VERB MOVEMENT AND COMPLEMENTIZER AGREEMENT

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There can be little doubt that the verb second character of Dutch and other Germanic languages is among the most intriguing phenomena to be explained by the theory of syntax. On a descriptive level, we understand 'verb second' to mean that the finite verb is in the second position in all types of main clauses, where we understand 'second' to mean 'immediately following the first constituent'. The types of main clauses that display verb second in Dutch are the neutral word order subject initial main clauses, topicalizations (where a constituent other than the subject precedes the finite verb), and questions introduced by a wh-word ((1)-(3), respectively).[1]

(1) Ik **heb** een huis met een tuintje gehuurd
I have a house with a garden-DIM rented
'I rented a house with a little garden.'

(2) a. [Een huis met een tuintje] **heb** ik gehuurd
a house with a little garden have I rented
b. Gisteren **heb** ik een huis met een tuintje gehuurd
yesterday have I a house with a little garden rented

(3) Waarom **heb** ik een huis met een tuintje gehuurd?
why have I a house with a little garden rented

There is no verb second effect within embedded clauses in Dutch ((4)-(6)).

(4) * ..dat ik **heb** een huis met een tuintje gehuurd
that I have a house with a little garden rented

(5) a. * ..dat [een huis met een tuintje] **heb** ik gehuurd
b. * ..dat gisteren **heb** ik een huis met een tuintje gehuurd

(6) * ..waarom **heb** ik gisteren een huis met een tuintje gehuurd

(4)-(6), with the exception of (5a), are grammatical with the finite verb adjacent to the past participle ((7)-(9)).[2,3]

(7) ..dat ik een huis met een tuintje gehuurd **heb**

(8) a. * ..dat [een huis met een tuintje] ik gehuurd **heb**
b. ..dat gisteren ik een huis met een tuintje gehuurd **heb**

(9) ..waarom ik een huis met een tuintje gehuurd **heb**

Early research in the syntax of Dutch yielded the important insight that in main clauses ((1)-(3)) the finite verb moves to what is now called a

functional head position (Koster 1975). Furthermore, it was argued that this functional head position is identical to the position occupied by the complementizer in embedded clauses (COMP)(Den Besten 1976/1983/1990). This explains why the same verb movement does not take place in embedded clauses ((4)-(5)). Since in embedded clauses the COMP position is occupied by the complementizer, there is no target for the verb movement, which therefore cannot take place.[4]

Immediate empirical evidence for this analysis was provided by German, a language closely related to Dutch that shows the same main clause - embedded clause asymmetry as described in (1)-(9) for Dutch.[5] In addition, in German the complementizer can be left out, and in that case, the verb second phenomenon shows up again in the embedded clause.

(10) a. Johann glaubt dass er Maria immer noch **liebt**
John thinks that he Mary still loves
b. * Johann glaubt dass er **liebt** Maria immer noch
John thinks that he loves Mary still

(11) a. * Johann glaubt er Maria **liebt** immer noch
John thinks he Mary loves still
b. Johann glaubt er **liebt** Maria immer noch
John thinks he loves Mary still

(12) a. * Johann glaubt immer noch er Maria **liebt**
John thinks still he Mary loves
b. Johann glaubt immer noch **liebt** er Maria
John thinks still loves he Mary
'John thinks he still loves Mary'

I will refer to this analysis of the verb second phenomenon as 'the standard analysis'. In short, the standard analysis entails that the finite verb is in COMP in (1)-(3), and that something else is in COMP in (7)-(9), so that in embedded clauses no verb movement can take place.[6]

In this article, I propose an alternative analysis for the noted asymmetry between main and embedded clauses in Dutch, building on earlier work by Travis (1984, 1991) and Zwart (1991a). According to this alternative, the finite verb is in AgrS in subjectinitial main clauses in Dutch, but in C(OMP) in topicalization constructions and wh-questions. I argue that there is a specific relation between C and AgrS in Dutch, which could be described as movement of AgrS to C. This relation is dependent on the presence of a lexical element in C, and blocks the movement of the verb to AgrS that we see in subjectinitial main clauses. I furthermore argue that an arbitrary feature specification of AgrS in Dutch drives these processes, in a sense to be made precise below.

The article has the following contents. In section 1, I list a set of theoretical assumptions concerning movement. These assumptions are partly traditional, and derive mainly from Chomsky 1991. In section 2, the standard analysis of verb second is critically examined. It will turn out that this analysis has a serious theoretical shortcoming, namely that there is no principled explanation for the reverse side of the verb second phenomenon, i.e. that some constituent has to be in the first position. This problem disappears if we assume that the verb is in different positions in (1) on the one hand, and (2)-(3) on the other hand. In section 3, I present empirical evidence for the presence of a functional head position below C and to the left of the VP in Dutch. This argument is based on object cliticization. In section 4, the phenomena of complementizer agreement in Dutch dialects are discussed. These phenomena can only be described within the present set of assumptions if the agreement is derived from a lower functional head (by Agr-to-C movement). In section 5, I propose to identify the 'lower functional head' that the three preceding sections evidence as AgrS. This makes possible an analysis of the verb second phenomenon that does not have the theoretical shortcomings of the standard analysis. In the final section before the conclusion, I discuss a number of favorable consequences that follow from the hypothesis that AgrS moves to C, having to do with subject-extraction (the 'that-trace effect') and semi-prodrop in Dutch.

1. Movement and Economy

In his 1991 class lectures, Chomsky presented a set of theoretical assumptions that I will assume throughout.

1. A derivation converges if it is fully interpretable at the interface levels PF and LF
2. A representation is fully interpretable if it contains nothing but legitimate objects
3. A legitimate object is an object that has all its morphological features checked
4. Movement takes place for no other reason than to check morphological features

Assumption # 1 implies that no derivation can be ruled out on account of its derivation violating a condition that applies at a level prior to LF or PF. In effect, this means that there are no S-structure conditions. The 'morphological features' mentioned in assumption # 3 are features of an abstract kind: Case (which is identical to agreement), tense, [+operator], etc. As in earlier stages of the development of the theory, morphological

features are structurally represented in the heads of functional projections (Agr and Tense). Certain lexical elements have certain morphological features which are of a purely syntactic significance and have to be checked against the features represented in the functional head positions.[7] Checking of the features of XPs takes place in Spec-Head Agreement configurations exclusively. Checking in effect eliminates a feature, which therefore does not show up at the interface levels. This is a welcome result, because at the interface level, these features would not be interpretable, since they have only syntactic relevance. Therefore, movement ultimately derives from the principle of Full Interpretation (Chomsky 1986a).[8]

The processes that these assumptions allow are subject to general economy restrictions. According to these, movement takes place as little and as late as possible, preferably at LF. If movement does take place in overt syntax, in violation of economy, this should be reducible to full interpretation at the level of PF. This leads to the assumption that certain morphological features are visible at the level of PF and others are not. Those that are visible will have to be eliminated before the split off between PF and LF (formerly, 'at S-structure'), and for that reason movement will have to take place before that point in the derivation. The parametric variation between languages then is limited to +/- PF-visibility of morphological features. Henceforth, I will call +PF-visible morphological features 'strong' and -PF-visible morphological features 'weak' (following a terminology introduced in Koster 1986).

This set of assumptions is in certain respects rather traditional. Especially, as has always been assumed, movement should never have as its only purpose the derivation of the right word order. With this in mind, let us turn to the standard analysis of verb second.

2. Verb Second

There are several conceptual and empirical problems with the standard analysis of the verb second phenomenon.

2.1 Conceptual Problems

2.1.1 One Analysis for Three Different Processes

The standard verb second analysis lumps together three processes that are obviously different. For example, English lacks verb second in subject initial main clauses and topicalizations, but has it in wh-questions (Rizzi 1990b).

(13) John probably has not kissed Mary

(14) a. Mary John probably has not kissed
b. Probably John has not kissed Mary

(15) a. * Who John probably has kissed?
b. Who has John probably kissed?

On the other hand, subject initial main clauses and topicalizations are different in that subjects in Dutch can be reduced in first position, but objects cannot (Koster 1978, Travis 1984).

(16) a. Ik zie hem
I see him
b. ’k Zie hem

(17) a. Hem zie ik
him see I
’Him, I see.’
b. * ’m Zie ik

Verb second in English wh-questions may follow from a Spec-Head agreement requirement on [+wh] marked functional projections, as proposed by Rizzi (1990b). This Spec-Head agreement requirement does not need special formulation giving the assumptions made in section 1. [+wh] is a morphological feature of certain lexical elements that has to be checked in a designated Spec-Head configuration, usually considered to be at the CP-level. Apparently, this checking can only take place (in English) if the head is lexically filled, which would explain the verb movement in this case.

If this explains the verb movement in wh-questions in English, so does it in Dutch. This means that verb second is motivated in different ways in (1) and (3). Therefore it is principally not attractive to propose a general constraint forcing verb second in each construction in (1)-(3).

The difference between subject initial and topic-initial sentences in Dutch illustrated in (16)-(17) can mean one of two things. Either the topic is in a different position than the subject (Travis 1984, Zwart 1991a), or they are in the same position, but this position has a different character depending on whether the element occupying it is in a Spec-Head agreement relation with the verb (Rizzi 1991). In either case, it is clear that the movements have different motivations. There is no evidence that movement of the subject is motivated by anything other than subject-verb agreement (Case). On the other hand, movement of the topic is not motivated by agreement with the verb, but by some 'topic property'. Since movement in the economy framework is triggered by morphological feature checking only, it targets designated positions, and therefore differently motivated movements cannot target identical positions.[9]

In short, since not all verb movements in Dutch are triggered by the same requirement, it is not attractive to hypothesize that they all target the same position.

2.1.2 Verb Movement to C Needs an Additional Stipulation

Verbs move in order to check their morphological features. In addition, let us assume that verbs also move to assist in the feature checking of other elements, but never to a position that they would not at some point have to go to in order to check a feature of their own (on the economy related principle of 'Greed', Chomsky 1991). In other words, there are no wild verb movements in order to get the derivation come out right.

As before, movement can take place in overt syntax and at LF, with a preference for the latter. Let us now look at wh-questions in English and Dutch. As can be seen from (3) and (15), the verb moves to C in these constructions. Following Rizzi (1990b), we assumed that this follows from the requirement that a [+wh] element in Spec,CP be checked against a lexically filled C. Thus, the verb movement to C assists in the feature checking of an element in Spec,CP. If our assumptions are correct, it follows

a. that [+wh] is PF-visible in Dutch and English

b. that verbs always move to C at LF

The feature [+wh] being PF-visible, it has to be checked before the split off point between LF and PF, so that it is eliminated and does not interfere with Full Interpretation at PF. Verb movement takes place to make this checking possible, but the verb could never move to C if it did not have to go there

itself at some point in the derivation. Therefore, the verb movement in wh-questions is only possible if verbs always have to go to C at LF.

At this point we might conjecture that verb second languages differ from non-verb second languages in that the verb always has to move to C in overt syntax. But this is clearly not correct, since in embedded clauses ((7)-(9)) the verb does not move to C. At some point or other, additional stipulations would have to be made to account for the asymmetry between main and embedded clauses in Dutch, German, etc.[10]

2.1.3 No Motivation For Subject Movement to Spec,CP

Let us suppose, for the sake of the argument, that in verb second languages the verb always moves to C in main clauses, perhaps because of some feature of C. Then the following question arises: Why does there always have to be a constituent preceding the verb?[11]

NPs move in order to get their features checked in a designated Spec-Head configuration. When this checking has taken place, no additional movement is allowed, unless other features need checking in another Spec-Head configuration. Topics and Wh-elements by assumption have a [+operator] feature in addition to their Case/agreement feature. Assuming that for instance a subject moves to Spec,AgrS to check its Case/agreement feature, it can only move on if it has an additional [+operator] feature.

This would explain the preposing of topics in (2) and wh-elements in (3). However, it would not explain the hypothesized movement of the subject to Spec,CP in (1). As can be seen in (7)-(9), the subject does not have to move beyond Spec,AgrS in embedded clauses in Dutch. Moreover, the subject in Dutch has none of the properties of a topic, as can be seen in (16)-(17), and also by looking at the semantic/pragmatic properties of preposed subjects and non-subjects. In short, there would be no reason for the subject to move to the Spec,CP, and therefore we must assume that this movement does not take place.[12]

It follows that the hypothesis that the verb is always in C in verb second language main clauses is untenable. By consequence, there must be a functional head below C and to the left of the VP in Dutch which hosts the verb in subject initial main clauses such as (1).

2.1.4 The Complementary Distribution of Complementizer and Finite Verb

In section 1, we saw that one of the virtues of the standard verb second analysis is that it provides an immediate explanation for the complementary distribution of lexical complementizers and finite verbs in German. If there is no lexical complementizer in an embedded clause, the verb second phenomenon emerges again ((10)-(12)).

It should be noted here, that the hypothesis that the verb has to move to C is only one of the possible accounts for the complementary distribution of lexical complementizers and fronted finite verbs. Another logical possibility is that the lexical complementizer entertains a specific relation with a lower functional head, and that the presence of this relation obviates the need for verb movement to that functional head (in overt syntax). A proposal along these lines is made in Travis (1984, 1991), who assumes an INFL position to the left of the VP in Dutch, and argues that verb movement takes place to license empty heads. In her analysis, a lexical complementizer governs and licenses the empty INFL, so that no verb movement is required in embedded clauses. The point is that a complementary distribution can have any number of causes, and, pending analysis, it is not very well possible to decide one way or the other.

Within the present set of assumptions, the standard verb second analysis account of the complementary distribution of lexical complementizers and fronted finite verbs in German looks suspicious. Supposing the verb has to move to C in overt syntax, it is not clear why the presence of a lexical complementizer blocks this movement. What property of the lexical complementizer allows the elimination of the PF-visible feature that triggers verb movement in the main clause? The only explanation can be that this PF-visible feature is not directly associated with the finite verb, but with C, and that lexicalization of C suffices for checking and elimination of that feature. Something along these lines is needed to account for the complementary distribution of lexical complementizers (including empty complementizers, see note 4) and finite verbs in wh-questions. In that case, PF-visibility is clearly related to a specific feature, [+wh]. If the complementary distribution of lexical complementizer and the finite verb is to follow from the requirement that the verb move to C, it must be the case that in each instance there is some feature of C that is checked under Spec-Head agreement in CP, regardless of whether the verb is in C or the lexical complementizer. Such a feature has not yet been identified in the case of subject initial main and embedded clauses. In particular, Nominative

Case/subject agreement is not checked under Spec-Head agreement in CP in embedded clauses, as can be seen from (7)-(9).[13] (See also note 10.)

2.2 Empirical Problems

2.2.1 Subject Clitics in Dutch

Most of the evidence adduced in favor of verb movement to C in Dutch, etc., quite clearly shows that the verb is in C in wh-questions and topicalizations, but is irrelevant for subject initial main clauses (see Den Besten 1990:25). The only piece of evidence which addresses subject initial main clauses as well is the complementary distribution of lexical complementizers and finite verbs, for which see section 2.1.4.

Other evidence tends to show that the verb is in different positions in subject initial main clauses and non-subject initial main clauses. Subject clitics in Dutch immediately follow the lexical complementizer in embedded clauses and the verb in non-subject initial main clauses.

(18) a. ..dat 'k vandaag appels eet
that I(scl) today apples eat
'..that I eat apples today'
b. * ..dat vandaag 'k appels eet
c. ..dat vandaag iedereen appels eet
'..that today everybody eats apples'

(19) a. Natuurlijk eet 'k vandaag appels
of course eat I(scl) today apples
b. * Natuurlijk eet vandaag 'k appels
c. Natuurlijk eet vandaag iedereen appels

(20) a. Waarom eet 'k vandaag appels?
why eat I(scl) today apples
b. * Waarom eet vandaag 'k appels?
c. Waarom eet vandaag iedereen appels?

The c-sentences show that adverbs can separate a full NP subject from whatever is in C, be it the lexical complementizer or the verb. The a- and b-sentences show that the subject clitic has to immediately follow the lexical complementizer or the verb. This provides a nice argument for the hypothesis that in topicalizations and wh-questions in Dutch the verb is in the complementizer position (Den Besten 1976, see Zwart 1991a for further arguments that subject clitics move to C).

However, in subject initial main clauses the subject clitic precedes the verb.

(21) a. 'k Eet vandaag appels
b. * Eet 'k vandaag appels

In embedded clauses, topicalizations, and wh-questions, the subject clitic cannot precede the complementizer or the verb.

(22) a. * ..'k dat eet vandaag appels
b. * Natuurlijk 'k eet vandaag appels
c. * Waarom 'k eet vandaag appels?

This suggests that in (21a) the verb is not in C but in a lower functional head position. If the position of the subject clitic shows that the verb is in C in (19a) and (20a), it also shows that the verb is not in C in (21a).[14]

2.2.2 Subject-Verb Agreement

A surprising phenomenon that has not yet received sufficient attention in the literature is the fact that subject-verb agreement in Dutch may differ depending on whether subject-verb inversion has taken place. This phenomenon is rather wide-spread in dialects of Dutch (see Goeman 1980, and section 4), but is also present in robust form in the 2SG in Standard Dutch. In embedded clauses and in subject initial main clauses, the verb ends in *-t*, in non-subject initial main clauses the verb is the bare stem.

(23) a. ..dat jij naar huis gaat/*ga
that you to house go
'..that you are going home'
b. Jij gaat/*ga naar huis

(24) a. Vandaag ga/*gaat jij naar huis
today go you to house
b. Wanneer ga/*gaat jij naar huis?
when go you to house

The asymmetry between (23b) and (24) suggests that the verbs are not in the same position in each type of construction.

2.2.3 Extraction Out Of Embedded Verb Second Clauses

In Schwartz & Vikner (1989) and Vikner & Schwartz (1991), adjunct extraction out of embedded verb second clauses in German (as in (11)-(12)) is presented as an argument against Travis' (1984, 1991) analysis of verb second. The facts are as follows: Adjunct extraction out of embedded verb second clauses is only possible if subject-verb inversion takes place in the embedded clause.

(25) a. * Womit glaubst du das Kind hatte das Brot gegessen?
with what think you the child had the bread eaten
'What did you think the child ate the bread with?'
b. Womit glaubst du hatte das Kind das Brot gegessen?

According to Travis' analysis, the finite verb in embedded verb second clauses (e.g. *liebt* in (11b) *Johann glaubt er liebt Maria*) is in INFL and the subject is in Spec,IP. The C of the embedded clause is empty, and is licensed under government of the higher verb (*glaubt* in (11b)). Schwartz & Vikner (1989) point out that this should make the embedded clause transparent for extraction, so that the obligatory inversion in (25) is unexpected.

This argues against the assumption in Travis' analysis that verb movement is triggered by an ECP-like condition on empty heads. It crucially does not argue against Travis' hypothesis that the verb in embedded verb second clauses is in INFL rather than in C.

As is well established, movement of adjuncts has to take place successive cyclically (Chomsky 1986b, Rizzi 1990a, Cinque 1990). Therefore, the wh-adjunct has to touch the embedded Spec,CP before landing in the matrix Spec,CP. Since the intermediate trace in the embedded Spec,CP is [+wh], verb movement to the embedded C is triggered by whatever causes verb movement in matrix wh-clauses, be it Rizzi's Wh-Criterion (Rizzi 1990b), or the requirement that a PF-visible feature be eliminated before the moment of Spell Out (Chomsky 1991).

Therefore, adjunct extraction out of embedded verb second clauses in German has no bearing on the issue of the position of the verb in subject initial verb second clauses. If we assume that the verb is in a lower functional head in subject initial main clauses and embedded verb second clauses in German, the subject-verb inversion accompanying wh-movement follows from general grammatical principles, and therefore in no way counts against this assumption.

However, if we look at argument extraction out of embedded verb second clauses, it becomes clear that these cases actually present an argument against the standard analysis. Argument extraction out of embedded verb second clauses triggers inversion in the embedded clause just like adjunct extraction.[15]

(26) a. * Was glaubst du das Kind hatte gegessen?
what think you the child had eaten
b. Was glaubst du hatte das Kind gegessen?
'What do you think the child ate?'

On the standard analysis, (26a) is bad because *das Kind* occupies the Spec,CP, so that the movement is non-local. However, if that were the case, we would expect (26a) to show a weaker island effect than (25a), which is not the case.

In other words, (26a) should be a subjacency violation and (25a) an ECP violation (see Lasnik & Saito 1984, Chomsky 1986b, Rizzi 1990a, Cinque 1990). But both (26a) and (25a) have at least the status of ECP-violations.

If the embedded subject is in Spec,AgrSP in (25)-(26), the Spec,CP is available for successive cyclic movement, and movement out of the embedded clause will therefore leave a trace in Spec,CP. If we are right, this trace has the feature [+wh] that triggers inversion. If the inversion does not take place, the [+wh] feature cannot be checked and eliminated, and the derivation will not result in a fully interpretable PF-representation. Thus we predict that no matter what kind of extraction takes place, non-inversion will always lead to an ungrammaticality of the most severe kind. This is exactly what the facts bear out.[16]

Thus, the facts of extraction out of embedded verb second clauses actually present an empirical argument against the standard analysis of verb second.[17]

2.3 Conclusion

The hypothesis that the finite verb goes to C in all clauses that have the verb in second position meets with both conceptual and empirical problems. At the conceptual level, it is unlear what triggers the verb movement and the subject movement in subject initial main clauses if these movements were to involve CP. The only way to capture this would be to come up with a feature of C that requires lexicalization of C, and to formulate a V2 constraint to the effect that the finite verb cannot be in the first position. Both these moves would not be motivated independently from the language and construction at hand, and are, in effect, little more than a description of the phenomenon that we should be trying to explain. At the empirical level, the order of subject clitic and verb and the different instantiations of subject-verb agreement in the 2SG in Dutch suggest that the finite verb is in different positions depending on whether a subject or a non-subject precedes the verb. These phenomena make perfect sense if the subject moves to Spec,AgrSP and the verb to AgrS, and if movement of a [+operator] element to Spec,CP triggers additional verb movement to C. For these movements, no stipulations have to be made given the set of theoretical assumptions outlined in section 1. Furthermore, the facts of extraction out of embedded verb second clauses in German cannot be explained in a satisfactory way on the standard analysis of verb second.

3. Clitics in Dutch

In section 2, we have seen that it would be attractive from a conceptual point of view to assume that the finite verb in subject initial main clauses in Dutch is in a functional head lower than C. In this section and in the following section, I will argue that phenomena of object cliticization and complementizer agreement present empirical evidence for the existence of such a lower functional head.

3.1 Assumptions on Cliticization

I will make two crucial assumptions on cliticization here. First, I will assume that it can be determined on purely syntactic grounds whether an element is a clitic or not. Second, I will assume that clitics adjoin to a functional head (following Baltin 1982, Kayne 1990).

The second assumption will go without elaboration, since it is a common assumption in the principles and parameters framework. The first assumption needs some attention. Although phenomena of phonological cliticization may exist, clitics can be identified without invoking phonological criteria.

In fact, phonological criteria are insufficient for such undisputed clitics as the weak pronouns in French. For example, French clitics can be contrastively stressed.

(27) A: Je ne te connais pas
I NEG you know NEG
'I do not know you'
B: Tu ne TE connais pas
you NEG YOU know NEG
'You do not know yourSELF'
(dialogue from the motion picture NUIT D'ÉTÉ EN VILLE)

I will assume that pronouns that have a different syntactic distribution than full NPs are clitics. As it turns out, in the majority of cases these pronouns are 'weak', and have a 'strong' counterpart that patterns with full NPs. This syntactic criterion clearly identifies *te* in (27) as a clitic.[18]

(28) a. * Je ne Paul connais pas
b. Je ne connais pas Paul

3.2 Object Clitics in Dutch

Dutch has the following paradigms of object clitics and object full pronouns (Koster 1978, Everaert 1986, Zwart 1991a).

(29) *Object clitics*

1SG	me	1PL	-
2SG	je	2PL	-
3SG	’m/’r/’t	3PL	ze

(30) *Object full pronouns*

1SG	mij	1PL	ons
2SG	jou	2PL	jullie
3SG	hem/haar	3PL	hen, hun

The object clitics differ from the object full pronouns in at least five respects.

3.2.1 Scrambling

Object clitics can only appear to the left of sentence adverbials, full pronouns can appear on either side of the sentence adverbials.

(31) a. Jan heeft [VP gisteren **haar** gekust]
Jan has yesterday her kissed
’Jan kissed her yesterday’
b. Jan heeft **haar** [VP gisteren gekust]
(32) a. * Jan heeft [VP gisteren **’r** gekust]
b. Jan heeft **’r** [VP gisteren gekust]

The NP-movement in (31) is called scrambling (or, object shift). In analyses of scrambling it is generally assumed that sentence adverbials have a fixed position. If so, then scrambling in Dutch and German is an optional movement, contrary to object clitic movement, which is obligatory ((32)).

Note, however, that optional movements are anomalous within the present set of theoretical assumptions. It may be the case, therefore, that the assumption that sentence adverbials have one fixed position is wrong. If so, (32) shows that object clitics are in a different position than scrambled NPs. The facts in the following sections seem to confirm this.

3.2.2 The Order Indirect Object - Direct Object

In double object constructions where the Indirect Object is not expressed in a PP, the order of Indirect Object and Direct Object is fixed if the Indirect Object and the Direct Object are full NPs, and free if they are clitics.[19]

(33) a. dat ik [VP gisteren **[haar][het boek]** gaf]
that I yesterday her the book gave
'that I gave her the book yesterday'
b. * dat ik [VP gisteren **[het boek][haar]** gaf]

(34) a. dat ik **[haar][het boek]** [VP gisteren gaf]
b. * dat ik **[het boek][haar]** [VP gisteren gaf]

(35) a. ? dat ik **'r 't** [VP gisteren gaf]
b. dat ik **'t 'r** [VP gisteren gaf]

3.2.3 The Dative Alternation

If the direct object in double object constructions has been scrambled out of the VP, and the Indirect Object stays behind in the VP, the Indirect Object must be expressed in the form of a PP if the Direct Object is a full NP, but it may be an NP if the Direct Object is a clitic.

(36) a. dat ik **[het boek]** [VP gisteren **[??(aan) Marie]** gegeven heb]
that I the book yesterday to Marie given have
'that I gave the book yesterday to Marie'
b. dat ik **'t** [VP gisteren **[(aan) Marie]** gegeven heb]

3.2.4 Clitic Climbing

Full NPs cannot cross an embedded subject in an Exceptional Case Marking (ECM) construction. On the other hand, object clitics can:

(37) a. dat ik Jan/hem **[het boek]** heb zien lezen
that I Jan/him-ACC the book have see-INF read-INF
'that I saw him read the book'
b. * dat ik **[het boek]** Jan/hem heb zien lezen

(38) a. dat ik Jan/hem **'t** heb zien lezen
b. dat ik **'t** Jan/hem heb zien lezen

As expected, this pattern recurs with multiple embedding:

(39) a. * dat ik **[de meisjes][het boek]** Jan heb zien proberen te beloven
that I the girls the book Jan have see try to promise
'that I saw John try to promise the girls the book'
b. dat ik **'t ze** Jan heb zien proberen te beloven

3.2.5 Indefinite Clitics

In certain dialects of Dutch (e.g. Brabantish, West Flemish), there is an indefinite clitic *'r* corresponding to indefinite objects. Indefinite objects must remain in the VP (to the right of sentence adverbials), but the corresponding clitic cannot:

(40) a. Heb je gisteren **meisjes** gezien
have you yesterday girls seen
'Did you see girls yesterday?'
b. * Heb je **meisjes** gisteren gezien

(41) a. * Heb je gisteren **'r** gezien
b. Heb je **'r** gisteren gezien

3.2.6 Conclusion

The facts in 3.2.1-3.2.5 clearly show that the pronominal elements in (29) have a different syntactic distribution than the full pronouns in (30). I therefore conclude that they have a different syntactic status, and that they are properly characterized as clitics (for more discussion, see Zwart 1991a, and Haegeman 1991 on West Flemish).

By assumption, clitics are adjoined to functional heads. The facts in 3.2.1-3.2.5 therefore show that there must be a functional head to the left of the VP and to the right of C in Dutch. More exactly, this functional head must be located to the right of the subject, considering (35b), (36b), etc., and (42).[20]

(42) * dat 't Jan gisteren gedaan heeft
that it John yesterday done has

Therefore the lower functional head that the clitics adjoin to is either AgrS or an even lower functional head. If it is AgrS, we must assume that the clitic adjoins to the right. If we assume that clitics only adjoin to the left (cf. Kayne 1990), the functional head the clitics adjoin to is lower than AgrS, presumably T.[21,22]

3.3 A Remaining Problem

Let us assume that object clitics in Dutch adjoin to AgrS. Let us also assume, following Kayne (1990), that clitics can adjoin to empty heads, but not to traces. This means that if a verb, on its way to a higher functional head,

moves through a functional head which a clitic is adjoined to, it has to take the clitic along.

In French, this is clearly the case. In (43b), the verb has presumably moved to C, and it has to take the clitic along, as (43c) shows.

(43) a. Tu l' as vu
you it have seen
b. L'as tu vu?
'Did you see it?'
c. * As tu le vu?

In Dutch however, object clitics are never taken along under verb movement to C.

(44) a. Je hebt 't gezien
you have it seen
b. * Heb 't je gezien?
'Did you see it?'
c. Heb je 't gezien?

If the verb is in AgrS in (44a), and the clitic is adjoined to AgrS, then in (44c) the clitic is adjoined to the verb trace, which is generally assumed to be impossible. Similarly if the clitic is left adjoined to a lower functional head which the verb has to move through on its way to C, e.g. T.

This problem cannot be solved rightaway, but we will see in section 5.2.3 that the verb moving to C actually skips AgrS, so that the object clitic will not be adjoined to a trace in (44c).

3.4 Conclusion

The distribution of object clitics in Dutch shows that there must be a functional head position lower than C and to the left of the VP in Dutch. This forms empirical support for an analysis of verb movement along the lines of section 2, with the verb in AgrS in subject initial main clauses in Dutch. A second empirical argument will be provided by those dialects of Dutch and German that display complementizer agreement.

4. Complementizer Agreement in Germanic dialects

4.1 The Data

In a number of dialects of Dutch (South Hollandic, Zeeuws Flemish, West Flemish, East Flemish, Groningen, East Netherlandic, Brabantish, Limburgish) and German (Bavarian, Luxemburgish, many others) the complementizer shows person and/or number agreement with the subject.[23] In the following examples, the a-sentences display complementizer agreement, and the b-sentences present control cases with either different complementizer agreement or no complementizer agreement at all.[24] (The characters in brackets are only present for orthographic reasons.)

(45) *West Flemish* (Haegeman 1990)

a. da-n-k ik kom-(e)n
   that-1SG-scl I come-1SG
b. da-t-j ij werk-t
   that-3SG-scl he work-3SG

(46) *South Hollandic* (Van Haeringen 1939)

a. dat-(t)e ze kom-(m)e
   that-PL they come-PL
b. dat ze kom-t
   that she come-3SG

(47) *Groningen* (Van Ginneken 1939)

a. of-s toe kom-s
   whether-2SG you come-2SG
b. of ik kom
   whether I come-1SG

(48) *Luxemburgish* (Bruch 1973)

a. Géi wuer s de wëll-s
   go where 2SG you want-2SG
b. Wess de nët wuer en an d'Vakanz geet?
   know you not where he on the vacation goes

(49) *Munich Bavarian* (Kufner 1961)

a. damid-ds komm-ds
   so that-2PL come-2PL
b. damid ich komm
   so that I come-1SG

In the examples in (45)-(48), the agreement morphology on the complementizer is identical to the agreement morphology of the verb. This is not necessarily the case, however, as the following examples bear out.

(49) *Brabantish*

a. dat-de gullie kom-t
   that-2PL you come-2PL
b. dat ik kom
   that I come

(50) *West Flemish* (Haegeman 1990, Goeman 1980)

   da-∅-j gie kom-t
   that-2SG-scl you come-2SG

(51) *East Netherlandic* (Van Haeringen 1958)

a. dat-(t)e wij speul-t
   that-1PL we play-1PL
b. dat zij speult
   that they play-3PL

4.2 AGR-to-C Movement

Complementizer agreement is problematic for the theoretical assumptions made in this article. First, we expect agreement to be located in a designated functional head lower than C, namely Agr. Second, we expect agreeing complementizers to be in a Spec-Head configuration with the subject, which is never the case. Compare (52) with the a-sentences in (45)-(47).

(52) a. * ik da-n-k komen
   b. * ze datte komme
   c. * toe ofs koms

Notice that when the complementizer agreement and the verbal agreement differ, it is the verbal agreement that shows up when the verb and the subject are in a Spec-Head configuration (i.e., in subject initial main clauses). Compare (53) with the a-sentences in (49)-(51).

(53) a. Gullie kom-t/*kom-de
   b. Gie werk-t/*werk-∅
   c. Wij speul-t/*speul-e

This shows that the complementizer agreement is somehow not ordinary Spec-Head agreement. Third, it is peculiar that complementizer agreement and verbal agreement are both present in a sentence. In this respect, complementizer agreement has a different status from agreement on *do*-supporting elements in English and dialects of Dutch:

(54) a. It does not matter/*matters
   b. Ik doe wel efkes de hond uitlaten/*uitlaat
      I do-1SG adv adv the dog walk-INF/walk-1SG
      'I'll walk the dog'

It should be noted that both complementizer agreement and verbal agreement reflect agreement with the subject. The fact that complementizer agreement and verbal agreement can be instantiated simultaneously suggests that overt morphological agreement is just a reflex of the presence of abstract morphological agreement features in the sense of Chomsky (1991). These facts therefore support the checking theory of inflectional morphology, and seem to argue against the hypothesis that inflectional morphology is combined with the verb through movement and adjunction.

The question that complementizer agreement phenomena pose is therefore the following: What is complementizer agreement a morphological reflex of? Here, I would like to formulate a crucial hypothesis. **The hypothesis is, that complementizer agreement is a morphological reflex of movement of the head of the AgrS projection to C (AgrS-to-C)**.

This hypothesis eliminates the two remaining theoretical problems that the complementizer agreement phenomena pose. First, since Agr moves to C, the agreement can be properly represented in a functional head lower than C, prior to movement. This is what we expect given our set of assumptions. Second, since agreement originates in a lower functional head, we expect subject agreement to be licensed in the specifier position of that head. This explains why an agreeing complementizer never enters into a Spec-Head agreement relation. In short, complementizer agreement derives from a lower functional head, which is the designated head for subject agreement licensing.

4.3 Economy

The next question to ask is: Why would Agr-to-C movement take place, and does it not violate general requirements of economy of derivation and representation?

Movement takes place to meet morphological licensing requirements only. Let us assume, again following Chomsky (1991), that AGR contains both a feature for the licensing of an NP (an N-feature) and a feature for the licensing of a verb (a V-feature). Neither N-features nor V-features are interpretable at the interface levels, so both have to be eliminated. As before, features are eliminated by checking them. Some features may be strong (PF-visible), and have to be eliminated before the Spell Out point (’at S-structure’). Therefore, if a feature is strong, it triggers movement in overt syntax.

It is an open question how many things have to move in order for checking to be able to proceed. In Chomsky (1991) it is assumed that movement of an NP to a designated specifier position is sufficient to check and eliminate the relevant N-feature. Thus, movement of the subject to Spec,AgrS eliminates a strong N-feature of AgrS. However, it is also possible that for checking of N-features to proceed, something must happen to AgrS as well. We saw (in section 2) that in the case of checking of the feature [+wh], C had to be filled by a lexical element in order for feature checking to take place. I will assume that the same applies to AgrS. Thus, for checking of the N-feature of AgrS to take place, both Spec,AgrS and AgrS itself must be lexically filled.

The AGR-to-C movement hypothesized in section 4.2 now follows on the assumption that the N-feature of AgrS is strong in complementizer agreement dialects, and that movement of AGR-to-C is a way of lexicalizing AgrS. This is not implausible, given the fact that this movement creates a chain the head of which is adjoined to a lexical element.[25] Once AgrS is lexicalized by movement of Agr to C and the subject NP is moved to Spec,AgrSP, the strong N-feature of AgrS can be checked and eliminated, so that it will not interfere with Full Interpretation at PF.

4.4 Conclusion

In this section we have formulated the hypothesis that in dialects of Dutch and German which show complementizer agreement AgrS moves to C in order to make checking of the N-feature of AgrS (i.e., Nominative Case/subject agreement licensing) possible. We analyzed complementizer agreement as a morphological reflex of Agr-to-C movement.

5. Verb Second Revisited

An important assumption that we made in section 4 was that complementizer agreement differs from ordinary Spec-Head agreement because it is a morphological reflex of Agr-to-C movement. This explains among other things why complementizer agreement, if present, rarely shows a full paradigm, and why it is a disappearing phenomenon (Vanacker 1949). This also makes it possible to widen the scope of the Agr-to-C hypothesis. Instead of saying that Agr-to-C takes place only when there is a morphological reflex of it, we could say that it takes place in all varieties of Dutch and German, even in the standard varieties, where no overt complementizer agreement exists. This is

what I will crucially assume in the remainder of this article. It will appear that the Agr-to-C hypothesis provides a natural explanation for the asymmetry between main and embedded clauses in (1)-(9), which is fully compatible with the minimal assumptions that we started out with.

5.1 Dutch Sentence Structure

Sections 2, 3, and 4 all point to the existence of a functional head lower than C and higher than VP in Dutch. The evidence in sections 2 and 3 indicates that this functional head should be located to the left of the VP. The evidence in section 4 merely points to the presence of an AgrS position, not to the actual position of this head. However, it is easy to show that this functional head should also be located to the left of the VP.

Recall that in those dialects of Dutch where the complementizer agreement and the verbal agreement are different, it is the verbal agreement that shows up on the verb in subject initial main clauses, not the complementizer agreement. See (53) and (55).

(55) *East Netherlandic*

a. dat-e wij speul-t
   that-1PL we play-1PL
b. Wij speul-t/*speul-e

(56) *Brabantish*

a. dat-de gullie kom-t
   that-2PL you come-2PL
b. Gullie kom-t/*kom-de

(57) *West Flemish*

a. dat-∅-j gie werk gao-t een
   that-2SG-scl you work go-2SG have
b. Gie gao-t/*gao-∅

However, in non-subject initial main clauses, the verb shows the complementizer agreement in these dialects.

(58) *East Netherlandic*

a. Wat speul-e/*speul-t wij?
   what play-1PL we
b. Vandaag speul-e/*speul-t wij
   today play-1PL we

(59) *Brabantish*

a. Wanneer kom-de/*kom-t gullie?
when come-2PL you
b. Merrege kom-de/*kom-t gullie
tomorrow come-2PL you

(60) *West Flemish*

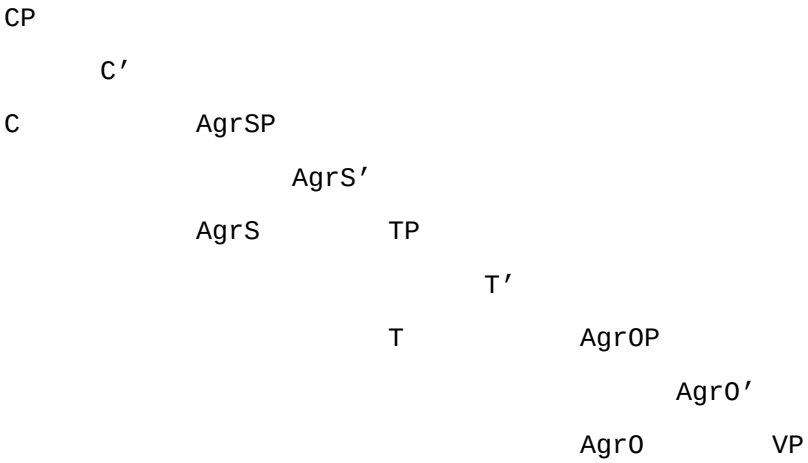
a. Wanneer goa-∅-j/*goa-t-j gie werk een?
when ga-2SG-scl you work have
'When are you going to have a job?'
b. Morgen goa-∅-j/*goa-t-j gie werk een
'Tomorrow you are going to have a job.'

If the complementizer agreement is a reflex of Agr-to-C movement, we must conclude that the finite verb in non-subject initial main clauses in (58)-(60) is in C. This was already concluded for Standard Dutch and Standard German by Den Besten (1976), on independent grounds. By the same token, the finite verb cannot be in C in subject initial sentences, since the verb shows the verbal agreement here, as in (55b). Since the verb is not in the VP and not in C, it must be in a lower functional head. Consequently, AgrS must be located to the left of the VP in these dialects of Dutch.

Since complementizer agreement is just a morphological reflex of abstract Agr-to-C movement, and we assume that this abstract Agr-to-C movement takes place in all varieties of Dutch and German, the conclusion concerning the position of AgrS in Dutch dialects carries over to Standard Dutch and German.

It seems, then, that sections 2, 3, and 4 all point to the presence of a functional head position to the left of the VP and to the right of C in Dutch. Since there is no evidence for functional head positions to the right of the VP in Dutch, and considerable evidence for functional head positions to the left of the VP in Dutch, the optimal hypothesis is that Dutch has the same sentence structure as has been proposed independently for English and French (Chomsky 1989, building on much recent work), namely the structure in (61).[26]

(61)



The AgrS is the lower functional head the presence of which was suggested in the preceding sections. It is the head where the finite verb is in subject initial main clauses, it is the head the object clitics adjoin to in Standard Dutch, and it is the locus of subject-verb agreement needed for the description of the complementizer agreement facts in section 4.

The Spec,AgrSP is the designated position for checking the morphological features of the subject. Both the dialects that show complementizer agreement and the standard varieties of Dutch and German have verb movement to AgrS in subject initial main clauses, and Agr-to-C movement whenever a lexical element occupies the C position (i.e. in embedded clauses with a lexical complementizer, and in non-subject initial main clauses). These movements must be driven by the need to eliminate a strong (PF-visible) feature. The minimal assumption is that this strong feature is the same feature both in the dialects and in the standard varieties, since the dialects and the standard varieties have the same pattern of verb movements (basically, the pattern in (1)-(9)). We must therefore conclude that AgrS in Standard Dutch and German has a strong N-feature, just like AgrS in the dialects of Dutch and German.

5.2 Verb Movements in Dutch

From the Dutch sentence structure in (61), and the assumptions laid out in section 1, and the hypothesis that AgrS in Dutch has a strong N-feature, the analysis of verb movement in Dutch follows straightforwardly.

Because in Dutch the N-feature of AgrS is strong, checking of this feature must take place before the Spell Out point. We also assumed that for this to

take place, AgrS must be associated with a lexical category, either by moving the verb to AgrS, or by moving AgrS to C.

From these assumptions, it follows that the verb should be in AgrS in subject initial main clauses. There is no lexical complementizer for Agr to move to, therefore the only way to eliminate the strong N-feature of AgrS is to move the verb to AgrS. Once the verb is in AgrS, feature checking can proceed, and no further movement is needed. This takes care of sentences of the type in (1).

In embedded clauses, Agr moves to C, and no verb movement has to take place. The verb therefore stays in the VP until LF. This takes care of (4)-(9).

Finally, in topicalizations and wh-questions, checking requirements on [+operator] marked elements forces these elements to move to Spec,CP. This forces the verb to move to C, again on the assumption that lexicalization is needed for checking to be able to proceed. In these cases, then, the verb will be in C. This takes care of sentences of the type (2)-(3).

All these movements follow from rather minimal assumptions, and there is considerable empirical evidence that this is what actually happens, as demonstrated in the preceding sections.

5.3 The Asymmetry Between Main and Embedded Clauses

Given the sentence structure of Dutch in (61) and the identification of the position of the verb in the various constructions, several questions remain.

1. Why does Agr-to-C take precedence over V-to-Agr?
2. Why does the verb in AgrS has the verbal agreement and the verb in C the complementizer agreement?
3. What explains the fact that object clitics never show up on the verb in C?
4. Why does topicalization trigger verb movement in Dutch but not in English?
5. What is the status of Agr-to-C in the other Germanic languages?

Most of these questions receive a straightforward answer without further assumptions.

5.3.1 Precedence of AGR-to-C over V-to-AGR

If Agr-to-C takes place, V-to-Agr before Spell Out is not allowed, by economy. The N-feature of AgrS can be eliminated by Agr-to-C (and NP-to-Spec,AgrS), and once the checking and elimination of the N-feature has taken place, no further movements are allowed. This takes care of the general complementarity of lexical complementizers and fronted verbs in Dutch and German.

If C is absent, as is optionally the case in German embedded clauses ((10-(12)), Agr-to-C cannot take place, and therefore verb movement to AgrS must take place, just like in subject initial main clauses.[27]

In embedded questions, there is no overt complementizer. It is generally assumed that in these constructions there is a lexical, but empty complementizer (see Culicover 1991, among others). This again explains the lack of verb movement in embedded questions. In English, the verb does not move to C in embedded questions.

(62) a. He did not come
b. Why did not he come?
c. * Why he did not come?
d. * ..why did not he come
e. ..why he did not come

In Dutch, the verb does not even move out of the VP in embedded questions.

(63) a. ..dat hij niet kwam
that he not came
b. Hij kwam niet
c. Waarom kwam hij niet?
why came he not
d. * Waarom hij kwam niet?
e. * Waarom hij niet kwam?
f. * ..waarom kwam hij niet
..why came he not
g. * ..waarom hij kwam niet
h. ..waarom hij niet kwam

On the assumption that there is a non-overt lexical complementizer in embedded questions, the total lack of verb movement in embedded questions in Dutch receives the same explanation as the lack of verb movement in other embedded clauses. The non-overt lexical complementizer can be the target for Agr-to-C, associating AgrS with a lexical category, so that the checking of the N-feature can proceed.

As is well known, the complementizer in embedded questions can be overt in Dutch.

(64) ..waarom (of)/(dat)/(ofdat) hij niet kwam
why if that ifthat he not came

In dialects with complementizer agreement, the agreement shows up on this complementizer, as the following South Hollandic fact shows (cf. (46)).

(65) Ik zel es hore watoffe ze zegge
I will prt hear what-if-PL they say-PL

Interestingly, in these dialects the complementizer in embedded questions is optional as well. If the complementizer is absent, the complementizer agreement may still show up (see also (48a)).

(66) Ik zel es hore watte ze zegge
I will prt hear what-PL they say-PL

The optimal assumption here is that the lexical complementizer may be overt or non-overt, and that in either case the complementizer serves as a target for Agr-to-C movement, blocking verb movement.

Thus, the complementary distribution of lexical complementizers and finite verbs falls out from the Agr-to-C hypothesis, and it is unnecessary to assume that the verb always moves to C to obtain this result. Moreover, we noted in section 2.1.4 that the assumption that the verb always moves to C does not really explain the complementary distribution of complementizers and verbs, since it is not clear what property of C forces verb movement if the complementizer is absent and blocks verb movement if the complementizer is present. Under the present analysis, this is clear. It is not a property of C, but a property of AgrS that forces lexicalization of AgrS before the Spell Out point. Lexicalization can take place by parasitizing on a lexical complementizer, or, in the absence of a lexical complementizer, by verb movement.

The one thing that is not clear in this approach is why Agr-to-C movement takes precedence over V-to-Agr movement. In other words, it could be the case that in sentences of the type in (4) verb movement to AgrS takes place, lexicalizing AgrS, and obviating the need voor Agr-to-C movement.

This, however, follows from the general economy principle that movement takes place as late as possible (Chomsky 1991). Nothing we have said so far forces verb movement before the Spell Out point. In fact, it is clear from the position of the verb in embedded clauses that the verb need not move until LF. There is no reason to stipulate that AgrS has a strong V-feature, which would force verb movement before Spell Out. By economy, therefore, the verb in Dutch

does not move in overt syntax, unless there is no other way to check and eliminate the strong N-feature of AgrS. If the Agr-to-C hypothesis is correct, movement of Agr to C is another way to ensure elimination of the strong N-feature of AgrS. This other way does not involve verb movement, and therefore, by economy, Agr-to-C movement takes precedence over verb movement.[28]

5.3.2 Verbal Agreement and Complementizer Agreement

As we have seen in section 4, in some cases the complementizer agreement and the verbal agreement are different. (67) is an example of the East Netherlandic dialect studied by Van Haeringen (1958).

(67) dat-(t)e wij speul-t
that-1PL we play-1PL

A verb in C has the complementizer agreement in these cases, but a verb in AgrS has the verbal agreement.

(68) a. Wij speul-t/*speul-e
b. Wat speul-e/*speul-t wij?

A combination of verbal agreement and complementizer agreement on the verb is impossible.

(69) a. * Wij speul-t-e/speul-e-t
b. * Wat speul-t-e/speul-e-t wij?

In section 4, we have assumed that complementizer agreement is a morphological reflex of Agr-to-C movement. This movement takes place whenever C is lexically filled. Therefore, we expect the verb in C to display complementizer agreement just like the complementizer. The verbal agreement has a different status. As we have been assuming throughout, verbs enter the syntactic component in fully inflected form. The inflection corresponds with an abstract morphological feature that has to be checked at some point in the derivation.

In subject initial main clauses, the verb is not in C, therefore no Agr-to-C movement can take place. Hence, the morphological reflex of Agr-to-C, complementizer agreement, never shows up. Also, the combined forms in (69a) are not expected on this account.[29]

In non-subject initial main clauses, the verb moves to C. As expected, in these cases the verb shows complementizer agreement.

The question now becomes: What blocks the combination of verbal agreement and complementizer agreement in (69b)? Possibly, such a combination could be ruled out on economy considerations. Since both complementizer agreement and verbal agreement instantiate subject agreement, realization of both of them would make one superfluous. Suppose that the relation between overt and abstract morphology is such that in the absence of overt morphology abstract morphology can still be present (as we have been assuming here), but that in the presence of overt morphology the corresponding abstract morphology cannot be absent. If that is the case, abstract subject agreement would be present twice in (69b). If checking eliminates only one instantiation of an abstract agreement feature (perhaps along the lines of Hoekstra's 1991 uniqueness of licensing principle), the other abstract agreement feature would remain unchecked and give rise to a violation of Full Interpretation at the Interface levels.

Therefore, a derivation starting out with a verb form carrying verbal agreement and ending in C before Spell Out, will never converge.[30]

5.3.3 Object Clitics and Verb Movement

In section 3, we concluded that object clitics in (Standard) Dutch are adjoined to a functional head lower than C. In this section, we have identified that lower functional head as AgrS. A problem that we could not solve in section 3, was why object clitics, though adjoined to the verb in subject initial main clauses, do not show up on the verb when the verb is in C.

(70) a. Je hebt 't gezien
you have it seen
b. * Heb 't je gezien?
'Did you see it?'
c. Heb je 't gezien?

This is a problem on the assumption that the finite verb moves from AgrS to C, leaving a trace, since in general clitics cannot adjoin to traces (Kayne 1990). However, if Agr-to-C takes place, there is no reason for the verb to move through AgrS on its way to C.

Recall that in a construction like (70b) the verb moves to C to assist in the checking of the feature [+wh]. In (70a) the verb moves to AgrS to assist in the checking of the N-feature of AgrS. However, this movement is only allowed when there is no other way to make sure that checking of this feature can proceed. By assumption, Agr-to-C movement is another way to allow checking of the N-feature, and therefore V-to-Agr is blocked when Agr-to-C takes place. This explains the general complementarity of lexical complementizers and

fronted finite verbs. Similarly, if V were to move directly to C, Agr-to-C movement could take place, and there would be no need for the verb to assist in the checking of the N-feature of AgrS by moving to AgrS itself.[31,32]

Since in Dutch the verb skips AgrS on the way to C, we expect object clitics to never show up on the verb in C in Standard Dutch.[33] The facts in (70) are not problematic for the analysis advanced here, therefore.

5.3.4 Topicalization

Topicalization in Dutch behaves like wh-movement. It triggers subject verb inversion in main clauses. Certain topicalizations in English have the same property.

(71) a. Never before have I seen such a beautiful girl
b. So in love with you am I

In general, however, topicalization in English does not cause subject-verb inversion.

(72) a. Yesterday all my troubles seemed so far away
b. * Yesterday seemed all my troubles so far away

What causes this difference between English and Dutch?

Topics in both English and Dutch must be marked with a special feature that forces movement to a designated position. There are several options here. The designated position for topics could differ from language to language. For instance, in English this position could be a position adjoined to IP, whereas it would be Spec,CP in Dutch. On the other hand, it could be that topics in both languages move to the same designated position, but that in Dutch the feature that triggers this movement is strong, and therefore has to be eliminated before Spell Out. But this would relegate topicalization in English to pragmatics (since the movement would not be triggered by the need to eliminate a strong feature). Thirdly, it could be the case that in both English and Dutch topics move to Spec,CP and that the feature triggering topicalization is strong, but that in English, contrary to Dutch, the strong feature can be eliminated if C is not filled. Neither of these options seems very attractive, and I will leave the matter for future research.

5.3.5 Agr-to-C in Other Germanic Languages

The strongest hypothesis is that Agr-to-C explains the asymmetry between main and embedded clauses with respect to the position of the finite verb in all

Germanic languages that display it. Conversely, the absence of such an asymmetry ought to follow from the lack of Agr-to-C movement.

The Germanic languages that show the relevant asymmetry are Dutch, German, Frisian, and the Mainland Scandinavian languages (Danish, Norwegian, Swedish). The Germanic languages that do not show the relevant asymmetry are Icelandic and Yiddish, and English.

Only Dutch, German and Frisian have remnants of complementizer agreement. In the Mainland Scandinavian languages no trace of complementizer agreement has been attested in the literature. It is often said that these languages lack agreement, which is a statement about morphological agreement. There is no overt person agreement morphology in the Mainland Scandinavian languages (Haugen 1982). However, since agreement is an abstract syntactic relation we cannot simply conclude from the absence of an overt agreement paradigm that a language lacks agreement. Saying that Swedish lacks agreement is like saying English lacks Case.

There are several independent reasons to assume that Mainland Scandinavian languages do have abstract agreement. First, Mainland Scandinavian dialects do show overt person agreement (see Trosterud 1989). Second, the Mainland Scandinavian languages do have different morphology for infinitivals. Infinitivals are generally (but see e.g. Stowell 1981) considered to be properly characterized by [-tense], but clearly they lack agreement as well. Thus, it could be the case that what is relevant in the distinction between finite verbs and infinitivals in Mainland Scandinavian is the presence or absence of an agreement feature. Third, Wexler (1991) shows that children acquiring Germanic pass through a stage where they master agreement and verb movement, but not tense (i.e., not the difference between present and past tense). This holds for both Dutch (an overt agreement language) and Swedish. If Swedish were to lack agreement altogether, we cannot express Wexler's findings in a satisfactorily generalizing way. On the other hand, if Swedish does have abstract agreement, we can simply say that at this early stage children acquire abstract agreement.[34] This ties in neatly with the analysis in this paper, according to which verb movement in subject initial main clauses is triggered by agreement.

I will therefore assume that the absence of morphological agreement does not exclude the presence of abstract agreement. Consequently, the Mainland Scandinavian languages can be said to have Agr-to-C, and the fact that these languages show a similar asymmetry between main and embedded clauses as Dutch and German follows straightforwardly.

Icelandic and Yiddish, on the other hand, show finite verb movement even in embedded clauses. This follows if Icelandic and Yiddish for some reason lack Agr-to-C, or if the feature specification of Agr or Tense in Icelandic and Yiddish differs to the extent that these languages have a strong (PF-visible) V-feature somewhere. Either assumption would force overt verb movement, to eliminate strong features before the Spell Out point. A number of tricky questions arise here, among others having to do with embedded topicalization, so I will not discuss the matter further at this point.

English never has verb movement to AgrS. As noted by Kayne (1989), the subject and the finite verb are never obligatorily in a Spec-Head configuration in overt syntax.

(73) John probably has not kissed Mary

Chomsky (1991) concludes from this that movement of the subject to Spec,AgrSP is enough to check and eliminate the N-feature of AgrS. But in order to account for verb movement in Germanic, we have crucially assumed that AgrS must be lexicalized for checking to take place. Instead of proposing uninteresting paramatrization, let us put this problem aside for further study.[35]

5.4 Conclusion

In this section we have made the following proposals concerning the syntax of Dutch and closely related Germanic languages.

1. Dutch has the same syntactic structure as English and French
2. Dutch has abstract Agr-to-C movement
3. Dutch AgrS has a strong N-feature

(where 'Dutch' stands for 'Dutch, German, Frisian, Norwegian, Danish, Swedish'.)

Together, these proposals yield the verb movement facts illustrated in (1)-(9). The underlying assumptions are those expressed in section 1, from Chomsky (1991). In addition to that, we had to assume that for feature checking to take place, the head of a functional category must be filled by a lexical category or by a trace.

We also found that verb movement to C may (or even must) skip AgrS. This explains why object clitics cannot appear on the verb in C in Standard Dutch.

The proposed analysis covers Dutch, German, Frisian, Danish, Norwegian, and Swedish. More needs to be said about Icelandic, Yiddish, and English, but I am hopeful that the surface differences between all these languages can be related to a minimal difference in strength of syntactic features.

In the final section, I will briefly point out two independent empirical arguments for Agr-to-C movement in Dutch.

6. Some Consequences

The arguments in this section are necessarily sketchy and in need of further research.

6.1 '*That*-trace' Effects

As is well known, English and Dutch differ with respect to long subject extraction. In English, this is only allowed if the complementizer is dropped.

(74) a. Who do you think (*that) t did it?
b. What do you think (that) John did t ?

(75) a. Wie denk je *(dat) t het gedaan heeft?
who think you that it done has
b. Wat denk je *(dat) Jan t gedaan heeft?
what think you that John done has

As can be seen in (75), in Dutch, the combination of complementizer and subject trace is not ungrammatical.[36]

In general, the *that*-trace effect is viewed as a violation of the ECP. Following Rizzi (1990a), we can say that a subject trace must be head governed, and that the complementizer in English does not count as a head governor. Rizzi argues that complementizers are generally not head governors, but can be turned into a head governor by assuming agreement features. The head assumes agreement features by being in a Spec-Head agreement relation with a trace in Spec,CP. This explains, in his analysis, the *que-qui* alternation in similar contexts in French and West Flemish.

(76) a. Qui est-ce que tu crois t qui/*que nous a vu?
who do you think that us has seen
b. Qui est-ce que tu crois t que/*qui nous avons vu?
who do you think that we have seen

(77) a. den vent da Valere peinst t da/die t ons gezien eet
the man that Valere thinks that/who us seen has
b. den vent da Valere peinst t da/*die me wunder t gezien een
the man that Valere thinks that/*who we seen have

Rizzi's assumption is that French *qui* is *que*+agreement. In case of object extraction, as in (76b), no Spec-Head agreement in CP obtains, therefore *que* appears and *qui* is out. Being an agreeing complementizer, *qui* is a head governor for the subject trace, but *que* is not. Similarly, West Flemish *die* would be *da*+agreement.

There are two problems here. First, unlike in French, the alternation is optional in West Flemish. This suggests that *da* is a head governor in (77a). Second, *die* cannot be *da*+agreement, because we know independently that West Flemish has complementizer agreement, and the agreeing form of *da* never looks like *die*. This suggests that *da* already has agreement, and that the *da*-*die* alternation has nothing to do with either agreement or head government.

Both problems disappear under the assumption that Agr-to-C takes place in West Flemish. This turns the complementizer into a head governor, allowing long subject extraction. Since we have assumed that Agr-to-C also takes place in varieties of Dutch and German where no overt complementizer agreement exists, the same Agr-to-C movement explains the general lack of that-trace effects in Dutch and related languages.[37]

6.2 Semi Prodrop

Dutch is not a pro-drop language, contrary to Italian.

(78) a. *(Hij) komt [Dutch]
he comes
b. *(Het) regent
it rains
c. *(Het) is duidelijk, dat..
it is clear that

(79) a. (Gianni) venga [Italian]
John comes
b. (Il) piove
it rains
c. pro e chiaro, che..

Remarkably, Dutch allows prodrop of pleonastic *it* ('semi-prodrop') when C is occupied.

(80) a. ..dat *(hij) komt
b. ..dat *(het) regent
c. ..dat (het) duidelijk is, dat..

(81) a. Vandaag komt *(hij)
today comes he
b. Vandaag regent *(het)
c. Vandaag is (het) duidelijk, dat..

Far from being able to account for this phenomenon, I would like to note that semi-prodrop is possible in exactly the same contexts where Agr-to-C takes place.[38] If semi-prodrop is contingent on movement from AgrS to C, then we predict that if Italian has a similar movement, that in the relevant constructions only pleonastics could be dropped.

If AUX-to-COMP movement is movement to C (cf. Rizzi 1982), this would be the relevant case. As is clear from (82), in AUX-to-COMP sentences, only the pleonastic subject can be empty (Rizzi 1982, Cinque 1990).

(82) a. Eravamo convinto esser *(Gianni) inadatto a quel compito
we-were convinced to-be John unsuitable for the task
b. Eravamo convinto esser pro chiaro, che..
we-were convinced to-be (it) clear that

Without AUX-to-COMP, lexical subjects in infinitivals are ungrammatical in Italian.

(83) * Eravamo convinto Gianni esser inadatto a quel compito
we were convinced John to-be unsuitable for the task

Rizzi (1982) therefore assumes that the AUX-to-COMP movement is driven by the Case Filter, and that Nominative Case is assigned under head government in (82a). From the present perspective, it is desirable to have all Nominative Case (subject-verb agreement) assigned (checked) in Spec-Head configurations. This can be done in the AUX-to-COMP cases if we assume that movement from Agr to C turns a non Case-assigner (non-checker) into a Case-assigner (checker), by leaving a trace.[39] If so, this is exactly the same mechanism that turns AgrS into a N-feature checker in Dutch embedded clauses and V-to-C cases. The parallelism between Italian and Dutch in these cases would then be expected.[40]

6.3 Conclusion

If the *that*-trace and semi-prodrop phenomena of Dutch and related languages can be analyzed and explained along the lines indicated, these phenomena provide independent empirical support for the hypothesis that in Dutch and related languages abstract movement from AgrS to C takes place.

7. Conclusion

An explanatory account of the verb second phenomenon of the Germanic languages should be embedded in a general theoretical framework, and should be fully consistent with it. The framework adopted in this article is the theory of Economy of Derivations and Representations, which developed out of the Principles and Parameters approach (Chomsky 1991). In this framework, linear notions such as 'second position' are meaningless. Consequently, no explanatory account of the verb second phenomenon should make explicit reference to a second position.

'Second' effects are not unexpected in the Economy approach. In this approach, movements are caused by the requirement that syntactic features be licensed in specific positions and configurations. More exactly, abstract morphological features such as Case/agreement, [+operator], have to be licensed at some level of representation in heads and specifier positions of functional projections. Given the general notions of X-bar Theory (Chomsky 1986b), a 'second' effect shows up whenever both the head and the specifier position of a functional projection are filled in overt syntax (and there are no overt elements present in higher functional projections). If we can explain why this is generally the case in main clauses in Dutch and related languages, we have an account for the verb second effect without making reference to a second position.

This is what I set out to achieve in this article. The crucial hypothesis here is that Dutch AgrS has a strong N-feature. An additional assumption that I need is that checking in a Spec-Head configuration in Dutch can only take place if the head is associated with a lexical category. All other features of the analysis are provided by the general theory of Economy of Derivation and Representation.

The verb second phenomenon in Dutch can now be explained as follows. The N-feature of AgrS is strong, and therefore has to be checked in overt syntax. For this to take place, the subject must move to Spec,AgrS, and AgrS itself must be associated with a lexical category. The subject moves to Spec,AgrS in overt syntax in all types of clauses. In subject initial main clauses, the verb moves to AgrS in overt syntax, so that AgrS is associated with a lexical category and the N-feature can be checked. In embedded clauses, AgrS moves to C in overt syntax if C is occupied by a lexical complementizer (as is always the case in Dutch). Thus, AgrS is associated with a lexical category, and verb movement in overt syntax is superfluous. Therefore, movement of the verb has to wait until LF. In main clauses where a non-subject is in the first position

(i.e. in topicalizations and wh-questions), the verb moves to C overtly, for reasons that are not related to the features of AgrS. If that happens, again Agr-to-C movement can take place to associate AgrS with a lexical category, and overt verb movement to or through AgrS is superfluous. Subjects and non-subjects move to different positions. The subject moves to Spec,AgrS to check its N-feature. Non-subjects move to Spec,CP to check their [+operator] feature. Thus, these movements are driven by morphological requirements in the sense of Chomsky (1991), and target designated positions. If overt verb movement is needed to assist in the feature checking, we must conclude that the verb moves to different positions in the two types of construction.

This analysis covers all Germanic languages that show a main clause - embedded clause asymmetry with respect to the position of the finite verb (Dutch, Frisian, German, Danish, Norwegian, Swedish). A corollary of the analysis is that these languages have the same syntactic structure as has been proposed independently for English and French. The differences in overt verb movement that exist between these languages in overt syntax have been reduced to an arbitrary feature specification of a functional head, a welcome result.

I have presented empirical evidence supporting both the proposed syntactic structure of Dutch and the hypothesis of Agr-to-C movement. Evidence for the existence of a functional head below CP and to the left of VP is provided by the distribution of subject and object clitics in Dutch and by the different forms of subject-verb agreement depending on whether a subject or a non-subject is in the first position. Evidence for Agr-to-C movement is provided by a range of complementizer agreement facts in Dutch and German dialects.

In this analysis, AgrS is the pivot for all the overt movements. No special reference has to be made to a feature specification of C. This is also a welcome result, because parametrization is done in terms of morphological features in the sense of Chomsky (1991), and C is not a projection of such features. The interaction of Agr-to-C and V-to-Agr explains all the complementary distribution effects of complementizers and fronted verbs in Dutch, German, etc.

I have found no evidence whatsoever for the existence of functional heads to the right of VP in Dutch and German. Moreover, I have argued that the hypothesis that in Dutch and German (and Frisian and Mainland Scandinavian) the verb always moves to C overtly (Den Besten 1976, Vikner & Schwartz 1991), lacks both theoretical and empirical support.

Further study on a number of topics is needed. Especially, the assumption made here that checking in a Spec-Head configuration requires lexicalization of the head is subject to further investigation. Possibly, this will also shed more light on the question why topicalization triggers inversion in Dutch but not in English. A number of other questions remain, as indicated in the text. However, if the analysis proposed here is on the right track, the remaining problems are interesting and worth pursuing. The result of that will determine whether we have come any closer to a full understanding of the phenomena of verb second.

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Notes

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1. There are certain exceptions to the generalization that the verb is always in second position in finite main clauses in Dutch. Apparently, the verb occupies the first position in imperatives, yes/no-questions, and constructions of so-called narrative inversion.

(i) Maak je niet dik
make yourself not fat
'Keep your shirt on'
(ii) Hou je van me?
hold you of me
'Do you love me?'
(iii) Zegt die muis:...
says that mouse
'And then the mouse said...'

On the other hand, a small group of adverbial particles can precede a first consituent that precedes the verb:

(iv) Dus dat argument telt niet
so that argument counts not
'So that argument does not count'
(v) Afijn we leven nog
Well we live still
'Well, we're still alive'

It has been argued that yes/no-questions involve a null operator preceding the verb, which is overt in a number of languages (e.g. Polish). The verb third constructions in (iv) and (v) are arguably paratactic (cf. (vi-vii)).

(vi) Nederlands is een SOV taal dus dat argument telt niet
'Dutch is an SOV language so that argument does not count'
(vii) Hoera! We leven nog.
'Hurray! We're still alive.'

The verb first orders in imperatives and narrative inversion cases are harder to cast into the verb second pattern, and may contain genuine exceptions to the generalization that the verb is always in second position in Dutch.
A further set of exceptions to the general verb second character of Dutch is presented by constructions containing a sentence connecting particle like 'dan' *then* or 'nu' *now*. These particles may separate the first constituent and the verb (viii) and may also appear *inside* the first constituent (ix).

(viii) Het voordeel *nu* is, dat...
'Now the advantage is, that...'
(ix) [Het voordeel *nu* van deze benadering] is, dat...
'Now the advantage of this approach is, that...'

These particles look like second position clitics of the type studied in Wackernagel (1892). I will not discuss them here.

2. In a construction like (i), where the topicalized constituent is heavily stressed, and is counterbalanced by a focussed constituent in the remainder of the sentence, embedded topicalization of arguments is acceptable (Neeleman 1990). As in (5b), the verb cannot be in second position in the embedded clause in this case.

(i) ..dat een huis met een TUINTJE zelfs JAN niet zou huren
that a house with a little GARDEN even JAN not would rent
'that even JOHN would not rent a house with a little GARDEN'

3. Whether the finite verb precedes or follows the past participle appears to be completely optional. However, the verb and the participle can never be separated by intervening material.

4. For this approach to work, we must assume that an empty complementizer is present in embedded questions ((6),(9)). This is a plausible assumption, given the fact that in languages that have verb second in wh-questions, such as English, no verb second takes place in embedded questions ((i-ii), cf. Rizzi 1990b), and given the fact that in Dutch, a lexical complementizer in embedded questions is possible as well (iii).

(i) Who did you see?
(ii) a. * ..who did you see
b. ..who you saw
(iii) ..waarom of ik een huis met een tuintje gehuurd heb
why if I a house with a little garden rented have

5. Frisian and the Mainland Scandinavian languages (Norwegian, Swedish, and Danish) also show the asymmetry between main and embedded clauses described here for Dutch. Evidence for verb movement in the Mainland Scandinavian languages, which are all SVO languages (in contrast to Dutch, German, and Frisian, which are SOV languages), is presented by the position of the finite verb with respect to sentence adverbs or the sentential negation (Kosmeijer 1986). Similar evidence leads to the conclusion that in Icelandic and Yiddish the finite verb always undergoes verb movement (Kosmeijer 1986, Den Besten 1990), and in English, never (except for *have* and *be*, cf. Pollock 1989).

6. In connection with the standard analysis of verb second, it is assumed (mostly tacitly) that the finite verb in embedded clauses is in an INFL position to the right of the VP. Since neither the presence of this INFL position to the right of the VP, nor the movement of the finite verb to it can be demonstrated, I choose not to share this assumption. Dutch being an SOV language, the clustering of verbs to the right in Dutch ('verb raising') can be described as V-to-V movement. Giusti (1991) argues that the infinitival marker *zu* in German (*te* in Dutch) is in the INFL-position to the right of the VP and that the infinitival adjoins to this position as an instance of verb raising, yielding the correct order *te*+infinitive. This argument is based on the assumption that inflected forms are created through movement and adjunction, and does not go through in the obvious alternative, according to which inflected forms are 'base-generated' as such, and have to be checked for their features at some point in the derivation (Chomsky 1991). In the checking theory of inflectional morphology, which I assume throughout (cf. Zwart 1988), Giusti's claim amounts to saying that in Dutch and German the infinitive (+*te*) moves vacuously to the

INFL position to the right in overt syntax. Since in so closely related languages as Danish and Norwegian the infinitive (+ the infinitival marker) clearly is VP-internal, the optimal assumption is that the infinitive plus infinitival marker is VP-internal in Dutch and German, too, and that the only difference between Danish/Norwegian and Dutch/German is that the former are SVO languages and the latter SOV languages. I will not discuss this issue further in this article.

7. In this approach, it is assumed that verbs, nouns, etc. enter the syntactic component in fully inflected form (see also note 6). Crucially, the assumptions explained in section 1 do not allow for derivations involving 'Affix Hopping' and lowering, as in Chomsky 1957 through 1989.

8. A note on terminology is in order. Chomsky (1991) argues that the ungrammaticality of certain constructions is not determined at LF but at a component of interpretation that is not strictly speaking part of the grammar. Vacuous quantification constructions are a case in point. Chomsky argues that the syntactic derivation of these constructions is completely grammatical, or 'converging'. The LF representation contains nothing but legitimate objects. In the terminology used in the text, these constructions are therefore 'fully interpretable', even though in the post-LF component of interpretation they will not receive a (correct) interpretation.

9. For more arguments that the three constructions in (1)-(3) are fundamentally different, see Zwart (1991a), Culicover (1991).

10. The most plausible assumption would seem to be that the verb moves to C only in main clauses, and not in embedded clauses, perhaps following ideas by Kayne (1982). According to this idea, the lexical element in the highest functional head determines the [+/- N/V] character of the clause as a whole, and main and embedded clauses differ in this respect. One problem with this approach would be that verb movement is ultimately only triggered by the morphological features of the verb, and it is implausible that the feature make-up of the verb would differ depending on whether the verb is in a main clause or in an embedded clause. Other requirements can make the verb move earlier (or, as I will argue, later), but never not move at all. For LF-movement of the verb to the complementizer, see Law (1991). Note that it is not immediately attractive to parametrize the strength of C within the present set of assumptions. The functional heads that are parametrized are Agr and T, both projections of morphological features of the verb. C is not a projection of morphological features of the verb. Since strength is defined in terms of PF-visibility of morphological features, parametrizing the strength of C is anomalous. On the other hand, not all parametrization can be reduced to strength of morphological features, if we are correct in assuming that (in some languages) the head of a functional projection must be lexicalized for checking under Spec-Head agreement to take place.

11. Some might argue that it is not really the case that some constituent always has to precede the verb in main clauses in Dutch, but that for pragmatic reasons when no constituent does, the sentence gets a particular reading (as in the verb-first constructions in footnote 1). But clearly our set of assumptions does not allow an additional movement (e.g. of the subject to the Spec,CP) to achieve an unmarked reading. Rather, the particular reading of imperatives, yes/no-questions and narrative inversion cases must be the result of an additional movement, presumably triggered by the presence of an operator-like element in Spec,CP along the same lines as in wh-questions (and, presumably, topicalizations in Dutch).

12. There is no want of attempts in the literature on Germanic to explain the hypothesized subject movement. There is no room to go into all of them here. See Vikner 1991 for a critical assessment of some of these attempts.

13. Since checking takes place in Spec-Head agreement configurations exclusively, the subject NP cannot be licensed by Head Government in embedded clauses.

14. To see that *'k* in (21a) is a real clitic and not a subject pronoun, consider the fact that in WestFlemish, a dialect of Dutch that in addition to clitics also has clitic doubling, *'k* triggers clitic doubling, unlike full pronouns (Haegeman 1990).

(i) a. ’k Werken ik
I(scl) work I(dbl)
b. * Ik werken ik

Haegeman (1991) shows that, apart from clitic doubling and object clitic placement, cliticization in Standard Dutch and West Flemish have the same properties (see Zwart 1991a and section 3 for Standard Dutch). Therefore we can safely assume that *’k* in both dialects is a clitic. Den Besten (1976) capitalizes on the fact that the 3SG clitic *ie* cannot appear in first position (ii). However, this appears to be a phonological phenomenon, since all other subject clitics can. In coordination, *ie* can appear in the second clause preceding the verb (iii).

(ii) * ie Komt
he (scl) comes
(iii) Hij wil wel, maar ie kan niet
he wants allright but he(scl) can not

Replacing *iedereen* in (18)-(20) by the full pronoun *ik* yields a grammatical sentence (but *ik* needs stress in the inversion cases).

15. Cinque (1990) argues that NP-gaps can be related to an antecedent through a different strategy than antecedent government. Therefore, they will always show a weaker island effect than PP-complements. However, NP-gaps and PP-gaps are equally bad in extraction out of embedded verb second clauses without inversion.

(i) a. * Mit wem glaubst du das Kind hatte geredet?
with whom think you the child had spoken
’Who do you think the child spoke to?’
b. Mit wem glaubst du hatte das Kind geredet?

This strengthens the point that the ungrammatical cases of extraction are not island violations.

16. One of the assumptions made here is that intermediate traces have the same features as their antecedent, and that they require a seperate checking operation. The former seems natural, but the latter does not straightforwardly follow. However, as Tada (p.c.) pointed out to me, many languages show a side-effect of long extraction on all intermediate CPs (e.g. Modern Irish, Chamorro, Ewe). Ideally, facts like these should also be explained by making use of the assumptions outlined in section 1. This may support the assumption that intermediate traces require an independent licensing operation.

17. As pointed out in Zwart (1991b) and Vikner & Schwartz (1991), the standard analysis of (embedded) verb second has an additional problem if we assume Rizzi’s (1990a) Relativized Minimality theory of extraction and follow Rizzi’s (1991) hypothesis that Spec,CP is an A-position if it is occupied by the subject. This would predict adjunct extraction out of embedded verb second clauses in German to be grammatical, since Spec,CP is an A-position in these cases (on the relevant assumptions) and therefore can be crossed without violating relativized minimality.

18. Other criteria for clitic status are the impossibility of being coordinated (i) or modified (ii).

(i) a. * te et me
you and me
b. toi et moi
(ii) a. * te avec ton frere
you with your brother
b. toi avec ton frere

19. For those speakers who do not consider the order of clitics to be free, it is the inverted order (DO-IO) that is the grammatical one. This forms an additional argument that the clitic placement is not scrambling.

20. (42) is grammatical in West Flemish (Haegeman 1991). I have no account for the difference between West Flemish and Standard Dutch in this respect.

21. On the standard analysis of verb second, with the subject in Spec,CP, we could assume that the clitics left adjoin to AgrS in Dutch, thus maintaining the generalization of Kayne (1990) that clitics adjoin to the left. However, in that case the clitic facts would still present evidence for the existence of a lower functional head. If such a head exists, all the conceptual issues raised in section 2 become very poignant.
Some more on the position of object clitics. In ECM constructions, the clitic can appear on both sides of the exceptionally Casemarked subject of the embedded clause (section 3.2.4). Vanden Wyngaerd (1989) argues that exceptionally Casemarked subjects move to the Spec,AgrOP in the matrix clause. If so, AgrO is available as an adjunction site for the object clitics that thematically belong to the lower clause. We predict that these clitics cannot appear to the right of matrix sentence adverbials, which is correct.

(i) dat ik Jan (*gisteren) 't (gisteren) heb zien doen

22. Haegeman (1991) repeats the arguments presented in this section for the Dutch dialect of West Flemish, confirming the results presented here. However, she argues that although the clitic facts demonstrate that there is a lower functional head to the left of the VP in Dutch and West Flemish, the finite verb in subject initial main clauses does not occupy that lower functional head position. Instead, she assumes that the finite verb moves to C in all main clauses in Dutch and related languages. She presents a puzzling empirical argument in support of the standard analysis. Object clitics in West Flemish can adjoin to C, contrary to Dutch. Thus, object clitics can appear between the complementizer (or fronted verb in topicalizations and wh-questions) and the subject (i). Similarly, if the sentence has a subject clitic and a doubling subject pronoun, the object clitic can appear between the subject clitic (which is adjoined to the complementizer, or the fronted verb in topicalizations and wh-questions) and the doubling pronoun (which Haegeman assumes to be in Spec,AgrsP)(ii).

(i) a. da-ze Valere Jan getoogd ee
that them Valere John shown has
'that Valere showed them to John'
b. Gisteren ee-ze Valere Jan getoogd
'Yesterday, Valere showed them to John'
(ii)a. dan-k ze ik Jan getoogd een
that-I them I John shown have
'that I showed them to John'
b. Gisteren een-k ze ik Jan getoogd
yesterday have-I them I John shown
'Yesterday, I showed them to John'

In subject initial main clauses with subject clitic doubling, the object clitic can again appear between the verb and the doubling pronoun (iii).

(iii) 'k Een-ze ik Jan getoogd
I have-them I John shown
'I showed them to John'

Thus, the object clitics show the same distribution in subject initial clauses as in non-subject initial clauses and complement clauses. There are two reasons why this argument is not compelling. First, the distribution of subject clitics shows that the position of the verb differs depending on whether a subject or a non-subject is the first constituent (cf. (iib) and (iii)). Second, the argument is based on the assumption that the doubling pronoun is in Spec,AgrSP. However, this is not entirely clear, and (iii) could equally well be taken to argue that the doubling pronoun is in the specifier position of a projection lower than AgrSP. See Haegeman (1990) for arguments that doubling pronouns in West Flemish are in the Spec,AgrSP. This issue obviously needs further study.

23. These facts are well-documented in works of traditional grammar and dialectology. Sources include Beckering Vinckers (1872), Bennis and Haegeman (1984), De Geest (1990), Van Ginneken (1939), Goeman (1980), Van Haeringen (1939, 1958), Haegeman (1990, 1991), Vanacker (1949), De Visser (1979), De Vries (1939), Weijnen (1939) on Dutch; Hoekema (1955), Visser (1988), Van der Meer (1991) on Frisian; Bayer (1984), Bruch (1973), Van Ginneken (1939), Harnisch (1989), Kufner (1961), Weise (1907) on German.

24. In a number of cases, the complementizer agreement is reported to be optional where it exists. This is generally attributed to the influence of the standard variety, where no overt complementizer agreement exists (Vanacker 1949).

25. There are a number of ways to work this out technically. For the moment, let us just say that by Agr-to-C movement Agr is associated with a lexical element, and therefore lexicalized.

26. I will not be concerned with T and AgrO in this article.

27. If successive cyclic movement out of the embedded V2 clause takes place, as in (23), the Specifier position of the embedded clause will be filled by the intermediate trace, a [+wh] element, which again triggers the additional movement of the verb to C (see section 2.2.3).

28. In other words, since it is a feature of AgrS that has to be eliminated, if AgrS can help itself, help from other elements is not needed, and therefore not allowed.

29. It is crucial that Agr-to-C does not consist in movement of the actual agreement morphology. If that were the case, combinations as in (69a) would be expected. Notice that movement of actual morphology is anomalous in the theoretical framework adopted here.

30. In a representational approach, the economy explanation for the impossibility of double overt morphology would be the same, but more would have to be said about how feature checking takes place in functional heads lower than where the verb is in overt syntax.

31. If it seems that circularity arises at this point, that is only the case because of the phrasing of the analysis in derivational terms. In a representational description circularity would of course never arise. However, even in a derivational approach the circularity would only be apparent. Given the fact that there are two possible derivations, one involving movement through AgrS and one involving movement directly to C, the latter one is more economical because it takes care of all checking operations in one swoop.

32. Since Agr has moved to C, the V-feature of Agr can be checked in C. Therefore there is no need for the verb to move through AgrS, even at LF. In principle, this would also seem to allow Spec-Head agreement in CP as a way of eliminating the N-feature of AgrS, bringing the standard analysis of verb second back in. However, this would always involve more movements, and therefore would not be allowed by economy. Also, it is clear from the type of agreement on the verb in subject initial main clauses in Dutch and Dutch dialects, that no Agr-to-C takes place in these constructions, therefore the verb cannot be in C.

33. In West Flemish, object clitics do show up on the verb in C, but also on the complementizer. So this does not prove that the verb has actually moved through AgrS on the way to C in West Flemish non-subject initial main clauses (Haegeman 1991). Why West Flemish allows object clitic movement to C is unclear to me at this point.

34. Of course, the child does not know it masters abstract agreement. The point is that the child learns the difference between finite verbs and infinitivals, and that the former have to be in a different position. This can all be done on the basis of positive evidence, even without an overt agreement paradigm. If Wexler (1991) is correct, what children acquire first is the realization of abstract formal syntactic relations, and the realization of relations with more semantic impact, such as tense, is acquired later.

35. A possibility to account for the difference between English and Dutch (etc.) is the following. Suppose that Agr-to-C can also take care of the elimination of a strong V-feature without verb movement. Then the difference between English and Dutch (etc.) would be that English lacks, but Dutch has, a strong V-feature. The problem here is that this would cost us the explanation for the absence of embedded verb second in Dutch (etc.), since economy principles would not explain the fact that Agr-to-C takes precedence over verb movement. A less interesting possibility would be to say that in English, unlike in Dutch, a head need not be filled for its N-feature to be checked. The same difference

between English and Dutch would explain much of the topicalization facts in the two languages. Here the problem is that it is absolutely unclear what this parametric difference would be related to.

36. There appears to be some variation among German speakers with respect to *that*-trace phenomena. In my view, the proper generalization is that German is like Dutch, and for most German speakers this seems to be correct. In the north of Germany, a variant of German is spoken where long extraction is not allowed in general (see McDaniel 1989). Rex Sprouse informs me (pc) that, also in the north, there are variants where long object extraction is allowed but long subject extraction is not. This would be a standard *that*-trace effect as in English. However, closer investigation is needed, because it is generally true that long subject extraction is slightly worse than long object extraction (cf. Pesetsky 1984). In Standard Swedish, the *that*-trace effect is also present, though not in all dialects (Finnish Swedish is like Dutch). The other Mainland Scandinavian languages do not show a *that*-trace effect.

37. Of course, under this approach it is unclear why Swedish does not seem to allow the *that*-trace configuration, and similarly for the relevant dialects of German (see note 36). Another problem is that many dialects of English seem to allow long subject-extraction across a lexical complementizer (Sobin 1987). Rizzi proposes to accomodate this by simply assuming that in these dialects *that* has agreement. If that is the case, then there could not be a relation with verb movement, since these dialects definitely do not have the Dutch type of verb movement in subject initial main clauses (or topicalizations, for that matter).

38. Semi-prodrop also occurs in embedded questions:

    (i) ..sinds wanneer (het) duidelijk is, dat..
        since when it clear is that

39. Thanks to David Pesetsky for pointing this out to me.

40. The languages that I treat as cognates of Dutch in this article show a remarkable variation as to whether pleonastics can or must be dropped in certain contexts. See Kosmeijer (1991) and Vikner (1991). I will leave this for further study.

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