

Working Papers in Scandinavian Syntax

38

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HAVE/BE-SELECTION AS AN A-CHAIN MEMBERSHIP REQUIREMENT

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Contents

1. Introduction	3
1.1 Variations Across Languages	3
1.2 Two Previous Accounts of <u>Have/Be</u> Selection	5
2. <u>Be</u> -Selection as an A-Chain Membership Requirement	6
3. Movement of Unstressed Pronouns (or Romance vs. Germanic)	9
3.1 <u>Be</u> -Selection	9
3.2 Derived Subjects	13
4. Other constructions (or It./Ge. vs. Fr./Da. vs Sp./En.)	17
4.1 Framework: The AgrP Analysis	17
4.2 Predicative Adjectives	19
4.3 Passives	20
4.4 Ergatives	21
4.5 Ergatives with Expletive Subjects	24
4.6 <u>Be</u> Itself	25
4.7 Other Raising Verbs	28
4.8 Transitives and Intransitives	30
5. Assignment of Case and θ -roles	31
5.1 θ -roles	31
5.2 Case	32
5.3 <u>Have/Be</u> and Assignment of Case and θ -roles	34
6. Past Participle Agreement and its Relation to <u>Be</u> -selection	35
6.1 In General	35
6.2 Participle Agreement without <u>Be</u> -Selection	37
6.3 <u>Be</u> -Selection without Participle Agreement	38
6.3.1 Dative Reflexive Clitics	38
7. Conclusion	40
Appendix. Remaining Problems in Scandinavian	41
A.1 Norwegian and Icelandic Free <u>Have/Be</u> -Variation with Ergatives	41
A.2 The Swedish Supine	42
A.3 Icelandic Quirky Case	45
References	47

1. Introduction.

1.1 Variations Across Languages.

A survey of the world's languages would reveal that a salient property of the Romance and Germanic languages is the existence of two items, apparently lexical verbs, exemplified by English have and be.¹

In this paper, we take the goal of a have/be selection analysis to be not so much the broad one of accounting for where have or be may occur and what they mean, but rather the more limited one of explaining or predicting for each occurrence of have why it may or may not be replaced by be and vice versa.

In other words, we will not so much concern ourselves with the ungrammaticality of have in (1a), as be is also ungrammatical here, (1b):

- (1). It. a. *Giacomo ha stato venuto
b. *Giacomo è stato venuto
"Giacomo has/is been come"

but we will try to account for the ungrammaticality of have in (2a), as be would be grammatical here, (2b):

- (2). It. a. *Giacomo ha venuto
b. Giacomo è venuto
"Giacomo has/is come"

Restricting ourselves to the Germanic languages English, Danish, and German, and the Romance languages Spanish, French, and Italian, we may note the following variation in selection:

1. The first incarnation of this paper was Vikner (1987b).

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All errors remain our own.

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Left side: Germanic

Right side: Romance

(almost) no auxiliary selection

(3) ENGLISH

- B a. Mary is ill
B b. Mary is photographed
H c. Mary has come
H d. Mary has been ill
H e. Mary has slept
H f. Mary has seen John
H g. Mary has photographed
herself

(4) SPANISH

- B a. María está enferma
B b. María es fotografiada
H c. María ha venido
H d. María ha estado enferma
H e. María ha dormido
H f. María ha visto a Juan
H g. María se ha fotografiado

auxiliary selection, but have is the auxiliary of be and other raising verbs

(5) DANISH

- B a. Marie er syg
B b. Marie er fotograferet
B c. Marie er kommet
H d. Marie har været syg
H e. Marie har sovet
H f. Marie har set Hans
H g. Marie har fotograferet
sig selv

(6) FRENCH

- B a. Marie est malade
B b. Marie est photographiée
B c. Marie est venue
H d. Marie a été malade
H e. Marie a dormi
H f. Marie a vu Jean
B g. Marie s'est photographiée

full auxiliary selection

(7) GERMAN

- B a. Maria ist krank
B b. Maria ist fotografiert
B c. Maria ist gekommen
B d. Maria ist krank gewesen
H e. Maria hat geschlafen
H f. Maria hat Hans gesehen
H g. Maria hat sich fotografiert

(8) ITALIAN

- B a. Maria è malata
B b. Maria è fotografata
B c. Maria è venuta
B d. Maria è stata malata
H e. Maria ha dormito
H f. Maria ha visto Gianni
B g. Maria si è fotografata

All six of these languages use be with predicate adjectives, as in the (a) sentences, and also in the passive constructions, as in the (b) sentences.² Danish, French, German, and Italian also use be as the perfect auxiliary for

². We will disregard the difference between the Spanish verbs ser and estar, the latter of which we take to introduce certain aspectual information. Furthermore Spanish represents something of an unusual case among the languages we are considering, in that in addition to the verb haber, Spanish also has the verb tener, which has many of the same functions that have has in the other languages. We will have nothing further to say about this here.

As for the passive construction in Danish and German, it most commonly employs the verb meaning "become": Da. blive, Ge. werden. See also the discussion of (54) to (57) in section 4.6 below.

ergative verbs, while English and Spanish use have, as illustrated in the (c) sentences. The four languages that select be as the perfect auxiliary in ergative constructions (Danish, German, French, and Italian) differ with respect to their behaviour with the verb be itself: German and Italian use be as the perfect auxiliary, while Danish and French use have, as shown in the (d) sentences. In all six languages have is used in both intransitives and transitives, as shown in the (e) and (f) sentences. Given the pattern developed thus far, it is perhaps surprising that when the direct object is a reflexive pronoun, as in the (g) sentences, French and Italian (but not Spanish) return to the use of be.

Several accounts exist of have/be selection in various languages, although none of the ones with which we are familiar seriously attempt to account for this range of variation in an explicit way.

1.2 Two Previous Accounts of Have/Be Selection.

Perhaps the best known account is Burzio's (1986) account of be selection in Italian. According to Burzio (1986:63), be is selected in Italian if and only if the subject binds a 'VP-internal' element at S-structure. This class of VP-internal elements includes all clitics as well as traces in object position, but it excludes reflexives in object position and also inverted subjects.

We have two objections to this account: 1) The class of "the VP-internal elements" is not a very natural one (though motivated as the class of elements whose binding relations necessarily hold at S-structure (Burzio (1986:399))). 2) As this provides an account of the selection of be as the perfect auxiliary in the case of passives, ergatives and reflexive clitics, it only accounts for a limited number of have/be in Italian: for example, this analysis does not explain why be is the passive auxiliary itself, nor why the perfect auxiliary and the so-called main verb be are one and the same word.

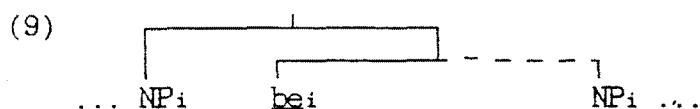
Haider (1985) and Hoekstra (1984) independently suggest a somewhat different approach based on the assignment of thematic roles. In essence, this approach associates the selection of have with the assignment of an external thematic role. While this provides an appealing account of German (and Dutch, where the facts are essentially the same), it too suffers from certain limitations: 1) Like Burzio's account, this account only covers a limited number of instances of have/be selection. 2) It fails to extend to French/Italian reflexive clitic constructions, where an external theta-role is indeed assigned, but be is selected as the perfect auxiliary.³ 3) It does not extend to be itself and other raising verbs in French and Danish, where no external theta-role is assigned, but have is selected as the the perfect auxiliary.

³. This may not be quite fair, as Haider & Rindler-Schjerve (1988) is about this particular question.

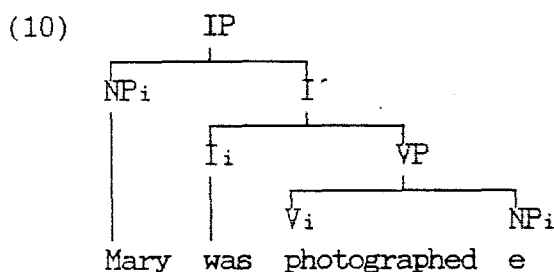
2. Be-Selection as an A-Chain Membership Requirement.

The basic idea of our analysis is the following: Have and be are alike in that they are a lexicalisation of a V° , as suggested also by Bach (1967). Have and be differ in that be must be a member of an A-chain (i.e. it must govern a coindexed A-bound NP), whereas have cannot do this.

The intuition is that be signals identity (cf. also Benveniste (1966:198)), i.e. it somehow corresponds to an equal sign, in that it must occur between two coindexed NPs, as in:



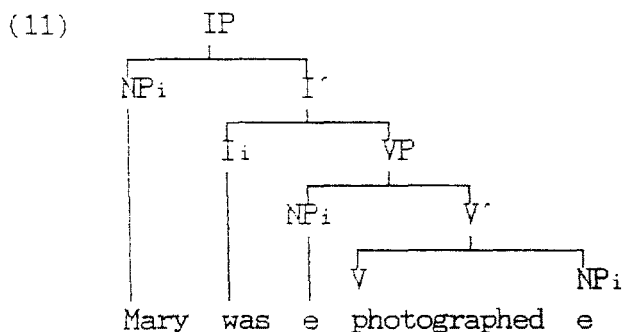
The coindexed NP that triggers be is a trace in the specifier position of the complement of be. Such a trace is motivated by the ECP, if A-traces must be antecedent governed. This is assumed in Chomsky (1986a:77), where it is achieved through coindexation of I° and V° , as in (10)⁴. The subject in (10) is coindexed with the I° , the I° and V° are coindexed, and the V° is therefore able to antecedent govern the trace in object position.



However, we assume that I° and V° are only coindexed if they merge at S-structure (for example by V° raising to I°), which means that in the cases where have or be is present, there is no such coindexation. In an example like (11), VP or V' will therefore be a barrier.⁵ We get around this barrier by means of another trace, which is antecedent governed by the subject, and which antecedent governs the trace in object position.

4. The structures of (10) and (11) have been simplified, the be that governs the VP containing the participle in passives is not dominated by I° but by V° (though a different V° from that of photographed) (cf. section 4.3 below), and in simple present (and simple past) it then moves up to I° .

5. Irrespective of whether the approach is a strict barriers one, as in Chomsky (1986a), or a relativised minimality one, as in Rizzi (1987). In the latter, VP is a barrier because of its specifier position, as discussed below.



This intermediate trace is in the specifier position of VP, as in (11). Assuming the relativised minimality condition on government of Rizzi (1987), the trace in VP-specifier is antecedent governed by the subject, and it antecedent governs the trace in object position.

As we assume that VP-specifier is a position which is always present (and which is an A-position), relativised minimality predicts that VP-specifier must antecedent govern the object trace: At any rate it prevents the object from being antecedent governed from anywhere else (irrespective of its indexing, VP-specifier would count as a "potential antecedent governor" of the object trace in the sense of Rizzi (1987:5)), and if VP-specifier did not itself antecedent govern the object trace, the sentence would violate the ECP, given the assumption from Chomsky (1986a:77) mentioned above that the only proper government of A-traces is antecedent government (in contrast to the assumption in Rizzi (1987) where head government may count). In short, A-movement out of any XP must go through XP-specifier.⁶

Furthermore, following Kayne (1985), we consider past participle agreement to be head-specifier agreement, i.e. agreement between the trace in VP-specifier and the past participle in V°. This analysis of participle agreement, as it is found in Fr. and It. passives and ergatives for example, is thus compatible with our assumption that be is triggered by a trace in VP-specifier (a trace of the NP that has moved to IP-specifier in passives and ergatives).

So the reason that there is be and not have in (11) is that be is a member of an A-chain (i.e. it governs a coindexed A-bound NP). Be governs this NP as a consequence of relativised minimality as there is no potential antecedent governor between them. Be is coindexed with this NP because be is coindexed

⁶. This application of relativised minimality was suggested by Ian Roberts.

An alternative might be to assume narrow minimality (cf. Chomsky (1986a:42)), as in earlier versions of this paper.

Then V' would be the barrier for government of the VP-complement, but only as far as government from outside the VP is concerned. The trace in VP-specifier would be able to antecedent govern the trace in object position, as government from XP-specifier into X' must be always possible: Even assuming narrow minimality, the specifier in NP-internal passives like (i) must antecedent govern its trace in the complement:

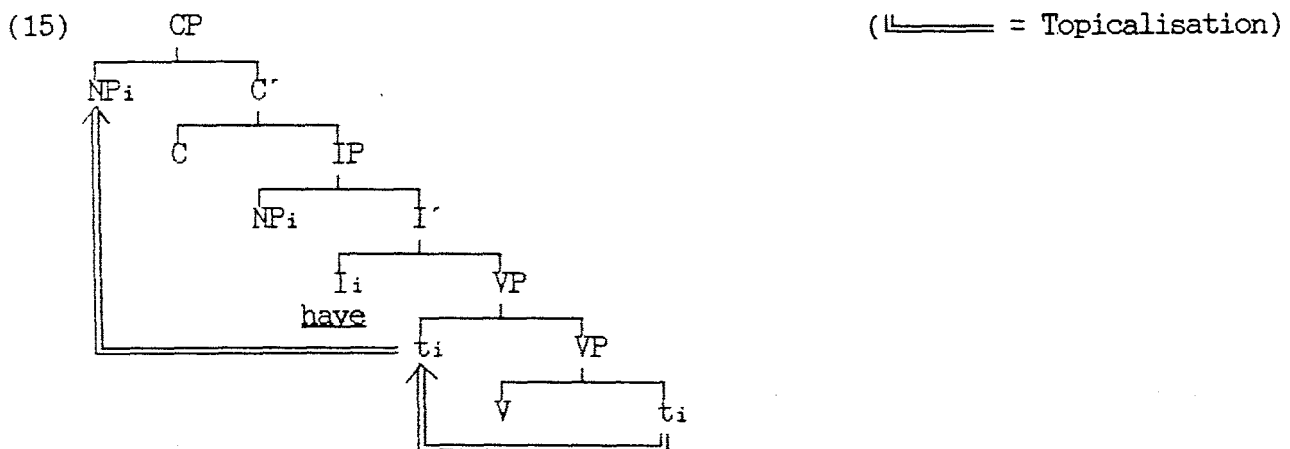
(i) [The city_i's [destruction e_i]]

with the subject and the NP is a trace of the subject. The NP is A-bound by being bound by the subject.⁷

If there is no A-bound NP coindexed with and governed by have/be, be is never selected, even if there is an A'-bound NP which is both coindexed with and governed by have/be. This is illustrated by the following topicalisations:

- (12) It. a. Se stessa, Maria ha sempre odiato
 b. *Se stessa, Maria è sempre odiata/odiato
 "Herself, Maria has/is always hated"
- (13) Da. a. Sig selv har Peter aldrig kritiseret
 b. *Sig selv er Peter aldrig kritiseret
 "REFL self has/is Peter never criticised"
- (14) Ge. a. Sich hat Hans am meisten gelobt ((3) in Haider (1985:225))
 b. *Sich ist Hans am meisten gelobt
 "REFL has/is Hans most praised"

which are all taken to have the following structure:⁸



Here there is a trace adjoined to VP, but this is not A-bound, only A'-bound, by the topicalised NP in CP-specifier position. That there is no trace in VP-

7. Even though in section 3 below we take I° to be an A-position in some sense, given its obligatoriness and its nominal features (cf. the SUBJECT idea of Chomsky (1981:209)), we take it that I° can't be a binder, as it is not an NP (the same goes for V°). If it could be a binder, all the be-triggering traces would have the same kind of binding, viz. binding from I°, and there would be no distinction A-bound/A'-bound. Then the data in (12)-(15) below would be very difficult to account for.

8. In (15) we abstract away from three things: the position of the adverbials, the I° to C° movements in Da. and Ge., and the internal structure of I' in Ge.

specifier can be seen from the missing participle agreement in (12a), odiato ("hated(masc-sg)") could not be replaced by odiata ("hated(fem-sg)").

A different case where have/be might be taken to govern a coindexed NP is the so-called free subject inversion cases:

- (16) It. a. pro ha telefonato Maria
b. *pro è telefonato Maria
"has/is telephoned Maria (= Maria has called)"

There would seem to be two ways of accounting for the fact that free subject inversion in itself never triggers be-selection:

1) Adjoined positions do not count for be-selection in general. This may replace the A-bound/A'-bound distinction, except for examples, as in French, cf. Kayne (1985: 73, (2)), where the past participle shows agreement with a wh-moved object. This suggests that both distinctions must be upheld independently of each other: A/A'-bound and adjoined/non-adjoined.

2) Free inversion may be taken to adjoin subjects to IP (following Raposo (1987)). Then we need to stipulate that the coindexed NP governed by be must be c-commanded (in the strict sense, not merely m-commanded) by be as well. Notice, however, that such a requirement seems necessary anyway, to exclude the subject from always qualifying as a be-triggering NP.

The idea that have and be are alike, apart from the requirement of be that it governs a coindexed A-bound NP, has consequences w.r.t case and θ -roles:

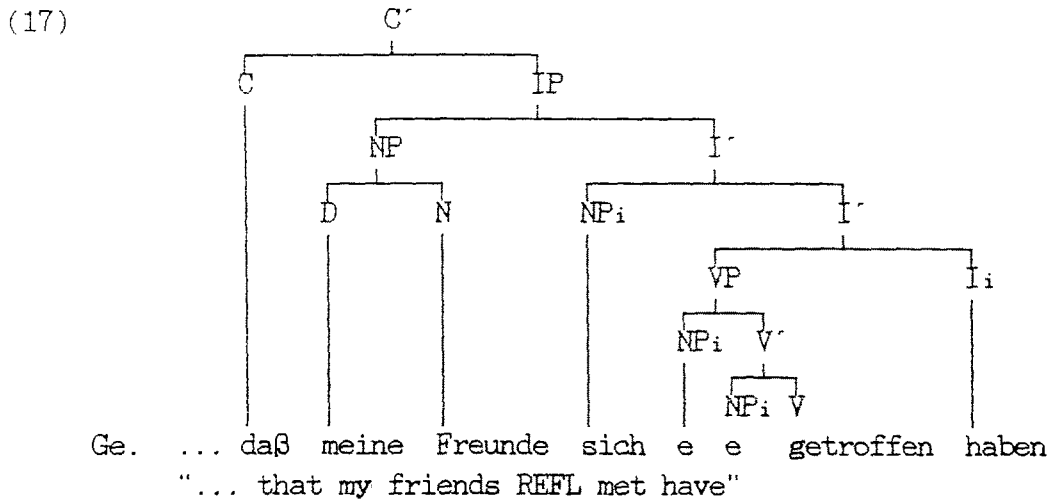
Both have and be may assign case, and both have and be may transfer an external θ -role. Neither of these possibilities exist if the usual well-formedness conditions of chains are violated, i.e. if a chain ends up having more than one case or more than one θ -role. Thus, if a chain already has a case or a θ -role, then have or be cannot assign case or transfer a θ -role. The transfer of an external θ -role furthermore requires that it has been absorbed by the past participle suffix -en. It is then assigned to the specifier of have or be. The basic idea is same as Haider's (1985) "deblocking". This will be discussed further below, in section 5.

3. Movement of Unstressed Pronouns (or Romance vs. Germanic).

3.1 Be-selection.

Having laid out a basic framework for have and be selection, we turn now to questions relating to the variation mentioned in section 1.1. The first difference is one that distinguishes Germanic from Romance (at least Fr./It.). Germanic reflexives select have, while Romance reflexives select be, cf. the (g) examples in (3)-(8). We claim that this difference is in fact a difference between the nature of pronoun movement in the two language groups, together with the independently motivated assumption that have/be selection is insensitive to A'-bound traces. That only A-bound traces can trigger be was discussed in connection with (12)-(15).

Consider first the German example in (17):



The example is a subordinate clause to abstract away from verb second effects. Though at first glance it may seem that sich in (17) has not moved at all, as direct objects in German always occur to the left of the verb, it is possible to see that sich has moved if the sentence contains adverbials, as in (18):

(18) Ge. ... daß meine Freunde [sich_i] gestern im Park e_i e_i getroffen haben
 "... that my friends REFL yesterday in the park met have"

(19) Ge. a. ... daß meine Freunde gestern im Park [einen Mann] getroffen haben
 "... that my friends yesterday in the park the man met have"

b. ?*... daß meine Freunde [einen Mann] gestern im Park getroffen haben
 "... that my friends a man yesterday in the park met have"

The examples in (19) show that when the direct object is not an unstressed pronoun (and in the absence of VP-internal topicalisation and focus movement), it must occur adjacent to the verb. Thus (19a) is fine, and (19b) is ungrammatical. (19b) would be grammatical with a definite object like den Mann ("the man"), which may be seen as having undergone VP-internal topicalisation. Sich however is an unlikely candidate for this kind of focalisation.

As the position of sich in (17) is not one where arguments normally appear, cf. (19b), we take it to be an A'-position, and its trace inside VP is thus A'-bound. This is further supported by the fact that an unstressed pronoun in this position may trigger a parasitic gap in German:^{9 10}

⁹ The reflexive cannot be used here, as it would be coindexed with PRO, which would interfere with the chain between the antecedent and the parasitic gap.

¹⁰ Even though sie in (20) apparently may be replaced by a full NP, as in

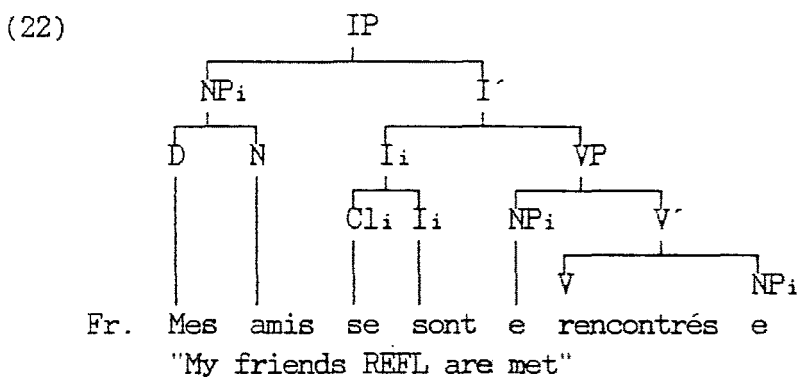
(i) Ge. ?... daß meine Freunde Maria [ohne PRO eparasite kennengelernt zu haben] ereal einladen wollten

- (20) Ge. ... daß meine Freunde sie [ohne PRO eparasite kennengelernt zu haben] ereal einladen wollten
 "... that my friends them [without e met to have] e to invite wanted"

which is completely impossible in French:

- (21) Fr. *Mes amis les ont invités ereal [sans PRO avoir rencontré eparasite]
 "My friends them have invited e [without to have met e]"

Let us now contrast sich with the syntactic properties of Romance reflexive clitics, which we take to A-bind their traces. Thus we will argue for the following structure:



Romance object clitics are genuine clitics, as can be seen from the fact that they can move into a X° position together with the verb, as in I° to C° movement in (23):

"... that my friends Maria [without e met to have] e to invite wanted"

we hold that sie in (20) is adjoined to I', as is sich in (17), whereas Maria in (i) has undergone VP-internal topicalisation. There are two reasons for this view:

One is that an unstressed pronoun like sie is unlikely to be topicalised.

The other is the positions of the elements in question (sie, Maria) relative to a particle like ja (meaning something like "as you know") which is VP-initial or VP-adjoined. The unstressed pronoun is clearly best preceding this particle, whereas the full NP is preferable following the particle:

- (ii) Ge. a. ... daß meine Freunde sie [ja [ohne PRO eparasite kennengelernt zu haben] ereal einladen wollten]
 b. *... daß meine Freunde [ja sie [ohne PRO eparasite kennengelernt zu haben] ereal einladen wollten]
- (iii) Ge. a. *... daß meine Freunde Maria [ja [ohne PRO eparasite kennengelernt zu haben] ereal einladen wollten]
 b. ?... daß meine Freunde [ja Maria [ohne PRO eparasite kennengelernt zu haben] ereal einladen wollten]

- (23) Fr. [_{CP} [_{CP-spec} D'où] [_C le connais] [_{IP} [_{IP-spec} -tu] ...]]
 "From-where him know you (= Where do you know him from?)"

The Germanic unstressed pronoun on the other hand is not a clitic and cannot do this. We cannot get (24a), but only (24b). When the verb moves to COMP, the German pronoun cannot move with it:

- (24) a. Ge. * [_{CP} [_{CP-spec} Woher] [_C ihn kennst] [_{IP} [_{IP-spec} du] ...]]
 "Wherefrom him know you"
 b. Ge. [_{CP} [_{CP-spec} Woher] [_C kennst] [_{IP} [_{IP-spec} du] ... ihn ...]]
 "Wherefrom know you him"

The reason why the trace of the Romance reflexive is A-bound is that it is bound from I° (but not by I°, even though I° as discussed in note 7 is taken to be an A-position, rather "through" I°, as discussed below in connection with (27)). Note that binding directly from the clitic position presumably is excluded as there is an X° category that dominates the binder, i.e. the clitic, and not the bindee, i.e. the trace inside VP.

Romance clitic reflexives are thus predicted to trigger ~~be~~-selection (and past participle agreement), as the intermediate trace is A-bound, and therefore must be in an A-position.

There are two potential objections to the analysis in (22).

One is that the clitic moves first to an XP position, and then to an X° position. This can be solved by adopting the analysis of projection levels of Muysken (1983), as given in (25):

- (25) Projection levels are classified in terms of two binary features:
 [+maximal, ±projection]:

- a. [+maximal, +projection] is an XP
- b. [-maximal, +projection] is an X'
- c. [-maximal, -projection] is an X°
- d. [+maximal, -projection] is an inherently maximal category.

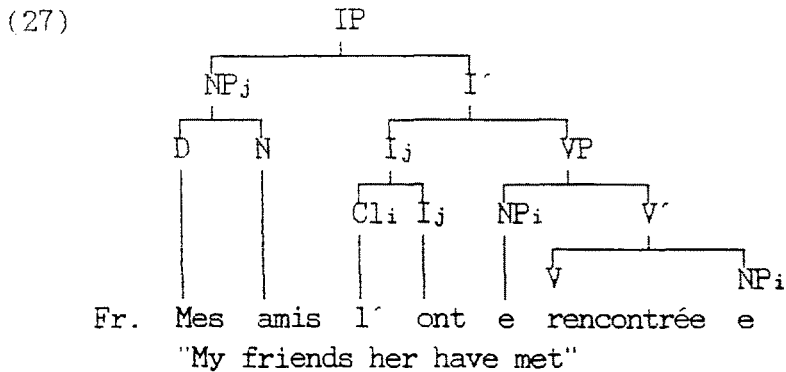
(i.e. a "non-projecting minor element", Muysken (1983:60))

We analyse the Romance clitic as an inherently maximal category, i.e. as [+maximal, -projection], i.e. in a sense it is both minimal and maximal at the same time. This is not that unreasonable, as even without the movement through VP-specifier the clitic is base-generated in an NP-position and it ends up adjoining to an X°. If we revise the constraints on movement from Chomsky ((1986a:4), (2b) and (2c)) to the following:

- (26) a. only [+maximal] can adjoin to or substitute an XP
 b. only [-projection] can adjoin to or substitute an X°

the movement properties of Romance clitics fall out directly.

The other objection that might be made against the analysis of (22) is that there may be a conflict between different indices when the clitic is not reflexive, as in (27):



We will adopt a suggestion made by Chomsky (autumn lectures, M.I.T., 1987), based on Pollock (1988), to the effect that I° is 'transparent' for the clitic, i.e. the clitic can govern as if it were in the position of I° but it cannot be governed as if this was the case. Then I° need not actually get the index of the clitic by percolation, and there is no conflict with I°'s own index. This means that index percolation from Cl to I°, which would seem to create problems in (27), is not necessary.

3.2 Derived Subjects.

Another difference between the Romance and the Germanic unstressed reflexives that can be accounted for in terms of whether the reflexive A-binds or A'-binds its immediate trace is the fact that only in German(ic) can the reflexive cooccur with a derived subject.

As discussed by among others Kayne (1975), Burzio (1986) and Rizzi (1986), Romance reflexive clitics are impossible in sentences where the subject is derived, i.e. base-generated inside VP with an internal θ-role. An example of this is given in (28a), as opposed to (28b) where there is a non-clitic anaphor. The examples are from Rizzi (1986:70):

- (28) It. a. *I nostri amici si sono stati presentati
 "Our friends to-each-other are been introduced"
 b. I nostri amici sono stati presentati l'uno all'altro
 "Our friends are been introduced one to the other"

Rizzi (1986) accounts for the ungrammaticality of (28a) by assuming a chain well-formedness condition that crucially depends on each link of the chain locally binding the next and on each chain only containing one argument. In (28a) a chain between i nostri amici and its θ-assigned trace inside VP there-

fore cannot be generated, because the trace has a binder more local than the subject, namely *si*, and as *si* in this case is an argument, chain formation cannot include any other arguments, and thus *i nostri amici* does not get any θ -role. In other words, the θ -role assigned to the trace of the subject inside VP cannot reach the subject itself, because it cannot get any further than *si*.

In German, however, there are no restrictions on moved unstressed reflexives cooccurring with derived subjects:

- (29) Ge. ... daß deine und meine Freunde sich schon gestern vorgestellt wurden
 "... that your and my friends to-each-other already yesterday
 introduced were"

We consider this compatible with the approach of Rizzi (1986) as outlined above, provided it is specified that each link of an A-chain must locally A-bind the next one (this follows from Rizzi (1987) if local binding of Rizzi (1986) is replaced by antecedent government). Then *sich*, which, as argued above, we assume to be in an A'-position, cannot interfere with the chain formation.¹¹

We analyse (28a) and (29) as follows, cf. (22) and (17). For further discussion of dative clitics, see also section 6.3.1. below.

- (30) a. It. NP_i [_{I'} *sii sono*] [_{VP} *ei ei* [_{V'} *stati presentati ei ei*]]
 b. Ge. NP_i [_{I'} *sichi* [_{I'} [_{VP} *ei* [_{VP} *ei* [_{V'} *ei ei vorgestellt*]]] wurden]]

In both cases the two θ -roles are assigned to the two traces (one of the subject, and one of the reflexive) inside V'. In (30a) the θ -role assigned to the trace of the reflexive is transferred to one of the traces in specifier of VP, and from there to *si*. The θ -role assigned to the trace of the subject is also transferred to one of the traces in specifier of VP, and from there also to *si*, which is the local binder, and therefore this θ -role cannot reach the subject, which is left without a θ -role. Thus the sentence with the structure (30a) is ungrammatical.

In (30b) the θ -role assigned to the trace of the reflexive is transferred to the trace adjoined to VP, and from there to *sich*. As argued above, *sich* is in an A'-position, and therefore it is possible for it to move out of the VP via the adjoined position, an option which is not open to *si*, which we took to A-bind its immediate trace. The θ -role assigned to the trace of the subject is transferred to the trace in specifier of VP, and from there to its local

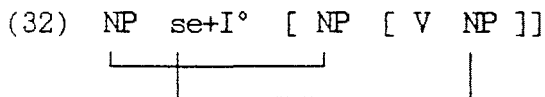
11. Liliane Haegeman has pointed out to us that the construction in (12)-(15), topicalisation of a reflexive, is further evidence for the assumption that A-traces and A'-traces do not interfere with each other's chains. In (12)-(15) it was possible for an A'-chain not be broken by an intervening coindexed A-element (i.e. the subject), in the *sich*-cases here, (29) and (30b), it is possible for an A-chain not to be broken by an intervening A'-element (i.e. *sich*).

(A-)binder, the subject. Thus the sentence with the structure (30b) is grammatical.

The ungrammaticality of (30a) cannot be ascribed to VP-specifier being filled with two different traces, as the following examples are grammatical, even though both the clitic and the subject must move through the specifiers of both VPs (the linear order of the two traces is irrelevant)((31a) is from Rizzi (1986:70)):

- (31) a. It. I nostri amici_i gli_j sono [e_i e_j stati [e_i e_j [presentati e_i e_j]]]
 "Our friends to-him are been introduced"
 b. Fr. Ce livre_i lui_j a [e_i e_j été [e_i e_j [donné e_i e_j]]]
 "This book to-him has been given"

As interpreted in Kayne (1988), Rizzi's (1986) chain well-formedness condition also rules out a structure like (32), which roughly corresponds to what we see as the structure of (33):



- (33) Fr. Jean se lave
 "Jean REFL washes"

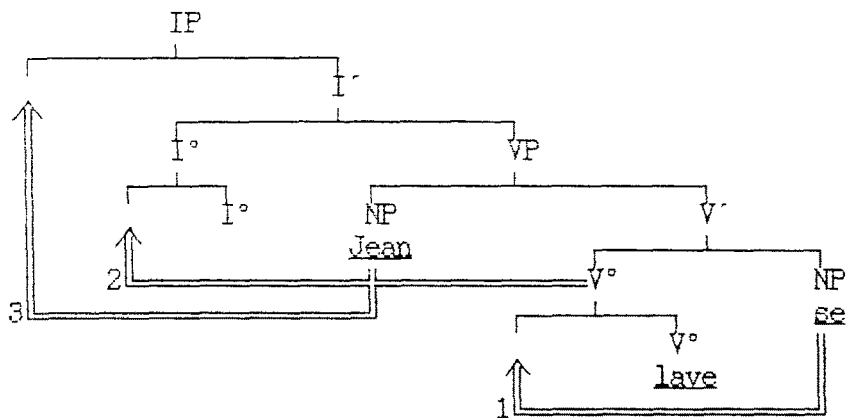
According to Kayne, (32) is ruled out in a fashion parallel to (30a), i.e. se prevents a chain between the subject and the specifier of VP from being well-formed.

However, if, as we suggested above, Rizzi (1987) is applied to Rizzi (1986), we not only get the result that A-bound elements and A'-bound elements cannot interfere with each other, but we would also expect that neither can interfere with (nor experience interference from) an element bound by an X° (cf. the tripartition: head vs. A vs. A' in Rizzi (1987:7)).

It is then possible to analyse the derivation of (33) in the following way (The chain well-formedness condition now rules out overlap of links of different A-chains (or A'-chains or X°-chains)¹² with the same index):

12. To be exact, the well-formedness condition excludes overlap of two θ -assigned α -chains with the same index, where α is A or A' or X°. The well-formedness condition says nothing about non- θ -assigned chains.

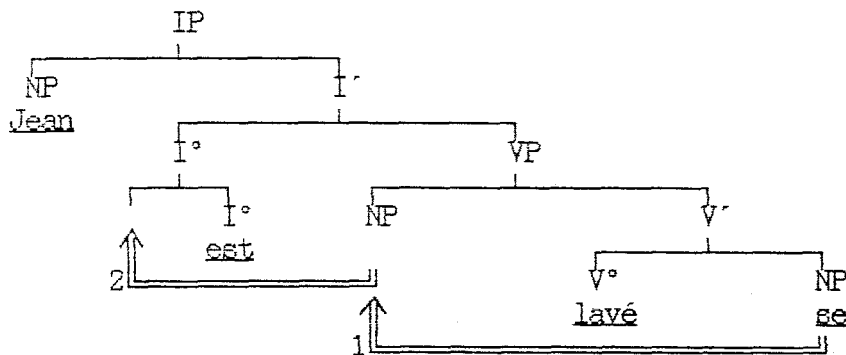
(34)



There are three links. 1 is the adjunction of *se* to V° , 2 the adjunction of V° (which now includes *se*) to I° , and 3 the movement of *Jean* from specifier of VP to specifier of IP. 3 is an A-link, 2 an X° -link, and 1 is at the same time both an A-link and an X° -link (recall that we consider the Romance clitics to be minimal and maximal projections at the same time, cf. (25) and (26)). Notice that 1 and 3 do not overlap, and therefore, as the only overlapping links, 2 and 3, are of different kinds, the structure is not ruled out by (our interpretation of) Rizzi's chain well-formedness condition.

As for the corresponding structure with a compound tense, we take it to be¹³

(35)



Here 1 is an A-link, and 2 is both an A-link and an X° -link. Even though the link adjoining to I° here may count as an A-link, there still is not any overlap, as the θ -role of *Jean* is assigned directly to the specifier of IP (cf. section 5.1 below).

Summing up section 3, we have shown that the differences between *se/si* in Romance and their corresponding elements in Germanic may be accounted for in terms of the basic difference between cliticisation (Romance) and A' -movement

¹³. Both (34) and (35) are simplified representations:

In (34), there is an AgrP missing between I' and VP, cf. (36).

In (35), there is an AgrP, a VP, and another AgrP missing between I' and VP. This means that *Jean* is base-generated in the spec and *est* in the head of this intermediate VP, and then moved to their positions in (35), cf. e.g. (61).

without cliticisation (Germanic).¹⁴ This basic difference shows up in (at least) two ways: have is selected over be in Germanic constructions of movement of unstressed reflexives, whereas be is selected in Romance¹⁵ (section 3.1). Derived subjects are allowed in these constructions in Germanic, but not in Romance (section 3.2).

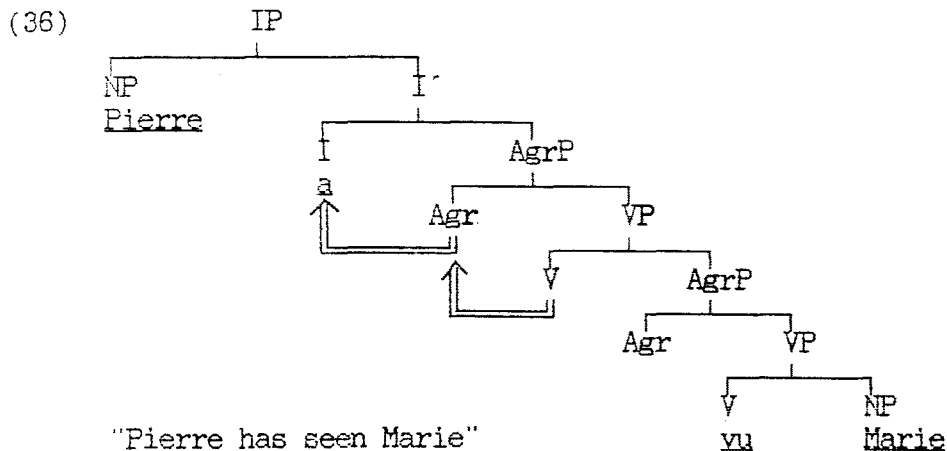
4. Other constructions (or It./Ge. vs. Fr./Da. vs. Sp./En.).

Reflexives, as discussed in the previous section, do not necessitate any modifications of the basic idea from section 2. However, the other constructions listed in the introduction cannot be accounted for, unless the principle that be must be in an A-chain (i.e. govern a coindexed A-bound NP), and that have cannot be, is modified somewhat. What we will try to show in this section is that this principle applies to a different extent in the three following groups of languages: 1) German and Italian, 2) Danish and French, and 3) English and Spanish.

4.1 Framework: The AgrP Analysis.

In Pollock (1988), it is argued that an extra layer of structure exists between IP and VP: an Agreement Phrase (AgrP) which is the sister of I° and the head of which, Agr, is the sister of VP.

A clause in the perfect tense is analysed in the following way:



14. A very similar conclusion is reached by Haider & Rindler-Schjerve (1988), but based on a rather different analysis.

15. The fact that Spanish, Portuguese, and Rumanian select have in this construction is due to the interaction of the independent parameter discussed in section 4.1 below, as two XPs separate have/be from the foot of the chain, and these languages allow at most one XP to do this:

(i) Sp. Maria_i sei hai [AgrP ei [VP ei fotografiado ei]]
 "Maria REFL has photographed"

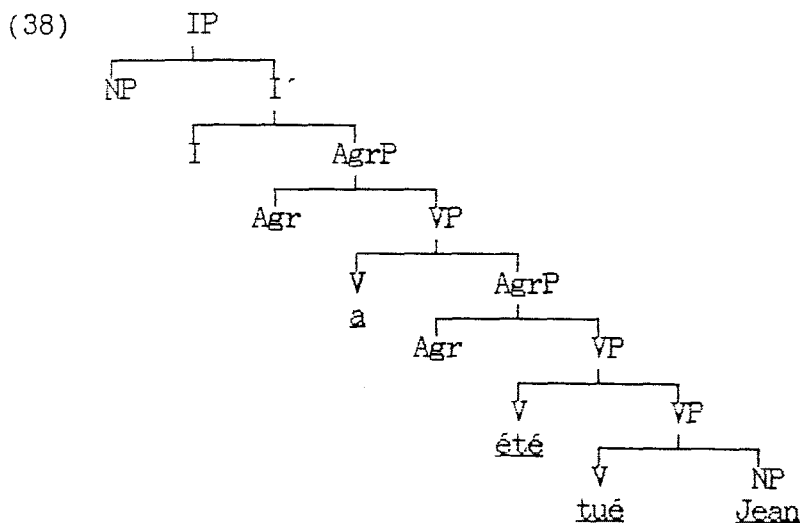
In other words, AgrP is selected by I (Pollock's "T") as well as by (some instances of) V. As for the arguments for the AgrP selected by I, we refer the reader to Pollock's article.

Pollock (1988:51) gives the following argument in favour of the lower AgrP (i.e. the one selected by V): Certain adverbials exist which only occur VP-initially in French (cf. Pollock (1988:14)), e.g. à peine ("hardly"), presque ("almost"). In certain circumstances, a verb may occur either after or before such an adverbial. This is taken to be a case of optional movement of the V to Agr° (also in infinitives, cf. Pollock (1988:12)), and is thus an argument in favour of this Agr°. Consider

- (37) Fr. a. Pierre a à peine vu Marie ((132b) in Pollock (1988:52))
 b. Pierre a vu à peine Marie ((133b) in Pollock (1988:52))
 "Pierre has (hardly) seen (hardly) Marie"

Given that à peine must be VP-initial, vu in (37b) must have moved around it and into Agr° (if there was no Agr°, there would be no landing site for vu, as it must move out of the VP, but it can only move to the closest X° which would then be the V° where a is base-generated).

We now want to show that there are no indications of a similar kind that an AgrP also exists immediately above VPs that are embedded below the main verb. We will therefore argue for the following type of analysis:



(38) is the structure of a passive construction at D-structure. The NP-movement involved in the derivation will be discussed below, in section 4.3. What is relevant here is the relative position of VP-initial adverbials and the participles. Consider now the following data:

- (39) Fr. a. Jean a presque été tué
 b. Jean a été presque tué
 c. *Jean a été tué presque
 "Jean has (almost) been (almost) killed (almost)"
- (40) Fr. a. L'accident a à peine été mentionné dans les journaux
 b. L'accident a été à peine mentionné dans les journaux
 c. *L'accident a été mentionné à peine dans les journaux
 "The accident has (hardly) been (hardly) mentioned (hardly)
 in the papers"

which illustrate the difference between the two participles: The participle of the main verb, *été* in (one possible analysis of) (39b) and (40b), may move around the adverbial and into an Agr°, whereas the embedded participle, *tué* in (39c) and *mentionné* in (40c), cannot do this. We take this to be an effect of the embedding of the VP of *tué* and *mentionné* directly under the VP of *été* with no intervening AgrP. This means that AgrP is selected by I° or by V° iff this V° is an auxiliary, i.e. either a modal or a *have/be* with temporal interpretation (perfect/past perfect).

Consistent with this analysis, and in spite of the simplified structures in previous sections, we assume that any verb (with the possible exception of En. modals) that may end up in I° is in fact base-generated under a V°, including *have/be* and modals.

As may be apparent from the above, we do not (as opposed to e.g. Kayne (1987)) see the presence of an Agr° as in any way necessary for a participle in V° being able to show agreement. Participle agreement is seen as a reflex of the relation between specifier and head, and thus does not involve anything outside the XP in question.

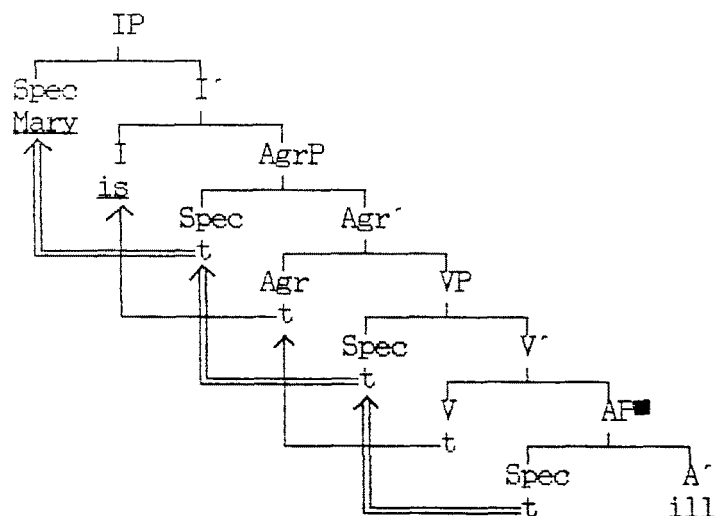
The idea that the A-chain membership requirement of *be* holds in one of three different degrees in the languages can now be expressed as a condition on the length of the chain: In En. and Sp. (as well as Swedish, Rumanian and Portuguese) *be* and the foot of the chain may only be separated by ONE maximal projection, in Da. and Fr. they may only be separated by TWO, whereas in Ge., It. (and Dutch) they may be separated by ANY number of maximal projections. Below the separating maximal projections will be marked "XP■" in the tree representations.

4.2 Predicative Adjectives.

The first construction of (3)-(8) is the one with predicative adjectives, i.e. (3a)-(8a). The adjective is assumed to assign one θ -role, which is external, to its specifier position (we consider it to be the standard case that an external θ -role is assigned by X' to the specifier position of XP, as opposed to an internal θ -role which is assigned by X° to the complement of XP). The subject in (41) is thus base-generated in AP-specifier and then it moves

(via the intervening specifier positions) to the specifier of IP. The full structure is

(41)



- a. Mary_i is_i [e_i ill]
 b. *Mary_i has_i [e_i ill]

It., Ge., Fr., Da., Sp., En.: B

but it is only the VP that is crucial here. V° is realised as be, as it is coindexed with an a A-chain.

As only one XP intervenes between the base-generated position¹⁶ of be and the foot of the A-chain, viz. the AP marked with ■, be is selected in all six languages.

Evidence for the trace in AP-specifier position can be found in the agreement between the adjective and (the AP-specifier trace of) the subject in Da., Sp., Fr., and It. This agreement is thus assimilated to past participle agreement (cf. sections 2 and 6) in that both are a kind of specifier-head agreement.

Adjectival passives, which also show agreement in Da., Sp., Fr., and It., as well as En. present participles with -ing may be analysed in a similar way.

4.3 Passives.

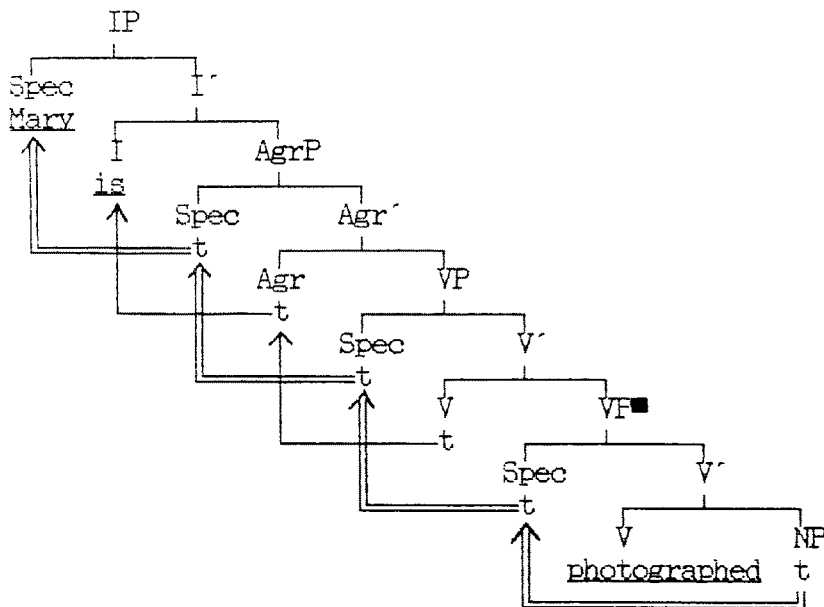
The next construction to be considered is passives. The examples were given in (3b)-(8b). We assume that a verb assigns its external θ -role to its specifier position (as assumed for adjectives in section 4.2), and that this θ -role may then be absorbed by the past participle suffix -en, as discussed by

¹⁶. As have/be never change from have to be or vice versa depending on its movement during the derivation, we assume that it is the base-generated position of have/be that counts. Cf.

- | | |
|-----------------------------------|--------------------------------|
| (i) a. Mary <u>is</u> ill | (ii) a. Mary <u>has</u> slept |
| b. Mary must have <u>been</u> ill | b. Mary must <u>have</u> slept |
| c. <u>Is</u> Mary ill? | c. <u>Has</u> Mary slept? |

for example Jaeggli (1986), Roberts (1987), and Baker, Johnson, & Roberts (1988). The internal θ -role is assigned to the complement NP.

(42)



- a. Mary_i is_i [photographed e_i] It., Ge., Fr., Da., Sp., En.: B
 b. *Mary_i has_i [photographed e_i]

The subject in (42) is base-generated as the object of photographed, and then it moves through the VP-specifier position (as well as a host of other specifier positions) on its way to the subject position. Movement is forced because the suffix, -en, prevents case from reaching the object, as -en itself is assigned the case in question (cf. Jaeggli (1986), Roberts (1987), and Baker, Johnson, & Roberts (1988)). If the object may be assigned partitive case, i.e. if it is indefinite, it does not have to move. Cf. the similar phenomenon in ergatives, discussed in 4.5.

V° is realised as be, as it is coindexed with an A-chain.

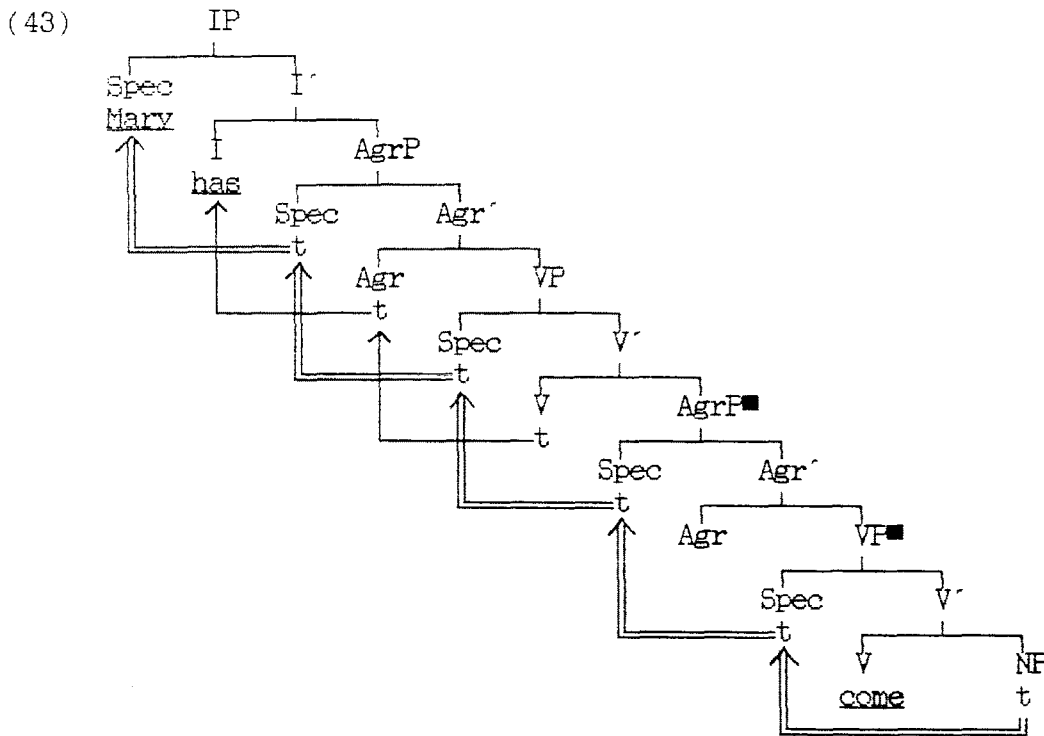
As only one XP intervenes between the base-generated position of be and the foot of the A-chain, viz. the VP marked with ■, be is selected in all six languages.

Evidence for the trace in object position is the fact that the subject has the θ -role of the object, and evidence for the trace in the specifier position of the lowest VP can be found in the participle agreement in It., Fr., and Sp., again given the analysis of Kayne (1985), as discussed in section 6 below.

4.4 Ergatives.

Moving on to ergative constructions, as given in (3c)-(8c), be is only selected in two of the three groups. We assume, with Burzio (1986), Perlmutter (1978), and others, that ergative verbs assign only one θ -role, an internal one, to the object position. This distinguishes them from transitives, which

assign more than one θ -role, and intransitives, which also assign only one θ -role, but an external one.



- a. Mary_i isi [[come e_i]] It., Ge., Fr., Da.: B
 b. Mary_i hasi [[come e_i]] Sp., En.: H

The subject of (43) is base-generated as the object of come, and then moves to subject position via the specifier of come.

V° may be realised as be, as it is coindexed with an A-chain.

However, two XPs intervene between the base-generated position of be and the foot of the A-chain, viz. the AgrP and the VP marked with ■. Therefore be is only selected in those languages that allow more than one intervening XP between be and the foot of the A-chain, i.e. It. and Ge., and Fr.¹⁷ and Da.,

17. There is a large number of ergative verbs in French that take have (cf. their Danish equivalents which all have be):

- (i) a. Fr. Marie a disparu
 b. Da. Marie er forsvundet
 "Mary has/is disappeared"
- (ii) a. Fr. La guerre a éclaté
 b. Da. Krigen er brudt ud
 "The war has/is broken out"
- (iii) a. Fr. Le chien a grandi
 b. Da. Hunden er vokset
 "The dog has/is grown"

(All French ergative verbs that have a transitive counterpart belong to this group as well). These facts are not expected under our analysis (cf. also Bur-

whereas Sp. and En. select have.

Evidence for the trace in object position may be found both in the construction mentioned in the next section, ergatives with expletive subjects, and also (with some verbs) in a corresponding transitive construction: The subject of (44a) is taken to be base-generated as object because of the transitive construction in (44b)(examples in Burzio (1986:54)):

(44) It. a. [Due navi nemiche]; sono; [ei [affondate ei]]
"Two enemy ships(fem) were sunk(fem-pl)"

b. L'artiglieria ha [affondato [due navi nemiche]]
"The army(fem-sg) has sunk(masc-sg) two enemy ships"

Evidence for the trace in specifier of come is again found in the agreement in It. (cf. (44a), and Fr., (as in the passive construction), and also in Icelandic (Friðjónsson (1978:82)) and in a Norwegian dialect, as discussed in Christensen & Taraldsen (1987:1).¹⁸

zio (1986:140)). Note that these verbs are taken to be ergative, as the argument may occur inside the VP, and as it may also be linked with the French clitic en:

(iv) Fr. a. Il a [disparu un livre sur Molière]
"It has disappeared a book about Molière"

b. Il n'en a disparu que deux cette année
"It thereof has disappeared but two this year"

¹⁸. We further agree with Burzio's (1986:138,159) idea that the languages under consideration have more or less the same class of ergative verbs.

There seem to be two logical possibilities in this question, either the lexical classes are (more or less) identical, and the grammatical processes (e.g. have/be-selection vary, or the the lexical classes vary, and the grammatical processes may be more similar across the languages. The former view is represented by Burzio (1986), and the latter by Napoli (1988), who argues that ergative verbs in English differ from ergative verbs in Italian by being intransitive (i.e. they do not involve NP-movement (Napoli (1988:137))).

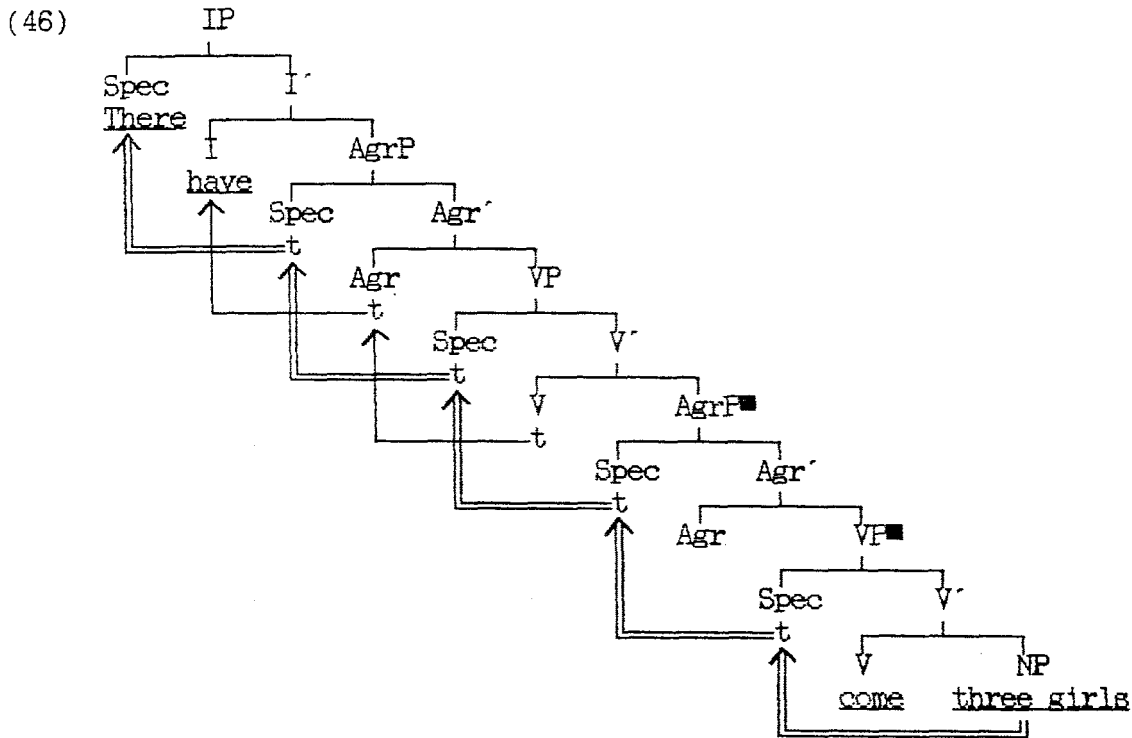
Our analysis is based on the former, and in this section we try to show an implementation of it which differ from that of Burzio (1988:140), where the grammatical variation is linked to whether a language considers a particular construction to belong to the core or the periphery. If a construction belongs to the periphery, it selects the auxiliary selected by the same verb in a core area construction, rather than the auxiliary predicted by the rules. One problem with this approach is that a verb may have a core area w.r.t. be (e.g. with reflexive clitics in Fr.) and a core are w.r.t. have (e.g. with a full NP object in Fr.), and then it is not clear which of the core areas whould be used for deriving the auxiliary in a periphery area (e.g. an ergative use in Fr.).

4.5 Ergatives with Expletive Subjects.

It is also possible to have expletive subjects in the ergative constructions, as shown by the examples in (45):

- (45) a. It. Sono venute tre ragazze
- b. Ge. Es sind drei Mädchen gekommen
- c. Fr. Il est venu trois filles
- d. Da. Der er kommet tre piger
- e. Sp. Han venido tres chicas
- f. En. There have come three girls

Here the NP which is assigned the θ -role stays in object position. Following Belletti (1988), we will assume that in that position it receives partitive case, and that this accounts for the obligatory indefiniteness.



- a. There_i are_i [[come three girls]_i] It., Ge., Fr., Da.: B
- b. There_i have_i [[come three girls]_i] Sp., En.: H

Furthermore we assume that an expletive subject of the kind occurring in (45) and (46) needs some form of linking to a θ -assigned chain, as discussed for Danish in Vikner (1987a). This linking may be motivated by expletive replacement at the level of Logical Form (LF), seen as a consequence of the Principle of Full Interpretation, as discussed in Chomsky (1986b:132ff, 179). The idea is that the expletive must disappear at LF as it does not contribute to the interpretation of the sentence, and it is replaced by the θ -assigned NP. The linking shown in (46) may then be seen as an "inverse" chain at S-structure, showing the way the NP will move at LF.

As with the other type of ergatives, there is evidence for the trace in the specifier of come from past participle agreement in It. (47a)¹⁹ and in a dialect of Norwegian (47b)(from Christensen & Taraldsen (1987:8)):

- (47) a. It. proi sono_i [_{ei} [venute tre ragazze_i]]
 "(there) are(3pl) come(fem-pl) three girls"
- b. No. Deri eri nett [_{ei} [komne nokre gjester_i]]
 "There are(no number) just come(pl) some guests"

We take (47) to show that there is a trace in the specifier of come, and that it is coindexed with the postverbal NP. There is also evidence that the trace in the specifier of come is coindexed with the subject in (47): There is also agreement between the inflection (sono) in (47a) and the postverbal NP (this can not be seen in (47b), as No. (like Da. and Swedish) does not show agreement on tensed verbs). Furthermore, (48) shows that constructions similar to (47) but with it (Fr. il, No. det), instead of there (It. "missing subject", No. der), have no agreement with the postverbal NP:

- (48) a. Fr. Il est_i [_{ei} [venu trois filles_i]]
 "It is(3sg) come(masc-sg) three girls"
- b. No. Deti eri nett [_{ei} [kome nokre gjester_i]]
 "There are(no number) just come(sg) some guests"

We assume along with Christensen and Taraldsen (1987:13) that both there of (47) and it of (48) enter into the kind of chain described above, and that whereas it has inherent features (3rd sing, neut), there has no such features, but takes on the features of the argument it is linked to.

As the trace in the specifier of come is exactly parallel to the one in ergative constructions without expletive subjects, cf. 4.4, the have/be selection is predicted to be the same as in the other type of ergatives: As two XPs intervene between the base-generated position of be and the foot of the A-chain, (the AgrP and the VP marked with ■), be is only selected in those languages that allow more than one intervening XP between be and the foot of the A-chain, i.e. It., Ge., Fr., and Da., whereas Sp. and En. select have.

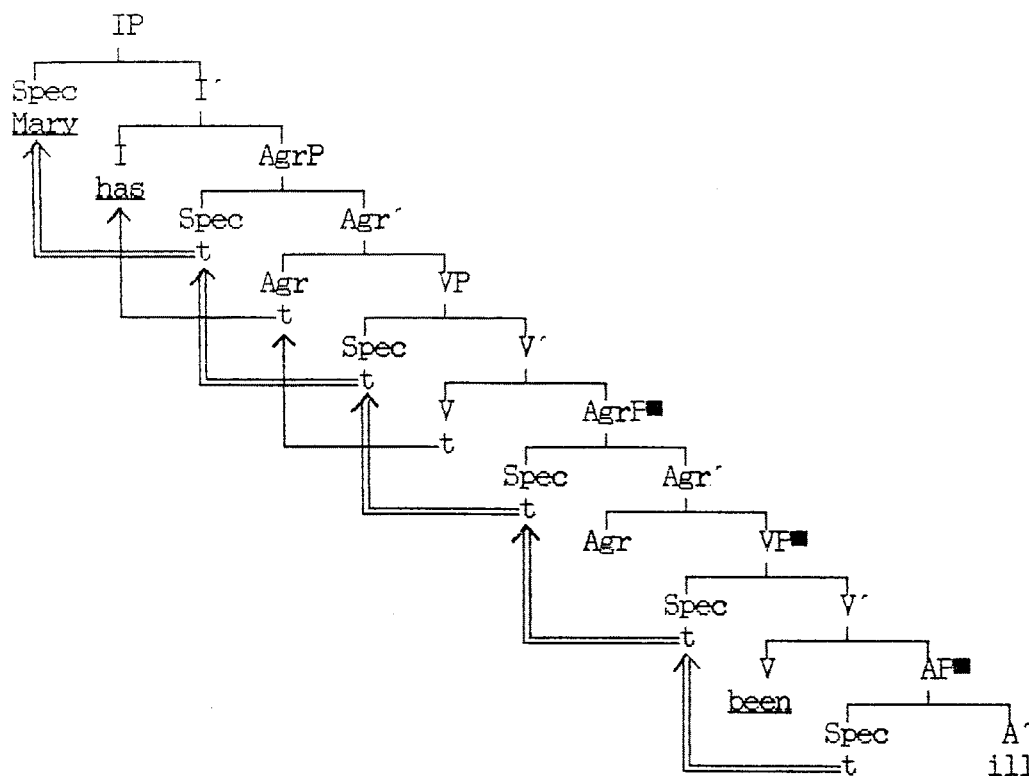
4.6 Be Itself.

Be itself belongs in the third major type of construction, i.e. the type where only It. and Ge. have be, but Fr., Da., Sp., and En. have have. As be does not assign any θ -role, we assume with Burzio (1986:148) and references

19. As for reasons to assume that tre ragazze is in the object position in (47a) rather than being a subject that has undergone free inversion, see Belletti (1988).

therein that it is a raising verb. The examples are given in (3d)-(8d), and their analysis is as follows:

(49)



- a. Mary_i is_i [[been [e_i ill]]] It., Ge.: B
 b. Mary_i has_i [[been [e_i ill]]] Fr., Da., Sp., En.: H

The trace in AP-specifier in (49) and the realisation of V° as be has already been discussed in connection with (41), section 4.2. That there is a trace in the specifier of been can be seen from the fact that been shows agreement in Italian:²⁰

- (50) It. Maria_i è_i [e_i [stata_i [e_i [malata]]]]
 "Maria is been(fem-sg) ill(fem-sg)"

V° may be realised as be, as it is coindexed with an a A-chain.

However, three XPs intervene between the base-generated position of be and the foot of the A-chain, viz. the AgrP, the VP, and the AP marked with ■. Therefore be is only selected in those languages that allow more than two intervening XP between be and the foot of the A-chain, i.e. It. and Ge., whereas Fr., Da., Sp., and En. select have.

Two constructions seem to be problematic from the point of view of this analysis, the English progressive (being), and the Danish passives with the verb meaning become.

20. "è_i" is an It. verb (En. is), "e_i" is an empty category.

The problem with En. being is that it selects be:

- (51) En. a. Peter is [being [difficult]]
b. *Peter has [being [difficult]]

where have might have been expected, as we have just assumed that be is not a θ -assigner in English. For be to be selected as the verb immediately preceding being, it may not be separated by more than one XP from the θ -assigned coindexed trace, which it would be if the θ -assigner was the adjective (viz. the VP of being, and the AP). Although being is embedded under two sets of have/be, as e.g. a passive participle is,²¹ it does not seem to be a θ -assigner. However, there may be a reason to assume that being is at least interfering with the θ -properties of (51). In a progressive construction like (51) there seem to be some agent-like properties predicated of the subject, as (52b) is ungrammatical, as opposed to the non-progressive construction, (53b):

- (52) En. a. Peter is being difficult
b. *Peter is being dead

- (53) En. a. Peter is difficult
b. Peter is dead

So what we will have to say is that being may reanalyse with an adjective to form something that assigns what resembles an agent θ -role, and therefore the trace in the specifier of being may be the one that counts for be-selection.

The problem with Danish become-passives is very similar to the one just discussed, as we get be where have would have been expected:

- (54) Da. a. Marie er [[blevet [fotograferet]]]
b. *Marie har [[blevet [fotograferet]]]
"Mary is/has become photographed"

For be to be selected, it may not be separated by more than two XPs from the θ -assigned coindexed trace, but it would be if the θ -assigner was the passive participle (viz. an AgrP, the VP of "become", and the VP of "photographed"). German which allows be to be separated from the foot of the A-chain by any number of XPs thus does not present a problem:

21. That being is embedded under two sets of have/be can be seen from:

- (i) En. Peter has been being difficult
(ii) En. Peter must have been being threatened with a gun
when he signed this

- (55) Ge. a. Maria ist [[[fotografiert] worden]]
 b. *Maria hat [[[fotografiert] worden]]
 "Mary is/has photographed become"

Also here there may be reason to assume that become plays a role from a thematic point of view. It does not merely correspond to be but it adds some meaning of its own, cf.

- (56) En. a. Mary was ill
 b. Mary became ill

where (56b) contains more information than (56a). Thus become might contribute part of the θ -role of a passivised subject, cf. Vikner (1988). This would explain why even in Da. (where be takes have) the auxiliary for become-passives is be, as the θ -assigned trace would not be more than two XPs away (viz. the AgrP and the VP of "become").

Swedish also has this type of passive constructions, but here the auxiliary is have:

- (57) Sw. a. Maria har blivit fotograferad
 b. *Maria är blivit fotograferad
 "Mary has/is become photographed"

Even if "become" may count as a θ -assigner, the relevant trace would still be separated from have by two XPs (viz. the AgrP and the VP of "become"), and it thus cannot trigger be-selection. As mentioned in the introduction to section 4, Sw. is like En. with respect to be-selection.

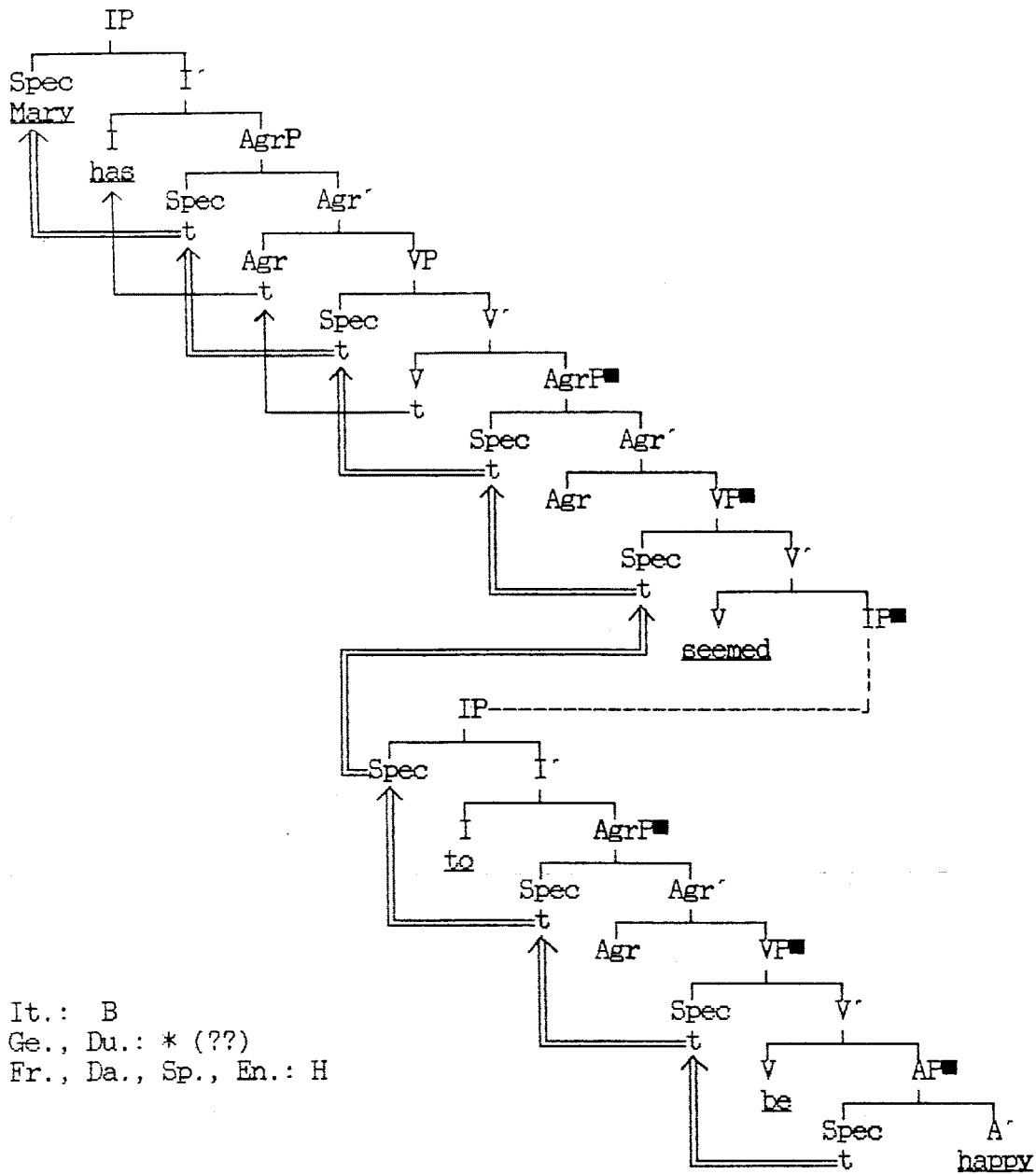
4.7 Other Raising Verbs.

The rest of the raising verbs pattern like be, i.e. It. has be, and Fr., Da., Sp., and En. have have. For reasons that we do not understand, speakers of Ge. (and Dutch) accept neither be nor have, i.e. these two languages seem not to have any perfect tenses of raising verbs:

- (58) a. It. Maria è sembrata essere contenta
 b. Ge. *Maria ist/hat froh zu sein geschienen
 c. Fr. Marie a semblé être contente
 d. Da. Marie har syntes at være glad
 e. Sp. María ha parecido estar contenta
 f. En. Mary has seemed to be happy

The data in (58) are analysed as follows:

(59)



It.: B
 Ge., Du.: * (??)
 Fr., Da., Sp., En.: H

- a. Mary_i is_i [[seemed [to [[be [e_i happy]]]]]]
- b. Mary_i has_i [[seemed [to [[be [e_i happy]]]]]]

The traces in specifier positions of AP and of *be* were discussed in sections 4.2 (AP) and 4.6 (*be*). The evidence for the trace in specifier position of the lower IP is that this is where the subject *Mary* appears if the embedded clause is finite:

(60) En. It seems that [Mary has been happy]

The trace in specifier position of *seemed* is taken to exist because of the agreement in the It. example of *sembrata* ("seemed(fem-sg)").

V° may be realised as *be*, as it is coindexed with an A-chain.

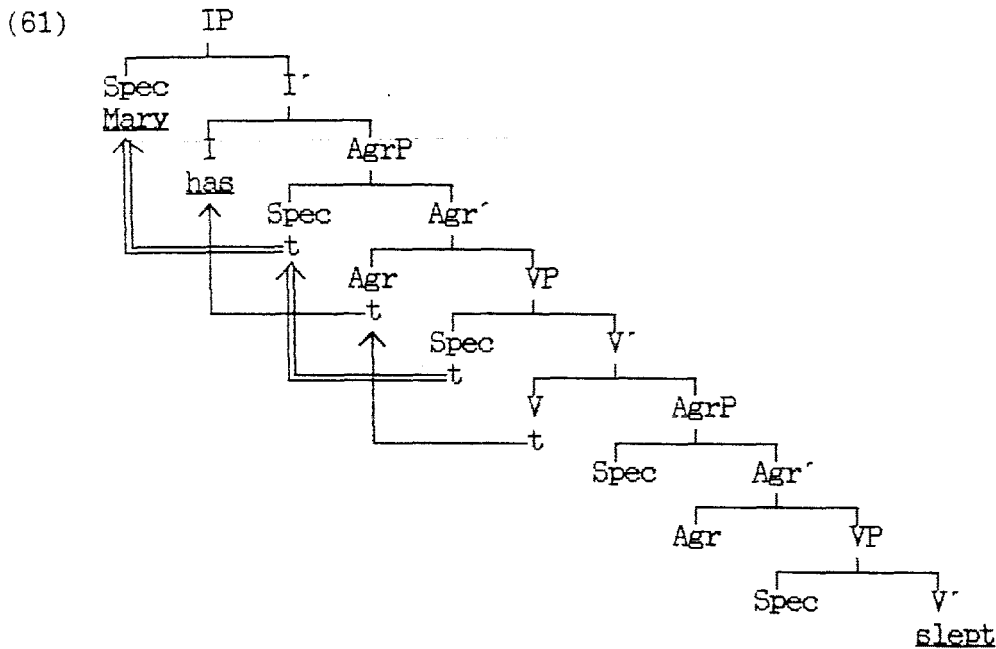
However, no less than six XPs intervene between the base-generated position of be and the foot of the A-chain, and therefore be is only selected in those languages that allow more than two intervening XP between be and the foot of the A-chain, i.e. It., whereas Fr., Da., Sp., and En. select have.

4.8 Intransitives and Transitives.

We will finish the discussion of the various constructions in section 4 by briefly mentioning the intransitive and transitive constructions, which take have in all the six languages, as illustrated by (3e)-(8e) and (3f)-(8f) respectively.

Intransitives and transitives both assign an external θ -role to the VP-specifier. This is then absorbed by the past participle ending, and may be reassigned by have/be to its specifier position. Intransitives only assign this single θ -role, whereas transitives furthermore assign an internal θ -role to their object position.

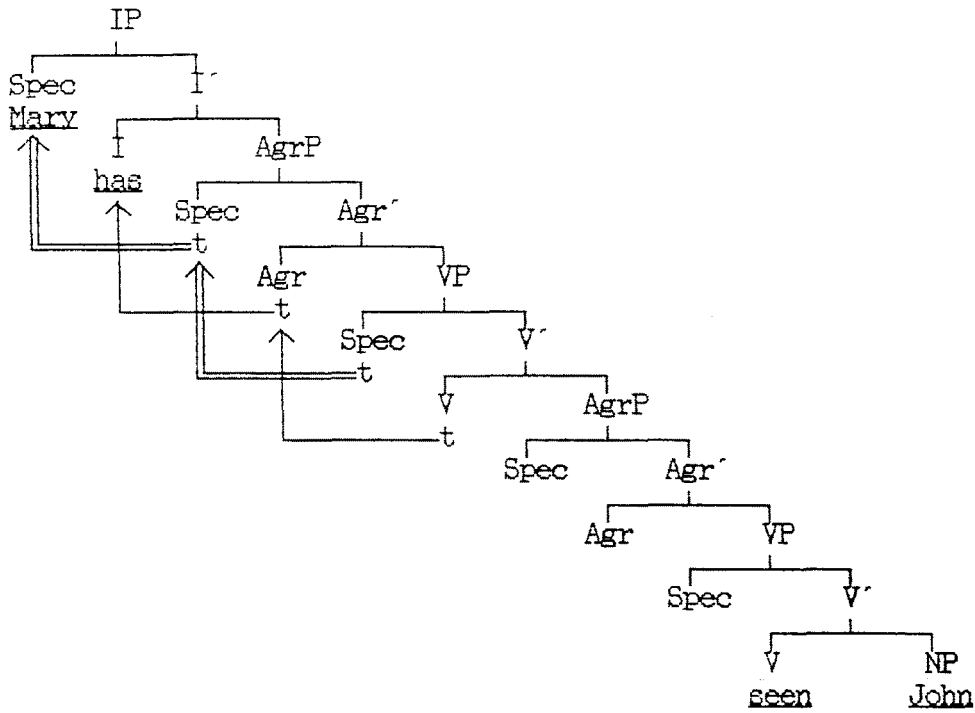
The analysis is as shown in (61) for intransitives and in (62) for transitives. In neither case could be possibly be selected, as there is no trace coindexed with and governed by have/be:



- a. *Maryi isi slept.
- b. Maryi hasi slept

It., Ge., Fr., Da., Sp., En.: H

(62)



- a. *Mary_i isi seen John
- b. Mary_i has_i seen John

It., Ge., Fr., Da., Sp., En.: H

5. Assignment of Case and θ -roles.

As *have* and *be* are merely variant spell-outs of an empty V° node, and their selection is determined solely by their structural environment, they are expected otherwise to have identical syntactic properties. It will be shown below that, as long as no chain ends up having more than one θ -role and/or one case, both *have* and *be* may transfer an external θ -role or assign a case.

5.1 θ -roles.

As set out in section 4.2, we assume that the external θ -role is first of all assigned to the specifier position of the θ -assigner. Here it may stay, i.e. an argument may occur in this position, as in (63), or the trace of an argument may occur in this position, as in (64), where the argument itself has moved to specifier of IP.

(63) En.

- a. I found [the book [dull]]
- b. I found [Peter [sleeping]]

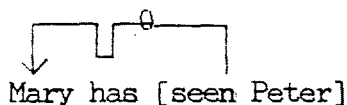
(64) En.

- a. The book_i is [e_i [dull]]
 b. The book_i seems [e_i [dull]]
 c. Peter_i is [e_i [sleeping]]
 d. Peter_i sleeps_j [e_i [e_j]]

If the θ -assigner is a verb, and on top of that a past participle, the external θ -role may be absorbed by the past participle morphology, -en. The external θ -role may then stay absorbed, as in (65), where the subject position now is left vacant so that something else can appear there. The external θ -role may also be reassigned ("deblocked" in the terms of Haider (1985)) by have/be, which means that it is assigned to the specifier of have/be, as in (66):²²

- (65) En. a. Peter was [seen e]
 b. There were [killed three soldiers]

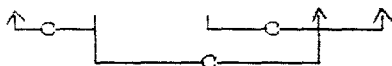
(66) En.



5.2 Case.

Case assignment by have/be is assumed to take place in transitive constructions, as there are two elements that need case (apart from the subject), the object and -en,²³ and two elements that assign case (apart from I°), the verb and have/be. We assume that a tensed I° assigns case to IP-specifier. Case may be assigned by have/be to the past participle suffix -en, leaving the verb free to assign case to its object, as in (67) :

(67) En. Mary has [photographed John]



If the object is a clitic pronoun, the process may either be seen as completely

22. For a possible fourth step in this process, see the appendix on the Swedish supine, section A.2. (The three steps were: 1. assignment to spec of assigner, 2. absorption by -en, and 3. reassignment to spec of have/be.)

23. -en needs case in all and only those cases where it absorbs a θ -role (cf. the "visibility" idea mentioned in Chomsky (1986b:94)). This means that -en in e.g. ergative constructions does not need case.

similar, (68):24

(68) It. Maria lij ha [ej [comprati ej]]



"Maria them(masc-pl) has bought(masc-pl)"

If there is nothing in the verb complement that needs case, then the verb assigns its case to the suffix -en, and have/be does not assign any case, as in (69), where neither the trace in the complement of photographed, nor the VP in the complement of been needs any case:

24. This is an example of case-assignment to an NP (in object position) which is not in the highest A-position of its chain, as VP-spec is (or rather AgrP-spec). Thus we follow Kayne (1985:76, 1987:55) in substituting

- (i) If a Case-marked chain is headed by an A-position, then that A-position must be assigned Case. (Kayne (1987:5))

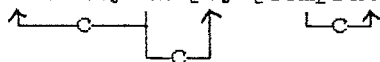
where there are no restrictions on the case-marked position in an A'-chain, for the earlier

- (ii) In a Case-marked chain, Case must be assigned to the highest A-position. (derivable e.g. from Chomsky (1981:69,185))

(Note here that we take Romance clitics not to occupy an A-position, cf. section 3.1)).

(68) could not have been made compatible with (ii), even if the case assignment was assumed to take place in the following way:

(iii) It. Maria lij ha [ej [comprati ej]]




"Maria them(masc-pl-acc) has bought(masc-pl)"

where case is assigned to the clitic chain in the specifier position immediately below have (i.e. AgrP-spec), the same position from which be-selection is triggered. The problem here would be that that it is clear from the selection of be that dative clitics also go through this specifier (cf. (85) and (86) below):

- (iv) It. Maria si è comprato un libro
"Maria herself is bought a book"

but if this is so, then (iii) would predict that they are assigned case by have/be (which would be accusative, cf. (iii)), as otherwise case would not be assigned to the highest A-position (AgrP-spec). As the case in (iv) clearly is not assigned by have/be (it is dative), this supports that (ii) is too strong:

- (v) It. Maria gli ha comprato un libro
"Maria him(dative) has bought a book"

(69) En. Mary_i has [e_i [beeni [e_i [photographed e_i]]]]


We assume that -en receives case from have/be rather than from the verb, as there is evidence that the verb assigns its case to the object whether or not -en is present: German objects normally have accusative (70a), but some exceptionally have dative (70b). The choice of case depends on the main verb even when -en is present, and therefore helfen ("help") is assumed to assign case to the object also in (71b).

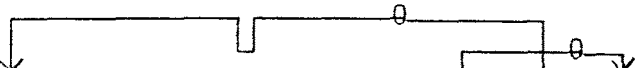
(70) Ge. a. ... daß Peter [den Mann] sieht
 "... that Peter the man(acc) sees"
 b. ... daß Peter [dem Mann] hilft
 "... that Peter the man(dat) helps"

(71) Ge. a. ... daß Peter [den Mann] gesehen hat
 "... that Peter the man(acc) seen has"
 b. ... daß Peter [dem Mann] geholfen hat
 "... that Peter the man(dat) helped has"

5.3 Have/Be and Assignment of Case and θ -roles.

The most controversial implications of the above are that be may both transfer a θ -role and assign a case, and that have may find itself in a position where it does neither.

First let us look at be and θ -roles. If the subject is in a chain with an NP inside VP, be cannot transfer a θ -role as then the subject would get two θ -roles, as in the following constructions: predicative adjectives (4.2), passives (4.3), It./Ge./Fr./Da. ergatives (4.4). If the subject is not in any chain with an NP inside VP, then there is no be, as in the intransitives and transitives (4.8). If the subject is only in an extended chain with an NP inside VP, then be transfers a θ -role, as in the Romance clitic construction in (72), cf. (22):

(72)

 Fr. Mes amis_j sei sont_j [e_i [rencontrés e_i]] (i=j)
 "My friends REFL are met"

Now for be and case. If the subject is in a chain with an NP inside VP, be does not assign case as this would entail that the subject would get two cases, as in predicative adjectives (4.2), passives (4.3), It./Ge./Fr./Da. ergatives (4.4). If the subject is not in any chain with an NP inside VP, then there is no be. If the subject is only in an extended chain with an NP inside VP, then be assigns case. Again an example is the Romance clitic in (73), cf. (22), (72):

(73) Fr. Mes amis_j sei sont_j [ei [rencontrés ei]] (i=j)



"My friends REFL are met"

The following goes for have and θ -roles. If the subject is not in any chain with an NP inside VP, have must transfer a θ -role as otherwise the subject would have no θ -role, as in intransitives and transitives (4.8). If the subject is in a chain with an NP inside VP, have does not transfer a θ -role as this would entail that the subject would get two θ -roles. Examples are ergatives in Sp./En. (4.4), as well as be and other raising verbs in Fr./Da./Sp./En. (4.6 and 4.7).

With respect to have and case, there are also two possibilities. If the subject is not in any chain with an NP inside VP, and there is a lexical NP inside the VP, then have must assign one of the two cases needed inside the VP: one is needed by -en, the other by the object, as in transitives, (4.8). If the subject is in a chain with an NP inside VP, have does not assign case as this would entail that the subject would get case twice. As examples, consider ergatives in Sp./En. (4.4), as well as be and other raising verbs in Fr./Da./Sp./En. (4.6 and 4.7).

6. Past Participle Agreement and its Relation to Be-selection

6.1 In General.

We have seen above that it is the same kind of position, viz. a specifier, which is relevant both for determining adjective/participle agreement (both are types of specifier-head agreement), and for determining selection of have or be (which depends on the specifier of the XP selected by have/be).

In some cases the specifier position relevant for be-selection and the one relevant for agreement are the same position, e.g.

(74) a. Fr. Les lettres sont [e écrites e]



"The letters(fem-pl) are written(fem-pl)

b. Da. Husene er [e røde e]



"Houses-the are red(pl)

where have/be selects a category (VP, AP) the head of which may show agreement. In other cases, have/be selects the maximal projection of something that may not show agreement (e.g. AgrP), and then the two relevant specifier positions are different:

(75) a. It. Maria è [_e Agr [_e venuta e]]

 └──┬──┘ └──┬──┘
 "Maria is come(fem-sg)

If the two specifier positions are traces, relativised minimality will ensure that they are coindexed, as otherwise each of them would break the chain of the other one, as it would count as a potential antecedent governor (cf. the discussion of (11)).

We thus expect be-selection and participle agreement to cooccur. This is however not always the case, and in the rest of this section we will discuss the exceptions, both "real" and apparent.

Let us start by noting that the above predictions only tell us where be may be selected or where there may be agreement, in so far as there never is agreement or be-selection in any of the languages considered unless the conditions obtain (the one case of agreement without be-selection will be shown in section 6.2. to obey the conditions), but there frequently is lack of agreement or be-selection even when the conditions obtain.

The most striking fact in this connection is probably that whenever have is selected inspite of coindexation (cf. sections 4.4 - 4.7), then the participle immediately under have (i.e. in the V° of the VP selected by the Agr° of the AgrP selected by have) does not show agreement either.

We will give two examples of this. Spanish has no agreement with a preposed object clitic, as opposed to French and Italian:

(76) a. Sp. María las ha visto

 b. Fr. Marie les a vues

 c. It. Maria le ha viste

 "Mary them(fem-pl/pl/fem-pl) has seen(masc-sg/pl/fem-pl)"

and this is exactly the type of construction where, even when given the right condition (government of a coindexed A-bound NP), Spanish does not have be-selection, whereas French and Italian do (cf. sections 4.4, 3.1):

(77) a. Sp. María ha venido

 b. Fr. Marie est venue

 c. It. Maria è venuta

 "Mary has/is/is come(masc-sg/fem-sg/fem-sg)"

(78) a. Sp. María se ha fotografiado

 b. Fr. Marie s'est photographiée

 c. It. Maria si è fotografata

 "Mary herself has/is/is photographed(masc-sg/fem-sg/fem-sg)"

The other example of the coincidence between have-selection and absence of participle agreement comes from Swedish, which (unlike Da., Ge., and En.) has

some degree of participle agreement. This agreement only shows up in non-have-selecting environments:

- (79) Sw. a. ... att djuren har blivit skjutna
b. *... att djuren är blivit(/blivna) skjutna
"... that animals-the have/are become(no agr(/pl)) shot(pl)"

blivit shows no agreement, and the next V° up is have, not be, inspite of the relevant coindexation (cf. (57)). skjutna does show agreement, and the next higher V° is never have instead of be, as can be seen in:

- (80) Sw. a. ... att djuren är skjutna
b. *... att djuren har skjutna(/skjutit)
"... that animals-the are/have shot(pl(/no agr))"

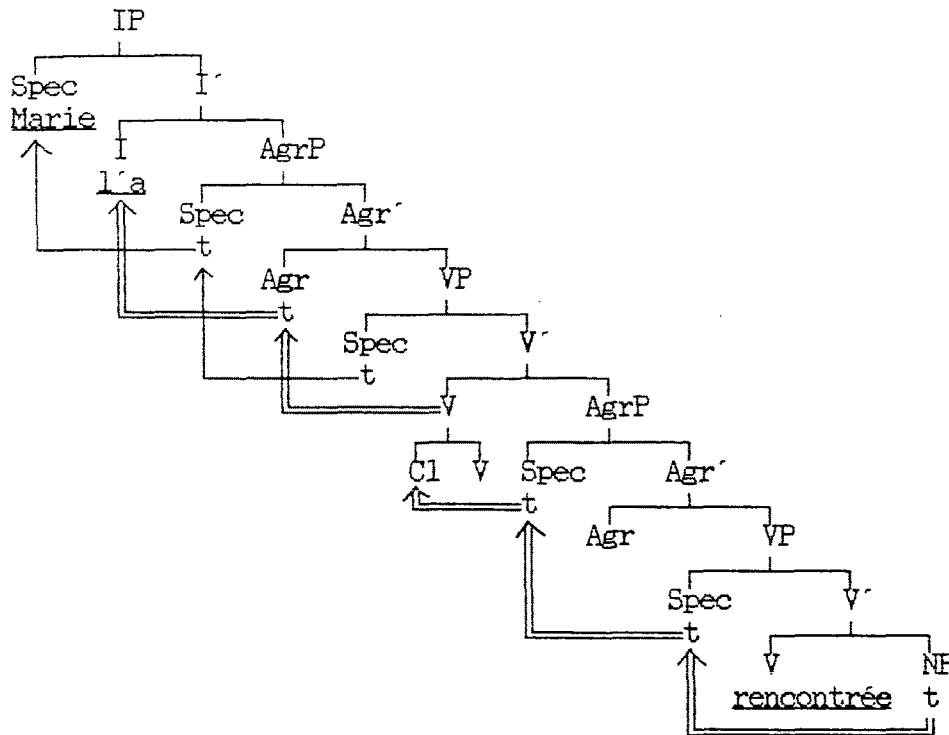
Though we do not claim to explain this coincidence (between have-selection and absence of participle agreement),²⁵ by taking it for granted, we may greatly reduce the number of "irregularities", as they now only comprise cases where there is agreement without be-selection or be-selection without agreement. Below we will discuss first a case of the former, and then various cases of the latter.

6.2 Participle Agreement without Be-Selection.

To our knowledge, the only case of agreement without be-selection is the one of It./Fr. non-reflexive direct object (accusative) clitics, as in (81) (cf. (27)) and (82) (=68)).

²⁵. Two other treatments of the coincidence of have-selection and participle agreement are Kayne (1987) and Taraldsen (1986), but it seems to us that both these accounts have merely moved the problem rather than solved it. W.r.t. Kayne (1987:2,5,n4), the question is now why the VP in Spanish, (76a)-(78a), is the sister of (aux) V, whereas in French and Italian, (76b,c)-(78b,c), it is the sister of an Agr°. W.r.t. Taraldsen (1986), the question is why Spanish is "object-linking", whereas French and Italian are "subject-linking".

(81)



Fr. Marie l'a rencontrée
 "Marie her has met(fem-sg)"

(82) It. Maria li; ha [e; Agr [e; comprati e;]]
 "Maria them(masc-pl) has bought(masc-pl)"

As stated in section 6.1 above, this construction presents no problems for our analysis: There is agreement as there is a trace in VP-specifier (forced by the ECP, cf. section 2), but there could be no be-selection, as the trace in AgrP-specifier is not coindexed with have/be.

6.3 Be-Selection without Participle Agreement.

There are several cases of be-selection without agreement. Whereas we have an analysis for one case, which will be discussed in the following subsection, most of the cases will just be mentioned here:

In En. it seems that there never is any sort of agreement at all, apart from subject - I°, and in Ge. almost the same obtains, the only kinds of agreement found are subject - I° and prenominal adjectivals. In Da. as well as in one dialect of Norwegian ("bokmål") only adjectivals and adjectival passives show agreement.

6.3.1 Dative Reflexive Clitics.

Given the fact that direct object clitics trigger agreement in Fr. and It., cf. (81) and (82), and that indirect object (dative) clitics do not, cf. (83) and (84), one might speculate that only direct object clitics have to go

through the specifier of VP, and that indirect object clitics somehow are base-generated in a position that obviates this need:

- (83) Fr. a. Marie leur a offert un cadeau
b. *Marie leur a offerts un cadeau
"Marie them(pl) has given(masc-sg/pl) a present"
- (84) It. a. Giovanni le ha comprato un libro ((98a) in Burzio (1986:61))
b. *Giovanni le ha comprate un libro
"Giovanni them(fem-sg) has bought(masc-sg/fem-pl) a book"

However, in both Fr. and It. a reflexive indirect object clitic will necessarily trigger be-selection:

- (85) Fr. a. Marie s'est offert un cadeau
b. *Marie s'est offerte un cadeau
c. *Marie s'a offert un cadeau
d. *Marie s'a offerte un cadeau
"Marie REFL is/has given(masc-sg/fem-sg) a present"
- (86) It. a. ??Maria si è comprato un libro
b. Maria si è comprata un libro ((98b) in Burzio (1986:61))
c. *Maria si ha comprato un libro
d. *Maria si ha comprata un libro
"Maria REFL is/has bought(masc-sg/fem-sg) a book"

indicating that the indirect object does move through the relevant specifier position for be-selection.

We are thus looking for an analysis where one specifier position triggers be-selection, and a different specifier position triggers participle agreement, at least in constructions involving indirect objects.²⁶

²⁶. This view is supported by (i)-(iv), where all have participle agreement with the clitic direct object, but only (i) and (ii) where the indirect object is a reflexive clitic have be-selection, whereas (iii)-(iv) has not, as there are no reflexives (cf. section 6.2):

- (i) Fr. a. *Marie se les est offert
b. Marie se les est offertes
c. *Marie se les a offert
d. *Marie se les a offertes
"Marie REFL them(pl) is/has given(masc-sg/fem-pl)"
- (ii) It. a. *Maria se le è comprato
b. Maria se le è comprate
c. *Maria se le ha comprato
d. *Maria se le ha comprate
"Maria REFL them(fem-pl) is/has bought(masc-sg/fem-pl)"

Juan Uriagereka (p.c.) has suggested the following. The indirect object might be outside the VP as such, and inside a different maximal projection (δP) together with the VP:

(87) [_{IP} ... [_I I° [_{δP} t [_{δ} δ° [_{VP} t [_V V NP(do)]] NP(io)...]]]]

Then *be* would be selected if a coindexed trace shows up in δP -specifier (through which both direct object clitics and indirect object clitics must pass), but V° can only show agreement with VP-specifier, through which only direct object clitics must pass.

Two problems remain with this analysis:

- 1) what is the structure of δP , or more specifically, what is the position of the indirect object inside δP ? It might be the sister of either δ° or δ' , but in both cases the question is why the dative object could not have a similar position inside VP. (Another question is whether δP corresponds to AgrP. The answer must be no, because δP exists even in passives, and thus it cannot count for computing the distance between *be* and the foot of the chain the way AgrP counts).
- 2) why does the past participle show agreement with the reflexive indirect object clitic in It., as in (86b)? Note though that this is not possible if there is a direct object clitic as well,

(88) It. a. *Maria se li ha comprata
 b. Maria se li ha comprati
 "Maria REFL them(masc-pl) has bought(fem-sg/masc-pl)"

and that absence of this agreement does not yield a completely ungrammatical sentence, (86a)(cf. Burzio (1986:61,(98b.i))).

7. Conclusion.

The basic idea of our analysis is that *be* and *have* are completely identical, apart from *be* requiring membership of an A-chain (i.e. coindexation with an A-bound NP that it governs), and *have* not allowing such a membership. Basing our

(iii) Fr. a. *Marie les lui est offert
 b. *Marie les lui est offertes
 c. *Marie les lui a offert
 d. Marie les lui a offertes
 "Marie them(pl) him(masc-sg-dat) is/has given(masc-sg/fem-pl)"

(iv) It. a. *Maria gliela è comprato
 b. *Maria gliela è comprate
 c. *Maria gliela ha comprato
 d. Maria gliela ha comprate
 "Maria him(masc-sg-dat) them(fem-pl) is/has bought(masc-sg/fem-pl)"

analysis on Kayne (1985), Chomsky (1986a), Rizzi (1986), (1987) and Pollock (1988), this idea makes it possible to account for the distribution of have and be and of participle agreement:

(89) It. Mariai èi [ei¹ Agr [ei² statai [ei³ vista ei⁴]]
"Maria is been(fem-sg) seen(fem-sg)"

(è is selected (and not ha) because it is coindexed with a trace that it governs, ei¹. stata is selected (and not avuto/-a) because it is coindexed with a trace that it governs, ei³. stata agrees with ei², which is in its specifier. vista agrees with ei³, which is in its specifier.)

The language specific variations are accounted for by analysing Romance unstressed reflexives as clitics and Germanic ones as non-clitics (section 3), and by assuming a parameter determining the maximum possible distance between be and the foot of the chain that triggers be (En., Sp.: one XP; Da., Fr.: two XPs; Ge., It.: any no. of XPs).

We have developed a have/be-selection analysis that tries to consider as many different types of have and be as possible, and not just limit itself to the perfect auxiliaries. We also think that more languages should be taken into consideration. The latter is in part a consequence of considering more types of have and bes, as the languages so far considered not to have "auxiliary selection", for instance English, Swedish, Spanish, and Rumanian, are also relevant in the kind of analysis we have tried to carry out here.

We have argued that be may be considered to be some kind of signal of identity, as it requires a certain type of coindexation. While there is no shortage of problems remaining to be solved in this area, we hope that our analysis at least makes it possible to see them in a different light.

Appendix. Remaining Problems in Scandinavian.

In accordance with the title of this series, with respect to "Working Papers" as much as with respect to "Scandinavian Syntax", we include here an appendix on phenomena in Scandinavian that may present problems for our analysis.

A.1 Norwegian and Icelandic Free Have/Be-Variation with Ergatives.

In all the languages where ergatives may select be, there are examples of verbs that may take be sometimes and have sometimes.

One type is (44), repeated here:

- (44) It. a. Due navi nemiche sono affondate
"Two enemy ships were sunk
b. L'artiglieria ha affondato due navi nemiche
"The army has sunk two enemy ships"

which does not present a problem, (44b) is a transitive use of affondare as shown by the presence of two arguments (one that receives an external θ -role, and one that receives the internal one).

Another type is

- (90) Da. a. Peter er gået
b. Peter har gået
"Peter is/has gone"

where there is only one argument in either case. There is a clear difference between the two, to do with verbal aspect: (90a) is an event (punctual), and (90b) is a process (durative). This can be seen in that only (90a) may combine with a locative adverbial like over til naboen ("over to neighbour-the"), and only (90b) may combine with a durational time adverbial like i flere timer ("for several hours"). This indicates that there may be a connection between aspect and absence of either the external or the internal θ -role. Cf. also that ergative verbs are typically event verbs (arrive, fall), where as intransitive verbs are typically process verbs (sleep, dance, work).

The third and problematic type is found in Norwegian and Icelandic, where there seems to be free variation between have and be in cases like

- (91) No. a. Vasen er falt
b. Vasen har falt
"Vase/the is/has fallen"

- (92) No. a. Det er falt ein vase
b. Det har falt ein vase
"It is/has fallen a vase"

- (93) Ic. a. María er komin
b. María hefur komið
"Maria is/has come(fem-sg/neut-sg)"

and no structural (or any other kind of) difference seems to exist. This is problematic for us, because we cannot account for such free variation. It would force us to assume that the NP in (91)-(93) may either be the external or the internal argument, not a very desirable assumption, as the question then is why such a free variation is not possible in other languages.

A.2 The Swedish Supine.

Platzack & Holmberg (1988) account for the difference between the free variation with ergatives in Icelandic and the exclusive selection of be in Danish by relating it to whether the finite verb moves to I° (Ic.) or not

(Da.). This again ties in with presence vs. absence of overt agreement, which distinguishes Icelandic and Faroese from Danish, Norwegian, and Swedish.

There seems to be at least two problems related to this: Why does Norwegian have free variation, and why does Swedish allow have? (Both would be predicted to be like Danish).²⁷

The former they leave unsolved (as do the present paper and most other treatments that we know of), but the latter they connect with the Swedish so-called "supine" (Sw. supinum). Platzack & Holmberg's (1988:8-12) analysis is that have is "reinterpreted as a non-defective verb", and they go on to say that this "marked situation in Swedish is evident from the fact that have is followed by a specific ACTIVE verbform, called the supine, with properties sharply distinguishing it from the past participle".

Given that our analysis does not see the situation w.r.t have/be-selection in Swedish as particularly marked (as mentioned in 4.6 it is completely parallel to that of English, Spanish, Portuguese, and Rumanian), we would like to consider the supine to be less exceptional than Platzack & Holmberg do.

We therefore agree with Christensen & Taraldsen (1987) that the supine is the form of the past participle that occurs when the participle shows no agreement. It occurs when there is nothing in VP-spec:

- | | | |
|-------------|--------------------------------------|------------------------------|
| (94) Sw. a. | Peter har <u>sovit</u> | "Peter has slept" |
| | b. Peter har <u>skrivit</u> ett brev | "Peter has written a letter" |

and when there is a trace in VP-spec provided that the immediately higher verb is have, (cf. section 6.1 on lack of agreement when have is selected):

- | | | |
|-------------|-----------------------------------|---------------------------|
| (95) Sw. a. | Peter har <u>kommit</u> | "Peter has come" |
| | b. Det har <u>kommit</u> ett brev | "There has come a letter" |
| | c. Han har <u>varit</u> i Lund | "He has been in/to Lund" |
| | d. Han har <u>blivit</u> skjuten | "He has become shot" |

There are two problems with this approach. One is that we cannot explain why supines (as opposed to all other participles in Germanic and Romance) may be passivised:

- (96) Sw. Djureti hari [ei [skjutits ti]]
-
- "Animal-the has shot-passive"

27. Other phenomena which are problematic for Platzack & Holmberg (1988) include the impossibility of be with ergatives in English, Spanish, and Rumanian and the impossibility of have with ergatives in Italian, given that it is assumed (Platzack & Holmberg (1988:13)) that all these languages have movement of the finite verb to I°, and therefore they are predicted to behave like Icelandic (i.e. to allow both have and be).

where the following things seem to take place w.r.t. θ -roles: 1) the external θ -role is assigned to VP-Spec, 2) it is absorbed by -en (i.e. -it), 3) it is reassigned by have to IP-Spec, and finally the special Swedish twist: 4) it is absorbed by -s.²⁸

The other problem is that in one particular construction there is a difference between a non-agreeing participle (in neuter, singular) and a supine:

- (97) Sw. a. Jag har inte fått skrivit boken/breven än
 b. Jag har inte fått skrivet boken/breven än
 "I have not got written(supine/neut-sg)
 the book(comm-sg)/the letters(pl) yet"

where (97a), with a supine, means that I have (not) done it myself, whereas (97b), with a participle, means that I have not got someone else to do it. If

²⁸. Danish and Norwegian, which also have this -s, do not allow perfects (or past perfects) of -s-passives:

- (i) Da. a. Dyret skydes
 "Animal-the shoot-passive"
 b. *Dyret har skudtes
 "Animal-the has shot-passive"

but must employ a become-passive instead:

- (ii) Da. Dyret er blevet skudt
 "Animal-the has become shot"

At first glance the ungrammaticality of (ia) may seem phonological or morphological, as the passive -s is also excluded in past tenses that end in a consonant:

- (iii) Da. a. spiste / spistes "ate / ate-passive"
 b. skød / *skøds "shot / shot-passive"

It is however possible to have an -s, with a reciprocal interpretation, in a perfect tense, giving the following minimal pair:

- (iv) Da. a. Marie og Peter har mødtes hver morgen siden jul
 "Marie and Peter have met-recipr. every morning since Christmas"
 b. *Marie har mødtes (af Peter) hver morgen siden jul
 "Marie have met-passive (by Peter) every morning since Christmas"

Cf. also that the same phonological form as in (iv) is grammatical both as a passive and as a reciprocal in the simple past:

- (v) Da. a. Marie og Peter mødtes hver morgen
 "Marie and Peter met-recipr. every morning"
 b. Marie mødtes (af Peter) hver morgen
 "Marie met-passive (by Peter) every morning"

We therefore have to conclude that this difference between Swedish and Danish/Norwegian is not morphological, but must have another explanation.

the supine is a non-agreeing form of the participle, then why the difference between (97a) and (97b)?

We might add that the corresponding Danish sentence (with a participle) is ambiguous as to these two interpretations:

- (98) Da. Jeg har ikke fået skrevet bogen/brevene endnu
 "I have not got written(neut-sg) the book(comm-sg)/the letters(pl) yet"

A.3 Icelandic Quirky Case.

In earlier versions of this paper, we used an Icelandic example with quirky case to show something about the nature of the coindexation that is necessary for be-selection. The question was which of the two coindexations that counted, either the one between be and the following trace, (99a), or the one between the specifier of be and the following trace, (99b):

- (99) a. ... NP be_i NP_i ...
 └──────────┘
 b. ... NP_i be NP_i ...
 └──────────┘

In most languages, be would be coindexed with its specifier, obliterating the difference between (99a) and (99b), but this is not the case in the following constructions where the subject has what is often called quirky case:

- (100) Ic. a. Mig_i hefur [e_i vantað peninga e_i]
 b. *Mig er vantað peninga
 "I(acc) has/is(3-sg) lacked money (= I have lacked money)"

- (101) Ic. a. Mér hefur leiðst
 b. *Mér er leiðst
 "I(dat) has/is(3-sg) bored (= I have been bored)"

Quirky case subjects have a case which is assumed to be lexically assigned and associated with their VP-internal position at D-structure (cf. Cole et al. (1980) as well as Zaenen et al. (1985) and references therein). As there is no agreement between the subject and the verb in these cases, it is assumed that there is no coindexation between the subject and have/be. As have is selected and not be, it therefore seemed reasonable to cite (100) and (101) as support that it is the coindexation between the be and the trace that is crucial, not the coindexation between the subject and the trace in VP-specifier, which still obtains in (100) and (101).

This argument does not go through, however, as it predicts that passives, (102a-c), as well as predicative adjectives, (102d), with quirky case subjects should select have over be, parallel to (100) and (101). The opposite is true:

- (102) Ic. a. Konunginum voru/*höfðu gefnar tvær ambáttir
 "King-the(dat) were/had(pl) given(Nom-fem-pl)
 two slaves(Nom-fem-pl)
- b. Henni var/*hafði boðið af Jóni
 "She(dat) was/had(3-sg) invited(nom+acc-neut-sg) by John(dat)
- c. Okkar var/*hafði saknað
 "We(gen) was/had(3-sg) missed(nom+acc-neut-sg)
- d. Mér er/*hefur kalt
 "I(dat) is/has(3-sg) cold

These facts leave us with two equally problematic paths to follow:

If the crucial coindexation is the one between the specifier of be and the trace, i.e. (99b), then, contrary to the facts, have is predicted to be ruled out and be to be grammatical in (100) and (101).

If the crucial coindexation is the one between be itself and the trace, i.e. (99b), then, contrary to the facts, be is predicted to be ruled out and have to be grammatical in (102), as be is not part of an A-chain here. A way of getting out of this may be to adopt (and adapt) the suggestion in Baker et al. (1988) that the ending of the participle, -en, is base-generated in an X° outside the maximal projection of the participle. If -en was base-generated in a node that be either occupies or moves through, then perhaps be could claim to be a member of an (A-)chain. However, this would get us into a new dilemma: Either all participles (passive ones as well as active past ones) are predicted to occur only with be (obviously a wrong prediction), or a unified approach to these participles (which always take identical forms, with the possible exception of Swedish, cf. A.2) must be given up, as -en must be generated in different places in the two cases (i.e. passive and active)

Note finally that although German also has what looks like quirky case passives and predicative adjective constructions, as in

- (103) Ge. a. ... daß dem Kind geholfen ist
 "... that the child(neut-sg-dat) helped is"
- b. ... daß dem Kind kalt ist
 "... that the child(neut-sg-dat) cold is"

these do not present similar problems, as we assume that dem Kind stays in its base-generated VP/AP-internal position, and the subject position is left empty (cf. Cole et al. (1980) as well as Zaenen et al. (1985) and references therein). Be is then selected because of the inverse chain between the empty subject and the VP/AP forced by expletive replacement at LF, cf. section 4.5.

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