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- Kitagawa, Y. (1986) *Subjects in Japanese and English*, Doctoral dissertation, University of Massachusetts, Amherst.
- Kuroda, S.-Y. (1965) *Generative Grammatical Studies in the Japanese Language*, Doctoral dissertation, MIT, Cambridge.
- Lasnik, H. and M. Saito (1987) "Move alpha: conditions on its application and output", ms., University of Connecticut and University of Tukuba.
- Nakamura, M. (1986) "Anaphora in Japanese", ms., Tohoku University and MIT.
- Nakamura, M. (1989a) "Reflexives in Japanese", Gengo Kenkyu, *Journal of the Linguistic Society of Japan* 95, 206-230.
- Nakamura, M. (1989b) "On 'Null Operator' Constructions", ms., Tohoku University.
- Ohso, M. (1976) *A Study of Zero Pronominalization in Japanese*, Doctoral dissertation, Ohio State University, Columbus.
- Reinhart, T. (1981) "Definite NP anaphora and C-command domains", *Linguistic Inquiry* 12, 605-635.
- Saito, M. (1984) 'On the definition of C-command and government', *NELS* 14, 402-417.
- Saito, M. (1985) *Some Asymmetries in Japanese and Their Theoretical Implications*, Doctoral dissertation, MIT, Cambridge.
- Saito, M. (1988) "On condition (C) of the binding theory", paper read at Tohoku University.
- Saito, M. (1989) "Scrambling as semantically vacuous A'-movement", M.R. Baltin and A.S. Kroch, eds., *Alternative Conceptions of Phrase Structure*, The University of Chicago Press, 182-200.
- Terazu, N., T. Inada and M. Yamanasi (1979) "Nihongo-niokeru syoo-oo hyoogen-nituite sono 2", (On Anaphoric Expressions in Japanese 2) Report for Special Research Project of "Language" (The Ministry of Education), the Isiwata Group, 15-60.
- Xu, L. (1986) "Free empty category", *Linguistic Inquiry* 17, 75-93.

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CHAIN-GOVERNMENT

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1. INTRODUCTION*

In Dutch (and German) the indirect object may precede the subject of the clause in a limited set of constructions. It has been shown by Den Besten (1981, 1982, 1985) that this order is only possible if the predicate of the clause is an ergative or a passive verb. He argues that in case the object precedes the subject, the latter has remained in its D-Structure position.

Under this analysis, case-assignment to the subject becomes a problem, since it is not governed by a nominative assigning head. To solve this, Den Besten introduces the notion 'chain-government' and assumes that the subject may receive case under chain-government by the nominative assigning head.

- (1) α chain-governs β iff α governs γ_1 , γ_1 governs γ_2 , ..., γ_{n-1} governs γ_n , and γ_n governs β ($n \geq 1$).
- (2) If NP_i is governed by a category α which cannot or may not assign Case, NP_i will acquire its case from the first Case-assigner up by which it is chain-governed.

Den Besten's proposal has frequently been criticized. Although most critics do agree that this proposal is able to account for the facts, they sense it as an *ad hoc* solution (cf. for example Grewendorf 1989:p.137 ff.). Since it has never been argued that the assumption of chain-government is independently motivated, this criticism seems to be justified.

In this article, however, I will show that chain-government plays a role in the explanation of several other phenomena in the grammar of Dutch, e.g. binding and T-linking, and, consequently, that this notion is independently motivated after all.

The organization of this article is as follows. In section 2, I discuss some general background assumptions that are used throughout this article. In section 3, I discuss the notion 'chain-government' in detail. It is argued

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that the definition in (1) is too unrestrictive, and therefore it will be revised. Further, the consequences of Den Besten's proposal for NP-movement in Dutch are surveyed. Finally, some attention is paid to the question why nominative case can be assigned under chain-government in Dutch, but not in English.

In section 4, the distribution of the two anaphor-types Dutch distinguishes is discussed. It is shown that their distribution can be explained by introducing the notion 'chain-governing category'.

In section 5, Verb Raising (and other movements of the verb) in Dutch will be discussed. It has been argued by Bennis and Hoekstra (1989a,b) that every verb must be a link in a T-chain and that Verb Raising establishes such chains. If they are on the right track, a natural assumption would be that the possibility of chain-government in Dutch follows from the availability of Verb Raising. Following Den Besten and Broekhuis (to appear), however, I will argue that it is not Verb Raising that makes chain-government possible. Rather, it is chain-government that plays a role in establishing the required T-chain.

In section 6, I finally discuss some properties of Verb Raising constructions. This discussion enables us to solve a problem concerning binding that was left aside in section 4.

2. PRELIMINARIES

In this section, I discuss some background assumptions underlying this study. In 2.1, the definition of government that will be used throughout this article is discussed. In 2.2, I give the phrase structure rules for Dutch. In 2.3, I briefly present some issues in the grammar of Dutch and point out some consequences of the specific formulation of government given in 2.1.

2.1. Government

As the notion 'government' plays a crucial role in this article, some attention to its proper definition seems to be justified. The definition of government that is used in this article is stated in (3). The notions used in (3) are defined in (4-9). Some of these definitions will be revised later in this section.

- (3) α governs β iff:
- $\alpha = X^0$;
 - α c-commands β ;
 - β is θ -subjacent to α ;
 - minimality is respected.

- α c-commands β iff α does not dominate β and the node most immediately dominating α also dominates β .
- β is n -subjacent to α iff there are fewer than $n + 1$ barriers for β that exclude α .
- α excludes β if no segment of α dominates β .
- α is a barrier for β iff:
 - α is a maximal projection;
 - α is not L-marked;
 - α dominates β .
- α L-marks β iff α is a lexical category that Θ -governs β .
- α Θ -governs β iff α governs and Θ -marks β .

According to the substantive condition on government in (3a), all governors are heads. Generally, it is assumed that a coindexed NPs may also act as a governor to account for the COMP-trace effects. But since Rizzi (1990a) has argued that the ECP can be split in a Formal Licensing condition on traces (which involves head-government) and an Identification Requirement on traces (which involves antecedent-trace relations), the relation between a trace and its antecedent need no longer be seen as an instance of government. This motivates the formulation of the substantive condition as in (3a). In 2.3.2, I will return to the Identification Requirement on traces.

The configurational condition on government is defined as c-command. In most recent studies, it is assumed that it must be defined as m-command. This m-command condition on government is mainly motivated by considerations of Case theory; it is assumed, for example, that in NPs the head noun must govern its specifier for case assignment (cf. Aoun and Sportiche 1983). Of course, this motivation for the m-command definition of government is only valid if there are no other means by which case can be assigned to a specifier position. In Bennis and Hoekstra (1989b), however, it is assumed that specifiers (of functional heads) can be assigned case under SPEC-Head agreement (cf. also Hoekstra and Mulder 1990, where this mechanism has been put to work in an analysis of the locative inversion construction).

Note further that Aoun and Sportiche's assumption that the specifier of NP is assigned genitive case under government by N is incompatible with Abney's (1987) DP-hypothesis; according to this hypothesis the genitive NP is not within the maximal projection of the noun, but of the determiner. This can be seen in the following structure: $[_{DP} NP_{gen} D [_{NP} \dots N \dots]]$. Therefore, genitive case cannot be assigned by N, but must be assigned

by the determiner D. But since D is a functional head, we may assume that it is comparable to I in being able to assign case under SPEC-Head agreement. Consequently, if we adopt this mechanism, we may assume a c-command definition of government as far as Case theory is concerned. This renders one of the most convincing arguments in favour of the m-command condition on government invalid.

Since the assumption of a m-command condition on government forces us to assume various auxiliary assumptions that in fact amount to replacing the m-command condition on government by a c-command condition (cf. for instance Rizzi 1990a, where *proper government* is being restricted to *head-government within the immediate projection of the head*), it seems desirable to constraint government by a c-command condition (cf. Broekhuis en Hoekstra to appear for further discussion).

The definition of c-command in (4) itself does not need any comment. It is almost equal to the one given in Reinhart (1983:18). It only does not refer to 'branching node'.

The locality condition on government in (3c) captures the idea that a barrier blocks government (Chomsky 1986a). The definition of n-subjacency in (5) is equal to the one given in Chomsky (1986a:30), but will be simplified in a moment.

The definition of barrier in (7) is taken from Lasnik and Saito (1989: chapter 3, (83)). It differs from the one given in Chomsky (1986a:26) in that it states that any maximal projection that is not L-marked, is a barrier. This implies that IP may be a barrier. Unfortunately Lasnik and Saito (chapter 3, (70b)) have to stipulate that VP cannot be a barrier, I being suitably lexical.

(10) VP is not a barrier.

I discuss assumption (10) in section 2.3.1 and 3. There it will be shown that the theory in hand predicts that in Dutch VP is a barrier at D-Structure, but not at S-Structure or LF. In English, on the other hand, VP is a barrier at D- and S-Structure, but not at LF.

In addition to their definition of barrier in (7), Lasnik and Saito make the following assumption (chapter 3, (81)):

(11) Adjunction creates a separate projection.

In conjunction with (11), the assumption in (7) states that a barrier γ can never be crossed by first adjoining the moved constituent to γ .

According to Chomsky's proposal this way of voiding a barrier is a possible option. Consider the structure (12), in which an element has been adjoined to γ , γ a maximal projection.

(12) ... [γ_1 α [γ_2 ... β ...]]

In (12), γ_1 and γ_2 are segments of the same node. According to the subjacency condition on government in (3c), α may govern β if there is no barrier γ for β , such that γ excludes α (cf. (5)). In (12) α is not excluded by γ , and therefore α may govern β . If β is a trace and α its antecedent, the structure in (12) is licit according to Chomsky, because α antecedent-governs β .

In (12), γ_1 is not a barrier for α either. A prerequisite for α to be a barrier for a category β , is that α dominates β . Given the definition of domination from Chomsky (1986a:7), given in (13), this condition is not fulfilled.

(13) α is dominated by β only if it is dominated by every segment of β .

In conclusion, according to Chomsky (1986a) movement of a constituent from the position of β across a barrier γ is made possible by first adjoining it to γ , followed by movement to the target position. In this way, no barrier is crossed.

According to (11), this way of voiding a barrier is not possible. Instead of being segments of the same node, γ_1 and γ_2 are taken to be two separate maximal projections. Therefore, if γ is a barrier, both γ_1 and γ_2 in (12) will be barriers. If γ is not a barrier, adjunction to γ will in fact *create* a barrier (γ_2), because γ_2 is not L-marked. And, in fact, this is what Lasnik and Saito have shown in their study - adjunction to a maximal projection adds a barrier (and is therefore island creating).

If we accept the assumption in (11) and the definition of barrier in (7), we have to revise the definition in (5) a little. Given (11), the notion 'exclusion' is irrelevant to the theory of barriers. Therefore, let us exclude it from the theory of grammar.¹ Consequently, (5) can be simplified as (5)'. 'Domination' must be construed in its traditional sense now, i.e (13) must be replaced by (13)'. Note further that these definitions make the stipulation in (11) superfluous; hence, it can be dropped.

(5)' β is *n-subjacent* to α iff there are fewer than $n+1$ barriers for β that do not dominate α .

(13)' α *dominates* β iff β is contained within α , α (a segment of) a node.

The minimality condition on government in (3d) expresses the idea that α does not govern β if there is a 'closer' governor for β (Chomsky 1981, 1986a). Note that we did not state the Identification Requirement in terms of government, and hence that a relativized notion of minimality is implied here.

Since the configurational condition on government is stated as 'c-command', we adopt the narrower interpretation of Chomsky's Minimality Condition (1986a:42 (92)). In (14), both α_1 and α_2 are heads and γ is the maximal projection of α_2 .

(14) ... $\alpha 1$... [γ ... β ... $\alpha 2$...]

If β is the specifier of γ in (14), the definition of government in (3) allows β to be governed by $\alpha 1$, as long as γ is not a barrier. Minimality defined by the notion 'm-command', the broader interpretation of Chomsky's Minimality condition, excludes this possibility since γ will always be a barrier for government under minimality; β can only be governed by $\alpha 2$.

If β is the complement of $\alpha 2$ both definitions exclude government of β by $\alpha 1$. Similarly, if γ is not a barrier, both definitions allow $\alpha 2$ to be governed by $\alpha 1$.

Thus, the notion 'minimality' in (3) differs from the broader one in the accessibility of the specifier of a maximal projection γ for government from outside γ .

2.2. Phrase Structure

Koopman and Sportiche (1988), Sportiche (1988) and others have argued that the external argument of the verb is not generated in the specifier position of IP (henceforth: SpecIP), but in a VP internal position. Here, I adopt this VP-internal hypothesis without discussion. Let us assume more specifically that the external argument of the verb is generated in SpecVP (cf. for instance Bennis and Hoekstra 1989b, Den Besten et al. 1988). In that case the phrase structure rules for Dutch are as given in (15). *NP* is the base position of the external argument (if present).

- (15) a. $VP = [NP [V \dots V]]$
 b. $IP = [\dots [I VP I]]$
 c. $CP = [\dots [C C IP]]$

Following Pollock (1988), IP probably has to be divided into two separate functional projections, AGRP and TP, and possibly even other functional projections may be present (cf. for instance Chomsky 1988 and Rutten 1991). Because nothing in the present article crucially depends on the number or order of functional categories, I just confine myself to the phrase structure rules in (15).

An important question that arises in connection with (15), is how the notion 'A-position' should be defined. In Chomsky (1981:47), an A-position has been described as 'a potential Θ -position'. If the external argument is generated VP-internally in all languages, SpecIP is not a potential Θ -position, hence an A'-position. Since SpecIP (at least in English) seems to be a typical A-position, this conclusion is undesirable.

If we want to make the notion 'A-position' compatible with the VP-internal hypothesis, we have to revise its definition. Let us assume that an A-position must be licensed in some way, for instance by Θ - or case-marking (cf. Hoekstra and Mulder 1990:37). This has been made explicit in the definition in (16).

- (16) If a position is Θ - or case-marked it is an *A-position*; it is an *A'*-position otherwise.

This definition plays an important role in section 3. It will enable us to show that in Dutch there is no NP-movement in the traditional sense of the term.

2.3. Movement in Dutch

In this subsection, I briefly discuss two kinds of movement that are typical of Dutch (and other West Germanic OV-languages). The first kind is Verb Raising and V-to-I. These movements are instances of X^0 -movement. The second kind is Scrambling, an instance of XP-movement.

2.3.1. X^0 -movement

Consider the following sentence.

- (17) dat ik Peter met een mes zag spelen
 that I Peter with a knife saw play
 'that I saw Peter playing with a knife'

Following Den Besten et al. (1988) and Bennis and Hoekstra (1989a,b), I assume that in bare infinitivals the matrix verb subcategorizes for a VP. If we assume further that sentential arguments of the verb are generated in the same position as the nominal argument, the bare infinitival has to appear in preverbal position at D-Structure. Hence the D-Structure of (17), with the omission of irrelevant details, is as given in (18).

- (18) dat ik [_{VP} Peter met een mes spelen] zag

The linear order in (17) can be derived by moving the embedded verb out of its clause and adjoining it to the higher verb as in (19). This movement is known as Verb Raising (VR). VR will be discussed more extensively in section 5.

- (19) dat ik [_{VP} Peter met een mes t_i] zag spelen_i

Another sort of verb movement is V-to-I. In embedded finite sentences in Dutch, it cannot be seen whether a verb has moved to I or not. This is due to the fact that both V and I are head-final (cf. (15)) and that it is not possible to place lexical material between these positions. In main clauses, though, the verb obligatorily moves into the C^0 -position. By the Head Movement Constraint (cf. Travis 1984, Chomsky 1986a and Baker 1988) this implies that in main clauses the verb has moved through I.

In *te*-infinitivals it can be seen that the verb has moved to I. Consider the following examples.

- (20) a. dat Jan probeerde [PRO te komen]
 that John tried to come
 b. *dat Jan probeerde [PRO komen te]

It is generally assumed that *te* is the phonological spell-out of infinitival I. Since the VP in Dutch is generated to the left of I, the D-Structure order of the complement is as in (20b). As this order results in an ungrammatical S-Structure, we have to conclude that movement of V must apply in (20).

Because V-to-I is obligatory in both main clauses and *te*-infinitivals, we can conclude that V-to-I is obligatory in all clauses, even though we are not able to prove this for embedded finite clauses.

- (21) In Dutch, V-to-I is obligatory.

Of course, (21) is a language-specific statement and cannot be generalized to all other languages. With respect to English, for instance, it is clear that main verbs do not move to I at S-Structure (cf. for example Pollock 1988; Chomsky 1988). How does this difference between Dutch and English arise?

A question that must be answered first is why (21) holds. There have been several attempts to derive this statement from more general principles (for instance: Evers 1982, Pollock 1988, Chomsky 1988, Bennis and Hoekstra 1989a,b, Rutten 1991). I adopt here the spirit of Bennis and Hoekstra's proposal. Bennis and Hoekstra relate the statement (21) to a theory of Tense. Their theory demands that every verb be identified by Tense. The notion 'Tense' refers to both finite and infinitival Tense.

- (22) *T-linking*
 A verb must be identified by Tense.

T-linking is established by means of a T-chain. According to Bennis and Hoekstra, such T-chains may be formed in two ways: either by moving the verb to I or by percolation of the Tense-features to V. They assume that languages may be parametrized to the way they establish T-chains. In Dutch the option of movement of the verb is chosen, and this is the reason why (21) holds. In English on the other hand, the option of percolation is chosen, and therefore V-to-I is not possible in English.

In Den Besten and Broekhuis (to appear), this approach has been slightly revised. Instead of assuming that in Dutch T-chains can only be formed by verb movement, we assume that T-chains may be formed by percolation as well. We further assume that percolation of Tense is in fact coindexing of I and its lower verb(s). The way we derive the statement in (21) is by constraining coindexing in the following way (a more formal definition will be offered in the next sections):

- (23) A head β may be *coindexed* with a head α iff α governs β .

We further assume (24).

- (24) I° is not lexical.

The result of (23) and (24) is that no T-chain may be formed by coindexing. Since I° is not lexical, it does not L-mark VP. Hence VP is a barrier for V. Consequently, I° does not govern V and coindexing of I° and V is impossible. The only way to meet (22) is by moving V to I. Thus we have derived the statement in (21).

A problem we did not discuss in Den Besten and Broekhuis (to appear) is how to explain that V-to-I is not possible in English. Of course, we could have stated that (24) does not hold in English. In that case, VP is never a barrier (cf. (10)) and the condition on coindexing is always met in English. Another possibility is to assume that languages may be parametrized in the following way:

- (25) T-linking has to be met:
 a. at S-Structure, or:
 b. at LF.

Dutch chooses the option in (25a), English the one in (25b).² This hypothesis has some interesting consequences.

Chomsky (1986a) assumes that V-to-I lexicalizes I. In fact, we have to assume the same. If VP is a barrier after V-to-I, government of the trace of V would be blocked and the structure should be ruled out by the ECP. Since this is not the case, the VP cannot be a barrier, hence has to be L-marked. Therefore the amalgam I + V has to be lexical.³

If it is true that in Dutch the amalgam is formed at S-Structure and in English at LF, this would imply that:

- (26) a. In Dutch VP is only a barrier at D-Structure;
 b. In English VP is a barrier at D- and S-Structure, but not at LF.

Consequently, the VP in Dutch and English should behave similarly with respect to barrierhood as far as it concerns conditions that have to apply at LF (like the ECP), but differently as far as it concerns conditions that have to apply at S-Structure. In section 3, I will show that this might indeed be the case.

In section 5, I discuss V-to-I more extensively in connection with VR.

2.3.2. *XP-movement (Scrambling)*

One of the most striking characteristics of Dutch (and some other West Germanic languages) is the relatively free word order of the nominal

arguments in the sentence. Consider for example the sentences in (27).

- (27) a. dat Jan waarschijnlijk de man het boek gegeven heeft
that John probably the man the book given has
'that probably John has given the man the book.'
b. dat Jan de man waarschijnlijk het boek gegeven heeft
c. dat Jan de man het boek waarschijnlijk gegeven heeft

Generally, it is assumed that the word orders in (27b) and (27c) are derived from (27a) by moving the object(s) across the adverbial and adjoining it (them) to a higher projection.

In principle, two positions are available as an adjunction site for the objects, VP and I'. (Chomsky's restriction on adjunction will be discussed below.) In (27b) and (27c), adjunction is not possible to IP, because this would imply that the object(s) should precede the subject. The two possible structures of (27c) are given in (28).⁴

- (28) a. dat [_{IP} Jan [_{VP} de man_i [_{VP} het boek_j [_{VP} waarschijnlijk
[_{VP} t_i t_j gegeven]]]] heeft]
b. dat [_{IP} Jan [_{I'} de man_i [_{I'} het boek_j [_{I'} waarschijnlijk
[_{I'} t_i t_j gegeven] heeft]]]]

In the following, I assume that the Identification Requirement holds for all types of traces, including those that are left by Scrambling (cf. Koster 1986:3; Webelhuth 1989).

- (29) A trace must be Identified.

In Rizzi (1990a), it is assumed that the Identification can be established either by antecedent-government (in case of local dependencies) or by binding (in case of non-local dependencies, i.e. island violations). Binding will be disregarded in this study, since Dutch generally disallows island-violations (cf. Broekhuis in prep. for further discussion).

As has been mentioned in section 2.1, the local dependencies need not necessarily involve antecedent-government. Here, I will account for the locality of antecedent-trace relations by assuming the following condition on chain-formation (which is in fact an adaptation of Lasnik and Saito's 1989:27 definition of antecedent-government; cf. also Chomsky 1986a:30 and Rizzi 1990a:92).

- (30) If (α, β) is a link of a chain, then:
a. α and β are nondistinct;
b. α c-commands β ;
c. β is subjacent to α .
- (31) β is *subjacent* to α if for every γ , γ a barrier for β , the maximal projection immediately dominating γ , dominates α .

The restriction on adjunction of XP from Chomsky (1986a:6) selects (28a) as the right structure, since it states that adjunction is only possible to a maximal projection that is a non-argument. According to his definition of barrier neither of the VPs in (28a) is a barrier for the relation between the traces and their antecedents, and so both traces may enter into a well-formed chain with their antecedents.

If we adopt the definition of barrier given in (7), however, (28a) cannot be the right structure. According to (7) and the assumption in (11), all the lower VP-nodes in (28a) are barriers and therefore the traces cannot enter into a well-formed chain with their antecedents.

In structure (28b), adjunction has taken place not to a maximal, but to an intermediate projection. Because intermediate projections are never barriers, the traces in (28a) may enter into a well-formed chain with their antecedents. Therefore, this structure must be the right one.⁵ The definition of barrier in (7) thus forces us to drop Chomsky's restriction on adjunction of XPs.

Let me conclude this subsection with some notes on the definitions in (30) and (31). According to Chomsky's definition of barrier (1986a:14), a maximal projection becomes a barrier if it immediately dominates a Blocking Category. In fact, this type of inheritance is now included in the definition of subjacency in (31).

If we assume that the complementizer *dat* is not lexical, and that therefore the embedded IP is a barrier, the *wh*-trace in (32) is subjacent to the intermediate trace in the embedded CP. Since the embedded CP is L-marked by the matrix verb, CP is not a barrier either. Consequently, the intermediate trace will be subjacent to the *wh*-phrase in the upper SpecCP as well. Now, the lowest trace can be identified through a well-formed movement-chain, since all the links of this chain satisfy the subjacency condition in (30c).

- (32) Wat_i denk [_{IP} je [_{CP} t_i dat [_{IP} hij t_i zal kopen]]]
what think you that he will buy
'What do you think that he will buy'

Note that (32) is grammatical even if the matrix IP is a barrier, since, although IP is a barrier, the intermediate trace is still subjacent to its antecedent.

For the sake of the argument, assume that the matrix IP is not a barrier.⁶ Now consider (33).

- (33) *Wat_j [_{IP} vroeg hij zich af [_{CP} wie_i [_{IP} t_i t_j zou kopen]]]
What wondered he refl. prt. who would buy
'What did he wonder who would buy'

In (32), *wh*-movement of *wat* to SpecCP of the matrix clause has applied in one swoop. Since neither the matrix IP nor the embedded CP is a

barrier, only one barrier is crossed, namely the IP of the embedded clause. Nevertheless, this movement will be blocked by the Identification Requirement on traces, because the *wh*-trace is not subjacent to its antecedent, since the latter is not dominated by the first maximal projection that dominates the IP of the embedded clause, CP. In a way, this amounts to saying that the embedded CP has inherited barrierhood from IP.

Generally it is assumed that the COMP-position is only accessible to *wh*-phrases (maybe including topicalized elements). If this is true, Long Distance Scrambling, as in (34), is blocked for the same reason as Long *wh*-movement.

- (34) *Jan zei het boek_i [_{CP} dat [_{IP} hij t_i zal kopen]]
 John said the book that he will buy
 'John said that he will buy the book'

In (34), only one barrier (the embedded IP) is crossed, because the embedded CP is L-marked and cannot be a barrier according to definition of barrier in (7). Nevertheless the sentence is ungrammatical, since the trace is not subjacent to its antecedent.

2.4. Conclusion

In this section some definitions and assumptions have been presented that will be used in the next sections. For convenience, I repeat the definitions in their final version. Government and its related notions are defined in (35-41).

- (35) α governs β iff:
 a. $\alpha = X^0$;
 b. α c-commands β ;
 c. β is 0-subjacent to α ;
 d. minimality is respected.
- (36) α c-commands β iff α does not dominate β and the node most immediately dominating α also dominates β .
- (37) β is *n*-subjacent to α iff there are fewer than $n+1$ barriers for β that do not dominate α .
- (38) α is a barrier for β iff:
 (i) α is a maximal projection;
 (ii) α is not L-marked;
 (iii) α dominates β .
- (39) α L-marks β iff α is a lexical category that Θ -governs β .

- (40) α Θ -governs β iff α governs and Θ -marks β .
- (41) α dominates β iff β is contained within α , α (a segment of) a node.

The traditional notion of antecedent-government has been replaced by the condition on chain-formation in (42-43).

- (42) If (α, β) is a link of a chain, then:
 a. α and β are nondistinct;
 b. α c-commands β ;
 c. β is subjacent to α .
- (43) β is subjacent to α if for every γ , γ a barrier for β , the maximal projection dominating γ , dominates α .

Further, I have shown some consequences of this specific set of definitions for the explanation of some syntactic phenomena in Dutch, especially X^0 - and XP-movement.

3. CHAIN-GOVERNMENT AND THE ASSIGNMENT OF NOMINATIVE CASE

As has been known since Koster (1978), in some constructions in Dutch and German, e.g. passives, the subject of the sentence can be preceded by the indirect object. Koster proposed to account for this fact by assuming a rule of Indirect Object Preposing. Work by Den Besten (1981, 1982, 1985)⁷, though, has made it clear that this proposal was on the wrong track. He has shown that in all the constructions that allow the indirect object to precede the subject, the predicate is ergative and the subject remains in its base-position, i.e. does not undergo NP-movement. Globally, the S-Structure of (44) is as given in (45).⁸

- (44) dat mijn broer (IO) die boeken (SUBJ) bevallen
 that my brother those books please
 'that those books please my brother'

- (45) dat [_{IP} [_{VP} [_{V'} mijn broer [_{V'} die boeken bevallen]]] I]

Under this analysis case-assignment to the subject *die boeken* becomes a problem. The solution Den Besten offers for this problem runs as follows: I, the position of Tense (cf. fn.7), and its dependent V, *bevallen*, may constitute a chain [I, V(*bevallen*)]; this chain governs the position of the subject and may assign nominative case compositionally (which of course implies that nominative assignment to the subject is a sufficient condition for triggering subject-verb agreement). This way of assigning nominative case has been named chain-government and is discussed in 3.1.1. In 3.1.2,

the definition given by Den Besten is slightly revised. In 3.1.3, I discuss nominative assignment to the external argument of V.

If nominative assignment in ergative constructions is possible under chain-government, we have to conclude that in fact NP-movement has been rendered superfluous. After all, the need for an NP to get case has always been the motivation for the assumption of NP-movement. For this reason, I argued in Broekhuis (1988a) that we have to reconsider the need for NP-movement in Dutch (cf. also Den Besten 1989, 1990).⁹ It is very hard, though, to prove that NP-movement is not involved in the syntax of Dutch, but in 3.2 I give some arguments that may at least lend some support to this idea.

Adopting the idea that English does, but Dutch does not have NP-movement, I will try to explain in 3.3 why this should be so.

3.1. The assignment of nominative case in Dutch

3.1.1. Chain-government

Consider the examples in (46) and (47). In (46), we find a so called psych-verb, *bevallen*. According to Den Besten (1985), Belletti and Rizzi (1988) and others, psych-verbs of this type are unaccusatives. In (47), we find a passive construction. In the a-examples of (46) and (47), the subject *die boeken* precedes the indirect object *mijn broer*. In the b-examples, the indirect object precedes the subject.

- (46) a. dat die boeken_i mijn broer t_i niet bevielen
that those books my brother not pleased
'that those books didn't please my brother'
b. dat mijn broer die boeken niet bevielen
- (47) a. dat die boeken_i mijn broer t_i toegestuurd zijn
that those books my brother sent has-been
'that those books have been sent to my brother'
b. dat mijn broer die boeken toegestuurd zijn

According to Den Besten, the order of the arguments in the a-examples is derived by movement of the subject across the indirect object to the subject position of the sentence. Hence the trace following the indirect object. In the b-examples on the other hand, the subject occupies its D-Structure position, i.e. no movement has applied.

The crucial test for Den Besten to claim that the a-examples are derived by movement of the subject, while the b-examples reflect the D-Structure order of the arguments, is the so-called *wat voor-split*. Let us first consider the basic facts in a bi-transitive construction.

- (48) gisteren heeft Jan Peter dat boek toegestuurd
yesterday has John Peter that book sent
'yesterday, John has sent that book to Peter'

In (48), each of the arguments may be questioned by means of a *wat voor-NP*. This NP is an interrogative phrase with the meaning 'what kind of'. The *wat voor-NP* may undergo *wh*-movement as a whole, but in some cases the *wat voor*-phrase can be split. According to Den Besten the split is only possible if the *wat voor-NP* is the direct object (this claim will be revised a little in 3.1.2). This can be seen in (49-51).

- (49) a. *Wat voor boeken* heb je hem toegestuurd?
what sort of books have you him sent
'What kind of books did you send to him?'
b. *Wat* heb je hem *voor boeken* toegestuurd?
- (50) a. *Wat voor mensen* heb je het toegestuurd?
what kind of people have (sg.) you it sent
'To what kind of people did you send it?'
b. (?)*Wat* heb je het *voor mensen* toegestuurd?
- (51) a. *Wat voor mensen* hebben het je toegestuurd?
what kind of people have (pl.) it you sent
'What kind of people send it to you?'
b. **Wat* hebben *voor mensen* het je toegestuurd?

The conclusion Den Besten draws from these facts, is that the *wat voor-split* is only possible if the *wat voor-NP* is (strictly) governed by V.¹⁰

- (52) The *wat voor-split* may only apply in positions that are governed by V.

If we try to apply the *wat voor-split* to examples like (46) and (47), we get the following result.

- (53) a. **Wat zouden voor boeken* mijn broer nou bevallen?
what would for books my brother prt. please
'What sort of books would please my brother, I wonder'
b. *Wat* zouden mijn broer nou *voor boeken* bevallen?
- (54) a. **Wat* zijn voor boeken mijn broer toegestuurd?
what have-been for books my brother sent
'What sort of books have been sent to my brother'
b. *wat* zijn mijn broer *voor boeken* toegestuurd?

In both (53) and (54), the *wat voor-split* is only possible if the indirect object precedes the subject. Because of (52), we can now conclude that whenever the indirect object precedes the subject, the subject occupies a position governed by V, i.e. its base position.

If this conclusion is correct, a problem arises concerning Case theory.

In (46b) and (47b) the subject is not governed by I, the nominative assigning category, but by V. If case can only be assigned under government, the subject does not receive case, because the verbs in (46) and (47) are unaccusatives and thus do not have the ability to assign case.¹¹

Den Besten solves this problem by introducing the notion 'chain-government' and by assuming that case may be assigned under chain-government.

(55) α chain-governs β iff α governs γ_1 , γ_1 governs γ_2 , ..., γ_{n-1} governs γ_n , and γ_n governs β ($n \geq 1$).

(56) If NP_i is governed by a category α which cannot or may not assign Case, NP_i will acquire its case from the first Case-assigner up by which it is chain-governed.

Finally, Den Besten assumes that languages may be parametrized according to whether they assign case by (56) or not. In this way he is able to explain the difference between for instance Dutch and English.

Let me illustrate how (55) and (56) work. The S-Structure of (46b) is given in a slightly simplified form in (57). In (57) I governs the head of VP, *bevalen*. Because the verb *bevalen* governs the NP *die boeken*, the latter is also chain-governed by I.¹² Since the verb *bevalen* is an unaccusative, it cannot assign case to the NP, but since I chain-governs the NP and is able to assign nominative case, the NP receives case from I by (56).

(57) dat [_{IP} [_{VP} mijn broer [_V die boeken bevelen]] I]

In (47b), nominative case is assigned in the same way as in (46b); by (55) I and its dependent verbs may constitute a chain [I, V(*zijn*), V(*gestuurd*)] and by (56) the NP *die boeken* may be assigned nominative case by I.

We may formulate (56) in a slightly different way. By (55), I and its dependent V(s) may constitute a chain; this chain governs the position of the subject and may assign nominative case compositionally.

3.1.2. A reformulation of 'chain-government'

The definition of chain-government in (55) is very unrestrictive. It allows, for instance, for the formation of each of the chains given in (58).

(58) a. [I, V, V] c. [I, V, N]
b. [I, V, P] d. [I, V, A]

In this subsection, I would like to claim that the definition in (55) is in fact too unrestrictive, and that it therefore has to be revised. But before I am able to make this claim, I must first discuss some phenomena that at first sight have nothing to do with the topic under consideration.

Consider the English examples in (59) and their Dutch translations in (60). (For convenience, I assume here that the subject of the infinitival complements occupies SpecIP. The hypothesis that the subject of the clause is base-generated in SpecVP has some consequences for the kind of arguments given in this subsection. They will be discussed in section 6.)

(59) a. *It is [_{AP} certain [_{α} PRO to win]]
b. It is [_{AP} possible [_{α} PRO to win]]
c. *It is [_{AP} probable [_{α} PRO to win]]

(60) a. *Het is [_{AP} zeker [_{α} PRO te winnen]]
b. Het is [_{AP} mogelijk [_{α} PRO te winnen]]
c. *Het is [_{AP} waarschijnlijk [_{α} PRO te winnen]]

Chomsky (1986a:78) explains the ungrammaticality of (59a,c) by assuming that the complement of *certain* and *possible* is an IP and, consequently, PRO is governed. The ungrammaticality of these sentences thus follows from the PRO-theorem. Since (59b) is grammatical, the complement of *possible* should be CP.

This conclusion is compatible with the findings of Den Besten et. al. (1988). They have argued that *te*-infinitivals may differ with respect to their category; *te*-infinitivals may be either IP or CP (cf. section 6 for further discussion). If the infinitival is a CP, the complementizer may be *om* (for in English) or empty. This means that α in (59) and (60) may be either IP or CP, the choice being subject to the subcategorization properties of the selecting head.

As is well known, the infinitival complement of *possible* may contain the complementizer *for* as in *it is possible for John to win*. In the Dutch example in (60b) the complementizer *om* can be optionally added as in *Het is mogelijk om te winnen*. Let us therefore assume that *possible* and *mogelijk* also select a CP if their complement does not contain an overt complementizer. Since the infinitival complements of *certain/zeker* or *probable/waarschijnlijk* never contain an overt complementizer, I assume that adjectives of these types always select an IP. This means that the structures can be made more precise as suggested by Chomsky, namely as in (59') and (60').

(59') a. *It is [_{AP} certain [_{IP} PRO to win]]
b. It is [_{AP} possible [_{CP} [_{IP} PRO to win]]]
c. *It is [_{AP} probable [_{IP} PRO to win]]

(60') a. *Het is [_{AP} zeker [_{IP} PRO te winnen]]
b. Het is [_{AP} mogelijk [_{CP} [_{IP} PRO te winnen]]]
c. *Het is [_{AP} waarschijnlijk [_{IP} PRO te winnen]]

It is not clear, however, whether the ungrammaticality of (59a,c) and (60a,c) has to be explained by recourse to the PRO-theorem, since it has been

argued that PRO may be governed. If PRO is governed, it behaves as an anaphor (cf. Koster 1987). Let us assume the following statement, taken from Broekhuis and Hoekstra (1990, to appear):

(61) PRO is an anaphor if it is governed (at any level of representation).

Let us first consider the constructions in (59a,c) and (60a,c) in which α is IP. If we assume that the adjectives L-mark their complement, IP is not a barrier for the subject of the complement. Consequently, PRO is governed by the adjective and by (61) it is an anaphor. Because there is no antecedent for PRO in (59a,c) and (60a,c), PRO cannot be bound, thereby violating binding condition A.

Now, consider the constructions in (59b) and (60b) in which α is CP. Since IP is not L-marked by the empty complementizer, it is a barrier for the subject, and thus PRO is not governed. Therefore, PRO need not be bound and the sentences are well-formed.

Now, consider the English examples in (62) in which the subject of the sentential complement has been raised to the subject position of the main clause.

- (62) a. John_i is [_{AP} certain [_{IP} t_i to win]]
 b. *John_i is [_{AP} possible [_{CP} [_{IP} t_i to win]]]
 c. *John_i is [_{AP} probable [_{IP} t_i to win]]

The ungrammaticality of (62b) can be easily explained. Since IP is a barrier in (62b), NP-movement across the CP violates the subjacency restriction on chain-formation in (42c).

The difference in grammaticality between (62a) and (62c) however comes as a surprise. If both *certain* and *probable* select an IP, we would expect both to have the same status. Chomsky (1986a) assumes that the difference in grammaticality is due to some idiosyncratic property of these constructions. He assumes that the copula does not L-mark the AP, so that in the unmarked case the constructions should be ungrammatical. The sentence in (62a) is saved by a marked coindexing of the copula and the adjective *certain*.

As will become clear shortly, this option is not available to me, since I will assume that coindexing is only possible under government (this restriction is formalized in (66)). Therefore, coindexing of the copula and *certain* implies that the AP is L-marked by the copula. If this is so in (62a), there is no reason to not assume the same in (62c).

Another way to explain the difference in grammaticality between (62a) and (62c) is to assume that adjectives like *probable* (and *waarschijnlijk*) do not select an infinitival complement. This immediately accounts for the ungrammaticality of (59c), (60c) and (62c).¹³

Thus far, we have seen that adjectives may differ in their subcategorization properties. They may either do or do not select an infinitival complement,

and if they do, they may either select an IP or a CP. This explains the paradigm in (59), (60) and (62).

Now, consider (63) and (64), the Dutch equivalents of (62a). In (64), no NP-movement has been applied. *Het* in (64a) is an expletive just as *it* in (59). If the subject is indefinite, *er* is normally used as an expletive NP. This possibility is given in (64b). The ungrammaticality of (63), in which NP-movement has been applied, will be discussed in 3.2.1. We restrict our attention here to the examples in (64).

(63) *Jan is zeker [_{IP} t_i te winnen]¹⁴

- (64) a. *Het is zeker [_{IP} Jan te winnen]
 b. *Er is zeker [_{IP} iemand te winnen]

Since NP-movement has not been applied in (64), nominative case has to be assigned to the subject of the *te*-infinitival by chain-government. According to (55), the chain [I, V(*is*), A(*zeker*)] may be constructed, and according to (56) this chain may assign case to the subject. Thus the definitions in (55) and (56) wrongly predict that the structures in (64) should be grammatical. One conclusion we may draw from this, is that the definition of chain-government is too unrestrictive.¹⁵

One way to overcome this problem is by restricting chain-government to I and V. If we assume that both I and V have the features [-N, +V], we may state chain-government as in (65).

(65) α chain-governs β iff α and the governor of β are coindexed.

- (66) A head β may be *coindexed* with a head α iff:
 (i) both α and β are [-N,+V], and:
 (ii) α governs β .

Since the adjective *zeker* does not have the features [-N,+V], it cannot be coindexed with the verb *is*. Consequently, the adjective and I are not coindexed either. As a result, chain-government of the subject of the *te*-infinitival in (64) by the matrix-I is blocked.

One problem arises concerning passive participles. As we have seen in 3.1.1, a passive participle can be a link in a government-chain. But since passive participles do not have case-assigning properties, it has been assumed that they have lost their [-N] feature (cf. Den Besten 1981). I adopt this assumption here. If we want to include passive participles, we have to revise (66,i) accordingly. To include passive participles, we could revise (66,i) by dropping the requirement that α and β are [-N]. The result of this move is that adjectives are also included. Since this is what we originally wanted to exclude, this option is not available. Another possibility is by demanding that α and β are not [+N] as in (67).

- (67) A head β may be *coindexed* with a head α iff:
 (i) both α and β are not [+N], and:
 (ii) α governs β .

If we assume (67), we include the prepositions. If the preposition assigns objective case itself, this has of course no undesirable results for nominative assignment under chain-government; nominative assignment to the complement of the preposition by chain-government always results in a case-conflict, and is thereby blocked. If the preposition is not a case-assigner, we of course allow for case-assignment under chain-government. Compare the following English particle constructions.

- (68) a. They looked the information up
 b. They looked up the information

In Den Dikken (1990), it is argued that the D-structure of the examples in (68) is as given in (69). According to this structure, the NP *the information* is the complement of the particle *up*.

- (69) They looked [_{SC} e [_{PP} up the information]]

Further, Den Dikken assumes that particles are ergative prepositions, i.e. prepositions that are not able to assign case. Consequently, if nothing happened, the structure in (69) would be ruled out by the case filter. However, the NP can be assigned case by moving into the specifier position of the SC; in this position, it is in the required configuration for being assigned case by the verb structurally.

Alternatively, Reanalysis of the verb and the particle may take place. Reanalysis enables the particle to transmit the verb's structural case to its complement. Of course, we may reinterpret Den Dikken's Reanalysis as a case of chain-government; since both the verb and the particle are not [+N], the condition on coindexing in (67) is met in (69).

Before we proceed, two problems must be noted. First, this treatment of case-assignment in the particles construction implies that particles are head-final in Dutch, since they always follow the object. This assumption is well-motivated since in Dutch some transitive preposition may occur in final position as well. Compare for instance the predicative PP in (70).

- (70) dat Jan [_{SC} de auto [_{PP} de garage in]] reed
 that Jan the car the garage into drove
 'that Jan drove the car into the garage.'

Secondly, since in English the nominative argument always precedes the objective argument, case-assignment under chain-government must be restricted to objective case in this language. The reason why nominative case cannot be assigned under chain-government in English will be discussed in section 3.3.

Since the condition on coindexing in (67,i) enables us to give a natural account of (68) within our framework, I will henceforth assume the definition of coindexing in (67).¹⁶ In section 4, we will see that this definition enables us to use the notion of chain-government in an entirely different domain of syntax.

3.1.3. Nominative assignment to the external argument of V

If in Dutch nominative case can be assigned to the derived subject under chain-government, it is to be expected that nominative case can also be assigned to the external argument of the verb under government. In this subsection, I show that this is indeed the case. Since we adopted the hypothesis that the external argument is generated in SpecVP, this amounts to showing that nominative case can be assigned to that position in Dutch.

Of course, assignment of nominative case to SpecVP is what one would expect in the present framework, simply because nothing prevents it. At S-Structure V moves to I, thus lexicalizing I. This enables I to L-mark VP, and as a result VP is not a barrier at S-Structure. Hence case-assignment under government is not blocked.

Consider the examples in (71).

- (71) a. dat de man waarschijnlijk het boek koopt
 that the man probably the book buys
 'that probably the man is buying the book'
 b. dat de man het boek_i waarschijnlijk t_i koopt.

It is generally assumed that the adverbial *waarschijnlijk* is generated in a VP-external position (cf. for example Verhagen 1986). Since in (71b) the NP *het boek* precedes the adverbial, we may assume that it has been scrambled across the adverbial to a VP-external position (cf. section 2.3.2). In (71a), on the other hand, the NP has remained in its D-Structure position.

If the VP-internal hypothesis and the assumption that sentence adverbials are generated VP-externally are correct, the D-Structure of (71) is as given in (72).

- (72) dat [_{IP} waarschijnlijk [_{VP} de man het boek koopt]]
 that probably the man the book buys
 'that probably the man is buying the book'

If nominative case can be assigned to SpecVP in Dutch, one would predict that (72) is a possible S-Structure. This prediction is correct, although most people prefer the order in which the NP *de man* precedes the adverbial.

Probably, this preference has a pragmatic base (and has to be explained within a pragmatic theory on presupposition and focus, cf. Bennis 1986, Verhagen 1986, Broekhuis 1988a, 1990 and many others), since if the subject is not a definite NP but, for instance, a universally quantified expression, both orders are equally well.

- (73) a. dat waarschijnlijk iedereen het boek koopt
 b. dat iedereen waarschijnlijk het boek koopt

That the subject of an unergative verb may be assigned its nominative case in SpecVP, can be argued for in a different way. As has been known for a long time, the subject of an embedded clause may be extracted by *wh*-movement, even if a complementizer is present (cf. for example Bennis 1986, Koster 1986). An example of such an extraction is given in (74).

- (74) Wie denk je dat *(er) lachte?
 who think you that there laughed
 'Who do you think laughed?'

Nevertheless, in most varieties of Dutch, especially the standard language, (74) is out if the expletive *er* has been dropped. This does not necessarily follow from the ECP, because the same holds in simplex sentences:

- (75) Wie lachte *(er)?
 who laughed there
 'Who laughed?'

Since we find the same phenomenon if the subject is an indefinite NP (cf. (76) and 3.2.2), the ungrammaticality of (74) and (75) without *er* only indicates that *wie* is an indefinite NP also. (Note that the *er*-construction in Dutch is not restricted to unaccusative verbs as the English *there*-construction is.)¹⁷

- (76) dat *(er) iemand lachte
 that there someone laughed
 'that someone laughed'

Now, how can the absence of the *that*-trace effect be explained within the set of assumptions we have adopted in section 2? Since (74) is grammatical, we have to assume that the traces are formally licensed, i.e. that the ECP is satisfied. First, assume that the subject is extracted from SpecIP. This would lead to the wrong result, because, according to the definition of government given in section 2, the *wh*-trace has to be c-commanded by its governor. Therefore, the only potential governor of the trace is C. But since C is not lexical, it does not L-mark IP, which is consequently a barrier for the *wh*-trace. Thus, the *wh*-trace is not governed and the structure is ruled out by the ECP.

But now, assume that the subject is extracted from SpecVP. In this case, the structure will be as indicated in (77).

- (77) wie_i denk je [_{CP} t_i dat [_{IP} er [_{VP} t_i t_j] lachte_j]]

In (77), the verb *lachte* has been moved to I, thus lexicalizing I. Since I is lexical, it L-marks VP, which, as a result, is no longer a barrier for the *wh*-trace. So the trace is governed by I and the ECP is satisfied.

To conclude, we may state that *wh*-extraction of the subject must take place from SpecVP. Since the *wh*-trace must be case-marked, this implies that SpecVP may be case-marked under government.¹⁸

As can be seen in (77), SpecVP is governed by the verb after V to I. As we have seen in 3.1.1 the *wat voor*-split may apply in positions that are governed by V (cf. (52)). Of course, (52) is meant to refer to the V-position, but suppose that (52) has to be stated as in (78).

- (78) The *wat voor*-split may apply in positions that are governed by a head containing V.

In this case we would expect that the *wat voor*-split is also possible in SpecVP and in fact, contrary to what Den Besten claims, the subject can be split (cf. Reuland 1985). Consider again (51b), repeated here for convenience as (79).

- (79) **Wat* hebben voor mensen het je toegestuurd?
 what have (pl.) for people it you sent
 'What kind of people sent it to you?'

(79) is indeed unacceptable. According to (78), the *wat voor*-phrase must occupy SpecVP. Hence the NPs *het* and *je* are in their base positions, too. But this is not allowed in Dutch; pronominals like *het* and *je* are clitic-like elements in that they must be scrambled. Hence the sentence that has to be considered is not (79), but (80) which is noticeably better than (79).

- (80) ?*Wat* hebben het je voor mensen toegestuurd?

The fact that (80) still sounds a bit odd has to do with the fact that Scrambling across an indefinite NP is marginal in all cases.

- (81) ?dat het hem iemand toegestuurd heeft
 that it him someone sent has
 'that someone has sent it to him'

In examples in which Scrambling across the subject does not occur, the *wat voor*-split of the subject seems to give rise to a perfect result.

- (82) Wat hebben er voor vogels je voedertafel bezocht?
 what have (pl.) there for birds your bird-table visited
 'What kind of birds visited your bird-table?'

To account for the acceptability of (80) and (82), we must assume again that the external argument of an unergative verb may remain in its base positions and, thus, is able to acquire its case under government by I.¹⁹

In this section, I have given three arguments in favour of the assumption that in Dutch external arguments of unergative verbs may remain in their base positions and, consequently, that nominative assignment to them may take place under government by I.²⁰

3.2. Arguments against NP-movement in Dutch

As we have seen in 3.1, we do not have to assume NP-movement in Dutch. In fact, the assumption that nominative case can be assigned under (chain-) government, renders NP-movement superfluous. In this subsection, I give some arguments that suggest that NP-movement is not only superfluous in the grammar of Dutch, but in fact never applies in Dutch. This is not meant to imply that the subject in Dutch cannot be moved to SpecIP, but only that it *never* moves to this position *for reasons of case*.

We can state this in a different way. Given the definition of A-position in section 2, repeated here for convenience, we can say that, since case is always assigned under government and never under SPEC-Head agreement, SpecIP is never assigned case and thus is always an A'-position in Dutch.

- (83) If a position is Θ - or case-marked it is an *A-position*; it is an *A'-position* otherwise.

In this subsection, three arguments are given that indicate that SpecIP in Dutch is an A'-position, contrary to what is the case in English. In addition, one potential counterargument will be discussed.

3.2.1. Raising adjectives

The first argument can be very briefly stated. In 3.1.2 we have discussed the behaviour of raising adjectives in Dutch and English. The sole thing we did not yet explain is the difference in grammaticality between (62a) and (63), repeated here for convenience as (84).

- (84) a. John_i is certain [_{IP} t_i to win]
b. *Jan_i is zeker [_{IP} t_i te winnen]

The difference between the English and the Dutch example may be explained by assuming that SpecIP in English, but not in Dutch, may be assigned case under SPEC-Head agreement and that therefore *John* in (84a), but not *Jan* in (84b), may be assigned case by movement to SpecIP.²¹

There is at least one objection to this account of the ungrammaticality of (84b). In Dutch, Extraposition of the sentential complement of an adjective is compulsory as can be seen in (85). As a result, in (84b) the

NP-trace is at the right-hand side of the verb after Extraposition. This can be seen in (86).

- (85) a. dat het mogelijk is [PRO te winnen]
that it possible is to win
'that it is possible to win'
b. *dat het mogelijk [PRO te winnen] is

- (86) *dat Jan_i zeker is [_{IP} t_i te winnen]

In Koster (1987), it has been argued that this leads to an ECP violation, since the trace is not canonically governed in this structure (canonical government being to the left). In section 6.1, however, it will be argued that this account cannot be maintained and that the impossibility of Subject Raising after Extraposition has to be accounted for by recourse to the Case theory as well.

3.2.2. Indefinite subjects

The second argument is adapted from Reuland (1988). As is well known, in English non-specific indefinite NPs may appear in SpecIP. For example, both (87a) and (87b) are fine with the non-specific reading of the NP *a man*.

- (87) a. Probably, there has arrived a man yesterday
b. Probably, a man has arrived yesterday

In Dutch, on the other hand, the NPs in (88a) and (88b) cannot have the same reading; the NP *een man* in (88a) has a non-specific reading, but the NP *een man* in (88b) can only have a specific reading.

- (88) a. dat er waarschijnlijk gisteren een man is aangekomen
b. dat een man waarschijnlijk gisteren is aangekomen

In Reuland (1988), it is suggested that this difference between English and Dutch is related to the A/A'-status of SpecIP; a non-specific NP can only move to SpecIP if it is an A-position. This assumption is based on the following consideration. According to Reuland (1988), non-specific NPs may not be scrambled in Dutch. If an indefinite NP has been scrambled, it always gets a specific (or generic) interpretation (cf. Kraak and Klooster 1968). Here, I give some of Reuland's examples. The glosses are mine.

- (89) a. Rudy hoopt dat Onno morgen zes brieven verscheurt
Rudy hopes that Onno tomorrow six letters tears up
'Rudy hopes Onno will tear up six letters tomorrow'
b. Rudy hoopt dat Onno zes brieven morgen verscheurt
'Rudy hopes Onno will tear up six of the letters tomorrow'

As will be clear from the glosses, in (89b) the NP *zes brieven* only has a partitive reading, i.e. it can only refer to (a part of) a previously established group of letters. In (89a), it may have the same reading as in (89b), but in addition it can also have a non-specific reading, i.e. it can also refer to just some letters not previously introduced into the discourse.

Since Scrambling is an adjunction rule, i.e. movement to an A'-position, Reuland captures the facts in (89) with the following descriptive generalization:

- (90) Non-specific NPs can only be licensed in A-positions.

If this generalization is correct, the examples in (88b) show that SpecIP in Dutch is not an A-position. (Note that Reuland considers SpecIP as an A'-position for a different reason than I do.)

Unfortunately, there are some problems with Reuland's generalization in (90). According to the TLR-reviewer, the example in (89b) can be construed with a non-specific reading of the object. Although I do not agree with his judgement on this specific example, I must admit that scrambled indefinite NPs sometimes allow for a non-specific interpretation. Compare for instance the following examples.

- (91) a. dat Jan waarschijnlijk morgen iemand zal bezoeken
 that Jan probably tomorrow someone will visit
 'that John probably will visit someone tomorrow'
 b. dat John waarschijnlijk iemand_i morgen t_i zal bezoeken
 c. dat Jan iemand_i waarschijnlijk morgen t_i zal bezoeken

What is important here is that although the non-specific object may be scrambled across the adverbial phrase *morgen* (91b), it cannot be scrambled across the sentence adverb *waarschijnlijk* (91c); if the indefinite NP appears in front of the latter adverbial, it necessarily gets a specific interpretation. Probably, this difference must be related to the domain within which Scrambling has applied.

Recall that we assumed in 2.3.2 that sentence are generated as adjuncts of I'. Let us now further assume that adverbs of time are (or: can be) generated as adjuncts of V'. One thing this distinction directly predicts is that only adverbials of the latter type can be taken along in the case of VP-topicalization. As can be seen in (92), this prediction is correct.

- (92) a. [Morgen bezoeken] zal hij hem wel niet
 tomorrow visit will he him prt. not
 b. *[Waarschijnlijk bezoeken] zal hij hem wel niet
 probably visit will he him prt. not

Now, we may account for the difference between (91b) and (91c) by assuming that non-specific NPs may only be scrambled within a restricted domain,

namely VP, i.e. can only be adjoined to V'. If this assumption is correct, we predict that the non-specific NP in (91b) can (in fact: must) be taken along under VP-topicalization. As can be seen in (93), this prediction is correct.

- (93) a. [iemand morgen bezoeken] zal Jan waarschijnlijk niet
 b. *[morgen bezoeken] zal Jan waarschijnlijk niet iemand

Now, we have established that Scrambling of a non-specific NP to a VP-external position is excluded, we may revise Reuland's generalization as in (94):

- (94) VP-externally, Non-specific NPs can only be licensed in A-positions.

If this generalization is correct, we may maintain Reuland's explanation for the difference between the English examples in (87) and the Dutch examples in (88), i.e. by assuming that SpecIP is an A-position in English, but an A'-position in Dutch.

3.2.3. Parasitic gaps

Bennis and Hoekstra (1984) have shown that Scrambling may license parasitic gaps.

- (95) a. *Jan heeft [zonder ze/*e te bekijken] die boeken
 John has without them/e to inspect those books
 weggelegd
 away put
 'John has put away those books without inspecting them'
 b. Jan heeft die boeken [zonder ze/e te bekijken] t weggelegd

In (95b), the scrambled NP *die boeken* fulfils all the requirements for licensing a parasitic gap (cf. Chomsky 1982:66), especially that it occupies an A'-position. This requirement is necessary to explain the impossibility of (96), which is reported to be completely ungrammatical by Chomsky.

- (96) *this book can be sold t without reading e

In (96), all the requirements for licensing a parasitic gap are fulfilled, but one; the requirement that the antecedent does not occupy an A-position. Now compare (96) and (97).

- (97) ?dat die boeken [zonder ze/e te bekijken] t zijn
 that those books without them/e to inspect has been
 weggelegd
 away-put

The passive sentence in (97) is not as acceptable as the one in (95b), but certainly not completely ungrammatical. Further, (97) is also marginal without the parasitic gap. This indicates that the decrease of acceptability does not have to do with the parasitic gap, but possibly with control. Anyway, given the acceptability of (97) we have to conclude that the NP *die boeken* does not occupy an A-position and that therefore SpecIP is an A'-position in Dutch.²²

3.2.3. Binding

Above we discussed some differences between English and Dutch that may be explained by assuming that SpecIP in English, but not in Dutch, is an A-position, on account of the fact that nominative case in English, but not in Dutch, is assigned to SpecIP by SPEC-Head agreement.

Here, I discuss a potential counterargument to the claim that SpecIP is not an A-position in Dutch. (A second potential counterargument is discussed in section 6.1, fn.40.) Consider (98).

- (98) dat zij elkaar bevallen
that they each other please
'that they please each other'

The verb *bevallen* is an unaccusative psych-verb, hence at D-Structure the subject has been generated in a position that does not c-command the indirect object *elkaar*. Nevertheless, at S-Structure it is able to bind the indirect object and since the reciprocal pronoun needs to be A-bound, we are forced to conclude that *zij* occupies an A-position. The result is that SpecIP must be an A-position.

There are several reasons to doubt this conclusion. First, consider the following example.

- (99) Jan leek hem ziek te zijn
John seemed him sick to be
'Jan seemed to him to be sick'

In (99), the NP *Jan* has been moved across the indirect object to the SpecIP of the matrix clause. Therefore the structure of (99) is as given in (100) (irrelevant details omitted).

- (100) Jan_i leek hem [_{IP} t_i ziek te zijn]

If the SpecIP of the matrix clause is an A-position, we would expect the subject to be able to bind an anaphor in the position of the indirect object, just as in the English example in (101). This, however, is not the case as can be seen in (102).

- (101) They seem to each other to be sick

- (102) *Zij_i lijken zichzelf_i /elkaar_i ziek te zijn
they seem themselves/each other sick to be

Consequently, this example gives rise to the opposite conclusion, namely that SpecIP is not an A-position.

Secondly, it is not clear whether we may derive any conclusion about the status of SpecIP from the binding fact in (98). In Webelhuth (1989), it has been shown that in German a scrambled accusative object is able to A-bind the indirect object, although it is generally assumed that scrambling is movement to an A'-position.²³

- (103) Er hat die Gäste_i (acc.) einander t_i vorgestellt
he has the guests each other introduced
'He has introduced the guests to each other'

We have to conclude that a scrambled NP, i.e. an NP in an A'-position, cannot only act as an A'-binder, as we have seen in 3.2.3, but also as an A-binder. Hence we cannot derive from (98) that SpecIP is an A-position. (Of course, the assumption that a scrambled NP may act as an A-binder leaves the contrast between (98) and (102) unexplained. I will leave this topic to future research.)

3.3. On differences between Dutch and English

In 3.1 and 3.2, we have seen that in Dutch nominative case is assigned only under (chain-)government, whereas it is only assigned under SPEC-Head agreement in English. Here, I want to discuss the question of why this should be so.

As we have seen in section 2, Dutch and English differ in another respect. In Dutch V-to-I applies in syntax, whereas V-to-I applies at LF in English. What I want to do is to connect these two differences. Let us assume that the following holds:

- (104) Nominative assignment under (chain-)government is only possible if V-to-I applies in the syntax.

Why should (104) hold? Generally, it is assumed that the requirement that an NP is case-marked, holds at S-Structure. Therefore nominative case has to be assigned at D- or S-Structure. Now, suppose that V-to-I does not apply in the syntax. According to the assumption of section 2 that I is not lexical, VP is not L-marked and, consequently, a barrier for all VP-internal positions at S-Structure. So, I cannot govern into VP and thus it follows that nominative case cannot be assigned under government.

If V-to-I does apply in the syntax, I is lexical at S-Structure. Now VP can be L-marked by I, so it is not a barrier for the VP-internal positions.

Hence, I can govern into VP and nominative case may be assigned under government. In this way (104) can be derived from the theory.

The generalization in (104) answers the question why nominative case cannot be assigned under government in English, but it does not answer the question why nominative assignment under SPEC-Head agreement is impossible in Dutch. The answer to this question has to be deferred until future research has clarified this issue.

I think that (104) is the strongest generalization that can be made for the moment, since it appears not to be true that nominative assignment under SPEC-Head agreement is restricted to languages in which V-to-I applies at LF. In French, for instance, V-to-I is possible in the syntax (cf. Pollock 1988), but nominative assignment under SPEC-Head agreement seems to be possible as well. In fact, I am not aware of facts that indicate that nominative case may be assigned under government in French. Therefore, it also appears to be false that in every language in which V-to-I applies in the syntax, nominative case may be assigned under government. For this reason, I will make no stronger claim than the one expressed in (104).

Possibly, one would be tempted to relate the difference between Dutch and French to the fact that Dutch, but not French, has Verb Raising. This would imply that VR is somehow comparable to V-to-I in so far as it necessarily applies to fulfil some syntactic requirement (as has been assumed for example by Bennis and Hoekstra 1989a,b). In section 5, however, it will be shown that this is not the case.

4. BINDING

Since Chomsky's Pisa Lectures, a lot of work has been done on the distribution of reflexives in Dutch. In Dutch, two anaphor-types can be distinguished. In the third person singular and plural, they appear as *zichzelf* and *zich*, respectively. These anaphors differ with respect to the domain within which they must be bound. In 4.1, some basic observations concerning their distribution are discussed.

In 4.2, I give an explanation for the differences in distribution of the two anaphor-types in complement positions. The explanation will be based on incorporation of the notion 'chain-government' into the Binding theory. In 4.3, the proposal given in 4.2 is slightly revised in order to be able to explain the distribution of the two anaphor-types in specifier positions.²⁴

4.1. Some notes on the distribution of *zich* and *zichzelf*

The observation that underlies most recent research on the distribution of *zichzelf* and *zich* (cf. for example Vat 1980, Koster 1985/1987 and Everaert 1986), is that in simplex sentences that are not inherently reflexive, *zich* is only possible as the complement of a locational preposition (i.e. a

preposition of location or movement). *Zichzelf* on the other hand, is not possible in this position, but may occupy all other complement positions of the sentence. Compare the following examples (coindexing is indicated by italics):

- (105) *Jan* bewondert *zichzelf*/**zich*
John admires himself
- (106) *Jan* schoot op *zichzelf*/**zich*
John shot at himself
- (107) *Jan* zette de tas voor **zichzelf*/*zich*
John put the bag in front of him (refl.)

In Broekhuis (1988a,b), I claimed that this observation is wrong, and that therefore the theories that are based on this observation have to be false. First, let us consider example (108). In this example, we find a locational preposition, but nevertheless *zich* is not possible. Hence, it is not true that *zich* may always appear as the complement of a locational preposition. As can be seen in (109) *zichzelf* is impossible too.

- (108) **Jan* zit naast *zich*
John sits next to himself
'John is sitting next to himself'

- (109) **Jan* zit naast *zichzelf*

But now, consider (110). In (110), *zichzelf* is possible, whereas *zich* is still impossible.

- (110) *Een mens* kan niet naast *zichzelf*/**zich* zitten
A person can not next to himself sit
'A person cannot sit next to himself'

The grammaticality of (110) suggests that the unacceptability of (109) has nothing to do with a violation of the binding condition for *zichzelf*, but with our conception of reality; the idea expressed in (109) is nonsensical. On the other hand, since (110) is ungrammatical with *zich*, the ungrammaticality of (108) seems to represent a genuine violation of the binding conditions.

It seems that this explanation of the unacceptability of (109) is on the right track: in a paranormal context both (108) and (109) make perfect sense, but only the example with *zichzelf* in (109) is acceptable. Further, constructions like (109) are fine if they are used in a metaphorical sense, while constructions like (108) are still excluded in that case. Compare (111), in which *zichzelf* cannot be replaced by *zich*.

- (111) *Zij loopt de hele dag al achter zichzelf aan*
 She walks the whole day already after herself prt.
 'She has been extremely/too busy all day'

Another reason to assume that anaphors of the type of *zichzelf* may occur as the complement of a locational preposition has to do with the distribution of the reciprocal *elkaar*. If we assume that *zichzelf* and *elkaar* are subject to the same binding condition, just as *himself* and *each other* in English are, again we have to conclude that anaphors of this type may occur as the complement of a locational preposition. This will be clear from the following example.

- (112) *Zij zitten naast elkaar*
 They sit next to each other

From now on, I assume that there are two anaphor-types in Dutch; *zichzelf* and *elkaar* represent the first type, *zich* the second. Henceforth, I refer to these anaphor-types as A1 and A2, respectively.

4.2. The binding conditions for A1 and A2

Let us consider the distribution of these two anaphor-types in more detail.

- (113) *Jan bewondert zichzelf/*zich*
 John admires himself
- (114) *Jan schoot op zichzelf/*zich*
 John shot at himself
- (115) *Zij houden de honden bij *elkaar /zich*
 they keep the dogs next to each other/them (refl.)
 'They are keeping the dogs with them'
- (116) *Zij houden de honden bij elkaar/*zich*
 'They are keeping the dogs together'

In (113), the anaphor is the complement of the verb and in this case only A1 is possible. In (114), the anaphor is the complement of a non-locational preposition and again only A1 is possible. But now consider (115) and (116), which are taken from Everaert (1981). The possibility for A1 and A2 to occur depends on the choice of the antecedent. If the subject of the sentence is chosen as the antecedent, only A2 is possible, but if the object is chosen, only A1 is.

As has been discussed in Chomsky (1981), in English pronominals may occur as the complement of a locational preposition. As he shows, one way to explain this fact is to assume that locational prepositions are Small

Clause predicates. Although he finally rejects this possibility (since this assumption does not fit in the conception of Small Clauses adopted there), I will try to exploit this idea here. (Cf. Koster 1985/1987 for additional arguments against a Small Clause analysis for locational PPs, and Hoekstra et. al. 1987, Broekhuis 1988a,b and Hoekstra and Mulder 1990 for arguments in favour of it.)

If non-locational prepositions do not form a Small Clause, the structure of (114) is as given in (117). If locational prepositions are the predicates of a Small Clause, the structure of (115) and (116) is as in (118). (I assume here that the Small Clause is the maximal projection of the preposition and that the subject is the specifier of the maximal projection.)

- (117) Jan schoot [_{PP} op zichzelf/zich]

- (118) Zij houden [_{PP} de honden bij elkaar/zich]

For the moment, I assume the definition of governing category in (119) (cf. Chomsky 1981:211).

- (119) β is a governing category for α iff β is the minimal category containing α , a governor of α , and a SUBJECT accessible to α .

In (117), the PP does not contain a SUBJECT accessible to the anaphor. The first category higher up that contains one is the whole sentence, which is therefore the governing category for the anaphor. Since *zichzelf* may, but *zich* cannot be bound within this governing category, we have to conclude that A1 may be bound within its governing category, but A2 must be free within its governing category.

In (118), the PP does contain a SUBJECT accessible to the anaphor, so the PP is the governing category for the anaphor. Since *elkaar* may be bound by the subject of the Small Clause, but cannot be bound by the subject of the sentence, we have to conclude once more that A1 has to be bound within its governing category. With respect to *zich* it is just the other way around, so we have to conclude again that A2 must be free in its governing category.

If we assume the binding conditions of Chomsky (1981), this result leads to the conclusion that A2 is not an anaphor, but a pronominal. As Koster (1985/1987) argued, this conclusion is unwarranted, since *zich* must always be bound which is a feature of an anaphor and not of a pronominal.

If we want to assume that both A1 and A2 are anaphors, we have to complicate the binding conditions a little. Here, I do so by incorporating the notion 'chain-government', repeated here for convenience, into Binding theory (cf. Everaert 1981, Koster 1985/1987 for similar proposals).

- (120) α chain-governs β iff α and the governor of β are coindexed.

- (121) A head β may be *coindexed* with a head α iff:
 (i) both α and β are not [+N], and;
 (ii) α governs β .

I want to propose that in addition to the notion 'governing category' we have to assume the notion 'chain-governing category' as defined in (122).

- (122) β is a *chain-governing category* for α iff β is the minimal category containing α , a chain-governor of α , and a SUBJECT accessible to α .

In (118), neither the verb *houden* nor the preposition *bij* has the feature [+N]. Since the verb L-marks the PP, the PP is not a barrier, and so the verb governs the preposition. Hence, both conditions in (121) are fulfilled, and the verb and the preposition may be coindexed. This gives rise to the following result (I neglect the coindexing of I here).

- (118) *Zij houdenⁱ [PP de honden bijⁱ elkaar/zich]*

According to (120) the verb *houden* chain-governs the anaphor, and according to (119) and (122) the PP is the governing category and the whole sentence is the chain-governing category for the anaphor. If we assume the following binding conditions, the facts in (115) and (116) are explained.

- (123) An anaphor must be bound within its chain-governing category and:
 (i) A1 (*zichzelf* and *elkaar*) must be bound within its governing category.
 (ii) A2 (*zich*) must be free within its governing category.

From (123) it follows that in (118) *elkaar* has to be bound within the PP, and that *zich* has to be bound within the sentence but has to be free within the PP.

Now, reconsider (113) and (114).

- (113) *Jan bewondert zichzelf/*zich.*
 (114) *Jan schoot op zichzelf/*zich.*

Assuming that a lexical category is always coindexed with itself, in (113) *bewonderen* is both the governor and the chain-governor of the anaphor. Consequently, the whole sentence is both the governing and chain-governing category for the anaphor. Now, according to (123), *zichzelf* must be bound by *Jan* and *zich* is excluded, since it may not be bound in both its governing and its chain-governing category.

In (114), the verb *schoot* and the preposition *op* may be coindexed by (121), so *op* is the governor and *schoot* is the chain-governor of the anaphor. But since the preposition is not locational, the PP does not contain a subject. Hence the whole sentence is again both the governing and the chain-governing category for the anaphor. As a result, *zich* is excluded again.

The binding conditions in (123) can be confirmed by taking A.c.I.-constructions into consideration. In Dutch, Exceptional Case Marking is only possible into bare infinitives. In 2.3.1, we have assumed that bare infinitives are VPs. Now, consider (124).

- (124) *dat Jan [VP Peter [PP opⁱ zichzelf/zich] schietenⁱ] lietⁱ*
 that John Peter at himself shoot let
 'that John let Peter shoot at himself/him'

By (121), the verbs *liet* and *schieten* and the verb *schieten* and the preposition *op* may be coindexed. Hence the verb *liet* and the preposition *op* are coindexed too, and *liet* may function as the chain-governor of the complement of the preposition.

Since the PP does not contain a SUBJECT accessible to the anaphor, but the VP does, the VP is the governing category for the anaphor. But since the chain-governor *liet* is not contained in the VP, the chain-governing category for the anaphor is the whole sentence. According to (123), this means that A1 must be bound within VP, and that A2 must be bound within the whole sentence, but free within VP. This prediction is confirmed; in (124) *zichzelf* must be bound by *Peter* and *zich* must be bound by *Jan*. These bindings exhaust the possibilities.²⁵

What does the theory predict with respect to anaphors that are complements of adjectives or nouns? Consider the following structures.

- (125) *dat ... [AP ... [A' verliefd op zichzelf/zich]] V*
 that in love with himself
 (126) *dat ... [NP ... [N' kritiek op zichzelf/zich]] V*
 that criticism on himself

In (125/126), the anaphor is governed by the adjective/noun.²⁶ Therefore, if the AP/NP contains a SUBJECT accessible to the anaphor, the AP/NP is the governing category for the anaphor. If this is not the case, the first projection higher up that contains a SUBJECT accessible to the anaphor will be the governing category.

Since the adjective/noun has the feature [+N], (121) blocks coindexing of the adjective/noun and their governing verb. Consequently, the adjective/noun is always both the governor and the chain-governor of the anaphor, and the governing and chain-governing category for the anaphor are always identical. By (123), we predict that A1 must be bound within the smallest

category containing a SUBJECT accessible to the anaphor, and that A2 never occurs as the complement of an A or an N. If we assume that the genitive NP acts as the subject of NP, this prediction is confirmed.

In (127/129) the AP/NP does not contain a SUBJECT accessible to the anaphor, and *zichzelf* but not *zich* can be bound within its governing category, the whole sentence. In (128/130) *zichzelf* has to be bound within AP/NP, and *zich* cannot be bound at all.²⁷

- (127) *Peter* is [_{AP} *verliefd op zichzelf/*zich*]
 Peter is in love with himself
- (128) a. *Marie* acht [_{AP} *Peter verliefd op zichzelf/*zich*]
 Mary considers Peter in love with himself
 b. *Marie* acht [_{AP} *Peter verliefd op *zichzelf/*zich*]
 Mary considers Peter in love with her(self)
- (129) *Peter* zag [_{NP} *een foto van zichzelf/*zich*]
 Peter saw a picture of himself
- (130) a. *Peter* hoorde [_{NP} *Maries kritiek op zichzelf/*zich*]
 Peter heard Mary's criticism on herself
 b. *Peter* hoorde [_{NP} *Maries kritiek op *zichzelf/*zich*]
 Peter heard Mary's criticism on himself

It is not clear to me whether the assumption that the genitive NP in (130) is the subject of the NP can be sustained. Since NPs containing a genitive specifier are always specific, the binding facts in (130) may also follow from a specificity constraint on binding (cf. Fiengo and Higginbotham 1981).

If we assume that the nominal predicate of copular constructions is a nominal Small Clause, the theory at hand gives the correct results for these constructions, too. The structure of the nominal Small Clause is similar to the one given in (126), and therefore the same predictions follow as for AP Small Clauses and referential NPs. Now, consider the examples in (131-133).²⁸

- (131) *Marie_i* is [_{NP} *t_i* [_{N'} *een goed verdediger van zichzelf/*zich*]]
 Mary is a good defender of herself
- (132) *Jan* acht [_{NP} *Marie* [_{N'} *een goed verdediger van zichzelf/*zich*]]
 John considers Mary a good defender of herself
- (133) *Jan* acht [_{NP} *Marie* [_{N'} *een goed verdediger van *zichzelf/*zich*]]
 John considers Mary a good defender of himself

Since *is* and *verdediger* may not be coindexed, the governing and chain-

governing category for the anaphor are identical. Hence, *zichzelf* must be bound within the minimal category containing a subject and *zich* cannot be bound at all. In (131) the whole clause is the minimal category containing a subject and therefore *zichzelf* can be bound by the sentential subject *Marie*, but in (132) and (133) the NP is the minimal category containing a subject, and therefore *zichzelf* must be bound within the NP, and cannot be bound by the sentential subject *Jan*.

4.3. The distribution of anaphors in specifier position

Thus far, we have only considered anaphors that occur in complement position. In this case, A1 and A2 can never appear in the same environment. This is not true when the anaphor occupies a specifier position. Consider the following structures. (Since *zichzelf* and *zich* cannot occur as genitive specifiers, no examples can be given with referential NPs.)

- (134) *Zij* zien [_{VP} *zich /elkaar* in de spiegel kijken]
 they see themselves/each other in the mirror look
 'They see themselves/each other look in the mirror'
- (135) *Zij* achten
 [_{AP} *zich /elkaar* te goed voor zulk werk]
 they consider themselves/each other too good for such work
- (136) *Zij* wierpen [_{PP} *zich /elkaar* voor de trein]
 they threw themselves/each other in front of the train
- (137) *Zij* achten
 [_{NP} *zich /elkaar* een goed verdediger]
 they consider themselves/each other a good defender

In (134-137), the anaphor is governed and chain-governed by the matrix-verb. Consequently, we expect the whole sentence to be both the governing and chain-governing category for the anaphor and *zich* to be excluded in these examples. This prediction is not correct.

In Broekhuis (1988a,b), this problem has been solved by associating the notions 'government' and 'chain-government' to the assignment of Θ -roles and case, respectively (cf. Everaert 1981). That chain-government may be associated with case-assignment will not come as a surprise after the discussion of nominative assignment in section 3. That government may be connected to Θ -role assignment seems to be quite plausible, too, since internal Θ -roles are always assigned to the sister of the Θ -marking head.

The notion 'governing category' in (123) in the binding condition for A1 is substituted for by ' Θ -governing category'.

- (138) β is a Θ -governing category for α iff β is the minimal category containing α , a Θ -governor of α , and a SUBJECT accessible to α .

Θ -government has been defined in section 2 as:

- (139) α Θ -governs β iff α governs and Θ -marks β .²⁹

The notion 'chain-governing category' is replaced by the notion 'case-governing category'. The notion 'chain-government' has been incorporated into the definition of case-government.

- (140) β is a case-governing category for α iff β is the minimal category containing α , a case-governor of α , and a SUBJECT accessible to α .
- (141) α case-governs β iff α is the head of the chain that contains the (chain-)governor that assigns case to β .

The binding conditions for A1 and A2 can now be restated as in (142).

- (142) An anaphor must be bound within its case-governing category, and (if possible):
- (i) A1 (*zichzelf* and *elkaar*) must be bound within its Θ -governing category.
 - (ii) A2 (*zich*) must be free within its Θ -governing category.

For the cases discussed in 4.2, (142) makes the same predictions as (123). The predictions for (134-137), however, differ. As we have seen, (123) predicts that in (134-137) *zich* may not occur, since the governing and chain-governing category are identical. (142) on the other hand predicts that both A1 and A2 may occur. Since all the anaphors in (134-137) are occupying a specifier position, they do not have a Θ -governor. Hence, the anaphors do not have a Θ -governing category and therefore (142,i) and (142,ii) cannot apply. The result is that (142) demands that both A1 and A2 are bound within their case-governing category, and this requirement is fulfilled in all the examples under discussion.

4.4. Conclusion

In this section, I have shown that the notion 'chain-government' does not only play a role in the case-module of the grammar, but also in the binding-module. Not all problems with respect to binding in Dutch are discussed here, since I just wanted to show how the notion 'chain-government' may be used in this domain. In section 6.4, however, I will discuss one more problem concerning binding, namely the impossibility

for *zich* to occur in *te*-infinitivals. For further discussion of binding in Dutch, I refer the reader to Broekhuis (1988b, in prep.).

5. T-LINKING

In section 3, it has been argued that the difference between Dutch and English with respect to (chain-)government and the assignment of nominative case can be related to their difference with respect to the possibility of V-to-I to apply in the syntax. Since French for example cannot assign nominative case under chain-government, it is tempting to relate this difference between Dutch and French to the fact that Dutch, but not French, has Verb Raising (VR). For example, one may assume that VR is chain-creating, as has been argued by Bennis and Hoekstra (1989a,b) among others, and that this enables chain-government to occur in Dutch. In this section, however, it will be shown that this is not the case; it is argued that VR is a quite superficial phenomenon that is forced by basically non-syntactic principles.

Although VR has been studied from the mid seventies (starting with Evers' 1975 dissertation), comparatively little is known about it. One of the causes for this is the enormous variation among the languages that allow VR to apply. Therefore, for practical reasons I have to confine myself to the discussion of the standard variety of Dutch. Further, I will only discuss the behaviour of infinitives, leaving aside the behaviour of participles. (A more extensive discussion of VR, which includes the behaviour of participles, can be found in Den Besten and Broekhuis to appear on which this section is based.)

Before we start, I give an overview of the various types of verb movements that we have discussed so far. As we have seen in section 2.3.1, in Dutch we have to distinguish three types of movement involving the verb.

- (143) a. Verb Raising (V-to-V)
 b. V-to-I
 c. Verb second (V/I-to-C)

Recall that, VR explains the linear order of the verbs in (144a). Although the arguments of the embedded verb *spelen* precede the matrix verb *zag*, the embedded verb itself follows it. This may be accounted for by assuming that the sentential complement is generated to the left of the matrix verb and that the embedded verb is adjoined to the higher verb at S-Structure. That is, the structure of (144a) is as given in (144b).

- (144) a. dat ik Peter met een mes zag spelen
 that I Peter with a knife saw play
 'that I saw Peter playing with a knife'
 b. dat ik [_{VP} Peter met een mes t_i] zag spelen_i

In 2.3.1, I have argued that V-to-I is obligatory in Dutch. In English, on the other hand, V-to-I does not apply in the syntax, but at LF. This assumption has some consequences for the barrierhood of VP in the two languages that have been discussed in section 3.

In finite clauses, V-to-I creates a new syntactic word, namely the inflected verb. We therefore have to assume that V-to-I in finite clauses is substitution. It is not clear whether V-to-I in infinitival clauses can be seen as substitution, too. In English, the infinitival marker *to* behaves as a word and not as an affix. Therefore, it seems to be rather natural to consider the Dutch infinitival marker *te* as a word as well. If *te* is a word, V-to-I in infinitival clauses cannot be substitution, but has to be adjunction, just as VR is.

Given that Verb Second (V2) is a substitution rule and we have to distinguish two types of V-to-I, we may give the following classification of the verb movement rules in Dutch, which distinguishes four types of verb movements instead of three as in (143).

(145) *VERB MOVEMENT IN DUTCH*

- A. Adjunction: (i) Verb Raising
 (ii) V-to-I
 B. Substitution: (i) V-to-I (in finite clauses)
 (ii) V/I-to-C (V2)

In this section, the rules in (145) are the main topic of our interest. It has been assumed that the notion of Tense-linking may play a central role in the explanation of these movements (Bennis and Hoekstra 1989a,b). Following Den Besten and Broekhuis (to appear), I argue in this section that this is not the case and that with the exception of V-to-I (cf. section 2) verb movement cannot be explained by making an appeal to syntactic principles of the sort proposed by Bennis and Hoekstra.

5.1. *Bennis and Hoekstra's Tense theory*

Let us first discuss the proposal by Bennis and Hoekstra (1989a,b). They try to give a unified account of the phenomena in (143). Further, they try to give an account of the obligatoriness of Extraposition in Dutch. In 5.1.1, their account of (143), and in 5.1.2 their account of Extraposition will be discussed. In 5.1.3, some objections to their proposal will be offered. In 5.1.4, the revision of Bennis and Hoekstra's proposal in Den Besten and Broekhuis (to appear) will be discussed.

5.1.1. *T-Linking*

The central notion in Bennis and Hoekstra's theory is 'Tense'. The semantic intuition that motivates their proposal is that every verb has a certain temporal reference. To give a syntactic account for this, they assume that each verb has to be linked to the (finite or infinitival) Tense of their clause.

(146) *T-Linking*

A verb must be identified by Tense.

T-linking is established by means of a T-chain.

Bennis and Hoekstra assume that languages may be parametrized in two respects. First, they may differ with respect to the base position of Tense. In Dutch, the base position of Tense is C, whereas in English Tense is base-generated in I. Secondly, languages may be parametrized with respect to the way in which T-chains are established; T-chains may be formed either by movement of the verb to the position of Tense or by percolation of the Tense-features to V. In Dutch, T-chains are established by movement of the verb. In English, on the other hand, the option of percolation is chosen. Bennis and Hoekstra (1989a) summarize these assumptions as follows:

(147) T-chains may vary across languages on two parameters:

- a. the base position of Tense;
 b. the way in which the chain is established: by Verb movement or by percolation.

Bennis and Hoekstra attempt to show that the assumption that T-chains in Dutch can only be established by verb movement explains the fact that VR of bare infinitives and V2 in main clauses is obligatory.

In main clauses, the T-chain cannot be established by percolation, since percolation of Tense is not possible in Dutch by stipulation. Therefore, the verb has to move (via I) to C, the base position of Tense. In this way, the requirement of T-linking is satisfied directly.

Bare infinitivals do not contain Tense, since it is assumed that bare infinitivals are VPs. Consequently, the embedded verb has to be linked to the Tense of the matrix clause. The requirement of T-linking of the embedded verb can be satisfied by VR. After VR the embedded verb is adjoined to its governing verb and now it is linked to Tense, as soon as its governing verb is.

- (148) Jan zou dat boek graag willen lezen
 John would that book gladly want to read
 'John would very much like to read that book'

At D-Structure, the linear order of the verbs is *lezen willen zou*. In the derivation of (148), all the rules in (145) are involved. First, the verbs *lezen* and *willen* raise to the verb *zou* (cf. (145A,i)). This results in the verbal cluster given in (149a). Then this cluster adjoins to I (cf. (145A,ii)). The result is given in (149b). Subsequently, the highest verb is extracted from the verbal cluster and substitutes for I (cf. (145B,i)). This can be seen in (149c). Finally, the amalgam I+V substitutes for C (cf. (145B,ii)). This leads to the linear order of the verbs in (148).

- (149) a. [_V zou [_V willen [lezen]]]
 b. [_I I [_V zou [_V willen [lezen]]]]
 c. [_I I+zou_i [_V t_i [_V willen [lezen]]]]

By moving the amalgam I+V the verb *zou* is identified by Tense, since it has been moved to the position of Tense, C. Since *zou* has been extracted from a VR-cluster, the verb that is governed by it, *willen*, is also identified by Tense, and since *willen* is identified by Tense, the same is true for its governee *lezen*.

Although it seems to be irrelevant here, I want to make a small digression on this account of (148). Since V2 only moves the finite verb, it has to be assumed that the verbs that are stranded can be identified by Tense via the trace of the finite verb. This seems to imply that I-to-C does not only identify the finite verb, but also its trace that is left behind. Therefore, we must assume (150). I return to (150) in section 5.1.3.

- (150) I-to-C Tense-identifies the I-position.

In embedded finite clauses and *te*-infinitivals, the T-chain is established in a way different from that in main clauses. Since V2 is not possible in embedded clauses, Bennis and Hoekstra must assume that Tense percolates to I. After movement of the verbs to I, the T-linking is established.

We can summarize Bennis and Hoekstra's proposal as in (151):

- (151) In Dutch, a verb can be Tense-identified by:
 a. movement of the verb to I (V-to-I), possibly by intermediate adjunction to its governing verb (VR), followed by:
 b. Tense identification of I by:
 (i) movement of the finite verb into C (V2), or
 (ii) percolation of Tense to I.

5.1.2. Tense composition

In addition to their explanation of (143), Bennis and Hoekstra want to account for the obligatoriness of Extraposition in Dutch, as in (152).

- (152) a. *dat Piet [dat Jan ziek was] zei
 that Piet that John ill was said
 'that Piet said that Jan was ill'
 b. dat Piet zei [dat Jan ziek was]

Bennis and Hoekstra note that the temporal reference of the most embedded clause in (152) depends on the temporal reference of the matrix clause. They want to give a syntactic account of this dependency by demanding that the Tense of an embedded clause is connected to the Tense of its matrix clause. They have named this requirement T-composition (Bennis and Hoekstra 1989b).

- (153) *T-composition*
 The Tense of an embedded clause (T2) must be connected to the Tense of the matrix clause (T1).

The requirement in (153) is fulfilled if (154) holds.

- (154) T2 is connected to T1 if T1 governs T2.

In (152a), T1 does not govern T2. The dependent clause is governed by the verb(-position), but since V cannot be Tense-identified by percolation, this position does not contain Tense. Therefore T2 in the C of the dependent clause is not connected to T1 and the structure is ruled out by (153). In (152b), on the other hand, the dependent clause is moved to a position governed by I. Since this position is identified by T1 (cf. (151b)), T2 in the C of the dependent clause is governed by T1 and the requirement in (153) is satisfied.

Since the matrix verb in (152) has been moved to I, a T-identified position (cf. (151b,i)), we have to note that this account implies the assumption in (155), otherwise the verb position would be Tense-identified and, consequently, (152a) should be grammatical.

- (155) Movement of a verb to a Tense-identified position does not Tense-identify the V-position.

We return to (155) in section 5.1.3.

If the sentential complement is a *te*-infinitival, the requirement of T-composition can be satisfied in two ways, either by Extraposition or by VR.

- (156) a. *dat Jan [_{CP} PRO een boek te lezen] probeert
 that John a book to read tries
 'that John is trying to read a book'
 b. dat Jan t_i probeert [_{CP} PRO een boek te lezen]_i
 c. dat Jan [_{CP} PRO een boek t_i] probeert te lezen_i

(156a) is ungrammatical for the same reason as (152a) is; the infinitival complement occupies its base-position and is thus governed by the V-position of the matrix-verb which is not a Tense-identified position according to (155). (156b) is fine, since the dependent clause has been moved into a position that is governed by I; this structure is therefore grammatical for the same reason as (152b) is. (152c) is grammatical since the verb of the dependent clause has been raised via the embedded I and C to the matrix verb, taking along the Tense features of the dependent clause. In this way, the Tense features are raised to a position in which they are governed by the Tense of the matrix clause, thus satisfying (153).

Note that in (152) VR is excluded since the C of the dependent clause

is filled by a complementizer, thus blocking movement of the verb through C. For the same reason VR from infinitival complements containing the complementizer *om* is blocked.

(157) *dat Jan [_{CP} om [_{IP} PRO een boek *t_i*]] probeert te lezen_i

5.1.3. Some objections to Bennis and Hoekstra's theory

The most attractive aspect of Bennis and Hoekstra's Tense theory is that a broad range of phenomena can be explained within a relatively simple theory. At first sight, we only seem to need the assumptions in (158) to explain the phenomena of V2, VR and Extraposition.

- (158) a. In Dutch T-chains are only established by movement.
 b. An empty position cannot be Tense-identified by its relation to a Tense-identified antecedent, i.e. empty positions are not links in a T-chain.

Closer examination, though, reveals that their theory is not that simple. For instance, we have seen that (158a) cannot be maintained in full force, since we had to assume that T-linking in embedded clauses may partially be established by percolation (cf. (151b,ii)). The same is true for (158b); we had to assume that the trace that is left behind after V2 is identified by Tense (cf. (150) (= (151b,i))).

These additions to (158) are crucial for the proposal discussed in the previous subsections, but since there is no independent evidence for them, the proposal gets an *ad hoc* flavour. Why can the I-position (in embedded clauses) be Tense-identified by percolation, but not the V-position? Why can the I-position be Tense-identified by V2, but not the V-position by VR or V-to-I (cf. (150) and (155))?

Furthermore, the assumption of (151b) renders the theory redundant. (151b,i) stipulates that in main clauses movement of the finite verb to C causes the I-position to be Tense-identified. (151b,ii) states that T-identification of the I-position can be established by percolation. Since it is not clear why the latter should not be possible in main clauses as well, (151b,i) and (151b,ii) are redundant. This redundancy can be eliminated by replacing (151b) by (159).

(159) The I-position can be Tense-identified by percolation.

An additional advantage of the assumption in (159) is that it solves the problem with respect to (158b); since (151b,i) is eliminated, (158b) can be maintained in full force.

If (159) is the correct generalization, it is no longer possible to explain the obligatoriness of V2 in main clauses by the requirement of T-linking; both in main and in embedded clauses the I-position can be Tense-identified by percolation.

The explanation of V2 by the theory of T-linking can only be maintained if we reject (159) in favour of (151b,i) and (151b,ii). In this case (151b,ii) has to be construed as only applying to embedded clauses. But this results in a circular argument; V2 is obligatory in main clauses, since percolation of Tense in main clauses is impossible, and that percolation of Tense in main clauses is impossible becomes clear from the fact that V2 is obligatory. For this reasons, I reject the assumption in (151b,ii).

If we adopt (159), we must reject the assumption in (158a). Another possibility is to maintain (158a) and to reject (159) in favour of the assumption that in Dutch Tense is generated in I; in this case V-to-I would be sufficient to Tense-identify the verb. An additional merit of this assumption could be that we no longer have to assume that languages are parametrized with respect to the position of Tense; Tense is always base-generated in I.

This assumption, however, is not compatible with Bennis and Hoekstra's proposal. According to their requirement of T-composition, the Tense of an embedded clause (T2) has to be governed by the Tense of the matrix clause (T1) (cf. (154)). If Tense is generated in I, T1 and T2 would be separated by the CP of the embedded clause, and consequently T1 would not be able to govern T2.³⁰ Therefore, Bennis and Hoekstra have to assume that Tense is generated in C.

Summarizing, we can state the following objections to Bennis and Hoekstra's proposal:

- (a) The assumption that the I-position, but not the V-position, can be Tense-identified by percolation, is *ad hoc*.
 (b) The assumption that V2 Tense-identifies the I-position, but that VR or V-to-I does not Tense-identify the V-position, is *ad hoc*.
 (c) If we want to explain V2 by the requirement of T-linking, we have to assume (151b,i) and (151b,ii). As we have seen, this leads to a circular argumentation.

The objections in (a) and (b) could be circumvented, if Bennis and Hoekstra rejected either the assumption that T-linking can only be established by movement of the verb, or the assumption that Tense is base-generated in C.

Rejecting the former assumption means that they are no longer able to explain the obligatoriness of VR (and V2, but this is already a problem because of (c)) with the help of their requirement of T-linking. In addition they are no longer able to explain Extraposition, since if the V-position can be Tense-identified by percolation, the sentential complement can be governed by Tense from the V-position of the matrix clause.

Rejecting the latter assumption means that they are no longer able to explain Extraposition by the requirement of T-composition; T-composition requires a government relation between the Tense of the matrix and the embedded clause, but this relation is blocked by the CP of the embedded clause.

Consequently, both revisions render it impossible to explain Extraposition by the requirement of T-composition. For this reason, we may wonder whether there is any necessity to assume a syntactic notion 'T-composition'. Recall that this notion was only introduced to explain Extraposition (and VR of *te*-infinitivals). I shall not go into this question here, but assume that Extraposition cannot be explained by the requirement of T-composition.

5.1.4. An alternative approach

In Den Besten and Broekhuis (to appear) an alternative approach to Tense theory has been proposed. Their proposal differs from the one in Bennis and Hoekstra (1989a,b) in two ways, both having to do with the parametrization of languages in (147), repeated here for convenience.

- (147) T-chains may vary across languages on two parameters:
- the base position of Tense;
 - the way in which the chain is established: by Verb movement or by percolation.

With respect to the position of Tense, we assume that in Dutch (and in fact in all languages) Tense is base-generated in I. The result of this assumption is that we are not able to explain the obligatoriness of Extraposition by a theory of T-linking. Further, we are not able to explain the obligatoriness of V2 in main clauses.³¹ As I have argued, the explanation of these phenomena is also problematic within the Bennis and Hoekstra proposal.

With respect to the formation of T-chains, we assume that in Dutch T-chains may be established by percolation. Percolation we conceive of as coindexing of I and its dependent verb(s). Let us tentatively assume (160) which is to be revised later in this section.

- (160) In Dutch T-chains may be established either by movement of the verb(s) to a Tense-identified position or by coindexing of the verb(s) and a Tense-identified position.

In accordance with the restriction given in 3.1.2 (24), I assume that coindexing is only possible if the verb is governed by the Tense-identified position. The result of this assumption is that we are not able to force VR by the requirement of T-linking. As I will show in the next subsection, this should be considered a desirable result.

5.2. T-linking in bare infinitives

The proposal of Bennis and Hoekstra has been designed to explain the obligatoriness of VR. It has been known for a long time, though, that inversion of the verbs is not obligatory if a modal verb is present (cf.

Reuland 1983 and Geerts et.al. 1984). In (161) and (162), the non-inverted orders *komen kan* and *helpen zal* give rise to a perfect result. Henceforth, I will assume that the non-inverted lower verb occupies its base-position in (161) and (162).³²

- (161) dat Jan niet kan komen/komen kan
that John not is able come
'that John is not able to come'
- (162) dat Peter hem zal helpen/helpen zal
that Peter him will help
'that Peter will help him'

A very strange restriction on the non-inverted order is that it is only possible if there are no more than two verbs present; If there are three verbs, the acceptability of the non-inverted order decreases dramatically. If we embed (161) under the verb *zullen* as in (163) only the inverted order is acceptable. The same is true if we put the sentence in the perfect tense as in (164). An account of these facts is given in 5.3.1.

- (163) dat Jan niet zal kunnen komen/?*komen kunnen zal
that John not will be able come
'that John will not be able to come'
- (164) dat Jan niet heeft kunnen komen/?*komen kunnen heeft
that John not has been able come
'that John has not been able to come'

In Den Besten and Broekhuis (to appear) it has been shown that the non-inverted order is not only acceptable if a modal verb is present, but in all bare infinitivals. Below, I give some examples of all other verbal types that select a bare infinitival.

I. A.c.I.-verbs

In Dutch, the causative verb *laten* ('to make' or 'to let') and the perception verbs *zien* 'to see', *horen* 'to hear' and *voelen* 'to feel' select a VP-complement. Generally it is assumed that these verbs are able to case-mark the external argument of the embedded predicate. The non-inverted order is possible with these verbs, for example:

- (165) dat hij mij zag lopen/lopen zag
that he me saw walk
'that he saw me walking'

As with the modals, the non-inverted order is only possible if there are at most two verbs present, compare:

- (166) a. dat hij mij zal zien lopen/?*lopen zien zal
 that he me will see walk
 'that he will see me walking'
 b. dat hij mij heeft zien lopen/?*lopen zien heeft
 that he me has seen walk
 'that he has seen me walking'

II. (Semi-)aspectual verbs

Semi-aspectual verbs as *blijven* 'to continue to' and *gaan* 'to go to' select a bare infinitival. With these verbs the non-inverted order is possible as well, for example:

- (167) dat hij morgen gaat dansen/dansen gaat
 that he tomorrow goes dance
 'that he is going to dance tomorrow'

As above, the non-inverted order is only possible if there are at most two verbs present. Compare:

- (168) a. dat hij morgen zal gaan dansen/?*dansen gaan zal
 that he tomorrow will go dance
 'that he will go and dance tomorrow'
 b. dat hij gisteren is gaan dansen/?*dansen gaan is
 that he yesterday has go dance
 'that he went to dance yesterday'

The semi-aspectuals *zitten*, *liggen* and *staan* do not select a bare infinitival in the present tense, but they do in the perfect tense. I will not discuss these verbs here.

III. *Helpen*, *leren* and *durven*

In addition to the modals, the A.c.I.-verbs and the semi-aspectuals, there are some isolated verbs that select a bare infinitive, such as *leren* ('to learn' or 'to teach'), *helpen* 'to help' and *durven* 'to dare'. (The latter two verbs with a bare infinitival are not accepted by everyone. In the perfect tense, however, a bare infinitive is generally preferred.) They all allow the non-inverted order.

- (169) dat ik hem leerde lezen/lezen leerde
 that I him taught read
 'that I taught him to read'

- (170) dat ik hem help verhuizen/verhuizen help
 that I him assist move house
 'that I assist him to move'
 (171) dat hij daar niet durft praten/praten durft
 that he there not dares speak
 'that he doesn't dare to speak there'

Again, with three verbs the non-inverted order is not possible.

- (172) a. dat ik hem zal helpen verhuizen/?*verhuizen helpen zal
 that I him will assist move
 'that I will assist him to move'
 b. dat ik hem heb helpen verhuizen/?*verhuizen helpen heb
 that I him have assist move
 'that I have assisted him to move'

I first want to address the question of how it can be explained that the non-inverted order is possible at all. After answering this question, I address the question why the non-inverted order is impossible if there are more than two verbs present in 5.3.1.

If one wants to hold on to the claim that VR is compulsory, one may answer the first question by assuming that VR has applied in these constructions as well, but that a late stylistic rule has inverted the verbs once again (cf. Rutten 1991)³³. In the beginning of this subsection, however, I have adopted another, perhaps more interesting, assumption, namely that the embedded verb has remained in its D-Structure position. The D-Structure of the relevant constructions (irrelevant details omitted) is given in (173).

- (173) dat [_{IP} ... [_{VP1} ... [_{VP2} ... V2] V1] I]

In 2.3.1, we assumed that in Dutch T-linking must be met at S-Structure, and that therefore the S-Structure of the non-inverted constructions cannot be identical to (173), since in this structure the embedded verbs cannot be Tense-identified. Recall that in 5.1.4 we have assumed that T-linking may be established by coindexing of I and V. A prerequisite for coindexing, however, is that I governs the verb. This condition is not fulfilled in (173); in (173), I is not lexical and therefore it does not L-mark VP1, which is consequently a barrier for the verbs. Therefore, (173) is ruled out as a possible S-Structure.

T-linking is possible at S-Structure, however, if we apply V-to-I (i.e. (145B,i)). In that case the S-Structure is as given in (174).

- (174) dat [_{IP} ... [_{VP1} ... [_{VP2} ... V2] t_i] I+V1_i]

In (174), I is lexicalized. Now I is able to L-mark VP1, which is no longer a barrier for the verbs. Therefore the base-position of V1 is governed by I and according to (160) this position can be Tense-identified by coindexing of V. Since the trace of V1 L-marks VP2, it also governs V2 and again by (160) V2 can be Tense-identified by coindexing of V2 and the Tense-identified position t_i . Otherwise, we might state that the most embedded verb may be Tense-identified by I, since I chain-governs it. I adopt the latter option here.

Note that this explanation of the acceptability of the non-inverted orders does not make use at all of Tense-linking by movement of the verb. In fact, given this account, movement of the verb is superfluous for the theory of T-linking (although it may be necessary in order to void the barrierhood of the VP). Let me clarify this. Movement of V to I is only possible if in the resulting structure the trace of the verb is governed by I, since otherwise it would result in an ECP violation. But if there is a government relation between I and the V-position, the condition for T-linking of the V-position by coindexing is fulfilled as well and consequently T-linking is always possible by coindexing.

Of course, this does not necessarily imply that T-linking cannot be established by movement of the verb, but the situation that is created now resembles the one we discussed in section 3 concerning NP-movement in Dutch. Since NP-movement in Dutch is not necessary in order for an NP to receive case, we concluded it might be the case that NP-movement (movement of NP in order to get case) does not apply in Dutch. Similarly, we may conclude here that it might be the case that verb movement in order for the verb to get Tense-identified does not apply in Dutch.

There are two ways in which we may decide the issue of whether T-linking may be established by verb movement or not. Preferably, the decision should be based on empirical arguments, but unfortunately I am not aware of any empirical facts that bear on this issue. Therefore, we have to resort to arguments of elegance (or, perhaps, economy). Clearly, a theory that allows T-linking to be established by coindexing only is simpler than a theory that allows T-linking to be established either by coindexing or by verb movement. Therefore, the former theory is preferable to the latter, and we have to reject (160) in favour of (175).

(175) T-chains can only be established by coindexing of the verb(s) and a Tense-identified position.

The result of (175) is that we are no longer able to explain verb movement by making an appeal to the theory of Tense.

Before attempting to explain why VR is obligatory in most cases, let me give an overview first. In 5.1, I have given the classification of verb movement in (145), repeated here for convenience.

(145) VERB MOVEMENT IN DUTCH

- A. Adjunction: (i) Verb Raising
 (ii) V-to-I
 B. Substitution: (i) V-to-I (in finite clauses)
 (ii) V/I-to-C (V2)

In 5.1.4, I argued that V2 cannot be explained by the theory of Tense. VR cannot be explained by the theory of Tense either, since a verb is always Tense-identified under (chain-)government by Tense (cf. (175)). All we can explain with recourse to Tense theory now is the obligatoriness of V-to-I. If V-to-I does not apply, I is not lexical, and consequently VP will be a barrier for the verb, thus blocking T-linking of the verbs.

5.3. Obligatory Verb Raising

Although we cannot force VR by the theory of Tense, we have seen in 5.2 that VR is obligatory if there are more than two verbs present. Besides these cases, VR is also obligatory in *te*-infinitivals. In this subsection, I will suggest an explanation for these facts.

5.3.1. Obligatory Verb Raising in bare infinitivals

In 5.2 we have seen that VR in bare infinitivals is optional if there are only two verbs present. Given the data presented there, the unacceptability of the non-inverted orders in the following examples comes as a surprise.

- (176) a. dat je hem toch niet aardig kan vinden/?*vinden kan
 that you him prt. not nice may consider
 'it is impossible that you consider him nice'
 b. dat je dat boek niet uit de kast
 that you that boek not out of the bookcase
 mag halen/?*halen mag
 to be allowed get
 'that you are not allowed to get that book out of the book-
 case'
 c. dat je mij wel een schat zal vinden/?*vinden zal
 that you me a darling will consider
 'that you will consider me a lovely boy'

In (176), the embedded verbs (*vinden*, *halen*) select a Small Clause. The Small Clause predicates are *aardig*, *uit de kast* and *een schat*, respectively. In Den Besten and Broekhuis (to appear), we related the unacceptability of these non-inverted orders to the presence of these Small Clauses. One of the characteristics of Small Clauses is that its predicate always receives primary stress. We argued that the non-inverted order is excluded if the embedded verb is adjacent to the constituent that bears primary stress or, perhaps more correctly, that the embedded verb has to bear primary

stress itself to occur in non-inverted order. (Of course, this phonological restriction is language-specific, since in other varieties of Dutch and in German the non-inverted order is always possible.)

(177) A non-inverted embedded verb must bear primary stress.

Confirmation of this suggestion can be found in (178). The sentences in (178) differ only with respect to the object. In (178a), the object is a definite NP and it has been scrambled. As a result, the embedded verb bears primary stress and the sentence is fine. In (178b,c), the object is indefinite. In the (178b), this NP has been scrambled and as a result it receives a generic interpretation. The verb bears primary stress and the sentence is fine. In (178c), the NP has not been scrambled and as a result it receives a non-specific interpretation. In this sentence, the indefinite NP has to bear primary stress, and consequently the embedded verb cannot. Just as we predict, this sentence sounds odd.

- (178) a. dat hij de panthers altijd aaien wil
 that he the panthers always stroke wants to
 'that he always wants to stroke the panthers'
 b. dat hij panthers altijd aaien wil
 c. ??dat hij altijd panthers aaien wil

Now compare the following example which contains three verbs.

- (179) ?*dat ik hem dat boek geven willen zou
 that I him that book give want would
 'that I would like to give him the book'

According to (177), both non-inverted embedded verbs in (179), *geven* and *willen*, have to bear primary stress. Evidently, this is blocked, and therefore the example is unacceptable. This suffices to exclude non-inversion in structures in which more than two verbs are present. This does also hold for the examples in the perfect tense such as: ?*dat Jan niet komen kunnen heeft 'that Jan has not been able to come'.

Nevertheless, there is another construction that is not excluded by (177). Take as an example the sentence in (180), which is derived from (179) by raising of the verb *willen*.

- (180) *dat ik hem dat boek geven t_i zou willen_i

According to (177) only the verb *geven* has to bear primary stress and this condition can be fulfilled. Therefore, this structure should be grammatical.

Note that in (180) the order of the verbs has been totally mixed up. We may assume that this leads to parsing problems and that as a result

the sentence becomes unintelligible. To exclude (180), we may assume the following perception principle:

(181) Verb Raising preserves the sequence of the verbs in reversed order.³⁴

5.3.2. Obligatory Verb Raising in *te*-infinitivals

As we have discussed in 2.3.1, T-linking in Dutch must be met at S-Structure. In order to make T-linking possible at S-Structure, I has to be lexicalized by V-to-I. Therefore, V-to-I is obligatory in *te*-infinitivals.

- (182) a. Jan probeerde [om PRO te komen]
 John tried COMP to come
 b. *John probeerde [om PRO komen te]

Now, compare the example in (183).

- (183) a. *Jan ging weg [om PRO zijn huiswerk maken te gaan]
 b. Jan ging weg [om PRO zijn huiswerk te gaan maken]
 John went away COMP his homework to go make
 'John left to go and do his homework'

It seems to be the case that V-to-I forces the embedded verb to raise. This may seem surprising, since V-to-I in finite clauses does not force VR to apply.

The difference, however, is that V-to-I in finite clauses is substitution, whereas V-to-I in infinitival clauses is adjunction (cf. (145)). This implies that V-to-I in the first case does not affect word order, whereas V-to-I in the latter case does. This suggests that, as in the case of VR in (180), the impossibility of (183a) might be induced by a perception principle, similar to (181). We may account for this similarity by restating (181) as (184).

- (184) Adjunction of verbs (cf. (145A)) preserves the sequence of a T-chain in reversed order.

This completes our discussion of obligatory VR.³⁵

5.4. Conclusion

In this section, I have discussed the attempt in Bennis and Hoekstra (1989a,b) to derive several types of verb movement from a theory of Tense. I have shown that their theory meets some internal problems and that it cannot be maintained in its present form. Attempts to amend their theory resulted in the loss of the explanation of the obligatoriness of Extraposition and V2.

Further, I have shown that in some cases VR is optional. If we want

to give a syntactic explanation for this possibility, we have to assume that Tense-identification may be established under (chain-)government. As a result we are no longer able to force the application VR by the requirement of T-linking. Finally, I have argued that in those cases that VR is obligatory in the standard variety of Dutch, it is forced by non-syntactic principles.

Since we have to assume that Tense-identification may be established under (chain-)government, irrespective of the application of VR, we have to conclude that chain-government is not dependent on VR and, consequently, that it is not VR that makes chain-government possible in Dutch. Rather, it is the availability of chain-government in Dutch that makes VR optional in several cases.

6. ON SOME DIFFERENCES BETWEEN *TE*- AND BARE INFINITIVALS

Although I have argued in the previous section that VR does not establish a T-chain, it seems to be clear that there is a certain relation between the presence of a T-chain and VR in so far that VR is restricted to contexts in which T-chains may be established. This is especially clear with respect to bare infinitives. VR is always possible if the embedded verb is a bare infinitive, but in this case there is always a T-chain established as well, since otherwise the T-Linking requirement will be violated.

Now, compare the examples with *te*-infinitivals in (185). In (185a) the *te*-infinitival has been extraposed, whereas in (185b) the *te*-infinitive has been raised. If it is true that VR is only possible if a T-chain may be established as well, we must assume that in (185b) one single T-chain has been formed that includes both the matrix and the embedded Tense. In (185a), on the other hand, two independent T-chains have been formed.

- (185) a. dat Jan t_i probeert [PRO een boek te lezen]_i
 that John tries a book to read
 ‘that John tries to read a book’
 b. dat Jan [PRO een boek t_i] probeert te lezen_i

A possible explanation for this difference may be that the embedded Tense in (185b), but not in (185a), is somehow deficient and cannot T-identify the embedded verb. Hence, the embedded verb has to be T-identified by the matrix Tense and consequently a T-chain must be formed that includes both the matrix and the embedded verbs.

At first glance, this solution may seem to be mere stipulation, but there seems to be some empirical evidence for this approach. In Rutten (1991), it has been observed that in case VR has applied, the time-references of the verbs are necessarily identical, whereas in the case Extraposition has applied the time-references may be different. This can be illustrated with the following examples, taken from Pardoën (1986).

- (186) a. Ik heb gisteren geprobeerd [PRO die jongen vandaag
 I have yesterday tried that boy today
 te ontmoeten]
 to meet
 ‘Yesterday I tried to meet that boy today’
 b. *Ik heb gisteren [PRO die jongen vandaag t_i] proberen te ont-
 moeten_i
 I have yesterday that boy today try to meet

In (186a), the temporal reference of both the matrix and the embedded verb may be modified by a temporal adverb. After VR, as in (186b), this is impossible. The sentence is fine, however, if we drop one of the adverbials. In this case the adverbial takes both verbs in its scope and therefore we have to assume that it is generated in the matrix clause, as for example in (187).

- (187) Ik heb gisteren [PRO die jongen t_i] proberen te ontmoeten_i]
 I have yesterday that boy try to meet

I believe that the facts in (186) and (187) support the claim that the embedded Tense of *te*-infinitivals is deficient in VR contexts and that therefore a single T-chain may be formed in such constructions.

Summarizing, I think we may claim that there are two types of T-chains. The first type consists of Tense and *n* verbs that are T-identified by it. This type is formed if the complement of the matrix verb is a bare infinitival. The second type not only has an I as its head, but contains an additional, defective I as an intermediate link. This type is formed if the complement of the matrix verb is a *te*-infinitival.

- (188) bare infinitivals: [I, V1,, Vn]
 te-infinitivals: [I, V1, ..., I, ..., Vn]

In Dutch bare infinitivals and *te*-infinitivals differ systematically in at least three respects. The first difference has to do with control. If the subject of the infinitival is PRO, in bare infinitivals PRO may be either controlled by the subject or by the object of the verb, but in *te*-infinitivals PRO can only be controlled by the subject.

The second difference has to do with Exceptional Case Marking: the subject of a bare infinitival may be case-marked by the matrix verb, whereas the subject of a *te*-infinitival may not.

The third difference is concerned with binding. As we have seen in section 4, if the reflexive *zich* occurs within a bare infinitive, it can be bound by the subject of the higher verb. This is never possible if it occurs within a *te*-infinitival.

In the sections 6.2 to 6.4, I try to derive these differences between bare infinitivals and *te*-infinitivals from the difference in the T-chain that is formed in the VR contexts.

Before I can undertake this task, I have to digress a little more on *te*-infinitivals first, since it is not always simple to decide whether VR has been applied to the *te*-infinitive or not. In 6.1.1, I review the discussion of this matter in Den Besten et.al. (1988) and Den Besten and Rutten (1989), and in 6.1.2, I discuss some technical questions that are raised by their proposal.

6.1. The Third Construction

6.1.1. Long distance movement from an extraposed complement

Consider example (189). So far, we have assumed that (189) is derived by VR (cf. (185b)). In Den Besten et.al. (1988) and Den Besten and Rutten (1989), however, it has been (re-)discovered that if we put the sentence in the perfect tense, it may appear in two different forms. In (190b) the matrix verb appears as a participle, whereas in (190a) it appears in its infinitival form.

(189) dat Jan een boek probeert te lezen

- (190) a. dat Jan dat boek heeft proberen te lezen
 b. dat Jan dat boek heeft geprobeerd te lezen

From this fact, Den Besten and Rutten concluded that (189) may have two different structures that correspond to the structures of (190a) and (190b), respectively. What are the structures of (190a) and (190b)? To answer this question, let us first have a closer look at sentences in which Extraposition has applied, such as (185a). If we put (185a) in the perfect tense, the matrix verb has to appear as a participle.

(191) dat Jan heeft geprobeerd/*proberen dat boek te lezen

This fact led Den Besten and Rutten to the conclusion that the sentence in (190b) is derived from a structure in which Extraposition has been applied, as in (191), whereas (190a) is a case of ordinary VR. (190b) can be derived from (191) by extracting the NP *dat boek* from the extraposed clause and by adjoining it to a projection of the matrix clause, i.e. by scrambling it out of the embedded clause. Hence the structures of (190a) and (190b) are as given in (192a) and (192b), respectively. The resulting structure in (192b) has been called the Third Construction, because it is neither VR nor plain Extraposition.

- (192) a. dat Jan [PRO dat boek t_i] heeft proberen te lezen;
 b. dat Jan dat boek $_i$ heeft geprobeerd [PRO t_i te lezen]

That the long distance movement in (192b) is scrambling is evident, since it is subject to the same restrictions, e.g. Small Clause predicates cannot

be scrambled in simplex sentences and cannot undergo the long distance movement from an embedded clause either.

The most important conclusion of Den Besten and Rutten (1989) is that we cannot conclude whether VR has been applied in a certain construction by just looking at the linear order of a sentence in the present or the past tense. Before we can decide, we first have to consider the perfect tense of the sentence. If the matrix verb can only appear as an infinitive, we are dealing with VR. If it can only appear as a participle, we are dealing with the Third Construction. If it appears either as an infinitive or as a participle in the perfect tense, the sentence in the present tense may be either a VR construction or a Third Construction.

6.1.2. Long distance movement and the Identification Requirement on traces

In section 2.3.2, I have assumed that a trace that has been left by Scrambling must be identified by entering into a well-formed movement-chain. Further, we assumed the following conditions on chain-formation.

(193) If (α, β) is a link of a chain, then:

- a. α and β are nondistinct;
 b. α c-commands β ;
 c. β is subjacent to α .

(194) β is subjacent to α if for every γ , γ a barrier for β , the maximal projection immediately dominating γ , dominates α .

In this subsection, I discuss the consequences of the Identification Requirement for the analysis of the Third Construction.

6.1.2.1. *The CP/IP distinction* In Dutch, long distance movement is not possible if the complement is a finite clause. As we have seen in section 2, this can be very easily explained by the Identification Requirement on traces. Compare the following structure:

- (195) *Jan heeft dat boek $_i$ beweerd [_{CP} dat [_{IP} hij t_i las]]
 John has that book contended that he read
 'John has contended that he was reading that book'

In (195), IP is not L-marked by C, since we have assumed that the complementizer *dat* is not lexical. Hence, IP is a barrier for the trace and the trace is not subjacent to its antecedent, since the latter is not dominated by the maximal projection that immediately dominates IP. As a result, chain-formation is blocked and (195) violates the Identification Requirement on traces.³⁶

A similar explanation can be given for the impossibility of long distance movement from infinitival clauses that contain the complementizer *om*, as in (196). Since *om* is not lexical, IP is a barrier for the trace and no

well-formed chain can be created, since the antecedent of the trace is not dominated by CP.

(196) *dat Jan dat boek_i heeft geprobeerd [_{CP} om [_{IP} PRO t_i te lezen]

One of the consequences of this explanation is that the infinitival complement in (192b), here repeated for convenience as (197), cannot be CP, but must be IP, since otherwise the construction should be ungrammatical for the same reason as (196) is.

(197) dat Jan dat boek_i heeft geprobeerd [_{IP} PRO t_i te lezen]

Since the IP-complement in (197) is selected by the matrix-verb *geprobeerd*, it is L-marked by this verb. Consequently, it is not a barrier for this trace and the required chain can be established, since the trace is subjacent to its antecedent.

Note that we need not assume that an infinitival complement without a complementizer must always be IP. It must be IP only to allow for chain-formation if long distance movement has applied. If long distance movement does not apply, there is no reason for it not to be CP. (Further recall that the choice between IP and CP may be subject to the subcategorization properties of the selecting head (cf. 3.1.2).)

Den Besten et al. (1988) have argued that infinitival complements without complementizers may indeed be either IP or CP, since this may help us to account for the following paradigm.

(198) a. dat (er) geprobeerd werd [_{CP} [_{IP} PRO dat boek te lezen]
that it tried was that book to read
b. *dat (er) dat boek_i geprobeerd werd [_{IP} PRO t_i te lezen]

(199) a. dat hem verboden werd [_{CP} [_{IP} PRO dat boek te lezen]
that him forbidden was that book to read
'that he was forbidden to read the book'
b. dat hem dat boek_i verboden werd [_{IP} PRO t_i te lezen]

In (198) and (199), the main clause has been passivized. In (198a) and (199a), only the infinitival complement has been extraposed. In (198b) and (199b), long distance movement has applied as well.

Let us first consider (198). What explains the difference in grammaticality between (198a) and (198b)? In (198b) the infinitival complement must be an IP, since otherwise chain-formation would be blocked. Since IP is no barrier for the trace, it cannot be a barrier for PRO either. Hence, PRO is governed by the matrix verb. According to the assumption (61) in 3.1.2, it is an anaphor as a result. Since there is no antecedent to bind PRO in (198b), binding condition A is violated. Hence, the sentence is ungrammatical.

In (198a), on the other hand, long distance movement has not applied. If we assume that the infinitival complement is a CP, PRO is not governed, because IP is a barrier for PRO. Consequently, PRO is not an anaphor and need not be bound. As a result, the sentence is fine.

In (199), it does not matter whether PRO is governed or not, since there is an antecedent that can bind or control it. Hence both (199a) in which PRO is not governed, and (199b) in which PRO is governed, are grammatical.

Summarizing, we have seen that an infinitival complement without an overt complementizer may be either an IP or a CP. In case long distance movement has applied, it must be an IP, because otherwise chain-formation would be blocked. In passives like (198a) it must be a CP, because otherwise binding condition A is violated. (198b) is ungrammatical, since the complement must be IP to make chain-formation possible, but has to be CP to avoid a violation of the Binding theory. Consequently, either choice results in ungrammaticality.

6.1.2.2. *Some problems and their solution* Although at first sight the explanation for the contrast between (198) and (199) in 6.1.2.1 seems to be sound, there may be a flaw in the argument. The explanation of the impossibility of long distance movement in (198b) is based on the assumption that PRO is governed by the matrix verb, but I think it can be proved that PRO is not governed by this verb, neither at D- nor at S-Structure.

We have assumed that the external argument of a verb is base generated VP-internally. If this is so, the D-Structure of (198b) is as in (200):

(200) dat (er) [_{IP} [_{VP} PRO dat boek lezen] te] geprobeerd werd

Since the embedded I (*te*) is not lexical, VP in (200) is not L-marked and as a result it is a barrier for PRO. Consequently, PRO is not governed at D-Structure.

At S-Structure, the embedded verb *lezen* raises to I, thus lexicalizing it. If nothing more happened, PRO would be governed by the amalgam *te lezen*. We must assume however that PRO may be moved to SpecIP at S-Structure to avoid government, otherwise PRO would necessarily be governed in both (198) and (199) and the explanation for the paradigm would be completely lost (cf. Hoekstra in prep.).³⁷ But recall that the infinitival complement in (200) is extraposed. Therefore, the S-Structure of (200) is as given in (201).

(201) dat (er) geprobeerd werd [_{IP} PRO [_{VP} dat boek t_i] te lezen]

Since the Θ -marker of the IP, *geprobeerd*, has not moved to I (which is clear from the fact that it precedes the auxiliary that is occupying the I-position), IP is *not* governed by it at S-Structure and therefore we may

assume that IP is not L-marked at this level.³⁸ As a result, at S-Structure IP is a barrier. Since PRO has been moved to SpecIP to avoid government by the amalgam *te lezen*, it is not governed at all.

Since PRO is governed neither at D-Structure nor at S-Structure, we would not expect it to behave as an anaphor, unless it is governed at LF. This problem can be solved by assuming that at LF Reconstruction applies to extraposed clauses.³⁹ In this way, the reasoning given in the previous subsection can be repeated for the structure at LF. Since movement of the (PRO-)subject to SpecIP is optional (cf. section 3), at LF the structure of (198b) is as in (202a) or as in (202b).

- (202) a. *dat (er) dat boek_i [_{IP} [_{VP} PRO *t_i* *t_j*] *te lezen_j*] geprobeerd werd
 b. *dat (er) dat boek_j [_{IP} PRO_i [_{VP} *t_i* *t_j* *t_k*] *te lezen_k*] geprobeerd werd

Since both VP and IP are L-marked in these structures, PRO is governed in both structures; in the first structure it is governed by the amalgam I+V *te lezen*, whereas in the latter structure it is governed by the matrix-verb. Because PRO is governed in both structures in (202), it has to be an anaphor and therefore in both structures binding condition A is violated.

There is one problem with respect to this solution, but it can be solved very easily. Note that in case Subject Raising has applied, Extraposition is blocked:

- (203) *dat Jan_i schijnt [_{IP} *t_i* dat boek *te lezen*]
 that John seems that book to read
 'that John seems to read that book'

Hoekstra (1984) and Koster (1987) explain the ungrammaticality of (203) with the help of the ECP. Following Kayne (1984), they assume that the ECP can only be satisfied if the trace is canonically governed. In Dutch canonical government is to the left. In (203), however, the trace is to the right of the matrix verb and is thus not canonically governed. This results in an ECP violation. Since the ECP holds at LF (cf. fn.39), this explanation will be lost if we assume that Reconstruction applies to the complement; in the resulting LF-structure the trace is canonically governed by the matrix verb, and as a result the ECP is satisfied.

The ungrammaticality of (203) can be quite easily explained in another way, though. Recall that in section 3 I have argued that nominative case can only be assigned under (chain-)government. This implies that the base position of the subject must be chain-governed by the matrix I. The D-Structure and S-Structure of (203) are as given (204a) and (204b), respectively.

- (204) a. dat [_{IP} [_{VP} Jan dat boek lezen] *te*] schijnt
 b. dat Jan_i schijnt [_{IP} [_{VP} *t_i* dat boek *t_j*] *te lezen_j*]

In (204a), the VP is not L-marked and is therefore a barrier for the NP *Jan*. Hence *Jan* is not governed, let alone chain-governed by the matrix I. In (204b), the VP is L-marked by the amalgam I+V *te lezen*. But now the complement has been extraposed and as a result the embedded I is no longer governed, since the IP is a barrier now, and, in addition, the embedded I is not c-commanded by the matrix verb. Hence, no chain can be formed that includes both the matrix and the embedded I. As a result, the base position of the subject is not chain-governed by the matrix I and will not receive case. Since the case filter must be satisfied at S-Structure (or at PF), Reconstruction of the complement at LF does not save the sentence from the Case Filter.⁴⁰

Summarizing, we may say that the problem that we considered in this subsection can be solved by assuming that extraposed clauses may be reconstructed at LF. This assumption makes it impossible to explain the ungrammaticality of (203) by recourse to the ECP. I have shown, however, that this ungrammaticality may be explained by taking recourse to the Case Filter.

6.2. Control

Now we have discussed the Third Construction, we can continue to discuss the differences between bare infinitivals and *te*-infinitivals with respect to control and ECM. In this subsection, control will be discussed.

Before we can start talking about control with respect to bare infinitives, it must be made clear that bare infinitivals may contain a PRO-subject. For this reason, I first give a short summary of Klooster (1986).

In Dutch, modal verbs as *kunnen*, *willen*, *mogen* and so on may be used either with an epistemic or a root reading. In their epistemic use, they modify the predicate, i.e. they indicate the probability of something to happen. In their root use, they express something about the subject of the clause, i.e. they express that the subject has the ability, the wish or the permission to do something.

In Klooster (1986), this difference in meaning has been related to a difference in subcategorizing properties of the modal; in their root use the modal verbs have an external argument, but in their epistemic use they have not. Since the modals do not have an external argument in their epistemic use, they are raising predicates in this case. In their root use, however, they are not. Since the modals select a bare infinitival in both readings, we may assume that they select a VP in both cases.

The modal verb in the sentence in (205) may have either an epistemic or a root meaning. According to the discussion above we have to attribute to the sentence the structure in (206a) in its epistemic use and the structure in (206b) in its root use. The presence of PRO in (206b) is due to the Θ -criterion.

- (205) dat Peter kan komen
that Peter may/is able to come
- (206) a. dat [_{IP} Peter_i [_{VP} *t_i* *t_j*] kan komen;
b. dat [_{IP} Peter [_{VP} PRO *t_i*] kan komen;

If the argument of Klooster is correct, we must assume that VP complements may contain PRO. The only requirement that must be fulfilled is that the external argument of the matrix verb receives a Θ -role by the matrix verb. In (206b) this is the case; *Peter* receives the 'ability' role. This role is not available in (206a).

In the remainder of this subsection, I will only present examples in which the condition that two distinct Θ -roles are available for the matrix subject and for PRO is fulfilled more clearly than in the case of the modals. Now, compare the sentences in (207) and (208).

- (207) dat Jan [PRO Duits *t_i*] leert spreken;
that John German learns speak
'that John is learning how to speak German'
- (208) dat Jan Peter [PRO Duits *t_i*] leert spreken;
that John Peter German teaches speaking
'that John is teaching Peter how to speak German'

In (207), PRO is controlled by the subject, and in (208) it is controlled by the indirect object, *Peter*.

Now consider the sentences in (209) and (210).

- (209) dat Jan [PRO dat boek *t_i*] probeert te lezen;
that John that book tries to read
'That John tries to read that book'
- (210) dat Jan Peter [PRO dat boek *t_i*] verbiedt te lezen;
that John Peter that book forbids to read
'that John is forbidding Peter to read that book'

In these sentences PRO may also be controlled by either the subject or the indirect object of the matrix clause, and therefore we seem to be bound to believe that there is no difference in control possibilities in construction that involve Raising of bare infinitives and *te*-infinitives, respectively.

In (210), we assumed that VR has applied. In 6.1, however, we have seen that we may only conclude this if the matrix verb appears as an infinitive in the perfect tense. As can be seen in (211) and (212), respectively, the matrix verb of (209) may appear as an infinitive, but the matrix verb of (210) may not. It can only appear in its participial form *verboden*.

- (211) dat Jan dat boek heeft proberen/geprobeerd te lezen
- (212) dat Jan hem dat boek heeft *verbieden/verboden te lezen

Consequently, we have to conclude that although VR may have been applied in (209), this cannot be the case in example (210), i.e. (210) must be an instance of the Third Construction. Hence, the structure in (210) is wrong and should be as indicated in (213).

- (213) dat Jan Peter dat boek_i verbiedt [PRO *t_i* te lezen]

If we go over the list of verbs that select *te*-infinitivals, we note that VR is only allowed if the matrix verb requires subject control. In case the verb requires object control, VR is always blocked and all the apparent cases of VR turn out to be instances of the Third Construction. As a result, we have to conclude that VR of *te*-infinitives, is impossible if object control is required. VR of bare infinitives, however, is possible in this case. How can we explain this difference?

One possible explanation has already been raised by Evers (1975:38 ff.). He assumes that the presence of a dative NP (among other constituents) may block VR. The problem with this account, though, is that it predicts that VR of bare infinitives is also blocked by the presence of a dative NP. As we have seen, this is evidently not the case (cf. (208), for which Evers assumes a similar structure as I do here).

In Broekhuis and Hoekstra (1990), a different approach has been taken to tackle this question. As we have assumed in the introduction of this section, VR is only possible if a T-chain has been formed. The T-chains formed differ in only one respect; in case of a bare infinitives the T-chain does not contain an embedded I, but in case of a *te*-infinitives it does. This has been stated in (188), repeated here for convenience as (214).

- (214) bare infinitivals: [I, V1, ..., Vn]
te-infinitivals: [I, V1, ..., I, ..., Vn]

In the introduction to this section, we have already assumed that a T-chain may only contain an embedded I, if this I is deficient in one way or another. We may state this in a different way, however. Since a T-chain is constituted by coindexing, we may assume that a T-chain may only contain an embedded I, if the reference of the embedded I is identical to the reference of the matrix I. Consequently, VR of *te*-infinitives is only possible if the temporal reference of the embedded I is identical to the temporal reference of the matrix I.

Since I does not only contain Tense, but also Agreement features, the same line of reasoning may be used to explain the impossibility of VR of *te*-infinitives in case the matrix verb requires object control. VR is only possible if the embedded I has been coindexed with the matrix I. As a

result, the nominal references of the Agreement features of the matrix and the embedded I must be identical.⁴¹ Consequently, the reference of the NP that is coindexed with the matrix I (the subject of the matrix clause) must be identical to the reference of the NP that is coindexed with the embedded I, i.e. the PRO-subject. If the matrix verb requires object control, this, of course, cannot be fulfilled.⁴²

In case of VR of bare infinitives, the referential identity that is forced in case of *te*-infinitives, does not necessarily occur. The T-chain that has been formed does not contain an embedded I in this case. Hence PRO is not coindexed with a link of the T-chain and its reference may be established independently of the reference of the matrix subject. As a result, both subject and object control is possible.

6.3. Exceptional Case Marking

The proposal put forward in the previous subsection provides an explanation of the fact that VR of *te*-infinitives is restricted to subject control constructions, and that VR of bare infinitives is also possible in object control constructions. However, it does not say anything about other constructions in which VR is blocked. For instance, VR of *te*-infinitives (but not of bare infinitives) is generally impossible if an indirect object is present in the matrix clause. This might lead one to reject the proposal given here, because if we can give an explanation for the latter fact, the facts discussed above follow immediately. Unfortunately, I am not aware of any such explanation; any proposal I have heard of so far also blocks VR of bare infinitives if an indirect object is present.

One of the merits of the proposal given here is that it explains a second difference between *te*-infinitives and bare infinitives as well. First, consider the English sentences in (215) and (216).

(215) I heard [_{VP} Peter lock the door]

(216) I expected [_{IP} Peter to lock the door]

In English, ECM is possible both to the subject of a bare infinitival and to the subject of a *to*-infinitival. In Dutch, however, ECM is blocked in the latter case.

(217) dat ik [_{VP} Peter de deur *t_i*] hoorde sluiten
that I Peter the door heard lock

(218) *dat ik [_{IP} Peter de deur *t_i*] verwachtte te sluiten
that I Peter the door expected to lock

How can this difference between English and Dutch be explained? Let us first consider (218). Since VR has applied, a T-chain has been formed

that includes both the matrix and the embedded I. As we have seen in the previous subsection, the presence of this T-chain forces the references of the matrix and the embedded subject to be identical. Evidently this is not the case in (218) and therefore the sentence is ungrammatical.⁴³

The only possibility to avoid the formation of a T-chain that includes both the matrix and the embedded I is by Extraposition.

(219) *dat ik verwachtte [_{IP} Peter de deur te sluiten]

After Extraposition, however, the embedded subject is not chain-governed by the matrix verb, and hence it cannot be assigned case. The above explanation of the ungrammaticality of (219) is therefore similar to the earlier given explanation of the impossibility of extraposition in the case of Subject Raising (cf. (203)).

(217) is grammatical, since the T-chain that has been formed does not contain an embedded I as an intermediate link. As in the case of PRO, this means that the reference of the embedded subject is not necessarily identical to the reference of the matrix verb. As a result the sentence is fine.

The English sentence in (215) is not problematic. Now, how can (216) be grammatical? Contrary to Dutch, English has NP-movement. Hence the subject of the embedded clause may be moved to a case-marked position in order to receive case. Since the matrix verb in (216) assigns objective case under government, SpecIP is assigned case. Consequently, the embedded subject may move to this position in order to receive case.

Because the embedded verb in (216) may be T-identified by the embedded Tense at LF, there is no need to establish a T-chain that includes both the matrix and the embedded I. The references of the matrix and the embedded subjects therefore need not be identical. This explains the grammaticality of (216).

6.4. A final note on binding

In the previous sections, we have seen that the notion 'chain-government' plays an important role in several modules of the grammar. In section 3 we have seen that in unaccusative constructions nominative case is assigned under chain-government to the base position of the S-Structure subject of the clause.

In section 4, we have seen that the distinction between 'government' and 'chain-government' may be used to define two distinct notions of 'governing category', i.e. the Θ -governing and the case-governing category. I repeat the definitions given in section 4 for convenience.

(220) β is a Θ -governing category for α iff β is the minimal category containing α , a Θ -governor of α , and a SUBJECT accessible to α .

- (221) α Θ -governs β iff α governs and Θ -marks β .
- (222) β is a *case-governing category* for α iff β is the minimal category containing α , a case-governor of α , and a SUBJECT accessible to α .
- (223) α *case-governs* β iff α is the head of the chain that contains the (chain-)governor that assigns case to β .

On the basis of these definitions we have been able to formulate the following binding conditions for the Dutch anaphors.

- (224) An anaphor must be bound within its case-governing category, and (if possible):
- (i) A1 (*zichzelf* and *elkaar*) must be bound within its Θ -governing category.
- (ii) A2 (*zich*) must be free within its Θ -governing category.

In section 5, we have seen that T-chains are established under chain-government. Some properties of T-chains have been discussed in the previous subsection.

In this subsection, I want to discuss a problem concerning binding that we have left aside in section 4. As has been frequently noted (cf. for example Koster 1987, Broekhuis 1988b, Reinhart and Reuland forthcoming), if the reflexive *zich* is an argument of a *te*-infinitive, it can never be bound by an antecedent that is not contained within its own clause, whereas, as we have seen in section 4, it can be bound outside of its own clause if it is an argument of a bare infinitive.⁴⁴ Compare for instance the following examples. As before coindexing is indicated by italics.

- (225) dat *Jan* Peter op *zich* liet schieten
that John Peter at himself let shoot
'that John let Peter shoot at him'
- (226) a. *dat *Jan* heeft geprobeerd op *zich* te schieten
that John has tried at himself to shoot
b. *dat *Jan* op *zich* heeft proberen te schieten
that John at himself has try to shoot
'that John tried to shoot at himself'

As we have seen in section 4, in (225) the following chain is formed (as before we neglect the matrix I): [V(*liet*), V(*schieten*), P(*op*)]. Hence, *zich* is chain-governed by the matrix verb *liet* and the matrix clause is its case-governing category as a result. Since the PP has no subject, but the embedded clause does, namely *Peter*, the latter is the Θ -governing category for *zich*. Consequently, in (225) *zich* is bound within its case-governing category, but free within its Θ -governing category, thus satisfying (224).

In (226a), Extraposition has applied. As we have seen in the section 6.1, this implies that two independent T-chains have been formed. Since T-chains are formed under chain-government, this implies that *zich* is not chain-governed by the matrix-verb. As a result, the embedded clause is its case-governing category. Since the PP does not have a subject, the embedded clause is its Θ -governing category as well. According to (224), *zich* cannot simultaneously be bound within its case-governing category and free within its Θ -governing category, and as a result (226a) is ungrammatical.

Since the matrix verb in (226b) has its infinitival form, we may conclude that VR has applied. As I have argued in section 6.1, this means that in (226) only one T-chain has been established. Since T-chains are formed under chain-government, this implies that we have at least the following governing chain in (226b): [V(*proberen*), I(*te*), V(*schieten*)]. However, since the verb *schieten* and the preposition *op* may also be coindexed, we have to assume that the chain includes this preposition as well. This means that *zich* is chain-governed by the matrix verb and that the matrix clause is its case-governing category. Since the embedded clause is the Θ -governing category for *zich*, we expect that *zich* may be bound by the subject of the matrix clause. Nevertheless, (226b) is ungrammatical.

This ungrammaticality can be explained quite easily. Since the verb *proberen* requires subject control, binding of *zich* by the matrix subject would imply that *zich* is also bound by the subject of the embedded clause, PRO. This, in its turn, would mean that *zich* is bound within its Θ -governing category, thus violating (224). Since there is no other binder for *zich*, the sentence is ungrammatical.

So far, we have seen that there are two reasons for the impossibility for *zich* as an argument of a *te*-infinitive to be bound by the matrix subject. If Extraposition has applied, *zich* will not be chain-governed by the matrix verb, and thus the matrix subject is not included in the case-governing category for *zich*. If VR has applied, *zich* will be chain-governed by the matrix verb and the matrix subject is in its case-governing category. But if the embedded subject, PRO, is controlled by the matrix verb, *zich* is also bound within its Θ -governing category, thereby violating (224).

The only remaining logical possibility, now, is a construction in which VR has applied, but in which no subject control is required. If *zich* is bound by the matrix subject, it is not simultaneously bound within its case- and Θ -governing categories in this case. In the previous section, however, we have seen that such a construction never occurs, since in *te*-infinitivals VR is always blocked if object control is required. This completes the explanation of why *zich* can never be bound by the matrix subject if it is an argument of a *te*-infinitive.

6.5. Conclusion

In this section, some differences between bare infinitives and *te*-infinitives

in VR contexts have been discussed. These differences are connected to the difference between the T-chains that are formed in these contexts.

7. GENERAL CONCLUSION

In this article, I have argued that the notion 'chain-government' plays a role in several modules of the grammar. The modules in question are Case, Binding and Tense theory. With this, I have shown that this notion is independently motivated. Consequently, the criticism that 'chain-government' is an *ad hoc* device is no longer tenable.

NOTES

1. In Broekhuis and Hoekstra (1990), it has been argued that the notion 'exclusion' must be shifted from the definition of government to the definition of c-command. According to their proposal c-command must be defined as in (i).

- (i) α c-commands β iff α does not dominate β and the node immediately dominating α does not exclude β .

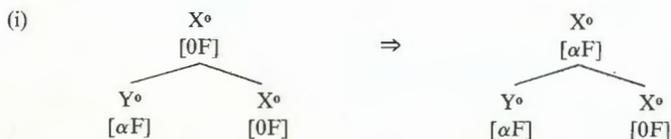
Probably, this definition (which comes very close to the full definition of c-command in Reinhart 1983:23) is what we need to allow for movement of adjuncts. Since nothing in this study crucially hinges on the proper definition of this notion, I will not digress on this issue here (cf. Broekhuis in prep. for elaborate discussion).

2. If my suggestions are on the right track here, we have to assume that Affix Hopping and *do*-support in non-interrogative clauses are phonological rules that save the sentence from the Stray Affix Filter (Baker 1988:140).

3. The notion 'lexical category' is somewhat misleading, since it suggests that a category is lexical as soon as it contains phonological material. Given this interpretation of 'lexical', I in (20) would be lexical, since it contains the phonological word *te*.

If I use the notion 'lexical category', I refer to a category specified with respect to the features $[\pm N, \pm V]$, i.e. to a category of the type N, V, A or P. The non-lexical (functional) categories are not specified with respect to these features. As a result of this stipulation, I and C are non-lexical categories, even though they may have phonological content such as *ie/to*, *dat/that* and *om*.

The assumption that movement of a lexical category to a non-lexical category lexicalizes the latter can be accounted for by assuming that in the structure in (i) the feature F of the incorporated head Y^0 may percolate up to the higher X^0 node as long as X^0 is not specified for F. (cf. for example Roeper 1987).



If X^0 is I and Y^0 is V, the higher X^0 becomes a lexical category of the type $[-N, +V]$.

4. Irrelevant details are omitted. In (28), it is assumed that the auxiliary *heeft* occupies the I-position. I will not go into the question of whether it is base-generated in this position or has arrived there by movement.

5. I will not go into the precise position of the adverbial *waarschijnlijk* in (28b). Generally it is assumed that sentence adverbials are not within the VP-domain. Here it is assumed that they are generated as adjuncts of I' .

Note that if sentence adverbials are not generated as adjuncts of I' , but of VP, (11) has to be modified in such a way that it does not refer to base-generated adjuncts, otherwise the presence of such adverbials will always create VP-islands. This is not true in Dutch. The consequence of such an assumption to (28a) is that t_j can be related to its antecedent through a well-formed chain, but that t_i cannot.

6. One may assume that Verb second enables C to L-mark IP (cf. the discussion of verb movement in 2.3.1.). As a result the latter is not a barrier. This would imply, however, that C L-marks IP. I will not commit myself to this assumption.

7. In my review of Den Besten (1985), the remarks on this paper in Den Besten (1989) are taken into account as well. Sometimes, this leads to incongruities between my review and the original paper. For example, I follow the remarks in rejecting the idea that there is no I in Dutch and German and that Tense is therefore situated in C. For reasons of space, I cannot discuss Den Besten's treatment of the ACC-NOM verbs here. These verbs are extensively discussed in Broekhuis (in prep.).

8. In Den Besten (1985), it is assumed that the indirect object is immediately dominated by VP. In accordance with the VP-internal subject hypothesis, I assume here that the indirect object is dominated by an intermediate projection of the verb. Further, Den Besten assumes that in Dutch the indirect object is not governed by V, as in English, but by V' and that it is assigned dative case by this intermediate projection. Given the fact that we assumed in the previous section that all governors are heads, this option is not available to us. However, if we adopt the definition of c-command as given in fn. 1, and if we assume that the two V' -nodes are segments of the same projection, the verb *bevalen* c-commands, and hence governs, both NPs in (45). Therefore, we may assume that dative case is assigned structurally by the verb. This will also account for the fact that in Dutch (and German) there are two passive alternates of the bi-transitive construction: one in which the direct object (the *worden/zijn*-passive) and one in which the indirect object is promoted to subject (the *krijgen*- or semi-passive).

9. 'NP-movement' has to be construed here as movement of an NP to SpecIP *in order for the NP to receive case*. Contrary to what is suggested in Den Besten (1990), I never argued that in Dutch movement to SpecIP is excluded in general. This does not necessarily imply, however, that non-nominative constituents, such as the indirect object *mijn broer* in (44), may be moved to SpecIP as has been assumed by Den Besten (1985) and others (see fn.20 for some empirical evidence against this option). Such movements are probably blocked for the following reason. As is now generally assumed, the head of a functional category XP agrees with the specifier of XP (if present). As a result the SPEC-position of XP is only accessible to an NP that agrees with the head of XP. Since I only agrees with the NP that is assigned nominative case, only this NP can be moved to SpecIP. This solves the problem (if it is a problem at all) of multiple derivations discussed in Den Besten (1989, 1990).

10. If the indirect object is governed by V, as has been suggested in fn.8, and if (52) is the correct generalization, we would expect (50b) to be grammatical. In fact, I believe that this example is fully acceptable (for which reason I placed the question mark between parentheses). In Den Besten's examples, the indirect object is always followed by other material. Compare for instance the example in (i) with (50b).

- (i) Wat heb jij voor mensen *het/??het stuk gestuurd?
 What have you for people it/ the paper sent
 'What kind of people have you sent it/the paper to?'

This indeed gives rise to a degraded result. Probably, the degraded status is not the result of the *wat voor*-split, but of the fact that the direct object *het/het stuk* occupies its D-structure position. Cf. section 3.1.3 for relevant discussion.

11. Note that the proposal by Belletti (1988) that unaccusatives may assign partitive case does not solve this problem, since according to this proposal assignment of partitive case is restricted to indefinite NPs.

12. As we have seen in section 2, the finite verb, *bevalen*, first has to move to I, in order for I to be able to govern into VP. Perhaps this may lead one to think that it is V-movement itself that establishes the chain. This cannot be true, for, as we shall see in a moment, in (47b) the passive participle *gestuurd* is a link in the governing chain, even though it does not move to I. This is clear from the fact that it precedes the auxiliary *zijn*, which is occupying I.

13. Another proposal to account for the ungrammaticality of (59c) and (60c) can be found in Bennis and Hoekstra (1989c). They assume (i) that PRO is always an anaphor and (ii) that an anaphor can be bound either by a syntactically realized argument or by an implicit argument. This implicit argument is the agent of a passive sentence or can be realized as a *voor*-PP in Dutch. Since neither *certain* nor *probable* have an implicit argument, (59a) and (59c) are ungrammatical. If this suggestion is on the right track, the difference between (62a) and (62c) can be explained by assuming that *certain* selects an IP and *probable* selects a CP. It is not clear, however, whether this proposal can be maintained. Compare (i).

- (i) Het is schadelijk voor het milieu [om PRO vuilnis te storten]
It is harmful to the environment COMP waste to dump
'It is harmful to the environment to dump waste'

In (i), there is neither a lexical nor an implicit argument to bind PRO. Consequently, the sentence should be ungrammatical. For this reason, it seems that we have to reject Bennis and Hoekstra's proposal. Cf. Broekhuis and Hoekstra (to appear) for some additional objections to their proposal.

14. The sentence in (i) is fine, but differs from the one given in the text. This can be shown by dropping the complement. In this case the sentence is still fine. Consequently the subject of the main clause cannot have been extracted from the embedded clause. So the subject of the embedded clause cannot be NP-trace, but has to be PRO.

- (i) Jan is er zeker van te winnen
(ii) Jan is er zeker van
'John is certain about winning/it'

15. Note that this argument is not conclusive. Since Extraposition of the sentential complement is obligatory, there may be another explanation for the ungrammaticality of the constructions (cf. section 6).

16. Possibly, (67) may have to be revised in yet another way by assuming that the restriction in (67,i) only holds for β . This option may be preferable if one wants to make the claim that θ -roles can be assigned compositionally. I will not discuss the matter here.

17. The distribution of expletive *er* is very complicated, since its occurrence does not only depend on the (in-)definiteness of the subject, but also on the (in-)definiteness of the object. If we only take these arguments into consideration, its distribution is restricted in the following way:

- (i) Expletive *er* only occurs if: (a) the verb is intransitive and the subject is indefinite, or: (b) the verb is transitive and both the subject and the object are indefinite.

If we assume that interrogative phrases as *wie* are indefinite NPs, the descriptive generalization in (i) accounts for the following paradigm:

- (ii) a. Wie las (*er) het boek?
Who read there the book

- b. Wie las *(er) een boek?
Who read there a book

- (iii) a. Wie denk je dat (*er) het boek las?
Who think you that there the book read
'Who do you think read the book?'
b. Wie denk je dat *(er) een boek las?
Who think you that there a book read

18. Since *wh*-phrases and non-specific indefinite NPs behave similarly with respect to the distribution of expletive *er*, I assume that at S-Structure non-specific indefinite subjects of unergative verbs remain in SpecVP also (cf. 3.2.2). In general, I assume from now on that the presence of the expletive *er* indicates that SpecIP is not filled (or maybe better: is not present).

19. According to the TLR-reviewer, the subject can also be split if it has been scrambled into a position preceding the adverbial sequence *gisteren waarschijnlijk* 'yesterday probably' as in (i).

- (i) Wat hebben er voor vogels gisteren waarschijnlijk je voedertafel bezocht?

This examples does not sound acceptable to me. Nevertheless, if the reviewer intends to claim that a split subject can precede an adverb of time, he is certainly right; (i) is acceptable to me if we drop the adverb *waarschijnlijk*. But this does not show that the subject has been scrambled, since we may assume that adverbs of time are generated VP-internally. (I refer to section 3.2.2 for an empirical motivation of this assumption.) If this assumption is correct, we predict that the placement of underlying and derived subjects differ in the following way; split underlying subjects may precede the adverbs of time (as is the case in (i) if we drop *waarschijnlijk*), but split derived subjects must follow them. As can be seen in (ii), placement of a split derived subject in front of an adverb of time indeed has a degrading effect.

- (ii) a. Wat zijn er gisteren voor mensen aangekomen?
What has-been there yesterday for people arrived
'What kind of people have arrived yesterday?'
b. *?Wat zijn er voor mensen gisteren aangekomen?

20. If this conclusion can be maintained, we are able to give empirical support to the claim that SpecIP is only accessible to the subject of the clause (cf. fn.9). If the subject can be assigned nominative in its SpecVP position and SpecIP position is accessible to other constituents, we would predict that the subject of the clause can always be preceded by another constituent. This is not the case in Dutch as can be seen in (i) and (ii).

- (i) *dat dat boek Jan leest
that that book John reads
'that John is reading the book'
(ii) *dat op zijn vader Jan wacht
that for his father John waits
'that John is waiting for his father'

Cf. Vikner (1990, ch.2) for a more extensive discussion of the topicalization to SpecIP-hypothesis.

21. One may wonder why NP-movement to SpecVP cannot save (84b) from the Case filter. Obviously, we have to restrict NP-movement to the specifier positions of functional projections. To account for this restriction, we may assume that the presence of SpecVP is determined

by the lexical properties of the verb, i.e. SpecVP is only available to unergative verbs.

22. The TLR-reviewer notes that a parasitic gap can also be licensed by preposing of a non-specific derived subject, as in (i).

- (i) ?dat er boeken [zonder *e* te bekijken] *t* werden weggelegd

Given the discussion in the previous subsection, this is expected if the infinitival clause is generated VP-internally. Given the fact that it may follow the sentence adverbs (cf. (ii)), and that it can be taken along under VP-topicalization, this assumption seems to be well-motivated.

- (ii) ?dat er waarschijnlijk boeken [zonder *e* te bekijken] *t* zijn weggelegd

- (iii) [[zonder *e* te bekijken] *t* weggelegd] zijn die boeken niet

23. In Vanden Wyngaerd (1989) it has been proposed that Scrambling of the object is movement to the specifier of SpecAGR_{OP}. As he shows, in this way we are able to explain the fact under consideration. Vikner (1990) however has pointed out that Dutch and German do not exhibit this kind of movement.

24. This section is a condensed and simplified version of Broekhuis (1988b). Since the main point of this section is to show that chain-government plays an important role in the module of binding, I skip over a lot of major and minor points to save space. For instance, the distribution of the two types of pronominals Dutch distinguishes may be very easily explained by extending the theory proposed here, but will not be discussed here.

25. A problem is that in (i) *zich* cannot be bound by *Jan*. I refer the reader to Broekhuis (1988b) for the solution to this and other problems concerning A.c.I.-constructions.

- (i) *Jan liet [_{VP} Peter *zich* bewonderen]

26. In fact, the anaphor is governed by the preposition. If we adopt the suggestion given in section 3, fn.16, we may claim that the anaphor is governed by the preposition, but chain-governed by the adjective/noun. Since the preposition is non-locational and therefore has no external argument, this assumption has no consequences for the topic under consideration.

27. If we assume that *zijn* 'to be' is an ergative verb, and that the subject of the sentence is the D-Structure subject of the AP, (127) reduces to (128). In (129) we may assume that the NP contains a PRO-subject (cf. Chomsky 1986b) that is controlled by *Jan*. In this case the facts follow immediately.

28. Probably, what has been called NP in (131-133) has to be called DP (cf. Abney 1987). In Broekhuis (1990), it has been attempted to give a unified account for both (131-133) and (129) and (130).

In Zwart (1989), it has been argued that in *een goed verdediger van zichzelf* the affix *-er* bears the external Θ -role of the stem *verdedig*, and that the anaphor has to be bound by this affix. The coreferentiality facts in (131-133) are assumed to follow from the subject-predicate relation between *Marie* and the nominal predicate. Although this is an interesting idea, it leaves unexplained that we find the same facts if the noun is not derived from a verb.

- (i) *Marie* is een probleem voor *zichzelf*/**zich*
'Mary is a problem to herself'
- (ii) Jan acht *Marie* een probleem voor *zichzelf*/**zich*
John considers Mary a problem to herself'
- (iii) Jan acht *Marie* een probleem voor **zichzelf*/**zich*
'John considers Mary a problem to himself'

29. If we want to assume that Θ -roles may be assigned compositionally (cf. section 3, fn.16), the notion 'government' must be replaced by 'chain-government'. I will not discuss the matter here.

30. Note that this is also a problem for Bennis and Hoekstra's assumption that in English Tense is base-generated in I. By this assumption, T-composition is always blocked in English.

31. The need of Extraposition remains mysterious. I believe, however, that V2 in Dutch can be accounted for by exploiting the *wh*-criterion that has recently been proposed in Rizzi (1990, 1991), but I will not elaborate this here.

32. Of course, in Evers (1975) various arguments have been given in favour of a left-adjoining VR-rule. In Den Besten and Broekhuis (to appear), these arguments have been discussed extensively and are shown not to be tenable. For reasons of space, I do not digress on this issue here. Note that if left-adjoining VR is not possible, the following German example cannot be derived by VR (as has been claimed by Den Besten and Edmondson 1983), but must be derived by Verb Projection Raising.

- (i) dass er hätte kommen können
that he has come can

33. As far as T-linking is concerned the proposal of Rutten (1991) is similar to the one presented below. It differs, however, in that it predicts the obligatoriness of VR by requiring a verb to be assigned verbal case; adapting an idea of Baker (1988), Rutten assumes that in Dutch assignment of verbal case is only possible by incorporation of the verb, i.e. VR.

34. It is not immediately clear whether this principle is language-specific or not. Consider for example the following example taken from a dialect spoken in central Holland (Stroop 1970) which seems to violate this principle *as far as it concerns the finite verb*:

- (i) (de boeken) die ik u laten zien heb
the books that I you let see have
'the books that I have shown you'

The order in (i) can however be derived without violating principle (181). In (ii) a simplified D-structure of (i) is given. After VR (145A,i) the structure is as given in (iii).

- (ii) ... zien] laten] heb] I]
(iii) ... t₁] t₂] [_V heb [_V laten₂ zien₁]] I]

As we have seen before, in the standard variety of Dutch the verbal cluster *heb laten zien* moves to I as a whole (145A,ii) and subsequently the highest verb may be moved to I (145B,i). This results in the order *heb laten zien*. Nothing, however, blocks the highest verb to move to I (145B,i) directly. This results in the order in (ii). Since substitution of V for I is not VR (or adjunction; cf. (1284) to be discussed in the next subsection), this movement does not bear on principle (181).

35. We did not yet discuss the Raising of *te*-infinitives as in (i). Since we rejected the notion 'T-composition', for the moment we have no explanation for this construction. In the next section, though, it will be argued that *heeft proberen te lezen* constitutes a single T-chain. Given this assumption, VR is forced by (184), since adjunction of *lezen* to *te* is necessary to void the barrierhood of the embedded VP; if *te lezen* does not adjoin to the matrix verb in its turn, (184) would be violated.

- (i) dat Jan dat boek probeert te lezen/*te lezen probeert
that John that book tries to read
'that Jan tries to read this book'

Note that the German example in (ii) may be a problem for (184).

- (ii) dass er Dein Buch zu lesen versucht
that he your book to read tries
'that he tries to read your book'

For discussion of this example, I refer the reader to Den Besten and Broekhuis (to appear). 36. Note that this analysis implies that SpecCP cannot be a link in a Scrambling-chain. We may exclude SpecCP as an intermediate landing-site by assuming that this is a case of improper movement, i.e. by assuming a COMP-to-COMP Condition as in Chomsky (1973). If there really exist such a condition, we exclude adjunction to VP as an intermediate step in a long *wh*-chain as well, but of course such intermediate adjunctions are not needed in our framework.

37. Note that for the same reason we must assume that PRO cannot be governed by virtue of the fact that its trace is governed. Of course, this is the normal situation as will be clear from (i).

- (i) *Who_i do you think that t_i has been killed t_i

In (i) the *wh*-trace violates the ECP even though the NP-trace is (properly) governed by the verb *killed*.

38. In Broekhuis and Hoekstra (1990) we did not have a solution for the problem Reconstruction poses for (203), to be discussed in a moment. We were therefore forced to assume that an extraposed clause may be L-marked by the amalgam I + V that is formed at S-Structure. Given the fact that the auxiliary does not Θ -mark the sentential complement, this suggestion must be rejected as implausible.

39. Note that the presence of a barrier at S-Structure is not necessarily a problem for Long distance Scrambling, if we assume that both the extraposed clause and the scrambled element are adjoined to the I' of the matrix clause. If the embedded IP is a barrier, Long distance Scrambling of course crosses one barrier, the IP, but since the scrambled element is dominated by the maximal projection that immediately dominates IP, the IP of the matrix clause, the trace will nevertheless be subjacent to its trace, and hence chain-formation will be possible. Consequently, Reconstruction is not necessary to fulfil the Identification Requirement on traces.

However, there is independent evidence for Reconstruction of sentential complements at LF. Consider the following example:

- (i) Hoe had hij gezegd [t' dat [hij het probleem zou oplossen]]
How had he said that he the problem would solve

Example (i) is a case of regular *wh*-extraction. Since the embedded clause is obligatorily extraposed (which can be seen from the fact that it follows the verb *gezegd*), we must assume that the intermediate trace *t'* is not governed by the verb *gezegd*, and hence it should induce an ECP-violation (or, if we delete the trace, a violation of the Identification Requirement on traces). Of course, this example can be saved by Reconstruction of the complement at LF. By the way, note that this implies that the ECP does not apply at S-Structure as assumed by Rizzi (1990), but (only) at LF.

40. In Bennis and Hoekstra (1989b, p.177 ff.), it has been claimed that the Dutch counterparts of the English verbs of the *believe* type allow Subject Raising if they are passivized. Consider for example the sentence in (i). If Bennis and Hoekstra are right, the structure of (i) is as given in (ii). Since this structure is similar to the one in (203), one would expect it to be excluded by either the ECP or the Case Filter.

- (i) dat Jan geacht wordt nog te kunnen lopen
that John considered is still to be able walk
'that John is considered still to be able to walk'

- (ii) dat Jan_i geacht wordt [_{IP} t_i nog te kunnen lopen]

Raising Passives as in (i) are considered archaic by most speakers and their use seems to be restricted to very formal registers. Further, speakers tend to disagree with each other with respect to their judgments on less familiar cases (even Bennis and Hoekstra admit that Raising Passives are not always felicitous). For example, According to Marcel den Dikken (p.c.) the participle *geacht* can be substituted for *beweerd* 'claimed', *geloofd* 'believed', *gemeend* 'meant', *verwacht* 'expected' and *gezegd* 'said', whereas other informants (including myself) generally reject these possibilities.

This discussion may lead one to the conclusion that constructions as in (i) are not syntactically derived (i.e. are not part of core grammar, but part of the marked periphery).

41. In Evers (1990) it is assumed that infinitival I is anaphoric in that it is dependent on the matrix I for its values, mood and agreement. The proposal of Broekhuis and Hoekstra seems to amount to the same thing. Note, however, that they assume that infinitival I is 'non-anaphoric' if Extraposition applies. It is not clear to me whether Evers would agree on this or not.

42. Note that there may be a problem here. Suppose that the matrix verb requires object control and that the indirect object is an anaphor that is bound by the subject of the matrix clause. In this case object control of PRO implies coreference of PRO and the matrix subject, but still VR is blocked. This indicates that the type of coreference we are discussing in the main text (identity), is not identical to the type of coreference that arises from binding (referential dependency). It will lead me too far afield to discuss this difference here. In Hoekstra (in prep.), this difference will be discussed more extensively.

43. Cf. Evers (1990:228). A problem similar to the one discussed in the previous footnote arises here. If the subject of the *te*-infinitival is an anaphor, ECM is still blocked, in spite of the fact that the matrix and the embedded subject are coreferential. Hence, we need a stronger notion than coreference, i.e. identity.

44. The explanation given for this fact in this section differs from the one given in Broekhuis (1988b). There it has been stipulated that I has the feature [+N] and is thus not able to be coindexed with the higher verb. Given the acceptability of VR of *te*-infinitives this stipulation has to be dropped.

REFERENCES

- Abney, S.P. (1987). *The English Noun Phrase in its Sentential Aspect*. MIT diss.
Aoun, J. and D.Sportiche (1983). On the Formal Theory of Government. *The Linguistic Review* 3, 211-235.
Baker, M.C. (1988). *Incorporation. A Theory of Grammatical Function Change*. Chicago/London.
Belletti, A. (1988). The Case of Unaccusatives. *Linguistic Inquiry* 19, 1-34.
Belletti, A. and L.Rizzi (1988). Psych-verbs and Θ -theory. *Natural Language and Linguistic Theory* 6, 291-352.
Bennis, H. (1986). *Gaps and dummies*. Dordrecht/Riverton 1986.
Bennis, H. and T.Hoekstra (1984). Gaps and Parasitic Gaps. *The Linguistic Review* 4, 29-87.
Bennis, H. and T.Hoekstra (1989a). Why Kaatje Was Not Heard Sing a Song. In D.Jaspers et. al. (eds.). *Sentential Complementation and the Lexicon. Studies in Honour of Wim de Geest*. Dordrecht.
Bennis, H. and T.Hoekstra (1989b). *Generatieve grammatica*. Dordrecht/ Providence.
Bennis, H. and T.Hoekstra (1989c). PRO and the Binding Theory. H.Bennis and A.van Kemenade (eds.). *Linguistics in the Netherlands 1989*. Dordrecht/Providence.
Besten, H. den (1981). A Case Filter for Passives. In A. Belletti et.al. *Theory of Markedness in Generative Grammar. Proceedings of the 1979 GLOW Conference*. Pisa.

- Besten, H. den (1982). Some Remarks on the Ergative Hypothesis. *Groninger Arbeiten zur Germanistischen Linguistik* (GAGL) 21, 61-81.
- Besten, H. den (1985). The Ergative Hypothesis and Free Word Order in Dutch and German. In Jindrich Toman (ed.). *Studies in German grammar*. Dordrecht/Cinnaminson.
- Besten, J.B. den (1989). *Studies in West Germanic Syntax*. Diss. Tilburg.
- Besten, H. den (1990). The Syntax of Nominatives in SOV Germanic. In J.Mascaró and M.Nespor 1990
- Besten, H. den and J.Edmondson 1983. The Verbal Complex in Continental West Germanic. In W.Abraham (red.) 1983. *On the Formal Syntax of the Westgermania. Papers from the "3rd Groningen Grammar Talks", January 1981*. Amsterdam/Philadelphia.
- Besten, H. den, J.Rutten, T.Veenstra and J.Veld (1988). *Verb Raising, Extrapositie en de derde constructie*. ms. University of Amsterdam.
- Besten, H. den and J. Rutten (1989). On Verb Raising, Extraposition and Free Word Order in Dutch. In D.Jaspers e.a. (eds.) *Sentential Complementation and the Lexicon. Studies in Honour of Wim de Geest*. Dordrecht.
- Besten, H. den and H.Broekhuis (to appear). Woordvolgorde in de werkwoordelijke eindreeks. *GLOT* 13,1.
- Broekhuis, H. (1988a). *A- en A'-binden in het Nederlands*. M.A.-thesis University of Amsterdam.
- Broekhuis, H. (1988b). Small Clause PP's en binding. *GLOT* 11, 243-280.
- Broekhuis, H. (1990). *Scrambling en de specificiteitsrestrictie*. ms. University of Amsterdam.
- Broekhuis, H. (in prep). *Word Order Variation in Dutch and Chain-government*. Diss. University of Amsterdam.
- Broekhuis, H. and K.Hoekstra (1990). Verb Raising, Extrapositie en controle. *Tabu* 20, 153-174.
- Broekhuis, H. and K.Hoekstra (to appear). The Configurational Condition on Government: some Evidence from Control Theory. In S.Barbiers et.al. (eds). *Proceedings of LCJL* 3.
- Chomsky, N. (1973). Conditions on Transformations. In Chomsky (1977).
- Chomsky, N. (1976). Conditions on Rules of Grammar. In Chomsky (1977).
- Chomsky, N. (1977). *Essays on Form and Interpretation*. New York/Amsterdam/Oxford.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht/ Cinnaminson.
- Chomsky, N. (1982). *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge (Mass.)/London.
- Chomsky, N. (1986a). *Barriers*. Cambridge (Mass.)/London.
- Chomsky, N. (1986b). *Knowledge of Language. Its Nature, Origin, and Use*. New York/Westport/London.
- Chomsky, N. (1988). Some Notes on Economy of Derivation and Representation. In I.Laka and A.Mahajan (eds.). *Functional Heads and Clause Structure*. MIT Working Papers 10, 43-74.
- Dikken, M. den (1989). Verb Projection Raising en de analyse van het IPP-effect. *Tabu* 19, 59-75.
- Dikken, M. den (1990). The Structure of English Complex Particle Constructions. R.Bok-Bennema and P.Coopmans (eds.), *Linguistics in the Netherlands 1990*. Dordrecht/Providence.
- Evers, A. (1975). *The Transformational Cycle in Dutch and German*. Diss. Utrecht.
- Evers, A. (1982). Twee functionele principes voor de regel "Verschuif het werkwoord". In *Glott* 1, 11-30.
- Evers, A. (1990). 'The Infinitival Prefix "zu" as INFL'. G.Grewendorf and W.Sternefeld (eds.). *Scrambling and Barriers*. Amsterdam/Philadelphia.
- Everaert, M. (1981) Zich. In Saskia Daalder and Marinel Gerritsen (eds.): *Linguistics in the Netherlands 1981*. Amsterdam/Oxford/New York.
- Everaert, M. (1986). *The Syntax of Reflexivization*. Dordrecht/ Riverton.
- Fiengo, R and J.Higginbotham (1981). Opacity in NP. *Linguistic Analysis* 7, 395-421.
- Geerts, G. et. al. (eds.) (1984). *Algemene Nederlandse spraakkunst*. Groningen/Leuven.

- Geilfuß, J. (1991). *Verb- und Verbphrasensyntax*. Universität Stuttgart & Universität Tübingen. Arbeitspapiere des Sonderforschungsbereich 340. "Sprachtheoretische Grundlagen für die Computerlinguistik" 11.
- Grewendorf, G. (1989). *Ergativity in German*. Dordrecht/Providence.
- Hoekstra, K. (in prep). *Een syntaxis van PRO interpretatie*. Diss. University of Amsterdam.
- Hoekstra, T. (1984). *Transitivity. Grammatical Relations in Government-Binding Theory*. Dordrecht/Cinnaminson.
- Hoekstra, T., M.Lansu and M.Westerduin (1987). Complexe verba. *Glott* 10, 61-77.
- Hoekstra, T. and R.Mulder (1990). Unergatives as Copular Verbs; Locational and Existential Predication. *The Linguistic Review* 7, 1-79.
- Kayne, R.S. (1984). *Connectedness and Binary Branching*. Dordrecht/Cinnaminson.
- Klooster, W.G. (1986). 'Problemen met complementen'. *Tabu* 16, 112-132.
- Koopman, H. and D.Sportiche (1988). *Subjects*. ms. UCLA.
- Koster, J. (1978). *Locality Principles in Syntax*. Dordrecht/Cinnaminson.
- Koster, J. (1985). Reflexives in Dutch. In J.Guéron et. al. (eds.): *Grammatical Representations*. Dordrecht/Cinnaminson.
- Koster, J. (1986). The Relation between PRO-drop, Scrambling and Verb Movement. *Groningen Papers in Theoretical and Applied Linguistics, TTT nr.1*, University of Groningen.
- Koster, J. (1987). *Domains and Dynasties. The Radical Autonomy of Syntax*. Dordrecht/ Providence.
- Kraak, A. and W.G.Klooster (1968). *Syntaxis*. Culemburg/Keulen.
- Lasnik, H. and M.Saito (1984). On the Nature of Proper Government. *Linguistic Inquiry* 15, 235-289.
- Lasnik, H. and M.Saito (in prep). *Move-alpha*.
- Mascaró J. and M.Nespor (eds.) (1990). *Grammar in Progress. GLOW essays for Henk van Riemsdijk*. Dordrecht/Providence.
- Pardoen, J. (1986). Werkwoordclustering in de voltooide tijd. *Voortgang* 8, 49-76.
- Pollock, J. (1988). Verb Movement, Universal Grammar and the Structure of IP. *Linguistic Inquiry* 20, 365-424.
- Reinhart, T. (1983). *Anaphora and Semantic Interpretation*. London/ Sydney.
- Reinhart, T. and E.Reuland (forthcoming). Anaphoric Territories. In J.Koster and E.Reuland (eds.): *Long-Distance Anaphora*. Cambridge.
- Reuland, E. (1983). Government and the Search for AUXes: a Case Study in Cross-linguistic Category Identification. In F.Heny and B.Richards (eds.). *Linguistic Categories; Auxiliaries and Related Puzzles*, vol. one, 99-168.
- Reuland, E. (1985). Representations at the Level of Logical Form and the Definiteness Effect. In J. Guéron et. al. (eds.): *Grammatical Representation*. Dordrecht/Cinnaminson.
- Reuland, E. (1988). Indefinite Subjects. *Proceedings of NELS* 18, 375-394.
- Rizzi, L. (1990a). *Relativized Minimality*. Cambridge (Mass.)/London. MIT Press.
- Rizzi, L. (1990b). 'Speculations on Verb Second'. In Mascaró and Nespor (1990).
- Rizzi, L. (1991). 'Residual Verb Second and the Wh-criterion'. Technical Reports in Formal and Computational Linguistics 2. University of Genève.
- Roeper, T. (1987). 'Implicit Arguments and the Head-Complement Relation'. *Linguistic Inquiry* 18, P.267-310.
- Rutten, J. (1991). *Infinitival Complements and Auxiliaries*. Diss. University of Amsterdam.
- Sportiche, D. (1988). A Theory of Floating Quantifiers and Its Corollaries for Constituent Structure. *Linguistic Inquiry* 19, 425-449.
- Stroop, J. (1970). System in gesproken werkwoordsgroepen. *Taal en tongval* 22, 128-147.
- Travis, L. (1984). *Parameters and Effects of Word Order Variation*. Diss. MIT.
- Vat, J. (1981). Zich en zichzelf. In Saskia Daalder and Marinel Gerritsen (eds.): *Linguistics in the Netherlands 1980*. Amsterdam/ Oxford/New York.
- Verhagen, A. (1986). *Linguistic Theory and the Function of Word Order in Dutch. A study on Interpretative Aspects of the Order of Adverbials and Noun Phrases*. Dordrecht/Riverton.
- Vikner, S. (1990). *Verb Movement and the Licensing of NP-positions in the Germanic Languages*. Diss. Genève (draft).

- Vikner, S. (1990). *Scandinavian Object Shift versus Continental West Germanic Scrambling*.
Talk given at the 'Workshop on Scrambling'. Tilburg, October 18-20, 1990.
- Webelhuth, G. (1984). German is Configurational. *The Linguistic Review* 4, 203-246.
- Webelhuth, G. (1989). *Syntactic Saturation Phenomena and the Modern Germanic Languages*.
Diss. Massachusetts.
- Wyngaerd, G. Vanden (1989). Object Shift as an A-movement Rule. *MIT Working Papers
in Linguistics* 11.
- Zwart, J.-W. (1989). Over 'Bewonderaars van zichzelf'. *Tabu* 19, 202-216.

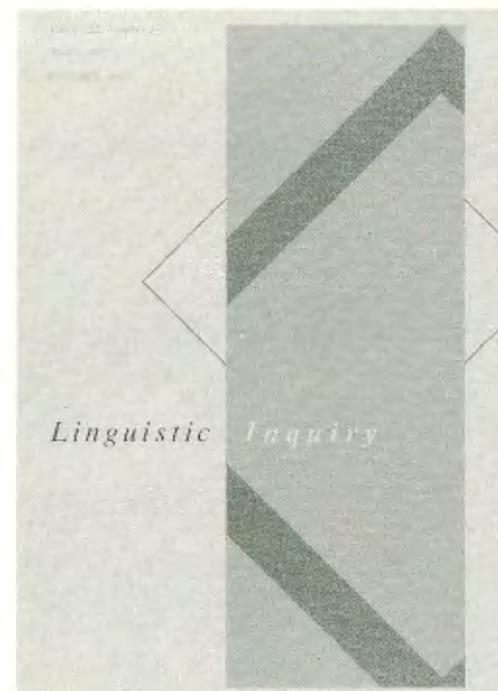
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