1

The Verb Always Leaves IP in V2 Clauses

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1 Introduction

The verb-second (V2) phenomenon, as it is found in the Germanic languages, has been the focus of much attention within recent syntactic research. In most of the literature on V2 (e.g., den Besten 1977, 1989; Thiersch 1978; Koopman 1984; Holmberg 1986; Platzack 1986a, 1986b, 1987; Taraldsen 1986a; Schwartz and Vikner 1989; Tomaselli 1990a, 1990b; Roberts 1993; and Vikner 1994c), it is assumed that the verb in all V2 clauses has moved to a head position outside IP, e.g., C^0. In Schwartz and Vikner (1989) we claimed that all V2 clauses were CPs, and we referred to this analysis as the "traditional" analysis. In this paper[1] we shall call it the "V2-outside-IP" analysis, and by using this term we want to convey that although in what follows we will adhere to the view that the verb moves to C^0, any analysis in which the verb moves into an X^0 which is the sister of IP may be compatible with what we say here.[2]

Various alternatives to this analysis have been explored in the literature, and here we will address two in particular: One alternative is that there is an asymmetry between subject-initial and non-subject-initial V2 clauses, the former being only IPs and the latter CPs, as suggested by Travis (1984, 1986, 1991) and Zwart (1990, 1991). Below we will refer to this analysis as the "V2 asymmetry" analysis. The other alternative analysis is that V2 takes place inside IP, as suggested by Diesing (1988, 1990), and also in slightly different forms by Rögnvaldsson and Thráinsson (1990), by Reinholtz (1989) and by Santorini (1989), and accordingly we shall group these under the term the "V2-inside-IP" analysis.[3]

Below we will first discuss the V2 asymmetry account in section 2, then the V2-inside-IP account in section 3, and finally some facts concerning V^0-to-I^0 movement in German and Dutch in section 4.

2 The Asymmetry Analysis

This analysis, as found in Travis (1984, 1986, 1991) and in Zwart (1990, 1991), has it that subject-initial V2 clauses are smaller than non-subject-initial V2 clauses: the former are only IPs, whereas the latter are CPs. We will argue that the position of the finite verb is the same in all types of V2 clauses, irrespective of whether the preverbal XP is a subject.[4]

The asymmetry analysis is forced to assume that I^0 in Dutch (Du.) and German (Ge.) is to the left of VP in order to account for the position of the verb in 1 as opposed to its clause-final position in embedded clauses, as in 2:

(1) Ge. a. *Die Kinder den Film gesehen haben
b. Die Kinder haben den Film gesehen
The children (have) the film seen (have)

(2) Ge. a. Ich weiß, daß die Kinder den Film gesehen haben
b. *Ich weß, daß die Kinder haben den Film gesehen
I know that the children (have) the film seen (have)

Indeed, 2 points to another consequence of the asymmetry analysis, namely that V^0-to-I^0 movement is not obligatory in German (and Dutch), at least not at S-structure; in fact, in this analysis, V^0-to-I^0 movement is impossible at S-structure in non-V2 clauses. We will come back to this issue of V^0-to-I^0 movement in section 4.

Below we will discuss some issues which are relevant yet problematic for either the asymmetry account and/or the V2-outside-IP analysis.

2.1 Adjunction to V2 Clauses

Positing adjunction to IP would seem to be the only way to account for the position of adverbials like German *letzte Woche* 'last week', or Swedish (Sw.) *trots allt* 'after all/nevertheless/despite everything', in the examples below. The analysis has the following steps:

a. The subject is taken to be in IP-spec, as it occurs to the left of another adverbial (in 3: German *tatsächlich* 'actually'; in 4: Swedish *inte* 'not'), which we take to be adjoined to VP.

b. The adverbials left of the subject are therefore left of IP-spec and hence must be adjoined to IP. This is demonstrated in three different types of clause: in 3a and 4a in an embedded clause; in 3b and 4b in a main clause (yes/no) question; and in 3c and 4c in a main clause topicalization:[5]

(3) Ge. a. Ich weiß, $[_{CP}$ daß letzte Woche $[_{IP}$ Peter tatsächlich ein Buch gelesen hat]]
I know that last week Peter actually a book read has
b. $[_{CP}$ Hat letzte Woche $[_{IP}$ Peter tatsächlich ein Buch gelesen]] ?
Has last week Peter actually a book read?
c. $[_{CP}$ Dieses Buch hat letzte Woche $[_{IP}$ Peter tatsächlich gelesen]]
This book has last week Peter actually read

(4) Sw. a. Jag beklagar [$_{CP}$ att trots allt [$_{IP}$ Johan inte vill läsa de här bökerna]]
I regret that despite all Johan not will read these here books
b. [$_{CP}$ Vill trots allt [$_{IP}$ Johan inte läsa de här bökerna]] ?
Will despite all Johan not read these here books?
c. [$_{CP}$ De här bökerna vill trots allt [$_{IP}$ Johan inte läsa]]
These here books will despite all Johan not read

If a subject-initial main clause is an IP (as it is according to the asymmetry analysis), then 5 and 6 ought to be grammatical, as they should be completely parallel to 3 and 4: The adverbial should be able to adjoin to IP. However, these examples are not grammatical:

(5) Ge. *Letzte Woche [$_{?}$ Peter hat tatsächlich ein Buch gelesen]
Last week Peter has actually a book read

(6) Sw. *Trots allt [$_{?}$ Johan vill inte läsa de här bökerna]
Despite all Johan will not read these here books

If a subject-initial main clause is a larger constituent than an IP (e.g., a CP), as it is according to the approach we want to defend here, 5 and 6 are not predicted to be grammatical; instead they should be completely parallel to 7 and 8: The adverbial cannot adjoin to the V2 clause (i.e., to the CP), giving the correct prediction.

(7) Ge. *Letzte Woche [$_{CP}$ ein Buch hat [$_{IP}$ Peter tatsächlich gelesen]]
Last week a book has Peter actually read

(8) Sw. *Trots allt [$_{CP}$ de här bökerna vill [$_{IP}$ Johan inte läsa]]
Despite all these here books will Johan not read

Summing up: There is independent evidence that adjunction to IP is allowed and that adjunction to CP is not. The fact that adjunction to a subject-initial V2 clause is impossible is therefore a natural consequence of the V2-outside-IP approach but left unexplained within the asymmetry approach.

2.2 *Sentence-Initial Weak Pronouns*

2.2.1 Weak Object Pronouns Impossible Sentence-Initially in Dutch and German

In section 2.1, the asymmetry analysis was seen to make the wrong predictions, because there was no difference between the behavior of subject-initial main clauses and non-subject-initial main clauses with respect to adjunction. In this section we will discuss some facts where such an asymmetry does exist. The more well-known of these facts fall out naturally from the asymmetry analysis, as we shall see; other problems nevertheless are raised that only the V2-outside-IP analysis can handle in a unified manner.

As Travis (1986:20, 1991:359) shows, the German unstressed personal pronoun (third person neuter singular) *es* 'it', may only occur sentence-initially if it corresponds to a subject (cf. 9), but not if it corresponds to an object (cf. 10):

(9) Ge. a. Das Kind hat das Brot gegessen
b. Es hat das Brot gegessen
The child/it has the bread eaten

(10) Ge. a. Das Brot hat das Kind gegessen
b. *Es hat das Kind gegessen
The bread/it has the child eaten

The facts are parallel in Dutch, as shown by Zwart (1991:80, ex. 28, 29):

(11) Du. a. Ik zag hem
b. 'k zag hem
I saw him

(12) Du. a. Hem zag ik
b. *'m zag ik
Him saw I

In the asymmetry account, this difference (9b and 11b vs. 10b and 12b) is linked to the hypothesis that sentence-initial subjects are in IP-spec, whereas sentence-initial objects are in CP-spec.

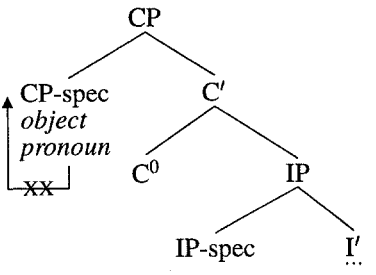
This difference is analysed in two distinct ways. Travis (1986:20, 1991:359) suggests that only XPs carrying focal stress may move to CP-spec, and that *es* (and by extension all reduced pronouns) cannot bear focal stress. In this way, 9b and 11b are permitted, since subject *es* and *'k* are in IP-spec, and 10b and 12b are ruled out.

According to Zwart (1990:4, 1991:80, n. 13), the difference between unstressed sentence-initial subject pronouns and unstressed sentence-initial object pronouns may be accounted for in a similar but distinct way: Adapting the suggestion by Kayne (1991:647) that all Romance pronominal clitics left-adjoin to a functional head, Zwart suggests that all weak pronouns in Dutch (which he maintains are clitics) right-adjoin to a functional head. This means that a weak pronoun in CP-spec will have nothing to cliticize to (see 13a), as there is no functional head to its left, and such structures will therefore be ruled out (see 10b and 12b). If in contrast the sentence-initial weak pronoun is a subject, it will first be in IP-spec (as is the case with all sentence-initial elements if and only if they are subjects (see 13b); and then it may cliticize to the right of the empty C^0, satisfying the above cliticization requirement (see also the discussion in section 4.2).[6]

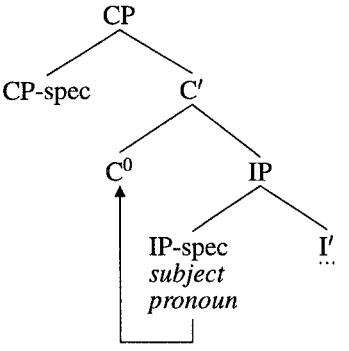
The V2-outside-IP account, on the other hand, would assume all the sentence-initial elements above to move to CP-spec. This account thus does not have recourse to a structural difference to which the difference in grammaticality can be linked. There are, nonetheless, at least two attempts in the literature to reconcile the V2-outside-IP account with these data, on the basis of which we will then propose a third.

Tomaselli (1990a:438, 1990b:124–126) follows Travis' suggestion that only pronouns carrying stress may occur in CP-spec. Her solution to the difference in behavior between unstressed subject and unstressed object pronouns is that the subject ones may cliticize (at the level of phonetic form) to C^0 but the object ones may not. However, since this cliticization takes place from CP-spec onto C^0, and since both

(13) a.



b.



types of sentence-initial unstressed pronouns move to CP-spec, the difference with respect to cliticization must fall out from another difference between subject and object unstressed pronouns. According to Tomaselli, this other difference is that only the subject agrees with C^0, as she assumes that C^0 agrees with IP-spec, as shown by evidence from dialects of German and Dutch (e.g., Bavarian and West Flemish). An objection to this might be that cliticization in, for example, the Romance languages does not seem to require agreement between a clitic and the head to which it cliticizes.

Holmberg (1986:123–127) suggests an analysis of a rather different kind, making an appeal to Binding Theory. He proposes that sentence-initial unstressed pronouns cannot be operators, and therefore their traces are not variables but rather anaphors, following a suggestion in Taraldsen (1986b). Anaphors must be bound in their governing category and the governing category for subjects is CP, whereas for non-subjects the governing category is only IP (the latter is essentially the Specified Subject Constraint). Therefore a trace of a pronoun which has moved to CP-spec is bound in its governing category only if the trace itself is in subject position; and since anaphors must be bound, a pronoun in CP-spec must therefore have its trace in the subject position. This solution thus requires accepting the claim that a trace may have its antecedent in CP-spec but still not be a variable.

An account that retains the insights of the two proposals above can be found if we adopt some of Luigi Rizzi's recent ideas. According to Rizzi (1991a, 1992:11), a position is an A-position if it is either assigned a thematic role or construed with agreement. Consequently IP-spec is always an A-position, but CP-spec can be an A-position only if it is coindexed with C^0, i.e., if the subject has moved into CP-spec (cf. Tomaselli's condition above on cliticization in CP-spec and cf. Rizzi 1990a:51ff on C^0 agreement). If we now assume with Holmberg (1986:123–127) that the unstressed pronouns in German and Dutch cannot be operators, i.e., they cannot be moved into CP-spec by A-bar-movement, then the only way for them to reach CP-spec is through A-movement. However, in accordance with Rizzi's proposals about A-positions, if the moved element is not the subject, then CP-spec cannot be an A-position and hence A-movement is impossible. (Notice that the same result is guaranteed by the Relativized Minimality restrictions on movement; cf. Rizzi 1990a: if A-movement out of IP does not go via IP-spec, it will violate Relativized Minimality, as IP-spec will be an intervening A-position.) Thus the same effect is

reached as in Holmberg (1986), on slightly different assumptions, provided we accept his idea that the unstressed pronouns under discussion cannot be operators.

2.2.2 Weak Object Pronouns Impossible Sentence-Initially also in Danish and Norwegian

Holmberg claims that this restriction, namely, unstressed object pronouns such as German *es* 'it' (and also e.g., Du. unstressed *'m* 'him') not being able to occur in CP-spec, is rather limited in its application and does not apply in Scandinavian. In support of this he gives the following examples from Swedish (1986:123, ex. 130):

(14) Sw. a. Det har Johan ätit
It has Johan eaten
b. Henne känner jag faktiskt inte
Her know I actually not
c. Den tar jag hand om
It take I care of

These examples, however, do not necessarily show that unstressed (object) pronouns may occur sentence-initially in main clauses, even if these sentences are acceptable with contrastive stress on e.g., the subject: It is possible that the pronouns here are not really unstressed forms. The situation displayed above may in fact be identical to the one concerning German *er/ihn* 'he'/'him', or *sie* 'she'/'her': There is no difference in form between the unstressed version and the normal version of the pronoun, and therefore the difference between 9b and 10b above is not reproduced:

(15) Ge. a. Die Mutter hat den Sohn in die Schule gebracht
b. Sie hat den Sohn in die Schule gebracht
The mother/she has the son(acc) to school brought
c. Die Tochter hat der Vater in die Schule gebracht
d. Sie hat der Vater in die Schule gebracht
The daughter/her has the father(nom) to school brought

To the unstressed *sie* corresponds a stressed form *sie*, whereas the unstressed *es* is different from its stressed variant *das*.

So the possibility remains that the restriction against unstressed pronouns occurring sentence-initially in main clauses is also valid in Scandinavian, but that this is simply not discernible in the Swedish examples above, as the stressed and unstressed forms are indistinguishable. In fact, there is evidence from Scandinavian dialects that the restrictions on unstressed pronouns discussed in the previous subsection are not limited to German and Dutch.

One case comes from an Oslo dialect of Norwegian (No.) (as discussed by Christensen 1984) and another from a Copenhagen dialect of Danish (Da.): One Norwegian unstressed pronoun is *a* 'she', and a Danish one is *'d* (phonetically [ð]) 'it', i.e., the unstressed form of the neuter pronoun.[7] Both Norwegian *a* and Danish *'d* may occur in the post-verbal subject position in a main clause (16a, c), but not sentence-initially (16b, d):[8]

(16) No. a. Har a ikke bodd her?
Has she not lived here?
b. *A har ikke bodd her (Christensen 1984:1, ex. 1a)
She has not lived here
Da. c. Måske vil 'd ikke koste mere end tusind kroner
Maybe will it not cost more than thousand kroner
d. *'d vil måske ikke koste mere end tusind kroner
It will maybe not cost more than thousand kroner

The question is whether 16b, d are evidence that *a/'d* are generally impossible as the initial element in a V2 clause. Following Christensen (1984:6), we will argue that there is no such general constraint, and that the reason *a/'d* are impossible in 16b, d is that there is then nothing to the left of subject *a/'d* to which they may cliticize. This is supported by the fact that if we take an embedded V2 clause, then *a/'d* are both acceptable as the clause-initial element. This is shown by the embedded V2 clauses in 17a and 18a, which are just as grammatical as the embedded non-V2 clause in 17b and 18b:[9]

(17) No. a. Vi vet at a har ikke bodd her (Christensen 1984:28, ex. iv)
We know that she has not lived here
b. Vi vet at a ikke har bodd her (Christensen 1984:1, ex. 3a)
We know that she not has lived here

(18) Da. Marie sagde også ...
Marie said also ...
a. ... at 'd ville sikkert ikke koste mere end tusind kroner
... that it would probably not cost more than thousand kroner
b. ... at 'd sikkert ikke ville koste mere end tusind kroner
... that it probably not would cost more than thousand kroner

However, now it might look as if the restriction on *a/'d* is only a phonetic one, i.e., that *a/'d* must occur to the immediate right of something phonetically overt to which it can cliticize. That this constraint is both too strong and too weak is shown by the following:

(19) No. a. *Vi vet at ikke a har bodd her (Christensen 1984:1, ex. 3b)
We know that not she has lived here
b. Vi vet hva a har gjort (Christensen 1984:27, ex. ii)
We know what she has done
Da. c. Marie vidste ikke hvorfor 'd var så billigt
Marie knew not why it was so cheap

19a shows that it does not suffice to require that *a* simply appear to the right of another overt element, as *a* is not allowed here (there is no Danish version of 19a because sentential negation generally cannot occur left of the subject in Danish). 19b, c show that *a/'d* are possible even when immediately right-adjacent to an empty element (we

are assuming that in embedded questions like 19b, c, C^0 is empty). We therefore follow the analysis of Christensen (1984): Subject *a/'d* must cliticize to the right of a C^0.[10]

Summing up the discussion of subject *a/'d* in Norwegian and Danish, we have seen that it is possible for a subject weak pronoun to occur initially in a V2 clause, provided that it occur to the immediate right of a C^0.

We now turn to *a/'d* as objects:[11]

(20) No. a. Jon hadde ikke sett a før
Jon had not seen her before
b. *A hadde ikke Jon sett før
Her had not Jon seen before
Da. c. Marie ville ikke give tusind kroner for 'd
Marie would not give thousand kroner for it
d. *'d ville Marie ikke give tusind kroner for
It would Marie not give thousand kroner for

20a, c show that object *a/'d* are possible in their base position inside the main clause, whereas 20b, d show that they are not possible initially in a main clause. As with the weak subject pronouns, the question is whether object *a/'d* are generally impossible as the initial element in a V2 clause or whether they are only impossible here because there is no C^0 to their left. Consider now the following examples:

(21) No. a. *Jon sa dessuten at a hadde han ikke sett før
Jon said moreover that her had he not seen before
Da. b. *Marie sagde også at 'd ville hun ikke give tusind kroner for
Marie said also that it would she not give thousand kroner for

As shown in the ungrammatical 21, object *a/'d* (parallel to object *es* in German) are also impossible initially in an embedded V2 clause, even though here there is a C^0 to their left (filled by *at*). This is different from the subject *a/'d*, which were allowed initially in an embedded V2 clause (cf. the grammatical 17b and 18b). Thus, *modulo* the restriction that a weak pronoun occur to the immediate right of a C^0 when it is the initial element of a V2 clause, the same subject-object asymmetry exists in Norwegian and Danish as exists in German and Dutch (contrary to the claims of Holmberg 1986:123, 127): Weak subject pronouns *can* but weak object pronouns *cannot* occur as the initial element in a V2 clause.

Let us now consider the relevance of these Scandinavian data to the opposing analyses (discussed in the previous subsection) of the asymmetry between subject and object pronouns originally noticed for only German and Dutch. While the data from Norwegian and Danish fall out straightforwardly under the various versions of the V2-outside-IP account, they in fact undermine Zwart's account. What is crucial to our argument is the fact that Norwegian and Danish embedded V2 clauses must always follow a complementizer (as opposed to embedded V2 in German, for example, where the complementizer is impossible), as can be seen in all the Norwegian and Danish examples of embedded V2 above.

Recall that according to Zwart, the difference between unstressed subject and object pronouns in sentence-initial position is due to the idea that clitics must always right-adjoin to a functional head: Unstressed subject pronouns, which are taken to move to IP-spec, may appear initially because they may cliticize from IP-spec to C^0 (cf. 13b); by contrast, unstressed object pronouns, which would have to move to (or through) CP-spec when sentence-initial, are not possible initially because there is no functional head to the left of CP-spec to which they could cliticize (cf. 13a). However, this line of argumentation cannot be valid in view of the facts concerning unstressed subject and object pronouns as the initial element in embedded clauses in Norwegian and Danish discussed above. Since embedded V2 in Norwegian and Danish must always take place under an overt complementizer, then Zwart would necessarily predict there to be no asymmetry between unstressed subject and object pronouns in embedded clauses: There will always be a functional head to the left of the unstressed object pronoun (the C^0 containing *at*) to which it should be able to cliticize.[12]

As for the V2-outside-IP accounts (Tomaselli 1990a, 1990b; Holmberg 1986; and our combination of these two based on Rizzi 1991a, 1992), they will apply to not only the Dutch and German facts but also the data from Danish and Norwegian: In these accounts, the unstressed object pronoun (as opposed to the unstressed subject one) is impossible in CP-spec because it does not agree with C^0 and because it would have to move across the subject in IP-spec on its way to CP-spec. Thus a single analysis covers all the data, in Norwegian and Danish as well as Dutch and German, and in embedded as well as main clauses.

This section has thus shown not only that the impossibility of unstressed object pronouns sentence-initially is more widespread than previously thought, but also, more importantly, that the Norwegian and Danish data can crucially decide between the asymmetry account and the V2-outside-IP account. Whereas the asymmetry account makes the wrong prediction concerning the occurrence of unstressed object pronouns sentence-initially in Norwegian and Danish, the V2-outside-IP account treats the data in a unified manner in all four languages and thus makes the correct predictions.

2.2.3 Weak Expletive Pronouns Sentence-Initially in German, Yiddish, and Icelandic

So far we have discussed unstressed pronouns which were arguments. Let us now turn to unstressed expletive pronouns (in German, Yiddish (Yi.), and Icelandic (Ic.)), as they show a different kind of distribution which will again be seen to pose more problems to the asymmetry account (as noted by Tomaselli 1990b:140) than to the V2-outside-IP account.

Compared to the unstressed object pronouns, the (unstressed) expletive pronouns have an almost mirror-image distribution. Whereas the former cannot occur sentence-initially, the unstressed expletives of German, Yiddish and Icelandic seem to occur only in sentence-initial position (in CP-spec) (these facts have been discussed in the literature as early as Breckenridge 1975 and Thráinsson 1979):[13]

(22) Ge. a. Es ist ein Junge gekommen
b. *pro ist ein Junge gekommen
There is a boy come
c. *Gestern ist es ein Junge gekommen
d. Gestern ist pro ein Junge gekommen
Yesterday is there a boy come

(23) Yi. a. Es iz gekumen a yingl
b. *pro iz gekumen a yingl
There is come a boy
c. *Nekhtn iz es gekumen a yingl
d. Nekhtn iz pro gekumen a yingl
Yesterday is there come a boy

(24) Ic. a. Það hefur komið strákur
b. *pro hefur komið strákur
There has come (a) boy
c. *Í gær hefur það komið strákur
d. Í gær hefur pro komið strákur
Yesterday has there come (a) boy

The asymmetry account has no difference in positions to appeal to in order to explain the grammaticality difference above between 22a, 23a, and 24a, on one hand, and 22c, 23c, and 24c, on the other: In both cases the overt expletive is in IP-spec.

Whereas Travis (1986, 1991) and Zwart (1990, 1991) do not address this problem, Travis (1984:169) suggests that only if I^0 is phonetically empty (i.e., in non-subject-initial clauses) may VP properly govern IP-spec, and thus allow it to be empty. We find this proposal difficult to accept for three reasons: First, although this might *allow* IP-spec to be empty, it is difficult to see how it would *force* it to be empty. Second, VP as a proper governor seems rather controversial (as noted by Tomaselli 1990b:141), given that proper governors are normally heads. Third, why should this proper government depend on phonetic adjacency (i.e., be limited to cases where I^0 is phonetically empty)?

As for the V2-outside-IP account, here there is a difference in position: The expletive in the grammatical 22a, 23a, and 24a is in CP-spec, whereas in the ungrammatical 22c, 23c, and 24c the expletive is in IP-spec. The next question is why expletives are not allowed in IP-spec. Within the V2-outside-IP account, two different approaches may be taken: The expletive may be generated in CP-spec, as argued by Tomaselli (1990b:140) for German and by Sigurðsson (1989:11, 165, 284) and references therein for Icelandic. It then follows that it could never appear in IP-spec. An alternative is that the expletive is generated in IP-spec and then obligatorily moved to CP-spec, as suggested in Cardinaletti (1990a, 1990b). We agree with the latter approach, as it is the only one compatible with our view that expletives need to be assigned case (and that nominative case is assigned only under government in V2 languages). The requirement that expletives be case assigned receives further support from the following difference in languages like Danish and Swedish (as well as, e.g., Norwegian and Dutch):[14]

(25) Da. a. ... at der$_i$ faktisk ser ud til t_i ikke at blive danset til festen
... that there actually seem out to not to become danced at party-the
(= ... that there actually seems not to be any dancing at the party)
b. *... at det faktisk ser ud til der ikke at blive danset til festen
... that it actually seem out to there not to become danced at party-the

(26) Sw. a. ... att det$_i$ faktiskt verkar t_i inte dansas på festen
b. *... att det$_i$ faktiskt verkar det inte dansas på festen
... that it actually seems (it) not danced-be at party-the

These examples can be accounted for only if the expletive must be assigned case: In 25a and 26a the expletive is raised out of its own clause and receives case as subject of the higher embedded clause. In 25b and 26b, on the other hand, no raising takes place, and the expletive in the most deeply embedded clause does not receive case. If the expletive did not require case, 25b and 26b should be well-formed.

2.2.4 Conclusion

Summing up: In section 2.2.1, we saw that the distribution of data concerning the unstressed argument pronoun *es* in German (and unstressed argument pronouns in Du.) may be captured in the asymmetry analysis by linking it to the difference in position of the first element in a subject-initial main clause as opposed to the position of the first element in a non-subject-initial main clause. The V2-outside-IP analysis has no such difference to appeal to, but there may nevertheless be ways of accounting for the difference, if we assume either that these object pronouns cannot bear stress or that they cannot be operators.

Section 2.2.2, on the other hand, showed that this difference in position could not be appealed to in order to account for the parallel data in Norwegian and Danish, given that in embedded sentences, both sentence-initial subjects and sentence-initial objects (topicalized objects) occur to the immediate right of a C^0. Only the V2-outside-IP analysis was able to provide an account for this set of data.

Finally, in section 2.2.3, we argued that the asymmetry analysis makes the wrong predictions concerning the expletive pronoun *es* in German (and the expletive pronouns Yi. *es* and Ic. *það*). In contrast, these facts are more easily accounted for in the V2-outside-IP analysis, even if not all problems are solved, as shown in the discussion of whether this expletive is generated in CP-spec or not.

2.3 Extractions from Embedded V2 Structures

Below we consider an argument that attempts to support the V2-outside-IP approach; our focus will be on extractions from embedded V2 structures in German, and we show that Travis' version of the asymmetry approach cannot capture the distribution of the data. This argument is based on one made by Holmberg (1986:110) using Swedish, but (as we discussed in detail in Schwartz and Vikner 1989:35–38) we think that Travis' version of the asymmetry approach is in fact not susceptible to

those criticisms. We do think, however, that when the argumentation is carried over to German data, Travis' version of the asymmetry approach finds itself in an insoluble dilemma.

Following this discussion we will then address the difference between Travis' and Zwart's versions of the asymmetry approach and the reason Zwart's version is not subject to the objections made here. After that, however, we will consider some additional data that are not amenable to his analysis.

2.3.1 Travis' Version of Asymmetry

German has embedded clauses with V2 under matrix verbs like *say* and *believe*, but they are only possible without *daß* 'that'. 27 shows that with *daß*, the finite verb must remain at the end of the embedded clause, whereas 28 and 29 show that when there is no complementizer, the finite verb has to move, resulting in a V2 structure:

(27) Ge. a. *Sie glaubte daß das Kind hatte dieses Brot gegessen
b. Sie glaubte daß das Kind dieses Brot gegessen hatte
She thought that the child (had) this bread eaten (had)

(28) Ge. a. Sie glaubte das Kind hatte dieses Brot gegessen
b. *Sie glaubte das Kind dieses Brot gegessen hatte
She thought the child (had) this bread eaten (had)

(29) Ge. a. Sie glaubte dieses Brot hatte das Kind gegessen
b. *Sie glaubte dieses Brot das Kind gegessen hatte
She thought this bread (had) the child eaten (had)
(= She thought that the child had eaten this bread)

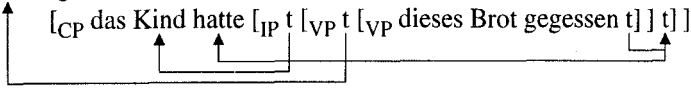
Now consider what happens when extraction takes place out of the complementizer-less embedded clause. The results are only grammatical if the finite verb precedes all of the rest of the clause:[15]

(30) Ge. Womit glaubte sie, ...
What-with thought she ...
a. ... hatte das Kind dieses Brot gegessen
b. *... das Kind hatte dieses Brot gegessen
... (the child) had (the child) this bread eaten

In the V2-outside-IP approach, there is a straightforward account for these facts, parallel to the analysis of main clauses, i.e., all V2 structures receive the same analysis: The finite verb is in C^0. This entails that *das Kind* in 30a is in IP-spec but in CP-spec in 30b:

(31) Ge. a. Womit glaubte sie
$[_{CP}$ t hatte $[_{IP}$ das Kind $[_{VP}$ t $[_{VP}$ dieses Brot gegessen t$]$ $]$ t$]$ $]$

b. *Womit glaubte sie



In 31a the extraction does not violate any constraints; the empty embedded CP-spec contains an intermediate trace of the extracted adjunct. In 31b, on the other hand, since the embedded CP-spec is filled, there is no room for an intermediate trace there, and the extraction is ruled out.[16]

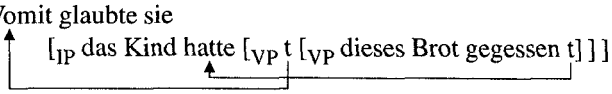
This analysis of 30b would, on first view, seem not to be open to Travis' version of the asymmetry approach, as there it is claimed that the subject of subject-initial V2 structures is in IP-spec. This leaves the Travis version of asymmetry with two possible analyses of 30b:

either a. the subject is in IP-spec; and there is no C^0-projection at all,
or b. the subject is in IP-spec; and CP-spec and C^0 are present but empty.

Let us start with the former: In a structure like 28a, one might be tempted to propose that *glauben* 'believe/think', takes only an IP as a complement, on parity with the asymmetry analysis of subject-initial main clauses. However, in 29a *glauben* must be followed by a CP, since the object *dieses Brot* 'this bread', precedes the finite verb and the subject. Thus, this analysis runs into the conceptual problem of stating that *glauben* subcategorises for an IP (only when the clause is subject-initial) and for a CP (in all other cases).

More significant are the empirical problems encountered in such a proposal. If the subject of 30b is in IP-spec and there is no C^0-projection, the sentence, which is ungrammatical, would be predicted to be good:

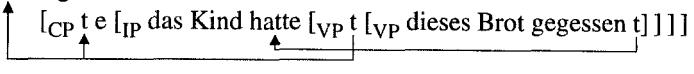
(32) Ge. a. Womit glaubte sie



Movement of the adjunct does not violate any constraints on extraction here.[17] Hence, the first alternative to the V2-outside-IP approach must be rejected, since the sentence must be ruled out.

Let us now turn to the second alternative, where *das Kind* in 30b is in IP-spec, but CP-spec and C^0 are present but empty:

(33) Ge. a. Womit glaubte sie



The question is whether or not the embedded CP is the complement of the matrix verb in 33, *glauben*.

Let us first discuss an analysis which assumes that the CP is the complement of *glauben*. This would again incorrectly predict 30b to be grammatical, because the empty C^0 would be properly governed (by *glauben*, hence no ECP violation

would result within Travis' conceptualisation of the ECP)[18] and CP-spec would also be available for an intermediate trace of *womit* 'what-with'. Thus, within Travis' version of the asymmetry approach, it cannot be assumed that the embedded CP is the complement of the matrix verb. In fact, the grammaticality of 30a clearly shows that *glauben* does not properly govern the embedded C^0: The finite verb unquestionably is in the embedded C^0, since it precedes the subject, and this would not be possible if the C^0 was properly governed (cf. n. 18, above).

If the embedded CP is not the complement of the matrix verb in 33, then this verb cannot identify the empty C^0 and the empty C^0 would thus violate (Travis' version of) the ECP if it were to remain empty. However, although C^0 is empty at D-structure, there is nothing that would force the embedded finite verb (*hatte*) to not move into C^0, and the subject (*das Kind*) to not move into CP-spec, given that the subject precedes the finite verb. It should be remembered that it is this kind of head movement that is relied on to prevent violations of (Travis' version of) the ECP. In this instance, however, these steps of movement would amount to the analysis of the V2-outside-IP approach, which was given as 31b.

In sum, we find that working within Travis' version of the asymmetry approach, there is no way to rule out 30b, except if it is analysed as 31b: The finite verb (*hatte*) is in C^0; the subject (*das Kind*) is in CP-spec, and since CP-spec is filled, there is no room for an intermediate trace of *womit*. Thus it seems that there is no analysis which can simultaneously maintain the subject in IP-spec and rule out 30b under this version of asymmetry.

The general conclusion of the discussion above must be that embedded V2 clauses are larger than IPs, irrespective of whether they are subject-initial or not. This would seem to imply that Travis' version of an asymmetry approach has to either be given up completely or be maintained in a much weaker form: While conceding that all *embedded* V2 clauses are CPs, proponents of Travis' version of the asymmetry approach could still maintain that V2 subject-initial *main* clauses are IPs, necessitating two different explanations for what seems to be only one phenomenon, viz. V2. Though this is theoretically possible, it is less desirable given the existence of an analysis which provides a unified explanation of this phenomenon.

In the remainder of this section, we will discuss another example of a phenomenon which cannot receive a unified explanation under Travis' version of the asymmetry approach. This will thus be a further argument for why even this much weaker variant of Travis' version of asymmetry should be rejected. The relevant data concern the behavior of *es*, as discussed in section 2.2.1. There it was shown that (Travis' version of) the asymmetry approach could provide an elegant analysis of the distribution of sentence-initial *es*, by assuming that the specifier position to which sentence-initial subject *es* moves is IP-spec (and therefore grammatical), whereas the specifier position to which sentence-initial object *es* moves is CP-spec (and therefore ruled out, as CP-spec only can be occupied by elements that may bear stress).

We start by considering the following contrast:[19]

(34) Ge. a. Womit glaubst du hat es dieses Brot gegessen
b. *Womit glaubst du es hat dieses Brot gegessen
What-with think you (it) has (it) this bread eaten

At first glance, it might appear that Travis' version of asymmetry could account for this difference in grammaticality in a parallel fashion to its account of 9b and 10b, repeated below as 35. In 35a *es* is in IP-spec (allowed), but in 35b *es* is in CP-spec (disallowed):

(35) Ge. a. $[_{IP}$ Es hat $[_{VP}$ dieses Brot gegessen t]]
It (the child) has this bread eaten

b. *$[_{CP}$ Es hat $[_{IP}$ das Kind t $[_{VP}$ t gegessen t]]]
It (this bread) has the child eaten

Carrying this over to 34, in 34a *hat* would be in C^0 and the intermediate trace of *womit* would be in CP-spec; the ungrammaticality of 34b could then be due not only to there not being any intermediate trace (there is no room for it in CP-spec) but also to the unstressed *es* occurring in CP-spec, which is explicitly excluded under Travis' version of the asymmetry approach (cf. 35b and section 2.2.1).

As also argued in the discussion of 30–33 above, however, this presupposes that the embedded clause is a CP, whether it is subject-initial, as in 36a (= 28a), or object-initial, as in 36b (= 29a) (note that we have put I^0 to the left of VP here, as the asymmetry approach would):

(36) Ge. a. Sie glaubte $[_{CP}$ das Kind hatte $[_{IP}$ t t dieses Brot gegessen]]
She thought the child had this bread eaten
b. Sie glaubte $[_{CP}$ dieses Brot hatte $[_{IP}$ das Kind t t gegessen]]
She thought this bread had the child eaten
(= she thought that the child had eaten this bread)

This in turn leaves Travis' version of asymmetry without an account for the difference in grammaticality between the *es* versions of 36a and 36b, viz. 37a and 37b, as in both cases *es* must be in CP-spec:

(37) Ge. a. Sie glaubte es hatte dieses Brot gegessen
She thought it (the child) had this bread eaten
b. *Sie glaubte es hatte das Kind gegessen
She thought it (this bread) had the child eaten

In fact, Travis' version of asymmetry would incorrectly predict 37a to be ungrammatical, precisely because *es* must be in CP-spec. Let us briefly run through, once more, why this must be so:

a. *glauben* must be followed by a CP (cf. the discussion of 32)

b. CP cannot be the complement of *glauben* (cf. the discussion of 33)

c. C^0 is not properly governed, so the verb must be in C^0 (cf. the discussion of 33)

d. *es* cannot be in IP-spec, as it precedes the verb in C^0

e. *es* is in CP-spec, where it must not occur (cf. section 2.2.1)

f. the sentence 37a is hence ruled out incorrectly

In other words, Travis' account of 37 which refers to a difference in position between sentence-initial subject *es* (in IP-spec) and sentence-initial object *es* (in CP-spec) is not tenable for embedded clauses (it would incorrectly predict 37a to be ungrammatical).

So it is precisely the claim that unstressed *es* cannot be in CP-spec (which was the prime motivation for the idea that subject-initial (main) clauses are IPs) that turns out not to be able to account for the completely similar facts in embedded clauses. Thus, this is another example of a phenomenon for which Travis' version of asymmetry now has to have two different explanations, one for main clauses and another for embedded clauses (whatever the latter might be).

Summing up: We have shown that two important assumptions of Travis' version of the asymmetry approach, (a) that subject-initial V2 clauses are IPs, and (b) that unstressed *es* cannot occur in CP-spec, cannot possibly hold for embedded clauses, as embedded subject-initial V2 clauses are CPs (cf. 33) and unstressed *es* may occur in an embedded CP-spec (cf. 37a). This leaves three possibilities:

a. the assumptions of Travis' version of asymmetry are maintained, though only for main clauses. The costs for this are that facts which are completely parallel in main and embedded clauses thus do not receive unified explanations.

b. the assumptions of Travis' version of asymmetry are rejected and the relevant phenomena receive parallel analyses: Both main and embedded V2 clauses are CPs and the restrictions for unstressed *es* in CP-spec are the same in main and embedded clauses.

c. a rather different version of asymmetry is adopted

Option (c) is what will be explored in the following section.

2.3.2 Zwart's Version of Asymmetry

As for Zwart's (1990, 1991) version of the asymmetry approach, it differs sufficiently from Travis' version so as to be able to rule out the problematic 30b, repeated here as 38b:

(38) Ge. Womit glaubte sie, ...
What-with thought she ...
a. ... hatte <u>das Kind</u> dieses Brot gegessen
b. *... <u>das Kind</u> hatte dieses Brot gegessen
... (the child) had (the child) this bread eaten

38b is not possible in Zwart's account because of the following filter (Zwart 1991:74, ex. 14):[20]

(39) *[YP X^0], where YP is an operator, and X^0 is empty.

With respect to 38b, the consequences of 39 are:

a. that the embedded clause is a CP, with the subject in IP-spec, and therefore

b. that the example is ruled out because although CP-spec is filled (by a trace of *womit*), C^0 is not filled.

39, however, does not apply to (unstressed) subject-initial clauses: The subject has no reason to move to CP-spec, since unstressed subjects cannot be considered operators, according to Zwart (1991:75). The analysis of subject-initial sentences follows from 40 instead (Zwart 1991:85; recall that for Zwart, I^0 precedes VP):

(40) The finite features, which are located in I^0, must be licensed by either (a) or (b):

a. V^0-to-I^0 movement

b. lexicalized C^0

Thus, in a subject-initial main clause, the verb moves to I^0 in order to license the finite features there (cf. 40a). 40b can be used to explain the contrast in grammaticality in 27 and 28, repeated here as 41 and 42:

(41) Ge. a. *Sie glaubte daß das Kind hatte dieses Brot gegessen
b. Sie glaubte daß das Kind dieses Brot gegessen hatte
She thought that the child (had) this bread eaten (had)

(42) Ge. a. Sie glaubte das Kind hatte dieses Brot gegessen
b. *Sie glaubte das Kind dieses Brot gegessen hatte
She thought the child (had) this bread eaten (had)

As C^0 is lexicalized in 41, the finite features in I^0 are licensed; moreover, in the spirit of Chomsky (1991), Zwart rules out V^0-to-I^0 movement by principles of economy, and hence 41a is ungrammatical. In contrast, C^0 is not lexicalized in 42 and therefore V^0-to-I^0 movement is required in order to license the finite features of I^0.

One potential counterexample to 39 may be furnished by exclamatives (adapted from Näf 1987:143):

(43) Ge. a. Wie riesig sind die Pflanzen geworden!
b. *Wie riesig die Pflanzen sind geworden!
c. Wie riesig die Pflanzen geworden sind!
How enormous (are) the plants (are) become (are)!

The grammaticality of 43a would seem to indicate that C^0 is not lexically filled by an empty element in C^0.[21] If we apply Zwart's analysis, 43a should follow from 39, and so then the ungrammaticality of 43b would be due to violating 39. Nevertheless, this leaves 43c unexplained, for it too should violate 39: As CP-spec is filled, C^0 should be

filled. Unlike the solution given for 41b where a lexicalized C^0 was said to license the features of I^0, here no such analysis can be appealed to — given the grammaticality of 43a with verb movement to C^0. In sum, it is not at all clear how both 43a and 43c are grammatical under an analysis like Zwart's: Either the features of I^0 are not licensed in 43c, or 43a violates principles of economy — yet both sentences are equally acceptable. Note, finally, that within a V2-outside-IP approach, the contrast in 43 is unproblematic: The verb in 43a is in C^0, the verb in 43c is in I^0, whereas 43b is ungrammatical because there is no X^0-position at all between the subject and the VP.[22]

2.4 *Some Adjunction Consequences from Zwart (1990)*

Zwart, in his attempt to account for the primary differences between V2 languages like German and Dutch, on the one hand, as opposed to non-V2 languages like English, on the other, ends up positing the following (Zwart 1990:11, ex. 52) as his fundamental proposal:[23]

(44) a. A strong functional head licenses the features of the functional head it governs (as well as its own features) if lexically filled

b. A strong functional head attracts adjunction to its projection

Apart from these two statements, Zwart is claiming that virtually the only other thing that needs to be specified to capture the differences between V2 and non-V2 languages is which functional head counts as "strong" (following Koster 1986): In German and Dutch it is C^0, but in English I^0 is the "strong" functional head. The somewhat non-intuitive claim being made here notwithstanding (i.e., that I^0 is "stronger" in English than, say, in German), there are a few empirical consequences one can explore that follow in particular from 44b, above. So, first we will consider a non-V2 language, English, and next we will briefly consider a V2 language, Dutch

2.4.1 Topicalization in English: Adjunction to IP?

Given that in English it is I^0 that is strong, then Zwart (1990:7, ex. 37), following Lasnik and Saito (1992:85), gives the following as an example supporting the idea that IP attracts adjunction:

(45) En. A man to whom freedom [$_{IP}$ we would never grant . . .] . . .

In this case, it appears that since *to whom* is in CP-spec, *freedom* must be adjoining to IP (as originally suggested in Baltin 1982:18, ex. 71). However, the contrasts within the pairs of sentences like the following seem to show that adjunction to IP is not the only possible analysis for 45:

(46) En. This is the man . . .
a. . . . to whom only in America could liberty be granted
b. *. . . to whom only in America liberty could be granted

(47) En. He is the kind of guy . . .
a. . . . who under no circumstances should you trust
b. *. . . who under no circumstances you should trust

(48) En. a. He's the jerk who never in my life will I want to see again
b. *He's the jerk who never in my life I will want to see again
c. *He's the jerk who never in my life I want to see again

In 46a, 47a, and 48a, although the embedded *wh*-phrase is in CP-spec, the negative constituent (*only in America/under no circumstances/never in my life*) that follows does not appear to be adjoined to IP, for otherwise one would not expect the auxiliary verb to precede the subject (*liberty/you/I*); moreover, that 46b, 47b, and 48b, c are ungrammatical indicates that the negative constituent *cannot* simply be adjoined to IP.

Returning now to 45, one can in parallel fashion propose that *freedom* is not adjoined to IP but rather is in some Spec position between CP and IP, but because V2 effects are rather limited in English,[24] the auxiliary does not move. Müller and Sternefeld (1993:481–482) give another argument that embedded topicalizations are different from adjunctions to IP, contrary to Lasnik and Saito (1992). Their point is that extraction is impossible out of embedded topicalizations but possible out of sentences in which scrambling to IP has taken place.

The limited effects of V2 in English and in other residual V2 languages seem to suggest, therefore, that the difference between V2 and non-V2 languages cannot simply be linked to the "strength" of functional heads, for one would not want to say that in constructions like 46a, 47a, and 48a above—not to mention normal *wh*-questions—the nature of the functional categories changes, i.e., that in these constructions C^0 becomes strong. Moreover, we have seen that the general claim in 44b, namely, that the specification of a functional head as 'strong' leads to its maximal projection being the landing site for adjunction, is empirically questionable. In the next section, we will briefly show that 44b is necessarily misguided.

2.4.2 Adjunction and the Strong Functional Head in V2 Languages

The flipside of the coin for 44b as it applies to V2 languages also is empirically inaccurate. In principle, the idea of having a single property (of functional heads) be able to account for the bifurcation between V2 and non-V2 languages is certainly desirable; however, it appears that what is in fact captured is only (not even) half of the story: Namely, one half of the verb movement story (in V2 languages) and one half of the adjunction story (in non-V2 languages). Above we saw that adjunction to IP is not the only possibility for fronting in English, where I^0 is said to be strong. However, it should also be noted that if Zwart (1990) is indeed on the right track, then one straightforward prediction from 44b is, since C^0 is 'strong' in Dutch (and German), that adjunction to CP should be possible. That this is an incorrect prediction is shown by the following examples:[25]

(49) Du. a. *In de bibliotheek$_i$ [$_{CP}$ de boeken$_j$ heeft het kind t_j t_i gelezen]
In the library the books has the child read

b. *Ik geloof niet <u>in de biblioteek</u>$_i$ [$_{CP}$ dat het kind de boeken t_i gelezen heeft]
I think not in the library that the child the books read has

Summing up, then, the facts of adjunction to the maximal projection of the respective 'strong' functional heads do not follow from the proposal in 44b: Although I^0 is categorized as the strong functional head in English, in certain circumstances adjunction to IP is excluded; in Dutch (and other V2 languages), where C^0 is strong, adjunction to CP is not permitted.

3 The V2-inside-IP Analysis

Here we will mainly address the analyses of Yiddish in Diesing (1988, 1990) and of Icelandic in Rögnvaldsson and Thráinsson (1990) and not the analyses of Yiddish in Santorini (1989) and of Danish in Reinholtz (1989).

All four analyses agree that in a non-subject-initial V2 clause, the first element is in IP-spec and that IP-spec in this instance is an A-bar-position. The above analyses also agree that in a subject-initial V2 clause, the subject is in IP-spec. Where the analyses differ, however, is in regard to the status of IP-spec when filled by a subject. According to Diesing and to Rögnvaldsson and Thráinsson, when occupied by a subject, IP-spec is an A-position (in short, IP-spec varies with respect to A- and A-bar status). On the other hand, both Santorini and Reinholtz suggest that a sentence-initial subject is completely parallel to a sentence-initial non-subject; not only are both in IP-spec, but IP-spec is an A-bar-position in both cases as well (in short, IP-spec is always an A-bar-position).[26]

Let us recapitulate the differences between the three major lines of analysis discussed in this paper:

(50)

	Position of the first element in:	
	a subject-initial V2 clause	a non-subject-initial V2 clause
The Asymmetry analysis (discussed in section 2)	IP-spec	CP-spec
The V2-outside-IP analysis (advocated by this paper)	CP-spec	CP-spec
The V2-inside-IP analysis (discussed in this section)	IP-spec	IP-spec

3.1 Extraction out of Embedded V2 Clauses in Yiddish

Diesing (1990:62, ex. 30; 74, ex. 52) uses the following evidence from Yiddish to argue that V2 in embedded clauses takes place inside IP:

(51) Yi. Vemen$_i$ hot er nit gevolt az [<u>ot di bikher</u> zoln mir gebn t_i] ?
Who(dat) has he not wanted that PRT the books should we give?

The V2 clause is bracketed, and the element in the specifier-position of the V2 clause is underlined. Diesing argues that as extraction must take place via CP-spec, *ot di bikher* in 51 cannot be in CP-spec but must instead be in IP-spec. Therefore embedded V2 clauses like 51 must involve topicalization to IP-spec, and the subject must be inside the VP.

Following Vikner (1994c, section 4.8), it seems that it is only argument extraction from an embedded V2 clause that is perfectly grammatical. If adjunct extractions are considered, then we see that extraction is not necessarily as free as the data in Diesing might lead us to expect (1991:118, ex. 170):[27]

(52) Yi. Viazoy hot zi gezogt . . .
How has she said . . .
a. ??. . . az [in shul hobn di kinder gelernt geshikhte t] ?
. . . that in school have the children learned history?
b. ??. . . az [di kinder hobn gelernt geshikhte t] ?
. . . that the children have learned history?

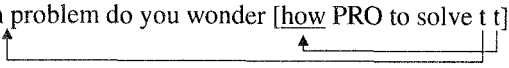
Furthermore, the more crucial of the two kinds of extraction is adjunct extraction, for the following reason: Whereas every trace in the chain of an adjunct extraction has to be antecedent governed, the intermediate traces in an argument extraction chain have to observe only subjacency.

That the intermediate traces in argument extractions do not have to have antecedent government inside the chain has (at least) two different motivations in the literature: According to Chomsky (1986:17–18), following Lasnik and Saito (1984), a chain ending in an argument position must be licensed with respect to the ECP (through gamma-marking) at S-structure, whereas chains ending in non-argument positions must be licensed at LF. At LF, all empty categories must be or have been licensed. This means that the intermediate trace *t'* properly governing the trace *t* in an argument position may do so at S-structure and then disappear at LF (Lasnik and Saito 1984:258). In contrast, the intermediate trace *t'* properly governing the trace *t* in the base-generated position of the adjunct must do so at LF; hence *t'* must exist at LF and will itself have to be properly governed. Thus in an argument chain, it is only the trace in the base position that must observe the ECP by being properly governed; in non-argument chains, on the other hand, all traces, including the intermediate ones, must observe the ECP by being properly governed.

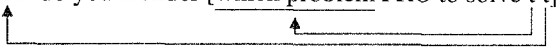
An alternative motivation for claiming that intermediate traces in argument chains do not have to be antecedent governed comes from Rizzi (1990a:85–95). Within the Relativized Minimality framework, argument extraction and adjunct extraction are alike in that the trace in the base position of both (non-subject) arguments and adjuncts may satisfy the head-government requirement ("formal licensing") of the ECP (Rizzi 1990a:87, 82). The two kinds of extraction differ in the way their lowest trace is linked to the moved element ("identification"): When an *argument* is extracted, the extraction is subject only to subjacency. This is because the extracted element may be linked to its trace through binding, as an argument has a referential index. Extraction of an *adjunct*, on the other hand, is subject to antecedent government (as well as to subjacency). The extracted element may not be linked to its trace through binding, since an adjunct has no referential index (Rizzi 1990a:86, 76–80).

As examples of this difference, Rizzi (1990a:88, ex. 32b, c) gives the following contrast:

(53) En. a. ?Which problem do you wonder [how PRO to solve t t] ?



b. *How do you wonder [which problem PRO to solve t t] ?



In either case the embedded CP-spec cannot be part of the chain between the *wh*-element at the head of the main clause and its trace inside the embedded clause. That 53a is not as unacceptable as 53b is ascribed to the fact that the link between *which problem* and the trace in its base-generated position is not subject to the antecedent government requirement.

Whichever account is preferred, argument extraction is subject only to subjacency requirements (though see the discussion of 54, below), whereas non-argument extraction is subject both to subjacency and to an antecedent government requirement. In what follows, we shall phrase our analysis in the terms of Rizzi (1990a), but as far as we can tell, it could also have been done in terms of Chomsky (1986) and Lasnik and Saito (1984).

When seen in the light of the above discussion, the Yiddish data of 51 and 52 are open to another interpretation: It is not the case that Yiddish always allows extraction out of embedded V2 clauses. That argument extractions are permitted and adjunct ones are not seems to suggest instead that Yiddish allows violations of subjacency.[28]

Let us now go through the crucial examples of Diesing (1990:71–75, ex. 49–54), both discussing the problems they pose for her analysis and showing how they may be accounted for under a V2-outside-IP analysis. Such an analysis will make the following two basic assumptions:

a. complementizer-less embedded clauses are V2 and therefore CPs. That this is also the case in German can be seen from the ungrammaticality of 28b in section 2.3.1.

b. Yi. *az* 'that', (like Ic. *að* 'that') obligatorily selects CP (viz. $[_{CP}\ [_{C'}\ az/að\ [_{CP} \cdots\ ]]]$).

We start with object extractions (the base position is thus to the right of the embedded verb *leyenen* 'read'). As above, the V2 clause is bracketed and the element in the specifier-position of the V2 clause is underlined (the underlined element is thus in IP-spec in Diesing's analysis and in CP-spec in ours) (Diesing 1990:71–72, ex. 49):

(54) Yi. a. Vos hot er nit gevolt az [mir zoln leyenen ___] ?
What has he not wanted that we should read ?

b. ?Vos hot er nit gevolt az [es zoln mir leyenen ___] ?
What has he not wanted that it should we read?

c. *Vos hot er nit gevolt az [___ zoln mir leyenen ___] ?
What has he not wanted that should we read?

d. Vos hot er nit gevolt [___ zoln mir leyenen ___] ?
What has he not wanted should we read?
e. *Vos hot er nit gevolt [mir zoln leyenen ___] ?
What has he not wanted we should read?

Under our account, 54a violates subjacency since the extraction is crossing IP and CP (and CP-spec is filled by *mir*), but as we have just seen this does not seem to matter in Yiddish (cf. 51 and 52, above).

54b violates only subjacency, not the ECP, just like 54a, and it should thus be acceptable both under our analysis and under Diesing's (cf. the following quote from Diesing 1990:73, n. 25: "[example 54b] is marginal for some speakers. I have no explanation of why this should be so."

54c is a violation of the ECP: The intermediate trace (in IP-spec from Diesing's point of view but in CP-spec according to ours) is not properly head governed, as *az* 'that', cannot be a proper governor (following Diesing 1990:74). Notice that in 54c, the ungrammaticality is caused by an intermediate trace of an argument extraction, seemingly in contradiction to both Chomsky's and Rizzi's ideas that intermediate links in an argument extraction are subject to only subjacency. So while it is obvious that *if* the intermediate trace exists, it violates the ECP, the question is: Why does it exist at all? In other words, why can it not delete as other intermediate argument traces are allowed to do? The answer seems to stem from the V2 phenomenon. That V2 overrides the possibility of deleting intermediate traces of an extracted argument is motivated by the idea that only traces not contributing to the interpretation of a sentence can be deleted (Chomsky 1990, class lectures). In fact, when viewed from this perspective, two accounts of the ungrammaticality of 54c fall out. The first is as suggested above: The trace, which must exist in order to satisfy the V2 constraint, is unable to be properly governed by *az*. If, in contrast, the specifier of *zoln* is empty, the sentence violates whatever it is that forces movement of an XP into a specifier of the pre-subject finite verb in all V2 languages. In either derivation, 54c is ruled out.

The fact that 54d is well-formed supports the above analysis of 54c and in particular that an intermediate argument trace filling the initial position in adherence to V2 cannot be deleted. Only in a derivation in which there is an intermediate trace in the specifier position of the embedded verb *zoln* can this sentence be acceptable; this trace, in turn, is properly governed by the matrix verb *gevolt*. (The alternative derivation, with the specifier of the verb *zoln* left empty will be ruled out, but this is irrelevant.)[29]

54e seems to us to be somewhat problematic for both Diesing's and our approaches. Considering the available positions in the structure, three different derivations are possible in principle. Below we schematise the possible positions of *mir* and *zoln*:[30]

(55)

		CP-spec	C^0	IP-spec	I^0	
a.	...	mir			zoln	...
b.	...	mir	zoln			...
c.	...			mir	zoln	...

Notice that Diesing explicitly rules out the possibility that embedded clauses like the one in 54e have no CP level at all:

> The complementizer *az* is optional in many embedded clauses. I will assume that in these case there simply is no CP node. In the case of *wh*-movement from an embedded clause, the CP node is obligatorily expanded by the *wh*-word moving to [Spec, CP], requiring government of C. (Diesing 1990:75–76, n. 27)

This means that to Diesing, 55a, b are excluded, as there is no room in CP-spec for an intermediate trace of *vos*. She furthermore excludes 55c (and 55a again) by saying that if there is no verb in C^0, then C^0 is not properly governed and it should be. The claim that C^0 needs to be properly governed (under the derivation in either 55a or 55c) is not self-evident. Diesing seems to be following the proposals of Travis (1984, 1986, 1991), resorting to the idea that a base-generated empty X^0 category is subject to the ECP (whereas, according to the standard view, the ECP applies only to categories which are empty as a result of movement). For a detailed discussion of the problems with such an approach, see Schwartz and Vikner (1989) as well as section 2, above.

To us, 55a, c are excluded as violations of whatever motivates V2. The question for the V2-outside-IP analysis, however, is what excludes the third derivation, 55b. It should be a subjacency violation, on a par with 54a (in both examples an argument extraction has to cross both an IP and a CP without having a trace in CP-spec), and yet 54e is much worse than 54a. The problem for us is that it seems that Yiddish sometimes allows violations of subjacency and sometimes not. It would appear that these violations are allowed when the relevant subjacency barrier is the CP selected by *az*, 54a, but not when it is the CP selected by the matrix verb, 54e.

Consider now the next set of examples which show subject extractions, also from Diesing (1990:75, ex. 53):

(56) Yi. a. ?Ver hot er moyre az [es vet kumen ___] ?
Who has he fear that it will come?
b. *Ver hot er moyre az [___ vet kumen ___] ?
Who has he fear that will come?
c. Ver hot er moyre [___ vet kumen ___] ?
Who has he fear will come?

56a is just like 54b: subjacency is violated, which itself does not result in ungrammaticality in Yiddish

56b is parallel to 54c: The (undeletable) trace in the specifier of the V2 clause violates the ECP: Since *az* is not a proper governor, the trace is not properly governed.

56c is like 54d above: The trace needed to observe V2 is properly governed by the matrix head that selects CP, in this case the N^0 *moyre*. Note, moreover, that the fact that this is a V2 clause is clear from the German version of it, where the finite verb precedes the infinitive:

(57) Ge. Wer hat er Angst [t wird [t t kommen t]] ?
Who has he fear will come?

The last of Diesing's examples is 58 (1990:75, ex. 54):

(58) Yi. Ver hot er nit gevolt ___ az [ot di bikher zoln ___ leyenen ___] ?

Who has he not wanted that PRT the books should read?

58, which also should be a subjacency violation, is parallel to 54a and 51.

Let us finally reconsider the adjunct extractions in 52, above (repeated here as 59):

(59) Yi. Viazoy hot zi gezogt . . .

How has she said . . .

a. ?? . . . t' az [in shul hobn di kinder gelernt geshikhte t] ?

. . . that in school have the children learned history?

b. ?? . . . t' az [di kinder hobn gelernt geshikhte t] ?

. . . that the children have learned history?

According to our analysis, 59a, b are ruled out. Following Rizzi (1990a), the trace in the base position of the extracted element, *t*, cannot be linked to the intermediate trace in the specifier of *az*, *t'*, by referential indices, as adjuncts do not have referential indices. Binding cannot provide the linking necessary to identify the trace, *t*, so we have to look to antecedent government to do this. The problem is that *t'* does not antecedent govern *t*, as there is an intervening governor of the relevant kind (A-bar), namely the underlined element in the specifier of the embedded finite verb, *hobn*. Contrast this with the following example where there is no intervening A-bar-governor, since, in fact, the intermediate trace itself is in the specifier of *hobn* (Vikner 1994c, section 4.8.1):

(60) Yi. Viazoy hot zi gezogt [t' hobn di kinder gelernt geshikhte t] ?

How has she said have the children learned history?

It would appear that Diesing's analysis has no way of accounting for the difference in acceptability between argument and adjunct extractions (but cf. n. 27, above). Under her approach, the underlined elements in 59a, b would be in IP-spec, and would therefore not induce any kind of violation, as extractions out of IP are generally allowed.

In this section we have shown that neither the V2-inside-IP approach of Diesing nor the V2-outside-IP approach presents us with a completely satisfactory set of predictions concerning extraction from embedded V2 clauses. We will therefore have to look to other phenomena to indicate which analysis is preferable; this is what we will do below, considering adverbial positions in section 3.2, subject-verb agreement in section 3.3, topicalization in relative clauses and in embedded questions in section 3.4, and inversion with a topicalized element in section 3.5.

3.2 *Adverbial Positions*

In this section we will show how data concerning adverbials which occur to the right of the subject in embedded V2 clauses in Icelandic and Yiddish provide an argument against the claim of the V2-inside-IP analysis that in non-subject-initial V2 clauses, the subject is in VP-spec. The data argue only against the subject being in VP-spec in such clauses and argue only indirectly in favor of the initial element being in IP-spec, as this presupposes that there is only one functional head between C^0 and V^0, namely I^0.

We will start out with Icelandic since the data are clearer here. In Icelandic embedded non-subject-initial V2 clauses, the subject always precedes the sentential adverbial:

(61) Ic. a. Hann veit að kannski las Jón aldrei bókina
b. *Hann veit að kannski las aldrei Jón bókina
He knows that maybe read (Jón) never (Jón) book-the
c. Hann veit að kannski hefur Jón ekki lesið bókina
d. *Hann veit að kannski hefur ekki Jón lesið bókina
He knows that maybe has (Jón) never (Jón) read book-the

If the finite verb is in I^0 (and there is no IP-recursion), then the subject must be either in VP-spec or in the specifier of some intermediate projection, e.g., TP-spec. As both Diesing (1988, 1990) and Rögnvaldsson and Thráinsson (1990) explicitly take the subject to be in VP-spec, we will mainly argue against this.

The first argument applies to the possibility of the subject occurring in either IP-spec or in TP-spec. The data concern the position of adverbials in relation to the subject and a participle: The negative sentence adverb *aldrei* 'never' in 61a and the negation *ekki* 'not' in 61c, like other sentential adverbials, should only occur adjoined to, or in the specifier position of, an XP relatively high in the tree, for reasons of scope. Furthermore, within the Relativized Minimality framework (Rizzi 1990a), the fact that *ekki* induces a negative island (as would also negative adverbs such as *aldrei*) points towards the negation being in TP-spec (cf. the following data):

(62) Ic. a. Hversu margar bækur hefur Jón lesið t?
How many books has Jón read?
b. Hversu margar bækur hefur Jón ekki lesið t?
How many books has Jón not read?

(63) Ic. a. Hvað hefur Jón lesið [t margar bækur] ?
What has Jón read many books?
(= How many books has Jón read?)
b. *Hvað hefur Jón ekki lesið [t margar bækur] ?
What has Jón not read many books?

Asking for the number of books that Jón has read can take two forms, either *How many books ...* , 62a, or *What ... many books ...* , 63a.[31] If, however, you want to know the number of books that Jón has not read, only the former strategy works,

62b; the latter does not, 63b. Following Rizzi (1990a:15–22) this may be accounted for by assuming the negation to be in TP-spec, blocking the A-bar-movement of non-arguments across it (i.e., of elements which do not have a referential index). The whole object can be moved across negation into CP-spec, 62b, but just a part of the object cannot, 63b, as it does not have a referential index and the negation is blocking antecedent government of the trace, thereby leaving the trace without any link to its antecedent.

Carrying this conclusion over to 61, if the negation in 61a, c is in TP-spec, then the subject, which is to the left of the negation, can neither be in VP-spec nor in TP-spec.

The second argument only goes against the subject occurring in VP-spec. The adverbial *örugglega* 'surely', like its English counterpart, has two different interpretations which depend on its position in the sentence:

(64) Ic. a. Vilhjálmur mun örugglega hitta eplið
b. Vilhjálmur mun hitta eplið örugglega
Vilhjálmur will (surely) hit apple-the (surely)

In 64a *örugglega* is a sentence-adverbial, with the meaning 'definitely/certainly/absolutely'. In 64b *örugglega* is a VP-adverbial, with the meaning 'in a sure manner'. Let us now consider what happens in embedded clauses:

(65) Ic. Ég held að í gær hafi ...
I believe that yesterday has ...
a. ??... örugglega Vilhjálmur hitt eplið
b. ... Vilhjálmur örugglega hitt eplið
... Vilhjálmur hitt eplið örugglega
... (surely) Vilhjálmur (surely) hit apple-the (surely)

The subject cannot occur to the right of the adverbial, 65a, parallel to 61b and 61d (insofar as 65a is interpretable, the adverbial would not be a sentence adverbial but would modify only *Vilhjálmur* 'at least Vilhjálmur' or 'certainly Vilhjálmur', as opposed to anybody else). If the subject is in VP-spec, as claimed by Rögnvaldsson and Thráinsson (1990), the adverbial in 65b, which only has the sentence-adverbial interpretation, is adjoined to V-bar. The adverbial in 65c, which has only the VP-adverbial interpretation, can either be adjoined to V-bar or to some larger constituent, e.g., VP or TP. If the adverbial in 65c is adjoined to V-bar, then the adverbial in 65b and the one in 65c would be adjoined to the same constituent, and we would expect them to have identical interpretations or scopal properties, which is not the case. If the adverbial in 65c is adjoined to VP or higher, we would expect it to have wider scope than the one in 65b, exactly contrary to fact.

Let us now compare the analysis just given which posits the subject in VP-spec with an analysis that assumes the subject to be in IP-spec. Under such an analysis, the adverbial in 65b can be adjoined to TP and the one in 65c to VP. If, following the argumentation concerning 62–63, we assume that the negation is in TP-spec, then the following data support the analysis that when *örugglega* occurs right of the subject and left of the participle it is adjoined to TP:

(66) Ic. Ég held að á morgun muni Vilhjálmur ...
I believe that tomorrow will Vilhjálmur ...
a. ... örugglega ekki hitta eplið
b. *... ekki örugglega hitta eplið
... (surely) not (surely) hit apple-the

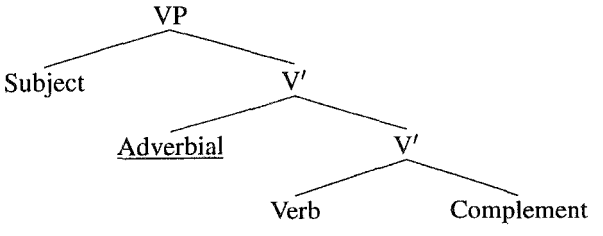
Another argument of a closely related nature against the subject being in VP-spec concerns the scope interactions between adverbials and quantified objects:[32]

(67) Ic. Helgi sagði ...
Helgi said ...
a. ... að þess vegna hafði Jón oft lesið margar bækur
b. ... að þess vegna hafði Jón lesið margar bækur oft
... that therefore has Jón (often) read many books (often)

The interpretations of 67a, b differ in exactly the same way as those of their English counterparts: 67a means that Jón often reads many books (for some particular reason), whereas 67b means that there are many books which (for some particular reason) Jón often reads. This again clearly shows that when the adverbial occurs between the subject and the participle it has higher scope than when it occurs sentence-finally. As the sentence-final adverbial in 67b cannot possibly have a position in the tree lower than adjoined to V-bar (as it is preceded by the object), the adverbial in 67a must occur in a higher position, which means that it in turn cannot be lower than in VP-spec or adjoined to VP. Both of these in turn exclude the subject being in VP-spec in 67a.

The fourth argument against the subject being in VP-spec is conceptual in nature and is based on X-bar-Theory. If the subject is in VP-spec in 61a, c, then the fact that the adverbial would have to occur between VP-spec and the complement of V^0 implies a particular D-structure representation. This structure (before the verb leaves VP) would have to be the following, as is in fact explicitly assumed by Rögnvaldsson and Thráinsson (1990:10, ex. 10, 11):

(68)



We take a structure like 68 to be explicitly ruled out in the X'-system of Chomsky (1986), as adjunction to an X-bar is impossible. (This point is also made for Danish in Reinholtz 1989:107.)[33]

In sum, since the subject in 61a, c cannot be in VP-spec (and if we disregard the TP-spec option), then there is no possible analysis of these well-formed examples with the finite verb in I^0. A different analysis therefore needs to be found for 61a, c.

Let us now turn to the Yiddish data. Here, in contrast to the Icelandic data, both the subject-adverbial and the adverbial-subject orders seem to be possible:

(69) Yi. a. ... az morgn vet dos yingl in emesn zen a kats
... that tomorrow will the boy in truth see a cat
b. ... az morgn vet in emesn dos yingl zen a kats
... that tomorrow will in truth the boy see a cat

What is important for us is that 69a is possible at all. Following the argumentation above, the adverbial *in emesn* 'in truth', in 69a must be adjoined to VP, for reasons to do with both scope and X-bar-Theory, and then the subject *dos yingl* 'the boy', must be outside the VP. As with Icelandic, this means that (at least in 69a) the subject must be in IP-spec (again provided we disregard the TP-spec option), which in turn implies that the initial element, *morgn* 'tomorrow', in this non-subject-initial V2 clause must be in a specifier outside IP, e.g., CP-spec.

A very similar argument may be made on the basis of data concerning object shift in Icelandic (cf. among others Holmberg 1986:218 and Vikner 1989, 1994b) and movement of weak pronouns in Yiddish (cf. den Besten and Moed-van Walraven 1986:123–125). Consider the following Icelandic examples:

(70) Ic. Hann veit ...
He knows ...
a. ... að þess vegna las$_v$ Jón bókina$_i$ ekki t$_v$ t$_i$
b. *... að þess vegna las$_v$ bókina$_i$ Jón ekki t$_v$ t$_i$
... that therefore read (book-the) Jón (book-the) not

We know from the fact that *bókina* precedes the negation that it has left its base position (which is to the right of the verb trace which again is to the right of the negation). The question is now what position the object has moved to in 70a. If the subject, *Jón*, were in VP-spec, then *bókina* must have adjoined to V-bar, something we also take to be excluded by X-bar-Theory. If on the other hand *Jón* is in IP-spec, then it is possible that *bókina* has adjoined to VP, which is perfectly compatible with X-bar-Theory.

As was the case concerning the adverbials above, the argument concerning object movement can likewise be repeated for Yiddish but in a weaker form. Consider the following:

(71) Yi. a. Miriam hot gezogt az dos Bukh hot Mendele ir gegebn
b. Miriam hot gezogt az dos Bukh hot ir Mendele gegebn
Miriam has said that the book has (her) Mendele (her) given

On the assumption that the object *ir* 'her', is generated right of the main verb, then it must have moved in order to get to the position it has in 71a; if the subject *Mendele* is in VP-spec, then the object *ir* must have adjoined to V-bar, which is problematic with respect to X-bar-Theory. On the other hand, if *Mendele* is in IP-spec, then *ir* may have adjoined to VP in 71a, and then 71b would have to be analyzed as adjunction of *ir* to IP.[34]

So far we have seen five reasons why the subject in 61a, c (and in 69a) cannot be in

VP-spec, only one of which also argues against it being in TP-spec. There is another argument to be made against the subject being in TP-spec, and that is that TP-spec is an A-bar-position. This assumption is made, for example, by Roberts (1993), and it is supported by the Relativized Minimality analysis of negative islands (cf. 62–63, above) and of the so-called "pseudo-opacity" phenomena (cf. Rizzi 1990a:12–15, which is based on Obenauer 1976, 1984).

Summing up, if the subject in 61a, c and 69a can occur neither in TP-spec nor in VP-spec, as has been argued above, then it is not possible to analyse these well-formed examples as having the finite verb in I^0.

In contrast, however, were we to posit that the finite verb is in C^0, then a third possibility for the position of the subject in 61a, c and 69a may be taken into consideration: The subject could be in IP-spec. This analysis suffers from none of the defaults discussed above, and as the subject being in IP-spec excludes IP-spec as the landing site of topicalization, we shall take this to be an argument against the V2-inside-IP analysis.

3.3 Subject-Verb Agreement Facts

In Yiddish and Icelandic, the finite verb agrees in number and person with the subject, irrespective of whether the initial element in the V2 clause is the subject, the object, or an adverbial. Consider the following examples, where the initial element in the embedded V2 clause is the object. At the top, we have pointed out which position the elements are claimed to occupy, both according to the V2-outside-IP analysis and according to the V2-inside-IP analysis:[35]

(72)

	V2-outside-IP		CP-spec	C^0	IP-spec	...
	V2-inside-IP		IP-spec	I^0	VP-spec	...
a.	Yi.	... az	dos bukh	hobn	di kinder	geleyent nekhtn
b.	Ic.	... að	bókina	hafa	börnin	lesið í gær
		... that	the book	have	the children	read yesterday
c.	Yi.	*... az	dos bukh	hot	di kinder	geleyent nekhtn
d.	Ic.	*... að	bókina	hefur	börnin	lesið í gær
		... that	the book	has	the children	read yesterday

In the V2-outside-IP analysis, the subject-verb agreement is a realisation of Spec-X^0 agreement inside IP: The subject in IP-spec agrees with the verbal inflection generated in I^0. That the verbal inflection then has to move to C^0 along with the verb stem does not alter this.

In the V2-inside-IP analysis, the subject-verb agreement seems to be more difficult to account for (to our knowledge, this issue has not been addressed by proponents of this analysis). If the subject is in VP-spec, we would expect that the only head which could show agreement with the subject would be the verb stem, which is generated in V^0. This may not be a problem, as the verb stem does not show any agreement at all, and so the idea of agreement between subject and verb stem cannot be empirically rejected. However, if the object is in IP-spec, we would expect the verbal inflection,

which (we assume) is generated in I^0, to show agreement with the object and not the subject. This is clearly not the case, as it would predict 72a, b to be ungrammatical and 72c, d to be grammatical — exactly the wrong prediction. The only way for the V2-inside-IP analysis to avoid this problem would seem to be to give up the idea that morphological agreement is a manifestation of a head-specifier relationship, something which can be retained in the V2-outside-IP analysis.

3.4 Topicalization in Relative Clauses and Embedded Questions in Yiddish and Icelandic

Within the V2-inside-IP analysis, the IP-spec position can serve both as an A-position (when the subject moves there) and an A-bar-position (when any other XP — including *wh*-elements — moves there). Consequently, no CP is assumed to exist in main clauses in Diesing (1988, 1990) or in Rögnvaldsson and Thráinsson (1990). In embedded clauses, in contrast, CP is needed to accommodate either an overt complementizer in C^0 or a *wh*-word/trace in CP-spec. It is thus expected that in embedded clauses, it should be possible to have both topicalisation (of the subject or a non-subject) and *wh*-movement. In other words, given that in embedded contexts (only), topicalisation and *wh*-movement are claimed to be movement to distinct postions (IP-spec and CP-spec, respectively), it should be unexceptional to find them co-occurring. Specifically, this predicts that topicalization in embedded questions and relative clauses (where something other than the subject occurs after the *wh*-word but before the verb) should be unexceptional — but they are not.

In this section, we will first discuss the data and show that topicalization in embedded questions and relative clauses is a rather restricted phenomenon, and then we will discuss the proposals that Diesing (1990) offers to account for these restrictions.

We first show that topicalizations in embedded questions and relative clauses are not as easily accepted as the particulars of the proposal by Diesing (1990:62–67) for Yiddish or by Rögnvaldsson and Thráinsson (1990) for Icelandic would seem to predict.

In relative clauses, topicalization is perfectly acceptable when the subject is relativized:

(73) Ic. Flokkur sem [um fjögurra ára skeið hefur verið í stjórn] tapaði kosningunum
A party that in four years' course have been in government lost election-the
(= A party which had been in government for four years lost the election)
(Rögnvaldsson 1984:6, ex. 12)

(74) Yi. ... nokh epes, [vos oyfn hitl iz geven] ...
... still something that on-the little-hat is given ...
(= something else that was on the little hat)
(Santorini 1989:56, ex. 36a)

However, if the object is relativized, not only are these sentences not nearly as good as expected, they are in fact unacceptable:

(75) Ic. *Helgi hefur keypt bók, [sem trúlega hefur Jón ekki lesið]
Helgi has bought a book that probably has Jón not read
(Thráinsson, personal communication)

(76) Yi. *Der yid [vos in Boston hobn mir gezen] iz a groyser lamdn
The man that in Boston have we seen is a great scholar
(Lowenstamm 1977: ex. 34d)

It would seem that in order to improve the acceptability of sentences like 76, the topicalized element (which is in IP-spec according to the V2-inside-IP analysis) needs rather heavy contrastive stress, as demonstrated by Santorini (1989:56–57, ex. 38):

(77) Yi. Der yid vos mir hobn gezen in Niu-York iz an amorets, ober
der yid [vos in Boston hobn mir gezen] iz a groyser lamdn
the man whom we have seen in New York is an ignorant but
the man whom in Boston have we seen is a great scholar

In embedded questions as well, topicalization is not always well-formed. We must point out, however, that with respect to embedded questions, it is less easy to classify even superficially the different groups. The following are grammatical examples:

(78) Ic. Ég spurði [hvar henni hefðu flestir aðdáendur gefið blóm]
I asked where her(dat) had most fans given flowers
(= I asked where most fans had given her flowers)
(Thráinsson 1986:186, ex. 28b)

(79) Ic. a. ?Ikh veys nit [tsi dos bukh hot er geleyent]
b. Ikh veys nit [tsi ot dos bukh hot er geleyent]
I know not whether (PRT) the book has he read
(Diesing 1990:66, ex. 40)

Note that the sole difference between 79a and 79b is the addition of the particle *ot*, which, according to Diesing (1990:66), gives the NP "contrastive emphasis". Yet, ungrammatical examples of non-subject (NP) topicalization in embedded questions are also found:

(80) Ic. Ég veit ekki [af hverju . . .
I know not why . . .
a. *. . . Maríu hefur Ólavur eiginlega lofað þessum hring]
. . . María(dat) has Ólavur actually promised this ring(acc)
b. *. . . þessum hring hefur Ólavur eiginlega lofað Maríu]
. . . this ring(acc) has Ólavur actually promised María(dat)
(Thráinsson, personal communication)

(81) Yi. *Ikh veys nit [vemen zuntik hot zi gezen]
I know not whom Sunday has she seen
(Diesing 1990:63, ex. 32a, citing Travis 1984)

Furthermore, Diesing suggests that topicalizations of non-NPs may be more acceptable than topicalization of NPs, and she gives an example of the following type as evidence (Diesing 1990:61, ex. 41):

(82) Yi. a. Ikh veys nit [far vos in tsimer iz di ku geshtanen]
b. *Ég veit ekki [af hverju í herberginu hefur kýrin staðið]
I know not why in the room has the cow stood

(Notice that the parallel example is not possible in Icelandic). As suggested in Vikner (1994c, section 4.1.4), the grammaticality of 82a may be linked to the fact that the indirect question is introduced by *why*. If we try topicalization embedded under other *wh*-elements, the result is completely unacceptable:

(83) Yi. a. *Ikh veys nit [ven in tsimer iz di ku geshtanen]
b. *Ég veit ekki [hvenær í herberginu hefur kýrin staðið]
I know not when in the room has the cow stood

(84) Yi. a. *Ikh veys nit [vu nekhtn iz di ku geshtanen]
b. Ég veit ekki [hvar í gær hefur kýrin staðið]
I know not where yesterday has the cow stood
(ex. 82–84; Prince, Thráinsson, personal communications)

(Notice that these are ill-formed both in Yiddish and in Icelandic.)

So, on the face of it, this area is problematic to all of the analyses proposed, as none is capable of accounting for the complete distribution of the grammatical and the ungrammatical sentences.

It therefore follows that both analyses will have to say something extra to account for these data. Diesing (1990:66–67) finds the good examples 'a sufficiently robust phenomenon to warrant generation by the grammar', and goes on to suggest an analysis based on "independent discourse conditions on topicalization and Wh-movement." In short, she argues that since in the embedded context there are two landing sites for movement, only one of which can be emphasized, a contradiction arises when movement of a *wh*-element ("inherently emphasized") and topicalisation of a non-subject co-occur:

> ... [T]he difference between embedded topicalization of the subject vs. ... non-subjects with a [+*Wh*] CP can be formulated in terms of the A vs. A-bar distinction ... As an A-position ... [Spec, IP] is an unemphasized position. A-bar movement to [Spec, IP] results in an operator interpretation *which requires an added emphasis.* This interpretation of non-subject topicalization is odd in the context of an embedded question or relative clause unless there is some additional emphasis ... The added emphasis resolves the clash between Wh-extraction and the topicalization. (Diesing 1990:67; emphasis ours)

So, as she states, the embedded sentences/questions with a non-subject in initial position improve if stressed.

As we have seen, such a strategy does not capture all of the data — not even considering only the Yiddish facts. In addition, it does not seem to us to be intuitively

appealing to claim, on the one hand, that in Yiddish, A-bar-movement to IP-spec parallels traditional A-bar-movement to CP-spec in main clauses but that in embedded contexts this generalisation is excluded. Moreover, it seems to be the case that IP-spec, in so far as it is an A-bar-position, simultaneously is an inherently emphasized position but also requires additional emphasis (cf. 77, above). Notice that when IP-spec is an A-bar-position in main clauses no such additional emphasis is needed. Nor is it the case that material in the CP-spec position needs emphasis — even in double *wh*-questions, despite the fact that they, too, are both operator-variable chains — and which would, pursuing this proposal, need emphasis to "resolve ... the clash" (Diesing 1990:67). And finally, even if there were a way to make the idea of discourse constraints sound more plausible, it still seems to require a syntactic reason for IP-spec as an A-bar-position to be treated differently in main as opposed to embedded clauses. Although we have no alternative to offer, given the array of data considered, we find Diesing's proposal suggestive but unfortunately insufficient.

In this section, we have tried to show, on the one hand, that the data concerning topicalization in relative clauses and embedded questions is quite difficult to account for, and on the other hand, that although Diesing's attempt to give such an account is very laudable, it is also rather counterintuitive. In conclusion, it seems to us that this is another area where it is not yet possible to find a reason to prefer either the V2-inside-IP or the V2-outside-IP approach. It therefore seems that the data and arguments such as discussed in sections 3.2 and 3.3, which favored the V2-outside-IP approach, are perhaps more revealing.

3.5 Inversion with a Topicalized Element in Yiddish

In the previous subsection we saw that Diesing (1990:54, ex. 20) allows topicalization to take place inside an embedded question, with *wh*-movement into CP-spec and topicalization into IP-spec (e.g., 82a). This is not the case in main clauses, however, since *wh*-elements do not occur in CP-spec in main clauses, but only in IP-spec, like topicalized elements. As pointed out by Heycock and Santorini (1992, section 2.2), such an analysis makes the following prediction: In an extraction from an embedded clause, it should not matter whether IP-spec contains a subject or a non-subject, i.e., the verb should be able to precede either a subject or a topicalized element, since both should be able to occur in IP-spec. 85 shows that this prediction is not borne out (Heycock and Santorini 1992:4, ex. 8).

(85) Yi. Vemen$_i$ hot er nit gevolt ...
Who(dat) has he not wanted ...

	CP-spec	C^0	IP-spec	...
a.	... t_i	zoln should	mir$_j$ we	t_j gebn t_i ot di bikher? give PRT the books?
b.	*... t_i	zoln should	ot di bikher$_j$ PRT the books	mir t_i t_j gebn? we give?

The same point was raised in Vikner (1990, section 2.3.3.1) as a problem for Santorini's (1989:98) account of V1 declaratives, which are analyzed with the verb in C^0: Why can the verb in V1 declaratives not be followed by a topicalized element as well as by the subject, if it is the case that IP-spec may contain either?

In part in response to data like 85, Heycock and Santorini (1992) propose an analysis where main clause questions are CPs but main clause topicalizations IPs. In the following we summarize what is essential in the theoretical apparatus they propose, and then we will attempt to argue that the analysis that results is itself less than completely satisfactory.

Heycock and Santorini (1992) are attempting to explain why, when the verb is in C^0, the sole element that may immediately follow the verb is the subject. Therefore much of their analysis depends on the licensing of XP-positions. They hypothesize three ways in which XP-positions can be licensed: theta-assignment, predication, and case assignment. Licensing via theta-assignment occurs only at D-structure, whereas predication and case assignment can license new positions only at S-structure. For example, the direct object position is licensed under theta-assignment at D-structure, whereas IP-spec — not being a theta-position — can be licensed only at S-structure in one of two ways, depending upon the final landing site of the verb (and note that IP-spec must be licensed (1992, section 3.1): As the landing site for topicalization (as well as for clause-initial subjects), IP-spec is licensed via predication; however, in *wh*-questions, for example, where the verb moves to C^0, a different way of licensing IP-spec is needed, namely nominative case assignment. It is worth pointing out that Heycock and Santorini explicitly rule out the possibility of IP-spec being licensed via predication in this configuration (i.e., when the verb precedes the subject) by proposing that "the relationship between licensing mechanisms and the positions licensed by them is a one-to-one relationship" (1992, section 3.1). The net result of this system is that while thematic positions are licensed at D-structure, the licensing of non-thematic positions depends on the final landing site of the finite verb (and hence that verb traces are insufficient for this kind of licensing).

Within this approach, 85b is ruled out because the finite verb in C^0 can only license IP-spec through nominative case assignment, and therefore the object *ot di bikher* 'just these books', cannot occur there.

Nevertheless, it seems to us that this approach leads to some unwanted predictions. Consider the following two cases of exceptional case marking (either as yes/no-questions or as V1 declaratives):

(86) Yi. a. Zet der yid plutsling den shokhn kumen t (?)
Sees the man(nom) suddenly the neighbor(acc) come (?)
b. Lozt der yid plutsling den tsigar faln t (?)
Lets the man(nom) suddenly the cigar(acc) fall (?)

In both 86a, b, the NP with accusative case is no longer in its base-generated position, which follows the embedded (infinitival) verb *kumen/faln* 'come'/'fall'. As it is not in its base-generated position anymore, the question arises as to how the position it occupies is licensed at S-structure. It cannot be via predication, as it is not in a Spec-X^0 agreement relationship with the verb; the only other possibility is via case assignment. But this in turn cannot be possible either: The finite verb is licensing

(through nominative case assignment) the subject in IP-spec and cannot also be licensing the surface position of the accusative NP, both because of the one-to-one relationship and because there is no position for the accusative NP to occupy such that it is head-governed by C^0 and not by I^0, in accordance with minimality (section 3.2). Thus, it seems that under this approach there is no way to license *den shokhn* in 86a and *den tsigar* in 86b.

Under the V2-outside-IP analysis, the accusative NP in 86a, b is licensed (i.e., assigned accusative case) in the specifier of the embedded VP, but there is no prohibition against this licensing being carried out by a trace. As for the examples in 85, which were problematic for Diesing (1990), they would fall out from our general assumptions: IP-spec is only an A-position, and therefore only the subject may occur there.

4 The Position of I^0 in Dutch and German

Having discussed the asymmetry and the V2-inside-IP approaches, we will now turn to a related but still somewhat independent topic: the position of I^0 in Dutch and German.

As outlined in section 2, it is crucial to the asymmetry analysis that I^0 in Dutch and German be to the left of the VP, as it has to provide the landing site for the verb in subject-initial V2 clauses. Furthermore, if one were to suggest that the V2-inside-IP analysis also covered German and Dutch (a suggestion which to our knowledge has not been explicitly made so far), this would also presuppose the sequence I^0-VP.

If the order is I^0-VP, there can be no obligatory V^0-to-I^0 movement (at S-structure) in German and Dutch (cf. the data in 2, above, repeated here:

(87) Ge. a. Ich weiß, daß die Kinder den Film gesehen haben
b. *Ich weß, daß die Kinder haben den Film gesehen
I know that the children (have) the film seen (have)

The problem for this account, then, is how to explain just what prevents V^0-to-I^0 movement in finite *embedded* clauses. In essence, under either version of the asymmetry approach the idea is that since I^0 is "filled" with features, the finite verb is unable to move into it.

As noted in Schwartz and Tomaselli (1990), the prohibition against V^0-to-I^0 movement in embedded clauses under Travis' version of the asymmetry analysis is grounded in a rather unorthodox usage of the ECP, namely that proper government by a lexical complementizer of the (phonetically) empty I^0 *blocks* movement of the verb there.

In Zwart's (1991:85) version, as summarized above, economy is said to prevent V^0-to-I^0 movement in embedded clauses (with a complementizer), as the complementizer licenses the finite features in I^0. Nevertheless one might still wonder *why* the complementizer is able to identify the finite features.[36]

As for the V2 outside IP analysis, it is compatible with the order of either I^0-VP or VP-I^0. Notice that if the correct order is I^0-VP, then it must be concluded that V^0-to-I^0 movement cannot be obligatory; if, on the other hand, the correct sequence *is* VP-I^0, then V^0-to-I^0 movement may be obligatory and hence uniform for all tensed

sentences. It is of course also perfectly possible within a VP-I^0 analysis that V^0-to-I^0 movement is not obligatory (or maybe even impossible) in embedded clauses and that the verb thus moves to I^0 only when it is on its way to C^0 (similar to what is commonly claimed about Danish, Norwegian and Swedish).

Below we will discuss data from two areas which have been used to support arguments both in favor of and against the obligatoriness of V^0-to-I^0 movement in German and Dutch.

4.1 Richness of Inflection

Several analyses have linked obligatory V^0-to-I^0 movement to the richness of inflection (e.g., Holmberg and Platzack 1988). The basis of comparison comes from examining SVO languages where V^0-to-I^0 movement can be directly observed to take place (or not to take place), such as Italian, Icelandic, French, English, Swedish, etc. (cf. Emonds 1978; Pollock 1989; Holmberg and Platzack 1988; Belletti 1990; and others). The generalization seems to be that the languages which have a relatively rich verbal inflection also have V^0-to-I^0 movement (Italian, Icelandic, and French), whereas the languages that have a poor verbal inflection lack V^0-to-I^0 movement (English, Swedish, and Danish). We should perhaps emphasise that when we refer to V^0-to-I^0 movement, we are primarily focusing on whether it is possible for I^0 to be the final landing site for the finite verb at S-structure.

Consider this generalization in light of the inflectional system in the Germanic V2 languages: Icelandic, which has V^0-to-I^0 movement, distinguishes between four or five of the six possible forms in the verbal paradigm, whereas Danish, which does not have V^0-to-I^0 movement, makes no distinctions in the verbal paradigm:

(88) Ic. ég tek, þú tekur, hann tekur, við tökum, þið takið, þeir taka

(89) Da. jeg tager, du tager, han tager, vi tager, I tager, de tager
I take, you take, he takes, we take, you take, they take

In view of this difference, let us now consider German: Here we notice that German too has rich inflection, in fact just as rich as that found in Icelandic (four or five different forms out of a possible six):

(90) Ge. ich nehme, du nimmst, er nimmt, wir nehmen, ihr nehmt, sie nehmen
I take, you take, he takes, we take, you take, they take

Intuitively, then, German seems to have the same kind of motivation as Icelandic has to force movement of the verb from V^0 to I^0, even in embedded clauses.[37]

The verbal inflection in Dutch is much poorer than that in German, even if it is not as poor as that of English or Danish:

(91) Du. ik neem, jij neemt, hij neemt, wij nemen, jullie nemen, ze nemen
I take, you take, he takes, we take, you take, they take

However, even though there is a sizeable literature on the differences between German and Dutch, it has to our knowledge never been suggested that one of them has V^0-to-I^0 movement and the other one does not.

4.2 *Dutch Unstressed Pronouns*

Jaspers (1989) and Zwart (1991:82–83) both argue that Dutch unstressed pronouns are clitics and that the fact that they obligatorily occur immediately right of the subject may be explained by assuming that they have to cliticize to a functional head which occurs between the subject and the VP. Zwart (1991:82–83) furthermore takes this head to be I^0, and the position of the unstressed pronouns to be evidence that in Dutch, I^0 is to the left of VP:

(92) Du. a. *... dat Jan het boek gisteren Marie gegeven heeft
b. ... dat Jan 't gisteren Marie gegeven heeft
... that Jan the book/it yesterday Marie given has

(93) Du. a. *... dat Marie het boek Jan heeft zien lezen
b. ... dat Marie 't Jan heeft zien lezen
... that Marie the book/it Jan has see read

The interesting point about this analysis is that it is compatible with the fact that the full NP cannot undergo this movement, as the ungrammaticality of 92a and 93a shows.

It is not obvious that a VP-I^0 analysis has anything to say about these cases, except that they cannot be cliticization (as there would be no head to which the pronoun could cliticize), and so they must be instances of scrambling instead. That this might be the case is suggested by the fact that both 92a and 92b are grammatical in German:[38]

(94) Ge. a. ... daß ich das Buch gestern Maria gab
b. ... daß ich es gestern Maria gab
... that I the book/it yesterday Maria gave

It seems to us that the claim that the pronouns in 92b and 93b cliticize to I^0 makes a wrong prediction (as noted in Vikner and Sprouse 1988:12), namely that they should move along with the verb when it moves from I^0 to C^0. In order to see this in the asymmetry approach, a non-subject-initial main clause is required, e.g., a question like the following:

(95) Du. a. *Waarom 't heeft [$_{IP}$ Jan gekocht] ?
b. *Waarom heeft 't [$_{IP}$ Jan gekocht] ?
c. Waarom heeft [$_{IP}$ Jan 't gekocht] ?
Why (it) has (it) Jan (it) bought?

Underlined are the elements that have been moved from I^0 to C^0 (still from an asymmetry point of view), and it is clear that both of the two logically possible verb + clitic combinations are impossible. Only the verb itself may occur in C^0 in these cases.

It is commonly assumed that once something adjoins to an X^0, it can no longer be separated from this X^0 (see, for example, Kayne 1991:649, who says that a trace cannot be "a proper subpart of a X^0 constituent" and cites a rule in Baker 1988:73 to the same effect). If this were a generalized constraint, then 95a, b

would be ruled out. However, in Roberts (1991), an attempt is made to refine and distinguish different types of head movement. Elaborating on a proposal in Rizzi and Roberts (1989), in which a distinction is made between head movement as adjunction vs. head movement as substitution, Roberts argues that extending the ideas of the Relativized Minimality framework (Rizzi 1990a) to these two types of head movement can explain both the possibility and the impossibility of certain cases of "excorporation": Excorporation is defined as successive cyclic movement of a head which first incorporates into another governing head but then moves out of the head, leaving something behind. The conditions under which excorporation is disallowed are when a host-head morphologically subcategorizes for another head; this is the case of tense and agreement marking in I^0 with respect to the verb-incorporee, and it is this that forces verb movement to I^0 in this system (see Rizzi and Roberts 1989). In head movement as adjunction, in contrast, moving an adjoined head up to another governing head and stranding either the host or the incorporee is possible, since proper government of the trace of the moved head will still be allowed (i.e., the non-moved head will not count as a closer intervening governor, see Roberts 1991:214–216 for details).

If we now apply this system to the facts presented above on Dutch clitics,[39] we see that moving the verb to C^0 does not entail that the clitic move as well. Movement of the verb into I^0 by substitution guarantees that the verb cannot be separated from its verbal affix; however, adjoining the clitic to I^0 allows the clitic to be stranded. Thus, positing I^0 to the left of VP can accommodate the facts of weak pronouns in Dutch not moving along with the verb to C^0, as in 95c.

Nevertheless, it should be pointed out that other instances of verb movement to C^0 do not allow the clitic to be stranded, in direct opposition to the Dutch facts. If we follow Baker's proposal, then the pair of sentences in 96a, b is explained: Clitics in French (Fr.), which normally adjoin to I^0, must move along to C^0 in questions:

(96) Fr. a. Où l'avait-il$_i$ [$_{IP}$ t$_i$ acheté] ?
b. *Où avait-il$_i$ [$_{IP}$ t$_i$ l' acheté] ?
Where (it) had he (it) bought?

The elements that have been moved from I^0 to C^0 have been underlined, and clearly the clitic must move along with the verb when it moves to C^0.[40] Roberts' system, on the other hand, has no way of ruling out stranding the clitic in I^0 in French, as in 96b.

Summing up so far, an extension of Roberts (1991) can explain why it is possible for a clitic to stay behind in I^0 when the verb moves to C^0, as in the Dutch 95c, but not why this is not possible for the French clitic, 96b, nor why it is impossible for the Dutch clitic to stay attached to the verb when it moves into C^0, 95a, b. Baker's (1988:73) rule (which disallows traces internal to a word), on the other hand, gives exactly the right predictions for French and exactly the wrong ones for Dutch, provided the Dutch pronoun in 95c is in fact cliticized to I^0 (if there is no cliticization, then Baker's rule correctly predicts 95a, b to be ungrammatical).

Notice furthermore that it is commonly assumed that cliticization is taking place in French, whereas this is only one of many theoretically possible analyses as far as Dutch is concerned. It therefore seems to us that if an account for the Dutch pronouns as clitics means losing (part of) the explanation for French, then this should be taken

as a sign that the analysis of Dutch may not be on the right track, a point of view which receives further support from the German data in 94.[41]

Let us conclude this section by giving a different argument against the analysis of the Dutch unstressed pronouns in 92, 93, and 95 as clitics. This last argument has to do with the interaction between object cliticization to I^0 and the realisation of verbal inflection. Although Zwart (1990, 1991) does not address this issue, it seems that in his analysis, affix hopping from I^0 to V^0 would have to be the mechanism by which the finite verb in embedded clauses becomes morphologically encoded (as suggested, for example, in Travis 1984).

The problem with this is that the result has the object clitic being cliticized to an I^0 which contains nothing but the trace of the verbal inflection (which itself is realised on the verb in V^0). Apart from the fact that there is no way of deriving this without violating strict cyclicity, it is also ruled out by the rule from Baker (1988:73) and Kayne (1991:649) discussed above: There would be an X^0 constituent, I^0, which would contain both the clitic and the trace of the verbal inflection.

In short, we find that the problems with assuming that unstressed Dutch pronouns are clitics are bigger than the advantages of this assumption.[42]

5 Conclusion

In this paper we have tried to compare and evaluate three different approaches to verb second: V2-outside-IP, asymmetry (two versions), and V2-inside-IP. In an attempt to sort out the strengths and weaknesses of each approach, particularly in comparing the V2-outside-IP approach to the others, data from across the Germanic V2 languages related to a variety of linguistic phenomena were examined. In some cases, this led us to point out areas where the V2-outside-IP approach fares better than the other approaches. In other instances, we sought to consider data that either seem or have explicitly been claimed to illustrate the superiority of one of the other approaches over the V2-outside-IP approach; in most cases we found that on closer inspection, the data are either indeterminate with respect to the competing approaches or in fact more adequately handled by the V2-outside-IP approach.

The following are some of the particular findings regarding both versions of the asymmetry account (Travis 1984, 1986, 1991; Zwart 1990, 1991):

a. Neither is able to account for, e.g., the facts concerning adjunction to a V2 clause (section 2.1) or the fact that expletive *es* in German occurs in CP-spec (section 2.2.3).

b. In contrast, both of these accounts were shown to have ready though distinct explanations for the impossibility of German and Dutch weak object pronouns occurring sentence-initially (section 2.2.1), though other analyses compatible with the V2-outside-IP approach were also briefly discussed; in contrast, the additional data from dialects of Norwegian and Danish, which were shown to be parallel to the Dutch and German facts, can be accommodated only under the V2-outside-IP analysis (section 2.2.2).

c. With respect to Travis' version of asymmetry, we considered the facts concerning extraction from embedded clauses (section 2.3.1) and showed that no account for the data can be found within her system.

d. And finally we argued that Zwart's version of asymmetry gives rise to problems in the areas of exclamatives (section 2.3.2) and V^0-to-I^0-to-C^0 movement, in so far as the "clitic" must be stranded in I^0 (section 4.2), in addition to it making rather unfortunate predictions concerning adjunction to IP (in non-V2 languages) and to CP (in V2 languages) (section 2.4).

Turning now to the V2-inside-IP approach (Diesing 1988, 1990; Rögnvaldsson and Thráinsson 1990; Heycock and Santorini 1992), we have similarly tried to show that it is indeed not so apparent that it is superior to the V2-outside-IP approach, as argued by its proponents:

a. Data concerning extraction out of embedded V2 clauses in Yiddish (section 3.1) as well as the facts about topicalization in relative clauses and in embedded questions in both Yiddish and Icelandic (section 3.4) are not completely captured under either approach.

b. We have argued, nevertheless, that the Yiddish and Icelandic facts concerning the positioning of adverbials, especially in relation to the position of the subject in non-subject-initial V2 clauses (section 3.2), subject-verb agreement (section 3.3), and inversion with a topicalized element (section 3.5) can be satisfactorily accounted for only under the V2-outside-IP approach.

In section 4, arguments concerning the position of I^0 in German and Dutch were presented:

a. One favors the order I^0-VP, namely, the data concerning unstressed pronouns in Du.

b. In spite of these facts remaining essentially unexplained in the V2-outside-IP approach, we pointed out that the account offered by Zwart (1990, 1991) is not without its problems, viz. that the clitic cannot move along with its hosting verb to C^0.

c. Another argument, concerning the relation between the richness of verbal inflection and verb movement (section 4.1), favors the order VP-I^0.

Although we have tried to maintain the superiority of what we originally termed the "traditional account" in Schwartz and Vikner (1989), we would like to emphasize that the V2-outside-IP approach also has a number of problems of its own: No really satisfactory solution has been suggested concerning, for example, weak object pronouns (sections 2.2.1 and 2.2.2), or extraction and topicalization in embedded V2 clauses (sections 3.1 and 3.4). Nevertheless, we feel that this analysis is still the one that comes closest to giving a straightforward account of much of the data. In light of these specific and non-trivial shortcomings, it remains an open question whether V2 actually *always* takes place at the CP-level or whether embedded V2 takes place at the level of a category which contains IP but is itself contained by CP (namely, the "Bigger-Than-IP-But-Smaller-Than-CP" approach . . .).

Notes

1. This paper is a completely revised, much altered, and considerably extended version of Schwartz and Vikner (1989). We would like to thank Markus Bader, Maria Beck, Anna Cardinaletti, Noam Chomsky, Kathrin Cooper, Molly Diesing, Lynn Eubank, Giuliana Giusti, Christine Haag-Merz, Liliane Haegeman, Hubert Haider, Arild Hestvik, Teun Hoekstra, Hans Kamp, Jim McCloskey, Ad Neeleman, Christer Platzack, Luigi Rizzi, Ian Roberts, Ramona Römisch-Vikner, Beatrice Santorini, Manuela Schönenberger, Halldór Sigurðsson, Rex Sprouse, Thilo Tappe, Höskuldur Thráinsson, Alessandra Tomaselli, Lisa Travis, Heike Zinsmeister, and Jan-Wouter Zwart. Of course are all errors still our own fault.
2. Alternatives to C^0 as the head that selects IP include, for example, the F^0 of Tsimpli (1990:246), the $Agr1^0$ of Roberts (1993, section 1.4) and Cardinaletti and Roberts (1991), or the $Topic^0$ of Müller and Sternefeld (1993:485).
3. It should be noted that the topics covered in this paper are not intended nor claimed to be a complete discussion of the merits of the V2-outside-IP account. For additional reasons to prefer the traditional account of V2, see, for example, Holmberg (1986), Giusti (1991), Tomaselli (1990b), and Johnson and Vikner (1994).
4. An exception to this general claim is the position of the verb in questions in residual V2 languages like English (En.) and French (which we do not address here—but see Rizzi 1990b:377). There is a real asymmetry with respect to the verb positions in English questions: Only in subject questions like *who saw an accident?* is a form of *do* not required, as opposed to non-subject questions like *what did you see?* or *where did you see an accident?*.
5. If adjunction to IP is possible (as shown here for German and Swedish), we have a reason to prefer the conditions on proper government of Rizzi's (1990a) Relativized Minimality framework over those of Chomsky's (1986) Barriers framework (see also the discussion in section 3.1).

   As we will show in section 2.3.1, extraction of an adjunct out of an embedded clause in German is impossible unless there is an intermediate trace in the embedded CP-spec. If adjunction to IP is possible, then the Barriers framework cannot prevent adjunct-extractions from adjoining to the embedded IP. Then, however, even extractions across a filled CP-spec are predicted to be grammatical (CP would not inherit barrierhood from IP, since IP would not be a blocking category), though this is clearly not a desirable prediction (cf. 30b and 34b in section 2.3.1).

   In the Relativized Minimality framework, the possibility for adjoining to IP makes no difference; the extraction still has to go across CP-spec, which still is a typical potential antecedent governor of the relevant type (A-bar). Thus in the chain there will be a trace that is not properly governed (either the one adjoined to the embedded IP, or the one adjoined to the embedded VP) and the relevant examples are predicted to be ungrammatical, which is the correct prediction (see section 2.3).
6. Haegeman (1991:52–55) points out that the analysis of Zwart (1990, 1991) and, by extension, also the one of Travis (1986, 1991), is not compatible with the data concerning cliticization in West Flemish. She shows that regardless of whether the initial element in a V2 clause is an unstressed subject pronoun or unstressed object pronoun, the same number of functional heads need to be posited in order to accommodate all of the cliticization possibilities. If there are the same number of functional heads available in the two types of clause, Haegeman argues, the finite verb must occupy the same position in each, which is incompatible with the "asymmetry" hypotheses of Zwart and Travis (but compatible with the other analyses discussed below).

7. This argumentation can be reproduced with respect to other weak pronouns in the two languages: e.g., Danish *d'n*, the weak form of *den* 'it' (common gender), and Norwegian *'n*, the weak form of *ham* 'him'.
8. All the examples in 16–21 below (including those that are ungrammatical) will be fully grammatical if the weak pronoun is replaced either by its corresponding strong form or by a full NP. Thus *a* can be replaced by *hun* 'she', in 16–19 and by *henne* 'her', in 20–21 or by *tante Sofie* 'Aunt Sofie', in all of 16–21. The same applies to *'d*, which can be replaced by *det* 'it', or by *det her fjernsyn* 'this TV set', in all of 16–21.
9. The word order in 17b and 18b, where negation or sentence adverbials precede the finite verb, is always an option and sometimes the only option in embedded clauses in Danish (and Norwegian and Swedish). The word order in 17a and 18a, where the finite verb precedes negation or sentence adverbials, could in theory be analyzed either as embedded V2 or as an instance of V^0-to-I^0 movement. Two facts support the former interpretation: The word order in 17a and 18a is not always possible (whereas the other one is, leading to the conclusion that Danish, Norwegian, and Swedish are languages which lack V^0-to-I^0 movement), and whenever the word order in 17a and 18a is possible, then embedded topicalization, which must be taken to be cases of embedded V2, is possible as well (cf. Platzack 1986a, 1986b; Vikner 1994a, 1994c; and references therein).
10. In view of the examples to be discussed below, this rule could be generalized to cover all occurrences of *a*/*'d* (and other weak pronouns): *a*/*'d* must cliticize to the right of an X^0 which c-commands it.

    In addition to this syntactic rule, there is also a phonological constraint on the occurrence of Danish *'d*: The word to which *'d* cliticizes phonologically must end in a vowel (as observed by Jensen 1986:92). In spite of the Danish orthography, this constraint is not violated in any of our examples.
11. Thanks to Arild Hestvik for providing those Norwegian examples which have not been taken from Christensen (1984).
12. Furthermore, Zwart's proposal would also not be able to account for the fact that initially in a main clause neither unstressed subject nor unstressed object pronouns are possible in Norwegian and Danish (cf. 16), as opposed to Dutch (cf. 11). The unstressed subject pronouns should have moved to IP-spec (and not to CP-spec) and therefore be able to cliticize to the empty C^0 (cf. also 19b, c, which show that cliticization to an empty C^0 is possible).
13. It should be noted that 22b, 23b, and 24b all have grammatical readings: 22b is fine as a question; 23b and 24b are fine either as questions or as so-called V1 declaratives. V1 declaratives are restricted to narratives and similar kinds of contexts (cf. e.g., Sigurðsson 1990 for Icelandic and Santorini 1989:68 for Yiddish).

    Also, please note that we are consciously avoiding the rather thorny issue of the analysis of embedded clauses in Icelandic and Yiddish, where the expletive is allowed to the right of the complementizer, as opposed to embedded clauses in German. For a discussion of embedded clauses in Icelandic and Yiddish in general, see section 3; and for a discussion of the interaction between expletives and embedded clauses in Icelandic and Yiddish which is compatible with the proposals of this paper, see Vikner (1994c, ch. 4).
14. Notice that the ungrammatical 25b and 26b cannot be ruled out simply by saying that the expletive cannot occur in IP-spec, as this is not the case (in contrast to German, Yiddish, and Icelandic):

    Da. a. Sad der en fugl på taget?
    Sw. b. Satt det en fågel på taket?
    Ge. c. *Saß es ein Vogel auf dem Dach?
    Sat there/it/it a bird on the roof? (Platzack 1983:85, ex. 9b)

Notice also that whether the language makes the distinction between *it* and *there*, as Danish and Dutch do, or whether the form *it* is used for both, as in Norwegian and Swedish, plays no role.

15. The examples in 30 are adjunct-extractions, with the base-generated position of the adjunct being left-adjoined to the embedded VP. Note that the same results are obtained when we extract the subject (i), or the object (ii):

(i) Ge. a. Welches Kind glaubte sie hatte dieses Brot gegessen
b. *Welches Kind glaubte sie dieses Brot hatte gegessen
Which child thought she (had) this bread (had) eaten
(ii) Ge. a. Welches Brot glaubte sie hatte das Kind gegessen
b. *Welches Brot glaubte sie das Kind hatte gegessen
Which bread thought she (had) the child (had) eaten

As for the distinction between argument and non-argument extraction and for why argument extraction is subject only to subjacency requirements whereas non-argument extraction is subject both to subjacency and to the ECP, see the discussion of 51 and 52 in section 3.1.

16. An intermediate trace in CP-spec is necessary whether one adopts the conditions on proper government in Chomsky (1986) or those in Rizzi (1990a). In Chomsky's Barriers framework, there cannot be proper government across both an IP and a CP, as the CP would then be a barrier, inheriting its barrierhood from IP. In Rizzi's Relativized Minimality framework, the filled CP-spec is a 'typical potential antecedent governor' of the relevant type (i.e., A-bar), and thus in order for the trace adjoined to the embedded VP (or to the embedded IP, cf. n. 5) to be properly governed, this CP-spec position must contain an antecedent for the trace.

As these are adjunct-extractions, subject to the ECP (cf. section 3.1), the conditions are that each link of the extraction chain properly govern the next one. (Note also that we have omitted the intermediate trace adjoined to the matrix VP in all of these examples.)

17. In other words, each link in the chain (including the trace adjoined to the matrix VP, which we have omitted) properly governs the next one, as no barriers intervene (only IPs) with respect to Chomsky (1986) or as no typical potential antecedent governors intervene (because of the absence of CP-spec) with respect to Rizzi (1990a).

18. In order to see how this works, let us briefly review Travis' version of proper government: A properly governed head must remain empty, i.e., nothing can move into it, because it is filled in some sense by features. To put this in Travis' (1986:12, 18, 1991:351, 357) terms, the head is identified by proper government, and in this way it receives features which must remain recoverable, thus preventing anything moving into this position (cf. also n. 11 in Schwartz and Tomaselli 1990:270). This is how complementizers like *daß* prevent V^0-to-I^0 movement from taking place. Another kind of proper government concerns complements. By definition (Travis 1991:351, ex. 22a), the (head of a) complement of α is properly governed by α. Therefore, if CP is the complement of *glauben*, the embedded verb necessarily cannot move into the properly governed C^0. In fact, this same line of argumentation applies to the first proposal discussed above concerning IP being the complement of *glauben*, as pointed out to us by Molly Diesing (personal communication). As IP is a complement to the matrix verb, then I^0 should be properly governed — and hence should not be able to be filled (on a par with complementizers properly governing the empty I^0). This incorrectly predicts 28b to be grammatical. One would therefore have to conclude that if *glauben* should be able to take an IP as complement, I^0 for some reason would not count as being properly governed by *glauben* (cf. 28a).

19. Teun Hoekstra has pointed out to us that 30 and 34 might not be interpreted as extractions out of embedded clauses; instead they might have an alternative interpretation under which

glaubte sie 'believed she', is a so-called parenthetical, inserted between the matrix CP-spec and the matrix C^0. If so, then the examples would not support our argument, as 30b and 34b would now be straight forward violations of the V2 constraint: The finite matrix verb *hatte* would not have moved to C^0, though it should have, as nothing else occurs in C^0.

There are, however, at least two reasons to reject a parenthetical analysis of the examples in 30 and 34 (cf. also Tappe 1981). One is that the judgments (of both 30 and 34) are the same with more complicated matrix clauses:

(i) Ge. Womit hast du mir gestern gesagt, . . .
What-with have you me yesterday told . . .
a. . . . hatte das Kind dieses Brot gegessen
b. *. . . das Kind hatte dieses Brot gegessen
. . . (the child) had (the child) this bread eaten

Here the parenthetical analysis is unlikely, as the parenthetical would consist of *hast du mir gestern gesagt* 'have you me yesterday told'.

Another argument can be made on the basis of examples containing bound variables:

(ii) Ge. An welcher Universität würde jeder Linguist sagen würde er am liebsten arbeiten?
At which university would every linguist say would he preferably work?

Bound variables have to be c-commanded by their antecedent, as opposed to the E-type pronouns of Evans (1980:339–340). It is clear that the pronoun in (ii) is a bound variable rather than an E-type pronoun as the quantifier antecedent may be negative.

(iii) Ge. An welcher Universität würde kein Linguist sagen würde er am liebsten arbeiten?
At which university would no linguist say would he preferably work?

Er in (ii) and (iii) clearly has *jeder Linguist/kein Linguist* as an antecedent, and therefore *jeder Linguist / kein Linguist* must c-command *er*. This in turn means that *jeder Linguist/kein Linguist* are part of the matrix clause and cannot be inside a parenthetical.

20. As far as we can tell, "an operator" simply means an element in an A-bar-position.
21. Zwart (1991:75, n. 3) assumes an empty complementizer is present in embedded questions (i), and in relative clauses (ii), since CP-spec is filled but verb movement to C^0 is impossible:

(i) Ge. a. *Ich frage mich was hat Peter gekauft
b. Ich frage mich was Peter gekauft hat
I ask myself what (has) Peter bought (has)
(ii) Ge. a. *Die Zeitung, die hat Peter gekauft, war teuer
b. Die Zeitung, die Peter gekauft hat, war teuer
The newspaper, that (has) Peter bought (has), was expensive

22. It should be added here that the fact that 43c is grammatical is also a problem under Travis' version of the asymmetry approach, as I^0 in 43c must be empty, but there is nothing that could possibly properly govern I^0 ('fill it with features') and therefore 43c should violate the ECP (twice, in fact, as C^0 is also empty). For more discussion of the position of I^0 in German and Dutch, see section 4.
23. Discussion of what differentiates V2 from non-V2 languages is greatly reduced in Zwart (1991) as compared to Zwart (1990). In the more recent version (1991:76), he merely states that English is an IP-oriented language whereas Dutch (and German) is a CP-oriented language. For this reason, we rely on Zwart's earlier paper.
24. They may be analyzed as results of the Negative Criterion, cf. Rizzi (1991b, section 5) and Haegeman and Zanuttini (1991:244), which is a biconditional principle to the effect that a

negative XP-element must be in a Spec-X^0 agreement relation with a head which has the feature [+neg], i.e., the verb in 46, 47, and 48.

25. Zwart (1991:76) follows Koster's (1978) analysis of non-subject-initial V2 clauses: Topicalization is adjunction of an XP to CP, accompanied by a co-indexed pronoun in CP-spec, a so-called "d-word", which may be empty. 39 then applies, forcing the verb to move to C^0. One might expect that this would rule out 49a, as *de boeken* 'the books', would then be adjoined to CP rather than in CP-spec. However, as nothing should prevent multiple adjunction to CP (notice that multiple adjunction to IP is possible in both German and Swedish), this still does not explain why 49a is impossible.
26. In some respects, the position of Reinholtz (1989) and of Santorini (1989) may be considered a notational variant of the V2-outside-IP analysis (their IP-spec always corresponds to our CP-spec; their VP-spec always corresponds to our IP-spec), and therefore not all of the arguments below will actually be problematic for their position. However, Heycock and Santorini (1992), discussed in section 3.5, cannot be considered a notational variant, as they suggest that while topicalized elements occur in IP-spec, *wh*-elements occur in CP-spec; the verb therefore is in C^0 in questions but in I^0 in topicalizations and other declarative clauses.
27. Molly Diesing and Beatrice Santorini have each pointed out that many speakers find 52 either acceptable or not nearly as unacceptable as a *that*-trace violation like the one in 54c. This is problematic in so far as we would predict 52 and 54c to violate the same condition, the ECP (though two different parts of the ECP: 52 violates the restriction on antecedent government, 54c the one on head government). If 52 should turn out to be good in Yiddish (and/or in Icelandic, for example), one possible analysis could be that the language in question has a difference between topicalization and *wh*-movement, so that the two kinds of movement cannot interfere with one another (cf. the suggestions of Müller and Sternefeld 1993:484), much like A-movement and A-bar-movement cannot interfere with one another in the Relativized Minimality framework of Rizzi (1990a).
28. Other languages have also been claimed to allow violations of subjacency. The best-known examples are perhaps the Mainland Scandinavian languages, as discussed in the papers in Engdahl and Ejerhed (1982). A characteristic example is the following (Engdahl 1982:152, ex. 4):

    (i) Sw. Nobelpriset i medicin$_j$ ska vi snart få reda på vem$_i$ som t_i har fått t_j
    Nobel-prize-the in medicine shall we soon get clarity as-to who that has got
    (= the Nobel prize for medicine, we will soon know who has received)

29. The analysis suggested for 54c and 54d will also extend to Danish and German, if we make the two following (independently empirically motivated) assumptions:

    (i) a. Embedded V2 is only possible in Danish if the complementizer 'at' *is* present.
    b. Embedded V2 is only possible in German if the complementizer 'daß' is *not* present.

    (iia) and (iiia) correspond to 54c; (iib) and (iiib) to 54d:

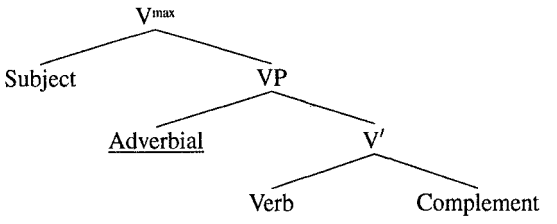
    (ii) Da. a. *Hvad sagde han at ___ skulle vi købe ___ ?
    b. *Hvad sagde han ___ skulle vi købe ___ ?
    What said he (that) should we buy?

    (iii) Ge. a. *Was hat er gesagt daß ___ sollten wir kaufen ___ ?
    b. Was hat er gesagt ___ sollten wir kaufen ___ ?
    What has he said (that) should we buy?

(iib) and (iiia) are ruled out by (ia, b) above. (iia) is ruled out because the trace before *skulle* is not properly governed (by *at*), just like 54c. (iiib) is possible, the trace before *sollten* being properly governed (by *gesagt*), just like 54d (see also the discussion in section 2.3.1). Neither (ia) nor (ib) holds for Yiddish (cf. the quote below from Diesing 1990:75).

30. Above we bracketed 54e corresponding to 55c, even though Diesing's (1990:72, ex. 49e) bracketing corresponds to 55a.
31. This is therefore a parallel to the so-called *was ... für* split in other Germanic languages (cf. e.g., den Besten 1984:34–39; Corver 1991; Vikner 1994c, section 2.4).
32. Thanks to Halldór Sigurðsson for pointing out the different interpretations of *oft* in 67.
33. Versions of X-bar-Theory exist in which a VP-internal subject may precede a VP-adjoined adverbial. In Koopman and Sportiche (1991:212) and Sportiche (1988:425), a VP structure is suggested which would allow an adverbial to occur between the subject and V^0 without necessitating adjunction to V-bar:

(i)



According to Koopman and Sportiche (1991:212), V^{max}, which is "a small clause whose predicate is VP ... "the maximal projection" of V^0, whereas VP is "the phrasal projection" of V^0. This gives two possibilities for the position of the adverbial, neither of which presupposes adjunction to V-bar: Either the adverbial is in VP-spec (as opposed to V^{max}-spec which is occupied by the subject) or it is adjoined to VP. Notice that though VP-adjunction is adopted by Sportiche (1988:432), it is only suggested for a manner adverbial like French *soigneusement* 'carefully'. In fact, Sportiche assumes that a sentential adverbial would have to be "adjacent (adjoined) to I" and thus to the left of V^{max}.

The option of positing a structure like (i) in order to save the idea that the adverbial is generated between the subject and the verb in sentences like 61a, c is thus unavailable, since the position of the adverbial in (i) is feasible only for non-sentential adverbials.

34. The potential weakness of this argument is that it presupposes that objects in Yiddish are generated to the right of the verb, an assumption that is generally made but also questioned (cf. den Besten and Moed-van Walraven 1986 and Geilfuß 1991).
35. Potentially problematic in this approach is that in Icelandic sentences with a nominative object and a non-nominative subject, the finite verb agrees with the object rather than the subject. However, as argued by Jónsson (1991:24–26) and by Vikner (1994c, section 4.6), for example, this kind of agreement is different from the standard subject-verb agreement, as it only takes place in the third person and as it also seems to be optional.
36. In other words, one might wonder about the naturalness of the disjunctive ways in which finiteness features in I^0 are supposedly licensed (cf. 40a, b).
37. For other arguments that at least one functional head should follow VP, see Giusti (1991) on infinitivals.
38. There is no direct German parallel to the construction in 93.
39. It should be pointed out that for Zwart, V^0-to-I^0 movement could not possibly be forced by I^0 morphologically subcategorizing for V^0, as V^0-to-I^0 movement is only motivated by the need to license the finiteness features in I^0, and there is an alternative way for these features to be licensed: by a lexicalized C^0 (cf. Zwart 1991:85 and ex. 40 in section 2.3.2).

40. A further complication is that in French questions (e.g., 96), the subject pronoun does not stay in IP-spec but cliticizes to C^0, as shown by the indexing. For more discussion of this and other details of this construction, see Rizzi and Roberts 1989.
41. It should also perhaps be pointed out that it is Kayne's (1991) analysis of the French clitics (which explictly relies on Baker's (1988) rule) that serves as the fundamental basis for Zwart's proposals about the Dutch reduced pronouns. Hence, it becomes somewhat questionable (not to mention ironic) to have to conclude that accepting Zwart's extension of Kayne's idea in order to account for the Dutch pronouns seems to necessitate abandoning the analysis of the French pronouns as cliticization to I^0.
42. Ad Neeleman (personal communication) has pointed out that the data concerning the possible positions of reduced pronouns in Dutch are more complicated than depicted in Zwart (1990, 1991). Recall that it is on the basis of data like 92b and 93b where the reduced form of the pronoun occurs immediately to the right of the subject (in embedded clauses) — coupled with the assumption that clitics must cliticize to a functional head — that Zwart concludes that there must be a functional head to the right of IP-spec and the left of VP. However, Neeleman notes the grammaticality of the following as well:

    (i) Du. a. . . . dat Jan gisteren 't eindelijk gekocht heeft
    . . . that Jan yesterday it finally bought has
    b. . . . dat Jan 't gisteren 'm eindelijk gegeven heeft
    . . . that Jan it yesterday him finally given has

    As a supplement to the data presented in Zwart (1991), the data in (i) show that there are minimally two positions for reduced pronouns in Dutch and moreover that *'t* in (ia) and *'m* in (ib) could not possibly be in the head (i.e., I^0) of the projection whose specifier is occupied by *Jan* (i.e., IP-spec), since both *'t* in (ia) and *'m* in (ib) follow the adverb *gisteren* (for related discussion, see also Haegeman 1991:520–555).

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