CLAUSE STRUCTURE

AND X-SECOND*

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0. Introduction

The purpose of this paper is to propose a unified analysis of a range of "second-position" phenomena that have been attested in various languages, and in so doing to motivate a more elaborated theory of Nominative Case assignment. The proposal is that many languages, including a number of Germanic and Romance languages, have a projection which intervenes between Comp and the highest Infl-type projection (which, following Belletti (1990), we take to be AgrP). We refer to this projection as Agr1P and we refer to the lower, "traditional" AgrP as Agr2P. Thus our claim is that in the languages in question there are two Agr-heads, and two projections of Agr. These two Agrs are both "subject" Agrs; in this respect, our proposal is distinct from but not exclusive with Chomsky's (1989) idea that in addition to the standard "subject" Agr, there is also an "object" Agr.

We will show that this proposal is of considerable empirical value in that it offers a new perspective on a range of second-position phenomena and allows us to connect "verb-second" effects with various kinds of "clitic-second" effects, known in traditional grammar as Wackernagel's Law and the Tobler/Mussafia Law. We will in fact suggest that the presence of Agr1P is fundamentally related to Nominative Case assignment, in that thebasic property of Agr1E seems to be that of assigning Nominative Case; the other properties that we ascribe to it (e.g. attracting clitics, or attracting the inflected verb) are intimately related to its Nominative-assigning property. In this sense, it may be best to think of Agr1P as NomP. As a working hypothesis, then, we assume that in languages which have both Agr1P and Agr2P, Agr2E is not an assigner of Nominative Case. Because our focus is on the interaction of clause structure with structural Case assignment, we will concentrate almost exclusively on processes and properties of S-structure.

It is a classic tenet of generative grammar that inflectional affixes may be separate syntactic entities at pre-phonological levels of representation; cf. the analysis of the English auxiliary system in Chomsky (1957). In the last two or three years, this idea has received new impetus, beginning with Pollock (1989). Pollock's proposal that the Infl-node of Chomsky (1981) should be split into its morphological components has led to the working hypothesis in much recent research that any inflectional head which appears to be syntactically relevant heads its own maximal projection with the standard X-bar theoretic structure (for a different view, see Williams (this volume)). Our proposal amounts to the claim that certain languages have a special X-bar projection for the assignment of Nominative Case; in terms of the connection with inflectional morphology, it may be possible to relate the existence of Agr1P to the

possession of morphologically-realized Nominative Case.

    The structure that we are proposing is as follows:

(0)   CP

  Spec   C'

   CE   Agr1P

    Spec   Agr1'

       Agr1E   Agr2P

          Spec   Agr2'

           Agr2E   TP

The order of TP and Agr2E varies in the languages under consideration: in West Germanic TP is on the left of Agr2E (cf. Giusti (1986) for the proposal that IP is head-final in German); in North Germanic and Romance, it is on the right. On the other hand, Agr1E, like CE, precedes Agr2P in all the languages we discuss.

    The paper is organized as follows: in Section 1 we analyze the phenomenon of embedded verb-second, basing ourselves largely on the best-known case of this type: Icelandic (although we also analyse both Old French and Yiddish in these terms). In Section 2 we show how our system gives a natural analysis of the "clitic-second" phenomena in Germanic and Romance; in our terms the traditionally-recognized Wackernagel position of Germanic languages is Agr1E, as is the clitic position in those Romance languages which obey the Tobler-Mussafia law. The last two sections deal with ways in which the properties of Agr1E vary parametrically: we discuss different modes of Nominative Case assignment in Section 3, where we present and elaborate the recent proposals of Koopman & Sportiche (1991), and different kinds of null subjects in Section 4.

1. Agr1 as a position for the inflected verb: embedded V2

1.1 Icelandic

   The postulation of Agr1P allows us to account in a straightforward way for certain differences within the class of verb-second languages. While in many languages, e.g. German, Dutch and Mainland Scandinavian, verb-second is essentially a root phenomenon, it appears to be generalized to all types of embedded clauses in Icelandic. The following data illustrate this, where in a variety of embedded clauses we have the order XP - V - subject:[1]

(1)a. Ég held   *aδ   &egar* *hafi María* lesiδ &essa bók.

   I believe that already has Mary read this book.

        'I believe that Mary has read this book already.'

 b. Ég harma *aδ   &egar* *hafi María* lesiδ &essa bók. (factive)

   I regret that already has Mary   read   this   book.

        'I regret that Mary has already read this book.'

 c. Ég spurδi *hvort   &egar   hefδi María* lesiδ &essa bók. (Wh)

   I asked whether already had Mary read this book.

        'I asked whether Mary had already read this book.'

 d. sú staδreynd *aδ   &egar   hefur María* lesiδ &essa bók (NP)

    the fact   that already had Mary   read this book

        'the fact that Mary had already read this book'

 e. bókin   *sem &egar   hefur María* lesiδ   (relative)

    book-the that already had   Mary   read

        'the book that Mary had already read'

     (Rögnvaldsson & Thráinsson (1990); Thráinsson, p.c.)

The Icelandic situation, as illustrated in (1), contrasts with what we find in German. In German embedded V2 is possible only in a limited class of embedded clauses, essentially the complements to "bridge verbs" of the type in (1a). On the other hand, embedded V2 is excluded in all the contexts parallel to (1b-e):[2]

(2)a. Ich glaube, *gestern hat Maria* dieses Buch gelesen.

   I believe yesterday has M.   this   book read.

      'I believe Mary read this book yesterday.'

  b.*Ich bedauere,(daß) *gestern hat Maria* dieses Buch gelesen.

   I   regret   (that) yesterday has M.   this   book read.

  c.*Ich frage mir, *ob gestern hat Maria* dieses Buch gelesen.

   I ask   me   whether yesterday has M. this book read.

  d.*die Tatsache, *gestern hat Maria* dieses Buch gelesen

   the fact   yesterday has M.   this   book read.

  e.*das Buch, *das gestern hat Maria* gelesen

   the book which yesterday has M.   read

For (2a), an analysis in terms of CP-recursion seems to be in order. As noted in Rizzi & Roberts (1989), the same class of verbs allows an otherwise root phenomenon -- subject-aux inversion triggered by a negative-polarity item -- in its complement in English:

(3)a. I believe that only in America could you do such a thing.

  b.*I wonder whether only in America could you do such a thing.

It seems then that, independently of verb-second, the complements of bridge verbs are able to have root properties. We propose, still following Rizzi & Roberts (1989), that this is because bridge verbs allow CP-recursion in their complements. More precisely, we propose that bridge verbs select a CE which selects another CE; to avoid unlimited recursion at the C-level we clearly must propose that the two CEs have different properties (e.g. that the first allows a "propositional" complement while the second only allows a "predicational" complement in the terms of Rizzi (1990b)). In German the two CEs are different in form: the first is null, the second is filled by the inflected verb, like the CE of a matrix clause (in English, too, the CE which selects CP is different from other CEs: that in (3a) cannot be deleted, while

other occurrences of <u>that</u> can be). Adopting this analysis for (2a), we propose the following partial structure:

(4)   .. glaube [$_{CP}$ O [$_{CP}$ gestern [$_{C'}$ hat [Maria ...

Vikner (1990) proposes extending this analysis to embedded verb second in Icelandic. This entails that CP-recursion is generalized in Icelandic, while it is limited to a specific class of complements in German, Mainland Scandinavian and English. In other words, the property of selecting CE is available for all classes of CE in Icelandic. However, if this were true, then there would be no way to avoid unlimited recursion of CE, clearly an undesirable consequence.

Instead, our proposal provides a straightforward account of the data in (1). These examples have the following structure (although, to the extent that the class of verbs which allows CP-recursion in German also allows it in Icelandic, (1a) may also have a structure like (4) with <u>aδ</u> in the higher CE and the inflected verb in the lower CE):[3]

(5) [$_{CP}$ CE [$_{Agr1P}$ TOP [$_{Agr1'}$ V+Agr1 [$_{Agr2P}$ NP$_{Nom}$ [$_{Agr2E}$ t

As we will see in more detail in Section 3, the special property of Icelandic is that SpecAgr1' is a topic position while the usual superficial subject position is SpecAgr2'.

If we do not assume a double-Agr structure, no other position would be available for the subject. Since there is no generalized CP-recursion, SpecC' is not available. Although we assume that the subject is base-generated in VP (cf. in particular Koopman & Sportiche (1991)), the base-position of the subject is unavailable, at least for a definite NP, since it is not a position which can receive Nominative Case from AgrE (cf. Section 4 for some evidence that indefinite NPs can appear in this position). This idea is confirmed by the fact that definite subjects always precede VP-adverbs, as in <u>.. aδ</u> <u>Pegar hefur María</u> <u>oft lesiδ Pessa bók,</u> 'that already has Mary often read this book' (Thráinsson, p.c.) (cf. also Vikner (1990, Ch 2:45)). Furthermore, we follow Rizzi (1990a) in assuming that SpecT' is inherently an A'-position and as such not a possible landing site for the subject. In fact, if we adopt Rizzi's (1991b) characterization of potential A-positions as either ⊖-positions or specifiers of Agr, SpecT' must be an A'-position. Hence SpecAgr2' is the position of the definite subject.

Given this analysis of embedded clauses, we are not forced to treat matrix V2 in Icelandic as involving movement of the verb to CE. Movement to Agr1E would clearly suffice to derive the same orders (cf. Rögnvaldsson & Thráinsson (1990) and the references given there for recent discussion of similar proposals). At the same time, the data do not force us to reject a movement-to-C analysis.

One property of Icelandic, however, suggests that matrix V2 should in fact be handled in terms of verb-movement to Agr1E rather than to CE. Icelandic makes much more frequent use of declarative V1 orders than do the other (Modern) Germanic languages (aside from Yiddish). Declarative V1 is illustrated in the following example:

(6)   Hitti hann pá einhverja útlendingar.

    Met   he   then some   foreigners.

            'He then met some foreigners.'

                    (Sigurðsson (1985:1))

We propose that in (6) the inflected verb has undergone structure-preserving topicalization (i.e. topicalization of an XE category to another head position YE). This operation probably takes place for reasons connected to information structure, since the examples in question seem to be presentational sentences. We propose that the landing-site of this operation is CE; these are the only declarative clauses in which the verb is in CE (as in other Germanic and Romance languages, the inflected verb is typically in CE in matrix interrogatives, imperatives and hypotheticals). As we will see in 2.2, this kind of "verb-topicalization" is not restricted to Icelandic, but is also found in Medieval Romance languages (cf. also Benincà (1989), Alberton (1990)). More generally, we expect this possibility to exist in all languages which realize V2 at the Agr1P-level since in such cases CE is freely available as a landing site for structure-preserving topicalization. Since the V2 requirement is satisfied elsewhere, SpecC' in such languages can remain empty. This analysis implies that declarative operators do not exist, since otherwise we would expect V1 declaratives to be generally possible on a par with V1 interrogatives, hypotheticals, etc.[4]

One reason to favour an analysis of (6) in which the verb moves to CE over one in which the verb moves only to Agr1E, while the subject stays in SpecAgr2', is that this kind of V1 is a root phenomenon. Since den Besten (1983), the simplest treatment of root phenomena has been to say that they involve movement to CE, a position available in principle

in matrix clauses but unavailable in embedded clauses. If matrix clauses are Agr1P in Icelandic, this implies that verb second is not a unified phenomenon in the Germanic languages, at least in the sense that the landing site of the verb may vary cross-linguistically. We will see further evidence in favour of this conclusion as we proceed. Cf. also Diesing (1988, 1990), Santorini (1988, 1989) for a similar conclusion based on Yiddish evidence (and cf. 1.3 for some discussion of Yiddish).

To sum up, following on from our "double-Agr" hypothesis about basic clause structure, the following conclusions emerge for Icelandic:

(7)a.   Agr1E can assign Nom under government (see Section 3);

   b.   SpecAgr2' is a subject position;

   c.   SpecAgr1' can be a topic position;

   d.   SpecC' is an operator position.

1.2 Old French

The V2 nature of OF is illustrated clearly by the examples in (8) (non-nominative clitics -- e.g. en in (8b) -- are effectively part of the inflected verb, and so do not "count" in the computation of the second position):

(8) a. Einsint *aama* la demoisele Lancelot.

Thus   loved the lady   Lancelot

'Thus the lady loved L.'

(Adams (1987b:50))

b. Desuz un pin   en *est* li reis alez

Under a pine-tree of-it is the king gone

'The king went underneath a pine-tree.'

(Schulze (1888:200))

c. Quatre saietes   *ot* li bers au   costé

Four boats-of-war had the baron at-the side

'The baron had four boats of war at his side.'

(Charroi de Nîmes, l. 20)

Adams (1987a,b) shows that V2 is possible in the complements to bridge verbs. The class of bridge verbs in question is comparable to the class which in V2 Germanic languages typically allows complements with matrix properties (cf. 1.1). Here are some examples with null subjects:

(9)a. Or voi ge bien, *plains es*   de mautalant.

Now see I well full   are (you) of bad-intentions.

'And now I see clearly that you are full of bad intentions.'

(Le Charroi de Nîmes, l. 295)

b. Je cuit *plus sot   de ti n'i   a.*

I think more stupid than you not there has (it).

'I think that there is noone stupider than you.'

(Adams' (11a-c), p. 17)

In neither of these examples is <u>que</u> present, suggesting that these are cases of German-style embedded V2 (this implies that "conjunctive discourse" is not specific to German, cf. Note 2).

The embedded sentences in examples like (9) can be analysed as follows:

(10)   CP1

C1E   CP2

AdvP   C2'

C2E   AgrP

V+Agr NP   TP

It is clear that CP2 here is just like a matrix clause, and so V2 is possible, as expected.

However, there are cases of V2 orders in Wh-clauses:

(11)a. Quant a eus *est* li rois venus, ..

When to them is the king come, ..

'When the king came to them, ..'

b. s'a   la vostre bonté   *vousist* mon pere   prendre garde

　if against the your   good-will wanted my father to-take precaution

　'if against your good will my father wanted to take precautions.'   (Adams (1988b), (19c), p. 19)

(12) a. Por l'esperance qu'an   lui *ont*, ...

　　　For the hope   which in him have (they) ..

　　　'For the hope which they have in him, ...'

b. Et si ne sait   que faire *puisse*

　　And so not knows what to-do can (he)

　　'And so he doesn't know what he can do'

In terms of the standard assumption that the inflected verb cannot move to a [+wh] CE (cf. Rizzi & Roberts (1989), Rizzi (1991a) for an account of this), we are led to the conclusion that the verb is in Agr1E in these examples. So we assign the following structure to (11a), for example:

(13)   CP

　　XP   C'

　　　CE   Agr1P
　　　[+wh]
　　　　Spec   Agr1'

　　　　　Agr1E   Agr2P

　　　　　　Spec   Agr2'

Agr2E   TP

Quant   a eus *est* li rois *t*   *t* venus

Here the verb appears in Agr1E and assigns Case under government to the subject, <u>li rois</u>, in SpecAgr2'.

What is the status of SpecAgr1' in OF? On the basis of examples like (11), it appears to be a topic position of the Icelandic kind. However, clear examples of the type in (11) are not very frequent. According to Dupuis (1989:151f.), this possibility is only attested with any real frequency in the <u>Quatre Livres</u> <u>du</u> <u>Roi</u> (a text from around 1170); in other texts (including some from the same period), there are very few cases of embedded V2 (in non-bridge complements) with overt subjects.

There are, however, cases of embedded V2 order with null subjects in a range of 12th-century texts, as well as in some 13th-century verse texts (cf. Hirschbuhler (1990) and 4.2). Such examples are not clear cases of topicalization and can instead be treated as Stylistic Fronting. Stylistic Fronting is an operation found in Icelandic, Faroese and Yiddish. The operation fronts some VP-constituent, usually an adverbial, a participle or a complement (see Maling (1980) for details), to a position between CE and the inflected verb. The main condition on Stylistic Fronting is that the sentence must contain a subject gap, usually a trace of Wh-movement, but also possibly the trace of cliticization (Platzack (1988)) or an NP-trace (Sigurδsson (1989)). The following Icelandic example illustrates the application of Stylistic-Fronting to a participle:

(14)   &arna er konan sem *kosin   var/var kosin*   forsetí.

      There is woman that elected was/was elected president.

            'There is a woman that was elected president.'

One test favours a Stylistic-Fronting analysis of examples like (12) over a topicalization analysis. Platzack (1988) shows that the subject-gap condition can be satisfied by a cliticized subject pronoun. This gives rise to the order Complementizer - Subject - XP - V, which cannot be a case of embedded verb second. Such orders are found at the relevant period of OF:

(15) quant *il de ci* departiront

   when they from here will-leave

     'when they will leave here'

     (Vance (1988), (11), p. 89)

The existence of this kind of order, and the absence of clear embedded topicalization, at the relevant period of OF suggests that apparently ambiguous examples of the kind in (12) are to be treated as involving Stylistic Fronting.

For reasons of space, we make no proposal for the analysis of Stylistic Fronting in this paper, although we note that it does seem to correlate with the double-Agr structure in VO languages: Icelandic and OF both have both properties, as arguably do Middle English and the Medieval Mainland Scandinavian languages (cf. Platzack (1988, 1990)).

The conclusion is that, with the possible exception of some of the very early texts, OF does not allow generalized embedded topicalization, although it does have Stylistic Fronting. We interpret this to mean that SpecAgr1' was not a topic position in OF, but a subject position. Nevertheless, movement of the inflected verb to Agr1E was general, and so the movement of the inflected verb to Agr1E does not necessarily imply that SpecAgr1' is a topic position (cf. Section 3). In Section 4.2, we will see that the distribution of null subjects in OF supports this conclusion.

To sum up, OF had the following properties:

(16)a.   Agr1E can assign Nominative under government;

   b.   SpecAgr2' is a subject position;

   c.   SpecAgr1' is also a subject position (see Section 3).

1.3 Yiddish

The other Germanic language which has been claimed to allow generalized embedded topicalization is Yiddish (cf. Diesing (1988, 1990), Santorini (1988, 1989)). The following examples illustrate topicalization in [-wh] and [+wh] complements:

(17)a. John bedoyert az *zayn bukh hob* ikh geleyent.

    John regrets that his book have I   read.

   'John regrets that I have read his book.'

            (Vikner (1990:Ch 2, 32))

  b. Ikh veys nit far vos *in tsimer iz* di ku geshtanen.

   I   know not for what in room   is the cow stood.

  'I don't know why the cow has stood in the room.'

            (Vikner (1990:Ch 2, 34))

  c. Ikh veys nit tsi *in tsimer iz* di ku geshtanen.

   I   know not if in room   is the cow stood.

  'I don't know if the cow has stood in the room.'

          (Santorini, p.c.)

Since "regret" is a non-bridge verb, (17a) is most likely not a case of CP-recursion. (17b,c) are cases of topicalization in a [+wh] complement.

Both Diesing (1988, 1990) and Santorini (1988, 1989) propose to analyse this kind of embedded V2 in Yiddish by treating SpecI' -- the canonical subject position in a language like English -- as a topic position, and taking the subject to be in its VP-internal base position. However, this analysis will not carry over straightforwardly in our terms. If we split IP into TP and AgrP, and assume that Nominative Case is assigned by AgrE, then the VP-internal subject position cannot receive Nominative Case.Instead, this position receives Partitive Case (cf. Belletti (1988)) and therefore can only be occupied by indefinite NPs. Since we are assuming that SpecT' is an A'-position (see 1.1), no (non-scrambled) NP can

occupy this position. Hence the only position for a definite Nominative NP is SpecAgr'. For these reasons, the examples in (17) motivate an analysis in terms of the "double-Agr" structure. So (17a) would have the following structure:

(18)   CP

     CE   Agr1P

          NP   Agr1'

               Agr1E   Agr2P

                    NP   Agr2'

                         Agr2E   TP

       az zayn bukh *hob* ikh   *t*   *t*   geleyent

Further evidence in favour of embedded topicalization and against CP-recursion comes from sentences like the following where an argument undergoes long Wh-movement:

(19) Vos   hot er nit gevolt az *in shul   zoln*   di   kinder

          leyenen?

     What has he not wanted that in school shall the children

     read?

          'What didn't he want to the children to read in school?'

                                        (Santorini (1989:59))

(As expected, the analogous long extraction of an adjunct is impossible (Vikner (1990, Ch. 2, p. 60), Vikner & Schwartz (1991, 3.1))). In general, extraction from complements with CP-recursion is impossible (cf. Rizzi & Roberts (1989)). This, combined with the fact that CP-recursion under verbs of volition is otherwise unattested, argues that there is no CP-recursion here. Instead, then, this must be a case of embedded topicalization.

However, there are a number of restrictions on embedded V2 in Wh-complements in Yiddish. Only a limited class of Wh-complements, e.g. those in <u>far vos</u> ('why') and <u>tsi</u> ('if') allow embedded topicalization. Compare (20) with (17b,c):

(20)a.   *Ikh veys nit vu   *nekhtn*   iz di ku geshtanen.

    I   know not where yesterday is the cow stood.

    'I don't know where the cow stood yesterday.'

       (Vikner (1990, Ch. 2, p. 34))

  b.   *Ikh veys nit ven *zayn khaver* hot Moyshe getrofn.

    I   know not when his friend has M.   met.

    'I don't know when M. met his friend.'

               (Santorini, p.c.)

  c.   *Ikh veys nit (far) vemen *zayn khaver* hot Moyshe forgeshtelt.

    I   know not (to) whom his friend has M.   introduced.

    'I don't know who M. has introduced his friend to.'

        (Santorini, p.c.)

(Short extraction of an argument Wh-element seems to be possible over a topicalized adjunct PP, however: <u>Ikh veys nit vemen in restoran hot Moyshe getrofn</u> 'I don't know whom in the restaurant has Moyshe met'. This situation should be compared with that in Icelandic mentioned in Note 1).

On the other hand, topicalization in a Wh-complement apparently becomes generally possible where (i) the subject is extracted, (ii) the subject is indefinite and apparently VP-internal:

(21)a.   Zi iz gekumen zen ver *frier vet* kontshen.

   She is come   see who earlier will finish.

      'She has come to see who will finish earlier.'

     (Diesing (1988:132))

b.   Ikh veys nit vu   *nekhtn   iz* geshtanen a ku.

   I know not where yesterday is stood   a cow.

         (Vikner (1990, Note, Ch. 2, p. 34)

Both contexts involve a gap in the canonical, preverbal subject position. As such, they appear to be cases of Stylistic

Fronting (cf. 1.2).

   In relative clauses, verb-second order arises where there is a subject gap, but not otherwise. Relatives on the object are

possible, provided that a resumptive pronoun is used:

(22)a. nokh epes,   vos *oyfn hitl   iz* geven

     still something, that on   the hat-DIM is been

    'something else that was on the little hat'

  b. *Der yid vos *in Boston hobn* mir gezen iz a groyser lamdn.

     The man that in Boston have we seen is a great scholar.

     'The man whom we saw in Boston is a great scholar.'

        (Lowenstamm (1977), cited in Santorini (1989:56))

 (23)   der yid vos *in Boston hobn* mir *im* gezen

      the man that in Boston have we him seen

          'the man that we saw (him) in Boston'

         (Lowenstamm (1977), cited in Diesing (1990:63))

Here again, the possibility of embedded topicalization depends on the presence of a subject gap, confirming the idea that

these are cases of Stylistic Fronting. The contrast between (22b) and (23) supports the idea that embedded topicalization

is incompatible with any form of Wh-movement (with the exception noted after (20)). It seems, then, that Yiddish

allows embedded verb second under rather limited conditions: in non-bridge complements and in Wh-complements

where the Wh-element is not moved. Stylistic-Fronting is possible in clauses where Wh-movement affects the subject.

In other words, embedded topicalization creates an island for extraction in Yiddish Wh-complements (cf. Vikner (1990: Ch 2, 34f.)). This seems to be a property specific to Yiddish, since embedded topicalization does not have this effect in Icelandic (or perhaps the effect is limited to extraction of adjuncts over adjunct topics -- cf. Note 1).

In spite of this difference, Yiddish shows the same basic properties as Icelandic: it has a double-Agr clause structure, SpecAgr1' is a topic position, SpecAgr2' is a subject position and Nominative Case can be assigned under government.

2. Agr1 as the position for clitics

It has often been noticed, since the earliest work on Indo-European syntax (cf. Wackernagel (1892)), that unstressed elements of various kinds tend to be found in the second position in the clause. In this section, we will propose a general analysis of this salient fact about the syntax of a variety of languages in terms of the following general idea:[5]

(24)   Agr1E is a position for clitics.

In the languages we discuss below, Agr1E is preceded by an element occupying its Spec. Since Agr1E is occupied by a clitic, the result is a "clitic-second" structure. We will see that there is cross-linguistic variation in these structures regarding the position of the inflected verb relative to the clitic; our system +makes it possible to analyse this variation in a straightforward way.

2.1   The Wackernagel position in German

A striking property of German which differentiates it from other Germanic languages is the fact that pronouns can occur between CE and the subject. The following examples illustrate this phenomenon for both embedded and matrix clauses (in all our German examples the subject is unstressed; if the subject receives focal stress, the judgements can change, presumably owing to the fact that in this case the subject occupies a different position -- a matter which we leave aside):

(25)a.   .. daß *es ihm*   der Johann gestern   gegeben hat.

          .. that it him-DAT the J.   yesterday given   has.

                    '.. that John gave it to him yesterday.'

   b.   Gestern   hat *es ihm*   der Johann gegeben.

         Yesterday has it him-DAT the J.   given.

                    'Yesterday John gave it to him.'

In terms of our system, these examples have the following structure:

(26)   C'

     CE   Agr1P

     daß   Agr1'
     hat

          Agr1E   Agr2P

          es ihm   NP   Agr2'

               der J.   ... gegeben ...

As (26) shows, the subject (<u>der Johann</u>) can remain in SpecAgr2'; it is not required to move to SpecAgr1'. However, it is also possible to have the order in which the pronouns follow the subject. In our system, it is possible to say that in such cases the clitics are in the same position as in (26), with the subject occupying SpecAgr1':

(27)a.   C'
     CE   Agr1P

     daß   NP   Agr1'
     hat
          der J. Agr1E   Agr2P

               es ihm   NP   Agr2'

                    t   .. gegeben ..

   b.   .. daß der Johann *es ihm* gestern gegeben hat.

   c.   Gestern hat der Johann *es ihm* gegeben.

The post-subject position of the pronouns is not a VP-internal position since the VP-internal order of arguments is Dative-Accusative in German. The fact that an Accusative pronoun must appear before a Dative NP indicates that it is outside VP:

(28) .. daß der Johann *es* dem   Hans gegeben hat.

    .. that the J.   it the-DAT H.   given   has.

      '.. that John gave it to Hans.'

Moreover, a post-subject pronoun is typically unstressed and, like a pre-subject pronoun, has clitic properties (cf. Boschetti (1986)). This suggests that post-subject <u>es</u> occupies the same position as pre-subject <u>es</u>, rather than being in a scrambled position of some kind (although other pronouns aside from <u>es</u> may be scrambled -- cf. Note 6). As indicated in (26) and (27), the clitic position is Agr1E.

  A further argument in favour of our approach over a scrambling analysis comes from the absence of "clitic-splitting" in German. That is, we do not find sentences where one pronoun precedes the subject and one follows:[6]

(29)a. * .. daß *ihm* der Hans *es/sie* wahrscheinlich gegeben hat.

    .. that him-DAT Hans it/her probably   given   has.

  b. * .. daß *es/sie* der Hans *ihm* wahrscheinlich gegeben hat.

      .. that it/her the H. him-DAT probably   given   has.

(29) is ungrammatical because there is only one position available for unstressed pronouns: Agr1E. Where there is more than one unstressed pronoun, they all appear in Agr1E. Furthermore, it is unlikely that (25) is a case of scrambling since many speakers reject scrambling to pre-subject position, as shown by (30):

(30)   ??.. daß den   Roman ihm   Johann gegeben hat.

    .. that the-ACC novel him-DAT John   given   has.

  An important confirmation for this analysis of German comes from the fact that Dutch shows a pattern which differs minimally from German, something which we can treat very simply in our system.[7] Zwart (1991) argues convincingly that Dutch has object clitics which occupy a VP-external position (cf. also Jaspers (1989)). Zwart in fact proposes an

analysis very similar to ours, involving a head-initial functional projection whose head is to the right of the canonical subject position. This analysis provides a simple explanation for the order "subject - pronouns" in Dutch:

(31)   .. dat *Jan 't*   gisteren aan Marie gaf.

    .. that J. it (cl) yesterday to M.   gave.

              '.. that John gave it to Mary yesterday.'

(31) is like the German examples in (27b,c), and we can analyse it in the same way: 't is in Agr1E and Jan is in SpecAgr1'.

    Dutch differs from German, on the other hand, in that the order in (25) is ungrammatical:

(32) *.. dat *'t* Jan aan Marie gaf.

This means that the structure in (26) is impossible in Dutch. Since (31) shows, in our terms, that the clitic can occupy Agr1E, (32) must be interpreted as indicating that the subject cannot be in SpecAgr2'. The minimal difference between German and Dutch lies in the possible positions of the Nominative subject. We conclude that, although in both languages SpecAgr1' is a subject position, SpecAgr2' is a position which receives Nominative only in German (cf. Section 3).

2.2. "Tobler-Mussafia" effects

   A related phenomenon to the ones just discussed is found in all the Medieval Romance languages (Old French, Old Italian, Old Spanish) and, at least prescriptively, in European Portuguese (Benincà (1989); see also Galves (this volume) for an analysis of the clitic systems of both European and Brazilian Portuguese in terms of the double-Agr clause structure). The phenomenon in question amounts to a ban on clitic-first orders; in constructions where a proclitic would appear in first position, enclisis is obligatory and proclisis is excluded (Mussafia (1983)). This phenomenon is known as the "Tobler/Mussafia law" in the traditional literature.

   The following examples illustrate the operation of the Tobler/Mussafia law in Old French (OF):

(33)a.   Toutes ces choses *te presta* Nostre Sires.

      All these things you lent our   Lord.

                  'All these things our Lord lent you.'

             (de Kok (1985:74))

   b.   *Voit le* li rois.

      Sees him the king.

                'The king sees him.'

             (<u>Le Charroi de Nîmes</u>, l. 58)

   c.   *Fust i*   li reis, n'i   oüssum   damage.

      Were here the king, not here had (we) damage.

      'If the king were here, we wouldn't suffer any damage.'

                  (Harris (1978:240)).

In (33a), we have a regular V2 sentence (recall that OF was a V2 language; cf. 1.2). The direct object <u>toutes ces choses</u> is topicalized to SpecC'; and the finite verb appears in second position with the proclitic indirect-object pronoun <u>te</u>. (33b) is an example of "narrative V1" (cf. Hirschbuhler (1990)). Here we see that the object clitic <u>le</u> follows the inflected verb;

it is enclitic, not proclitic. (33c) is a verb-initial conditional clause where the same type of enclisis affects the locative i̲.

(34) illustrates the Tobler/Mussafia law in matrix interrogatives (de Kok (1985:82)):

(34) a. *Conois la* tu?

    Know   her you?

        'Do you know her?'

   b. Et quex chevaliers *i*   *avra*   il .. ?

    And which knight   there will-be there .. ?

        'And which knight will be there .. ?'

In (34a), the clitic l̲a̲ is enclitic on the inflected verb (note that the subject pronoun follows it). In (34b), the clitic i̲ is proclitic to the inflected verb (and subject pronoun still follows the verb).

In (35) and (36), we illustrate the analogous effect in Old Italian (OIt):

(35)a.   Poi *vi*   *trovò* tanto oro e   tanta ariente

     Then there (he) found much gold and much silver

         'Then he found a lot of gold and silver there.'

        (Novellino, LXXXIV; Alberton (1990))

   b.   *Vogliolo*   sapere da   mia madre.

     (I) want-it to-know from my mother.

         'I want to it from my mother.'

        (Novellino, III; Alberton (1990))

(36)a.   *Hailo* tu   fatto per provarmi?

     Have-it you done to try me?

'Have you done it to try me?'

(Alberton (1990))

b.   Chi *si potrebbe*   tener di piangere e   di   lagri

mare in cotanto dolore?

Who self could (he) keep from crying and from weeping

in such pain?

'Who could keep himself from crying and weeping in such

pain?'   (Alberton (1990))

A comparison of (35) and (36) with the French examples in (33) and (34) shows that the basic phenomenon is the same: wherever proclisis would place the clitic in first position, the clitic follows the inflected verb. There are, however, certain differences between OF and OIt; one important difference is that V1 declaratives are significantly rarer in OF than in OIt (Benincà (1989:5)). This may be due to the fact that the verb could remain in Agr1E in OIt matrix clauses (and so, to the extent that OIt was V2, V2 was realized at the Agr1-level), while in OF movement to CE was required (i.e. V2 was realized at the C-level). In this respect OIt would be like Icelandic (cf. 1.1), and OF differs from Icelandic (for other differences between OF and OIt, cf. Alberton (1990)).[8] We gloss over these differences here since our main goal is to account for the obligatory enclisis.

Our account of the Tobler/Mussafia law runs as follows. Following Kayne (1991), we assume that clitics always occupy functional-head positions. In particular, the clitic is in Agr1E prior to verb-movement to CE. The difference between enclisis and proclisis lies in whether the clitic forms a complex with the verb, or whether the verb moves to CE independently of the clitic. Enclisis results from the latter situation: the verb moves to CE while the clitic remains in Agr1E. This is what we find in yes/no questions like (34a) and (36a) and conditionals like (33c), as well as in examples where the verb undergoes structure-preserving topicalization to CE, e.g. (33b) and (35b). Proclisis, on the other hand, involves the formation of the complex [Cl + V] in Agr1E, which may then be moved to CE, as clearly seen in Wh questions like (34b) and (36b) (and V2 sentences where [Cl + V] moves to CE, as in OF examples like (33a)). A major advantage of this account is that it directly captures the fact that enclisis is a root phenomenon (Alberton (1990), Benincà (1989)); like other root phenomena, enclisis involves the presence of an inflected verb in CE.

In this respect, our analysis is more straightforward than analyses of the type proposed by Alberton and Benincà, in which the clitic is in CE both with enclisis and with proclisis in matrix clauses and topicalizes to SpecC' to produce enclisis. The clause structure we wish to propose for these languages makes it possible to assume that the topicalization of V is movement to CE, rather than movement to SpecC'. As we said above, this integrates the account of enclisis more directly with accounts of other root phenomena (e.g. subject-aux inversion in English or subject-clitic inversion in contemporary French, and other phenomena discussed in den Besten (1983)). A further advantage of our account as compared to approaches of the type in Alberton and Benincà is that the topicalization rule is structure-preserving, in that it moves the inflected verb, which is an XE, to CE.

Our analysis leads to two questions: (i) why can the verb move to CE independently of the clitic in Agr1E? (ii) why must the verb move to CE independently of the clitic in cases of topicalization and yes/no questions? There are two possible answers to the first of these questions: either the verb "excorporates" from Agr1E to CE leaving the clitic behind in Agr1E (cf. Roberts (1991a) on excorporation), or the verb is able -- under the right conditions -- to move from Agr2E to CE "skipping" Agr1E. Of these two possibilities, we will assume the second in what follows (cf. Roberts (forthcoming)). For the second question, we see no alternative to the traditional idea that the languages which show this effect do not permit clitic-first orders, presumably a phonological constraint. Hence the verb "skips" Agr1E exactly where the "regular" movement through Agr1E, picking up the clitic on the way, would give rise to a clitic-first order with [Cl + V] in CE.

The question which arises now is: why does V only "skip" Agr1E when moving through Agr1E would violate the ban on clitic-first orders? As we will suggest in Section 3, the clitic in Agr1E attracts the inflected verb in the usual case (cf. Note 8). The clitic thus seems to impose two distinct requirements: (a) it cannot appear first, (b) it must combine with the inflected verb. Where some other element (e.g. a Wh-constituent) appears in first position for independent reasons, requirement (a) is automatically satisfied and requirement (b) can be most economically satisfied by V-movement to Agr1E and hence it must be satisfied in this way, following Chomsky (1989) (although other requirements, e.g. Rizzi's (1991a) Wh-criterion, may lead to the [Cl + V] complex moving further). On the other hand, if no other element appears first, the two requirements imposed by the clitic are satisfied most economically if V moves to CE, skipping Agr1E, and the clitic left-adjoins to V (the latter operation possibly taking place in PF). Thus we see that the

Tobler-Mussafia Law is a "last-resort" operation in the sense of Chomsky (1989).

Concerning comparative questions, our analysis makes the prediction that a language which shows the Tobler/Mussafia effect has Agr1E. We can relate the possibility of independent movement of the verb with respect to the clitic to the existence of this position in the following way: in a system with both Agr1E and Agr2E, Agr2E contains the inflectional affixes that are required to form the inflected verb. Hence the verb-stem must move to Agr2E in order for an inflected verb to be formed. However, verb-movement to Agr1E is not forced by such morphological factors (although the verb may be "attracted" to Agr1E independently of the need to pick up an inflectional affix; see below, Section 3, and Note 10). On the other hand, contemporary French and Italian have only one Agr position, and this is the position which contains the finite verbal inflection and to which clitics are adjoined. Thus the finite verb always forms a unit with object clitics in these languages, and so, when the finite verb appears initially in CE in yes/no questions ((37)) and certain types of conditionals ((38)), the clitic remains proclitic (we illustrate with a conditional in Italian, as no overt form of subject-verb inversion is found in interrogatives; cf. Rizzi (1982) on this form of conditional inversion):

(37) [$_{CE}$ [$_{AgrE}$ La connais]] - tu?   (vs. (34a))

           her know   you?

           'Do you know her?'

(38) [$_{CE}$ [$_{AgrE}$ L'avessi]] io saputo in tempo, ...

      It-had(subj.) I known in time, ..

      'Had I known it in time, .. '

Note that our analysis does not claim that clitics form a unit with the non-finite verb. As Kayne (1991) shows, it is probably desirable to maintain that enclitics on non-finite verbs in some Romance languages occupy a syntactic position separate from the verb, e.g. in forms like Modern Italian <u>farlo</u> ('to do it').

Another point which is captured neatly by our approach is the fact that the Medieval Romance languages are like the contemporary Germanic languages in that both groups tolerate clitic elements which can be independent of the finite morphology, something which is completely impossible in most contemporary Romance languages (but not in

Rumanian; cf. Motapanyane (1991) for an analysis of clitic placement in this language which makes use of the same "double-Agr" system as that being proposed here). In our terms, what Medieval Romance and contemporary Germanic have in common is that their clitics occupy Agr1E, a functional-head position which is independent in principle of the position of finite morphology -- Agr2E. Furthermore, our analysis captures the traditional idea that Tobler-Mussafia effects are related to Wackernagel's Law; as we have seen, both sets of phenomena crucially involve the presence of an "autonomous" clitic in Agr1E.

2.3 V3 orders in Old English and Old High German

In this section, we discuss one phenomenon of clitic-placement found in the older Germanic languages Old English (OE) and Old High German (OHG). The data on OE are taken from van Kemenade (1987) and those on OHG from Tomaselli (1991).

Both OE and OHG were V2 languages, although, as we shall see below, this does not necessarily imply that CP was activated in all matrix clauses in these languages. In this section, we focus on one case of V3 word-order, found in both of these languages, in which the second element is a clitic (in OHG, this order is restricted to subject clitics; in OE complement clitics are found in this position too). This order is the same as that in the Medieval Romance languages in matrix declarative sentences:

(39)a. God *him* worhte &a reaf   of fellum.

   God them wrought then garments of skin.

   'God then made them garments of skin.'

                   (van Kemenade (1987:114)

  b. Forðon *we* sceolan mid ealle mod & mægene to Gode gecyrran.

   Therefore we shall with all mind and power to God turn.

   'Therefore we must turn to God with all our mind and

        power.'   (van Kemenade (1987:110))

c. Dhes martyrunga endi dodh *uuir* findemes mit urchundin

   dhes heilegin chiscribes.

His martyrdom   and death we demonstrate with evidence of

    the holy   writings.

'We demonstrate his martyrdom and his death with evidence

    from the holy scriptures.'   (Tomaselli (1991:3))

However, there is a major difference with the Romance Tobler/Mussafia effects discussed in the previous section. In contexts where the verb is in CE and an XP of a particular class is in SpecC', the clitic follows the verb. In OE, these contexts involve a Wh-constituent, the negative element <u>ne</u> or the adverb <u>&a</u> ('then') in initial position, all of which can be plausibly treated as elements in SpecC' triggering movement of the inflected verb to CE (Tomaselli (1991:6) implies that the same is true in OHG; cf. Tomaselli (1989)):

(40)a.   Ne geseah *hine* nan man   nates-hwon yrre.

    Not saw   him no man so little   angry.

   'Noone ever saw him so little angry.'

        (van Kemenade (1987:114))

  b.   Hwæt sægest *&u*, yr&lincg?

     What saist thou, ploughman?

     'What do you say, ploughman?'

                    (van Kemenade (1987:138-9))

   Parallel with our analysis of the Tobler-Mussafia effect in 2.2, we propose that in examples like (39) the clitic occupies Agr1E. The verb can occupy this position, as the following OE case of verb-subject order shows:

(41) Fela   spella *him* sædon &a Beormas, æg&er ge of hiera

　　　　agnum lande, ...

　　Many   stories him told the Permians, both of their own

　　　　country, ...

　　'The Permians told him many stories, both about their

　　　　own country, ...'　　　(van Kemenade (1987:114))

We cannot provide the parallel evidence in OHG, since the clitic in Agr1E is always a subject clitic. However, OHG examples like (39c) can be analysed as having the inflected verb in Agr1E together with the clitic. In Germanic matrix declaratives, then, the CP-level is not activated.

　　The main verb can also appear in a position quite distant from that occupied by the clitic in embedded clauses and in the characteristically non-V2 second conjuncts in main-clause coordination (cf. Kiparsky (1990)). Notice that the clitic can appear either before or after the subject in OE, as in Modern German (cf. 2.1):

(42)a.　　.. &æt *him* his fiend   wæren æfterfylgende.

　　　　.. that him his enemies were following.

　　　　'.. that his enemies were chasing him.'

　　　　　　(van Kemenade (1987:113))

　　b.　　&   se cyng *him* eac wel feoh   sealde.

　　　　and the king him also well property gave.

　　　　'and in addition the king gave him much property.'

　　　　　　(van Kemenade (1987:113))

　　c.　.. daz *íh* nîeuuánne necúme in conventicula haereticorum

　　　　.. that I never   not-come in the circle of-heretics

　　　　　　'.. that I never come into the circle of heretics.'

　　　　　　(Tomaselli (1991:29))

We take it that the inflected verb is in Agr2E in these examples. As in Medieval Romance languages, Agr2E is the position in which the inflected verb is formed by combining with the agreement affix; while Agr1E is the clitic position.

The principal difference between these Germanic languages and the Medieval Romance languages discussed in 2.2 is that in the Germanic languages the verb only moves to Agr1E in matrix declaratives, while in the Romance languages the verb moves to Agr1E both in matrix and in subordinate clauses, and indeed in any clause where the disallowed clitic-first order will not result from continued movement to CE. In Germanic interrogatives, etc., where the inflected verb is clearly in CE (cf. (40)), the verb "skips" Agr1E, and so the clitic appears in third position here. This is consistent with the fact that verb-preposing is a root phenomenon in Germanic, while it is found also in embedded clauses in Romance.

Our analysis captures the same range of facts as those proposed by van Kemenade (1987) for OE and Tomaselli (1991) for OHG. Compared to those analyses, ours has the advantage of greater generality, in that it relates the Germanic phenomena to the Tobler/Mussafia effects found in Romance. Also, the more elaborated clause structure that we propose makes it possible to distinguish the clitic position from the position of the inflected verb and to maintain that the inflected verb is always formed in the standard way in these languages, by head-movement into a position containing the agreement affix (cf. Pollock (1989)). On the other hand, neither Tomaselli nor van Kemenade allow for a position reserved purely for verbal inflection; in such a framework, it is necessary to posit special rules for the formation of the inflected verb when it is "distant" from the clitic in examples like (42), an undesirable consequence that we are able to avoid.

3. Subject positions

In this section, we will show how the subject positions are determined in the various languages which we have considered (we limit our attention throughout to non-⊖ subject positions, i.e. those outside VP). A central part of our discussion is based on the approach to Nominative-Case assignment advocated in Koopman & Sportiche (1991). Koopman & Sportiche propose that UG makes available two mechanisms of Nominative-Case assignment. Nominative Case can be assigned either under government, illustrated in (43a), or under agreement, illustrated in (43b):

(43)a.   X'

```
XE      YP


    NP      Y'




b.      XP


YP      X'


        XE
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Koopman & Sportiche consider that the choice among these two mechanisms is a "pure" parametric choice, in the sense that each language is in principle free to choose among these possibilities. We will suggest, however, that the choice of Nominative-assignment under agreement depends on other factors, in particular on the nature of the Case-assigning head XE, and that the only pure parametric choice is that of selecting (43a) or not.

   In the context of the general assumption that Agr1E is the Nominative-Case assigner in all the languages we are concerned with (but see Note 9 for a refinement of this assumption), if a language chooses the government option in (43a) then SpecAgr2' will be the subject position; and if a language chooses the agreement option in (43b) then SpecAgr1' will be the subject position. We further assume that the two options can be combined, making both SpecAgr1' and SpecAgr2' possible subject positions. We understand "subject position" to mean both Case-position, i.e. a position to which Nominative is assigned, and A-position (although we are excluding ⊖-positions here, as we mentioned above).

   The generalization which emerges from a consideration of the languages we have looked at is that wherever Agr1E is a clitic position, its specifier is a subject position. On the other hand, where Agr1E is a "pure" verbal position (in the sense that the only element that ever appears there is the verb), its specifier is a topic position. Suppose, then, that it is the fact that Agr1E may host a clitic that makes it possible for it to assign Nominative Case under agreement. We will return to this idea below. First, however, let us consider the evidence from the various languages that points to this conclusion.

Consider first the situation in Icelandic (and Yiddish, cf. 1.3). The evidence we presented in 1.1 shows that in this language Agr1E is a position which always hosts the inflected verb and that SpecAgr1' is a topic (non-Case, A') position, while SpecAgr2' is a subject position. Schematically, then, we have the following:

(44)　　$[_{Agr1P}$ TOP $[$ $[_{Agr1E}$ V $]$ $[_{Agr2P}$ Subj. $[_{Agr2E}$ t $]$

This structure is common to main and embedded clauses. We can account for its basic properties in terms of Koopman & Sportiche's system by saying that Agr1E assigns Nominative under government only. Note that Agr1E always contains the inflected verb and never contains a clitic in Icelandic; we propose the lack of Case-assignment under agreement is related to this point.

Now compare German, on the basis of the analysis given in 2.1. In main clauses, we have the following:

(45)　$[_{CP}$ TOP $[$ $[_{CE}$ V $]$ $[_{Agr1P}$ Subj. $[$ $[_{Agr1E}$ Cl $]$ $[_{Agr2P}$ Subj. $]]$

As in standard approaches, we take it that the verb moves to CE in main clauses and that SpecC' is a topic position. Agr1E is the Wackernagel position, and as such may contain one or more clitics. SpecAgr1' is a potential subject position in German, and not a topic position (cf. 2.1); this is the fundamental difference between German and Icelandic. SpecAgr2' is also a possible subject position in German, as it is in Icelandic.

In terms of Koopman & Sportiche's system, we can say that in German Agr1E assigns Nominative both under government and under agreement. For this reason, SpecAgr1' is a subject position rather than a topic position. As we mentioned above, we believe that there is a non-trivial connection between the possible presence of a pronoun in Agr1E and the fact that SpecAgr1' is a subject position.

There is a further complication concerning the topic positions in both German and Icelandic, i.e. SpecC' in German and SpecAgr1' in Icelandic (this complication is probably common to all the V2 Germanic languages and to OF (cf. Roberts (forthcoming, 2.3)). These positions also display properties of subject positions. Apart from being available for topicalization of any XP, they accept elements which are clearly not topics: lexical expletives and non-topic subjects (both pronominal and non-pronominal); cf. Cardinaletti (1990b,c) for further arguments for this analysis.

We can treat this situation in terms of Rizzi's (1991b) proposal that any specifier which agrees in Φ-features with its head can be an A-position (and therefore a subject position; other A-positions are all structural complements, not specifiers). This agreement can naturally be thought of as a coindexation relation between the subject in SpecX' and XE. We refer to this possibility henceforth as **spec-head coindexation**: this substantive relation is a subcase of the structural relation of spec-head agreement. Hence, precisely where a subject NP appears in SpecAgr1' in Icelandic, or in SpecC' in German, the position can be assigned Nominative since there will be agreement in Φ-features between the head and the NP. So, even in Icelandic, Nominative can be assigned under agreement in these conditions.[9] Nominative-assignment under *spec-head coindexation* can thus be distinguished in principle from Nominative-assignment under spec-head *agreement*, since in the latter situation it is possible that the head which assigns Nominative is not coindexed with its specifier (on this point we differ from the proposals made by Koopman & Sportiche (1991)).

In this sense, as we mentioned above, we do not take the possibility of Nominative-assignment under agreement given in (43b) to be an absolute parametric choice, but rather a possibility related to the nature of the Nominative-assigning head. On the status of the possibility of Nominative-assignment under government, see below.

Next, let us consider the more complex cases of OE and OF. Following the discussion in 2.3, OE main clauses show the pattern in (46a) and OE embedded clauses that in (46b):

(46)a. $[_{Agr1P}$ TOP $[\, [_{Agr1E}$ Cl + V $] \, [_{Agr2P}$ Subj. $[_{Agr2E}$ t $]$

 b. $[_{Agr1P}$ Subj. $[\, [_{Agr1E}$ Cl $] \, [_{Agr2P}$ Subj. $[_{Agr2E}$ V $]$

(46b) clearly indicates that Agr1E can assign Nominative either under government or under agreement in OE, and so both SpecAgr1' and SpecAgr2' are possible subject positions (cf. 2.3). So, for embedded clauses in OE, no problem arises. (46a), which is motivated by the analysis of V3 orders in OE that we gave in 2.3, leads to the following question: why is SpecAgr1' a subject position in embedded clauses, but a topic position in main clauses?

The fact that SpecAgr1' is a subject position in embedded clauses follows from our proposal that the possible presence

of a pronoun in Agr1E is correlated with the capacity to assign Case to SpecAgr1'. A pronoun can also occur in Agr1E in

main clauses, as seen in (46a) (cf. 2.3 for examples and discussion). However, Agr1E is also a position for the inflected

verb in (46a). This must be the factor which makes the difference: where Agr1E is a position to which the inflected verb

can move, its specifier is a subject position only where the two are coindexed (the same is true for CE in German, as we

saw above). On the other hand, if Agr1E hosts clitics but not inflected verbs, its specifier is uniquely a subject position

(see below for a slight refinement).

Finally, let us briefly consider the situation in OF, on the basis of the analyses proposed in 1.2 and 2.2 ((47a) is the

structure of a main clause and (47b) that of an embedded clause):

(47)a. [$_{CP}$ TOP [[$_{CE}$ Cl+V] [$_{Agr1P}$ Subj. [[$_{Agr1E}$ t] [$_{Agr2P}$ Subj.]]

  b. [$_{Agr1P}$ Subj. [[$_{Agr1E}$ Cl+V] [$_{Agr2P}$ Subj.]]

In both main and embedded clauses, Agr1E assigns Nominative under both government and agreement. Thus, both

SpecAgr1' and SpecAgr2' are subject positions. There is an important difference between OF and what we saw above for

OE. In OE, the specifier of a head containing the combination [Cl + V] (SpecAgr1' in matrix clauses) is a topic

position; on the other hand, the seemingly identical head position -- [$_{Agr1E}$ Cl + V] -- has a subject-position specifier in

OF embedded clauses, as (47b) shows.

We propose that the difference between the two cases lies in the different status of V-to-Agr1 movement in OF as

compared to OE, which we already noted in 2.3. In OF, V moves to Agr1E in all embedded clauses and all root clauses

where no violation of the ban on clitic-first orders will result, so this movement is clearly the unmarked option. On the

other hand, in OE V moves to Agr1E only in root clauses. Thus V-to-Agr1 is a more general process in OF than in OE,

since the verb forms a unit with the clitic wherever it can. This is clearly not the case in OE. Since the clitic in Agr1E

triggers V-movement to this position in OF, we can consider Agr1E to be essentially a clitic position, hence its specifier

is a subject position. Conversely, in OE the head [$_{Agr1E}$ Cl + V] is formed by an instance of verb-movement which is not

triggered by the clitic. Because of this, we consider these cases of Agr1E to be verb-positions, and so the account given earlier (after (46) above) applies.[10]

To sum up, we can account for the different subject positions attested in the languages we have discussed. Icelandic allows Nominative-assignment only under government, while the other languages discussed here allow both possibilities. We arrived at these conclusions by holding constant the following two assumptions:

(48)(i) Agr1E assigns Nominative Case (although it may not be

the only Nominative-assigner -- see Note 9);

 (ii) The nature of a specifier position depends on the   possible content of the head it specifies.

Of these assumptions, (48ii) deserves further comment. What emerged from our discussion is that Agr1E (and perhaps also CE -- cf. Note 9) assigns Case under spec-head agreement where (a) it contains an inflected verb which is coindexed with the NP in the specifier position or (b) it is a clitic position. This general conclusion is consistent with the spirit of Rizzi's (1991b) proposal that A-position specifiers are those specifiers which are in a Spec-head relation with Agr. As we mentioned at the beginning of this section, this in turn suggests that the possibility of assigning Nominative under spec-head agreement is not a "pure" parameter, but rather related to the intrinsic properties of the Nominative-assigner.

On the other hand, the possibility of assigning Nominative under government may be a "pure" parametric choice. We saw evidence in 2.1 that in Dutch Nominative Case can only be assigned under agreement (cf. (31) vs. (32)). In Dutch, Agr1E is clearly a clitic position, as Zwart's (1991) data show; hence SpecAgr1' is a subject position. However, SpecAgr2' cannot contain the subject, as (32) shows. We interpret this to mean that the government option is not chosen in Dutch. Where the verb raises to CE, SpecAgr1' remains a subject position, since Agr1E is not carried along by this movement; as in German, the verb "skips" Agr1E on its way to CE. So Agr1E continues to assign Nominative to its specifier in these conditions. Dutch shows the same evidence as German and Icelandic that SpecC' may be a subject position (cf. Travis (1984)); we can treat these facts exactly in the same way as we have treated the parallel German facts (cf. Note 9).

To see that this system has some generality, and is not limited to languages with the "double-Agr" structure, let us briefly consider the situation in languages which have just one Agr projection. Here the same possibilities of Nominative-Case assignment are available, and they are determined in the same way in that Nominative-assignment under agreement depends on properties of (the single) AgrE while Nominative-assignment under government is a "pure" parametric choice.

Modern Standard Italian is an example of a language in which Nominative is assigned under agreement only. This is consistent with our proposals in that AgrE in Italian can contain both complement clitics and the inflected verb, as is well-known. The possibility of Nominative-assignment under government does not exist as the ungrammaticality of the following example shows (cf. Rizzi (1991a), Roberts (forthcoming)):

(49)   *Ha Gianni fatto questo?

         Has John done this?

                  'Has John done this?'

(Here we are only concerned with the Case properties of AgrE; it is possible that "free inversion" involves Nominative-assignment by TE under government to a VP-internal subject position (cf. Rizzi (1990a)).

Where Nominative-assignment under government is impossible in a system with only one Agr-projection, verb-second and other kinds of inversion around a nominal subject are impossible (cf. Rizzi & Roberts (1989) on French). More generally, it is probable that systems with just one Agr-projection must allow Nominative-assignment under agreement since they are unable to exploit the government configuration in many cases (this conclusion depends on the assumption that SpecT' is an A'-position -- cf. 1.1).

English, like Italian, has only one Agr-projection. Nominative-assignment under agreement is possible, since there is always a subject in SpecAgr', triggering the required spec-head coindexation. Nominative-assignment under government is also possible in English:

(50)   Has John done that?

The existence of Nominative-assignment under government in English shows that this possibility holds no necessary relationship to full verb-second.

The following Tables sum up the properties of the different grammatical systems that we have discussed up to now.

TABLE ONE: VARIATION AMONG DOUBLE-AGR LANGUAGES

	SpecAgr1	Agr1E	SpecAgr2
Icelandic:	Topic	Governed NOM	Subject
Yiddish:	Topic	Governed NOM	Subject
Old French:	Subject	Governed/agreeing NOM	Subject
German:	Subject	Governed/agreeing NOM	Subject
Dutch:	Subject	Agreeing NOM	----
OE, OHG:	Topic (main) Subject (emb)	Governed/agreeing NOM	Subject

TABLE TWO: PARAMETERS

	Yes	No
Agr-recursion	See Table One	Mod. Engl, Mod. Fr, Mod. It
V2	Germanic (other than English), OF	Mod. Romance, English
Governed NOM	Germanic (other than Dutch), OF	Mod. Romance, Dutch

Recall that we have proposed that the possibility of assigning NOM under agreement is not a "pure" parameter, but rather a function of parametrized properties of the NOM-assigning head.

4. Null Subjects

In this section, we will show how the analysis developed in the previous sections can account for certain aspects of the distribution of null subjects in V2 languages. We adopt the conception of the <u>pro</u>-module outlined in Rizzi (1986). The most important aspect of this system is the fact that null subjects depend on Case-marking for formal licensing in the sense that a null subject must occupy a position of potential (although not necessarily actual) Case-assignment. Because of this, what we saw in the previous sections concerning the interaction of the double-Agr clause structure with Nominative-assignment has interesting consequences for the distribution of null subjects.

4.1. Expletive null subjects

In Icelandic and German, there is an alternation between an overt expletive and a null expletive. This alternation is determined by several factors, most importantly the licensing condition for null subjects. In these languages, null subjects can only be licensed under government or under "pure" spec-head agreement (in the sense discussed in Section 3). This gives rise to complementary distribution between the null expletive and the lexical expletive. Wherever it is possible for the expletive null subject to appear, it must appear and so the lexical expletive is excluded (cf. Cardinaletti (1990a,c) for an account of this). Wherever the expletive null subject is not licensed, the overt expletive appears.

This situation is illustrated by the following pairs of German ((51)) and Icelandic ((52)) matrix sentences:[11]

(51)a.   *(Es) wurde getanzt.

         It was   danced.

   b.   Gestern   wurde (*es) getanzt.

          Yesterday was   it danced.

                    'Yesterday there was dancing.'

(52)a.   *(&aδ) var dansaδ.

   b.   I gær   var (*&aδ) dansaδ.

                    Yesterday was   it   danced.

'Yesterday there was dancing.'

In the (a)-examples, the expletive is in topic position (although it is not a topic, cf. Section 3 and below). Since this is a position where null subjects are not licensed, the expletive pro cannot appear, and hence the overt expletive is required. Null subjects cannot be licensed in this position since this is a configuration in which Nominative is assigned under Spec-head coindexation (where the head is CE in German and Agr1E in Icelandic); as we will see in more detail below, Spec-head coindexation does not license a null subject. In the (b)-examples, on the other hand, the expletive appears in a position where null subjects are licensed, and hence the lexical expletive is ungrammatical.

In Icelandic, the situation in matrix clauses just illustrated is also found in all types of embedded clauses, as long as the thematic subject is indefinite, and is as such able to remain in VP where it receives Partitive Case (in the examples below, we use enginn, 'nobody'). As the examples show, the null expletive is in SpecAgr2':

(53)a. Ég harma *aδ &egar skuli pro enginn* hafa lesiδ &essa bók.

   I regret that already should   nobody have read this book.

      'I regret that nobody should have read this book already.'

b. Ég spurδi *hvort   &egar   hefδi pro enginn* lesiδ &essa bók.

  I asked whether already had   nobody read this book.

      'I asked whether nobody had read this book already.'

c. sú staδreynd *aδ   &egar   hefur pro enginn* lesiδ &essa bók

  the fact   that already has   nobody read this book

      'the fact that nobody has read this book already'

d. bókin   *sem &egar   hefur pro enginn* lesiδ

  book-the that already has   nobody read

      'the book that nobody has read already'

        (Thráinsson, p.c.)

As we said above, overt expletives cannot appear where a null expletive is possible:

(54)
a. *Ég held/harma   *aδ   &egar   skuli &aδ María/enginn*

hafa lesiδ &essa bók.

I believe/regret that already should it   M./nobody

have read this book.

b.   *Ég spurδi *hvort   &egar   hefδi &aδ María/enginn* lesiδ &essa bók.

I asked whether already has it M./nobody   read this book.

c.   *sú staδreynd *aδ   &egar   hefur &aδ María/enginn* lesiδ &essa bók

the fact   that already had it   M./nobody   read

this book

d.   *bókin   *sem &egar   hefur &aδ María/enginn* lesiδ

book-the that already had   it M./nobody   read.

(Thráinsson, p.c.)

In (53), the null expletive occupies SpecAgr2'. As we saw in Section 3, this is a subject position in the sense that it

is a position which receives Nominative Case. Hence the licensing condition on <u>pro</u> is satisfied here, and the null

expletive is present, making the overt expletive impossible as in (54).

The reverse situation is found in SpecAgr1'. This can be seen in examples like the following (there is a

complication concerning (55b) which improves this example in comparison with the others; see below):

(55) a.   Ég harma *aδ *(&aδ) skuli t enginn* hafa lesiδ &essa bók.

I regret that (it) should nobody have read this book.

'I regret that nobody should have read this book.'

b.   Ég spurδi *hvort ?(&aδ) hefδi t enginn* lesiδ &essa bók.

I asked whether (it) had   nobody read this book.

'I asked whether nobody had read this book.'

c.   sú staδreynd *aδ *(&aδ) hefur t enginn* lesiδ &essa bók

the fact   that (it) has   nobody read this book

'the fact that nobody has read this book'

d. bókin   *sem *(&aδ) hefur t enginn* lesiδ

    book-the that (it) has   nobody read

              'the book that nobody has read'

                  (Thráinsson, p.c.)

Moreover, when there is no subject, e.g. in impersonal passives, &aδ is able to appear in SpecAgr1':

(56) Ég veit *aδ *(&aδ) er t* ekiδ   vinstra megin í Astralíu.

  I know that (it) is   driven on the left   in A.

      'I know that people drive on the left in Australia.'

          (Rögnvaldsson (1984:17-18))

In both (55) and (56), we see that the overt expletive is required, and pro is impossible. The null subject is

ungrammatical in SpecAgr1' because the only way in which Nominative Case can be assigned to this position is by

spec-head coindexation, and not by "pure" spec-head agreement or by government. In general, this implies that

spec-head coindexation is not adequate for licensing pro.

    This approach is confirmed by the behaviour of expletives in interrogatives where the inflected verb is raised to

CE. In such examples, the overt expletive is impossible and the null expletive required:

(57)   Var (*&aδ) dansaδ?

    Was   (it) danced?

       'Was there dancing?'

Here the presence of the verb, containing Agr1E, in CE makes it possible to assign Nominative to SpecAgr1' under

government. Hence pro is possible.

    In (55), as in (53), there is a definiteness effect. Cf. the ungrammaticality of the parallel examples where the

thematic subject is definite:

(58)a. *Ég harma *aδ &aδ skuli María* hafa lesiδ &essa bók.

   I regret that it should M.   have read this book.

 b. *Ég spurδi *hvort   &aδ hefδi María* lesiδ &essa bók.

   I asked whether it had   M.   read this book.

 c. *sú staδreynd *aδ   &aδ hefur María* lesiδ &essa bók

   the fact   that it has   Mary read this book.

 d. *bókin   *sem &aδ hefur María* lesiδ

   book-the that it has   M.   read

                     (Thráinsson, p.c.)

We attribute the ungrammaticality of (58) to the fact that there are two NPs which compete for Nominative Case: &aδ and María. On the other hand, the indefinite enginn in (53) and (55) is able to receive Partitive Case (cf. Belletti (1988), Vikner (1990)), making Nominative Case available for &aδ.[12]

   Given these considerations, it is clear that no definite NP can appear lower than SpecAgr2'. On the other hand, it is clear from the discussion in 1.1 that there is no definiteness effect with embedded V2 in Icelandic. Therefore, this consideration further confirms that we cannot adopt an analysis of Icelandic embedded V2 of the type proposed by Rögnvaldsson & Thráinsson (1990), and by Diesing (1989) and Santorini (1989) for Yiddish embedded V2 (moreover, given the general similarities between Yiddish and Icelandic noted in 1.3, this analysis probably does not hold for Yiddish either).   This type of analysis relies on the idea that the standard SpecI' -- the canonical subject position of English -- is able to be a topic position, and that the subject can remain in an "internal" position. However, the contrasts between (53) and (54) and between (55) and (58) show that the "internal" position is subject to a definiteness effect. All this supports our analysis of embedded V2 in terms of the double-Agr structure, and so supports the postulation of that structure as a general possibility.

   Icelandic also allows an empty SpecAgr1' in embedded clauses. This is only possible where CE is able to license an expletive null subject, and only where the subject is indefinite. The conditions under which CE can license an

expletive null subject are rather difficult to understand; however, they correspond closely to those where in French Stylistic Inversion an expletive null subject may appear, being essentially cases where CE is [+wh] or subjunctive (cf. Kayne & Pollock (1978), Pollock (1986)):

(59)a. *Ég spurδi *hvort pro hefδi María/ hún* lesiδ &essa bók.

     I asked whether had   M./ she read this book.

  b. ?Ég spurδi *hvort pro hefδi t enginn* lesiδ &essa bók.

     I asked whether had   nobody read this book.

       'I asked whether nobody had read this book.'

  c. Hann spurδi *hvort pro hefδu t* komiδ margir gestir.

     he asked whether had   come many guests.

       'He asked whether many guests had come.'

         (Rögnvaldson & Thráinsson (1990:31))

  d. Ég veit *aδ pro væri t* ekiδ vinstra megin í Astralíu.

      I know that is   driven on the left in Australia.

      'I know that people drive on the left in Australia.'

        (Rögnvaldson (1984:17-18))

(60) J'exige que pro soit procédé au réexamen de cette question.

  I require that be   proceeded to-the reexamination of this

  question.

     'I require that this question be reexamined.'

                (Kayne & Pollock (1978))

As the examples in (59) indicate, the definiteness effect here is due to the fact that pro is base-generated in SpecAgr2' and raises to SpecAgr1'. The trace of pro in SpecAgr2' blocks movement of a definite subject into that position. One aspect of sentences of this kind may seem problematic given what we said above: in at least some cases, null and overt expletive subjects are apparently not in complementary distribution. This can be seen by comparing examples like (55b) with (59b); we repeat (55b) for convenience here:

(55b) Ég spurδi *hvort* *&aδ hefδi t enginn* lesiδ &essa bók.

   I asked whether it had   nobody read this book.

       'I asked whether nobody had read this book.'

This non-complementary distribution of <u>&aδ</u> and <u>pro</u> is not inconsistent with the basic idea that an overt expletive cannot appear wherever a null expletive can be licensed. The crucial point here is that there are two different potential licensers for expletive <u>pro</u>: Agr1E and CE (where CE is [+wh] or subjunctive). Suppose that each of these heads is only able to license <u>pro</u> under government, so Agr1E licenses <u>pro</u> in SpecAgr2' and CE licenses <u>pro</u> in SpecAgr1'. When Agr1E licenses <u>pro</u> in SpecAgr2', <u>&aδ</u> cannot appear in this position and so must move to SpecAgr1'. When CE licenses <u>pro</u> in SpecAgr1', <u>&aδ</u> cannot appear there for exactly the same reason. This is what we see in (59). So we arrive at the result that the only expletive possible in SpecAgr2' is the null one, while in SpecAgr1' either <u>&aδ</u> or <u>pro</u> is possible depending on which head -- Agr1E or CE -- is the licenser. A similar situation occurs in French with Stylistic Inversion; alongside examples like (60), the comparable case with the overt expletive <u>il</u> is possible:

(61) J'exige qu'il   soit procédé au   réexamen   de cette question.

   I require that it be   proceeded to-the re-examination of   this question.

      'I require that this question be reexamined.'

   The above paragraphs show that our proposed clause structure for Icelandic can account for the distribution of null and overt expletives in both matrix and embedded clauses. A major advantage of our account is that it explicitly relates the phenomenon of embedded verb second to the distribution of these expletives in embedded clauses.

   In German, the situation regarding null expletives is largely comparable to what we have just seen for Icelandic. A null expletive is possible in SpecAgr1' as shown by (51b) and the following:

(62)a.   .. daß <u>pro</u> es ihm   ein Mann gegeben hat.

    .. that   it to-him a man given   has.

    '.. that a man has given it to him.'

b.   .. daß <u>pro</u> es ihm   dieser Mann gegeben hat.

   .. that   it to-him this   man given   has.

   '.. that this man has given it to him.'

In (62a) the thematic subject, <u>ein Mann</u>, is indefinite and so able to receive Case in VP independently of Agr1E. Hence <u>pro</u> can appear in SpecAgr1'. In (62b), the thematic subject is definite, and, as its position relative to the clitics shows, it occupies SpecAgr2'. In this example, then, <u>pro</u> must occupy SpecAgr1'. Note that here <u>pro</u> does not receive a Case; nevertheless it is licensed since it occupies a potential Case-position (in the sense that Nominative can be assigned under spec-head agreement here; see Section 3).

   As we saw for SpecAgr1' in Icelandic, no null subject can be licensed by spec-head coindexation. In German the same situation holds at the level of SpecC' (it does not hold of SpecAgr1' as this position receives Nominative Case under "pure" spec-head agreement in German). This is illustrated both by (51a) and the following:

(63)   *Es* hat *t* ihm ein/dieser Mann das Buch gegeben.

   It has   him a/this   man the book given.

   'A/this man has given him the book.'

   In this section we have shown how the proposals we made in previous sections regarding both the clause structure and the modes of Nominative assignment in German and Icelandic can provide a straightforward account of the distribution of overt and null expletives, a matter that has long been regarded as problematic. This account depends crucially on the assumption that <u>pro</u> can be licensed in configurations of potential Case assignment, with the exception of those that depend on spec-head coindexation.

4.2 Referential null subjects

   We next consider the interaction of our proposals with the analysis of referential null subjects, concentrating on

Old French. As we saw in 1.2, OF was a verb-second language, and it is well-known that the distribution of null

subjects interacted with the movement of the verb (cf. Thurneysen (1892), Foulet (1982), von Wartburg (1934),

Price (1971), Vanelli, Renzi & Benincà (1986), Benincà (1984, 1989), Adams (1987a,b)).

   Null subjects are frequently found with verb second in OF. The following lines from the <u>Charroi de Nîmes</u>

illustrate this:

(64)a.   *Muetes de chiens font*   avec els mener. (Compl V)

         Troups of dogs   make (they) with them bring.

                    'They have troups of dogs brought with them.'

   b.   *Par Petit Pont sont*   en Paris entré.   (PP V)

         By Petit-Pont are (they) in Paris come.

                    'They entered Paris by the Petit-Pont.'

   c.   *Li cuens Guillelmes fu* molt gentix et ber.   (Subj V)

         The count G.   was very kind   and good.

                    'Count G. was very kind and good.'

Beginning with Vanelli, Renzi & Benincà (1986), various authors have made an analytic connection between the

verb-movement required for verb-second and the licensing of referential null subjects in this language. We concur

with this basic approach, and, following Roberts (forthcoming), we interpret the connection in terms of the

relationship between Case theory and formal licensing. So the connection between null subjects and

verb-movement in OF is due to the fact that verb-movement creates the configuration in which <u>pro</u> can be formally

licensed. To the extent that verb-second is cross-linguistically a root phenomenon, this approach leads to the

expectation that OF null subjects are a root phenomenon. However, there is evidence (from Adams (1988a,b,c),

Dupuis (1988, 1989), Hirschbuhler & Junker (1988), Hirschbuhler (1990) and Vance (1988)) that null subjects were

possible in a range of embedded clauses, including, most importantly, Wh-complements (they are also possible in

complements to bridge verbs, which we argued in 1.1 involve CP-recursion).

Adams (1988b,c) gives the following examples of V1 and V2 orders with null subjects in Wh-complements (1988b:(9), (11), pp. 5f.;1988c:(9), (11), pp. 10f.):

(65) a.   Je sui le sire a cui [*volez* parler].

I am the lord to whom (you) wish to-speak.

'I am the lord to whom you wish to speak.'

b.   L'espee   dont   [*s'estoit*   ocis]

the sword by-which   himself-was killed

'the sword which he killed himself with'

c.   Quant [*vit* le roi]

when (he) saw the king

'When he saw the king.'

Continuing to assume that the inflected verb cannot move to a [+wh] CE, we are led to the conclusion that the verb is in Agr1E in these examples. If this is so, we need to explain where the null subject is, and how it is licensed. The same question emerges from a consideration of the null subjects combined with Stylistic Fronting that we saw in 1.2 (cf. (12)).

Hirschbuhler (1990) presents evidence that referential embedded null subjects are found in just one phase of the OF period. He studies 12th and 13th century prose and verse, and concludes that there are essentially two systems at work, according to the nature of the text. One system, which we call the "conservative" system, allows null subjects in embedded clauses fairly freely, as in (65). This system is typical of 12th-century prose texts and for both 12th- and 13th-century verse. On the other hand, in 13th-century prose texts embedded V1 orders with null subjects are limited to two types of rather fixed expressions. Call this the "advanced" system. Here are some representative examples of the advanced system:

(66)a.   se ne *fu*   chiés le Roi Mehaigniée

　　　if not were "chez" King M.

　　'if it were not at the court of King M.'

　　　　　　　(Hirchsbuhler's (14), p. 7)

　b.   quant *vint* a cele hore que ...

　　　when came to that time that ...

　　　'when the time came that ...'

　　　　　　　(Hirschbuhler's (15a), p. 7)

These are clearly cases of expletive null subjects. Moreover, they seem to represent an unproductive option.

　　We propose, on the basis of Hirschbuhler's data, that the "double Agr" system was at work in the more conservative texts. So, for instance, we assign the following structures to the embedded clause in (65a):

(67)　　CP

　　XP　　C'

　　　CE　　Agr1P

　　[+wh]

　　　　Spec　　Agr1'

　　　　　　Agr1E　　Agr2P

　　　　　　　Spec　　Agr2'

Agr2E　　TP

　a cui　　pro　volez　t　　t　　t　parler

Here the verb appears in Agr1E and licenses the null subject, the pro in SpecAgr1', under agreement. The verb

moves from Agr2E to Agr1E to license the subject position in SpecAgr1'. So SpecAgr1' is a subject position. As

we saw in Sections 1.2 and 3, SpecAgr2' is also a subject position.

　　Putting together what we have just seen with the results of 1.2, our analysis of OF runs as follows. There may be

a very early period, essentially represented by the Quatre Livres du Roi, in which OF is like Icelandic in that

SpecAgr1' was a topic position, and embedded topicalization was possible. However, most of the texts of

"conservative" OF do not give sufficient evidence for embedded topicalization as opposed to Stylistic Fronting, to

support this analysis. For conservative OF (i.e. leaving aside the system that may be instantiated by the Quatre

Livres du Roi), we propose that SpecAgr1' was a subject position. So Nominative Case could be assigned to this

position under spec-head agreement. On this view, "conservative" OF is just like German with respect to the nature

of both SpecAgr1' and SpecAgr2'; the differences between the two languages are due to the independent existence

of both Stylistic Fronting and referential null subjects in OF. In main clauses at this period, the well-known

connection between verb second and null subjects is retained since V is in CE, and null subjects must be in

SpecAgr1'.

　　Third, there is the "innovative" system of 13th-century prose. Here, only expletive null subjects are allowed in

embedded contexts. The obvious analysis is that Agr1E is no longer able to license a referential null subject. We

think this is because Agr1E is not present at all at this stage. This leaves Agr2E and CE as potential licensers of null

subjects. Of these, Agr2E is unable to license referential null subjects alone (i.e. without moving to CE). As a

result, CE is the only potential licenser in embedded clauses, and so only expletive null subjects are available in

these OF texts.

　　Agr(2)E (i.e. the sole Agr after the 13th century) is unable to license a null subject under agreement in embedded

clauses, but it continues to license null subjects under government when moved to CE in main clauses, giving rise to

the clear asymmetries between main and embedded clauses found in 13th-century prose. We suggest that Agr(2)E is unable to license pro under agreement as the inflectional morphology it contains is too "poor"; for licensing under agreement genuinely rich morphology is required, as for example in Italian. French verbal morphology has been relatively impoverished since roughly the 12th century (cf. Foulet (1935/6), Roberts (forthcoming) for discussion). This difference in the licensing properties of Agr(2)E may be related to the suggestion made in Section 3 that relations that hold under spec-head agreement depend on the content of the head, while relations that hold under government are "pure" parametric choices. Note that this idea is consistent with the proposal -- which we have seen several times already -- that spec-head coindexation does not suffice for licensing null subjects.

Finally, we need to say something about why and how Agr1P was lost. Two, possibly related, factors are relevant to this question. First, there appears to be a relation between the loss of Agr1E, instantiated as the loss of embedded referential null subjects, and the loss of Tobler-Mussafia effects (cf. 2.2). De Kok (1985:93) gives early examples of clitic-first orders in yes/no questions in exactly the 13th-century prose texts that Hirschbuhler (1990) uses to establish the development of the "advanced" system of OF null subjects. This diachronic correlation is in need of further investigation and documentation, but, to the extent that it holds up, it can be accounted for straight-forwardly in our terms as the loss of Agr1P.

A second development which may be relevant is the loss of the morphological case system. It is well-known that OF had a morphological case system which distinguished nominative from non-nominative in NPs headed by (most) masculine nouns. This system was lost between the 12th and the 14th centuries (Foulet 1982:32f.)). Now, as we mentioned in Section 3, the presence of Agr1P makes Nominative-assignment under government possible independently of movement to CE, and hence allows inversion to be a non-root phenomenon. Suppose, as seems intuitively reasonable, that non-root Nominative-assignment under government is linked to generalized nominative morphology (i.e. nominative morphology not restricted to the pronominal system). One way to think of this is by taking Agr1P to be really NomP, a projection of a head whose sole function is to assign Case. Then, the loss of the morphological case system triggers the loss of Agr1P/NomP. This proposal has the virtue of tying the loss of Agr1P/NomP to a very well-known development in the history of French. The Germanic languages offer other examples of a possible relation between a morphological case system and Agr1P/NomP: German and Icelandic both have both, while English and the Mainland Scandinavian languages have neither. (Dutch is unusual in that it has

very little morphological Case and Agr1P/NomP).

In conclusion, the above analysis of OF accomplishes two things: first, it allows us to retain the idea that verb-movement, either to CE or to Agr1E, was intimately connected with the licensing of referential null subjects in this language; second, we can account for a range of the word orders attested at different periods of OF. A further point is that our approach allows us to explain the restrictions on null subjects that developed during the OF period and to relate them to changes in word-order possibilities, changes in clitic positions and, possibly, to the loss of morphological case.

5. Conclusion

In this paper, we have proposed that some languages have a more complex clause structure than has usually been supposed, in that there are two Agr-projections available. These two projections locate properties of AgrE in different positions: in particular, clitics can be thought of as occupying a position which is distinct from that of the finite verbal agreement morphology. By means of this simple assumption, we have been able to give a straightforward account of a range of phenomena involving the interaction of verb-movement, clitic-placement and Nominative-Case assignment.

On the empirical level, it emerges from our analysis that certain phenomena are characteristic of the "double-Agr" system. These are (i) generalized embedded topicalization; (ii) Tobler-Mussafia effects; (iii) phenomena involving second-position clitics more generally (e.g. the V3 orders of OE and OHG, as well as the "Wackernagel effects" of Modern German). If the suggestion made at the end of the previous section that the existence of Agr1P is closely connected to the existence of generalized morphological nominative case is correct, then we make the further prediction that properties (i - iii) above correlate with the presence of morphological nominative case.

On the theoretical level, we have developed a theory of subject positions. Taking as our starting point the proposals in Koopman & Sportiche (1991), we have suggested that the inventory of subject positions in a given language is a function of the possible modes of Nominative-assignment. We elaborated Koopman & Sportiche's proposal that Nominative Case can be assigned either under government or under spec-head agreement. First, we suggested that spec-head coindexation, although a subcase of spec-head agreement, should be distinguished from spec-head agreement. Spec-head coindexation may allow Nominative-assignment to positions which are otherwise A'-positions (cf. Rizzi (1991b)). Also, this idea has consequences for the theory of null subjects, since spec-head coindexation never formally licenses a null subject. Second, we proposed that Nominative-assignment under agreement is not a "pure" parametric choice, but is instead determined by the content of the Nominative-assigning head (which may be subject to parametric variation). On the other hand, the possibility of Nominative-assignment under government appears to be a parametric choice.

Of course, various questions remain open. The most pressing of these concerns the factors which determine the movements of the inflected verb to the various functional-head positions. In terms of the distinction between L-related and non-L-related heads recently proposed by Chomsky (Class 1990), since both CE and Agr1E would be non-L-related heads, while Agr2E would be L-related, the question becomes: what determines verb-movement to non-L-related heads? We hope that certain approaches to answering this question have emerged in the foregoing.

Notes

[1]   Although, as our data show, there is no restriction on the

class of clauses which allows verb second in Icelandic, there are some independent restrictions on the interaction of Wh-movement and topicalization. It seems that an adverbial Wh-constituent cannot introduce a verb-second clause where the topicalized element is also adverbial, as the following contrasts illustrate:

(i) Ég spurδi *hvar henni* hefδu flestir aδdáendur gefiδ blóm.

   I asked where her had   most   fans   given flowers.

   'I asked where the most fans had given her flowers.'

     (Thráinsson (1986:186), cited in Santorini (1989:67))

(ii)   bókin *sem &egar* hefur María lesiδ

    book-the that already had Mary read

        'the book that Mary had already read'   (cf. (1e))

(iii) *Ég veit ekki *hvar í gær* hefur kyrin staδiδ.

   I know not where yesterday has the-cow stood.

              (Vikner (1990:Ch 2, 34))

Example (i) has an adverbial Wh-element and an argumental topic; (ii) shows the opposite pattern. Both examples are grammatical as cases of embedded topicalization. Example (iii), on the other hand, involves an adverbial Wh-element and an adverbial topic, and is ungrammatical. Vikner (ibid) proposes that the impossibility of (iii)

should be attributed to failure of antecedent government. However, more needs to be said (at least given standard

accounts of antecedent-government) in order to distinguish (iii) from (i) and (ii).

²   In German, the complementizer must be absent from the embedded clause for V2 to be possible; if <u>daß</u> is

included in (2a) the sentence becomes ungrammatical. This is not true in Mainland Scandinavian, where the

equivalent of <u>daß</u> is required (cf. Vikner (1990, Ch. 2)).

    (2d) is improved if the verb is subjunctive, but not to the point of full grammaticality:

(i) ??die Tatsache, *gestern   habe   Maria* dieses Buch gelesen

            the fact   yesterday have(subj.) M. this   book read

However, deverbal nouns seem to accept a V2 complement of this kind more readily:

(ii)   die Behauptung, *er wäre*   in Frankfurt

                  the statement   he were(subj.) in F.

      'the statement he was in F.'

(iii)   die Behauptung *gestern   wäre er* in Frankfurt

                  the statement yesterday were he in F.

      'the statement yesterday he was in F.'

³   Cecilia Poletto (p.c.) raises the question of double topicalization. Why do we not find structures with both

CP-recursion and Agr-recursion, which would give rise to orders of the following kind (where the inflected verb is

either in the second CE or in Agr1E):

(i)   CE [TOP [CE/V [TOP [Agr1E/V [SUBJECT ...

This structure would be manifested by double topicalization. In general, double topicalization is not possible, due

to relativized minimality, since the lower topic prevents the higher one from antecedent-governing its trace.

[4] An apparent problem, pointed out to us by Guglielmo Cinque (p.c.), concerns the possibility of generating VOS orders in V1 declaratives. If, as we are proposing, the verb is in CE in such sentences, what prevents the object from moving to SpecAgr1'? This would give rise to VOS order, something we do not find (with a definite subject) in Icelandic. Notice that the problem is not limited to V1 declaratives, but, to the extent that they involve V-to-C movement, holds also of interrogatives, imperatives, etc., in languages with Agr-recursion. A solution comes from the adjacency condition on Case-assignment; McCloskey (1990) shows that in a systematically V1 language like Irish the verb must be adjacent to the subject for Nominative-assignment to take place, and suggests that this is true wherever Nominative-assignment takes place under government. Adopting McCloskey's proposal, we suggest that when the verb moves to CE the subject must move to SpecAgr1', blocking movement of the object to this position.

[5] The idea that Agr1E can be a clitic position leads naturally to an extension of our system to account for the "reduplication of agreement" found in many Gallo-Italian dialects with rich systems of subject clitics. Cf. Roberts (1991b) for a version of this idea. Also, our system may provide a straightforward account of inflected complementizers of the type found in West Flemish (cf. Haegeman (forthcoming)) and Bavarian (Bayer (1984/5)). These phenomena are illustrated in (i):

(i)a.   (La Maria) *la* parl*a*. (Northern Italian dialects)

      (Mary)   she talks.

         'Mary talks.'

  b.   ... da-*n*-k   goa*n*. (West Flemish)

         ... that-1sg-I go-1sg

         '... that I go.'

  c.   ... da-φ-me   goa*n*. (West Flemish)

      ... that-1pl-we go-1pl.

         '... that we go.'

  d.   ... wenn-*st* kumm*st*. (Bavarian)

      ... when-2sg come-2sg

         '... when you come.'

[6]   In fact, the situation is more complicated than (29) indicates in that sentences like (i) are possible on condition that at least the second pronoun is stressed:(i) ?.. daß *es/sie* der Hans *ihm* wahrscheinlich gegeben hat.

We interpret this fact, not as a counterexample to the analysis being put forward in the text, but as an example of scrambling of a (stressed) pronoun. When pronouns occupy some position other than the Wackernagel position, they have undergone scrambling in the same way as full NPs.

[7]   Another important confirmation comes from Penner's (1990) work on the acquisition of Bernese Swiss German. Penner shows that acquisition of this dialect proceeds in phases which can be neatly accounted for by assuming that Agr2P is acquired before Agr1P and Agr1P before CP.

[8]   This connection between matrix V1 and embedded topicalization was noticed by Santorini (1989:64). According to her, the languages which have both properties include Icelandic, Yiddish and OF. We capture this correlation in our system by saying that such languages allow matrix clauses to be Agr1Ps, with "VE-topicalization" to CE giving matrix V1. This is in fact what we said for Icelandic in 1.1. The relative infrequency of matrix V1 in OF as compared to OIt suggests that this is not the right approach for OF, at least not for the "core" period where matrix declaratives are CPs (cf. 1.2 and Section 3). It is possible that this analysis will turn out to be correct for the early period of OF where embedded topicalization is possible (cf. 1.2).

[9]   This proposal appears to lead to a problem in German. We have been operating under the assumption that Agr1E is the head which assigns Nominative. However, the analysis in 2.1 clearly implies that V moves to CE "skipping" Agr1E. So, the Nominative-assigning head does not appear to be moved to CE. To deal with this, we tentatively suggest that CE in German independently has the capacity to assign Nominative when it contains a verb which agrees with its specifier. Evidence in favour of this comes from es-clauses with a definite subject, e.g.:

(i)   ?Es hat t dieser Mann angerufen.

       It has   this   man   called.

              'This man has called.'

It is hard to avoid the conclusion that there are two Nominative NPs here: <u>es</u> and <u>dieser Mann</u>. In terms of our analysis, CE assigns Nominative to <u>es</u> in SpecC' under agreement, and Agr1E assigns an independent Nominative feature to <u>dieser Mann</u> in SpecAgr2' under government. SpecAgr1' is occupied by the trace of <u>es</u>, cf. Cardinaletti (1990a,c). This proposal captures the frequently-made observation that the definiteness effect is less rigid in German than in other languages.

[10]   It is possible that the distinction that Rizzi & Roberts (1989) draw between morphologically-selected and free head-to-head movement may be relevant here. Since Rizzi & Roberts use the notion of morphological selection only for cases where affixes attract stems, rather than for cases of cliticization, their system should be modified in order to be able to apply to cases where clitics simply impose a requirement of attachment to words of a certain class. As we saw in 2.2, the best treatment of the Tobler/Mussafia effect involves saying that the clitic must combine with the inflected verb, but we cannot state whether this requirement is one of enclisis or proclisis. In terms of Kayne's (1991) proposal that enclisis involves a configuration where the clitic is structurally lower than the element it cliticizes to, it is not clear how the mechanism of morphological selection can be adapted since selection always requires that the selecting element govern the selected element.

[11]   As in Cardinaletti (1990c), we are assuming that <u>es</u> and <u>&aδ</u> are essentially like the expletives of non-V2 languages. They have no special affinity with the sentence-initial position (SpecC' and SpecAgr1' respectively), and are not "fillers" of this (or any other) position.

[12]   According to the Partitive Hypothesis, an indefinite subject can receive Partitive Case in a position inside VP. If we assume that the base position of the subject is inside the projection of the main verb, the position assigned Partitive cannot be the base position of the subject, since this NP can precede an auxiliary which selects the main verb (cf. Vikner (1990) for further discussion).

References

Adams, M. (1987a) "From Old French to the Theory of Pro-Drop," Natural Language and Linguistic Theory 5, 1-32.

Adams, M. (1987b) Old French, Null Subjects and Verb Second Phenomena, PhD Dissertation, UCLA.

Adams, M. (1988a) "Embedded pro," in J. Blevins and J. Carter (eds) Proceedings of Nels 18, GSLA, University of Massachusetts, Amherst, 1-21.

Adams, M. (1988b) "Les effets V2 en ancien et en moyen français," in P. Hirschbuhler and A. Rochette (eds) Aspects de la syntaxe historique du français, Revue québécoise de linguistique théorique et appliquée 7, 13-40.

Adams, M. (1988c) "Word Order and Null Subjects: Contributions from Old French," ms. UCLA.

Alberton, S. (1990) Enclise du pronom objet en français et en italien antique ou la loi Tobler-Mussafia, Mémoire de Licence, Université de Genève.

Bayer, J. (1984/5) "COMP in Bavarian Syntax," The Linguistic Review 3, 209-274.

Belletti, A. (1988) "Unaccusatives as Case Assigners," Linguistic Inquiry 19, 1-34.

Belletti, A. (1990) Generalized Verb Movement: Aspects of Verb Syntax, Rosenberg & Sellier, Turin.

Benincà, P. (1984) "Un'ipotesi sulla sintassi delle lingue romanze medievali," Quaderni Patavini di Linguistica, 3-19.

Benincà, P. (1989) "L'ordine delle parole nelle lingue romanze medievali," XIX Congreso Internacional de Lingüística e Filoloxia Romanicas, Santiago de Compostela.

den Besten, H. (1983) "On the Interaction of Root Transformations and Lexical Deletive Rules," in W. Abraham (ed) On the Formal Syntax of the Westgermania, John Benjamins, Amsterdam, 47-131.

Boschetti, L. (1986) Zur Syntax des Pronomens **Sich**, Tesi di Laurea, Università di Venezia.

Cardinaletti, A. (1990a) "Es, pro and sentential arguments in German," Linguistische Berichte 126, 135-164.

Cardinaletti, A. (1990b) "Subject/object Asymmetries in German Null Topic Constructions and the Status of SpecCP" in J. Mascaró & M. Nespor (eds) Grammar in Progress, Foris, Dordrecht, 75-84.

Cardinaletti, A. (1990c) Pronomi nulli e pleonastici nelle lingue germaniche e romanze: Saggio di sintassi comparata, Tesi di Dottorato, Università di Padova e Venezia.

Chomsky, N. (1957) Syntactic Structures Mouton, The Hague.

Chomsky, N. (1981) <u>Lectures on Government and Binding</u>, Foris,   Dordrecht.

Chomsky, N. (1989) "Some Notes on Economy of Derivations and   Representations", in I. Laka and A. Mahajan (eds) <u>MIT   Working Papers in Linguistics</u> 10, MIT, Cambridge, Mass.   Reprinted in R. Freidin (ed) (1991) <u>Principles and   Parameters in Comparative Grammar</u>, MIT Press, Cambridge,   Mass.: 417-454.

Diesing, M. (1988) "Word Order and the Subject Position in   Yiddish," in J. Blevins and J. Carter (eds) <u>Proceedings of   NELS 18</u>, GSLA, University of Massachusetts, Amherst, 124-   140.

Diesing, M. (1990) "Verb Second in Yiddish and the Nature of the   Subject Position," <u>Natural Language and Linguistic Theory</u> 8,   41-80.

Dupuis, F. (1988) "Pro-drop dans les subordonnées en ancien   français," in P. Hirschbuhler and A. Rochette (eds) <u>Aspects   de la syntaxe historique du français</u>, <u>Revue québécoise de   linguistique théorique et appliquée</u> 7, 41-62.

Dupuis, F. (1989) <u>L'expression du sujet dans les subordonnées en   ancien français</u>, thèse de PhD, Université de Montréal.

Foulet, L. (1935/6) "L'extension de la forme oblique du pronom   personnel en ancien français," <u>Romania</u> 61, 257-315; 401-463;   <u>Romania</u> 62, 27-91.

Foulet, L. (1982) <u>Petite syntaxe de l'ancien français</u>, Editions   Champion, Paris (3ème édition).

Galves, C. (this volume) "V-Movement, Levels of Representation   and the Structure of S."

Giusti, G. (1986) "On the Lack of <u>Wh</u>-Infinitivals with <u>zu</u> and the   Projection of COMP in German" <u>Groninger Arbeiten zur   germanistischen Linguistik</u> 28, 115-169.

Haegeman, L. (forthcoming) <u>Generative Syntax: Theory and   Description. A Case Study from West Flemish</u>, Cambridge   University Press.

Harris, M. (1978) <u>The Evolution of French Syntax: A Comparative   Approach</u>, Longmans, London and New York.

Hirschbuhler, P. (1990) "La légitimation de la construction V1 à   sujet nul dans la prose et le vers en ancien français,"   <u>Revue québécoise de linguistique</u>, 19, 32-55.

Hirschbuhler, P. & M.-O. Junker (1988) "Remarques sur les sujets   nuls en subordonnées en ancien et en moyen français," in P.   Hirschbuhler and A. Rochette (eds) <u>Aspects de la syntaxe   historique du français</u>, <u>Revue québécoise de linguistique   théorique et appliquée</u> 7, 63-84.

Jaspers, D. (1989), "A Head Position for Dutch Clitics or: Wilma,   Wim and Wackernagel", in D. Jaspers <u>et</u>

al. (eds) <u>Sentential Complementation and the Lexicon</u>, Foris, Dordrecht, 241-253.   Kayne, R. (1991) "Romance Clitics, Verb Movement and PRO," <u>Linguistic Inquiry</u> 22, 647 - 686.

Kayne, R. & J.-Y. Pollock (1978) "Stylistic Inversion, Successive Cyclicity and Move-NP in French," <u>Linguistic Inquiry</u> 9, 595- 621.

van Kemenade, A. (1987) <u>Syntactic Case and Morphological Case in the History of English</u>, Foris, Dordrecht.

Kiparsky, P. (1990) "Origins of Germanic Syntax," ms. Stanford University.

de Kok, A. (1985) <u>La place du pronom personnel régime conjoint en français. Une étude diachronique</u>, Rodopi, Amsterdam.

Koopman, H. & D. Sportiche (1991) "The Position of Subjects," to appear in <u>Lingua</u>.

Lowenstamm, J. (1977) "Relative Clauses in Yiddish: A Case for Movement," <u>Linguistic Analysis</u> 3, 197-216.

Maling, J. (1980) "Inversion in Embedded Clauses in Modern Icelandic," <u>Islenskt mál og almenn málfræδi</u> 2, 175-193.   Reprinted in J. Maling and A. Zaenen (eds) (1990) <u>Modern Icelandic Syntax, syntax and Semantics Volume 24</u>, Academic Press, New York.

McCloskey, J. (1990) "Clause Structure, Ellipsis and Proper Government in Irish," to appear in <u>Lingua</u>.

Motapanyane, V. (1991) <u>Theoretical Implications of Complementation in Rumanian</u>, Thèse de Doctorat, Université de Genève.

Mussafia, A. (1983) <u>Scritti di filologia e linguistica</u>, A. Daniele and L. Renzi (eds), Padua.Penner, Z. (1990) "The Acquisition of the Syntax of Bernese Swiss German: The Role of Propositional Elements in Restructuring Early Grammar," Paper presented at the Fifteenth Annual Boston University Conference on Language Development, October 1990. Ms., Linguistic Institute, University of Berne.

Platzack, C. (1987) "The Scandinavian Languages and the Null Subject Parameter," <u>Natural Language and Linguistic Theory</u> 5, 377-401.

Platzack, C. (1988) "The Emergence of a Word-Order Difference in Scandinavian Subordinate Clauses," in D. Fakete and Z. Laubitz (eds) <u>McGill Working Papers in Linguistics: Special Issue on Comparative Germanic Syntax</u>, 215-238.

Platzack, C. (1990) "The Loss of V2 in English and French," ms., University of Lund.

Pollock, J.-Y. (1986) "Sur la syntaxe de <u>en</u> et le paramètre du sujet nul," in M. Ronat and D. Couquaux (eds) <u>La Grammaire Modulaire</u>, Editions de Minuit, Paris, 211-246.

Pollock, J.-Y. (1989) "Verb Movement, UG and the Structure of   IP," Linguistic Inquiry 20, 365-424.

Price, G. (1971) The French Language: Present and Past. Edward   Arnold, London.

Rizzi, L. (1982) Issues in Italian Syntax, Foris, Dordrecht.

Rizzi, L. (1986) "Null Objects in Italian and the Theory of   pro," Linguistic Inquiry 17, 501-557.

Rizzi, L. (1990a) Relativized Minimality, MIT Press, Cambridge,   Mass.

Rizzi, L. (1990b) "Speculations on Verb-Second," in M. Nespor et   al (eds) Grammar in Progress: A Festschrift for Henk van   Riemsdijk, Foris, Dordrecht.

Rizzi, L. (1991a) "Residual Verb Second and the Wh Criterion,"   University of Geneva Technical Reports in Formal and   Computational Linguistics, No. 2.

Rizzi, L. (1991b) "Proper Head Government and the Definition of   A-Positions," in GLOW Newsletter 26.

Rizzi, L. & I. Roberts (1989) "Complex Inversion in French,"   Probus 1, 1-30.

Roberts, I. (1991a) "Excorporation and Minimality," Linguistic   Inquiry 22.1.

Roberts, I. (1991b) "The Nature of Clitics in Franco-   Provençal Valdôtain," to appear in A. Belletti (ed) Dialects   of Italy, Rosenberg & Sellier, Turin.

Roberts, I. (forthcoming) Verbs and Diachronic Syntax, Kluwer, Dordrecht.

Rögnvaldsson, E. (1984) "Icelandic Word Order and &aδ-insertion,"
Working Papers in Scandinavian Syntax 8.

Rögnvaldsson, E. & H. Thráinsson (1990) "On Icelandic Word Order   Once More," in J. Maling and A. Zaenen (eds) (1990) Modern   Icelandic Syntax, syntax and Semantics Volume 24, Academic   Press, New York.

Santorini, B. (1988) "Against a Uniform Analysis of All Verb-   Second Clauses," ms., University of Pennsylvania.

Santorini, B. (1989) The Generalization of the Verb-Second   Constraint in the History of Yiddish, PhD Dissertation,   University of Pennsylvania.

Schulze, R. (1888) Die Altfranzösische Direkte Fragesatz,   Leipzig.

Sigurδsson, H. (1985) "Subordinate V/1 in Icelandic. How to   Explain a Root Phenomenon," Working Papers in Scandinavian   Syntax, 18.

Sigurδsson, H. (1989) Verbal Syntax and Case in Icelandic, PhD   Dissertation, University of Lund.

Thráinsson, H. (1986) "V1, V2, V3 in Icelandic," in H. Haider &   M. Prinzhorn (1986) Verb Second

Phenomena in the Germanic Languages, Foris, Dordrecht.

Thurneysen, R. (1892) "Die Stellung des Verbums im Altfranzösischen," Zeitschrift für Romanische Philologie 16, 289-371.

Tomaselli, A. (1989) La sintassi del verbo finito nelle lingue germaniche, Tesi di dottorato, Università di Pavia.

Tomaselli, A. (1991) "Cases of V3 in Old High German," in Groninger Arbeiten zur germanistischen Linguistik, 32.Travis, L. (1984) Parameters and Effects of Word Order Variation, PhD Dissertation, MIT.

Vance, B. (1988) "L'évolution du pro-drop en français médiéval,"

in P. Hirschbuhler and A. Rochette (eds) Aspects de la syntaxe historique du français, Revue québécoise de linguistique théorique et appliquée 7, 85-112.

Vanelli, L., L. Renzi & P. Benincà (1986) "Typologie des pronoms sujets dans les langues romanes," Actes du XIIe Congrès de Linguistique et Philologie Romanes, Aix-en-Provence.Vikner, S. (1990) Verb Movement and the Licensing of NP-Positions in the Germanic Languages, Thèse de Doctorat, Université de Genève.

Vikner, S. & B. Schwartz (1991) "The Verb Always Leaves IP in V2 Clauses," to appear in A. Belletti & L. Rizzi (eds) Parameters and Functional Heads: Essays in Comparative Syntax.

Wackernagel, J. (1892) "Über ein Gesetz der indogermanischen Wortstellung," Indogermanische Forschungen 1, 333-435.

von Wartburg, W. (1934) Evolution et structure de la langue française, Larousse, Paris.

Williams, E. (this volume) "The Clause as a Coordinate Structure."

Zwart, J.-W. (1991) "Clitics in Dutch: Evidence for the Position of INFL," Groninger Arbeiten zur germanistischen Linguistik, 33, 71-92.