On what comes first in a verb-second language[*]

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Abstract

Most Germanic languages display verb-second (V2) order. This paper addresses two fundamental, but open questions about V2 clauses: first, whether there are grammatical restrictions on what occupies initial position in declarative V2 clauses and, second, whether subject-initial V2 clauses have the same structure as non-subject-initial ones. Based on the distribution of an overt VP anaphor I argue that, in Danish at least, there are restrictions on what comes first in declarative V2 clauses, contra common perceptions, and that some subject-initial V2 clauses have a different, smaller structure than non-subject-initial V2 clauses, elaborating on proposals by Travis (1984) and Zwart (1991). These findings offer a new understanding of the relationship between information structure and V2 syntax. Where other languages have dedicated positions for particular information structural functions, Danish has a single position (Specifier of CP), which is restricted to information-structurally distinguished elements, but not dedicated to any particular information-structural function. A corollary is that information-structurally undifferentiated V2 clauses are smaller than CP and, therefore, subject initial. This analysis captures some initially surprising word order patterns, including the ungrammaticality of certain subject-initial V2 clauses with VP anaphora.

1 Introduction

Verb-second order is a major syntactic organizing principle of most Germanic languages.[1] In the simplest possible terms, verb-second (V2) order means that the finite verb appears in second position, preceded by exactly one constituent. Moreover, there are very few restrictions on what types of constituents can appear in the initial pre-verbal position. Accounting for V2 order was an early success story of Government and Binding theory, starting with Hans den Besten's work on Dutch and German in the late 1970s (published as den Besten 1983; see especially pp. 54–69) and followed up by numerous researchers, including Holmberg (1986), Holmberg and Platzack (1995:chapter 3), Koopman (1984:193–231), Platzack (1986a,b), Reinholtz (1989, 1990), Schwartz and Vikner (1989, 1996), Taraldsen (1986), Tiersch (1978), Tomaselli (1990), Travis (1984, 1991), Vikner (1995), Weerman (1989), and Zwart (1991, 1997). (Important precursors to den Besten (1983) are Bach (1962) and Koster (1975)). The emerging X-bar theory allowed for an elegant and attractive analysis of V2: the finite verb occupies C, the highest head position in the clause, and the initial constituent (XP in the schema below) occupies Specifier of C, which is projected to the left:

(1) $[_{\text{CP}} \text{ XP } V_{fin} \; [_{\text{IP}} \ldots]]$

Below C, we find IP which, among other things, is responsible for verbal inflection and the realization of subject, object and other grammatical relations. Well-known word-order differences between the Germanic V2 languages, most strikingly OV vs. VO order, are thus independent of V2 syntax, a point also made outside phrase-structural approaches to V2 (e.g. Heltoft 1992b). While there have been a number of refinements to the basic analysis sketched in (1), some of which will be referenced in section 2, it has proved remarkably robust and I will not be challenging it here. My primary concerns are two questions that arise from (1), neither of which have been fully resolved in the literature to date.

The first issue is whether there are grammatical restrictions on the choice of XP in declarative V2 clauses. The Danish topological/functional linguistics tradition (as represented by Diderichsen 1968, Heltoft 1986, 1992a, Hansen 1970, 1984, Jørgensen 2000, Jakobsen 1998, and Thomsen 1996) holds that initial position is multifunctional, hosting unmarked themes (roughly, continuation topics), marked themes (contrastive topics), and rhemes (focus), but defaulting to subject. In the generative tradition there is little explicit discussion of this quesiton, but the implicit consensus seems to be that there are no syntactic restrictions on initial position in declaratives. If we do find distinctive patterns, they are not a matter of syntax, but of stylistics and text linguistics. In this paper I argue, based on the distribution of an overt Danish VP anaphor, that there are syntactic restrictions on initial position of declarative V2 clauses, at least in Danish. In particular, I argue that information-structurally undistinguished elements, including expletives, cannot occupy the Specifier of CP, ruling out certain subject-initial V2 clauses. This argument challenges both the topological/functional view and the generative view and paves the way for a new understanding of the relationship between information structure and V2 syntax.

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[1]Various non-Germanic languages exhibit verb second syntax, including Kashmiri (Hook and Manaster-Ramer 1985, Manetta 2006), Breton (Schafer 1995, Jouitteau 2008) and Ingush (Nichols 2009). It is an interesting question whether in any of these languages verb-second syntax can be shown to interact with information structure in anything like the way I detail for Danish in this paper.

The second issue is whether subject-initial V2 clauses also have the structure in (1), or whether such clauses lack the CP layer. This issue was explicitly debated in the 80s and 90s (Branigan 1996, Santelmann 1996, 1999, Schwartz and Vikner 1989, 1996, Travis 1984, 1991, and Zwart 1991, 1997), but with no clear resolution. Based on the behavior of the Danish VP anaphor, I argue that some subject-initial clauses are just TPs, namely clauses with initial information-structurally undistinguished subjects. In contrast, subject-initial V2 clauses with information-structurally distinguished subjects are CPs. This view is compatible only with the asymmetric analyses of V2 proposed in Travis (1984, 1991) and Zwart (1991) and this paper can be seen as developing these analyses further by explicating the information-structural conditions for subject fronting to Spec-CP.

From my examination of these two issues, I draw the larger conclusion that, at least in Danish, V2 syntax is bound up with information structure in a deep and particular way. Whereas some languages have been argued to have particular positions for topic and focus (e.g. Mayan; Aissen 1992), Danish has a single position, Specifier of CP, which is restricted to information-structually distinguished elements, but not dedicated to any particular information-structural function.[2]

The paper also contributes to the understanding of VP anaphors, which are richly attested throughout the Germanic languages, but have been much less studied than VP ellipsis. The major conclusion that emerges on this front is that overt VP anaphors, by virtue of being overt, may interact with clausal syntax very differently from null VP anaphors (VP ellipsis). To my knowledge this observation has not played any role in work on the typology of anaphora, including Hankamer and Sag (1976), Huang (2000), and Winkler (2005). The present study suggests that it should.

The paper is organized as follows. Section 2 lays out the relevant aspects of verb second syntax. Section 3 introduces the Danish VP anaphor *det* and establishes two generalizations about its position in V2 clauses. Section 4 develops an analysis of these generalizations within the Minimalist framework and extends the analysis to VP anaphora in embedded clauses and to a word order alternation found with certain types of subjects. In section 5 I articulate the consequences of this analysis for the analytical understanding of V2 and for taxonomies of VP anaphora. Section 6 summarizes the results and identifies some avenues for further research.

2 Verb second and Danish clause structure

The Danish sentences in (2)–(10) are typical instantiations of V2:[3]

(2)   **Hende** havde han jo   genkendt forrige tirsdag.   [direct object]
       her   had   he ADV recognized last   Tuesday
       'He had recognized her last Tuesday.'

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[2]Ørsnes (2010) reaches a very similar conclusion on related, but independent, grounds. Working within LFG, he argues from the distribution of non-finite forms of the Danish support verb *gøre* that only elements that fulfill a 'grammaticalized discourse function' can occupy Spec-CP in Danish.

[3]I use the following abbreviations in the glosses: ADV = (unglossable) adverbial, DEF = definite, EXPL = expletive, PASS = passive, REFL = reflexive, SUP = superlative. I found it impossible to systematically convey the information structure of the Danish examples in my English translations, and I therefore decided to not attempt this at all, but instead give simple translations that convey the basic, truth conditional meaning of the Danish examples. Where relevant, the information structure of Danish examples will be discussed in the surrounding prose.
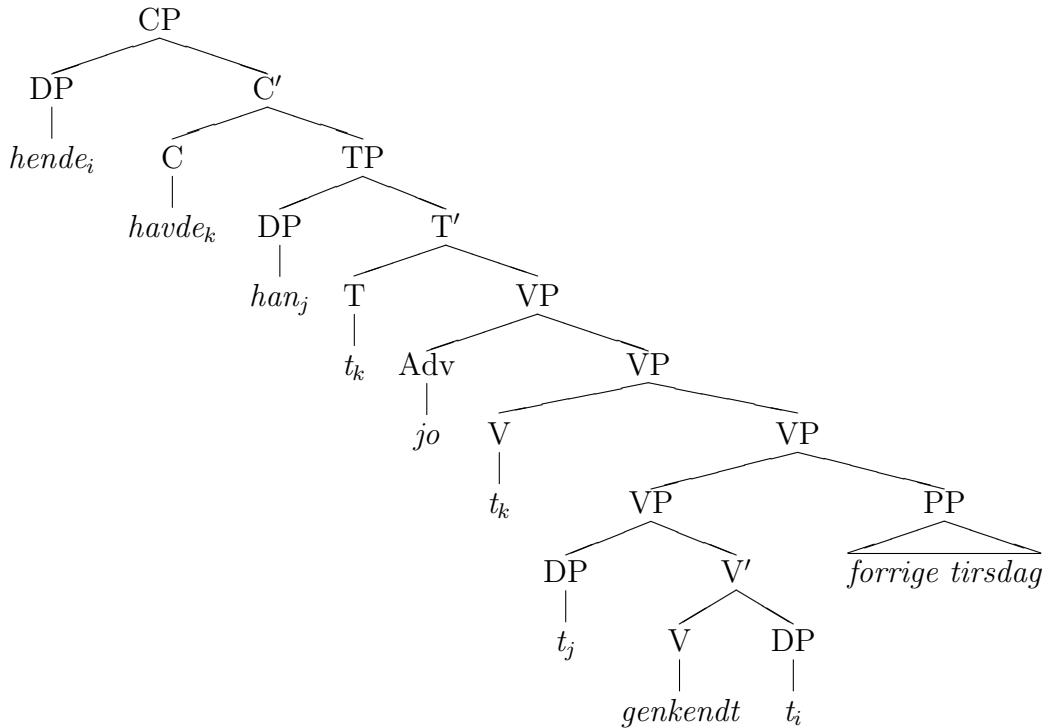
(3)   **Fra hjernen** kom de   sjældent.   [PP complement]
        from brain-DEF came they rarely.
        'They rarely came from the brain.'

(4)   **Ham** var der   aldrig nogen der   havde mistanke til.   [object of preposition]
        him   was there never anyone that had   suspicion to
        'There was never anyone who was suspicious of him.'

(5)   **Slagteren** har du vel givet besked.   [indirect object]
        butcher-DEF have you ADV given word
        'I take it that you have told the butcher.'

(6)   **At   hun også er den frygteligste**, ved   han ikke.   [CP complement]
        That she   also is the terrifying-SUP knows he   not
        'He doesn't know that she is also the most terrifying one.'

(7)   **Morsomt** fandt de   det ikke.   [predicate of a small clause]
        funny   found they it   not.
        'They didn't find it funny.'

(8)   **Så meget** gentog   verden sig   vel ikke.   [adverbial]
        that much   repeated world   REFL ADV not
        'One wouldn't think that the world would repeat itself that much.'

(9)   **Sælge gården** ville de   under ingen omstændigheder.   [non-finite VP]
        sell   farm-DEF would they under no   circumstances.
        'They wouldn't sell the farm under any circumstances.'

(10)   **Fundet nogen løsning** har de   endnu ikke.   [non-finite VP]
        found   any   solution have they yet   not.
        'They haven't found a solution yet.'

As the right-margin annotations indicate, a wide range of elements can occupy initial position. As far as I know, the only elements that cannot occupy initial position in Danish V2 clauses are: finite verbs and finite VPs, negation (*ikke*), and a handful of adverbs (*også* 'also', *jo* ≈ 'you know', *skam* ≈ 'really', *sgu* ≈ 'damned' *da* ≈ 'surely'); see Jørgensen (2000:83).

It is also worth noting that the finite verb in second position can be an auxiliary, as in (2), (5), (9), and (10), or a main verb, as in (3), (4), (7), (7), and (8). Under the standard V2 analysis sketched in the introduction, the example in (2) has the structure in (11).[4]

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[4]Here and in what follows, I have updated the original GB analysis to more current assumptions by replacing IP with TP, pruning non-branching structure, and letting the subject originate in Specifier of VP and move from there to Specifier of TP. I treat the perfect auxiliary *have* as a verb that takes a VP complement. None of these decisions affect the analysis of V2; they simply bring the discussion up to date. Traces of movement are represented by a *t* that is coindexed with the moved element.

(11)

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                          CP
              ┌────────────┴────────────┐
             DP                         C′
              │                ┌─────────┴─────────┐
          hende_i             C                    TP
                           havde_k      ┌───────────┴───────────┐
                                       DP                       T′
                                        │              ┌─────────┴─────────┐
                                     han_j            T                    VP
                                                       │          ┌─────────┴─────────┐
                                                      t_k        Adv                   VP
                                                                  │          ┌─────────┴─────────┐
                                                                 jo          V                    VP
                                                                             │          ┌──────────┴──────────┐
                                                                            t_k        VP                     PP
                                                                                  ┌─────┴─────┐          forrige tirsdag
                                                                                 DP          V′
                                                                                  │     ┌─────┴─────┐
                                                                                 t_j    V          DP
                                                                                        │           │
                                                                                   genkendt         t_i
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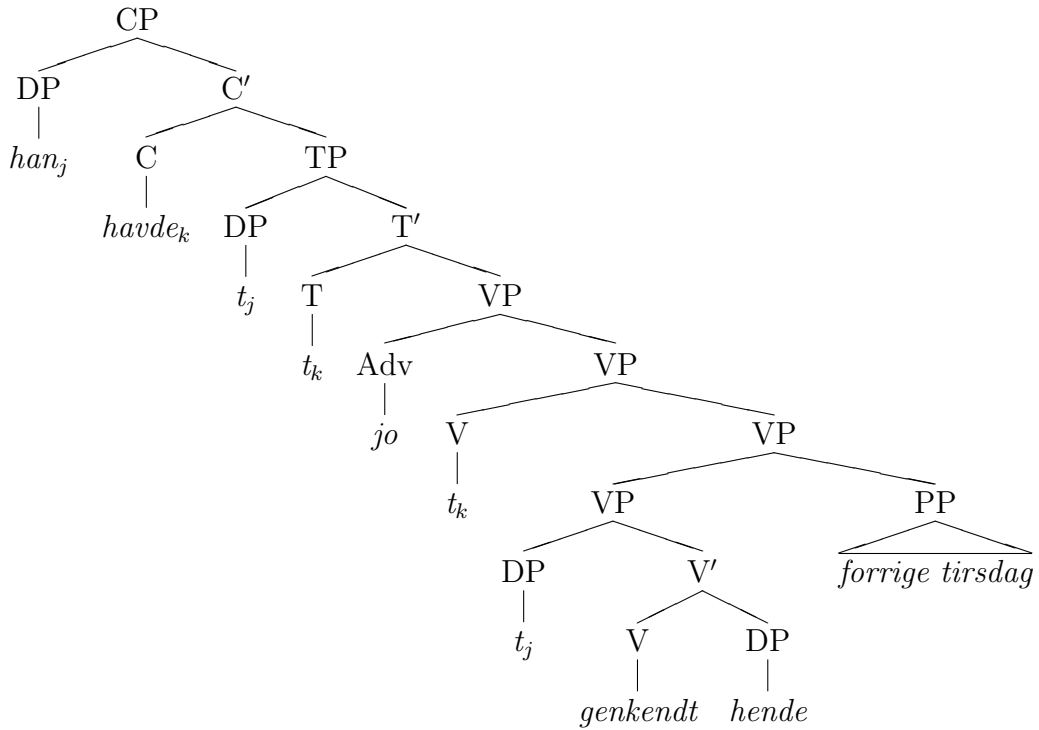
Four aspects of this structure are important for what follows. First, the finite verb (*havde*) moves to C via T. Second, the direct object (*hende*) moves to Specifier of CP from its base position as the sister of the main verb *genkendt*. Third, the subject surfaces in third position, immediately after the finite verb, since Specifier of TP is the canonical subject position in Danish and the specifier of TP is projected to the left, as are all specifiers in Danish. This accounts for the position of the subject in all of (2) though (10). Lastly, negation and so-called medial adverbs, like *jo* ($\approx$ you know) in (11), left-adjoin to the VP complement to T. Movement to C is limited to the verb that heads the complement of T, and there is no independent movement of lower verbs. Consequently, non-finite main verbs follow medial adverbs, whereas finite main verbs precede them; compare the order *han jo genkendt* (= SUBJ ADV V) in (2) to *kom de sjældent* (= V SUBJ ADV) in (3).

This much is relatively uncontroversial (though see Diesing 1990, Reinholtz 1990, and Rögnvaldsson and Thráinsson 1990 for dissenting views), but there are plenty of issues of active debate, including the possible function and causes of V2 (see e.g. Vikner 1995:51–64, Brandner 2004 and Zwart 2005), its origin (see e.g. Eythorsson 1995 and Dewey 2006), and the loss of V2 in English (Fischer et al. 2000:104–137, Haeberli 2002). The open issue of most immediate relevance to present concerns is the structure of subject-initial V2 clauses, like (12).

(12)   Han havde jo   genkendt hende forrige tirsdag.
        he   had ADV recognized her   last   Tuesday
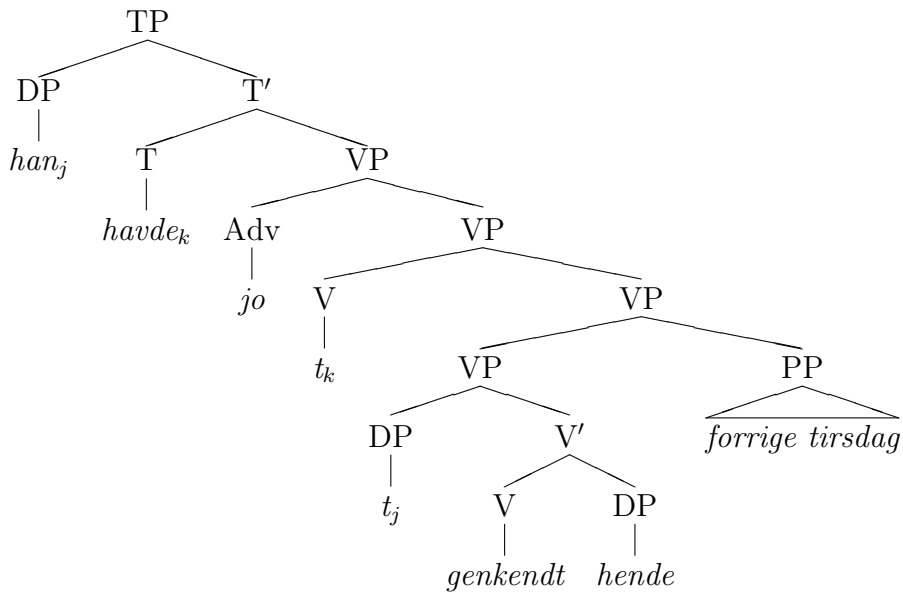   *He had recognized her last Tuesday.*

If we apply the canonical analysis to (12), the result is the structure in (13).

(13)

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                    CP
             _____/ _____
           DP                C'
           |            _____/ \_____
         han_j         C              TP
                       |         _____/ \_____
                     havde_k    DP            T'
                                |        _____/ \_____
                               t_j      T              VP
                                        |        _____/ \_____
                                       t_k      Adv            VP
                                                |        _____/ \_____
                                               jo        V              VP
                                                         |        _____/ \_____
                                                        t_k      VP            PP
                                                              __/ \__        /‾‾‾‾\
                                                            DP      V'     forrige tirsdag
                                                            |     __/ \__
                                                           t_j   V       DP
                                                                 |       |
                                                              genkendt  hende
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This is the uniform CP analysis advocated, in various guises, by den Besten (1983), van Crae-nenbroeck and Haegeman (2007), Holmberg (1986), Holmberg and Platzack (1995), Koopman (1984), Platzack (1986a,b), Schwartz and Vikner (1989, 1996), Taraldsen (1986), Tomaselli (1990), Vikner (1995), and Weerman (1989). Unlike (11) above, movement of *han* and *havde* into the CP-domain is string vacuous, in the sense that the very same word order results if there is no movement to CP, as in the alternative structure in (14).

(14)

```
                 TP
          _____/ _____
        DP                T'
        |            _____/ \_____
      han_j         T              VP
                    |        _____/ \_____
                  havde_k   Adv            VP
                            |        _____/ \_____
                           jo        V              VP
                                     |        _____/ \_____
                                    t_k      VP            PP
                                          __/ \__        /‾‾‾‾\
                                        DP      V'     forrige tirsdag
                                        |     __/ \__
                                       t_j   V       DP
                                             |       |
                                          genkendt  hende
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This structure is associated with the asymmetric V2 analyses developed by Travis (1984, 1991) and Zwart (1991, 1997);[5] see also Sells (2001:16–22). These analyses are asymmetric, because subject-initial V2 clauses have a different structure—they are TPs—than non-subject initial V2 clauses, which are CPs. It has proved difficult to differentiate (13) and (14) on empirical grounds (I'll discuss some specific arguments in section 5.1), but the analytical differences are quite clear. The CP analysis in (13) yields a uniform analysis of V2 clauses: all V2 clauses are CPs, all V2 clauses have the finite verb in C, and all V2 clauses have the initial element in Specifier of CP. The obvious cost of this uniformity is the "extra" structure associated with subject-initial V2 clauses. This extra structure can be isolated by comparing the CP structure in (13) with the TP structure in (14). In their recent book *Simpler Syntax*, Peter Culicover and Ray Jackendoff take mainstream generative grammar (in which they would include the competing analyses of V2 discussed above) to task for having sacrificed simplicity of structure for the sake of uniformity, that is to favor an analysis like (13) over that in (14) because the former yields a more uniform analysis of V2 clauses. Instead, Culicover and Jackendoff advocate a simpler syntax, one where the guiding principle is less structure where possible. One of the central conclusions of the present study is that some V2 clauses, including some subject-initial ones, are CPs and some are TPs. This analysis is neither uniform (not all V2 clauses are CPs) nor maximally simple (some subject-initial clauses include a CP layer even though a smaller TP structure could house all clausal constituents in the observed order). My point is that, in this case at least, the real issue is not a meta-theoretical one of uniformity vs. simplicity but one of understanding what drives V2 syntax in the first place.

3   VP anaphoric *det*

This section introduces the Danish VP anaphor *det* and offers two descriptive generalizations about its surface position in verb-second clauses: *det* must appear in situ when the illocutionary force of the clause requires the specifier of CP to be empty or occupied by an interrogative phrase (THE VPA IN-SITU GENERALIZATION) and *det* cannot appear in situ when an information-structurally undisguished subject occupies initial position (THE VPA FRONTING GENERALIZATION). An analysis of these generalizations and Danish verb second clauses is developed in section 4.

3.1   Introducing VP *det*

The VP anaphoric construction of interest is exemplified in (15) below.[6] The VP anaphor is *det* and is homophonous with the 3rd person singular neuter pronoun. In (15) *det* is a verbal proform (Houser et al. 2007) and I gloss it as DET throughout. The antecedent is the VP of the main clause ('emphasizes coaching') and through this anaphoric dependency the clause containing *det*

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[5]Travis labels TP IP, Zwart 1991 labels T INLF and Zwart 1997 identifies TP as AgrSP. Whatever the label, the key point is that the projection that hosts the subject and the finite verb is smaller than CP.

[6]Most of the data cited in this paper come from a database of 414 attested examples of VP anaphora, drawn from newspapers, magazines, fiction, radio, conversation, and existing corpora. Examples from the database are annotated with their id number, which is a P followed by a number between 1 and 414. Judgments on other examples come from 16 native Danish speakers residing in Denmark or the San Francisco Bay Area.

(= the target clause) is interpreted as 'Aalborg doesn't emphasize coaching'.

(15) Esbjerg [satser   på trænersiden]$_i$, mens Aalborg ikke gør **det**$_i$.   [P206]
Esbjerg emphasizes on coach.side.DEF while Aalborg not does DET
Esbjerg emphasizes coaching, while Aalborg doesn't.

Like English VP ellipsis, *det* is licensed by an auxiliary, including modals, the perfective auxiliaries *have* (have) and *være* (be), the passive auxiliary *blive* (become) and the dummy auxiliary *gøre* (do).[7] While overt VP anaphors are attested throughout Germanic, they have been studied much less than VP ellipsis. There is important early work on Swedish by Källgren and Prince (1989) and on Norwegian by Lødrup (1994) and, in the last decade, a surge of work on overt VP anaphors and their relation to VP ellipsis in various Germanic languages (Andréasson 2008, 2009, van Craenenbroeck 2004, Herold 2009, Houser et al. 2007, López and Winkler 2000, Platzack 2008, Winkler 2005: chapter 3, Ørsnes 2010). To my knowledge, the present paper is the most detailed study of the linear positioning of a Germanic VP anaphor and the first to relate the positioning of a VP anaphor to the syntax of verb-second clauses.

From a language-internal perspective, there are also good reasons to study Danish VP-*det*. The anaphor is very common[8] and it is found in all clause types and all registers. It is also worth noting that unlike English *do it* and *do so*, Danish *det* imposes no semantic restrictions on its antecedent.

In non-V2 clauses, such as the second clause in (15) above, there is only one clause-internal position for *det*, which is the position occupied by regular non-pronominal VPs in such clauses: immediately following the finite auxiliary, which is itself preceded by the subject and negation and other medial adverbs. Thus in (15), we have the order subject-negation-auxiliary-*det*. I call this position for *det* the regular position. In verb-second clauses, however, there are three potential positions for *det*: regular position (16a), object-shifted position (17), and fronted position (18).

(16) Så du en vindmølle, da   du var i Turkana? spørger de.   [P185]
saw you a windmill   when you were in Turkana ask   they
Did you see a windmill when you were in Turkana?, they ask.

a. – Selvfølgelig gjorde jeg ikke **det**.
of.course   did   I   not DET
Of course I didn't.

(17) En del af dem klarer sig, andre gør **det** ikke.   [P166]
a   part of them manage REFL others do   DET not
Some of them make it, others don't.

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[7]The same form (*det*) is also licensed by possessive *have*, copula *be* and inchoative *blive*. In these instances, *det* is standing in for a non-verbal predicate, specifically a PP, NP or AP. The proform, however, obeys the same linear order generalizations with these licensors as with the auxiliary licensors, so I will assume that these are all instances of the same construction, which could more appropriately be called predicate anaphora; in line with Baltin's (1995) discussion of English VP ellipsis as predicate ellipsis. For consistency with the literature I continue to refer to *det* as a VP anaphor. The analysis of *gøre* as a dummy auxiliary is developed in Houser et al. (2010), though see also Ørsnes (2010), who argues that *gøre* is a raising verb.

[8]I counted all occurrences of the VP anaphor in a recent novel (*Nordkraft* by Jakob Ejersbo). The novel is 423 pages and there were 180 instances of the VP anaphor. For comparison, there were 28 instances of VP ellipsis in the same novel.

(18) De eskorterende soldater var   rutinemæssigt faldet i søvn – **det** gør   de jo.
      the escorting   soldiers be.PAST routinely   fallen in sleep   DET do.PRES they DP
      [P27]
      The escorting soldiers had fallen asleep as by routine – they do that.'

In V2 clauses, the finite auxiliary moves to second position and therefore need not immediately precede a *det* in the regular position. In (16) for example the order is adverb-auxiliary-subject-negation-*det*. The key to diagnosing regular position in such clauses is the position of *det* relative to negation and other medial adverbs. In (16) *det* follows negation, whereas in (17) *det* precedes negation. The latter is the object-shifted position. Finally, the fronted position has *det* immediately preceding the finite auxiliary, as in (18).[9]

My focus in this paper is on the interaction between VP anaphora and V2 syntax, in particular the conditions on fronting the VP anaphor to initial position in V2 clauses. I will not be concerned with the difference between the regular and object-shifted positions and will refer to these collectively as in-situ position. See Andréasson (2008, 2009) for discussion of object-shifted vs. regular position in Danish and Swedish.

The table in (19) offers a first indication that VP anaphoric *det* interacts in a significant way with verb second. The GENERAL column gives the frequency of different constituents in initial position in Danish V2 clauses generally and the VPA-CLAUSES column gives the frequency for these constituents in initial position in V2 clauses with VP anaphora.[10]

(19)

INITIAL	GENERAL	VPA–CLAUSES
Subject	61%	23%
Adverbial	22%	16%
Object	9%	1%
Other	7%	60%

Comparing the two columns, we see that VPA-clauses have radically fewer subjects in initial position (23% vs. 61%), radically fewer objects (1% vs. 9%), and and slightly fewer adverbs (16% vs. 22%). Instead, VPA-clauses have a dramatically higher rate of 'other' initial constituents than V2-clauses generally (60% vs. 7). The table in (20) breaks down the 'other' category into Empty, VP-anaphoric *det*, Object of preposition, and Remainder. The category Empty includes polar questions, imperatives, and verb-initial antecedents of conditionals. In all of these, there is no element in the prefield or, under certain analyses, there is an element, but that element is null.

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[9] There is no object-shift in non-V2 clauses because object shift is conditioned by verb movement (Holmberg 1986) and there is no verb movement in non-V2 clauses. Fronted position is also unavailable for the VP anaphor, since all embedded topicalization triggers verb-second. Hence there is only one clause-internal position for *det* in a non-V2 clause (see (15)). Extraction of *det* out of a non-V2 clause to initial position of a higher V2-clause is sometimes possible; see examples in (59) and (60) in section 4.3.

[10] Percentages in do not necessarily sum to 100 due to rounding. Details on the quantitative study can be found in the appendix.

(20)

INITIAL	GENERAL	VPA-CLAUSES
Subject	61%	23%
Adverb	22%	16%
Object	9%	1%
Empty	3%	7%
VP-anaphoric *det*	2%	**53%**
Object of P	1%	0%
Remainder	1%	0%

The important thing to note in table (20) is that in 53% of VPA-clauses, the VP-anaphor occupies initial position. It is thus by far the most frequent initial element in such clauses, outnumbering subjects (53% to 23%) and adverbials (53% to 16%). A natural interpretation of table (20) is that VPA clauses have a very different distribution of elements in initial position, because the VP anaphor itself is very frequent in this position. And yet *det* obviously does not have to occur in initial position. In just under half of all VPA-clauses it is not fronted. This is important, because one of the few previously published claims about the position of *det* is that it must front (Vikner 1988:11, fn. 5). This claim is immediately falsified by the data reported in table (20). The remainder of this section seeks to establishing two generalizations about the posititition of *det* in V2-clauses. These generalizations, along with the analysis in section 4, go a fair way towards explaining the quantitative patterns seen in (20), specifically the dramatic difference in the number of initial subjects in VPA clauses, as compared to V2 clauses generally.[11]

3.2 VP anaphor in situ

Certain clause types require *det* to appear in situ. As I show below, this is true for constituent questions, polar questions, imperatives, and antecedents of conditionals. I propose to unify these in terms of the generalization in (21).

(21) **VP Anaphora In Situ Generalization**
When the expression of illocutionary force makes demands on initial position, VP-anaphoric *det* cannot front.

The idea is that these clauses all use the initial position to signal their illocutionary force (question, command, conditional), and that this eliminites the possibility of *det*-fronting to that position.

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[11]The lower number of initial objects in VPA clauses (1% vs. 9%) follows from an independent restriction against A-bar extraction out of pronominal VPs. Houser et al. (2007) show this for constituent questions, and it is also true for topicalization and relativization. The data for comparatives is less clear (Dan Hardt p.c.) and deserves further attention than I can give it here. Thus whenever we see a V2 construction that contains a VP anaphor and has an initial object, the VP anaphor and the object originated in different clauses within the larger V2 construction. I have found 4 such examples, corresponding to the 1% reported in Tables (19) and (20)). See also the appendix on how initial position was determined for VPA clauses.

Constituent questions   In (22), the VP anaphor occurs in a subject question, and the only legitimate order is that in (22a), with the wh-word initially and the anaphor in situ.

(22)   Vi [trættes],   men ...
        we tire.PASS.PRES but
        We get tired, but ...

       a.   hvem gør ikke **det**!   [P223]
             who   does not DET
             who doesn't!

       b.   ***det** gør hvem ikke!
             DET does who   not

The same is true for questions of manner, location, time, and reason. Object questions, which would require extraction out of the pronominal VP, are ungrammatical (see Houser et al. (2007:3, 9–11) for data and analysis), so the question of word order in these is moot. The ungrammaticality of (22b) follows from two well-established facts: Danish constituent questions require wh-fronting and in a verb-second clause there is only one fronted position available, namely the Specifier of CP. Hence *det* cannot front in (22).

Polar questions   Polar questions also disallow fronting of *det*, as shown in (23).

(23)   Ja - febrilsk   ædru og spurgte om   jeg kunne [låne hende nogle penge].
        yes agitatedly sober and asked   whether I   could lend her   some money
        Yes, she was sober but agitated and asked whether I could lend her some money.

       a.   "Gjorde du **det**?" spørger Mette.   [P311]
             did   you DET   asks   Mette
             Did you, Mette asks

       b.   * "**Det** gjorde du?" spørger Mette.
             DET did   you asks   Mette

Fronting of *det*, as in (23b), is possible under a declarative interpretation, but not with an interrogative interpretation. The relevant factor here is that Danish polar questions require a (phonologically) empty initial position and hence *det* cannot front. Some analyses assume that initial position is empty in polar questions (Diderichsen 1968:162); others that initial position is occupied by a null question operator (Vikner 1995:49, following Baker's (1970) original analysis of English). The analysis I develop later in the paper is compatible with either assumption. The important point here is that the syntax of polar questions make demands on initial position, which exclude *det*-fronting. Hence *det* surfaces in situ as shown in (23a).

Imperatives   Imperatives also disallow *det*-fronting, as (24) shows.

(24)   "[Fortæl ham det og se, hvad der   sker]," siger Lars. "Nej," siger Lisbeth.
        tell   him it and see what there happens says Lars no   says Lisbeth
        Tell him and see what happens, Lars says. No, Lisbeth says.

a. "Gør **det**. Ellers   gør jeg det."   [P362]
   do   DET otherwise do I   DET
   Do it or I'll do it.

b. *__Det__ gør. Ellers   gør jeg det."
   DET do   otherwise do I   DET

Like polar questions imperatives are verb-initial and hence require a (phonologically) empty Spec-CP. Alternatively, if imperatives are just TPs, as argued e.g. by Jensen (2007) for Danish, there is no Spec-CP in (24a, b). Either way, there is no room for *det* to front, accounting for the ungrammaticality of (24b).

Conditionals   Finally, *det*-fronting is prohibited in antecedents of conditional constructions. Like polar questions and imperatives, the verb must be the first phonologically realized element of the clause, as shown by the contrast in (25).

(25)   Et net af lyttecentraler   skal oprettes,   og   alle private internetudbydere   skal
         a   net of listening.centers shall create.PASS and all   private internet.service.providers shall
         [installere systemer, der gør   overvågningen mulig.]
         install   systems   that makes surveillance   possible
         *A web of listening stations are to be created and all private internet service providers
         are to install systems that allow for surveillance.*

   a. Gør de   ikke **det**, kan ejeren   straffes   med fængsel i op til tre   år.
      do   they not DET can owner.DEF punish.PASS with prison   in up to three years
      [P117]
      If they don't, the owner can be punished with up to three years of prison.

   b. *__Det__ gør de   ikke, kan ejeren   . . .
      DET do   they not   can owner.DEF

The syntax of conditionals requires a (phonologically) empty initial position in the antecedent clause. *Det*-fronting would target that initial position and hence cannot take place.

   To summarize, these patterns can all be understood in terms of the established syntax of questions, imperatives and conditionals. In each case, a hard syntactic requirement (empty/no Spec-CP or a wh-phrase in Spec-CP) precludes fronting of *det*. All we need to say is that *det* may surface in situ and the interaction with established syntactic principles will yield the attested restriction. This is about as far as other accounts go (Andréasson 2008:37–8; Herold 2009:80, 125f., 160f; Ørsnes 2010:16–17). What has not been observed, to my knowledge, is that there are also contexts that require fronting of *det*. I present several such cases in the next section.

3.3   VP anaphor fronted

The received wisdom about declarative V2 clauses is that the choice of initial element is syntactically free, but subject to discourse-pragmatic and textual requirements. This view is consistent with the quantitative data on initial position in V2 clauses reported in tables (19) and (20) above. Setting aside non-declaratives, we find subjects, various kinds of objects, adverbials, and

VP anaphoric *det* in initial position. It is entirely possible that this distribution directly reflects discourse-pragmatics, text structuring, and other patterns of language use. Superficially, the same is true of VPA-clauses: if we set aside the kinds of non-declaratives analyzed above, we find the typical range of elements in initial position: subjects, objects, and adverbials. However, when we examine individual V2 clauses with VPA a striking pattern emerges. In VPA clauses with expletive subjects, the expletive cannot take the place of the anaphor in initial position. In answers to polar questions, the VP anaphor must take initial position over the subject, whether expletive or not. Similarly, the subject is banned from initial position in VPA clauses generalizing from a specific instance to a claim about typical behavior and in repetitions. I propose that these patterns fall under the generalization in (26).

(26)   **The VP Anaphora Fronting Generalization**:

In a verb-second clause with VP anaphora, an information-structurally undistinguished subject cannot occupy the initial position, where information-structurally undistinguished subjects are either expletives or Discourse-old subjects of an equally Discourse-old predicate.

In section 4, I propose an explanation of this generalization in terms of the structure of V2 clauses, the function of spec-CP in such clauses, and the licensing requirements on VP anaphora. The remainder of the present section lays out the empirical evidence for the VP Anaphora Fronting Generalization (or the Fronting Generalization for short), and unpack the notion of undistinguished subject. I first show that the fronting generalization holds for expletive subjects (section 3.3.1) and that it is the right way to characterize the observed word-order restriction in such clauses. Then, in 3.3.2, I turn to the other three enviroments listed above (26)—answers to polar questions, generalizations, and repetitions—which all involve Discourse-old subjects of equally Discouse-old predicates and show that they too obey the fronting generalization in (26). Section 3.4 considers and rejects a stronger version of the Fronting Generalization, before moving on to the analysis in section 4.

3.3.1 Expletive subjects

Danish makes wide use of the subject expletive *der*, cognate with English *there*. While the expletive routinely occupy initial position, as in the first clause of (27), VPA clauses do not allow an initial expletive (27b, c). Instead the VP anaphor must occur in initial position (27a):

(27)   Der   skal bare [skinne overalt].
         EXPL shall just shine   everywhere
         Everything has to be squeaky clean. (Lit. There must shine everywhere.)

    a.   **Det** gør **der** også …   [P137]
         DET does EXPL also
         And it is … (Lit. That does there too.)

    b.   *__Der__ gør **det** også …
         EXPL does DET also

    c.   *__Der__ gør også **det** …
         EXPL does DET also

In (27b) the VP-anaphor is object shifted across the adverbial *også* (also) and in (27c) it is not, appearing instead in the regular position. Either order is impossible, showing that the source of the ungrammaticality is the initial expletive, not object shift of *det* or lack thereof.[12] The pattern in (27) follows the Fronting Generalization in (26): the undistinguished subject (expletive *der*), cannot occupy initial position at the expense of the VP anaphor (as it does in (27b) and (27c)), but it can surface in initial position, as in (27a), relegating the expletive subject to third position.

The Fronting Generalization is not dependent on the antecedent VP having an expletive subject, as (28) shows. Here the antecedent clause has the contentful subject 'many misunderstandings', whereas the target clause has the expletive subject *der*. The attested order is (28a) with the VP anaphor in initial position. It is ungrammatical to have the expletive in initial position, whether the VP proform is object-shifted or not (28b).

(28) Derved kunne mange misforståelser   [opstå], også af følelsesmæssig art.   [P31]
      thereby could many misunderstandings arise   also of emotional   kind
      In this way many misunderstandings could arise, also of an emotional nature.

   a. **Det** gør der for eksempel mellem denne romans   to hovedpersoner, ...
       DET does EXPL for example   between this   novel.POSS two main.characters
       As they do, for instance, between the two main characters of this novel, ...

   b. *Der gør (**det**) for eksempel (**det**) ...
       EXPL does DET   for example   DET

Nor is the fronting generalization specific to VP anaphora licensed by the dummy auxiliary *gøre*. We find the same pattern with all licensing auxiliaries, exemplified for the perfect auxiliary *have* in (29) and the passive auxiliary *blive* in (30).

(29) Da   jeg åbnede døren   troede jeg først at   der   havde [været indbrud], men ...
      when I   opened door.DEF thought I first that EXPL had   been   break.in but
      When I opened the door, I first thought that someone had broken into the house but ...

   a. **det** havde der heldigvis ikke.
       DET had   EXPL luckily   not
       luckily that wasn't the case.

   b. *der   havde (**det**) heldigvis ikke (**det**).
       EXPL had   DET   luckily not DET

(30) Arrangørerne håbede på at   der   ville blive [solgt mange billetter] og ...
      organizers.DEF hoped on that EXPL would become sold   many   tickets   and
      The organizers hoped that tickets would sell well and ...

   a. **det** blev   der også.
       DET became EXPL also
       they did.

   b. *der   blev   (**det**) også (**det**).
       EXPL became DET   also DET

_____

[12]In the parallel examples below, I therefore collapse the regular and object-shifted order into one example with a parenthesized *det* in each of these positions.

As (31) and (32) show, there is no such restriction on non-expletive subjects. In (31) the initial position can be occupied by the contentful subject *en anden* (someone else), as in (31b), which is the attested order, or by the VP anaphor (31a). In (32), the attested order has the VP anaphor initially (32a), but the subject-initial order in (32b) is also grammatical.

(31)   Vi kan ikke [fare rundt og spørge], det vil alle   opdage og undre sig   over.
        we can not rush around and ask   it   will everyone discover and wonder REFL about
        We can't run around asking questions. Everyone would notice it and wonder about it.

    a.   **Det** må   en anden gøre.
         DET must a other do
         Someone else has to do it.

    b.   En anden må   gøre **det**.   [P169]
         a   other must do   DET
         Someone else has to do it.

(32)   "Jeg [holder mig   til de faktuelle hændelser, når   jeg taler om   fortiden] - ...
        I   hold   REFL to the actual   occurrences when I   speak about past.DEF
        I stick to what actually happened when I speak about the past.

    a.   **det** burde du også gøre," siger han.   [P381]
         DET ought you also do
         You should too.

    b.   du burde også gøre **det**.
         you ought also do   DET
         You should too.

A natural question to is ask at this point is whether the ban on in-situ *det* in (27)–(30) could be due to independent properties of expletive constructions, in particular the DEFINITENESS EFFECT (Milsark 1979), which is operative in Danish (Mikkelsen 2002). The definiteness effect refers to the general infelicity of definite NPs as pivots of expletive constructions. Personal pronouns are definite and generally infelicitous as pivots. VP anaphoric *det* is an anaphoric proform, and it is possible that that makes VP-*det* definite (though see Lødrup 1994). If so, the ban on *det* in pivot (= in-situ) position in (27)–(30) could be analyzed as a definiteness effect and as such not in need of independent explanation.

Three considerations speak against this possibility. First, fronting of a definite pivot does not generally ameliorate the definiteness effect. Thus (33c) is as degraded as (33b).[13]

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[13]The string in (33c) is grammatical with stress on *der*, but then *der* must be interpreted as a locative adverbial (there). Under that interpretation, *egernet* is in subject position and we are no longer dealing with an expletive construction.

(33)   a.   Der   sad **et egern** på rækværket.
              EXPL sat a   squirrel on fence.DEF
              There was a squirrel sitting on the fence.

        b. #Der   sad **egernet**   på rækværket.
              EXPL sat squirrel.DEF on fence.DEF

        c. #**Egernet**   sad der   på rækværket.
              squirrel.DEF sat EXPL on fence.DEF

In contrast, fronting VP-anaphoric *det* in expletive clauses restores these to full grammaticality, as shown by the a. examples in (27)–(30).

Secondly, fronting something other the pivot does not ameliorate the definiteness effect with NP pivots, as (34) shows. In contrast, fronting something other than the VP anaphor can restore expletive VPA clauses to full grammaticality. An example of this is (35), which is a possible continuation of (29) above.

(34)   #På rækværket sad der   egernet.
        on fence.DEF   sat EXPL squirrel.DEF

(35)   heldigvis havde der   ikke det.
        luckily   had   EXPL not DET
        luckily that wasn't the case.

Even if these two differences between expletive clauses with definite NP pivots and expletive VPA-clauses could be accounted for, there is a third reason to not analyse the illformedness of the b.-sentences in (27)–(30) as a definiteness effect. Danish has two other expletive constructions which are not associated with any definiteness effect and yet these construction exhibit the exact same ordering restriction under VP anaphora as the expletive construction examined above. An account of (27b)–(30b) above in terms of the definiteness effect would not extend to these expletive constructions, and would therefore miss a significant generalization.

The other two expletive contructions are weather-clauses (36) and extraposition structures (37). (Compare (37) with (38), where the embedded clause occurs initially.)

(36)   **Det** regner.
        EXPL rains
        It is raining.

(37)   **Det** er helt   umuligt   at komme igennem på telefonen.
        EXPL is completely impossible to come   through on telephone.DEF
        It is completely impossible to get through by phone.

(38)   At komme igennem på telefonen   er helt   umuligt.
        to come   through on telephone.DEF is completely impossible
        To get through by phone is completely impossible.

As these examples reveal, this second expletive is identical in form to the VP anaphor; both are *det* (recall the homonomy of VP-*det* with the 3rd singular pronoun and note the use of *it* in the

English translations of (36) and (37)). This fact makes it more complicated to determine the fronting possibilities when the expletive and anaphor co-occur, but once these complications are dealt with, we find the same pattern as with expletive *der* above: the VP anaphor must front at the expense of the expletive in accordance with the fronting generalization in (26). The relevant paradigms are given in (39) and (40).

(39)   Tænk hvis det regner nytårsaften.
       think if   it   rains new.years.eve.DEF
       Imagine if it rains on New Year's Eve.

    a. Åh nej, **det** må **det** endelig   ikke gøre!
        oh no   DET may EXPL definitively not   do
        Oh no, please don't let it (rain on New Year's Eve)!

    b. *Åh nej, **det** må endelig   ikke gøre **det**.
        oh no   EXPL may definitively not   do   DET

    c. Det må endelig   ikke [regne nytårsaften].
        EXPL may definitively not   rain   new.years.eve.DEF
        Please don't let it rain on New Year's Eve.

(40)   Det er helt   umuligt   at komme igennem på telefonen, men
       EXPL is completely impossible to come   through on telephone but
       It is completely impossible to get through on the phone, but ...

    a. **det** burde **det** ikke være.
        DET ought EXPL not be
        it shouldn't be.

    b. ***det** burde ikke være **det**.
        EXPL ought not be DET

    c. Det burde ikke være [helt   umuligt   at komme igennem på telefonen].
        EXPL ought not be   completely impossible to come   through on phone.DEF
        It shouldn't be completely impossible to get through by phone.

The two paradigms are entirely parallel, so I'll discuss just (40) on the understanding that everything I say about it carries over to (39).[14] Let us first observe that the only possible order in the VPA clause is the one in (40a), which has the two *det*s flanking the finite auxiliary. Having an initial *det* and a final *det*, as in (40b), is impossible, as are any other positionings of the two *det*s. Under the glossing provided, this grammaticality contrast accords with the fronting generalization: (40b) has an initial expletive and VP-*det* in situ, which is exactly what it disallowed by (26); (40a) does not have this configuration and therefore does not run afoul of (26). The key question is whether we can defend the glossing of the two *det*s in (40a) and (40b).

In (40b) it is clear that the second *det* is the VP anaphor, since it is placed where a non-finite non-pronominal VP would be placed, namely after the negation *ikke*, as shown in (40c); on this point see also the structure in (11). By inference the initial *det* in (40b) is then the expletive, and (40b) has the structure in (41):

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[14]Interjections like *åh nej* 'oh no' do not "count" for verb second, so the first *det* is in initial position in (40a) and (40b).

(41) $[_{TP}Det_{EXPL}$ burde $[_{VP}$ ikke $[_{VP}$ være det$_{VPA}]]]$

In general, subjects cannot follow negation in Danish, because negation is invariably left-adjoined to VP and the subject is always realized outside of the VP. Hence (41) is the only possible structure for (40b).

The grammatical order in (40a), I argue, has the structure in (42), where the initial *det* is a fronted VP anaphor and the second *det* is an expletive in Spec-TP (for clarity, I indicate movement by placing lower positions of the moved element in angle brackets):

(42) $[_{CP}$ Det$_{VPA}$ burde $[_{TP}$ det$_{EXPL}$ ⟨burde⟩ $[_{VP}$ ikke $[_{VP}$ være ⟨det$_{VPA}$⟩]]]]$

The alternative analysis of (40a) that needs to be ruled out is represented in (43):

(43)
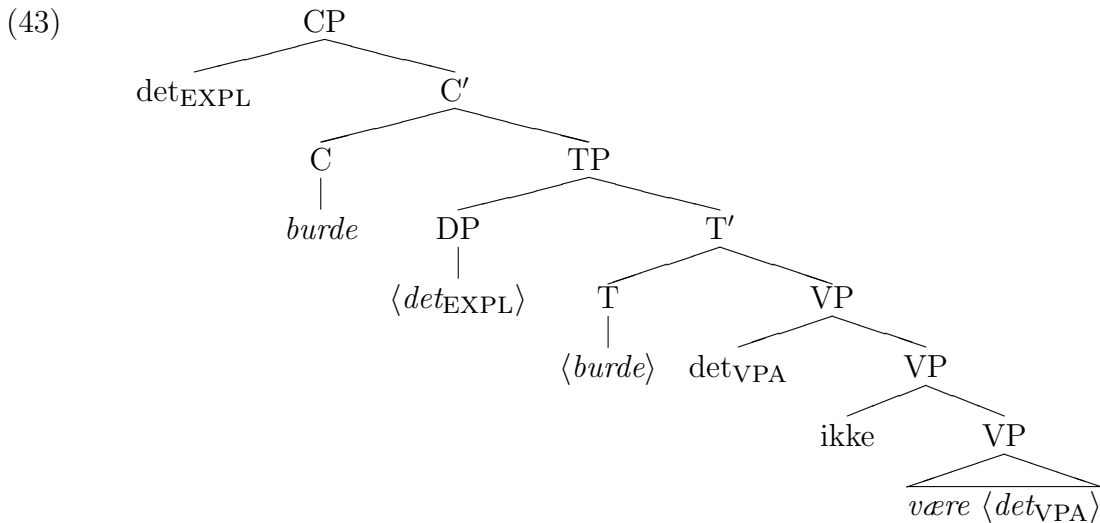
Here the initial *det* is the expletive and the post-modal *det* is the VP anaphor, which has moved from clause-final position to precede the negation in a VP-adjoined position. Since nothing intervenes between the highest element left-adjoined to VP and Spec-TP, this yields the same word order as (42). Moreover, there is a well-attested movement process that would position VP anaphoric *det* to the left of negation, namely object shift (see section 3.1, especially footnote 9). However, we can rule out object shift, and hence the structure in (43), since object shift is only possible when the verb licensing the object (here *være*) leaves the VP (Holmberg's generalization; Holmberg 1986, 1999). In (40a), this condition is not met, because of the higher modal. We can thus conclude that (42) is the structure for (40a), which together with the ungrammaticality of (40b) shows that the expletive *det* displays the same fronting behavior relative to the VP anaphor as expletive *der*: if anaphoric *det* and expletive *det* are co-present in a V2 clause, the expletive cannot occur initially.

3.3.2   Discourse-old subjects

The second type of information-structually undistinguished subjects included in the Fronting Generalization is Discourse-old subjects of equally Discourse-old predicates. Discourse-old entities are those that have already been mentioned in the prior discourse (Prince 1992:11), as

opposed to entities that are known to the hearer, and hence Hearer-old, but haven't been mentioned in the current strech of discourse.[15] Prince's work and subsequent work by Gregory Ward, Betty Birner and others have demonstrated the relevance of Discourse-oldness for a range of word order alternations in English, and other languages, and the need to distinguish Discourse-old/new from Hearer-old/new (Birner 1994, 1996; Birner and Ward 1996, 1998; Kaiser 2000, 2002; Miller 2001; Prince 1981, 1992, 1997; Ward and Birner 1995, 1998).

Most of the conditions uncovered in this work involve a particular subpart of a clause having a particular information status, either absolutely or relative to some other part. The information-status condition included in the Fronting Generalization singles out clauses where subject and predicate are both Discourse-old, and equally Discourse-old. This situation arises when a clause is a repetition or near repetition of a previous utterance. Below I examine three such recurrent contexts: answers to polar questions, generalizations from prior statements of specific instances, and repetitions.

Answers to polar questions In matching (= not over-informative; Kiefer 1980, Yadugiri 1986) answers to polar questions, a subject cannot take initial position in place of a VP anaphor:[16]

(44)   Tjener! Bestilte jeg ikke en gin og   tonic?
         waiter   ordered I   not a   gin and tonic
         Waiter, didn't I order a gin and tonic?

       a.   Jo, **det** gjorde De.   [P131]
             yes DET did   you
             Yes, you did.

       b. #Jo, De gjorde **det**
             yes you did   DET

       c.   Jo, De bestilte en gin og   tonic.
             yes you ordered a   gin and tonic
             Yes, you ordered a gin and tonic

The subject in (44a/b) is information-structurally undistinguished, because both it and its predicate are rendered equally Discourse-old by the question. The Fronting Generalization in (26) thus rules out (44b), in which the undistinguished subject takes the initial position at the expense of the VP anaphor. The grammaticality of (44c) shows that undistinguished subjects can occupy initial position if the VP is not pronominal. The same is true for expletive subjects (see the first clause of (27) above) and for undistinguished subjects in generalizations and repetitions (discussed below).

The example in (44) involves a direct question-answer exchange and one could imagine that this pragmatic fact could affect word order. In that light, it is relevant to observe that the word order restriction holds beyond direct question-answer exchanges. Thus we find it in direct answers to indirect questions (45), in indirect answers to direct questions (46), and in indirect answers to indirect questions (47).

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[15]While it is technically the entities in the discourse model that are new or old, and not the linguistic expressions denoting these, I will extend the terminology to the linguistic expressions themselves. Thus, a Discourse-old NP is one that refers to a Discourse-old entity.

[16]I use # to indicate infelicity in a given context.

(45)   Jeg spørger bekymret, om han sørger   for at lære   sin   kone dansk.
           I   ask   concerned if   he   take.care for to teach POSS wife   Danish
           I ask concerned, whether he is making sure to teach his wife Danish.

> a.   "Nej, **det** gør jeg ikke; faktisk …" griner han …   [P94]
>   no   DET do I   not   actually   laughs he
>   *No, I'm not, in fact [it's me that's learning a bit of Georgian], he laughs [and hesitates a little].*

> b. # "Nej, jeg gør (**det**) ikke (**det**); faktisk …" griner han …
>   no   I   do   DET   not   DET   actually   laughs he

(46)   Du er vel ikke blevet   for fin   til at more dig?
           you be DP   not   become too fine to to enjoy REFL
           I trust you haven't become too high-class to have a good time?

> a.   **Det** var Kurt Victor ikke.   [P148]
>   DET was Kurt Victor not
>   *Kurt Viktor hadn't.*

> b. # Kurt Viktor var (**det**) ikke (**det**).
>   Kurt Viktor was DET   not   DET

(47)   Morales spurgte en dreng på 7-8 år,   om han havde fået   sine   børnepenge.
           Morales asked   a   boy   on 7-8 years if   he   has   received POSS child.money
           Morales asked a boy who was 7 or 8 years old whether he had received his "child money"

> a.   **Det** havde han.   [P41]
>   DET had   he
>   *He had.*

> b. # Han havde **det**.
>   he   had   DET

This is accounted for by the Fronting Generalization, since in all of these answers, the subject and VP anaphor are made equally Discourse-old by the question. Collectively, these data offer good evidence that initial position is governed by Discourse-oldness, not a specific conversational interaction. This conclusion is further supported by the fact that we find the same pattern (no initial undistinguished subjects in VPA clauses) outside question-answer pairs.

Generalizations   Generalizations from a specific instance can also give rise to undistinguished subjects with VP-anaphora, as seen in (48).

(48)   Men Bush [sagde nej].   [P99]
           but   Bush said   no
           But Bush said no.

> a.   **Det** gør   han ofte.
>   DET does he   often
>   *He often does.*

b. #Han gør (**det**) ofte (**det**).
    he   does DET   often DET

By virtue of the antecedent clause the subject and predicate in (48a, b) are equally Discourse-old. The Fronting Generalization thus correctly rules out (48b) where the undistinguished subject takes initial position in place of the VP anaphor.

Repetitions Perhaps the most straightforward case of contextually undistinguished subjects comes from repetition. Danish speakers often use VP anaphora in the repetition and here the anaphor must take initial position over the subject, as the contrast between (49a) and (49b) shows.

(49)   Men jeg [tilgiver ham på stedet].   [P88]
          but I   forgive him on place.DEF
          But I forgive him on the spot.

        a.   **Det** gør jeg.
            DET do I.
            I do.

        b. #Jeg gør **det**.
            I   do DET

I conclude that undistinguished subjects cannot take initial position in place of VP-anaphoric *det*, whether the undistinguishedness is lexically determined (expletive subjects) or contextually determined (contentful subjects in matching answers to polar questions, generalizations, and repetitions). Putting the in situ and fronting generalizations together, we arrive at (50).

(50)   a.   **VP Anaphora In Situ Generalization**

When the expression of illocutionary force makes demands on initial position, VP-anaphoric *det* does not front.

b.   **The VP Anaphora Fronting Generalization**

In a verb-second clause with VP anaphora, an information-structurally undistinguished subject cannot occupy the initial position, where information-structurally undistinguished subjects are either expletives or Discourse-old subjects of an equally Discourse-old predicate.

It is the second generalization that helps explain why there are radically fewer initial subjects in VPA-clauses than in V2-clauses in general (23% vs. 61%). The fronting generalization places no restrictions on subjects in V2 clauses generally, but it bans certain subjects from initial position in VPA clauses (namely undistinguished subjects) thereby lowering the number of initial subjects in VPA clauses compared to V2 clauses generally.

3.4   A hypothetical fronting generalization

An important question to ask at this point is whether we can strengthen the Fronting Generalization to state that in a V2 clause with an undistinguished subject, the VP anaphor must occupy initial position. Then we would have a nice symmetric account of the position of *det*: one condition that states when *det* cannot front (50a) and another that states when it must front. The short answer is no. Whether or not the VP anaphor must occupy initial position in clauses with undistinguished subjects depends on what other elements are present in the clause. If there is another frontable element, e.g. a PP, a subordinate clause or an adverb that is not inherently banned from initial position, then it is possible to front that element instead of the VP anaphor, *subject to regular contextual, discourse, and text-pragmatic requirements.* Returning to the expletive examples in (27)–(30), we can observe the following. In (29), repeated here as (51), there is another frontable element in the target clause, namely the adverb *heldigvis* (luckily). The pragmatic relation between antecedent and target clause can be mediated by this adverb in initial postion, and the adverb-initial order in (51c) is possible alongside (51a).

(51)   Da   jeg åbnede døren   troede jeg først at   der   havde [været indbrud], men . . .
when I   opened door.DEF thought I   first that EXPL had   been   break.in   but
When I opened the door, I first thought that someone had broken into the house but . . .

a.   **det** havde der   heldigvis ikke.
DET had   EXPL luckily   not
luckily that wasn't the case.

b.   *der   havde (**det**) heldigvis ikke (**det**).
EXPL had   DET   luckily   not DET

c.   heldigvis havde der   ikke **det**.   [= (35)]
luckily   has   EXPL not DET
Luckily there hadn't (been a break-in).

In (51c), the VP anaphor occurs in situ with the undistinguished subject in 3rd position. The hypothetical generalization that VP-*det* must front in the presence of an undistinguished subject would incorrectly rule out such examples. They are allowed by the Fronting Generalization in (50b), because that generalization explicitly refers to the position of the undistinguished subject and only bans in situ VP anaphors when the undistinguished subject is in initial position, as in (51b).

Similarly, the unabbreviated version of (27a) has a temporal subordinate clause following the adverb *også* (also). Such clauses can generally occur in initial position and it would be grammatical, and felicitous, to have the temporal clause in place of the VP anaphor in initial position in (27).

In (28), reproduced as (52) below, there are two alternative candidates for the initial position: the PP *mellem denne romans to hovedpersoner* (between the two main characters of this novel) and the PP *for eksempel* (for example).

(52)   Derved kunne mange misforståelser   [opstå], også af følelsesmæssig art.   [P31]
         thereby could many misunderstandings arise   also of emotional   kind
         In this way many misunderstandings could arise, also of an emotional nature.

    a.   **Det** gør der for eksempel mellem denne romans   to hovedpersoner, ...
           DET does EXPL for example   between this   novel.POSS two main.characters
           As they do, for instance, between the two main characters of this novel, ...

    b.   *Der gør (**det**) for eksempel (**det**) ...
           EXPL does DET   for example   DET

    c. #Mellem denne romans   to hovedpersoner gør der **det** for eksempel ...
          between this   novel.POSS two main.characters does EXPL DET for example

    d. #For eksempel gør der **det** mellem denne romans   to hovedpersoner ...
          for example   does EXPL DET between this   novel.POSS two main.characters

Neither of these PPs are categorically banned from initial position, but in the context of (28) it is quite odd to front either of them, as shown in (52c) and (52d). I am not in a position to fully explain why the initial PPs are not up to pragmatic snuff in (52), but I think it is relevant that there is a paragraph break between the antecedent and target clauses in the original passage. I thus interpret (52) as a case where pragmatic considerations conspire to make fronting of the VP anaphor the only option, rather than a point in favor of a hypothetical requirement that a VP anaphor must front in a clause with an undistinguished subject.

Finally, in (30), repeated here as (53), there are no other frontable elements present in the VPA clause.

(53)   Arrangørerne håbede på at   der   ville   blive   [solgt mange billetter] og   ...
         organizers.DEF hoped   on that EXPL would become sold   many   tickets   and
         The organizers hoped that tickets would sell well and ...

    a.   **det** blev   der også.
           DET became EXPL also
           they did.

    b.   *der   blev   (**det**) også (**det**).
           EXPL became DET   also DET

c. *også blev der **det**.
   also became EXPL DET

d. *blev der (**det**) også (**det**).
   became EXPL DET also DET

In (53a)–(53d) we have just the finite auxiliary *blev* (became) and the adverb *også* (also), in addition to the expletive and VP anaphor. *Også* is one of the handful of adverbs barred from initial position (see p. 4), so fronting it results in ungrammaticality (53c). Similarly, a finite verb cannot occupy initial position outside of the three environments discussed in section 3.2. Hence (53d) is also ungrammatical on a declarative interpretation. Thus the only elements that are in principle frontable are the expletive and the VP anaphor, and here the Fronting Generalization prohibits the expletive from taking initial position over the VP anaphor, leaving (53a) as the only possible word order. If viewed in isolation, (53) appears to suggest obligatory fronting of VP anaphors with an undistinguished subject, but that generalization is untenable given the grammaticality of examples like (51c). In contrast, (51c) is unproblematic for the real Fronting Generalization, and so are (53c) and (53d), since their ungrammaticality has nothing to do with the presence of the VP anaphor; the initial elements are categorically banned from initial position whether the verb phrase is pronominal or not.

In an important way this behavior sets VP-*det* apart from wh-words in constituent questions and initial position in polar questions, imperatives, and antecedents of conditionals. In a constituent question, the wh-phrase must occupy initial position, no matter what other elements happen to be around in the clause[17] and in a polar question the initial position must be (phonologically) null or we have no polar question. Similarly, the initial position must be empty in imperatives and antecedents of conditionals. We can't test to see which of these requirements is stronger, since we cannot combine a constituent question with a polar question nor with an imperative nor with the antecedent of a conditional. Each requirement is absolute and they never interact. The situation is interestingly different with VP anaphoric *det*, because *det* is compatible with all clause types. Consequently, the positioning of VP-*det* opens a new window on the inner workings of V2 syntax.

4 An analytical proposal

My account of the VPA in situ and VPA fronting generalizations involves a particular analysis of verb-second syntax, which I couch in the Minimalist framework. Following Travis (1984, 1991) and Zwart (1991), I assume Danish V2-clauses may be TPs or CPs. V2-TPs are necessarily subject initial, since Spec-TP is reserved for subjects. V2-CPs, on the other hand, may be subject initial or not, and require that the initial element bears a C-RELATED FUNCTION. C-related functions include expression of illocutionary force (specifically, interrogative, imperative, and conditional force), information structural categories like topic and focus (of various kinds), and marking of the rhetorical relation to the previous clause (typically by adverbs). In structural terms, this means that all V2-Cs require a specifier and all place some content requirement on that specifier (that it be a wh-phrase, that it be a contrastive topic, that it signal a certain

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[17]Multiple wh-questions complicate this statement in an obvious way, as do echo questions.

rhetorical relation, etc). Concretely, I propose to implement this as a series of C items that differ only in selectional features, specifically the identity of the feature that triggers movement of some element to their specifier. For example, the C used in constituent questions bears a $u$wh* selectional feature and that triggers movement of a phrase bearing a matching interpretable wh-feature to Spec-CP. Analogously, Danish has a V2-C containing a strong uninterpretable focus feature ($u$foc*) and that C attracts a element bearing a matching interpretable focus feature to Spec-CP.[18] If a C is used in a derivation where no element bears a matching interpretable feature, the derivation fails. Crucially, information-structurally undistinguished elements do not bear the kinds of interpretable features that are required by V2-Cs, and can therefore not be attracted to Spec-CP in a V2 clause. Collectively these assumptions about feature distribution encode the idea that, in Danish, Spec-CP is reserved for elements that serve some discourse-relevant function and elements that can't serve such functions (either by nature or in the given context) are never realized in Spec-CP. In contrast, T places no discourse requirement on its specifier. It just requires a nominal there to serve as subject. Hence there are no information structural requirement on the initial element in a V2-TP. Turning, finally, to the VP anaphor itself, I assume that it is inherently an ANAPHORIC TOPIC (cf. López and Winkler 2000), and as such able to appear in Spec-CP, given the appropriate C, i.e. a C that bears an uninterpretable anaphoric topic feature, which I will annotate as $u$atop. In addition, VP-*det* comes with a licensing requirement of its own: it must be licensed by a C. This requirement is independent of movement to Spec-CP. While only a C equipped with $u$atop can attract VP-*det* to initial position, any C can license VP-*det*. If C bears a selectional feature other than $u$atop, the licensing is done remotely, by Agree. If C bears $u$atop, it can license *det* locally, following movement of *det* to Spec-CP. I implement this licensing requirement as an uninterpretable C feature on *det* (uC). The feature is weak, which allows it to be checked in situ by Agree. Note that this is an instance of upwards Agree (in the sense of Baker (2008:45ff)), since the Goal (C) c-commands the Probe (*det*). With these assumptions in place we can turn to cases of *det* in situ and explain why the anaphor must surface in situ in these cases.
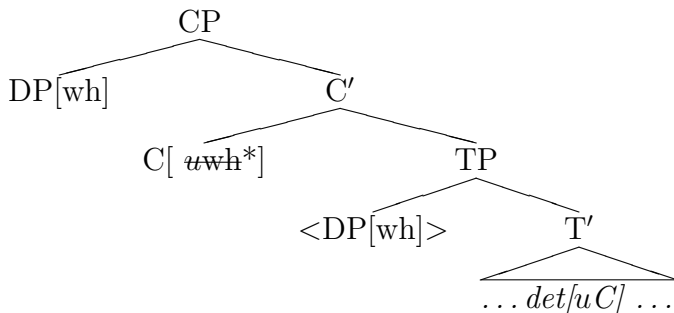
4.1 Accounting for *det*-in situ

When VP anaphora occurs in a constituent question, a polar question, an imperative, or the antecedent of a conditional, the anaphor must surface in situ. In presenting the relevant data (in section 3.2) I suggested that this is because each of these constructions put independent demands on initial position that conflict with fronting the VP anaphor; as a result the anaphor is prevented from fronting. We are now in a position to make that suggestion more concrete using the featural apparatus introduced above.

Constituent questions involve a C head that bears $u$wh*. This feature attracts the wh-phrase to Spec-CP yielding the schematic structure in (54) for a subject question with VP anaphora:

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[18]The existence of features like wh, focus, and topic, and their uninterpretable counterparts, is contested within the Minimalist Program. Chomsky advocates them in one of his early statements of the Minimalist Program (Chomsky 1993:32) and they are in wide use (e.g. Boeckx 2003, Green and Jaggar 2003, Jung 2001, Lambova 2001, and Stepanov 1998). Others denounce them in favor of specialized projections (ForceP, FocP, TopP etc), following Rizzi (1997), and López (2009) develops an alternative to both of these approaches.

(54)

```
                    CP
         ┌──────────┴──────────┐
      DP[wh]                   C′
                      ┌─────────┴─────────┐
                   C[ u̶w̶h̶*]              TP
                               ┌──────────┴──────────┐
                          <DP[wh]>                   T′
                                              ┌───────┴───────┐
                                               . . . det[uC] . . .
```

What remains to be checked is the uC feature on the anaphor. The C head checks this, using its category feature. Since the uC on *det* is weak it is checked in situ by Agree. (Note that C c-commands the anaphor in (54).) Hence, *det* surfaces in situ. At this point we need to ask what would happen if, instead, we had a C with a $u$atop feature. Such a C would attract *det* to Spec-CP leaving the subject wh-phrase in Spec-TP. The resulting word order (*det* Aux wh) is impossible, as demonstrated in 3.2. Depending on how we treat wh-phrases there are two ways to account for this within my analysis. If wh-elements are distinguished only by an interpretable wh-feature and carry no uninterpretable features themselves, such structures are grammatically well-formed, but semantically uninterpretable since we have a question word (the wh-element) in a declarative clause (C[$u$atop] is declarative). Alternatively, wh-elements themselves carry an uninterpretable feature that must be checked by an interrogative C (that is, a C that carries the value Q for the clausetype feature). Since the C that carries [$u$atop] is declarative ($u$clausetype: decl), the relevant feature on the wh-element cannot be checked and the derivation fails. To summarize, the wh-element requires (either semantically or syntactically) to be in an interrogative CP. The C that projects an interrogative CP attracts the wh-phrase to Spec-CP and hence the VP anaphor stays in situ.

The anaphor must also stay in situ in polar questions, imperatives, and antecedents of conditionals. In all of these, the initial postion must be empty. Previous work has implemented this requirement in one of two ways: Spec-CP is occupied by a null element (an operator that carries the illucutionary force of the utterance) or Spec-CP is absent. I will not take a stand here on which analysis is correct (for which construction), since either is compatible with my account of VPA in situ. If these verb-initial constructions do indeed involve a null operator in Spec-CP, the account of VPA in situ is similar to that given for constituent questions above: the relevant C requires that operator to occur in Spec-CP (through a specific selectional feature) and hence *det* cannot be fronted, but must surface in situ. If they don't involve null operators obligatory VP-*det* in situ is accounted for as follows: C is present but lacks a selectional feature. The finite auxiliary is attracted to C, by whatever mecanism it normally is in V2 clauses, but since C has no selectional feature nothing is attracted to Spec-CP and these structures surface with an initial verb.[19]

4.2 Accounting for the fronting generalization

In V2 clauses with an undistiguished subject, the subject cannot occupy initial position at the expense of a VP anaphor. The VP anaphor itself, or some other frontable element, must take
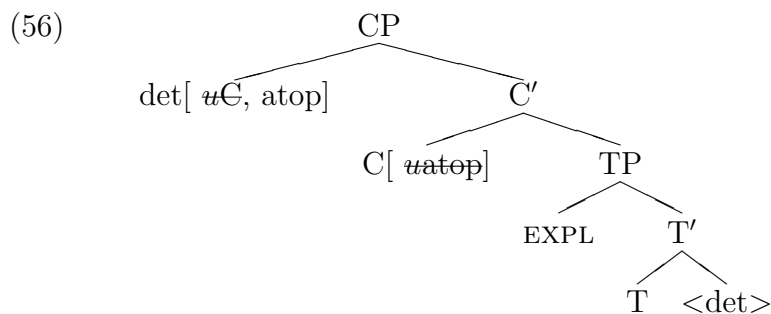
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[19]For imperatives it has been argued that there is no CP (Jensen 2007), in which case there is also no Spec-CP and no attraction of *det* to initial position.

initial position. This pattern is schematized for V2-clauses with an expletive subject and a frontable adverbial in (55).

(55)　　a.　　DET V_{fin} EXPLETIVE Adv ...

　　　　b.　　Adv V_{fin} EXPLETIVE DET ...

　　　　c.　　*EXPLETIVE V_{fin} (Adv) DET ...

The goal of this section is to account for this pattern using the analysis developed for *det*-in situ above. I illustrate the analysis using expletive constructions and then extend it to the other, context-dependent, cases of obligatory fronting with undistinguished subjects.

Let's first consider (55a), where the VP anaphor occupies initial position. Since (55a) is not subject-initial, it is a V2-CP. C is in charge of attracting the VP anaphor to initial position and it does that by way of a *u*atop feature, which matches the discourse function of the VP anaphor (it is anaphoric topic). The C-head licenses the VP anaphor by checking its *u*C feature, resulting in the structure below:

(56)

```
                        CP
            ┌───────────┴───────────┐
    det[ u̶C̶, atop]                 C′
                          ┌──────────┴──────────┐
                      C[ u̶a̶t̶o̶p̶]              TP
                                        ┌────────┴────────┐
                                      EXPL              T′
                                               ┌─────────┴─────────┐
                                               T            <det>
```

The order in (55b) comes about when a different C is chosen, one that attracts the adverbial to Spec-CP. C licenses the VP anaphor in situ by checking *u*C on *det*, via Agree. As in (56), the expletive surfaces in Spec-TP.

The crux of the analysis is the explanation is offers for the ungrammaticality of (55c). This is a subject-initial V2-clause and as such could be either a TP or a CP. If it is a CP, the initial element must bear a C-relation function, since all V2-Cs require their specifier to bear some C-related function. However, the expletive cannot bear any C-relation function: it is not a wh-word, it cannot be a topic or a focus, and it cannot express the rhetorical relation to the previous sentence. Hence, (55c) cannot be a well-formed CP. Expletives can occupy Spec-TP, so we need to consider the possibility that (55c) is a V2-TP. Here it becomes relevant that the clause contains contains VP anaphoric *det* which must be licensed by a C. If (55c) is a TP there is no C to license *det* and the derivation fails due to an unchecked *u*C feature on *det*. Hence, (55c) cannot be a wellformed TP either. Consequently, there is no well-formed structure for (55c) and it is therefore ungrammatical.

Importantly, this analysis applies equally well to the other cases of undistinguished subjects presented above (answers to polar questions, generalizations, and repetitions). In each case a C must be present to license VP-anaphoric *det*. Every V2-C requires an information-structurally distinguished specifier so no matter which C is involved it requires the initial element to bear a C-related function. However, the subject is information-structurally undistinguished and therefore

cannot bear any such function and there is consequently no derivation that results in a subject-initial realization.

At this point we have accounted for the two generalizations established in section 3. First, VP anaphoric *det* cannot front in questions, imperatives and antecedents of conditionals, since the C heads involved in these clause types make contrary demands on initial position. Second, an undistinguished subject cannot take initial position at the expense of the VP anaphor, since VP anaphors only occur in CPs and undistinguished elements cannot occupy Spec-CP. This analysis makes a prediction about VP anaphora in embedded clauses which I articulate and examine in the next section.

4.3 VPA in embedded clauses

If VP anaphoric *det* can be licensed in situ by all and only C, and if expletive-initial V2 clauses are just TPs (because expletives cannot occupy Spec-CP), the possibility of VP anaphoric *det* in a clause embedded inside an expletive-initial clause is predicted to depend on whether the embedded clause is a TP or a CP. In particular, we predict the following distribution:

(57)   *[$_{TP}$ EXPLETIVE V$_{fin}$ ... [$_{TP}$ ... DET]]

(58)   [$_{TP}$ EXPLETIVE V$_{fin}$ ... [$_{CP}$ ... DET]]

The structure in (57) is predicted to be ungrammatical because there is no C to license *det*, whereas (58) is predicted to be grammatical because the embedded clause contains a C that can license *det*. To test these predictions we need to identify constructions that have these structures.

[$_{TP}$ ... [$_{TP}$ ...]] **case**   The best candidate for the C-less structure in (57) is a raising construction with a raised expletive subject and VP anaphora in the embedded clause, as in (59a,b).

(59)   "Lad os gå en tur," sagde Klump, "så   sker   der   nok   noget   spændende.
        let   us go a walk said Klump   then happens EXPL probably something exciting.
        Lets go for a walk, Klump said, then probably something exciting will happen.

    a. *[$_{TP}$ Der plejer   jo   [$_{TP}$ at gøre **det**]].   [= (57)]
            EXPL usually.is you-know   to do   DET

    b. [$_{CP}$ **Det** plejer   der   jo [$_{TP}$ at gøre]].
            DET usually.is you-know   to   do
        As is usually the case.

The raising verb *plejer* has no verbal correspondent in modern English, but it is one of the most used raising predicates in Danish. The antecedent of the embedded VP anaphor is *sker noget spændende* ('happens something exciting') which takes an expletive subject. (The consituency of the antecedent VP obscured by verb movement of *sker*.) In both a and b, the expletive subject of the embedded clause has raised to the subject position of the matrix clause, i.e. Spec-TP. In

(59b), the VP anaphor has also moved out of the embedded clause and surfaces in sentence-initial position, preceding the finite raising verb. The result is a non-subject initial V2 clause: some constituent other than the subject occupies initial position (i.e. Spec-CP), the finite verb occupies second position (i.e. C), and the subject appears in third position (in Spec-TP). The movement of the VP anaphor to matrix Spec-CP is prompted by a *u*atop feature on matrix C. (Movement of the expletive to matrix subject position is presumably triggered by the regular EPP feature on matrix T, and won't concern us further here.) The VP anaphor is licensed by the matrix C and the derivation converges. This accounts for the grammaticality of (59b).

Turning to (59a), first note that it is indeed ungrammatical as predicted if it instantiates the structure in (57). Following the logic of the previous section, we know that the matrix clause in (59a) is just a TP, since the expletive is initial in the matrix clause and expletives cannot occupy Spec-CP. The syntax of raising tells is that the embedded clause is also a TP (Chomsky 1981:66 and much subsequent work) and hence (59a) instantiates the structure in (57). It is ungrammatical because the VP anaphor is not licensed. It can only be licensed by C (as encoded in *det*'s *u*C feature) but there is no C in this structure, only TPs.

[$_{\textbf{TP}}$ ··· [$_{\textbf{CP}}$ ···]] **case** The schematic structure in (58) is instantiated by expletive constructions with a CP complement to the N-head of an NP pivot.[20] As predicted, these are grammatical with VP anaphoric *det* inside the complement clause to N, as in (60a):

(60) Hossein ligner   overhovedet ikke en mand, der har behov for at [drage til Christiania
      Hossein resembles at.all   not a man   who has need for to go   to Christiania
      som kurer] for at klare   sig.
      as   courier for to manage REFL
      Hossein doesn't at all look like someone who needs to go to Cristiania as a courier to make a living.

   a. [$_{\text{TP}}$ Der må   være en anden grund til, [$_{\text{CP}}$ at   han gør **det**]]. [P248; cf. (58)]
           EXPL must be   a   second reason to   that he does DET
       There must be some other reason for him to do it.

   b. [$_{\text{CP}}$ **Det** må   der være en anden grund til [$_{\text{CP}}$ at   han gør.]
           DET   must there be   a   second reason to   that he does
       There must be some other reason for him to do it.

   c. *Der må   være en anden grund til, [$_{\text{CP}}$ **det** at   han gør].
       EXPL must be   a   second reason to   DET that he   does

   d. *Der må   være en anden grund til, [$_{\text{CP}}$ **det** gør han].
       EXPL must be   a   second reason to   DET does he

We know that the matrix clause in (60a) is a TP since it is expletive-initial. The embedded clause, however, is a CP; it is headed by the declarative complementizer *at* ('that').[21] The

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[20]Clausal complements to indefinite Ns are preceded by a preposition in Danish, here *til* 'to' (Hankamer and Mikkelsen 2009).

[21]In writing, the declarative complementizer is indistinguishable from the infinitival marker *at* (used in (59a,b)). They are, however, pronounced differently. The complementizer is [æ], except in emphatic listings of CPs where it is [æd]. The infinitive marker, which I take to be a T, is a low rounded central vowel ([ɒ]), except utterance intially (as in English *To leave now is to give up.*), where it is [æd]. See Reinholtz (1990:471) for relevant discussion.

embedded clause is not a V2 clause (complement clauses to N never are). The verb stays in situ and nothing moves to Spec-CP; compare (60a) to the ungrammatical versions with *det*-fronting to embedded Spec-CP in (60c) and (60d). Consequently the leftmost element of the embedded clause is the complementizer *at*. Since *at* is a C, it can license VP-*det*. In (60a) it does that by Agree.

Importantly, (60b) is also grammatical. In this structure, the VP anaphor has moved from the embedded clause to matrix Spec-CP. Unlike the fronting in (59b), this involves movement out of a complex NP and one might therefore expect a contrast between (59b) and (60b), in particular that (60b) be ungrammatical. Its grammaticality is consistent with observations by Erteschik-Shir (1973:32–49) and Jakobsen (1996) that complex NPs are not generally islands in Danish. Thus, from a language-internal perspective there is nothing surprising about (60b) and in terms of my analysis of fronting, it works exactly like (59b): matrix C bears *u*atop and thereby attracts *det* to matrix Spec-CP. I include (60b) to rule out an alternative explanation for the grammaticality of (60a), one that would not offer as strong support for the analysis of the VP anaphor and Danish verb second structures developed in the previous sections. Had (60b) been ungrammatical, one could potentially argue that (60a) is grammatical because there is no other way to express the relevant meaning (recall the ungrammaticality of both (60c) and (60d)). But (60b) **is** grammatical, ruling out this alternative explanation for the contrast between (60a) and (59a). Instead, I contend, the contrast between (60a) and (59a) follows from an independently motivated structural difference between complement clause to N (they are CPs) and raising constructions (they involve an embedded TP). Together with the categorical licensing requirement of the VP anaphor (*det* must be licensed by a C), this structural difference produces the observed contrast.

There is one more alternative explanation that I would like to set aside.[22] In (59) the VP anaphor originates in a non-finite clause; in (60) it originates in a finite clause. If the VP anaphor could not surface in a non-finite clause, that would equally well account for the key contrast between (59a) and (60a). It would also account for the grammaticality of both (59b) and (60b), since, in both, the anaphor surfaces in a finite matrix clause. Examples like (61) rule out this explanation.

(61) Hun studerede mig kritisk   et øjeblik og så   ud til at godkende mig.
      she studied   me critically a moment and saw out to to approve   me
      She studied me critically for a moment and appeared to approve of me.

    a.   Der   var heller ingen grund til [ikke at gøre **det**].   [P191]
           EXPL was also   no   reason to not   to do   DET
           There wasn't any reason not to.

    b.   **Det** var der   heller ingen grund til ikke at   gøre.
           DET was EXPL also   no   reason to to   not to   do
           There wasn't any reason not to.

Like (60), (61) is an expletive construction in which the NP pivot contains a complement clause. However, in (61) the CP complement to N is non-finite, as shown by the inflection of the embedded

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[22]I thank Adrian Brasoveanu for raising this possibility.

verb (*gøre* is infinitive) and the lack of an overt subject; the subject is PRO$_{arb}$.[23] Again we can't pin the grammaticality of (61a) on the lack of alternative ways of expressing the semantic content, since (61b), with fronting of *det* to matrix Spec-CP, is perfectly grammatical. If finiteness were the factor governing the surface position of the VP anaphor, we would expect (61) to pattern with (59), but it patterns with (60). This shows that it is syntactic category (C vs. T) that matters for licensing the VP anaphor, not finiteness.

4.4　"Optional" fronting

Recall from section 3.3.1 that with non-expletive subjects, *det*-initial and subject-initial versions of a given V2-clause are sometimes both possible:

(62)　　Vi kan ikke [fare rundt　og　spørge], det vil alle　　　opdage og　undre sig　over.
　　　　we can not　rush around and ask　　it　will everyone discover and　wonder REFL about
　　　　We can't run around asking questions. Everyone would notice it and wonder about it.

　　　　a.　**Det** må　en anden gøre.
　　　　　　DET must a　other　do
　　　　　　Someone else has to do it.

　　　　b.　En anden må　gøre **det**.　　　　　　　　　　　　　　　　　　[P169]
　　　　　　a　other　must do　DET
　　　　　　Someone else has to do it.

(63)　　"Jeg [holder mig　til de　faktuelle hændelser, når　jeg taler om　　fortiden] - ...
　　　　I　　hold　REFL to the actual　　occurrences when I　　speak about past.DEF
　　　　I stick to what actually happened when I speak about the past.

　　　　a.　**det** burde du　også gøre," siger han.　　　　　　　　　　　[P381]
　　　　　　DET ought you also　do
　　　　　　You should too.

　　　　b.　du　burde også gøre **det**.
　　　　　　you ought also　do　DET
　　　　　　You should too.

In (62), the attested order is (62b), with the subject in initial position, but (62b) with anaphor fronting is also possible. In (63), the attested order is (63a) with initial *det*, but the subject-initial order in (63b) is also possible. I propose to analyze this alternation as follows. In both examples, the subject of the target clause is contentful ('someone else' in (62) and 'you' in (63)) and may therefore take on an information-structural function. The linguistic context, specifically the antecedent clause, allows each subject to function as contrastive focus ('someone else' vs. 'we' in (62) and 'you' vs. 'I' in (63)). As a contrastive focus, the subject can occur in Specifier of CP (given the appropriate C), as in (62b) and (63b). However, the linguistic context doesn't require initial focus; speakers have a choice about how to construe the relation between the two clauses.

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[23]The PRO subject of a non-finite complement to N can also be controlled from a higher clause, as seen in the antecedent clause of (60). Here the PRO subject of *drage til Christiania som kurer* is controlled by the relative clause operator, which in turn is co-indexed with the external head of the relative clause, *en mand*.

If they construe it contrastively, we get subject-fronting. If they construe it anaphorically, we get *det*-fronting. Notice that under this analysis, (62b) and (63b) are CPs, despite being subject-initial.

For some attested examples, speakers differ in whether they allow the alternative order (see the table in (81) in the appendix). A typical example is given in (64).

(64) En del   af dem klarer   sig,
     a   portion of them manage REFL
     Some of them manage

    a. %**det** gør andre ikke.
       DET do   others not

    b. andre gør **det** ikke.   [P166]
      others do   DET not
      others don't

I interpret this variation as follows. Some speakers can only construe the relation between the clauses as one of contrasting two sets of indviduals. This construal forces the order in (64b). Other speakers also allow an anaphoric relation between the two clauses and for these speakers both orders are possible. Clearly more work is needed to establish the factors that determine which clausal construals speakers allow. The important point here is that *det*-fronting is never truly optional; a clause with a fronted *det* places a different set of restrictions on its use in text and discourse than the same clause with *det* in situ.

5   Consequences

The proposed analysis of the VPA in situ and fronting generalizations has consequences for both the understanding of verb-second syntax and the typology of verb phrase anaphora. I discuss these in turn.

5.1   Asymmetric verb second

My account of the word order generalizations governing the VP anaphor *det* requires that Danish V2 clauses come in two sizes: TP and CP. This is in line with the asymmetric V2 analyses developed by Travis (1984, 1991), Zwart (1991), and Sells (2001), but in direct conflict with the dominant analysis of verb second which holds that all V2 clauses are CPs (den Besten 1983, Holmberg 1986, Holmberg and Platzack 1995, Jouitteau 2008, Koopman 1984, Platzack 1986a 1986b, Schwartz and Vikner 1989 1996, Taraldsen 1986, Tomaselli 1990, Vikner 1995, Weerman 1989).[24] It is thus relevant to reexamine the empirical arguments advanced in favor of the uniform CP analysis over an asymmetric TP/CP analysis of V2. As far as I can tell, only four such arguments have been advanced for Mainland Scandinavian languages:[25]

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[24]It is equally in conflict with the minority views held by Branigan (1996) (subject-initial V2 clauses involve one less CP projection than other V2 clauses), Diesing (1990) (all V2 clauses are TPs), and Zwart (1997:262–267) (all declarative subject-initial V2 clauses are AgrSPs).

[25]There are many more arguments for German and Dutch, where the position of T is at issue, but these do not carry over to Danish, Norwegian, and Swedish, which are all VO languages.

1. Distribution of unstressed pronouns (Schwartz and Vikner 1996)

2. Extraction from embedded V2 clauses (Holmberg 1986:110ff)

3. Position of finite V in clauses with *mon* (Vikner 1995:45–46)

4. Adjunction to TP (Schwartz and Vikner 1996)

For reasons of space I will concentrate on arguments 3 and 4 here. (Schwartz and Vikner (1996:16–19) themselves show that 1 is only problematic if subject-initial V2 clauses with the subject in Spec-TP involve a null CP layer above TP and that assumption is not a necessary component of asymmetric analyses. In fact Zwart (1997:159) explictly states that the CP level is not projected in such clauses, as does Travis (1991:355). As for Holmberg's argument in 2, Schwartz and Vikner (1989:35–44) show it is not valid for Mainland Scandinavian, though it is valid for German.)

Mon-clauses   The argument from *mon*-clauses targets the assumption that the finite verb may surface in T in V2 clauses, as it is claimed to do under the asymmetric analysis in subject-initial V2 clauses that are just TPs. *Mon*-clauses, like (65), are relevant because they would seem to be main clauses with a lexical C. (*mon* has no direct correlate in English, but translates as "I wonder". Following Vikner (1995) I gloss it that way too.)

(65)   Hvilke film mon   børnene   har   set?   (Vikner 1995:(29b))
        which.PL film I.wonder children.DEF have.PRES seen
        I wonder which films the children have seen.

If *mon* occupies C we can make sense of the fact that in (65) *mon* sits between the wh-phrase and the subject. If *mon* is in C, that position is not available as a landing site for verb movement, but presumably T is available so we need to ask whether the finite verb is in V or T in (65). The relative position of the verb and negation in (66) shows that the verb is in V, not in T:

(66)   Hvilke film mon   børnene   (*har)   ikke har   set?
        which.PL film I.wonder children.DEF have.PRES not have.PRES seen
        I wonder which film the children haven't seen.

This is unproblematic for the uniform CP analysis, because under that analysis V2 movement is always movement of V to C (via T) and if V can't move to C (here because *mon* occupies C), then V can't move at all. Under the asymmetric V2 analysis, on the other hand, V2 is movement of the finite verb to the highest head position of its clause, which is C in a V2-CP and T in a V2-TP. Moreover, the finite verb **must** move to this position in both V2-CP and V2-TP (otherwise, the verb would not necessarily surface in second position). Thus, the asymmetric V2 analysis would seem to predict the starred position for *har* in (66). However, this argument only goes through if *mon* is indeed a complementizer. In an unrelated paper on subject relative clauses (Vikner 1991), Sten Vikner advocates a different view of *mon*, originally due to Kr. Mikkelsen (1911:582), namely that *mon* is a reduced verb form that introduces an embedded non-V2 clause, but no subject. Vikner (1991:118-119) gives some diachronic support for this view, which I will

not review here. The important point is that on this analysis of *mon*, (66) is a biclausal structure with wh-extraction out of the embedded clause. The string *børnene ikke har set* is an embedded clause of the non-V2 variety and therefore no verb movement is expected under any V2 analysis, including the asymmetric analysis.

Adjunction to TP   The argument from adjunction to TP starts from the observation that some V2 languages allow adverbs to intervene between C and the subject of a non-subject-initial V2 clause. This is illustrated for Swedish in (67), where the adverb *trots allt* intervenes between the finite verb in C (*vill*) and the subject (*Johan*). (This is example (4c) from Schwartz and Vikner (1996).)

(67)   [CP De   här bökerna vill <u>trots</u>   <u>allt</u> [TP Johan inte läsa.]]
                these here books   will despite all   Johan not read
         These books Johan won't read despite everything.

Schwartz and Vikner (1996:12) point out that such examples would seem to require adjunction of adverbs to TP. If subject-initial V2 clauses are TPs, we would expect adverbs to be able to adjoin to these, producing the ungrammatical word order in (68).

(68)   *Trots allt Johan vill inte läsa de   här bökerna.   (Schwartz and Vikner 1996:(5))
              despite all Johan will not read these here books

This is perhaps the strongest argument against the asymmetric V2 analysis (though see the response in Sells (2001:19–21)). However, it doesn't actually apply to Danish. Haeberli (1999) shows that Germanic languages differ with respect to the availability of the adverb-subject order in (67). Among the North Germanic languages, Swedish (67) and Norwegian (69) allow adverb-subject order (as do most West Germanic languages), whereas Icelandic (70) and, crucially, Danish (71) do not (nor do West Flemish and Afrikaans).

(69)   Denne klokka hadde (seinere) min gamle far   kjøpt.   (Haeberli 1999:(5c))
         this   watch had   later   my old   father bought
         This watch my father had bought later on.

(70)   Seinnilega mun (*seinna) Jón kaupa sama urid.   (Haeberli 1999:(5d))
         probably   will later   John buy   same watch.DEF
         Intended: *Probably John will buy the same watch later on.*

(71)   Dette ur   vil (*senere) min far   købe.   (Haeberli 1999:(5a))
         this   watch will later   my father buy
         Intended: *This watch my father will buy later on.*

In so far as there is no independent evidence that Danish allows adjunction to TP, the ungrammaticality of adjunction to a subject-initial Danish V2 clause, as in (72), is unproblematic under the asymmetric analysis:

(72)   *Senere min far   vil købe dette ur.
              later   my father will buy this   watch
              Intended: *Later on my father will buy this watch.*

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The conclusion that emerges is this: none of the known arguments against the asymmetric V2 analysis holds for Danish. This is interesting for at least two reasons. First, it means that there are no outstanding problems for the analysis of Danish V2 proposed here. Second, while positional restrictions on overt VP anaphors in other Germanic V2 languages have not been systematically examined, there is preliminary evidence that the VPA fronting generalization proposed here for Danish does not hold throughout Mainland Scandinavian. Helge Lødrup provides the Norwegian examples in (73) and (74). In (73), the VP anaphor *det* occurs in a matching answer to a polar question and yet the undistinguished subject takes first position, leaving *det* in situ (answer words like *ja* (yes) and *nei* (no) do not count for V2). In (74), the VP anaphor is in an expletive clause (74a) and, contrary to the Danish pattern, the VP anaphor may surface in situ (after the negation *ikke*) with an initial expletive subject.[26]

(73)   (Kan du strikke?) Ja, jeg kan det.   (Lødrup 1994:(3))
        (can   you knit)   yes I   can DET
        Can you knit? Yes, I can.

(74)   Har   det skjedd   noe   spennende i det siste?
        have.PRES EXPL happened anything exciting   in the last
        Has anything exciting happened lately?

        a.   -Nei, det   har   ikke det.   (http://threehundredandsixtyfive.blogg.no/)
             no   EXPL have.PRES not   DET
             No, nothing exciting has happened Lit. No there has not it.

This suggests that the exact information-structural restrictions on V2 structure detailed above might be particular to Danish and not shared by all or even any of the other Germanic V2 languages. This might seem like an undesireable result, but it is hardly unique. Much of the research on Germanic V2 in recent years has pointed to the same general conclusion: V2 across the Germanic languages, and across dialects of individual languages, is not as unified a phenomenon as we first thought. There are differences in the distribution of V2 in embedded clauses (Heycock 2005, Heycock et al. 2010), differences in the possibility of V3 in wh-questions (Westergaard and Vangsnes 2005, Westergaard 2009), differences in the movability of complex verbs (Vikner 2005) etc. Moreover, we know from the work of Bohnacker and Rosén that the Germanic languages differ in how the initial position is filled in language use (Bohnacker and Rosén 2008). The results of the present paper suggest that some of these usage and frequency differences might relate to structural and grammatical differences between the individual V2 languages.

From an analytical standpoint, one might object that the asymmetric V2 analysis splits V2 into two separate phenomena: a CP structure with the finite verb in C and a TP structure with the finite verb in T (this point is elaborated by Williams (1997:267–268)). Within a representational theory of syntax, like the Government and Binding theory within which the original generative analysis of V2 was couched, that critique carries a certain heft. In a derivational theory like Minimalism, the issue presents itself somewhat differently (Zwart 1997:254 makes

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[26]Norwegian and Swedish have only one expletive *det*, which is used where Danish uses expletive *det* and where Danish uses expletive *der*. In (74), the position of negation in the target clause shows that the first *det* is the expletive and the second *det* is the VP anaphor. See the discussion of the corresponding Danish examples in (40) above.

this point as well). In both V2 structures the finite verb is in the highest head position of the V2 clause, namely C if the V2 clause is a CP and T if it is TP. Once we allow V2 clauses to be either CPs or TPs, the different positions for the finite verb will follow. Simplifying somewhat, a V2-TP is generated when the numeration contains no C; a V2-CP when it contains a C. If it does contain a C, that C will attract the finite verb from T to C. If the numeration contains no C, there is nothing to move V beyond T and the finite verb will surface in T.

A final issue is the lack of V2 in embedded clauses. With the exception of Yiddish, Icelandic, and possibly Faroese, the Germanic V2 languages exhibit a contrast between main clauses (V2) and embeddded clauses (mostly not V2). Despite much work on this topic, the source of this contrast is controversial. Most V2 analyses, uniform and asymmetric ones, relate it, in one way or another, to the presence of lexical complementizers in embedded clauses. I have nothing new to add to this debate.

5.2   Overt and null VP anaphora

In addition to the overt VP anaphor *det*, Danish has VP ellipsis, as in (75)

(75)   Antarktis smelter   ikke, eller rettere 96 procent gør   ikke ___.   [E21]
        Antarctica melt.PRES not   or   rather 96 percent do.PRES not
        Antarctica isn't melting or rather, 96% isn't.

Unlike, VP-*det*, VP ellipsis does not participate in V2: the target of VP ellipsis cannot be fronted and count for V2. This difference is brough out in (76):

(76)   Han må godt gøre grin med profeten, . . .
        he   may well make fun with profet.DEF
        He is allowed to make fun of the profet . . .

      a.   **det** må en ikke-muslim ikke.
           DET may a   not-muslim   not
           a non-muslim is not.

      b. #___ må en ikke-muslim ikke.
              may a   not-muslim   not
      Intended '*a non-muslim is not.*'

      c.   en ikke-muslim må ikke ___.   [E10]
           a   not-muslim   may not
      '*a non-muslim is not.*'

In (76a) we have overt VP anaphora with fronting of *det*. The result is a declarative V2 clause. (76b) is parallel to (76a), but has VP ellipsis instead of overt VP anaphora. The only interpretation of (76b) is as a polar question. There is no declarative interpretation analogous to that of (76a). To achieve the declarative interpretation the word order in (76c) is required. This contrast shows that whereas overt VP anaphors can serve a C-related function (namely, anaphoric topic) a null VP anaphor cannot. This in turn shows that the idea that VP ellipsis is the result of VP topicalization followed by deletion (Johnson 2001:446-447) cannot be right for Danish. More importantly it suggests that null and overt anaphors may interact very differently with

the surrounding syntax, in this case word order possibilities. On the other hand, null vs. overt realization is not an important division in existing taxonomies of anaphora, including Hankamer and Sag (1976), Huang (2000), and Winkler (2005). In fact, a key point of Hankamer and Sag (1976) is that their distinction betwen Deep and Surface anaphora does not line up with overt vs. null anaphora. While Deep anaphors tend to be overt, there are null Deep anaphora, notably Null Complement Anaphora. And while most Surface anaphors are null, Hankamer and Sag (1976:415, 418) identify *so*, in *do so* and elsewhere, as a Surface anaphor (though see Kehler and Ward (1999, 2004) for critical discussion of this claim).

When faced with the contrast between (76a) and (76b) one could respond that this is a matter of understanding V2 syntax, not a matter of understanding VP anaphora. On the other hand, this contrast might ultimately explain a puzzle about the different distributions of overt and null VP anaphors in different Germanic languages. VP ellipsis is the unmarked, general purpose VP anaphor in English: it imposes no semantic restrictions on its antecedent, it is used in all registers, and it is very frequent. In contrast, all the overt VP anaphors of English (*do it*, *do so*, *do that*, *do the same thing*) place semantic restrictions on their antecedent and some are register-specific. In Danish, the unmarked all purpose VP anaphor is the overt VP anaphor *det*: it imposes no semantic requirements on its antecedent, it is used in all registers, it is the most frequent VP anaphor (VP-*det* is about 6 times as frequent as VP ellipsis in running text).[27] In contrast, VP ellipsis is somewhat restricted in Danish (and in other Germanic V2 languages; see van Craenenbroeck (2004:125–255) for Dutch, López and Winkler (2000:639–640) for German, Lødrup (1996:220) for Norwegian, and Platzack (2008:2, 17–19) for Swedish), both in terms of frequency of use and range of uses. These restrictions are largely unexplored, but one possibility is that overt VP anaphora is favored in Danish (and other V2 languages) because it suits V2 syntax better than VP ellipsis. By that I mean that the overt VP anaphors provide a candidate for fronting to preverbal position in a way that VP ellipsis does not (see again (76)). English is not a V2 language and hence there is no syntactic principle favoring overt VP anaphora overt VP anaphora. Grice's Maxim of Manner ("be brief") could be said to favor VP ellipsis over any overt VP anaphor (in any language) and if there is a preference for VP ellipsis in English over overt VP anaphors, that could following from Grice's Maxim of Manner ruling unopposed.[28] This is very speculative, not least because I have no frequency data for English, but one indication that there might be something to this idea is that Danish exhibits a main vs. embedded clause asymmetry with respect to overt and null VP anaphora, or rather a V2 vs. non-V2 asymmetry. In the domain of V2 clauses (namely, main clauses and embedded clauses with V2 syntax), VP-*det* is 8-9 times as frequent as VP ellipsis. In non-V2 embedded clauses, VP-*det* is only 3 times as frequent. This suggests that also within a language, the use of null vs. overt VP anaphors is sensitive to the syntactic structure of the clause that hosts it.

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[27]This is the ratio in the novel *Nordkraft* referenced in footnote 8 and it is matched in the data collected from other sources, as are the ratios for V2 and non-V2 clauses cited below.

[28]I am grateful to Andy Kehler for pointing me in this direction. There is much much more to be said here, including an account of when and why overt VP anaphors are used in English.

6 Conclusion

I will summarize the paper by highlighting four conclusions. First, while initial position in Danish V2 clauses is multifunctional, there are more syntactic restrictions on this position than previously acknowledged. In particular, we can add declarative VPA-clauses to questions, imperatives, and antecedents of conditionals, as clause types where the choice of initial element is restricted. Second, the analysis proposed to account for restrictions on initial position in expletive constructions extends straightforwardly to cases of context-governed restrictions on initial position, found in answers to polar questions, generalizations, and repetitions. I take this to be a real strength of the analysis. Third, Danish subject-initial V2 clauses are not structually uniform: information-structurally differentiated ones are CPs, undifferentiated ones are TPs. Since TP is necessarily subject-initial, this explains why initial position "defaults to subject", as noted in the descriptive literature (see references in introduction). Fourth, V2 involves a different relationship between information structure and syntax than systems in which there are dedicated positions for topic and/or focus, such as Hungarian (Kiss 1998), Italian (Rizzi 1997), and Mayan (Aissen 1992). In Danish, Spec-CP must be occupied by an information-structurally distinguished element, but is not dedicated to a particular function.

There are also a number of open questions. Here I will focus on two that I find particularly important. First, I have argued that Discourse-oldness restricts the position of the VP anaphor, but I have said nothing about how discourse **structure** might affect the position of VP-*det*, though I think there are good reasons to suspect that it does play a role. For instance, López (2009) argues that left-dislocation of anaphors in Romance is sensitive to discourse structure in that the clause containing the antecedent must be in a subordinated discourse relation to the clause containing the left-dislocated element (Asher and Vieu 2005). And Kehler (2000, 2002) shows that the derivation and interpretation of English VP ellipsis is sensitive to discourse structure, in particular Cause-Effect relations vs. Resemblance relations. Both are obvious directions for future research on Danish VP anaphoric *det*.

A second open question is why VP-anaphoric *det* should require licensing by C. Danish nominal anaphors do not require such licensing; they can occur in situ with undistinguished subjects. One could hypothesize that VP anaphora affects discourse—and ultimately syntax—differently because event tracking is different from tracking of individuals. However, Danish VP ellipsis also does not require licensing by C (VP ellipsis is possible with expletive clauses with an initial expletive), so it cannot be simply a matter of nominal vs. verbal. The possibility of VP ellipsis in the very environments where the VPA Fronting Generalization prohibits overt VP anaphora suggests a further division of labor between overt and null VP anaphors following up on the suggestions in section 5.2. It also suggests that overtness matters for V2 syntax in a fundamental way.

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Appendix

The proportions of initial elements reported in (19) and (19) were obtained in the following way:

V2-clauses in general   Surprisingly, there appears to be no comprehensive quantitative study of initial position in Danish V2 clauses. I therefore conducted a small pilot study and compared the results to existing comprehensive studies of Swedish and Norwegian as well as an existing pilot study of spoken Danish. I extracted samples from Danish newspapers, fiction and spoken language. Each sample contained 250 V2-clauses. The newspaper sample was drawn from 3 articles in *Weekendavisen* (May 24–June 1, 2006), the fiction from Jakob Ejersbo's novel *Nordkraft* (published in 2002 by Gyldendal), and the spoken sample from the BySoc corpus, which contains transcriptions of sociolinguistic interviews. Counts of initial elements in those three samples are given in (77):

(77)

	NEWSPAPER		FICTION		SPEECH		ALL SAMPLES	
Subject	158	(63%)	162	(65%)	140	(56%)	460	(61%)
Adverbial	72	(29%)	26	(10%)	69	(28%)	167	(22%)
Object[29]	8	(3%)	41	(16%)	21	(8%)	10	(9%)
Other	12	(5%)	21	(9%)	20	(8%)	53	(7%)

Thomsen (1996) reports 57.5% subject-initial V2-clauses for spoken Danish in a corpus of 9002 words, which concurs with 56% initial subjects in my BySoc sample. He does not provide ratios for objects or adverbials. In general, the proportions are comparable to those reported for Swedish and Norwegian based on comprehensive corpus studies: Subject (64%-73%, depending on genre), adverbials (23%-30%), objects (2%-14%) (Bohnacker and Rosén 2008 and Ute Bohnacker p.c. March 30, 2009). These studies only considered declarative V2 clauses.

(78) represents the same samples, but differentiates the categories further. The category 'Null' includes polar questions, imperatives, and verb-initial antecedents of conditionals. In all of these, there is no element in the prefield or, under certain analyses, there is an element, but that element is a null operator.

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[29]Of the 41 initial objects in the fiction sample, 34 are fronted objects of verbs of saying. All 34 are direct speech. The comparatively high number of initial objects in the fiction sample is thus due to the source being dialogue-heavy.

(78)

INITIAL	NEWSPAPER		FICTION		SPEECH		ALL SAMPLES	
Subject	157	(63%)	162	(65%)	140	(56%)	459	(61%)
Subject-*wh*	1	(0%)	0	(0%)	0	(0%)	1	(0%)
Adverb	27	(11%)	16	(6%)	65	(26%)	108	(14%)
Adverb-*wh*	6	(2%)	2	(1%)	1	(0%)	9	(1%)
Adverbial PP	33	(13%)	7	(3%)	3	(1%)	43	(6%)
Adverbial CP	6	(2%)	1	(0%)	0	(0%)	7	(1%)
Object	7	(3%)	36	(14%)	20	(8%)	63	(8%)
Object-*wh*	1	(0%)	5	(2%)	1	(0%)	7	(1%)
Null	4	(2%)	16	(6%)	5	(2%)	25	(3%)
VP anaphoric *det*	0	(0%)	1	(0%)	13	(5%)	14	(2%)
Object of P	2	(1%)	2	(1%)	2	(1%)	6	(1%)
Other	6	(2%)	2	(1%)	0	(0%)	8	(1%)

VPA-clauses The proportions of initial elements reported for VPA-clauses represent a database of 414 instances of VP anaphoric *det* gathered from corpora, newspapers, magazines, fiction, radio, and conversation. 7 of these were not contained in a V2-clause, but instead occurred in a fragment of some kind. These are not included in the counts below. The 407 tabulated examples include cases where *det* occurs as the predicate of the V2-clause itself as well as cases where it is the predicate of a non-V2-clause embedded in a V2-clause. In cases where *det* occurs as the predicate of a V2-clauses embedded in another V2 clause, the constituent in the prefield of the (most deeply) embedded V2-clause is counted. The table in (79) shows the counts for initial position, using just four broad categories:

(79)

INITIAL	VPA-CLAUSES	
Subject	93	(23%)
Adverbial	67	(16%)
Object	3	(1%)
Other	244	(60%)

(80) gives counts for initial position differentiating the categories further:

(80)

INITIAL	VPA-CLAUSES	
Subject	82	(20%)
Subject-*wh*	11	(3%)
Adverb	27	(7%)
Adverb-*wh*	25	(6%)
Adverbial PP	3	(1%)
Adverbial CP	12	(3%)
Object	3	(1%)
Object-*wh*	0	(0%)
Null	28	(7%)
VP-anaphoric *det*	216	(53%)
Object of P	0	(0%)
Other	0	(0%)

All VPA examples were furthermore annotated as to whether fronting was obligatory, impossible or optional, based on judgments from native speakers. If speakers disagreed or reported uncertainty, the example was annotated as 'fronting status unclear'. The result of this annotation is given in (81).

(81)

FRONTING STATUS	VPA-CLAUSES	
Fronting obligatory	152	(37%)
Fronting impossible	153	(38%)
Fronting optional	57	(14%)
Fronting status unclear	45	(11%)