On what comes first in a verb-second language*

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Line Mikkelsen (UC Berkeley)
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1 Introduction

General verb-second (V2) configuration (Germanic minus English, Kashmiri (Hook and Manaster-Ramer, 1985), Breton (Schafer, 1995), Ingush (Nichols, 2009)):

(1) \[ \text{XP} \ V_{\text{fin}} \ldots \ ]

Danish version:

(2) \((Y) \left[ \text{XP} \ V_{\text{fin}} \text{DP} \_{\text{subj}} \ldots \right] \)

\(Y = \) coordinator/subordinator and/or extraposed element.

Position of XP = PREFIELD (Da. forfelt) or INITIAL POSITION

Frequently Asked Questions:

1. Where is XP and where is \(V_{\text{fin}}\)?

(3) \([\text{CP} \ \text{XP} \ V_{\text{fin}} \ [\text{TP} \ \ldots \ ]]\) \hspace{1cm} \text{(Koster 1975 and onwards)}

2. Which clauses are V2 in which language? \hspace{1cm} \text{(Heycock, 2005)}

main clauses and most embedded clauses (Icelandic, Yiddish), main clauses and some embedded clauses (Danish, Swedish, Norwegian, German, Dutch)

3. What can fill in for XP?

In Danish, anything but \(V_{\text{fin}}\), negation and a handful of modal adverbs (\(jo\), \(skam\), \(sgu\), \(da\))

4. Are subject-initial V2 clauses CPs or smaller?

\[
\begin{align*}
\text{CPs} &= [\text{CP} \ \text{DP} \_{\text{subj}} \ V_{\text{fin}} \ [\text{TP} \ \langle \text{DP} \_{\text{subj}} \rangle \ V_{\text{fin}} \ldots ]] \hspace{1cm} \text{(e.g. Vikner 1995, Schwartz and Vikner 1996)} \\
\text{TPs} &= [\text{TP} \ \text{DP} \_{\text{subj}} \ V_{\text{fin}} \ldots ] \hspace{1cm} \text{(e.g. Travis 1991, Zwart 1997)}
\end{align*}
\]

*The material presented here grew out of The Danish Verb Phrase Anaphora project, which is a collaboration with Michael Houser, Maziar Toosarvandani, and, earlier on, also Ange Strom-Weber. Information about the project is at http://linguistics.berkeley.edu/~danish/. I am especially grateful to Michael Houser for setting up the on-line database for naturally occurring examples of VP anaphora on which I draw heavily in what follows. I am also grateful to Peter Juel Henriksen and Frans Gregersen for giving me access to the BySoc corpus of spoken Danish.
Rarely Asked Question

5. When a clause contains several candidates for initial position, which one gets to go there?

This question is too hard, since prefield is multifunctional (Danish Functional Linguistics tradition, e.g. Heltoft 1992, Thomsen 1996, and especially Jakobsen 1998)

This question is too easy, since there are just three categories (implicit concensus position in generative tradition):

- constituent questions: (highest) wh-phrase must go first
- polar questions, imperatives and V-initial antecedents of conditionals: null operator in Spec-CP
- all other V2 clauses: not a matter of syntax, but of stylistics and text linguistics

Today’s talk

- argue that there are restrictions on XP in Danish V2 clauses beyond what is commonly recognized
- tool: VP anaphoric det, which may, must or cannot front depending on its surroundings
- conclusions:
  - there are intra-sentential syntactic principles governing what comes first even in declarative V2 clauses
  - some subject-initial V2 clauses are TPs, some are CPs (see question 4)
  - while the elements that can occur in initial position in V2-CPs serve very different functions, the initial element always serves some function (there are no undifferentiated V2-CPs).

2 What does come first in Danish V2 clauses?

No comprehensive quantitative study, but examination of 750 V2-clauses from newspaper, fiction and spoken language yielded the proportions listed in under GENERAL in (4). Compare this general pattern to initial position in 407 V2-clauses containing VP anaphoric det, listed under VPA-CLauses.\(^1\)

(4)

<table>
<thead>
<tr>
<th>INITIAL</th>
<th>GENERAL</th>
<th>VPA-CLAUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>61%</td>
<td>23%</td>
</tr>
<tr>
<td>Adverbial</td>
<td>22%</td>
<td>16%</td>
</tr>
<tr>
<td>Object</td>
<td>9%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
<td>60%</td>
</tr>
</tbody>
</table>

- VP anaphoric det affects initial position:
  - radically fewer initial subjects;
  - radically fewer initial objects;
  - slightly fewer initial adverbials.

- What’s in ‘other’?

\(^1\)Percentages do not necessarily sum to 100 due to rounding. See appendix A for details of the quantitative studies.
<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>INITIAL</th>
<th>GENERAL</th>
<th>VPA-CLAUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>61%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Subject-\textit{wh}</td>
<td>0%</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Adverb</td>
<td>14%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Adverb-\textit{wh}</td>
<td>1%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Adverbia l PP</td>
<td>6%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Adverbial CP</td>
<td>1%</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Object</td>
<td>8%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Object-\textit{wh}</td>
<td>1%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Null\textsuperscript{2}</td>
<td>3%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>\textbf{VP-anaphoric \textit{det}}</td>
<td>2%</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>Object of P</td>
<td>1%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Impressionistically: VPA clauses have a very different distribution of elements in initial position, because the VP anaphor itself is very frequent in this position. Yet, it doesn't have to appear in initial position, contra Vikner (1988:11, fn. 5).

3 VP anaphoric \textit{det}

Components:

- anaphoric proform \textit{det} (= 3rd singular neuter pronoun; glossed \textit{det})
- licensor = modal, perfective, passive or dummy auxiliary; possessive \textit{have}; copula
- antecedent = [...]\textsuperscript{3}

(6) Esbjerg \textit{[sætser på trænersiden]}, mens Aalborg ikke \textit{gør det}. [P206]

Esbjerg emphasizes coaching, while Aalborg not does DET

In embedded clauses that are not V2, \textit{det} surfaces in situ, as in (6).

In V2-clauses (= main clauses and certain embedded clauses), \textit{det} may surface:

1. in situ: \textit{[subject auxiliary (neg) det]}
2. object shifted position: \textit{[subject auxiliary det (neg)]}
3. clause initially: \textit{[det auxiliary subject (neg)]}

This talk: 1 & 2 (= non-fronted) vs. 3 (fronted) (on 1 vs. 2, see Andréasson 2008)

3.1 Obligatory non-fronting

Fronting of \textit{det} is impossible in:

\textsuperscript{2}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 null.

\textsuperscript{3}I use the following abbreviations in the glosses: \textit{def} = definite, \textit{dp} = discourse particle, \textit{pass} = passive, \textit{poss} = possessive, \textit{refl} = reflexive. Examples from the database are annotated with their id number, which is a \textit{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.
1. **Constituent questions**

   Here subject question, but also manner, locative, temporal, and reason questions.

   (7) Vi [trættes], men ...
   
   a. hvem gör ikke det!
   
   *who does not DET
   
   b. *det gör hvem ikke!
   
   DET does who not

   Syntax of constituent questions requires wh-fronting → *det cannot front.

2. **Polar questions**

   (Fronting of *det, as in (8b), is possible under a declarative interpretation.)

   (8) Ja - febrilsk ædrug 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?” spørg Mette.
   
   did you DET asks Mette
   
   Did you, Mette asks

   b. *“Det gjorde du?” spørg Mette.
   
   DET did you asks Mette

   Syntax of polar questions requires no/empty prefield → *det cannot front.

3. **Imperatives**

   (9) “[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 gjør jeg det.”
   
   do DET otherwise do I DET
   
   Do it or I’ll do it.

   b. *“Det gjør der. Ellers gjør jeg det.”
   
   DET do otherwise do I DET

   Syntax of imperatives requires no/empty prefield → *det cannot front.

4. **Antecedent of conditional clauses**

   (10) Et net af lyttecenteral skal oprettes, og alle private internetudbydere skal [installere systemer, a net of listening centers shall create.PASS and all private internet service providers shall install systems der gor overvågning mulig.]
   
   that makes surveillance possible
   
   A web of listening stations are to be created and all private internet service providers are to install the system.

   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
   
   If they don’t, the owner can be punished with up to three years of prison.

   b. *Det gjør de ikke, kan ejeren ...
   
   DET do they not can owner.DEF

   Syntax of conditionals requires no/empty prefield in antecedent → *det cannot front.
3.2 Obligatory fronting

Expletive subjects

(11) Jeg kaster et blik ind i stuen, for at se om der er et eller andet pinligt, jeg skal have ryddet af vejen], men . . .

I throw a glance into the living room to see if expletive is one or other embarrassing I shall have cleared off way but

I glance into the living room to see if there is anything embarrassing that I need to clear away, but . . .

a. det er der ikke.
det is expletive not
there isn't.

b. *der er det ikke.
expletive is det not

c. *der er ikke det
expletive is not det

(12) Derved kunne mange misforståelser [opstå], også af følelsesmæssig art. [new paragraph]

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 romanst to hovedpersoner, . . . det does expletive 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 . . .
expletive does det for example

c. *Der gør for eksempel det . . .
expletive does for example det

(13) Da jeg åbnede døren troede jeg først at der havde været indbrud], men . . .

When I opened door thought I first that expletive 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 expletive luckily not
luckily that wasn't the case.

b. *der havde det heldigvis ikke.
expletive had det luckily not

EXPLETIVE had luckily not DET

c. *der havde heldigvis ikke det.
expletive had luckily not DET

(14) Arrangørerne håbede på at der ville blive [solgt mange billetter] og . . .

The organizers hoped that tickets would sell well and . . .

a. det blev der også.
det became expletive also

tyder did.

b. *der blev det også.
expletive became det also

c. *der blev også det.
expletive became also det
4 An analytical proposal

(See appendix B for implementation in terms of feature-checking)

Assumptions

- Danish V2 clauses may be CP or TP.
- V2-TPs are subject initial and subject is information-functionally undifferentiated.
- V2-CPs may be subject-initial or not and initial element bears some function (clause type, focus, contrastive topic, anaphoric topic, marking various rhetorical relations) → all V2-Cs require a specifier, and all place some content requirement on that specifier (wh, Q, focus, contrastive topic, . . .)
- VP *det* is an anaphoric topic (López and Winkler, 2000)
- VP *det* must be licensed by a C.
- expletives cannot bear any C-related function.

**Accounting for obligatory det-fronting in expletive constructions:**

(15) a. *

Wh *det* in ... det ...

b. det *Vfin* expletive...

Why is (15a) impossible?

- all V2-Cs require specifier to bear some function
- expletives cannot bear any of these functions
- → expletive-initial clauses are just TPs
- if a clause is just a TP, there is no C to license VP-anaphoric *det*
- → VP-anaphoric *det* is impossible in expletive-initial V2 clauses.

Why is (15b) possible?

- V2 clauses can be CPs and there is a V2-C that asks for an anaphoric topic in its specifier
- *det* is an anaphoric topic and thus may front to specifier of such a C, yielding (15b).

Why is (15b) obligatory?

- A V2 clause must be a TP or a CP
- A TP is not possible, because *det* is present.
- No CP would allow expletive in prefield (no information-neutral Cs)
- → Only candidate for fronting is *det*

---

4This is true independent of context for expletive clauses like (11a) where the other elements present in the clause (negation and the finite verb) are also not allowed in the prefield. For expletive clauses that contain other frontable material, such as (12a) and (13a), whether they allow a version where that material is fronted depends on context. So neither of the PPs can front in (12a), but the adverb *heldigvis* can front in (13a).
4.1 Other cases of obligatory fronting

Certain discourse/rhetorical contexts induce an information-structurally undifferentiated V2 clause, and in such clauses *det* must front.

In matching (= not over-informative) answers to polar questions, *det* must front:\(^5\)

(16) **Tjener! Bestilte jeg ikke en gin og tonic?**

Waiter, didn't I order a gin and tonic?

a. Jo, *det* gjorde De.

Yes you did.

b. #Jo, De *gjorde det.

(P131)

c. *Nej, det* gjør jeg ikke; . . .

No, I don't . . .

b. #Nej, jeg *gør det* ikke.

d. #Nej, jeg *gør ikke det.

(P94)

- Since *det* is present, a subject-initial TP is not an option
- VP *det* is invariably anaphoric topic and hence available as a candidate for fronting
- subject is not available for fronting since it doesn't bear any distinguished information-structural role: everything in answer is given (by the question) and no subpart is contrastive.
- → obligatory fronting of *det*

Same pattern found with generalizations and repetitions.

Environments of obligatory *det*-fronting lowers the numbers of subject-initial VPA V2-clauses compared to V2-clauses generally.

4.2 “Optional” fronting

In other contexts, *det*-initial and subject-initial versions of the V2-clause are both possible:

(18) **Vi kan ikke [føre rundt og spørge], det vil alle opblage og undre sig over.**

We can't run around asking questions. Everyone would notice it and wonder about it.

a. **Det** må en anden gøre.

Someone else has to do it.

b. En anden må *gøre det.

Someone else has to do it.

(P169)

[^5]: I use # to indicate that a sentence is infelicitous in the given context.
4.3 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 bear any information structural role), the possibility of VP anaphoric det inside an embedded clause is predicted to depend on whether the embedded clause is a TP or a CP:

\[(20) \quad [*[TP \ EXPLETIVE \ V_{fin} \ldots \ [TP \ldots \ DET]]] \]

\[(21) \quad [TP \ EXPLETIVE \ V_{fin} \ldots \ [CP \ldots \ DET]] \]

\[[TP \ldots \ [TP \ldots]] \text{ case} \quad \text{Raising construction with expletive subject:} \]

\[(22) \quad \text{Der [er mange ænder her om foråret og ...} \]

\quad \text{EXPLETIVE be,PRS many ducks here in spring,DEF and} \]

\quad \text{There are many ducks here in the spring and ...} \]

\quad \text{EXPLETIVE usually is also to be DET in fall,DEF} \]

\quad \text{there usually are in the fall too.} \]

\[[TP \ldots \ [CP \ldots]] \text{ case} \quad \text{Existential construction with CP complement to N-head of pivot:}\]

\[(23) \quad \text{Hossein ligner overhovedet ikke en mand, der har behov for at [drage til Christiania som kurer for} \]

\quad \text{Hossein resembles at all not a man who has need for to go to Christiania as courier for} \]

\quad \text{at klare sig.]} \]

\quad \text{to manage REF } \]

\quad \text{Hossein doesn’t at all look like someone who needs to go to Cristiania as a courier to make a living.} \]

\quad \text{EXPLETIVE must be a second reason to that he does DET} \]

\quad \text{There must be some other reason for him to do it.} \]

\[\text{a. } [CP \quad \text{DER må være en anden grund til, [CP at han gör det.]}] \quad [P248; \text{cf. (21)}] \]

\[\text{b. } [TP \quad \text{DER må være en anden grund til, [TP to han gör det.]}] \quad [P381] \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]

\[\text{You should too.} \]
5 Conclusions

- While Danish prefield is multifunctional, there are more syntactic (intra-sentential) restrictions on this position than previously acknowledged. In particular, we can add VP-anaphoric det in expletive constructions to questions, imperatives, and antecedents of conditionals, as clause types where the choice of initial element is fixed.

- The structural principles proposed to account for obligatory anaphor fronting in expletive clauses extend straightforwardly to cases of context-governed obligatory anaphor-fronting, such as answers to polar questions.

- Danish subject-initial V2 clauses are not structurally uniform: information-structurally undifferentiated ones are TPs, differentiated ones are CPs.

References

Andréasson, M. (2008). Not all objects are born alike - accessibility as a key to pronominal object shift in Swedish and Danish. In M. Butt and T. H. King (Eds.), Proceedings of the LFG08 Conference, Stanford, pp. 26-45. CSLI.


Appendix A

The proportions of initial elements reported in (4) and (5) were obtained in the following way:

**V2-clauses in general** 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 Nordraft (published in 2002 by Gyldendal), and the spoken sample from the BySoc corpus, which contains transcriptions of sociolinguistic interviews. Counts of initial elements in these three samples are given in (24):

<table>
<thead>
<tr>
<th></th>
<th>Newspaper</th>
<th>Fiction</th>
<th>Speech</th>
<th>All Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>158 (63%)</td>
<td>162 (65%)</td>
<td>140 (56%)</td>
<td>460 (61%)</td>
</tr>
<tr>
<td>Adverbial</td>
<td>72 (29%)</td>
<td>26 (10%)</td>
<td>69 (28%)</td>
<td>167 (22%)</td>
</tr>
<tr>
<td>Object</td>
<td>8 (3%)</td>
<td>41 (16%)</td>
<td>21 (8%)</td>
<td>10 (9%)</td>
</tr>
<tr>
<td>Other</td>
<td>12 (5%)</td>
<td>21 (9%)</td>
<td>20 (8%)</td>
<td>53 (7%)</td>
</tr>
</tbody>
</table>

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.

(25) 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.

<table>
<thead>
<tr>
<th></th>
<th>Newspaper</th>
<th>Fiction</th>
<th>Speech</th>
<th>All Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>157 (63%)</td>
<td>162 (65%)</td>
<td>140 (56%)</td>
<td>459 (61%)</td>
</tr>
<tr>
<td>Subject-wh</td>
<td>1 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>1 (0%)</td>
</tr>
<tr>
<td>Adverb</td>
<td>27 (11%)</td>
<td>16 (6%)</td>
<td>65 (26%)</td>
<td>108 (14%)</td>
</tr>
<tr>
<td>Adverb-wh</td>
<td>6 (2%)</td>
<td>2 (1%)</td>
<td>1 (0%)</td>
<td>9 (1%)</td>
</tr>
<tr>
<td>Adverbial PP</td>
<td>33 (13%)</td>
<td>7 (3%)</td>
<td>3 (1%)</td>
<td>43 (6%)</td>
</tr>
<tr>
<td>Adverbial CP</td>
<td>6 (2%)</td>
<td>1 (0%)</td>
<td>0 (0%)</td>
<td>7 (1%)</td>
</tr>
<tr>
<td>Object</td>
<td>7 (3%)</td>
<td>36 (14%)</td>
<td>20 (8%)</td>
<td>63 (8%)</td>
</tr>
<tr>
<td>Object-wh</td>
<td>1 (0%)</td>
<td>5 (2%)</td>
<td>1 (0%)</td>
<td>7 (1%)</td>
</tr>
<tr>
<td>Null</td>
<td>4 (2%)</td>
<td>16 (6%)</td>
<td>5 (2%)</td>
<td>25 (3%)</td>
</tr>
<tr>
<td>VP anaphoric det</td>
<td>0 (0%)</td>
<td>1 (0%)</td>
<td>13 (5%)</td>
<td>14 (2%)</td>
</tr>
<tr>
<td>Object of P</td>
<td>2 (1%)</td>
<td>2 (1%)</td>
<td>2 (1%)</td>
<td>6 (1%)</td>
</tr>
<tr>
<td>Other</td>
<td>6 (2%)</td>
<td>2 (1%)</td>
<td>0 (0%)</td>
<td>8 (1%)</td>
</tr>
</tbody>
</table>

*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.*
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 (26) shows the counts for initial position, using just four broad categories:

(26)

<table>
<thead>
<tr>
<th>INITIAL</th>
<th>VPA-CLAUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>93 (23%)</td>
</tr>
<tr>
<td>Adverbial</td>
<td>67 (16%)</td>
</tr>
<tr>
<td>Object</td>
<td>3 (1%)</td>
</tr>
<tr>
<td>Other</td>
<td>244 (60%)</td>
</tr>
</tbody>
</table>

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

(27)

<table>
<thead>
<tr>
<th>INITIAL</th>
<th>VPA-CLAUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>82 (20%)</td>
</tr>
<tr>
<td>Subject-wh</td>
<td>11 (3%)</td>
</tr>
<tr>
<td>Adverb</td>
<td>27 (7%)</td>
</tr>
<tr>
<td>Adverb-wh</td>
<td>25 (6%)</td>
</tr>
<tr>
<td>Adverbial PP</td>
<td>3 (1%)</td>
</tr>
<tr>
<td>Adverbial CP</td>
<td>12 (3%)</td>
</tr>
<tr>
<td>Object</td>
<td>3 (1%)</td>
</tr>
<tr>
<td>Object-wh</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Null</td>
<td>28 (7%)</td>
</tr>
<tr>
<td>VP-anaphoric det</td>
<td>216 (53%)</td>
</tr>
<tr>
<td>Object of P</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

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 (28).

(28)

<table>
<thead>
<tr>
<th>FRONTING STATUS</th>
<th>VPA-CLAUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fronting obligatory</td>
<td>132 (37%)</td>
</tr>
<tr>
<td>Fronting impossible</td>
<td>133 (38%)</td>
</tr>
<tr>
<td>Fronting optional</td>
<td>57 (14%)</td>
</tr>
<tr>
<td>Fronting status unclear</td>
<td>45 (11%)</td>
</tr>
</tbody>
</table>
Appendix B

A minimalist implementation of analysis:

- V2-C has an EPP requirement, which can be bundled with various features F (written EPP+F):
  - EPP+uwh: wh-phrase in Spec-CP
  - EPP+Q: null question operator in Spec-CP\footnote{Under an analysis where Spec-CP is empty in polar questions, C bears a Q feature and no EPP feature. Similarly for imperatives and verb-initial antecedents of conditionals.}
  - EPP+imp: null imperative operator in Spec-CP
  - EPP+cond: null conditional operator in Spec-CP
  - EPP+ufocus: focus-bearing element in Spec-CP
  - EPP+uatopic: anaphoric topic in Spec-CP
  - EPP+uctopic: contrastive topic in Spec-CP
  - ... 

- \( det \) bears interpretable \([\text{atopic}] \) feature

- \( det \) fronts when:
  - C bears EPP+uatopic,
  - \( det \) is accessible to C (not in an island), and
  - there is no closer \([\text{atopic}]\)-bearing element in the structure

- Some nonexistent Cs:
  - no \([C, \text{EPP}] \rightarrow \) No CPs with information-structurally undistinguished initial XP
  - no \([C, \text{claustype}: \text{Q}, \text{EPP+uatopic}] \rightarrow \) No \( det \) fronting in constituent or polar questions
  - no \([C, \text{claustype}: \text{imp}, \text{EPP+uatopic}] \rightarrow \) No \( det \) fronting in imperatives
  - no \([C, \text{claustype}: \text{cond}, \text{EPP+uatopic}] \rightarrow \) No \( det \) fronting in antecedent of conditional