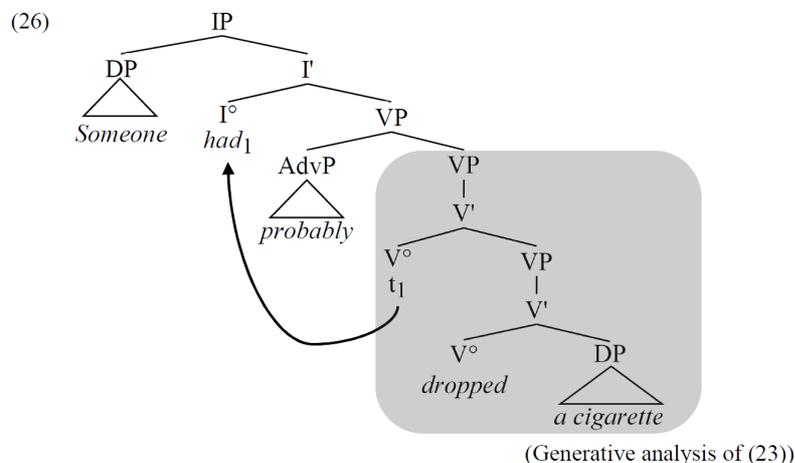
Hjulmand & Schwarz (2009:58, 2012:62) thus allow at least VPs to be discontinuous. (23) and (25)a show that their VP can be interrupted after the first verb, but does anything prevent a homogeneous VP from being interrupted after the second verb?

- (25) a. They will perhaps have read all of the novels by next week's lecture.  
 b. \* They will have perhaps read all of the novels by next week's lecture.

As far as I can tell, this restriction does not follow from anything within the homogeneous VP-analysis, which means it has to be stated separately (which is not done in Hjulmand & Schwarz 2009:48, 163, 2012:50, 177, but it could be done).

In generative analyses, examples like (23) and (25)a are not completely straightforward either. The VP *dropped a cigarette* is not discontinuous, but it looks as if the VP *had (probably) dropped a cigarette* is.

This is handled by assuming a movement of *had* from one head position ( $V^{\circ}$ ) to another ( $I^{\circ}$ ). Such a movement ( $V^{\circ}$ -to- $I^{\circ}$ -movement) only takes place with finite auxiliary verbs in English, but it is found with all finite verbs in e.g. French and Icelandic (cf. Vikner 1997, 1999 and references there).



This again means that in the generative analysis, an extra stipulation is not necessary to prevent (25)b: (25)a is  $V^{\circ}$ -to- $I^{\circ}$ -movement, and the impossibility of (25)b follows from  $I^{\circ}$  like all other head positions only being able to contain one head (and from *perhaps* like all other sentential adverbs having to modify the highest VP of the clause).

What about other types of phrases? As Hjulmand & Schwarz (2009:163, 2012:177) in principle allow phrases to be discontinuous, they have to stipulate that this is only possible for VPs:

- (27) *Verb phrases (in contrast to what is usually the case with the other phrases) are sometimes split in two.*  
(Hjulmand & Schwarz 2009:163, 2012:177)

In generative analyses, the fact that only finite verbs behave as in (26) follow from the circumstances which lead to V<sup>o</sup>-to-I<sup>o</sup>-movement (Vikner 1997, 1999) not being present in other types of phrases.

Notice that syntactic movement as such is found in both approaches, in that Hjulmand & Schwarz (2009:46-48, 2012:48-51) also assume movement, though only movement of phrases. The difference is thus not whether or not there is movement in syntax, but whether only phrases may move as in Hjulmand & Schwarz (2009, 2012) or both phrases (XP) and heads (X<sup>o</sup>) may move (as in the generative analysis).

## 5. Conclusion

The differences between the heterogeneous analysis of VP (and DP/NP) as found e.g. in the generative approach on the one hand and on the other hand the homogeneous analysis of VP as found in Hjulmand & Schwarz (2009, 2012), Bache & Davidsen-Nielsen (1997) and Bache (2014) (and the analysis of NP/noun group in the same accounts) are the following:

- The heterogeneous VP is consistent with the analysis of other phrases (section 2.2).
- The heterogeneous VP is compatible with the results of constituency tests (section 2.3).
- The structural difference between complements and modifiers both at the VP-level and at the DP-level in the generative analysis is compatible with the result of substitution of VPs by *do so* (section 3.1) and substitution of NPs by *one* (section 3.2).
- The generative analysis yields a more restrictive analysis of what would seem to be discontinuous VPs, i.e. of verb movement (section 4).
- (Furthermore, cf. the first appendix in section 6, the generative analysis yields a structural analysis of the differences between English and Danish that leads to improved generalisations concerning the similarities and differences between English and Danish word order).

The conclusion is thus that there is a series of reasons to assume the heterogeneous VP rather than the homogeneous VP in the analysis of English (and Danish) word order.

McGregor (2015:114) says that the arguments concerning the choice between homogeneous VPs (which he prefers) and heterogeneous VPs are “too complex to deal with in an introductory text”. Bache (2014:12) says that the analysis used there, which employs the homogeneous VP (called “verb group”), may not be optimal from a research point of view, but that it on the other hand is both simple and practical. As outlined above, I fully agree that the homogeneous VP is not optimal from a research point of view, but I do not agree that the homogeneous VP can be said to be both simple and practical, particularly not at the university level. On the contrary, I find the homogeneous VP an unnecessary complication. It may be the case that it is convenient to assume a homogeneous VP (called *udsagnsled/verbal-led* ‘verbal unit’) in Danish primary schools, but I think that right from the first year at university (and possibly even in high school), it is much simpler to leave the homogeneous VP behind and instead employ the heterogeneous VP, both because it is much more consistent with the analysis of other phrases (NP, AdjP, AdvP, PP) and because it is much more compatible with the various constituency tests (which are recognised across the various theoretical approaches to syntax).

#### **6. First appendix: The clause structure of Danish**

Hjulmand & Schwarz (2009, 2012) is directly targeted at students who are native speakers of Danish, and it therefore contains a great many interesting observations about the differences between Danish and English (and the potential corresponding difficulties for Danish speakers of English), e.g.

- (28) *We find that Danish is a verb second-language, because whatever comes initially, the verb is always in second position. [...] If Danes transfer this verb-second order into English, the result will be fine if the sentence starts with the subject.*

(Hjulmand & Schwarz 2009:267, 2012:291)

I completely agree that Danish is V2, but the advice given here would still incorrectly allow for e.g.

- (29) Da. a. Thomas reparerede faktisk bilen i går  
 En. b. \*Thomas repaired actually the car yesterday.  
 V2

In my view, what is missing in Hjulmand & Schwarz (2009, 2012) is a real attempt at a structural analysis of the differences between the two languages. This might improve on a number of insufficient and sometimes incorrect *ad hoc* rules, like (28) above or like the following:

- (30) *In Danish it is common to have an adverbial, even a long one, between verb and direct object.*  
 (Hjulmand & Schwarz 2009:268, 2012:292)

It is thus predicted that the following four examples should be possible in Danish, contrary to fact:

- (31) Da. a. Jakob taler næsten aldrig dansk.  
*Jakob speaks almost never Danish*  
 b. \* Jakob har talt næsten aldrig dansk.  
*Jakob has spoken almost never Danish*
- (32) Da. a. \* Når Jakob taler næsten aldrig dansk, så er det fordi ...  
*When Jakob speaks almost never Danish, then is it because ...*  
 b. \* Når Jakob har talt næsten aldrig dansk, så er det fordi ...  
*When Jakob has spoken almost never Danish, then is it because ...*

A generative analysis of this kind of data would be:

- |             | XP           | C°            | DP                  | AdvP                | V°            | V°                                    | DP            |
|-------------|--------------|---------------|---------------------|---------------------|---------------|---------------------------------------|---------------|
| (33) Da. a. | Jakob        | taler         |                     | næsten aldrig       |               |                                       | dansk.        |
|             | <i>Jakob</i> | <i>speaks</i> |                     | <i>almost never</i> |               |                                       | <i>Danish</i> |
| b.          | Jakob        | har           |                     | næsten aldrig       | talt          |                                       | dansk.        |
|             | <i>Jakob</i> | <i>has</i>    |                     | <i>almost never</i> | <i>spoken</i> |                                       | <i>Danish</i> |
| (34) Da. a. | Når          | Jakob         | næsten aldrig       |                     | taler         | dansk, så er det fordi ...            |               |
|             | <i>When</i>  | <i>Jakob</i>  | <i>almost never</i> |                     | <i>speaks</i> | <i>Danish, then is it because ...</i> |               |
| b.          | Når          | Jakob         | næsten aldrig       | har talt            |               | dansk, så er det fordi ...            |               |
|             | <i>When</i>  | <i>Jakob</i>  | <i>almost never</i> | <i>has spoken</i>   |               | <i>Danish, then is it because ...</i> |               |

Later on the same page of Hjulmand & Schwarz (2009, 2012), the rule in (30) is modified as follows:

- (35) *In the examples above we had simple verb phrases (one verb only). With complex verb phrases, on the other hand, we find the same constituent order in Danish and English: We place the adverbial after the first auxiliary.* (Hjulmand & Schwarz 2009:268, 2012:292)

Now it looks as if there are two rules for Danish, (“if there is only one verb in the clause, place the adverbial after the main verb, **and** if there is more than one verb in the clause, place the adverbial after the first auxiliary”). This could easily be simplified (to “place the adverbial after the finite verb”), but neither the complicated nor the simplified formulation would be generally valid, as they would only apply to main clauses, (36), and not to embedded clauses, (37):

- (36) Da. a. Jakob taler næsten aldrig dansk.  
*Jakob speaks almost never Danish.*  
 b. Jakob har næsten aldrig talt dansk.  
*Jakob has almost never spoken Danish.*
- (37) Da. a. \* Når Jakob taler næsten aldrig dansk, så er det fordi ...  
*When Jakob speaks almost never Danish, then is it because ...*  
 b. \* Når Jakob har næsten aldrig talt dansk, så er det fordi ...  
*When Jakob has almost never spoken Danish, then is it because ...*

The corresponding generative analysis is given in (33) and (34) above. An informal formulation of the rule concerning the placement of sentential adverbials, (38)a, and for V2, (38)b, could be as follows:

- (38) a. Place the adverbial to the left of the finite verb.  
 b. If and only if the clause is a main clause, move the finite verb to the position left of the subject, and then move either the subject or another phrase to the first position of the clause.

This would also be compatible with an analysis like Diderichsen (1946), see also Vikner (2015).

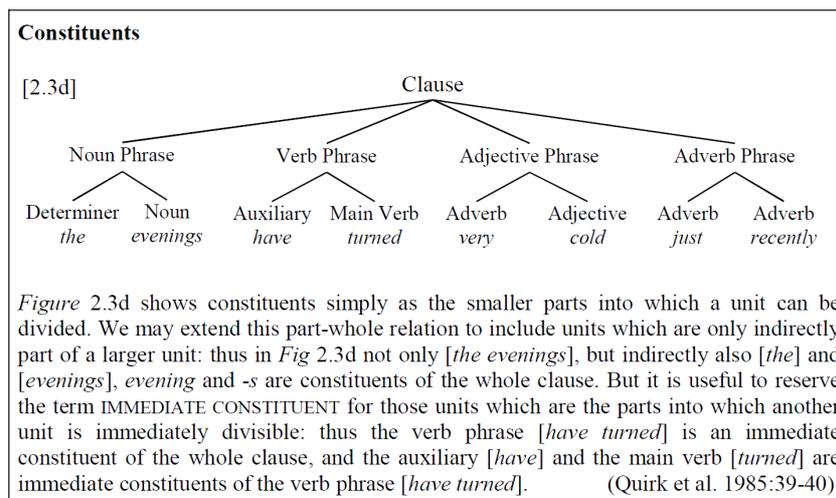
## 7. Second appendix: Constituents and immediate constituents

Consider the following definitions:

- (39) a. **Constituency:**  
Relation, especially in syntax, between a unit which is part of a larger unit and the whole of which it is part. E.g. the adjective phrase *very friendly* is a constituent of the noun phrase *very friendly people*.  
(*Oxford Concise Dictionary of Linguistics* = Matthews 2007)
- b. **Constituent:**  
Any unit which is part of a larger unit. Morphs are constituents of words, words of phrases, phrases of clauses, clauses of sentences.  
(*Cambridge Dictionary of Linguistics* = Brown & Miller 2013)
- c. **Constituent:**  
One of the parts that form something (*the chemical constituents of the liquid*).  
(*Merriam-Webster's Advanced Learner's Dictionary* = Perrault 2008)

One thing is perhaps still left open by the above definitions, namely whether the relation *constituent of* is transitive: If Z is a constituent of Y, and Y is a constituent of X, can Z then be said to be a constituent of X? To use a non-linguistic comparison, given that Shetland is part of Scotland, and Scotland is part of the United Kingdom (at least at the time of writing this in the autumn of 2015), can we say that Shetland is part of the United Kingdom?

Here I agree with Quirk et al. (1985:39-40), where the answer is yes (which corresponds to saying both that Scotland is part of the UK and that Shetland is part of the UK). Quirk et al. (1985:39-40) go on to suggest that if we need a term to refer only to constituents on the highest level, we can use the term *immediate constituent*. Here is the entire passage:



Quirk et al. (1985:39-40) here point out that the constituents of a clause comprise both those constituents which *are immediate constituents of the clause* (constituents on the highest level, e.g. the subject *the evenings*) as well as those constituents which are NOT *immediate constituents of the clause* (constituents on a lower level, e.g. a part of the subject like *evenings*).

Given that Hjulmand & Schwarz (2009:24, 47, 2012:24, 50) refer both to *primary sentence constituents* and to *sentence constituents* (and to *constituents*), we might expect them to be making the same distinction that Quirk et al. (1985:39-40) make. This is not the case, however, as it is clear from the context that Hjulmand & Schwarz (2009:47, 2012:50) intend *sentence constituents* (and *constituents*) to have exactly the same (narrow) interpretation as *primary sentence constituents*. Consequently, they do not have a single term with the Quirk et al. (1985:39-40) sense of *constituent of the whole clause*, i.e. one term that comprises both e.g. the constituent which is the subject and a constituent inside this subject.

Also Bache (2014:14-18) uses *constituent* or *sentence constituent* to refer only to the immediate constituent of the clause and not to lower level units.

As pointed out above, constituency tests like substitution and movement are used to support the assumption of a given constituent within various theoretical approaches, see e.g. Bache & Davidsen-Nielsen (1997:20-22), Haegeman & Guéron (1999:45-53), Aarts (2001:193-240), and Radford (2009: 58-69), Hjulmand & Schwarz (2009:45-48, 2012:48-51), and Bache (2014:15-18). It should be pointed out that such tests do not necessarily distinguish between immediate constituents of the clause (cf. the movement of an adverbial in (40)b, and substitution of a direct object in (41)b) and lower level constituents (part of an adverbial in both (40)c and (42)b, and part of a part of an object in (43)b):

**THE EXAMPLE  
SHOWS THAT**

- |      |  |   |
|------|--|---|
| (40) | a. I found these examples in a book from 1859.           |   |
|      | b. <u>In which book</u> did you find these examples ___? | <u>in a book from 1859</u><br>IS A CONSTITUENT    |
|      | c. <u>Which book</u> did you find these examples in ___? | <u>a book from 1859</u><br>IS A CONSTITUENT       |
| (41) | a. I gave <u>the man from the RSPCA</u> £10.             |   |
|      | b. <u>Who</u> did you give ___ £10?                      | <u>the man from the RSPCA</u><br>IS A CONSTITUENT |

IS A CONSTITUENT

- (42) a. I gave £10 to the man from the RSPCA.  
 b. Who did you give £10 to \_\_\_? *the man from the RSPCA*  
 IS A CONSTITUENT
- (43) a. I saw a photo of the man from the RSPCA.  
 b. Who did you see a photo of \_\_\_? *the man from the RSPCA*  
 IS A CONSTITUENT

As constituency tests can be used to support the existence both of (immediate) constituents of the clause and of lower level constituents, it is extremely convenient to have a term that covers both types. I therefore agree with Quirk et al. (1985:39-40) that *constituent* should be used for constituents at any level, and also that if a term is needed to refer only to constituents on the highest level, the term *immediate constituent* will do the job very well.

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