Dutch Syntax
A Minimalist Approach

Promotor: Prof. dr J. Koster

"Dans toutes les langues du monde il n'y a qu'une même manière nécessaire pour former un sens avec les mots..."

Cézec Cheuau du Marmal
(Encyclopédie, livr IV, 1764, s.l. 'Construction')

Cornelius Jan Wouter Zwart

geboren op 20 september 1960
te Oss
Acknowledgments

The idea to set off on the beaten track of Dutch syntax grew out of dissatisfaction with an introductory syntax class that I gave to the first-year students of the faculty of arts of our university in early 1990. As always, we from the general linguistics department were in desperate need of new students, and Jan Koster had left no doubt: this class was supposed to sell the students on the beauty of syntax. To that end, I had decided to illustrate to the students how a few simple rules account for the intricate patterns of verb movement in their own native tongue. I had really built up to this, but as I was explaining the standard analysis of verb second, I realized that what I was presenting fell far short of the wonders that I had promised.

I discussed this with Eric Heeksna and Jan Koster. Jan told me that what had always bothered him about the standard analysis of verb second was the unexpected impossibility of having a weak object in sentence-initial position. Neither of us at that time recalled Travis' discussion of the same paradigm, whose valuable contribution to the syntax of Germanic had been obscured by the success of her Head Movement Constraint. I felt rather silly when colleagues from the University of Tilburg told us that the solution we had found dated from 1984.

Wim Kosmeijer was also very helpful in drawing my attention to Bonnie Schwartz and Steven Vikner's 1989 article in Working Papers in Scandinavian Syntax, in which Travis' analysis is critically discussed. I found their arguments against Travis' ECP-account of verb movement in German convincing, but did not share their conclusion that Travis' description of the verb movement phenomena was, for that reason, incorrect. And Travis' description was still the only one in the literature that explained the asymmetry between weak subjects and weak objects that Jan Koster and I had discussed.

I had a hard time convincing Bonito and Sten of this point. I can still see Sten and me pacing angrily up and down a busy classroom in
Girona, in that wonderful summer of 1990, with Rex Sprouse and Bonnie Schwartz watching in amusement, and Andrea More, who happened to be in the same room, in what must have been amusement. All these people have become dear friends, and I am very grateful to Sten for his fierce opposition, which is only one of the ways in which he supported me over the years. Jan Koster's Girona 1990 course on my analysis, as it was developing, was also of great help in those early days. And, of course, Eric Hooekstra, with whom I had the fortune to discuss my work on a daily basis from the very start. I will not forget that we made the first pitch together, at the 1990 TAPU-day (Zwart & Hooekstra 1990).

In the meantime, it had become clear that several other aspects of the standard analysis of Dutch syntax were also unsatisfactory. I owe to Eric Reuland much of my critical remarks regarding the assumption that IP in Dutch is head final. This dates from the time that I was still living in Nijmegen and was commuting to Groningen once a week for Eric's class on nominalizations (1988). After the course I did not see Eric for several weeks. When we did get together again I found out that Eric had abandoned his own suggestion (which I had embraced) that the nominalization phenomena in Dutch indicated that there had to be an empty inflectional head. I found Eric's earlier idea much more stimulating, and continued to work in that direction. Eric's critical abilities and stimulating comments have always been a great source of encouragement to me over the years.

The next step was to go overseas. I am grateful to Judy Bernstein for inviting me to give a talk at the CUNY Syntax Lunch, which enabled me to visit MIT for the first time. From the discussions that I had with Richard Kayne and David Pesetsky, I got the distinct impression that something was in the air at MIT. At that time, Noam Chomsky was discussing PRO and proposed that PRO was not Case-less. This made a lot of sense to me, but it also appeared to obviate the need for further research on the frictions between Case Theory and Control Theory, which was my original research topic. I am extremely grateful to David Pesetsky for taking the time to talk to me during that first visit, and for encouraging me to focus on my work on verb movement. I made my decision there and then, and also knew that I had to return to MIT the next year.

1991 was a year of terrific developments. Looking back, I would probably have to say that the system of graduate student courses, managed by Peter Coopmans, was paying off for me, as it was for so many other graduate students of my generation. I am grateful to Peter Coopmans, Martin Eversart, Ian Roberts, Tine Hooekstra, Anne Hulk, Henk van Riemsdijk, Dominique Sportiche, Hilda Keupman, and to my brilliant colleagues Eric Hooekstra, René Muller, Marcel den Dikken, Rint

Sybesma, Pim Wehman, Guido Vanden Wymaard, Helen de Roop, and Ad Neeleman.

Ian Roberts' course on middles inspired me to work on expletives in Dutch. I have since found out that writing on expletives is a surefire way of getting your abstract accepted, as I went 4 for 4 during the summer of 1991. I thank Ian Roberts for the inspired discussions we had on this subject, especially on the consequences for the analysis of verb second. Ad Neeleman suggested to me that the complementizer agreement phenomenon of Dutch Netherlandic dialects supported my analysis of verb movement in subject initial main clauses in Dutch. I am grateful for this insight, and also for our friendship, dating back from the Cambridge GLOW Colloquium of 1990. I took the complementizer agreement material with me on my second visit to MIT, in the fall of 1991, and presented the first version of my GLOW talk at MIT on December 12 (Sinatra's birthday). This was a Thursday when Noam's class was canceled. I was afraid no one would come, but thanks to the organizational talents of Shigeo Toneske, who organized the colloquium series, the turnout was gratifying. I thank the MIT community for showing up and for their questions and comments.

There are many people I have to thank for the wonderful time I had at MIT. First of all, Noam Chomsky, whose 1991 fall term lecture series were nothing short of sensational. Apart from being conceptually and esthetically appealing, the theory Noam developed in that semester provided a perfect embedding for my analysis of verb movement in Dutch and seemed to be highly compatible with the representational approach to generative grammar that I knew so well from Jan Koster's work and teaching. I thank Noam for showing interest, then and now, and for putting his students onto my work.

Second, Wayne O'Veil, who assigned to me the visiting scientist status (which means: no desk), but did not object when the students organized a desk for me. These students were Jonathan D. Bobaljik and Tony Bures, and this is just one of the smaller things for which I owe them gratitude. Also thanks to my other room mates Seth Minkoff, Utpal Lahiri, Rolf Noyer, and Friederike Molmann. Next, David Pesetsky, who went out of his way to discuss my analysis of verb second in Dutch with me over and over again, and who never ceased to be extremely critical and extremely encouraging. Discussions with Jon Bobaljik, Chris Collins, Kim Hale, Ken Wexler, Doug Jones, Howard Lasnik, Alec Marantz, Peter Culicover, Chris Tancredi, Phil Branigan, Pierre Pina, Aneeq Mababia, Atsuo Watanabe, Yoshitaka Oka, Hubert Trudenbroedt, and many others were wonderful as well. The people from Harvard were also very helpful.

1 This research is reported in Zwart (1991a), (1992a).
Hóskuldur Thrúðisson, Jean Malin, Dianne Jonas, and, of course, Rex Spross. Many people made my stay in Somerville unforgettable, but most of all Andre Mess, Albert Brachveld, Sarah Kennedy, Jonathan Bobaljik, Lori Holmes, Harry Leder, Shigso Tonoike, Rex Spross, Katharina Hartmann, Anna Ard, and Masayuki Oishi.

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Back in the Netherlands, I was happy to find that the minimalist approach received a warm welcome from the people who have been working together with me most closely for the past few years: Jan Koster, Eric Hoeskstra, and Marcel den Dikken. Also the enthusiasm of our students Edith Kraan, Anko Wielg and Paulien Rijker was highly stimulating. Together with Edith, I had been working on a new analysis of extraposition in Dutch. The idea was to replace extraposition by short verb movement to the left. Richard Kayne’s brilliant 1992 GLOW guest lecture gave me this analysis a decisive push.

The hypothesis that Dutch is an SVO language made it possible to recapture a typological regularity that seemed lost in the revised verb second analysis, namely that the lexical projections and the functional projections must all have their heads on the same side. I thank Jan Koster for providing standard support for this idea. It is to a large extent thanks to his enthusiasm that I have been able to sail through the final stages of this research project with so much comfort.

I thank Werner Abraham for allowing me to discuss complementizer agreement among traditional and possessive pronouns on the Groninger Grammaticalpatisch of 1992. I thank the audience at the 1992 Lisbon GLOW Colloquium for questions and comments, especially Christer Platzack. I thank Chris Lorson and Reuven Oshindijik for inviting me to present my analysis of clefts in Dutch in a workshop organized by Theme Group 8 of the European Science Foundation Eurotyp project. Again, thanks to the audience, especially Joe Emonts and Anna Cardinaletti. Finally, thanks to the audience at the 5th Workshop on Comparative Germanic Syntax at Tromsø, 1992, especially Noam Chomsky, Chris Nieder, Giuliana Giusti, Andreas Hoenberg, Tarski Tarski, Haldir Sigurdsson, Christer Platzack, Tony Kroch, and Renny Iyengra.

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It is my great pleasure at this point to express my gratitude to my thesis supervisor Jan Koster. His acute intelligence and sharp judgment have been of immense value to me over the years. It is impossible to say where I would have been today without his confidence, friendship, and enthusiasm. I am very grateful for the fact that he did not let the pressure of time get in the way of providing me with numerous helpful remarks, suggestions, and corrections.

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There are several other people whom I forget to mention in the autobiographical account above. I would like to thank them here, and apologize to those who I have still left out.

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DUTCH SYNTAX

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I

INTRODUCTION

1 Where Languages Differ

Language is a function of the human species. It is unclear how this function has developed and in what way its properties are determined by the structure of the human brain. What is clear, however, is that only humans have language.

In this respect, the use of language is comparable to counting and calculating, to staging rituals and creating art, and to contriving deceit. Apparently, only the human brain harbors a computational system of the complexity that is required for performing these functions.

If language is a function of the human species, its properties must be largely determined by the properties of the human computational system. This implies that a number of properties of linguistic structures are universal.

In studying the universal properties of language, considerable progress has been made in recent years within the theoretical framework of generative grammar (Chomsky 1957 and much later work). According to this theory, the computational system creates language particular syntactic representations by deriving them from language independent basic representations. The structure of these representations is simple and universal, hierarchically ordered in a binary branching system. The various representations are related by universal operations, affecting the constituents of the representations by movement, deletion, and insertion.
The basic representations (originally called deep structures and later D-structures) are considered to be the interface between the computational system and the lexical-conceptual component of the mind. The way the various positions in the basic representations are filled depends on the thematic and aspectual properties of lexical items in a particular language.

The observable representations (originally called surface structures and later S-structures) are derived from the basic representations by applying or not applying the universal operations in a language particular way. It is assumed that they are merely intermediate stages in the derivation of a sentence. Eventually, the observable language particular representations will be turned into language independent representations again (called logical form or LF). These final representations are the interface to another mental component (or set of mental components), which operates independently of the computational system, and takes care of the interpretation of sentences.

Thus, the computational system takes a sentence from an initial state to a final state, through a number of intermediate states. The initial state and the final state are interfaces with other components of the mind. Therefore, the properties of these states are supposed to be universal. The intermediate states, however, are not interfaces with other mental components. Therefore, only at this intermediate stage is language variation to be expected.

At the same time, the intermediate states are the only states which are open to immediate empirical observation. It is assumed that at a certain point in the intermediate stage instructions to the articulatory-perceptual system are issued. These instructions constitute a third interface level (called phonetic form or PF), and without them sentences could not be spoken or heard. Therefore, sentences that can be empirically observed are always in an intermediate state of their derivation.

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1 It may be the case in certain languages that the intermediate state of the derivation differs minimally from or is identical with the initial state or the final state. However, it is crucially assumed that the intermediate state is not necessarily identical to either the initial state or the final state.

---

Intermediate states can be more or less advanced in the direction of the final state. There is no reason why the derivation of sentences should take place in rigorously identical ways in all languages. A certain arbitrariness is expected here. If the theory developed since Chomsky (1965) is correct, it should be possible to describe all syntactic variation between languages as arbitrary differences in the intermediate states of the derivation of the sentences of these languages.2

In this dissertation, certain phenomena in the syntax of Dutch, a continental West Germanic language of the Indo-European phylum, will be analyzed within the approach to syntactic variation sketched above. The most recent stage of this approach will henceforth be called the Minimalist Program, after Chomsky (1995). A fuller exposition of the Minimalist Program will be presented in section 3 of this introductory chapter, and some extensions of the approach will be proposed in section 3.

In Chapter II, the facts of Dutch which will be particularly relevant throughout this study will be presented first in a separate reference section. In sections 2 and 3, the traditional generative analysis of these phenomena, based on Koster (1976) and Den Besten (1977) will be discussed. In section 4, I will argue that our understanding of the phenomena of Dutch improves greatly when the more restrictive minimalist approach is chosen.

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2 The existence of implicational universals (Greenberg 1963) suggests that not all variations among languages is arbitrary, and that there are marked and unmarked combinations of parameter settings.
It will turn out that in Dutch, the derivation from the initial state to later states inevitably involves movement of syntactic heads and phrases to the left. This is at variance with previous analyses of Dutch, in which various rightward movements had to be assumed. However, this result is welcome, since it suggests that the directionality of the derivation is the same in Dutch and in English. It might even suggest that this directionality is universal, in that the target positions for the movements are always found to the left of already existing structure, and never to the right of it.

There is no a priori conceptual reason why movement should always be to the left and never to the right. It follows from well-known conditions that movement is always upward (picturing syntactic representations as inverted tree structures), but there is no reason why the arbitrary differences between languages determining syntactic variation should not include a directionality parameter.

However, as will become clear in section 3.3 of this introduction, there are several reasons to conclude that movement is in fact invariably leftward (Kayne 1993). If this is correct, the analysis of Dutch that will be developed in this study is in agreement with this universal mechanism, a marked improvement over the standard analysis of Dutch within generative grammar.

This, then, has been my major guideline in writing this book: to argue that the phenomena of Dutch can be profitably analyzed as involving leftward movement only. It follows that the structure of all syntactic categories can be represented as in (2), where specifier and X are the only possible targets for movement of elements in the complement of X:

(2) XP
    \   
  \    \                     \  \    \    \      \  /   \  
specifier X  \    \    \    \complement

In chapter III, I will argue that the structure in (2) applies to the functional projections in Dutch (which are created in the process of movement, see section 2 of this introduction). This will involve a discussion of cite placement, complementiser agreement, and verb movement. In chapter IV, I will argue that the structure in (2) also applies to the lexical projections of Dutch (constituting the initial representations). This will be argued mainly on the basis of the syntax of the VP, involving a discussion of verb clusters in Dutch.

The major conclusion of this study is that Dutch is a head initial language throughout. A second conclusion is that a strict application of the minimalist principles leads to a simple and elegant analysis of the complicated functional domain in Dutch. The analysis presented therefore provides empirical support for the universality of the structure of linguistic representations as well as of the operations affecting these representations.

2 The Minimalist Program (Chomsky 1992)

In this study, the phenomena of Dutch syntax will be analyzed in a way that is in some points sharply diverging from the traditional analysis, discussed in chapter II.

To some extent, the novel character of the analysis is a direct consequence of the theoretical framework adopted. This theoretical framework is the so called Minimalist Program, after Chomsky (1992 and MIT class lectures of Fall 1991). It is the latest developmental stage of the theory of (Transformational) Generative Grammar (Chomsky 1957).6

As in earlier stages of the theory, the Minimalist Program considers grammar to be a derivational system. A sentence is first built up in a basic form, then modified through processes of movement, deletion, and insertion, until it reaches a final form which may serve as input to other components of the cognitive system. However, unlike earlier stages of the theory, the mechanism creating the basic representation and the mechanism performing the other operations (movement, insertion, deletion) are the same (it is the mechanism of Generalized Transformation).

As in earlier stages of the theory, movement takes place because elements must be formally licensed. Unlike earlier stages of the theory, however, the need for formal licensing is the only reason for movement to take place. In addition, it is assumed that elements can never be formally licensed in a position they occupy in the initial representation.

As in earlier stages of the theory, movement may take place before or after the point in the derivation at which the instructions to the PF-system (the articulatory-perceptual system) are issued. Unlike earlier stages, however, it is now assumed that movement preferably takes place...

after this particular point in the derivation, so that overt movement is, in a way, the marked option.

As before, the amount of overt movement may differ from language to language. But, unlike before, the presence or absence of overt movement is the only instance of parametric variation in syntax among languages.

In the next four subsections, the key aspects of the Minimalist Program are briefly sketched. Some extensions to the program will be introduced in section 3.

2.1 Building Up Trees: Generalized Transformation

Representations are built up in a bottom-up fashion by a mechanism called Generalized Transformation. A Generalized Transformation combines two phrase markers. Two phrase markers are combined by expanding one of the two phrase markers (the 'target phrase marker') so as to include an empty position. This expansion takes place by adding to the target phrase marker a projection of the target phrase marker. This projection is binary branching and has two daughters: the target phrase marker and an empty position. This empty position is substituted for by the other phrase marker. The whole process, illustrated in (1), yields two sister phrase markers connected in a binary branching subtree.  

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*Binary branching is a result of this particular formulation of the Generalized Transformation mechanism. The attractiveness of binary branching has been argued for several times in the literature (Kaplan 1984, E. Hoekstra 1991).*
The Generalized Transformation illustrated in (1) combines two independent phrase markers. Therefore, it is called a binary operation. Lexical insertion is a typical binary operation.

It is also possible that the empty element created by expanding the target phrase marker is substituted for by an element contained in the target phrase marker. This would be called a singular operation.

Consider a standard case of raising to subject, as in *John arrived*. In this type of construction, *John* is generated as a complement of *arrived*, and moves to the subject position at some point in the derivation (Bucco 1981, Chomsky 1981).

A binary operation of the Generalized Transformation will first combine *arrived* and *John*, as in (3).

(3)  
\[
\begin{array}{c}
V \\
\text{arrived} \\
\text{John}
\end{array}
\]

Next, another binary operation will combine the phrase marker in (3) with a functional head in which the tense and agreement features are represented (called INFL, for the time being).

(4)  
\[
\begin{array}{c}
\text{arrived} \\
\text{John}
\end{array}
\]

For reasons that do not concern us here, *John* has to move out of the projection of *V* to a position in the domain of INFL. To this end, *V* is expanded in such a way that there will be an empty element in the position of sister of *I*, to be substituted for immediately by *John*.

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\* A note on terminology is in order here. In the earliest stages of Transformational Grammar, a distinction was made between singular transformations and generalized transformations. The former operate on a single phrase marker, are ordered, and do not introduce meaning-bearing elements; the latter embed a constituent phrase marker into a matrix phrase marker; are unordered, and do introduce meaning-bearing elements (Kruis and Postal 1964, Palmer 1979, and references cited there). In Chomsky (1965, 205), singular transformations are a subset of generalized transformations. The two operations work in the same way, the only difference being the origin of the phrase marker substituting for the empty position (the formal identity of singular transformations and singular transformations was already pointed out in Chomsky 1966b; cf. also Chomsky 1968; note 95). Generalized transformations, especially those governing sentence embedding, have been replaced by the rewrite rules of the base grammar (Chomsky 1966b, 1965 chapter 3). Singular transformations gradually developed into Move a (Chomsky 1965).

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\* This, then, is the modern version of the Strict Cyclic Condition (Chomsky 1975).
2.2 Licensing Elements: Morphological Feature Checking

A classic distinction exists in linguistic theory between contentful elements and functional elements. Word stems are contentful elements, whereas inflectional morphemes are functional elements. Functional elements express agreement relations between constituents.

In the Minimalist Program, it is assumed that agreement relations are highly local. A maximal projection α agrees with a head β only if α is a specifier of β. A head α agrees with a head β only if α is in adjunction to β. Moreover, β must be a functional head.

In the Government and Binding framework, the distinction between contentful (or lexical) elements and functional elements gradually took the following shape. Functional elements are generated as heads of independent phrasal projections. These functional projections are situated outside and on top of the lexical projections. Thus, the inflectional morphemes for tense, person, number, etc., are generated separately from the lexical stems. The stems have to be unified with the inflectional morphemes through a process of movement and adjunction.

This yields a sentence structure as illustrated in Figure 1:

- The locality requirements are further restricted in Zwart (1992b), where it is argued that a head α agrees with an element β only if either α or β has a head. This implies that in a specifier-head agreement relation, the specifier does not agree with the head, but with the immediate projection of a head. See below, section 3.2.

**FIGURE 1**

In figure 1, C stands for the complementizer position, T for tense, and AgrØ and AgrO for subject and object agreement morphology, respectively. These functional heads project phrases in accordance with the rules of X-bar Theory given in (2) of section 2.1. AgrOP, TP, AgrSP and CP together constitute the functional domain of a syntactic structure. VP constitutes the lexical domain.

In the Minimalist Program, this analysis is maintained in a simplified form. The major difference concerns the content of the lexical and functional heads. In the Minimalist Program, lexical heads are occupied by fully inflected forms (stems plus inflectional affixes). These forms carry a feature associated with the inflectional affix. The functional heads are likewise occupied by features associated with inflectional morphology (instead of by the inflectional morphology itself).^12

^12 The assumption that abstract features associated with inflectional morphology are of greater syntactic significance than the overt morphology itself is already a crucial part of the Case Theory module of the Government and Binding framework. This Case Theory refers to abstract Case features which are associated with nouns and noun phrases regardless of the morphological manifestation of Case on these nouns and noun phrases (Wasnawi 1979, Chomsky 1981). This theory of abstract Case is subsumed under the Minimalist Program. As a result, the inflectional features associated with Case are assumed to be present on lexical categories, even if there is no overt morphological manifestation of Case on these categories.
The features associated with the inflectional morphology of lexical categories have to match the features represented in the functional heads.

Matching is checked under the same strict locality requirements as agreement (in fact, agreement is a subcase of feature matching).

Therefore, the requirement that morphological features match triggers movement of lexical elements to positions in the functional domain.

License inflected elements consists in moving the inflected elements to positions in the functional domain, and checking whether the features associated with the inflection match the features represented in the functional heads.

Recall that movement is an application of the Generalized Transformation mechanism. The structure in figure 1, therefore, is completely built up in the process of moving elements from the lexical domain to positions in which their features can be checked (which yields the functional domain). There is no top-down rule system to ensure that syntactic structures are always like figure 1. The structure in figure 1 is the result of the fact that inflected elements have to be licensed outside of the lexical domain.

The inflectional features relevant to the phenomena of verb movement and noun phrase movement are tense, agreement, and Case. It is very well possible that other features exist, but these three appear to be indispensable features of sentence structure.

The features represented in the functional heads trigger both head movement (to the functional head) and XP-movement (to the specifier positions of the functional heads). For this reason, Chomsky (1992) distinguishes two types of features represented in the functional heads:

12 The exact difference between Case and agreement is not very clear in this system. It is assumed that the specifiers of Agr are empty for checking Nominitative and Averaccusative Case features, respectively. This suggests that Case and agreement are identical concepts. However, Chomsky (1992:40) suggests that, while Nominitative and Accusative Case features are checked in the specifier positions of Agr, respectively, the features relevant for checking Case do not reside in Agr, but in T and V, respectively. I will continue to consider Case as an independent feature of Agr, leaving the relation with T and V a subject for further study.

13 It is widely understood that the approach to inflectional morphology sketched here leads to an explosion of functional categories, assuming that every functional category discovered in studying the languages of the world should be present in the grammar of every single language of the world. This does not appear to be sound argumentation, since we cannot conclude, in biology for instance, that every aspect discovered in the study of biological systems should be present in every single species of the world. Yet some biological features appear to be indispensable in any biological system. Likewise, we may assume that a small number of inflectional features are present in all languages of the world, whereas a larger number may be relevant to specific languages only. What is universal, however, is the way inflectional features determine word order.

14 Shortcases can be interpreted in two ways, viz., as involving the smallest number of steps and as involving the shortest steps. These two interpretations appear to be contradictory (Chomsky 1992:23). I will argue in section 3.1 that the interpretation of economy of derivation as involving the smallest number of steps is the only correct one.

15 The modification well-established is needed to exclude movements triggered by 'ghost features', whose presence is only motivated in order to account for a specific word order phenomenon.

The derivation of a sentence consists in these two processes only: insertion of elements from the Lexicon (by a binary operation), and movement of elements to the functional domain (by a singulary operation).

2.3 Restrictions: Economy, Procrastination, Greed

The derivation of a sentence is subject to general conditions of economy. The derivation should take as few steps as possible (economy of derivation), and the resulting representations should have as few symbols as possible (economy of representation) (Chomsky 1991).

One consequence of economy of derivation is that movement always takes the shortest route. Another consequence is that any movement that is not triggered by a well-established requirement of morphological feature checking is excluded. Thus, elements, once licensed, are doomed to remain.

Economy of representation excludes the presence of irrelevant material at any given level of representation. One instantiation of economy of representation is the principle of Full Interpretation, which excludes the presence of uninterpretable material at the interface representations.

The derivation of a sentence is a finite process. At a certain point, the process yields a representation that will function as the output of the grammatical system. This representation will serve as the input to other parts of the cognitive system, for instance those having to do with interpretation. The principle of Full Interpretation requires that every
element of an output representation should provide a meaningful input to the relevant other parts of the cognitive system. Only these elements are considered to be legitimate objects at the interface level.

The features associated with inflectional morphology are considered to be relevant for syntax only. They play a crucial part in the licensing of inflected elements. However, these features are of no direct relevance to components of the cognitive system external to the grammatical component. In other words, the features associated with inflectional morphology are not legitimate objects at the interface level; they cannot be a part of the final representation that is to serve as input to other components of the cognitive system.

For this reason, these features have to be eliminated during the derivation. It is assumed that matching features are eliminated as soon as they are checked.

Therefore, a minimal number of derivational steps is required to achieve a minimal representation at the interface of the grammatical component and other components of the cognitive system.

Two other principles are directly derived from economy of derivation.

First, picture the derivation as a step-wise procedure. At each step, economy of derivation will allow only a minimum of activity. Eventually, movements will have to take place, but economy of derivation dictates that these activities take place as late in the derivation as possible. This can be formulated as a separate principle, Procrastinate (Chomsky 1995b:43).

Second, movement is triggered by the need to license inflected elements (more exactly, by the need to check off the abstract features associated with inflected elements). Elements that are already licensed, or that do not need licensing, are neither forced nor allowed to move. It follows that such elements can never be forced to move in order to assist in the licensing of another element. The trigger for movement always works directly on the element to be licensed. The principle that movement only to help other elements is disallowed is called Greed (Chomsky 1995b:47).

2.4 Parametric Variation: Strength of Features

According to the Minimalist Program, the derivation of a sentence yields interface representations which are subject to the principle of Full Interpretation: they must consist of legitimate objects only. If they do, the derivation is said to converge. If not, the derivation is said to crash.

The other components of the cognitive system that the grammatical component interacts with are performance systems, having to do with, roughly, speech and interpretation. Therefore, there are two types of performance systems: articulatory-perceptual and conceptual-intentional.

In accordance with this, the grammatical system will yield two interface representations, each consisting of instructions for one of the two performance systems. These interface representations are called PF (for the articulatory-perceptual performance system) and LF (for the conceptual-intentional performance system).

On the assumption that the conceptual-intentional performance system is identical in all humans, the interface representation called LF must be largely identical in all languages. In contrast, the interface representation called PF varies from language to language, as can easily be observed. It follows that the two interface levels PF and LF are not identical.

In the Minimalist Program, it is assumed that the LF interface level is the final stage of a derivation, and that the PF interface level is the reflection of an intermediate stage in the derivation. That is, at a certain point in the derivation, instructions to the articulatory-perceptual system will be issued. This point is called Spell Out. The part of the derivation before Spell Out is called overt syntax, the part of the derivation after Spell Out is called covert syntax. The problem of comparative linguistics is to find out how and why languages differ in their overt syntax. Recall that the principle of Procrastination dictates that movements take place as late in the derivation as possible. This principle, then, has to be violated to some extent in the grammar of certain, perhaps all, languages. The question is, Why?

The only possible answer to this question is that Procrastination must be violated to ensure convergence at the PF interface level. In other words, certain elements that would count as illegitimate objects at PF have to be eliminated in overt syntax. Sticking to the minimalist assumptions made above, it must be the case that certain inflectional features count as illegitimate objects at PF. These features, then, have to be checked and eliminated in overt syntax, through a process of movement of heads and phrases to positions in the functional domain.

* The point to be made here is actually more subtle. What differs in the PF representation in the various languages is the order of words and phrases in a string. The way the corresponding instructions are handled by the articulatory-perceptual performance system is just as universal as the way the LF instructions are handled by the conceptual-intentional performance system. The difference between the two interface levels is that word order and, in some languages, also word order inferences are interpreted in the conceptual-intentional system, but not in the articulatory-perceptual system. Therefore, word order must be universal at the LF interface, but not at the PF interface.

* These are two significant differences between overt syntax and covert syntax: binary transformations are only allowed in overt syntax (Chomsky 1995b:51), and the Direct Cycle Condition does not apply in overt syntax (Chomsky 1995b:52).
The surprising aspect of this mechanism is that not all inflectional features count as illegitimate objects at PF. If that were the case, overt syntax would be largely, perhaps completely identical in all languages of the world. As we know, there are very distinct differences in word order between even so closely related languages as English and French (Pollock 1989).31

This, then, appears to be the locus of parametrization between languages: an inflectional feature may or may not be visible as an illegitimate object at PF. Those that are visible as illegitimate objects at PF will have to be eliminated in overt syntax. Those that are not visible at PF will not be eliminated in overt syntax, by the principle of Procrastination. Features that are visible (thus: potentially harmful) at PF are called strong; features that are invisible (thus: harmless) at PF are called weak.32

A minimal assumption is that the strong/weak distinction is the only instance of parametric variation among languages. This implies that parametric variation is restricted to functional categories (Fukui and Spass 1986). It furthermore implies that there are no directionality parameters, such as directionality of government.32 The latter implication is supported empirically by Kayne (1993), who argues that movement is always leftward.

This concludes the presentation of the minimalist approach to syntax as put forward in Chomsky (1992). I will adopt this approach throughout this study.33 However, many parts of the approach are left unresolved in Chomsky (1992). At the same time, it has become clear that certain other recent developments can be advantageous combined with the minimalist approach (H. Hockett 1991, Kayne 1993).

In the final section of this introductory chapter, I will briefly mention a few theoretical points which result from the most recent developments, and which I consider as welcome additions to the minimalist program as sketched above.

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3 Minimalist Extensions

3.1 Shortest Steps vs. Fewest Steps

In Chomsky (1992), economy of derivation (the requirement that derivations be as short as possible, see 2.3) is implemented in two, apparently contradictory ways:

(1) 
- Economy of derivations
  - Use the shortest steps
  - Use the smallest number of steps

(1b) appears to be firmly rooted in the minimalist approach. Both Procrastinate (2) and Greed (3) can be reduced to (1b).

(2) 
- Procrastinate
- Move as late as possible

(3) 
- Greed
- Move a only if moving a contributes to licensing a

Both restrictions can be summarized as 'move as little as possible', which is equivalent to (1b).34 (1a) is firmly rooted in the generative tradition. I will argue, however, that it is superfluous in the minimalist approach. Given that (1a) and (1b) are contradictory, we have to conclude that the shortest steps requirement does not exist.

31 English and French are called 'closely related' here not for typological or genetic reasons, but because the same set of functional categories appears to suffice in the description of the two languages.

32 See Koster 1986, Pollock 1989 for the origin of this terminology.

33 In fact, government has no formal status in the Minimalist Program. For example, Case assignment is reduced to feature checking in a specifier-head configuration. See section 3.3 for the consequences for the Empty Category Principle of Chomsky (1981), which includes the notion 'proper government'.

34 Certain crucial aspects of the analyses presented in this book anticipate the emergence of the minimalist program, however, as is clear from Zwart 1990b.
It is generally accepted that steps in a derivation may not exceed a certain length (cf. Chomsky 1973, 1981, 1986b; Koster 1978a, 1987; Rizzi 1990a). Thus, nonlocal movement yields a deviant sentence:

(4) * What did he wonder what John put it?

It is not a priori clear, however, whether (4) is bad because the movement of what from the position indicated by its trace is nonlocal, or because what cannot be construed with a trace in a different local domain (in (4), a so-called wh-island).

Research in the past decade has clearly gravitated towards the latter point of view. The Empty Category Principle (ECP), according to which empty elements must be properly governed (i.e., antecedent governed, following Chomsky 1986b:88) is essentially a condition on the interpretation of traces (cf. Chomsky 1991:429). A trace can be construed with its antecedent if the two are connected by a chain consisting of local links. If not, the interpretation of the trace becomes more difficult.

Crucially, as has been clear from the outset (cf. Chomsky 1973:244), wh-island constructions give rise to considerable variation in grammaticality judgments. Thus, (4) is relatively acceptable in comparison with (5):

(5) ** Where did he wonder what John put it?

Since any violation of economy yields a crushing derivation, the difference between (4) and (5) cannot be described in terms of economy. Moreover, the relatively mild ungrammaticality of (4) is unexpected if the derivation of (4) is a violation of economy of derivation.

Cline (1980) and Rizzi (1990a, 1991b) have argued that wh-island constructions involving argument traces are relatively grammatical because of the availability of an interpretation mechanism for these traces that does not rely on conditions on chain formation (cf. also Koster 1987, chapter 4). If so, it is clear that a theory of interpretation, incorporating locality conditions on chain formation, holds more promise for an explanation of the local character of movement than economy of derivation.

If this is correct, locality conditions on wh-movement reduce to a principle of interpretability. A wh-trace is most easily interpreted when it is part of a chain which links it locally with its antecedent. If not, other options are open when the wh-trace is an argument trace, yielding a slightly degraded representation. Otherwise, the derivation will converge, but the trace will not be able to receive the required interpretation.

This suggests that (1a) is superfluous as a condition on wh-movement. Interestingly, similar considerations make (1a) superfluous in the domain of head movement and raising to subject.

Conditions on head movement are expressed in terms of the Head Movement Constraint (Travis 1984:131):

(6) Head Movement Constraint

An N must only move to a T which properly governs it.

It is generally assumed that the Head Movement Constraint reduces to the ECP (Travis 1984:133, Chomsky 1991:429). However, head movement constructions never show the kind of variation exemplified in (4)-(5), and nonlocal head movement, as in (7a), always appears to yield a crushing derivation, rather than a converging derivation that is hard to interpret.

(7) a. * Who kissed John will he?
    b. Who will John kiss?

This suggests that nonlocal head movement is ruled out by economy. However, it is not clear that (1a), rather than (1b), plays a role here.

The question that must be asked first is: What is the trigger for verb movement in wh-constructions like (7)? It is generally assumed that the verb in (7b) moves to the complementizer position, C. The principle of greed dictates that the verb itself has something to gain by moving to C. Therefore, the verb movement in (7b) must also result in the elimination of a feature of will.

There is ample evidence that verb movement to C in Germanic is closely linked to tense (Den Besten 1977:Appendix II). Consider the following facts from Dutch:

(8) Keek Jan een huis?
    knee John a house
    "Does John buy a house?"

(9) a. Jan een huis koop?
    knee John a house buy
    "John buy a house?"
    b. * Koop Jan een huis?
    buy John a house

Assuming that the structure of yes/no questions matches that of wh-questions, (8) and (9) are comparable to (7). We may consider the counterpart of the wh-word in (7) to be empty in (8) and (9). This suggests that the verb movement in (8), as in (7b), targets C. As can be seen in (9), such verb movement only takes place when the verb is finite.
In terms of Chomsky (1992), we may suppose that C hosts a tense feature, comparable to the V-features of AgrS etc., which must be checked by moving T(ense) to C (cf. Wilder and Cavar 1990). This triggers movement of the finite auxiliary in (7b).

 Likewise, the movement in (7a) is never triggered, hence excluded by the first steps requirement (10). At the same time, we may assume that the tense feature on the auxiliary in (7) must be checked against the tense feature in C. From this perspective, moving the infinitive to C in (7a) robs the finite auxiliary of the possibility to check its tense feature. This again yields a violation of economy of representation, assuming the relevant feature to be strong (as the overt movement in (7b) bears out). More generally, movement of a head α across a head β which contains a V-feature to be checked against the features of α is trivially excluded by economy of representation, because it yields an interface representation with uncheckable features.

 Thus, economy of representation and the first steps requirement of economy of derivation suffice to exclude a standard nonclausal head movement construction like (7a).

 In the domain of raising to subject, the shortest steps requirement excludes the superraising constructions in (10):

(10) a. John seems it is likely to win.
    b. John seems it is likely to win.

 The sentences in (10) are derived from more basic representations in which John is the subject of win, generated inside the VP as previously assumed. As (11) shows, the subject position of the embedded clause is a legitimate target for subject movement.

(11) It seems John is likely to win.

 It seems, then, that the sentences in (10) are derived by moving John across a legitimate target for subject movement, in violation of the shortest steps requirement of economy of derivation (Chomsky 1992:21).

 However, it is immediately obvious that (10a), at least, is excluded on standard minimalist assumptions regarding movement and feature checking. If John moves to the subject position of the embedded clause, as in (11), its features are checked, and it will from then on be deemed to inertness (unless additional features like [topic] or [WH] are present). On the other hand, if John in (10b) is moved to the subject position of the matrix clause directly, the N-features in the AgrS of the embedded clause will remain unlinked. Hence, (10a) always yields a crunch derivation.

 In (10b), the N-features of the embedded AgrS can be checked against the features of it. However, in (10b) the problem lies elsewhere. Following Bennis (1986), we must assume that it is not a dummy pronoun, inserted in the specifier position of the AgrS, but an argument generated in the complement domain of a raising verb. If it is generated as an internal argument of seems, (11) results. In that case, John is likely to win must be analyzed as an adjunct clause associated with it, and John is the only candidate for checking the N-features of AgrS inside the adjunct clause. Hence, (10b) cannot be derived from the representation underlying (10), illustrated in (12a).

(12a) a. seems [it] (is likely John to win).

 Alternatively, one could assume that it is generated as the internal argument of the lower raising verb (assuming its likely to be a single raising verb, for ease of exposition). This yields the underlying representation in (12b):

(12b) b. seems [is likely [it] (John to win)].

 In (12b), it could raise to the AgrS associated with is likely, and John could raise to the AgrS associated with seems. This would yield (10b), in violation of the shortest steps requirement. However, if (12b) were the structure underlying multiple raising verb constructions, (11) could not be derived without violating the shortest steps requirement. It would have to cross the AgrS position associated with the lower raising verb. Hence, the shortest steps requirement cannot exist if we assume (12b) to be the structure underlying multiple raising verb constructions. Therefore, no argument that assumes the structure in (12b) supports the shortest steps requirement.

 I assume that the internal argument of raising verbs must be either it (in combination with a finite clause) or a nonfinite clause, but not a single finite clause (without it) or a combination of it and a nonfinite clause. This excludes (12b) as a possible structure. Consequently, there is no derivation of the sentences in (10) that violates the shortest steps requirement without also violating standard feature checking.

30 Alternatively, John is likely to win. In (11) is not analyzed as an adjunct clause but as the subject of a small clause, of which it is the predicate (cf. More 1990). (12) would thus be the result of predicate raising, structurally similar to locative inversion in the analysis of Hockett and Muler 1970. This does not affect the argument, however, which is that slow must be licensed inside the subordinate clause.
requirements. Hence, supervening constructions are excluded by economy of representation, which requires features to be checked before the derivation reaches the interface state.\(^7\)

It seems then, that none of the standard phenomena indicating that movement must be local support the shortest steps requirement of economy of derivation.

An even stronger argument against (1a) would be to show that the shortest steps requirement is incompatible with other minimalist principles. This can actually be demonstrated, as argued in Swart (1995c). The argument can be summarized as follows.

Recall that in the minimalist approach, representations are built up by joining two phrase markers (Generalized Transformations). By the condition of strict cyclicity, it is not allowed to insert one phrase marker inside another phrase marker. It follows from this condition that no local \(wh\)-movement, as in (13), always violates the shortest steps requirement.

13. What do you think that he will do?

In the traditional approach to (13), \(what\) moves from the position indicated by \(t\) to the specifier position of the embedded CP, indicated by \(e\); and from there on to the specifier position of the matrix CP. Chomsky (1992:21), noting that this derivation violates the fewest steps requirement (1b), proposes to describe long distance \(wh\)-movement in terms of the operation Form Chain. This operation performs the movement from \(t\) to the specifier position of the matrix CP in one step, while at the same time introducing an intermediate trace \(e\) in the specifier position of the embedded CP. This yields a chain with local links, needed to facilitate the interpretation of (13).

However, if we think of Form Chain in terms of the structure building process Generalized Transformation, it becomes clear that \(e\) cannot be introduced after the embedded CP has been joined with the matrix verb think. This derivation would violate the condition of strict cyclicity.\(^8\) To comply with the condition of strict cyclicity, the intermediate empty \(wh\)-element \(t\) must be introduced before the embedded clause and think are joined together, hence, also before movement of \(what\) to the specifier position of the matrix CP takes place. We may assume that after the \(wh\)-movement has taken place, \(e\) functions as an intermediate trace in the chain linking \(what\) and \(t\).

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\(^7\) We will return to the derivation of supervening constructions in section III.6.1.

\(^8\) Chomsky (1992:33) restricts the condition of strict cyclicity to overt syntax. This means that the empty element in the intermediate position could be generated in covert syntax, but then Form Chain would no longer be a single operation in cases of overt \(wh\)-movement.
DUTCH SYNTAX

(16) XP
    UP  \<\ XP
    adjunct \<\ X
    X'    ZP

The ungrammaticality of (17), for example, is explained by the fact that
(15) is not a possible configuration for checking off the features of UP (who
in (17)) against the N-features of X' (dich).

(17) * Who suddenly did Bill discover?

Thus, UP in (15) is the designated checking position for the N-features of
X'. The question is whether this follows from any independent aspect of
the minimalist approach.

Another question that the X-bar schema in (14) raises, is whether it
is necessary to distinguish an intermediate projection X' next to the
maximal projection XP. It has been argued several times in the literature
that the intermediate level X' is redundant (Stuurman 1995, E.Hoekstra
1991). If it does not exist, (14) reduces to (16):

(18) a. XP    \<\ TP   XP
     b. XP    \<\ X'  ZP

(18a) instantiates the possibility of adjunction of a maximal projection to
another maximal projection. Since this possibility exists independently of
X-bar theory, (18) can be reduced to (19):

(19) XP    \<\ X'  ZP

(19) contains the following information: a) there is a distinction between
heads and maximal projections, b) a maximal projection α has a head of
the same categorial status as α (cf. Lyons 1968:331).

Obviously, b) is already expressed in the mechanism of generalized
transformations (cf. section 2.1). As we have seen, a phrase marker α is
combined with a phrase marker β if α projects a mother node, which
dominates both α and an empty position, to be filled by β.

Therefore, if the intermediate projection does not exist, X-bar theory
reduces to α, the statement that there is a distinction between heads and
maximal projections.

Notice that if the intermediate projection does not exist, the
mechanism of generalized transformations can be simplified. Without the
distinction between intermediate projections and maximal projections, the
following two statements are required:

(20) a. If a head is adjoined to α, the projection of α is a head
     b. If a maximal is adjoined to α, the projection of α is a maximal

These two statements can be reduced to one:

(21) If a P' is adjoined to α, the projection of α is an α'

On the other hand, if the intermediate projection does exist, the two
statements in (20) do not suffice. It has to be stated that if α is a head,
the projection of α is an X', unless the element adjoined to α is a head, in
which case the projection of α is also a head; that if α is an X', the
projection of α is an XP, and that if α is an XP, the projection of α is an
XP. Consequently, the reduction to (21), or a statement of comparable
simplicity, is impossible.

Let us therefore assume that the intermediate X'-level does not exist.
X-bar theory reduces to the distinction between heads and XP's. The
mechanism of generalized transformations ensures that all nodes in a
projection line have the same categorial features. The tree structure
resulting from these assumptions is represented in (22):

(22) adj
           XP
    \<\ XP
    \<\ X'

This takes us back to the question why the specifier of a head α is the
designated checking position for the N-features of α. Intuitively, the
specifier position in (22) is the position closest to α in the sense of (2) by
which N-features are represented. The only position closer to α is the
position adjoined to α', but this position can be excluded as an adjacency site for XPs on the
assumption that only heads may adjoin to heads (cf. Baltin 1982, Chomsky 1986b).

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20 Take the relevant N-features to be wh-features, cf. Kopt 1996b.
21 Chomsky (1992:140) includes UP in (16) in the checking domain of X'; in view of Kayne's
(1987) analysis of past participle agreement in Romance (these lectures Fall 1991). This,
however, does not detract from the observation that in general (20) is not a
legitimate configuration for licensing UP, which calls for an explanation.
However, we must allow adjuncion of an XP to a head \( \alpha \) when the XP is the complement of \( \alpha \).\(^{26}\) Apparently, only left-adjunction of an XP to a head must be blocked. The ban on left adjunction of an XP to a head can be derived from the condition of strict cyclicity.

Suppose \( \alpha \), a head, has a complement. If so, it has projected an XP. Therefore, adjuncion of XP to \( \alpha \) would involve projecting an additional XP between \( \alpha \) and the projection of \( \alpha \) XP (the mother node of \( \alpha \) and the complement of \( \alpha \)). Let us take the condition of strict cyclicity to exclude precisely that. On this interpretation of the Strict Cycle Condition, left-adjunction of a head to \( \alpha \) is not excluded, since adjunction of a head does not involve the projection of an additional XP.\(^{26}\)

On this interpretation of the condition of strict cyclicity, adjunction of a maximal projection to a head can be excluded. However, the intuitive notion 'closedness' still has to be defined more exactly, to ensure that the adjunct position in (22) is not close enough to \( X' \).

In order to define the special relation between a head and a specifier, I propose that the first XP projection of \( X' \), the sister of the specifier, has a special status. This special status is not expressed in terms of bar levels, but in terms of features. More specifically, I propose that the morphological features of a head \( \alpha \) are also present on the first XP projection of \( \alpha \).

Let us call the first XP projection of \( X' \) in (22) Projection, and the remaining XP projections Segment, according to the following definitions (cf. Zwart 1999):\(^{25}\)

(22a) For \( \alpha, \beta \), \( \alpha \) dominates \( \beta \), and \( X' = XP \):

- **Projection** \( \alpha \) is a Projection of \( \beta \) iff (i) \( \alpha = X', \beta = X' \), and (ii) there is no \( \gamma = X' \), such that \( \alpha \) dominates \( \gamma \) and \( \gamma \) dominates \( \beta \).

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\(^{26}\) Technically, the complement of a head \( \alpha \) is adjunction to \( \alpha \) by transformational generalization, even though complements are not generally regarded as adjunction.

\(^{25}\) This definition of the Strict Cycle Condition differs slightly from the one assumed in Chemla 1992:33, but the two definitions share the underlying idea that cyclicity is violated only if target extraction occurs.

\(^{24}\) In the definitions in the text, domination is understood in the elemental sense, i.e. as an asymmetric, transitive relation between nodes in a tree structure. \( \alpha \) dominates \( \beta \), if \( \alpha \)'s projection from a segment or projection is irrelevant for the domination relation between \( \alpha \) and any \( \beta \).

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27 Dutch Syntax

(36) **Segment**

- \( \alpha \) is a Segment of \( \beta \) iff (i) \( \alpha = X', \beta = X' \), and (ii) there is no \( \gamma = X' \), such that \( \gamma \) dominates \( \beta \) and \( \alpha \) dominates \( \gamma \).

**Specifier and Adjunct can now be defined as follows:**\(^{26}\)

(24) a. **Specifier**

- \( \alpha \) is aSpecifier of \( \beta \) iff (i) \( \alpha \) and \( \beta \) are sisters, and (ii) \( \beta \) is a Projection.

b. **Adjunct**

- \( \alpha \) is an Adjunct of \( \beta \) iff (i) \( \alpha \) and \( \beta \) are sisters, and (ii) \( \beta \) is a Segment.

We can now formulate the proposal regarding the special status of Projections as follows:

(25) **Feature Sharing**

- \( \alpha \) and \( \beta \) share morphological features only if \( \alpha \) is the Projection of \( \beta \).

According to (25), the N-features and the V-features that are represented in a functional head \( \alpha \) may also be present on the Projection of \( \alpha \).

I assume that the special status of Projections results from the mechanism of generalized transformations. The only way for a head \( X' \) to be integrated in a larger structure is to project an XP Projection. Heads, therefore, cannot exist without a Projection. They can, however, exist without a Segment, on the assumption that not every head has a specifier associated with it (cf. Pulic and Speas 1986). The mechanism of generalized transformations therefore leads us to consider the combination of a Head and its Projection as an indivisible unit.\(^{26}\)

It follows that a Head and its Projection have the same set of features. A Segment is added to a Projection only in order to make room for a specifier. But neither the Head nor the Projection need a Segment in order to be integrated in a larger structure. It follows that the Segment does not constitute an indivisible unit with either the Projection or the Head.

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\(^{24}\) \( \alpha \) and \( \beta \) are sisters iff there is no \( \gamma \) such that \( \gamma \) dominates \( \beta \) and does not dominate \( \alpha \), or such that \( \gamma \) dominates \( \beta \) and does not dominate \( \gamma \).

\(^{25}\) Head movement does not really separate the Head from its Projection, assuming that head movement leaves a trace.
Hence, no complete feature sharing between a Head and a Segment is expected.

It has now become possible to define 'closeness', the proximity condition on feature checking needed to explain (17), in terms of siblinghood. The closest relation between two nodes that are not in a domination relation is the siblinghood relation. The most restrictive condition on feature checking therefore requires a siblinghood configuration. Let us propose this following Zwart (1992a):

(26)

**FEATURE MATCHING**

Matching features of a and b takes place only if a and b are sisters

Suppose we want to check the features of an XP against the N-features of a functional head c. By (25), the N-features of c are also represented on the Projection of c. By (26), XP must adjoin to a node carrying the relevant N-features, in order to create the siblinghood configuration required for feature matching. It follows independently that adjoinment of XP to c or b is excluded. Hence, the Projection of c is the only possible target for adjoinment for the purpose of N-feature checking.

In short, the specifier is the designated position for N-feature checking, because its sister is the only node the XP can adjoin to in which the relevant N-features are represented. Adjoinment of XP to the functional head c itself is excluded by the condition of strict cyclicity. Adjoinment to a Segment of c is excluded because the Segment of c does not carry the N-feature of c.

It also follows that the specifier position of the complement of c is not a possible landing site for checking the features of an XP against the N-features of c. This configuration is illustrated in (27):

(27)

```
   XP
    X
  UP ZP
    c
```

*This is not intended to exclude standard percolation of features from a head to its maximal projection.*

I assume that the N-feature represented in the head c is automatically eliminated as a result of the feature matching operation involving the specifier and the Projection of c. Likewise, for the V-feature of c, represented in the Projection of c, it will disappear immediately when the V-feature in c is checked. See section III.4.4 for a refinement of the analysis which makes this assumption unnecessary.

Intended.

By (25), X* does not share its N-features with ZP. Hence, the siblinghood relation required by (25) is not established when UP is moved into the specifier position of ZP.

Notice that X* does govern UP in (27), assuming any standard definition of government (cf. Chomsky 1965, Azum and Sportiche 1983). It therefore follows from (26) and (27) that government is not a sufficiently restrictive relation for licensing operations. If all syntactic relations involve feature checking in the functional domain, and if feature checking involves matching between sisters, it follows that government can be dispensed with as a meaningful relation in syntax (cf. Chomsky 1965a).

Chomsky (1992a:20), noting that basic relations are typically local, describes the head-complement relation as the core local relation. The head-specific relation, in this view, falls into an 'elsewhere' category. If I am correct, there is no distinction between 'core' local relations and 'elsewhere' local relations. All local relations require the same configuration: siblinghood. Siblinghood is relevant for 8-role assignment (by head-complement siblinghood), checking of V-features (by head-head siblinghood), and checking of N-features (by specifier-Projection siblinghood). The division of labor between the various siblinghood relations follows from the basic assumption that checking takes place in the functional domain, and from the condition of strict cyclicity.

As we will see later on in this study, adopting the restrictive matching condition (26) will have the effect that the definition of the notions checking domain and complement domain of Chomsky (1992) can be made more restrictive (see section III.4.3).

A second consequence of the assumptions made here is that an additional locus of parametric variation becomes available. At present, the only parametric variation in the system resides in the strength of the morphological features represented in the functional heads. The parameter setting forces or disallows overt movement to positions in the functional domain. The formulation of the feature sharing mechanism (25), however, allows a second parametric choice: the features of a can or cannot be shared with the Projection of a.

We may assume that functional heads carry a feature [accessible], where the features of a [-accessible] head do not automatically spread to the Projection. I will propose that various operations affecting the functional head can remove the [-accessible] feature in this case. Since the N-features cannot be removed before a becomes accessible to the Projection, the operations that remove the [-accessible] feature are a precondition for X-feature checking in the relevant constructions. The [-accessible] feature, then, makes it possible to account for verb movements which appear to take place for no other reason than to make N-feature checking possible. This will turn out to be a characteristic aspect of verb movement in Dutch.
3.3 Directionality

Neither the structure building process of generalized transformations of Chomsky (1992) nor the sisterhood condition on feature checking of Zwart (1992) contains a specification of the linear order of head, complement, specifier, and adjunct. Superficial cross-linguistic examination suggests that languages may differ with respect to the linear order of these elements. In the tradition of generative grammar, the attested variation is described in terms of a parametric option: heads may govern to the left or to the right. A head that governs to the left takes its complement to the left in the initial representation, yielding a basic OV structure.

In the minimalist approach, a directionality parameter is no longer available. First, parametric variation must be expressed in terms of the features of functional heads only. A directionality parameter would therefore not suffice to account for the ordering of elements in the lexical domain. Second, government no longer plays a role in the minimalist approach (cf. section 3.2). Therefore, it is unclear whether a directionality parameter could be reduced to properties of an independently established grammatical relation. Third, a directionality parameter would be redundant, since much of the word order variation can be accounted for by the interaction of overt and covert movement.

Kayne (1992) presented empirical evidence showing that movement into the functional domain is invariably leftward. The evidence consists in what we do not find, in comparing movement phenomena in the languages of the world. Thus, we can conclude from the general lack of Wh-movement to the right that the specifier position of CP is always to the left. Similarly, there are no known cases where verb movement changes a verb-complement order from VO to OV, which suggests that verb movement to the right does not exist. Hence, the functional projections hosting V-features must be head initial. Also, the subject precedes the object in almost all languages of the world (Greenberg 1963, Universal 1). Assuming, in connection with this, that AgrSP is hierarchically higher than AgrGP, it also follows that the specifier of AgrSP is situated to the left. Likewise, if the complement of a preposition is extracted, the complement always ends up to the left of the preposition, never to the right of it. Again, this suggests that licensing positions, i.e. specifier positions, under our assumptions, are on the left hand side. For a fuller exposition of this line of argumentation, see Kayne (1992).

Let us therefore assume that functional projections are head initial, and that the specifier of functional projections are always to the left of the projection line. In other words, singular operations invariably consist in left-adjunction to a Projection.

As we will see, the assumption that the functional projections are universally head initial is problematic for the standard analysis of Dutch within the generative tradition. However, I will argue extensively in chapter III that the relevant phenomena provide clear support for the head initial character of the functional projections in Dutch. That the specifiers of the functional projections in Dutch are situated to the left I will assume without discussion.

Kayne (1993) in addition argues that the lexical projections in the world’s languages are invariably head initial as well. This is an attractive hypothesis, considering the empirical evidence for the universal structure of the projections of the functional domain. However, empirical evidence in support of this hypothesis is infinitely more difficult to obtain, in view of the fact that the observable word order reflects an intermediate state in the derivation of a sentence. In other words, one never knows whether the constituents are in a basic position or not.

I will nevertheless present some arguments based on the syntax of Dutch multi-verb constructions and complex prepositional phrases in support of the hypothesis that the lexical projections in Dutch are head initial (chapter IV).  

Kayne (1993) also presents conceptual argumentation in support of the idea that all phrases are head initial. Kayne proposes that asymmetric c-command invariably maps into linear precedence. In order for this mapping to be successful, it must be possible to express the relations between the nodes of a phrase marker that asymmetrically c-command each other into a set of ordered pairs <x,y> of the terminal (‘lexical’) elements dominated by these nodes. The pairing of two terminal elements x and y thus expresses a relation between x and y. Kayne proposes that the set of ordered pairs of these relations must express a linear ordering, i.e. a total, transitive, and asymmetric ordering.

Thus, according to this proposal it must be possible to read the relation of each terminal element to all other terminal elements off of the set of ordered pairs. Crucially, these relations must be asymmetric, i.e. it is...
excluded that two terminal elements $L$ each other, where $L$ stands for the relevant relation between these two elements.\textsuperscript{[34]}

The axiom that the set of ordered pairs of terminal elements derived from the set of relations between the nodes of a phrase marker that asymmetrically c-commands each other is a linear ordering of the terminal elements is called the Linear Correspondence Axiom (LCA).

In addition to the LCA, Kayne proposes that the relation expressed by the pairing of terminal elements is a precedence relation. I will refer to this hypothesis as the Extended Linear Correspondence Axiom (ELCA).\textsuperscript{[35]}

Kayne shows that the adoption of the LCA explains many basic facts of phrase structure, such as binary branching and endocentricity. In this respect, the LCA is compatible with the mechanism of generalized transformations as presented in section 2.1. It follows from the ELCA that adjunction always takes place on the left hand side.

In some respects, however, the LCA appears to be too restrictive, as Kayne notes. In fact, the LCA excludes adjunction of specifiers and adjuncts. Kayne therefore modifies the definition of the notion c-command in order to allow adjunction of specifiers. He argues, however, that adjunction of adjuncts (i.e., in addition to adjunction of a specifier) is excluded.

To see why adjunction of specifiers is difficult, consider the tree structure in (26), where $y$ and $x$ represent terminal elements:

\[(26) \quad \begin{array}{c}
\text{XP} \\
\text{VP} \\
\text{Y} \\
\text{X} \\
\text{Y} \\
\text{x} \\
\text{x}
\end{array}
\]

Assume the following definition of c-command:

\[(28) \quad \text{c-commands } \beta \text{ iff every } y \text{ that dominates } \alpha \text{ dominates } \beta\]

C-command is asymmetric where, for c-commands $\beta$, $\beta$ does not c-command $\alpha$.

In (26), VP asymmetrically c-commands X and XP asymmetrically c-commands Y. XP dominates the terminal element y, and X dominates the terminal element x. The relation between YP and X therefore can be expressed in the ordered pair of terminal elements $<y,x>$. But since XP dominates x and Y dominates y, the ordered pair of these terminal elements $<y,x>$ is also part of the set of ordered pairs expressing the relation between YP, XP, Y, and X. So now this set contains $<y,x>$ and $<x,y>$. Hence, the relation between x and y (i.e., between a head and its specifier) is not linear, because it is not antisymmetric.

To solve this problem, the pair $<y,x>$ or the pair $<x,y>$ must be excluded. This can be achieved if either VP does not c-command X (kicking out the pair $<y,x>$) or XP does not c-command Y (kicking out $<x,y>$). Kayne proposes to modify the definition of c-command in such a way that XP no longer c-commands Y. This can be done by excluding segments from the definition of c-command, assuming XP and XP in (28) to be two segments of the same category.\textsuperscript{[36]}

\[(29) \quad \text{c-commands } \beta \text{ iff } (\text{i}) \text{ a and } \beta \text{ are not segments, and} \]

\[(\text{ii}) \text{ a excludes } \beta, \text{ and} \]

\[(\text{iii}) \text{ every } y \text{ dominating } \alpha \text{ dominates } \beta\]

In (28), XP is a segment, hence does not c-command Y by clause (i) of the definition of c-command in (30). This gives the desired result that the relation between x and y in (26) is described by $<y,x>$, hence is a linear relation (hence, following Kayne, a precedence relation).

Notice that the fact that the higher XP is a segment of the lower XP suffices to exclude that the lower XP c-commands Y. Since the higher XP is a segment, the lower XP does not exclude Y, and the c-command relation is barred by clause (ii) of the definition of c-command in (30) (cf. Kayne 1993, note 9).

It follows that the lower XP does not c-command Y, even if the lower XP is not a segment. According to the definitions of Segment and Projection proposed in section 3.2, the higher XP (28) is a Segment, and the lower XP is a Projection. The Projection XP does not exclude Y in (28).

\text{\textsuperscript{[36]}} Following Chomsky 1955b-7, I will turn to the consequences of the definitions of Segment and Projection of section 3.2 below.
because the Segment XP includes Y. Hence, the Projection XP does not c-command Y, because of (30(iii)).

To see why adjunction is difficult, consider (32):

(32)  
\[
\begin{array}{c}
\text{XP} \\
\text{YP} \\
\text{Y} \\
\text{UP} \\
\text{X} \\
\text{XP} \\
\text{Y} \\
\text{u}
\end{array}
\]

In (32), not only the specifier UP, but also the adjunct YP is adjoined to XP. YP asymmetrically c-commands U, yielding \(<u,v>\), and UP asymmetrically c-commands Y, yielding \(<u,y>\). Hence the relation between the terminal elements y and u is not antisymmetric and therefore (32) is not allowed by the LCA.

Kayne concludes that multiple adjunction (i.e., adjunction of an element in addition to adjunction of a specifier, as in (32)) is universally impossible. It follows that adjunct elements, such as adverbs, can only be present in a structure as specifiers. Thus, for every adjunct there must be a head in the structure creating the required specifier position.

This seems overly restrictive, in the sense that numerous 'adjunct phrases in various positions must be assumed. Kayne acknowledges this, but doubts "that other theories can do without such entities" (p.45). Be that as it may, it remains the case that the adjunct phrases are unacceptable from a minimalist point of view, if no demonstrable morphological features are associated with them.

Let us therefore try to make (32) acceptable for the LCA, by eliminating the asymmetric c-command relation between UP and Y.

The problem in (32) is that the middle XP does not dominate UP, because it is a segment. Kayne adopts the standard definition of domination in relation to segments of Chomsky (1986b:7):

(33)  
\[
\text{a is dominated by b if b is a Segment, only if a is dominated by every segment of b}
\]

Assuming all XPs in (32) to be segments, UP is not dominated by all segments of XP. Hence, there is no \(y\) that dominates UP but not Y, and UP c-commands Y by (30(iii)).

This problem disappears, however, if the distinction between Segments and Projections as defined in section 3.2 is accepted. According to the relevant definitions, only the top two XPs in (32) are Segments, and the lowest XP is a Projection. Applying the definition of domination in (33) now gives the result that UP is dominated by all Segments of XP. Y, on the other hand, is not dominated by all Segments of XP, and hence is not dominated by XP. It follows that XP in (32) dominates UP but not Y, and hence UP does not c-command Y.44

This is the desired result. The pair \(<u,y>\) that is the image of the c-command relation between UP and Y disappears, and the relation between the terminal elements y and u is characterized by the pair \(<u,v>\) only. Therefore, (32), like (39), is allowed by the LCA.

It follows, however, that a third adjunction operation is excluded. In that case, the problems described above for (32) surface again, because the top three XPs would have to be regarded as Segments.

I will therefore assume throughout that adjunction of a single element in addition to adjunction of a specifier is possible. This will become relevant in the discussion of scrambling phenomena, in which I assume that adjunction of adverbs to various maximal projections is possible.

The upshot of this minimalist extension, however, remains that directionality specifications are redundant. Since directionality was considered to be a property of government, this result again undermines the conceptual and empirical basis for the relevance of the government relation in syntax.

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44 This requires that (33) be redefined as: a is dominated by \(b\) if \(b\) is a Segment, only if a is dominated by every Segment of \(b\). This modification of dominance applies only when \(b\) is a Segment, not when \(b\) is a Projection. Thus, X in (32) is dominated by the XP Projection. This is needed to ensure that X does not c-command Y in (32) (thanks to Marcel den Dikken for discussing this point with me).
II

A MINIMALIST APPROACH
TO THE SYNTAX OF DUTCH

This chapter contains four sections. Section 1 is intended as a reference section. It contains the basic facts of Dutch inflectional morphology and syntax that are discussed in this book. Section 2 reviews the standard analysis of these facts within the generative framework. Section 3 discusses the problematic aspects of the standard analysis on its own terms, i.e. as an implementation of the so-called Government and Binding approach. In section 4, the consequences of the Minimalist Program for the analysis of Dutch syntax are briefly sketched; it contains a review of the traditional analysis, this time on minimalist terms, and the first outline of a minimalist approach to the syntax of Dutch.

1. Phenomena of Dutch Syntax

1.1 Inflectional Morphology

1.1.1 Verbs

Dutch has an inflectional paradigm for the formation of the present and past tense verb forms. All other tenses are formed periphrastically.

The present tense is formed as in (1), the past tense as in (2):

3 See chapter I, note 3.
DUTCH SYNTAX

1. Present tense

1SG kus
2SG kust
3SG kust
1PL kussen
2PL kussen
3PL kussen

2. Past tense

1SG kuste
2SG kustet
3SG kustet
1PL kussen
2PL kussen
3PL kussen

The present tense 2SG verb form is kust when the subject precedes the verb, and kus when the verb precedes the subject. This is the case in topicalizations and wh-constructions, for which see section 1.3.

The imperative verb forms are kus for the singular and kussen for the plural.2

The non-tensed verb forms of Dutch are the bare infinitive, the infinitive with te, the present participle, and the past participle.1

3. Non-tensed verb forms

Base Infinitive: kussen
Infinitive with te: te kussen
Present Participle: kussend
Past Participle: gekussen

The future tense is formed by the auxiliary zullen ‘shall, will’ in combination with a bare infinitive:

4. Jan zal Marie kussen
   John will kiss Mary.

The perfect tense is formed by a combination of one of the auxiliaries hebben ‘have’ and zijn ‘be’ and a past participiple.3

1 The -e in the past tense inflection is a - in the verbal stem only in a vowel or a voiced consonant.
2 In addition, there are expletive verb forms, kusen for the 1SG and kussen for the 1PL. These are hardly ever used.
3 On the status of te, see III.1.

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Nouns in Dutch are inflected for number (singular and plural). The plural is formed by adding -en, pronounced -e in the North and East of the country -a, -en in the South and West of the country -s, and -en to the stem.4

Nouns in Dutch have no Case inflection, with the exception of pronouns (see section 1.1.5).

Gender agreement is marked on the adjective, only when used attributively in singular indefinite noun phrases. The masculine/feminine agreement suffix is -e, the neuter suffix is zero. In the plural, and in definite noun phrases, the adjective invariably has a -e suffix. Predicative adjectives show no agreement with the noun.

Definite determiners are de (plural, and masculine/feminine singular) and het (neuter singular). The plural indefinite determiner is zero, the

4 In the variety of Standard Dutch that is spoken in the North and East of the Netherlands, the plural suffix is pronounced as -en. In the dialects of these regions, the plural suffix actually appears to be a syllable -en.

5 See Koster (1984) on other forms of adjectival agreement in Dutch.
singular indefinite determiner is con, apparently a weak form of the numeral 'one'.

1.2 Main Clauses and Embedded Clauses

1.2.1 The Position of the Verb

The neutral order of main clauses in Dutch containing a finite verb is Subject-Verb-Object (SVO):

(8) a. Jan kust Marie
    John kisses Mary

b. * Jan Marie kust
    John Mary kisses

For non-neutral word orders, see section 1.3.

The word order of main clauses containing no finite verb is SOV:

(9) a. * Jan kussen Marie
    John kiss Mary

b. Jan Marie kussen
    John Mary kiss

John kisse Mary.'

The neutral word order of main clauses containing both a finite verb and a non-finite verb is SVOV, with the non-finite verb following the object. In (10), the finite verb is an auxiliary and the non-finite verb is a past participle. In (11)-(12), the finite verb takes an infinitival complement clause, and the non-finite verb is an infinitive:

(10) a. Jan heeft Marie gekust
    John has Mary kissed

b. * Jan heeft gekust Marie
    John has kissed Mary

c. * Jan Marie heeft gekust
    John Mary has kissed

d. * Jan Marie gekust heeft
    John Mary kissed has

(12) a. Jan wil Marie kussen
    John wants Mary kiss

b. * Jan wil gekust Marie
    John wants kissed Mary

c. * Jan Marie wil kussen
    John Mary wants kiss

d. * Jan Marie kussen wil
    John Mary kiss wants

When a main clause contains one finite verb and more than one non-finite verb, the non-finite verbs form a cluster. This cluster occupies the same position as the non-finite verb in (10)-(12), to the extent that the object of the most deeply embedded verb appears to the left of the cluster as a whole. The finite verb again precedes the object.

(13) a. Jan heeft Marie willen kussen
    John has Mary want kiss

b. * Jan heeft willen Marie kussen
    John has wanted Mary kiss

In each of the grammatical sentences in (8)-(13), the finite verb is strictly adjacent to the subject, as is illustrated for (8a) in (14):

10 The syntax of the verb clusters in Dutch is infinitely more complicated. A more detailed exposition will be given in chapter IV. See Evers (1975) for seminal work. For recent studies, see Baten (1991) and Broekhuis (1995), and references cited there.
DUTCH SYNTAX

(14) a. * Jan altijd kuste Marie
    John always kissed Mary

On the correct position of the adverb, see section 1.4.
In embedded clauses, the neutral word order is SOV. This is independent of the finiteness of the verb.¹¹

b. * dat Jan kuste Marie
    that John kissed Marie

c. * dat Jan Marie kuste
    that John Mary kissed

(15) a. Piet niet Jan kussen Marie
    Pete not John kiss Marie

b. Piet niet Jan Marie kussen
    Pete not John Mary kiss

"Piet sees John kiss Mary."

See also (11b) and (12b).
For non-neutral word orders, see 1.3 and 1.4.
Embedded SVO orders are not employed in Standard Dutch. In colloquial Dutch, however, two types of embedded SVO constructions are used (cf. De Rooij 1995a, 1995b). First, the *elíete Rede type discussed in Weerman (1989) and De Haan (1990):

(17) Jan zei, hij kon niet komen
    John said he could not come
    "John said that he couldn't come."

Second, a construction with an embedded SVO order in the complement of a complementizer:

(18) Jan zei dat hij kon niet komen
    John said that he could not come
    "said Pete that he couldn't come."

The properties of these constructions will be discussed in section III.5.3.¹²
The verb in the final position in embedded clauses need not be adjacent to the object. See section 1.4. The term 'final position' is slightly

¹¹ Throughout this book, embedded clauses will be introduced by two dat (.) when presented in isolation.

¹² In previous work, I have been less clear about these phenomena (cf. Zwirn 1990a, 1991b, note 23).

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misleading, since the verb may be followed by complement clauses and adjuncts. See section 1.6.

1.2.3 Complementizers and Complementizer Agreement

Complement clauses containing a finite verb must be introduced by one of the two complementizers of and dat, or by the combination of dat (cf. De Rooij 1995a, Hoekstra and Zwart 1993a):¹³

(19) a. Piet zei dat Jan Marie kuste
    Pete said that John kissed Marie
    "Pete said that John kissed Marie."

b. Piet vroeg of dat Jan Marie kuste
    Pete asked whether John kissed Marie
    "Pete asked whether John kissed Marie."

The choice between of, dat, and ofdat is determined by properties of the verb selecting the complement clause, but also by properties of the construction as a whole. For example, the complement clause selected by zeggen 'say' must be introduced by dat (see (19a)). But the complement clause selected by zeggen can be introduced by both dat and ofdat when a wh-element has been extracted out of it (Hoekstra and Zwart 1993a):

(20) Jan zei dat Piet dat Jan Marie kuste
    John said Pete that he kissed Marie
    "Who did Pete say John kissed?"

In many dialects of Dutch, the complementizers introducing a tensed complement clause can be inflected. The inflection expresses person and/or number agreement with the subject. A typical example is given in (21):¹⁴

(21) a. Piet zei dat Piet Jan Marie kuste
    Pete said that Pete kissed John Marie
    "Pete said that Pete kissed John Marie."

b. Piet zei dat Piet de jonge Marie kuste
    Pete said that Pete the young Marie kissed
    "Pete said that the boy kissed Marie."

This phenomenon will be discussed extensively in section III.3.

¹³ In addition to of, dat, and ofdat the combination dat+of is also possible, but restricted to substandard Dutch.

¹⁴ The morphology of the plural verb forms and noun forms in the example is adapted to colloquial speech. Complementizer agreement is absent in written Dutch.
Complement clauses containing an infinitive without to, except those in the complement of raising verbs (like schijnen 'seem') and certain control verbs (like menen 'think'), may be introduced by the complementizer om, which is optional. If te is absent, so is om.\(^{10}\) If te is absent, so is om.\(^{10}\)

(23) a. Jan probeert (om) Marie te kussen\(^{*}\)
    John tries Mary to kiss
    "John tries to kiss Mary."

b. Jan schijnt (om) Marie te kussen\(^{*}\)
    John seems Mary to kiss
    "John seems to kiss Mary."

c. Jan wil (om) Marie te kussen\(^{*}\)
    John wants Mary to kiss
    "John wants to kiss Mary."

The complementizer om is never inflected.

Embedded questions containing a raised verb are introduced by a wh-word and an optional complementizer. The complementizer can be of, ofdat, or dat. An example is given in (23);\(^{11}\)

(23) Ik weet niet wie eufodia\(^{*}\) Marie gekust heeft
    I know not who kissed Mary
    "I don't know who kissed Mary."
    "I don't know who kissed Mary."

The complementizer, if present, can be inflected in those dialects that have complementizer agreement. If the complementizer is absent, the inflection shows up on the wh-element:

(24) a. Ik weet niet wat eufodia de jongen gedaan hebbes
    I know not what the boy done have
    "I don't know what the boy have done."

b. Ik weet niet wat de jongen gedaan hebbes
    I know not what the boy done have
    "I don't know what the boy have done."

Embedded questions containing infinitival verb forms only are introduced by a wh-word, but not by a complementizer:

10 In certain infinitival subordinate clauses, such as purpose clauses, om is obligatory.

11 The combination of om and te appears to have been phatic at first. In Middle Dutch (c.1200-1500), it was optional after prepositions like om. This is still the case in certain dialects of Dutch, such as West Flemish and Groningen, which have constructions like moe om zien 'beautiful for you', good looking! Alternatively, om could be left out in subordinate clauses with te, like dat ziet de man in de tuin 'turn the name in to receive' turns to receive the name in' (Stewart 1977:202).

The wh-word in this case never shows any inflection.

1.3 Topicalization and Wh-Movement

Dutch main clauses may be introduced by elements other than the subject. In that case, the finite verb immediately follows the first constituent:\(^{12}\)

(26) a. Wie weet Jan laat Marie
    who know John let Mary
    "Who know John let Mary?"

b. Wie weet Jan Marie
    who know John Marie
    "Who know John Marie?"

c. Marie de jongens kussen vaak
    Mary the boys kiss often
    "Mary the boys kiss often."

d. Marie de jongens kussen vaak
    Mary the boys kiss often
    "Mary the boys kiss a lot."

e. Waarom Jan laat Marie
    why John let Mary
    "Why does John let Mary?"

f. Waarom Jan laat Marie
    why John let Mary
    "Why does John let Mary?"

12 Except when the verb itself is the first element, as in imperatives, counterfactuals, and yes-no questions. Orders with the verb in third position are possible when the first constituent and the verb are separated by an unstressed sentence connecting adverb like no (non-temporal) now', here (non-temporal) 'here', other (however), disanxieties in context, hence as is known. It is not clear that these adverbs are not part of the first constituent, even though their syntactic function clearly lies on the sentence level. They are comparable to the Ancient Greek intransitive particles ai 'but', for 'as we know', and may also appear inside the first constituent (though not preceding the lexical head of the first constituent) in contrast with Ancient Greek, cf. unci 1965, Duvall 1991:286. Other verb third orders involve topicalization in combination with a resumptive demonstrative pronoun like die man ik 'John that one know I', cf. Koster 1992b and section 2.3) and stacking of adverbs (Gisborne, ikadik de paust, ang el Post yesterday during the break now 1 Peter).
A MINIMALIST APPROACH

In (25), the first element is an adverb, in (27), it is a fronted argument. These two constructions are grouped together as topicaizations. In the sub-constructions (25a–25b), the first element is a fronted wh-clause.

Topicaizations and wh-constructions invariably trigger inversion of the subject and the verb in tensed main clauses. The topic/wh-element and the finite verb are strictly adjacent. The finite verb and the subject no longer have to be adjacent:

(25) a. Marie (‘vandaag’ kwassen de jongens vaak)
   Mary today kisses the boys often
b. Marie kwassen (‘vandaag’) de jongens vaak
   Mary kisses today the boys often
   "Mary the boys kiss a lot (today)."

(26) a. Waarom (‘altijd’) kwast Jan Marie?
   why always kisses John Mary
b. Waarom kwast (‘altijd’) Jan Marie?
   why kisses always John Mary
   "Why does John (always) kiss Mary?"

In infinitival main clauses, topicaizations and wh-constructions are very marginal at best. However, it is clear that the verb must stay in the final position typical for non-finite verb forms:

(27) a. ?? Marie de jongens kwassen? Dat nooit!
   Mary the boys kiss never!
   "The boys kiss Mary? Never!"
   b. ?? Marie kwassen de jongens? Dat nooit!
   Mary kisses the boys never!
   "Mary, the boys kiss? Never!"

Wh-movement in embedded clauses does not cause a change of position for the verb:

(28) a. ?? Marie de jongens kwassen? Dat nooit!
   Mary the boys kiss never!
   "The boys kiss Mary? Never!"
   b. ?? Marie kwassen de jongens? Dat nooit!
   Mary kisses the boys never!
   "Mary, the boys kiss? Never!"

Nor wh-elements can also be fronted inside embedded clauses. For objects the fronting is only possible under certain conditions of intonation (see section 1.4). These frontings likewise never cause a change of position for the finite verb:

(29) a. ?? Marie de jongens kwassen? Dat nooit!
   Mary the boys kiss never!
   "The boys kiss Mary? Never!"
   b. ?? Marie kwassen de jongens? Dat nooit!
   Mary kisses the boys never!
   "Mary, the boys kiss? Never!"

Notice that the fronted elements in (34), unlike in (33), appear to the right of the complementizer dat. This suggests that these constructions do not involve topicalization (see section III.2.2). In infinitival complement clauses, topicalization is hard to identify. Wh-constructions do exist, but no effect on the position of the verb is visible:

(30) a. ?? Marie de jongens kwassen? Dat nooit!
   Mary the boys kiss never!
   "The boys kiss Mary? Never!"
   b. ?? Marie kwassen de jongens? Dat nooit!
   Mary kisses the boys never!
   "Mary, the boys kiss? Never!"

In embedded passieve double object constructions, the indirect object preferably precedes the derived subject (dat de jongens het boek gegeven werd [that the boys the book given was]). Breindal (1995) argues that in these constructions the subject is not in the subject position, so that it is unclear whether the indirect object is topicalized.

?? Marie de jongens kwassen? Dat nooit!
Mary the boys kiss never!
"The boys kiss Mary? Never!"

b. ?? Marie kwassen de jongens? Dat nooit!
Mary kisses the boys never!
"Mary, the boys kiss? Never!"

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(35) a. ?? Marie de jongens kwassen? Dat nooit!
   Mary the boys kiss never!
   "The boys kiss Mary? Never!"
   b. ?? Marie kwassen de jongens? Dat nooit!
   Mary kisses the boys never!
   "Mary, the boys kiss? Never!"

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1.4 Scrambling

The direct object in Dutch does not have to be adjacent to the verb.\(^{11}\) Irrespective of the position of the verb, the direct object can always be separated from it by adverbs.\(^{12}\)

(26) a. Jan boekt (gisteren) Marie gekust
   John boekt yesterday Mary kissed
   "John kissed Mary yesterday."
   "John kissed Mary yesterday."

dat Jan (gisteren) Marie gekust heeft
   dat John kissed Mary yesterday.
   "dat John kissed Mary yesterday."

In neutral speech, distinct intonational patterns are associated with the word orders in the a- and b-sentences, respectively.\(^{25}\) In the a-sentences, the stressed syllable of Marie, -rie, is pronounced in a higher pitch than the preceding elements of the sentence, which are neutrally pitched, and the past participle gekust receives an even, low intonation.

In the b-sentences, Marie has neutral pitch; the adverb gisteren receives an even, high intonation, which is continued up to the stressed syllable of the past participle, -dat, which is pronounced at an even higher pitch. In (37b), the auxiliary hebben gets a neutral, hence lower, intonation.

Many other intonational patterns are possible, however. In general, when Marie presents old information, it will be evenly pitched, at the same level of intonation as the preceding elements. In that case, the past participle in the a-sentences above will have the rising pitch described above for the b-sentences. When Marie presents new information it will have the low-high intonation described above for the a-sentences. In that case, everything following Marie will have an even, low intonation.

More generally, any stressed element in the sentence may have a high intonation of its stress bearing syllable, and in that case everything following it will receive a flat, low intonation.

---

\(^{11}\) Except when the direct object is topicalized and the finite verb is in second position.

\(^{12}\) For indefinite objects, see section IV.2.2.3.

\(^{25}\) See Von Brussen (1984) for discussion of the general features of intonation in Dutch.

---

A MINIMALIST APPROACH

When a sentence has a neutral intonational pattern, the direct object will present old information when it occurs to the left of the verb, as in the a-sentences above, and new information when it occurs to the right of the verb, as in the b-sentences above. As a result, indefinite noun phrases appearing to the left of an adverb receive a special interpretation, as is generally the case when an indefinite element presents old information (see section IV.2.2.4). Assuming that intonation is related to focus, the neutral intonation pattern in Dutch suggests that the position to the immediate left of the verb in embedded clauses is a default focus position.

The phenomenon that direct objects do not have to be adjacent to the verb will be referred to as scrambling.\(^{28}\) As demonstrated by Neeleman (1990), two types of scrambling exist. The first type is described above. Its properties will be examined in more detail in section IV.2.2. The second type of scrambling, called focus scrambling by Neeleman, has entirely different properties. Through focus scrambling, objects may appear to the left of a subject, which is not possible through ordinary scrambling. The phenomenon is illustrated in (34a). The marked, balanced intonational pattern indicated there is characteristic of focus scrambling. Other distinguishing features are its unbounded character, and the fact that unscrambling elements, like restrictive predicates, may display it as well. Focus scrambling will be ignored in this study.

Indirect objects appear to the left of direct objects, and may be separated from them by adverbial material:

(36) a. ...dat Jan Marie (gisteren) het boek gegeven heeft
   that John Mary yesterday the book given has
   "that John gave Mary the book yesterday."
   "that John gave Mary the book yesterday."

b. ?? ...dat Jan het boek Marie gegeven heeft
   ...John the book Mary given has
   "that John gave Mary the book."
   "that John gave the book to Mary."

c. ...dat Jan het boek Marie terstond gegeven heeft
   ...that John the book Mary given has
   "that John gave the book book to Mary."

(38b) is unacceptable in a neutral stress pattern, i.e., with Marie slightly focused. Almost any marked stress pattern makes (38b) acceptable, though. Thus, in (38c) the particle terstond is in the default focus position, and the order of the objects appears to be free.
Indirect objects expressed in a PP have their neutral position to the right of the direct object:

(39) a. *dat Jan het boek aan Marie gegeven heeft
    *dat John gave the book to Mary has
    *that John gave the book to Mary.

b. *dat Jan aan Marie het boek gegeven heeft
    *dat John to Mary the book given has
    *that John gave the book to Mary.

When the direct object and the indirect object are clefts, the word order phenomena are different, as will be discussed in section III.2.1.5.b.

1.5 Clefts

Dutch has sets of strong and weak subject and object pronouns (Koster 1978a, Berendsen 1986, Eversaert 1986, Zwart 1991a).25

(40) Strong subject pronouns

   SG ik     1PL wij
   SG jij     2SGju
   SG jij/vi   2SG vj

(41) Weak subject pronouns

   SG r sle 1PL we
   2SG ja    2PL ze

(42) Strong object pronouns

   SG mij   1PL er
   2SG jou    2PL jull
   3SG hem/meer 3PL hem, hum

(43) Weak object pronouns26

   1SG me     1PL ze
   2SG je     2PL ju
   3SG h'mer     3PL hem, hum

---

A MIND-DEPENDENT APPROACH

For reasons that will become clear in section III.2, I will refer to the weak pronouns as clefts (cf. Zwart 1991b).

When a subject cleft is the first element in a main clause, it is proclitic to the finite verb in second position:25

(44) *Ik heb Marie geknapt
    I have Marie kissed
    "I kissed Marie."

In constructions involving subject-verb inversion, the subject pronoun is enclitic to the verb:25

(45) Marie heb'k geknapt
    Mary have I kissed
    "Mary I kissed."

In embedded clauses, the subject cleft is enclitic to the complementizer:

(46) *dat'k Marie geknapt heb
    that I Mary kissed have
    "that I kissed Mary."

Enclitic subject clefts cannot be separated from the verb, unlike full noun phrases (section I.2) and strong pronouns (cf. Koster 1978a, chapter 1.7):

(47) a. *Marie heb (*gestereen) ik niet geknapt
    *Mary have yesterday I not kissed
    *Mary I did not kiss yesterday.

b. *dat (*gestereen) *ik Marie niet geknapt heb
    *that yesterday I Mary not kissed have
    *that I did not kiss Mary yesterday.

---

25 The 3SG masculine cleft is exceptional, in that it cannot appear as the first element of a main clause, unless the main clause in question is the second element in a coordinated construction. In that case, it may be enclitic to the conjunction (zowel is niet ontdaan [for het be- SCL not not always] for he did not always sit down, from Neens. De sintender [1911], 8th impression, p. 15).

26 The enclitization does not bleed the devision of the final constituent of the verb. Thus, *vader (found he) is pronounced [vadert] instead of [vadert] (vadert) 1983).
(48) a. Marie heb (gisteren) ik niet gekust
    Mary have yesterday I not kissed
    "Mary I did not kiss yesterday."
b. dat (gisteren) ik Marie niet gekust heb
    that yesterday I Mary not kissed have
    "That I did not kiss Mary yesterday."

Object clitics are enclitic to the finite verb in subject initial main clauses, and cannot be separated from them:

(49) Jan heeft (gisteren) 'r gekust
    John has yesterday her kissed
    "John kissed her yesterday."

In main clauses introduced by an element other than the subject, the object clitics are separated from the verb by the subject:

(50) a. Gisteren heef Jan 'r gekust
    yesterday has John her kissed
    "Yesterday John kissed her."
b. * Gisteren heef't Jan gekust
    yesterday has her John kissed
    In this case, the object clitic cannot be separated from the subject:

(51) Daarom heef Jan (gisteren) 'r gekust
    therefore has John yesterday her kissed
    "That's why John kissed her yesterday."


(52) a. Ze heef Jan gekust
    she-OCL has John kissed
    "She kissed John."
b. * Ze heef Jan gekust
    hee-OCL has John kissed
    "John kissed her."

In embedded clauses the object clitic again appears immediately to the right of the subject:

(53) a. dat Jan's gekust heeft
    that John kissed has
    "That John kissed has"
b. * dat 'r Jan gekust heeft
    that her John kissed has

In double object constructions, when both objects are expressed as clitics, the two objects cluster together in the object clitic position. In the preferred order, the direct object precedes the indirect object, but the other order is also possible:

(54) * dat Jan (gisteren) 'r gekust heeft
    that yesterday her kissed has
    "That John kissed her yesterday."

In Exceptional Case Marking constructions, the object of the embedded clause may precede the subject of the embedded clause if and only if the former is a clitic:

(55) a. Piet heef't Jan zien kussen
    Pete has her John see kiss
    "Pete saw John kiss her."
b. * Piet heef Marie Jan zien kussen
    Pete has Mary John see kiss
    "Pete saw John kiss Mary."

1.6 Extraposition

When the verb is in final position (see section 1.2), a limited class of elements may appear to the right of the verb or the verbal cluster. These phenomena are usually grouped together under the name of extraposition.

* In West Flemish the order verb+complex aux+subject-object-clitic-subject is grammatical (Kruissenaar 1981). I have also observed this in dialects spoken in the South of the Netherlands (e.g. om de man dat niet is [because there that not is] 'because it's not there', instead of Standard Dutch om de man dat niet is [because there that not is]).
Complement clauses invariably follow the verb:29

(37) a. ...dat Piet zei dat Jan Marie knooe...
    that Pete said that John Mary kissed
    "...that Pete said that John kissed Mary."  

b. * ...dat Piet dat Jan Marie knooe...
    that Pete that John Mary kissed
    said

(38) a. ...dat Jan wilde proberen om Marie te kussen...
    that John wanted try O.M. Mary to kiss
    "...that John wanted to try to kiss Mary." 

b. * ...dat Jan om Marie te kussen wilde proberen...
    that John O.M. Mary to kiss wanted try
    "...that John wanted to try to kiss Mary." 

Adjunct clauses may also follow the verb, but they may appear in various positions further to the left:

(39) a. ...dat Jan Marie knooe toen de film begon...
    that John Mary kissed when the movie started
    "...that John kissed Mary when the movie started." 

b. ...dat Jan Marie toen de film begon knooe...
    that John Mary when the movie started kissed
    "...that John kissed Mary when the movie started." 

c. ...dat Jan toen de film begon Marie knooe...
    that John when the movie started Mary kissed
    "...that John kissed Mary when the movie started." 

d. ...dat toen de film begon Jan Marie knooe...
    that when the movie started John Mary kissed
    "...that when the movie started John kissed Mary." 

Relative clauses may appear to the right of the verb, but also to the immediate right of their antecedent:

29 Koster (1989) notes examples of complement clauses to the left of a deitive verb in final position. These constructions appear to have the focus scrambling characteristic (see 1.6). Thus Koster's example "...dat Jan [dat...] 'dat hij altijd of beter' heft ... dat John always regretted
"Matt..." is only grammatical with the intransitive pattern found in these scrambling constructions, with a balance of two stressed elements (in this case, one part of the embedded clause must be stressed, as well as either altijd 'always' or beter 'better').
2 Previous Treatments within Generative Grammar

This section briefly summarizes the standard analysis of Dutch syntax within the theoretical framework of generative grammar.

The standard analysis goes back to the pioneering work of Jan Koster and Hans den Besten in the 1970s. This work yielded the two cornerstones for every analysis of Dutch syntax in the two decades to follow. These two cornerstones are the following hypotheses:

1. Dutch is an SOV language.
2. In Dutch tensed main clauses the verb invariably moves to C.1

These two hypotheses, and their consequences, will be discussed in the following two subsections.

---

1 C is the position of the complementizer. It is assumed to be the head of a functional projection CP since Chomsky (1995b) (cf. Figure 1. in section 1.2). Before that, the complementizer position was referred to as COMP. The COMP position was not a functional head, and could be adjusted to by maximal projections.
2.1 Dutch as an SOV Language

In generative grammar, a language \( L \) is defined as an SOV language if all possible word orders of \( L \) are derived from an initial representation in which the order of meaningful elements in Subject-Object-Verb.

It was concluded as early as Bach (1962) and Bierwisch (1963) that German is an SOV language in this sense.\(^5\) German displays by and large the same word order phenomena as described for Dutch in section 1.2.1 (the position of the verb), 1.3 (topicalization and wh-movement), and 1.4 (scrambling).

Bach (1962) shows that the position of the finite verb in German main clauses (i.e. the second position) can be derived by a single transformation, if we assume that the basic order in German is SOV. To make sure that this transformation does not apply in embedded clauses, Bach makes crucial reference to the sentence boundary symbol in the description of the rule.\(^6\) Bach's Very Second transformation obligatorily moves the finite verb to the second position to the right of the sentence boundary. This transformation follows the other rules which determine the order of subject and object, for instance. This ordering makes the formulation of a single rule governing verb movement possible.\(^7\)

Koster (1970) is the first generativist treatment of the basic order question for Dutch.\(^8\) In the spirit of Bach (1962), Koster argues for a single verb movement transformation deriving the various main clause word orders of Dutch. This transformation, called Verb Placement, moves finite verbs to the left of the subject and to the right of a clause initial position called COMP.\(^9\) This COMP position must be substituted for by either the subject (in subject-initial main clauses), or a wh-phrase (in wh-constructions), or a non-subject (in topicalizations).

Koster defines Verb Placement as follows:

\[
\begin{array}{c}
\text{Verb Placement} \\
X \rightarrow \text{COMP} \rightarrow Y \rightarrow V \rightarrow Z \\
\end{array}
\]

S.D. 1 2 3 4 5 \rightarrow obl.

S.C. 1 2 4+3 \rightarrow 5

Verb Placement turns the initial representation (2) into the intermediate representation (3):

\[
\begin{array}{c}
(1) \\
X \rightarrow \text{COMP} \rightarrow Y \rightarrow V \\
\end{array}
\]

\[
\begin{array}{c}
(2) \\
S' \rightarrow \text{COMP} \rightarrow S \\
\end{array}
\]

\[
\begin{array}{c}
(3) \\
S' \rightarrow \text{COMP} \rightarrow S \\
\end{array}
\]

\[
\begin{array}{c}
\text{NP} \rightarrow \text{NP} \rightarrow \text{V} \\
\end{array}
\]

\[
\begin{array}{c}
\text{Jan Marie kust} \\
\end{array}
\]

\[
\begin{array}{c}
\text{NP} \rightarrow \text{NP} \rightarrow \text{V} \\
\end{array}
\]

\[
\begin{array}{c}
\text{kust Jan Marie} \\
\end{array}
\]

\[\text{See note 1 of this section.}\]

\[\text{For a discussion of the status of German in traditional grammatical frameworks, see} \]

Seligman (1984). In the 1980s a consensus arose as to the SOV status of Proto-Indo-European and Proto-Germanic (cf. Beekes 1978, Dahl 1985). It was assumed that the present asymmetric character of German is due to an unfinished shift from SOV to SVO status. After a period of uncertainty, the shift was apparently halted around 1500-1600. For unclear reasons, the embedded clause word order reverted to SOV, whereas the main clause word order remained SVO.

\[\text{This requires a distinction between a clause boundary and a sentence boundary, and a rule changing the first into the latter at some point in the derivation of a sentence in the proper context.}\]

\[\text{Bach's view was challenged by J.R. Ross (1970), who concluded that German was an SVO} \]

language on account of the fact that it allows forward gouging, which is unexpected in a truly verb final language. Bach appears to have been convinced by this argument (cf. Bach 1971). Ross on his turn became convinced that German was SOV after his analysis of gouging was challenged by Malin-Olfing (1972), see Koster (1975:113). Koster (1979) is in part an improvement of Malin-Olfing's argument. The discussion concerning basic word order typology was sobered in the late 1960s, early 1970s by the emergence of the theory of preservative semantics, which on principled grounds favored a VSO base, or a base without linear ordering. This explains the hesitance of Koster (1975:26) on the matter. For recent suggestions in this direction within the principles and parameters approach, see Chomsky (1991).

\[\text{The paper was first read at the first annual meeting of the Alpensia Vereinigung voor} \]

Dutch Taalwetenschap in January 1970, and published in the proceedings of that meeting as "Dutch as a SOV Language" (Koster, ed., 1970).
The COMP position is filled by subsequent transformations, so that the verb ends up in the second position in the final representation.

In (3), the finite verb is immediately dominated by the root node S. Thus, Verb Placement is a root transformation (see Emonds 1970). It follows that Verb Placement cannot take place in embedded clauses.

To be more exact, it must be stipulated that Verb Placement is a root transformation only, or a last cyclic rule. Koster notes that there are many transformations that are last cyclic only, but so known cases of transformations that take place in every cycle but the last. If the embedded clause word order were derived from the main clause word order, we would be forced to accept a non-last cyclic verb postponing rule. This is less attractive than positing Verb Placement as a last cyclic rule.

Thus, by embedding Verb Placement in a general theory of possible transformations, and by characterizing it as a last cyclic rule, Koster maintains Bach's result that a single rule takes care of the position of the finite verb in all constructions.

In addition, Koster presents an empirical argument for the basic SOV order of Dutch which has become influential. Koster notes that in main clauses in Dutch containing a particle-verb construction, the particle and the verb constitute a discontinuous category embracing all other categories (except the first element):

(4) a. Jan belde gisteren Marie op John called yesterday Marie up 'John called Marie up yesterday.'
    b. * Jan belde gisteren op Marie John called yesterday op Marie
    c. * Jan belde op gisteren Marie John called up yesterday Marie
    d. * Jan op belde gisteren Marie Jan op called yesterday Marie

Koster assumes that verb-particle combinations are compound verbs, i.e. the particle and the verb are both generated in V. This implies that one of two situations obtains in Dutch. Either there is a rule moving particles to the right in main clauses and embedded clauses, and a second rule moving the finite verb to the right in embedded clauses, in that case Dutch has a basic SVO order. Or there is no rule affecting the position of the particle and there is a rule moving the finite verb to the left in main clauses (Verb Placement); in that case Dutch has a basic SOV order.

It is obvious that the rule system connected with the basic SOV order is more economical.

Koster then proceeds to demonstrate that the particle in (4a) signals the basic verb position, by showing that the particle in the main clause has exactly the same distributional properties as the finite verb in the embedded clause. In particular, all and only those elements that may appear to the right of the finite verb in embedded clauses may appear to the right of the particle in main clauses (cf. section 1.6). This will go without demonstration here (see Koster 1976:119ff).

Koster's conclusion that Dutch is an SOV language has deeply influenced the study of Dutch syntax in the generative framework.

First, the analysis of the main clause word order of Dutch as involving a combination of verb preposing and topicalization has become standard (see among others Den Besten 1977, Thiersch 1978, Koopman 1984, Weerman 1986).

Second, the characterization of Dutch as an SOV language was often considered to imply that the VP in Dutch is head final. Consequently, when the existence of the independent functional head for inflectional features [Infl] was established, it was concluded that its maximal projection [IP] was head final as well. In connection with this, it was assumed that the finite verb in embedded clauses occupies the Infl-position in overt syntax. These assumptions were based on the idea that the inflectional morphemes are generated in [Infl] and have to be combined with the verbal stem in overt syntax (at S-structure). It was assumed that in English this combination takes place by lowering the inflectional morphemes onto the verbal stem in V, whereas in Dutch, the verbal stem raises to the inflectional morphemes in [Infl]. Since finite verbs are clause final in

---

* The idea that inflectional elements are generated separately from verbal stems is already present in Chomsky (1957), and is rooted in the post-Stromswoldian practice of manifesting inflectional morphemes as separate constituents (Krovetz 1986). The idea that SOV is the head of the clause appears to be due to Ken Hale, who proposed this in class lectures at MIT in 1977 (see Stowell 1981/1982; Stowell and Pesetsky 1982/1984). This idea appears to have been widespread around the year 1980. The idea that Infl projects a regular X-bar structure, with a specifier and a complement, was first formulated in Stowell (1981/1982); see also Pesetsky (1980/1982).

* The reordering of inflectional morphemes and lexical stems was introduced as a linear permutation rule in Chomsky 1987/82. This rule, later called Affix Mapping, did not yet have the hierarchical dimension associated with the terms raising and lowering. The raising-lowering distinction was introduced in Tesar's (1976) account for differences in verb position between French and English. The raising rule is adopted as Rule 8 in Chomsky (1986:17).
embedded clauses in Dutch, it follows that Inf is located to the immediate right of the VP in languages like Dutch and German. The same logic applies to the infinitives with te. Te was considered as an inflectional element, generated in Inf, and the verb stem was analyzed as raising to te in overt syntax. These assumptions have yielded a kind of typological truism, according to which SOV languages have head final functional projections.

A third major consequence of the assumption that Dutch is an SOV language was that a number of rightward movement rules had to be assumed. Thus, the phenomena described in section 1.5 (known as extraposition phenomena) were considered to involve movement to the right across the verb. These rightward movements were also empirically motivated by the existence, in various languages, of constructions where clauses and PPs are separated from the elements they appear to belong to (cf. Ross 1967):

(5) a. A book on linguistics came out today
   b. A book came out today on linguistics
   c. A book that I wrote years ago came out today
   d. A book came out today that I wrote years ago

A fourth major consequence of the analysis of Dutch as an SOV language has been the introduction of a directionality parameter for grammatical relations. Since Dutch is an SOV language, one could suppose there to be a canonical direction of government in Dutch, according to which heads govern their complements only in a right-to-left fashion. SOV languages, like English and Italian, would have the opposite canonical direction of government.

The idea that the verb governs to the left in Dutch suggests an account for the distribution of noun phrase complements and clause complements (Beekes 1981). Noun phrases must be formally licensed through Case assignment (Vergnaud 1979, Chomsky 1981), and Case is assigned to a direct object under government by the verb (Chomsky 1981). Clausal complements do not need to be licensed through Case assignment; in fact, they resist Case (Gerow 1981). One could assume that for that reason sentential complements flee from positions in which they would otherwise be assigned Case. Hence, in Dutch they move to the right of the verb,

where they are not governed by the verb and consequently cannot be assigned Case by the verb.\footnote{10}

2.2 Verb Movement to C

Koster’s Verb Placement transformation moves the finite verb to a position to the left of the subject and to the right of the clause initial element COMP (followed by movement of a maximal projection to COMP). Den Besten (1977) modified this analysis slightly, by arguing that all root transformations involve movement to COMP.\footnote{11}

Thus, in Den Besten’s influential analysis, the target of the verb movement in finite clauses in Dutch is COMP itself. Wh-movement, topicalization, and subject preposing also move constituents into COMP. The verb is adjoined to the right of COMP, and the other preposed constituents are adjoined to the left of COMP.

Den Besten asserts that there are two sets of root transformations, the verb movement transformation making up one set and the other root transformations making up the other. Only one transformation per set may be chosen for each sentence.\footnote{12}

Den Besten’s principal argument in support of the hypothesis that all root transformations involve COMP is based on the consideration that preposing must involve raising to a higher position, rather than leftward shifting to a lower position.\footnote{13} Thus, an element that is preposed out of S has to move to the sister position of S, or higher. Since COMP is the only known sister of S, all preposings must target COMP.

Den Besten in addition presents some empirical evidence in favor of the idea that verb preposing invariably involves movement to COMP (1989:250). Recall from section 1.5 that Dutch subject clefts have to be adjacent to the complementizer in embedded clauses. As was illustrated there, the subject clefts similarly have to be adjacent to the finite verb in

\footnote{10} The idea of directionality of government has had numerous other implementations (see e.g. Krieger 1984, Koslowski 1995; Power 1990). Space does not permit a full discussion of the relevant work in this study.

\footnote{11} Recall that before Chomsky (1986b) the clause initial element COMP was thought of as containing both final maximal projections and the verb/complementizer. These two functions of COMP were later distributed among the specifier of CP and C, respectively.

\footnote{12} This distinction between two sets of root transformations to COMP forms the distinction between head movement to C and XP movement to the specifier of CP (cf. Chomsky 1986b).

\footnote{13} For the details of this argument the reader is referred to the original text. Den Besten (1989:250).}
topicalization constructions. This can be captured in a single statement if
the verb occupies the complementizer position in topicalizations.

As Den Besten admits, this evidence is neutral as regards the proper
description of subject initial main clauses (1989b:25). Den Besten
nevertheless concludes that the verb moves to COMP in this case as well,
since "the superiority of a grammar of Dutch that accounts for all verb
prepositions by means of one rule that moves the verb from a VP-final
position (…) to one specified position in COMP, is evident" (loc.cit.).

In a later modification, Den Besten argues that verb movement to
COMP is not addition to the complementizer, but substitution in the
position of the complementizer.23 This explains why the preposed verb
and the complementizer are never found in COMP together. 22

In this modified version, Den Besten clearly links verb preposing to
tense. The COMP position is considered as a tense position, because the
complementizer dat specifically requires a finite verb, and the
complementizer er specifically requires a 2-infinitive. Verb preposing is
then redefined as ‚Move Tense‘. This movement is blocked when the tense
position (COMP) is already lexically filled, but obligatory whenever the
complementizer is absent.

There is a very clear complementary distribution of the
complementizer and the finite verb in German. In certain embedded
clauses in German the complementizer can be left out. In that case, the
embedded clause has the main clause word order:25

(7) a. Johann isst Maria
    John eats Mary
b. * Johann ist die Maria
   Johann is the Maria

c. Johann isst die Maria
   Johann eats the Maria

This modification was published as Appendix II to Chapter 1 of Den Besten (1989),
but dates back from a presentation at GLOW in 1978. The Appendix contains other modifications
as well, for instance in arguing for a leading role for Wh-elements outside COMP. This is
another step towards the development of a specific of CP. This latter modification appears to
be based on the analysis of topicalization of Kopf (1979b).

In the adjunction analysis proposed by Den Besten in his original
work, it was assumed that the complementizer is automatically deleted when the verb moves to COMP.

The subjunctive (keinen) verb form shows that the embedded verb second clauses are really
subordinated, according to Schwartz and Vilmar (1969). Similar constructions are also
possible in colloquial Dutch, as illustrated in section 2.1.1. Note, however, that the embedded
verb movement in colloquial Dutch is possible with the complementizer present, unlike in
German.26

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(8) a. Peter behauptet, daß Johann Maria kehrt
    Peter claims that John Mary leaves
b. * Peter behauptet, daß Johann kehrt Maria
    Peter claims that John leaves Mary

(9) a. Peter behauptet, Johann kehrt Maria
    Peter claims that Johann leaves Mary
b. * Peter behauptet, Johann Maria kehrt
    Peter claims John Mary leaves

A similar complementarity is found in counterfactuals in both German
(10) and Dutch:

(10) a. als ob der Himmel die Erde still geliebt hätte
    as if the sky the earth still loved
b. als hätte der Himmel die Erde still geliebt
    as if the sky the earth silently loved

The complementary distribution of the complementizer and the present
finite verb is often adduced as an argument for the correctness of the
hypothesis that verb fronting involves movement to COMP.18

Den Besten’s analysis has had considerable impact on the study of
Dutch and other Germanic languages.19

In the next subsection, the standard analysis of the phenomena of Dutch
syntax (based on the assumption that Dutch is an SCV language with
invariant movement to C in main clauses) will be briefly sketched.

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18 As will become clear in section 3.3, the complementary distribution of complementizer and
verb does not prove Den Besten’s analysis to be correct (cf. also Travis 1993). I will argue in
section 3.3.1. that this complementary distribution actually supports the hypothesis that
verb movement in subject initial main clauses does not target the complementizer position.

19 See among many others Kayne (1982), Platek (1983), Holmberg (1986), Hauder and
Prinzheim, eds. (1986), Veltman (1989a). The short list of references includes Travis (1984,
1991), Reinhart (1997), Zwart (1993a,b). For Verb second effects in Romance described in
effects in non-Indo-European languages are also standardly described in terms of movement
to C. See Spratt (1989) and Schäfer (1991) for Celtic, among others, and Black (1992) for
Shipibo.
2.3 The Standard Analysis of the Phenomena of Dutch Syntax

The phenomena of Dutch syntax listed in section 2.1 have received the following standard analysis in the Government and Binding framework of generative grammar. Most features of this analysis derive from the basic assumptions discussed above: Dutch is an SOV language and the verb moves to C in main clauses.

It follows from the SOV status of Dutch, and from the assumption that SOV languages have a head-final IP, that Dutch sentences are structured as in (11):

(11)  
\[
\begin{array}{c}
\text{CP} \\
\text{spec} \\
\text{C} \\
\text{spec} \\
\text{IP} \\
\text{spec} \\
\text{VP} \\
\text{spec} \\
\text{NP} \\
\text{VP}
\end{array}
\]

The inflectional morphemes, including 
, are generated in I. The verbal stem, generated in V, raises to I in order to combine the verbal stem and the inflectional morphemes. In main clauses, tensed verbs move to C.

The subject occupies the spec position of IP in embedded clauses. In main clauses, the subject either moves to the spec position of CP (a subcase of topicalization), or stays in the spec position of IP. In the latter case, the spec position of CP is occupied by another XP, by way of topicalization or wh-movement.

Complementizer agreement, first noted in the generative framework in Den Besten's Appendix II to his 1977 paper (Den Besten 1989:33), has given rise to two types of analysis. First, one could argue that C is an inflectional category, hosting abstract agreement features. In Chomsky (1981), these abstract agreement features are generated as a subpart of f. It could be the case that in Dutch they are generated as a subpart of C (Bayer 1984a:249, Rennies and Haegeman 1984:41, Koopman 1984:214, Haider 1986:69).

According to a second analysis, the agreement morphology originates in f but is moved to C, where it shows up on the complementizer (Hoekestra and Márač 1989).

For topicalization, basically two analyses have been proposed. According to one analysis, the topic is moved to the spec position of CP (Koster 1975, Baltin 1982). According to the other analysis, topicalization involves base generation of the topic outside CP (Chomsky 1977, Koster 1977b). In this analysis, the spec position of CP is occupied by an empty operator (Chomsky) or a possibly empty demonstrative pronoun (the d-word, Koster), which is moved from within the VP. The latter analysis is supported by the existence of constructions like (12), in which the presence of the d-word dit is optional:

(12)  
\[\text{Jan (dit) heeft ik niet. } \text{John (dit) gearie}\text{d I}}\text{ not.}\]

In both analyses, the placement of the subject in front of the finite verb in main clauses is considered to be a subcase of topicalization. Subjects may be resumed by a d-word as well:

(13)  
\[\text{Jan (dit) komt niet. } \text{John (dit) comes not.}\]

Wh-movement in both main clauses and embedded clauses targets the spec position of CP (Chomsky 1981).

The standard analysis of scrambling goes back to Kortenaer (1975), Van Riemsdijk (1976) and De Haan (1979). According to this analysis, adverbs have a fixed position. Sentence adverbs, like gestures 'yesterday', are adjoined to VP. As a result, scrambling consists in optional movement of a noun phrase to the left.29

It was discovered in the mid 1980s that scrambled objects in Dutch license parasitic gaps (Bennis and Hoekstra 1984, Koster 1984; cf. Felix 1983 for German):

(14)  
\[\text{Jan Marie zonder een aan iemand \text{ without looking at her.}}\]

In (14), the direct object Marie is moved from the position indicated by the trace across the adjunct clause zonder een te kijken without looking at as an instance of scrambling. The adjunct clause contains a gap which is parasitic on the trace of the direct object.

The fact that scrambling licenses parasitic gaps characterizes it as an instance of A'-movement (movement to a position that is not a potential

29 The other possibility, according to which noun phrases have a fixed position and adverbs optionally move to the right, was commonly held in the early 1970s (cf. Koster 1983, Kees 1974).
argument position, Chomsky 1981). This has become a standard aspect of the analysis of scrambling in Dutch. 21

The clitic status of the weak pronouns in Dutch is argued for in Koster (1979b, 1985b) and Van Remmery (1978:35). Stowell (1981, 135) follows their argumentation and concludes that these clitics are adjoined to a head position to the left of the VP. 22 In general, however, the consensus was that the Germanic clitics differ from the Romance clitics in that the former are adjoined to VP, whereas the latter are adjoined to heads (Everaert 1986). In this view, then, scrambling is an optional leftward shift inside VP, and the Dutch clitics are left-adjoined to VP. This explains why clitics show up further to the left than full NPs.

Elements appearing to the right of the clause final verb position, such as clausal complements and adjectives, relative clauses, PPs, and adverbials are assumed to have been moved there by rightward extraposition, crossing the final verbal position. 23

This concludes the survey of the main aspects of the standard analysis of Dutch syntax within the Government and Binding framework. In the next subsection, I will discuss certain aspects of this analysis which are problematic within the set of assumptions which make up the Government and Binding framework.

3 Problems of the Standard Analysis

In this section, I will mention a number of problems connected with the traditional analysis of Dutch syntax as sketched in section 1.2. These are problems from the point of view of the relevant stage of the theoretical framework, i.e. the Government-Binding approach.

Obviously, theoretical developments, such as the emergence of the minimalist approach, necessitate reassessments of traditional analyses.

However, it is important to note that the traditional analysis of the syntax of Dutch already had many problematic aspects, even within the framework of the Government and Binding approach. In fact, the traditional analysis is basically a pre-Government and Binding analysis, which failed to make the transition into the Government and Binding stage (even though its main points were widely accepted within that stage).

It comes as no surprise, therefore, that a further sharpening of the notions that became important in the Government and Binding era (such as economy of derivation and representation, visibility, Full Interpretation, feature checking), which yields the minimalist approach, makes the standard analysis untenable in a very obvious way. The problematic aspects of the standard analysis were already clearly present in the Government and Binding era.

3.1 INFL

In the standard analysis of Dutch syntax inflected verbs occupy the INFL position in overt syntax, in embedded clauses, or the COMP position, in main clauses. The underlying assumption in this analysis is that inflectional morphology is generated in INFL and has to be combined with a verbal stem in overt syntax (cf. Lasnik 1981).

A problem of this aspect of the analysis is that there are two ways to combine the verbal stem and the inflectional morphology. The verb can raise to INFL, but INFL can also lower onto the verb. This latter mechanism is assumed to apply in English (Emonds 1976, Chomsky 1981).

Assuming that INFL in English is occupied by the auxiliary do, by modal verbs like will, and by the infinitival marker to, constructions like (1) indicate that INFL is located to the left of VP:

(1) a. John did not kiss Mary
   b. John tried to quickly kiss Mary

Quickly is a VP modifying adverb (instead of a sentence modifying adverb like yesterday). It is assumed to occupy a VP internal or VP adjoined position. Therefore, (2) shows that finite verbs in English may occupy a VP internal position:

(2) a. John quickly kissed Mary

On the assumption that inflectional morphology is generated in INFL, (2) must be derived from (3), and the inflectional morphology must have moved down to the verbal stem to yield (2).
order. However, the verb-to-INFL movement, if it takes place, is always vacuous (Reuland 1990b).

This is not a necessary state of affairs. It could be that there are adverbial elements, or PPs, or clausal complements or adjuncts adjoined to the right of VP and that these elements were crossed by the verb on its way to INFL. But this can never be demonstrated.

In part, this is due to two other assumptions of the standard analysis. First, the extraposition rule always moves clausal complements to the right. Apparently, this means to the right of INFL. Second, it is assumed that all verbs, including the non-finite forms, move to INFL. As a result, nothing is left behind to mark the original position of the verb. This makes the verb raising vacuous by definition.

However, the conclusion that nothing is left behind to mark the original position of the verb cannot be drawn as easily as that. First, while infinitives obligatorily form a cluster, past participles appear to be included in the cluster only optionally. They may show up both to the left and to the right of the cluster:

Other orders are excluded in standard Dutch (but not in West Flemish, for instance, of section IV.2.4). The verb clustering mechanism in its simplest form (adjunction to the right) yields (5b), not (5a). It may be the case then, that the past participle is left behind in the verb position in (5a).

If so, it should be possible for adjuncts that are right adjointed to VP to intervene between the past participle and the finite verb if the latter moves to INFL. But this is never the case:

So the various movement hypothesis for verb-to-INFL movement requires a verb clustering mechanism that moves past participles out of the VP, but to different positions in (6a) and (6b).

A similar consequence applies to verb particles and resultative predicates. Recall from the discussion of Koster (1973b) that particles are assumed to be part of a compound verb, left behind when the verb is proposed. It must now be assumed that the particle does move along with
the verb to INFL, and is stranded there. Otherwise, the particle would mark the original position of the verb, and we would expect certain elements to be able to intervene between the particle and the verb in INFL. But this is never found:

(3) a. *dat Jan Marie op tijdens de film bidde that John Mary up during the movie called
b. *dat Jan Marie tijdens de film op bidde that John Mary during the movie up called
   "that John called Mary up during the movie."

Similarly for resultative predicates:

(9) a. *dat Jan de dezer rood met één kwast verfde that John the deer red with one brush painted
b. *dat Jan met één kwast de dezer rood verfde that John with one brush the deer red painted
   "that John painted the red with a single brush."

These elements must also be assumed to move along to INFL, because nothing may appear between them and the verb. This is not an attractive conclusion, because resultative predicates can be phrasal (i.e. rood ‘red’ in (9) can be replaced by the phrase met de kwast ‘as red as the brush’).

Thus the hypothesis of vacuous verb-to-INFL movement can only be maintained on the auxiliary assumption that all elements that could have marked the original position of the verb, whether heads or phrases, are moved along in the vacuous movement to INFL. This makes the hypothesis rather suspect.

In addition, Reuland (1990b) presents an empirical argument against vacuous verb-to-INFL movement in Dutch. This argument is based on the hypothesis that adverbial scope is determined by hierarchical rather than linear relations (cf. Reinhart 1976). Thus, an element higher in the tree has scope over an element lower in the tree, regardless of linear order. In SOV languages like Dutch, VP-internal elements are ordered in such a way that the linear order equals the hierarchical order. Thus, both sentences in (10) have only one reading:

(10) a. dat Jan Marie herhaaldelijk op beide wangen gekust heeft that John Mary repeatedly on both cheeks kissed has
   "that John repeatedly kissed Mary on both cheeks."
b. dat Jan Marie op beide wangen herhaaldelijk gekust heeft that John Mary on both cheeks repeatedly kissed has
   "that John on both cheeks kissed Mary repeatedly."

In (10a), John on several occasions kissed Mary twice, once on each cheek. In (10b), John gave each of Mary’s cheeks a streak of kisses.

Since op beide wangen ‘on both cheeks’ is a PP, it can presumably be adjoined to the right of the VP. This is not visible if all verbal material has moved out of VP to INFL, yet it cannot be excluded. At the same time, herhaaldelijk ‘repeatedly’ must still be assumed to be inside the VP (or adjoined to VP). If so, we may expect the linear order to be different from the hierarchical order: the right adjoined PP may be higher than the adverb. Thus we predict that (10a) also has the reading of (10b), which is not the case.

We see here that the vacuous V-to-INFL movement hypothesis predicts a possibility that does not exist. This makes the V-to-INFL movement hypothesis below (section III.1) a final remark must be made here on the nature of the lowering process.

Lowering (or rightward movement) of inflective morphemes to the verb stem has been an aspect of generative grammar ever since its beginnings. It is also very obvious that lowering is a problematic mechanism. Thus, it is counterintuitive and it does not leave a c-commanded trace. Chomsky (1991) solves the latter problem by assuming that the verb-INFL combination moves back to the INFL position at LF. This, however, yields other problems, having to do with economy of derivation. All these problems are due to the basic assumption that inflective morphemes are generated in the INFL position.

There is however a separate tradition within generative grammar according to which inflected elements are generated in fully inflected form (Lieber 1986, Williams 1981, Lapointe 1981, Reuland 1986). In this approach, it can be assumed that functional heads are not occupied by inflective morphemes but by inflectional features (Travis 1994:192, Fabb 1984, Zwart 1987, Zwart and Hoekstra 1993). In this assumption, languages like English and Swedish are characterized by the circumstance that inflected verbs preconstratime raising to INFL until LF; if that is the correct approach, it is an open question whether verb raising to INFL in Dutch takes place in overt syntax or at LF. As we have seen in section II.2, the assumption that functional heads host features rather than morphemes is a crucial part of the Minimalist Program.

In sum, if doubts are cast on the existence of verb movement to an INFL position to the right of the VP in Dutch, this does not automatically lead to the conclusion that Dutch has the suspect INFL-moving mechanism.  

---

1 This argument assumes that PP-verb-V phenomena involve movement to the right.
2 See note 10 of section II.1.
3.2 COMP

Den Besten (1977) argues that the verb invariably moves to C in main clauses in Dutch.

As pointed out in section 2.2, Den Besten's empirical arguments in favor of verb movement to C in Dutch relate to inversion constructions only. In these constructions, the verb is subject to the same adjacency condition as the complementizer. Den Besten presents no direct evidence relating to the position of the verb in subject initial main clauses. He notes, however, that a grammar of Dutch containing only one verb movement rule (verb movement to C) is superior to a grammar having more than one rule (verb movement to C in inversion constructions, and movement to a lower position in subject initial main clauses).

This argumentation is no longer valid in the Government-Binding framework (Chomsky 1981). In this framework, particular movement rules do not exist anymore. Rather, all movements are made by Move, a "move anything anywhere". The output of the application of Move is subject to various grammaticality conditions, as specified by the modules of grammar (Case Theory, Theta Theory, Binding Theory, Bounding Theory, etc.; see Chomsky 1961, Koster 1987).

Consequently, rules can no longer be counted, and grammars can no longer be compared by counting the rules they need. In the Government-Binding framework, a movement can be ruled out only if it results in a representation which does not meet all grammaticality requirements.

Does Den Besten's observation that the verb moves to C in inversion constructions in Dutch lead to the conclusion that the verb also moves to C in subject initial constructions in Dutch?

To see this, we must first ask whether an alternative landing site for the verb movement is available. This depends on where INFL is situated in Dutch. If INFL is situated to the right of the VP in Dutch, then verb movement must target C. On the other hand, if INFL is located to the left of VP, verb raising may target INFL in one case (the subject initial main clauses) and C in another (inversion constructions). Therefore, this point is dependent on another problematic point, and hence, a problem point in itself.

Suppose there is an INFL position to the left of the VP in Dutch. Then we should wonder whether moving the verb to this INFL position in subject initial main clauses would violate any grammaticality requirements. If so, Den Besten's conclusion that all verb prepositions target C still holds.

* This was argued by Travis (1994).

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Consider sentence (11) and its analysis under the relevant assumptions (12):

(11) Jan lustt Marie
John likes Mary

(12)

```
S
  \_\_\_
COMP
S
  \_\_\_
NP INFL VP
  \_\_\_
Jan lustt Marie
```

It is not easy to see what would be wrong with the representation in (12) (assuming the VP is adjoined with the required traces). The finite verb "lustt" "likes" is in INFL, where the tense features are canonically located. The subject is in the 'structural subject position', where it is governed and assigned Nominative Case by INFL, as required by Case Theory (Chomsky 1981). (12) is a perfect structure.3

Thus, if there is an additional functional head to the left of VP in Dutch, it must be considered a serious candidate for hosting the verb in subject initial main clauses. Hence, it does not suffice to show that the verb moves to C in inversion constructions. It must be demonstrated for subject initial main clauses as well, or the hypothesis that there is V-to-C movement in subject initial main clauses must be rejected.

A different problem, closely related to the one discussed above, is posed by the behavior of subject clitics in subject initial main clauses. Recall that subject clitics have to be right adjacent to both the complementizer and the preposed verb in inversion constructions. If the verb always moves to C, one would expect subject clitics to always be right adjacent to the preposed verb. But this is not the case in subject initial main clauses.4

4 The tree structure in the text follows Chomsky (1981). The conclusions would be the same if the structure of S (12) proposed by Bowell (1981), adopted by Chomsky (1995b), is assumed.

5 Den Besten (1989:27) mentions that the SBS subject clitic may not appear in the first position in subject initial main clauses. All other, clitics, however, are fine in the first position. Crucially, it likewise may not appear right adjacent to the verb in neutral constructions.

(continued...)
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functional head (INFL), thereby making movement of the finite verb to
INFL either superfluous or unnecessary (see also Zwart 1991a, 1991b).4

The problem connected with the complementary distribution of
complementizer and finite verb is the following. Suppose verb movement
to C is triggered by the requirement that Tense be moved to the highest
head. Assume that Tense is located in INFL, that INFL is located to the
right of the VP, and that the verb moves to INFL in both main clauses and
embedded clauses, because the verb has to be united with the tense
morphology (or the tense features). Then, in embedded clauses, the
presence of the complementizer blocks further verb movement to C. As a
result, Tense will not be realized on the highest head, and we expect the
construction in question to be ungrammatical. But this not the case, and
it is unclear why.

3.3 The specifier position of CP

A third class of problems connected with the traditional analysis of verb
movement in Dutch concerns the obligatory presence of a constituent
preceding the fronted verb.

It is certainly observationally correct to characterize Dutch as a 'verb
second' language. Neutral order main clauses, topcations, etc.
constructions all have the finite verb in second position. Imperatives (14)
and yes/no questions (15) have the finite verb in first position, but the
particular character of these constructions makes it likely that the first
position is actually occupied by an empty operator (cf. Katz and Postal
1964). The same is probably true of counterfactuals like (16):

(14) kies Jan
    kies Mary

(15) kiest Jan Marie?
    kiest John Mary

Doest John kies Mary?

4 Travis (1994, 1992) argues that verb movement is necessary to fill up empty, un occupied
heads, as a consequence of the Empty Category Principle (ECP). In embedded clauses in
Dutch, INFL is governed by the complementizer, so no verb movement is necessary. In main
clauses, the complementizer is absent and verb movement is needed to fill up the empty
INFL position. Similarly in the complementsless embedded clauses in German, Schwartz
and Vikner (1989) argue against the ECP as a factor determining verb movement in
German. If they are correct, which I believe they are, that still does not disqualify the
possibility that the complementarity of the complementizer and the fronted verb in Dutch
and German involves two positions (INFL and COMP) rather than one (COMP alone).

...
The obligatory verb second character of Dutch, then, appears to be the major explanandum of the grammar of this language. However, the traditional analysis offers no explanation for the fact that some constituent always has to precede the finite verb in Dutch. This is a serious inadequacy of the traditional analysis on any count.

It is clear from inversion constructions and embedded clauses that the subject in Dutch can be licensed in the specifier position of CP (the 'structural subject position'). If that is the case, it is not clear why movement of the verb to \( C \) triggers an additional movement of the subject to the specifier of CP. Assuming that a trigger for verb movement to \( C \) exists, even when the specifier position of CP is not occupied by a whole element or a topic, this does not necessarily also force the subject to leave its licensing position and move on to the specifier position of CP. The crucial question in this respect is why Dutch neutral order main clauses are not VSO.\(^*\)

It is important to note that invoking a 'verb second constraint' to account for the position of the finite verb in main clauses in Dutch is merely a way of concealing the problem. A 'verb second constraint' naturally matches the observations, but does nothing to explain them.

One might suppose that a 'verb second constraint' forces the specifier of CP to be filled whenever \( C \) is filled. But this is an inadequate formulation, because nothing fills the specifier of CP when \( C \) is fills by a complementizer:

\[ (17) \quad \text{Pieta zegt} \quad \text{dat Jan Marie gekust heeft} \]
\[ \text{Pieta says yesterday that John kissed Mary} \]

Moreover, it is clear from long distance movement constructions that the specifier position of CP must remain empty in embedded clauses in order to provide an intermediate chain position:

\[ (18) \quad \text{Wie zei Piet t dat Jan t gekust had?} \]
\[ \text{Who said Piet that John had kissed?} \]

Therefore, the requirement that the specifier of CP be filled must make specific reference to the preposed finite verb, which makes it ad hoc.

Finally, even if we allow the verb second constraint to be formulated in this way, it is still unclear why languages should differ in this respect. Again, one wonders why Dutch is not a VSO language like the Celtic languages or Arabic.

The problems connected with the specifier position of CP that the traditional analysis of Dutch syntax faces are in fact more complicated. The traditional analysis of Dutch contends that the finite verb always moves to \( C \) in main clauses. As a result, the placement of the subject to the left of the finite verb is regarded as a subcase of topicalization. However, there are clear differences between subjects and topics. These will be discussed in section 3.5.1.

Here, it suffices to note that object clitics may not appear in preverbal position in tensed main clauses, while subject clitics may (see section 3.5, and references cited there). An easy explanation for this would be to prohibit topicalization of weak elements, such as clitics, in general. But then the placement of the subject cannot be a subcase of topicalization, because this would exclude subject clitics in the first position of a finite clause. Travis (1984) solves this problem by assuming that NTF is located to the left of the VP in Dutch and German, and that the finite verb moves to NTF in main clauses, and to \( C \) in topicalizations and wh-constructions.

This latter point has received some attention in the recent literature and certain interesting proposals have been made to derive the asymmetry between subject clitics and object clitics in a way that leaves the generalized verb-to-C analysis unaffected (Holmberg 1986, Rizzi 1991a). We will return to these proposals in section 3.4.4.2.

3.4 Scrambling and Clitics

As we have seen, in the analysis of Dutch syntax within the Government and Binding framework, clitics, scrambled NPs, and sentence adverbials are all considered to be adjoined to VP. The order of elements is as in (19):

\[ (19) \quad \text{Clitics - Scrambled NP - Sentence Adverb - Non-Scrambled NP} \]

\[ \begin{array}{cccc}
1 & 2 & 3 & 4 \\
\end{array} \]

There are several unsatisfactory aspects of this analysis.
First, it is unclear why the Germanic clitics should be different from the Romance clitics. The latter are considered to be heads (Kayne 1975). For that reason, they have to adjoin to heads, not to phrasal categories (Baltin 1982). As several authors have shown, the Dutch clitics have the same head-like properties as their Romance counterparts (Koster 1978a, Essers 1994, Zwart 1996a). It therefore seems appropriate to analyze the Dutch clitics as heads as well.

In subject initial main clauses in Dutch, nothing may intervene between the finite verb and the object clitic. Of (20), repeated from section 1.2:

(20) Jan heeft (*gisteren) 't gekust
John has yesterday her kissed
"John kissed her (yesterday)."

In these constructions, then, the object clitics appear to be adjoined to a head. A problem arises in inversion constructions, however. In Romance, the object clitic is pied piped with the verb, but in Germanic the clitic is stranded in a position to the right of the subject.

(21) a. *Laat-hom kussen? 
Did he kiss her?
b. *Laat 't hem kussen?
Did he kiss her?

(22) a. *'t heeft Jan gekust?
has he kissed John?
b. *Heeft 't hem gekust?
Has he kissed her?
c. Heeft Jan 't gekust?
Has John her kissed?
"Did John kiss her?"

This is presumably one of the reasons why the Dutch clitics have not generally been considered heads. However, we have to note that this issue is intimately connected with the generalized V-to-C analysis. Assuming that the fronted verb is always in C, (22) tells us that the clitic cannot be adjoined to the verb in (23) either. This leaves the adjacency of the clitic and the verb in (20) a mystery, however. Similarly, it is unclear why the clitics have to be the leftmost VP-adjuncts, no matter how much scrambling goes on in the rest of the VP.

A second problem connected with the analysis of clitics and scrambling is the assumption that the sentence adverbs have a fixed position, namely adjoined to VP. It is clear from examples like (23) that adverbs can move further to the left:

(23) a. *...dat gisteren Jan Marie gekust heeft that yesterday John Mary kissed has
"...that John yesterday kissed Mary."
b. *...dat Jan gisteren Marie waarschijnlijk gekust heeft that John yesterday Mary probably kissed has
"...that John yesterday probably kissed Mary."

In (23), *gisteren ‘yesterday’ has moved to the left, crossing the subject Jan ‘John’. In (23b), two sentence adverbials are present. The object, Marie ‘Mary’, appears to the left of one of the adverbs, waarschijnlijk ‘probably’. Referring to the positions indicated in (19), it must have moved from position 4 to position 2. Still to the left of the object is the other sentence adverb, gisteren ‘yesterday’. This means that [3] in (14) cannot be the sole position of the sentence adverbials.

This implies that scrambling can actually take place to a position to the right of a sentence adverb. As a result, we do not have a single clue as to where the object noun phrase really is in a standard scrambling paradigm like (24):

(24) a. *...dat Jan gisteren Marie gekust heeft that John yesterday Mary kissed has
b. ...dat Jan Marie gisteren gekust heeft that John Mary yesterday kissed has
"...that John kissed Mary yesterday."

A third problem, related to scrambling, is the question how the scrambled object is assigned Case. In the Government and Binding framework, objects are assigned Case under government by the verb (or by the trace of the verb). ‘Government’ is defined as a relation between a head and an element 0-command (provided no other governors of the same element intervene). ‘0-command’ is a relation between elements in a tree structure such that the first branching node dominating the 0-commander dominates the 0-commandee. If an object is scrambled away from the verb (or its trace), it is no longer 0-commanded by the verb, hence it is no longer governed by the verb. Therefore, a scrambled object can only be assigned Case via the trace left behind in the scrambling process. This means that scrambled objects are formally comparable to topics and wh-elements, which likewise can only be assigned Case via the trace they leave behind as part of the movement operation. In other words, scrambling must be A'-movement.
We noted in section 2.3 that scrambling in Dutch has one property of A-movement, namely that it creates a configuration in which parasitic gaps are licensed. However, we will see below that scrambling in all other respects resembles A-movement, like Passive and Raising (Vanden Wyngaard 1989a). For example, as already noted in Huybregts and Van Riemsdijk (1985), scrambling, unlike wh-movement and topicalization, does not yield weak crossover effects:

(25) a. Jan heeft Marrie op haar voorhoofd gekust
    John has Mary on her forehead kissed
    "John kissed Mary on her forehead."

b. Wie heeft zijn ouders onderzoek?
   who have his parents investigated
   "Who did his parents investigate?"

The absence of weak crossover effects, as in (25a), in contrast to (25b), is considered to be a test for A-movement.

In A-movement, the trace is not assigned Case, but the movement targets a position in which the noun phrase in question can be assigned Case. If this is correct, our conception of scrambling in Dutch must change radically, because a position adjacent to VP is not the type of position in which Case is assigned, under standard assumptions of the Government and Binding framework.

3.5 Extraposition

A final problem of the standard conception of Dutch syntactic structure touches on the status of Dutch as an SOV language. Elements appearing to the right of the final verb position in Dutch are supposed to have moved there by a rightward movement called extraposition. It has been known since Ross (1967) that such rightward movements create islands, i.e. constituents out of which no extraction is possible. However, Dutch sentential complements, though appearing to the right of the final verb position, are not islands:

(26) Wie heeft Piet betwende dat Jan 
    who has Pete regretted that John
    gekust heeft?
    kissed has
    "Who did Pete regret that John kissed?"

In this respect, there is a clear contrast with non-complement clauses (T. Hoenstra 1983, Bennis 1996):

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(21) * Wie heeft Piet het betwende dat Jan 
    who did Pete it regret that John
    gekust heeft?
    kissed has
    "Who did Pete regret it that John kissed?"

In (21), het 'it' is the direct object of the verb, and dat Jan gekust heeft 'that John kissed' is construed as an adjunct to the direct object. In this case, the embedded clause is a clear island.

The fact that the embedded clause in (20) is not an island suggests quite strongly that it is in its basic position, and that no extraposition has taken place (thus T. Hoenstra, 1987). This has led several authors to suggest that Dutch has two different complements positions for NP-arguments and sentential arguments, the former preceding the verb and the latter following it.11

This, however, is incompatible with the important idea that the categorial status of arguments is irrelevant for the encoding of thematic relations into syntactic structure (see Pesetsky 1982, Chomsky 1986a, Baker 1988). In this respect, then, the standard analysis is problematic, and, in fact, casts doubt on the basic assumption that Dutch is an SOV language.12

3.6 Conclusion

The crucial features of the standard analysis of verb movement are all problematic. Verb movement to INFL in embedded clauses is always vacuous. The hypothesis that this movement takes place is based on the assumption that inflected verbs must occupy the INFL position in overt syntax. However, this is not necessarily the case, given the possibility of lowering INFL to the verb (or procrastinating verb movement until LF). Verb movement to C can only be demonstrated in inversion constructions. The conclusion that this verb movement takes place in subject initial main clauses as well is based on the idea that a grammar containing fewer rules is more attractive. However, this evaluation metric is no longer valid in the Government and Binding approach, where all movement rules are reduced to one, Move c. Verb movement to C in subject initial main clauses therefore needs independent evidence, but the evidence that is available suggests that the verb in these constructions is not in C but in

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12 As Marcel den Dikken notes (p.c.), an additional argument against extraposition of sentential complements out of VP is the fact that the VP above no 'flying' effect. Thus, in Wie heb je verteld dat je zou komen (whom have you told that you would come) the VP out of which dat je is an adverb (whom you would come) is supposedly extraposed in still transparent, witness the extratability of the indirect object use 'Wh'.
a lower functional head to the left of the VP. Finally, the transparency of clausal complements suggests that the position to the right of the verb in embedded clauses is their basic position. This in turn casts doubt on the assumption that Dutch is an SOV language.

4 A Minimalist Approach to Dutch Syntax

In this section, I will reexamine the phenomena of Dutch syntax from a minimalist perspective. First I will discuss the two basic assumptions underlying the standard analysis of these phenomena: the hypothesis that Dutch is an SOV language and the hypothesis that the verb moves to C in all main clauses. Next I will review the problems of the traditional analysis discussed in section 1.3. It will turn out that these problems become even more serious if the minimalist approach is taken. Finally, I will sketch the outlines of an analysis of Dutch syntax which seems to be forced upon us by the assumptions of the Minimalist Program. This will serve as the starting point for the more detailed analysis of the syntax of Dutch in chapters III and IV.

4.1 Basic Assumptions

Recall that the two basic assumptions underlying the standard analysis of Dutch syntax are the following:

1. Dutch is an SOV Language.
2. In Dutch tensed main clauses the verb invariably moves to C.

The Minimalist Program does not immediately affect the first of these assumptions. It is imaginable that when the verb and its object are first combined in a binary operation, the direct object ends up to the left of the verb.

However, as pointed out in section 1.3.3, the minimalist approach in its most restrictive implementation leaves no room for a parameter determining the position of the object with respect to the verb at this initial stage in the derivation. Moreover, such a parameter would be superfluous given the fact that word order variation can be derived from interactions of overt and covert movement.

In view of this, the question arises whether it is necessary to make a typological distinction between languages on the basis of their order of words in the initial stage of the derivation. We will return to this issue in chapters III and IV of this book, and I will argue there that, at least in Dutch, both the functional heads and the lexical heads take their complements on the right hand side.

The second assumption underlying the standard analysis, according to which the finite verb invariably moves to C in main clauses in Dutch, appears to be incompatible with the minimalist approach.

First, according to Figure 1 in section 1.2, the functional domain contains at least three head positions other than C. Therefore, Den Breejen's (1977) conclusion that C is the only head available for the preposed verb is no longer valid.1

Second, verb movement to C, if it takes place, must be triggered by the need to eliminate a strong intransitive feature represented in C. However, intransitive features have designated positions in the Minimalist Program: the tensed features are located in T, the subject agreement (Nominal Case) features are located in AgrS. Even if these features are strong in Dutch, they cannot trigger verb movement to C.2

Third, even if the verb moves to C in subject initial main clauses, there has to be a trigger for movement of the subject to the specifier position of CP in these constructions. Again, the relevant trigger must be a strong N-feature that has to be eliminated. However, the N-features for licensing the subject are not represented in C but in AgrS. Hence, unless the subject shows additional features which would warrant a further movement, it has to move to the specifier position of AgrSP, not CP. Hence, one of the subject to AgrSP, of course, is well attested in inversion constructions and embedded clauses. The default hypothesis appears to be that the subject ends up in AgrS in subject initial main clauses as well.

If so, we must conclude that verb movement to C does not take place in subject initial main clauses in Dutch.3

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1 One could argue that in Dutch, the heads of the AgrPs and TP are situated to the right of the VP. This would make C the only available host for the preposed verb again. However, the exact location of the functional heads in Dutch is an empirical issue. We will return to this issue in chapter IV, where I will argue that all functional projections in Dutch are head initial.

2 A way out would be to assume that tense has to end up as the highest functional head. This would trigger verb movement to C. However, this presupposes that the clauses are SBs, which is not a priori true. In particular, neutral main clauses may be complete as AgrSs. If so, the requirement that tense end up on the highest functional head would trigger verb movement to AgrS.

3 This does not exclude the possibility, however, that subjects sometimes carry a topic feature, triggering additional movement to the specifier position of CP (Zwart 1978).
The minimalist approach, then, suggests that a distinction be made in Dutch syntax between subject initial main clauses on the one hand, and topicalizations and wh-constructions on the other hand.

4.2 Problems of the Standard Analysis

In section 3.3, it became clear that certain aspects of the traditional analysis of Dutch are problematic, even from the point of view of the theoretical framework underlying it (the Government and Binding framework). In this section, I will show that these aspects make the traditional analysis downright untenable from the point of view of the minimalist approach.

4.2.1 INFL

In the traditional analysis, it was assumed that the functional heads host inflectional *morphemes* rather than *features*. As a result, in embedded clauses in Dutch the verb must have moved to INFL (assuming that lowering is not an option, but see section 2.3.1). Consequently, INFL had to be located to the right of the VP in Dutch.

In the minimalist approach, the functional heads host inflectional *features* rather than morphemes. As a result, verbs are inserted in a structure (by means of Generalized Transformations) in fully inflected form. At some point in the derivation, the verb will have to move to the functional heads in order to check the features associated with its inflectional morphology. But this movement may take place before or after Spell Out. Movement after Spell Out is even preferred, by the economy-related principle of Precrastination.

Consequently, it is not surprising that the inflected verb should remain in a final position in embedded clauses in Dutch. We may assume that the verb is still in its base position, precrastinating movement into the functional domain. As a result, the position of the verb in embedded clauses in Dutch does not provide a single argument for the location of the functional heads in Dutch.

Recall from section 3.3 that the assumption that the finite verb moves to an inflectional head to the right of VP in embedded clauses is problematic anyhow. The movement is always vananeous, and predicts non-existing scope phenomena (Reuland 1990b). These problems disappear under the minimalist assumption that the verb does not move in overt syntax in embedded clauses in Dutch.

4.3.2 COMP

We have seen in section 4.1 that the assumption that the finite verb invariably moves to C in main clauses in Dutch is untenable in the minimalist approach. It comes as no surprise, therefore, that maintaining this assumption would yield the very problems noted in section 3.3.

In particular, Den Besten's (1977) argument in favor of the generalized verb-to-C analysis based on rule counting is not valid in the minimalist framework, any more than it was in the Government and Binding framework. The minimalist approach is unrestricted in that it has no rules. On the other hand, it is very restrictive in that every movement must be motivated by a morphological licensing requirement.

Economy, in other words, is not an evaluative metric for rule systems, as it was in the Extended Standard Theory, but a principle requiring that every single movement be motivated independently of the total of movements in a particular grammar. For this reason, we cannot conclude from the fact that some movements in Dutch target C, that all movements in Dutch target C. Every single movement to C must be motivated independently in terms of elimination of inflectional features.

Tense and agreement appear to be the features triggering verb movement and noun phrase movement in subject initial main clauses. These features are represented in T and AgrS. For all we know, then, the relevant movements target the checking domain of these functional heads, not the checking domain of C. The adjacency of the subject and the finite verb indicates that the subject and the verb are in the specifier-head configuration of a single functional category, presumably AgrS.

In contrast, other features like [-topic] and [w-who] appear to be relevant in topicalizations and wh-questions. These features are conventionally represented in C (as in Den Besten 1977). For all we know, then, these movements target the domain of C.

Therefore, from a minimalist point of view, the simplest analysis appears to involve two different movements, or, rather, two different targets for movement.

As we have seen, this analysis raises the question why verb movement is restricted to main clauses. The answer to this question mentioned in section 3.2 implies that the complementizer in C wields some power over the lower functional head so that this head need not be filled when the complementizer is present (cf. Travis 1984, 1991).

This answer is problematic, because it is not clear what kind of influence could prevent the lower functional head to be filled. It remains to be seen to what extent this part of the answer is compatible with the minimalist approach. However, the second part of the answer is very much in line with economy of derivation. If movement to the lower functional head is unnecessary because of the presence of the
complementizer, this movement is automatically blocked by economy of
derivation (Zwart 1991a).

We will return to this problem extensively in chapter III. In the mean-
time, we may conclude that, as before, the complementary distribution of
the complementizer and the fronted verb does not provide an argument for
the generalized verb-to-C movement.

4.2.3 The Specifier Position of CP

In the standard analysis, the specifier position of CP must always be
filled. This is unexplained, even if the observation takes the form of a
language particular and construction particular `verb second constraint’
(Wízner 1991a).

A verb second constraint may match the observations, but should be
derived in terms of movement of heads and phrases to the functional
domain. Each of these movements must be explained independently in
terms of eliminating strong inflectional features. These explanations, then,
provide the real challenge for the analysis of Dutch syntax.

These explanations should take into account the differences existing
between subjects and topics in Dutch that were briefly mentioned in
section 3.3. These differences suggest that different features are involved
in topicalizations and subject initial main clauses. If so, movement must
target different positions in each case.

4.2.4 Scrambling and Clitics

In the standard analysis, scrambling is optional movement of a noun
phrase across a sentence adverb. The scrambled category adjoins to the
VP, but to the left of the clitics (which are adjoined to the VP as well). A
basic assumption of this analysis is that sentence adverbs have a fixed
position.

In a minimalist approach, this analysis cannot be maintained.

First, optional movements are not allowed in the Minimalist Program.
Every movement is triggered by the need to eliminate a strong feature. If
there is a strong feature that must be eliminated, movement cannot be
optional, since the derivation will only converge when it takes place. The
fact that the direct object and the verb (in embedded clauses) are not
necessarily adjacent in Dutch indicates that at least sometimes the direct
object moves away from the verb. Consequently, we must assume that
direct objects in Dutch always move to a particular position. In other
words, scrambling may seem to be optional, but in fact it is not.

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Second, if direct objects in Dutch always move to a particular position,
sentence adverbs cannot have a fixed position. This was already concluded
in section 3.4. In particular, in a typical scrambling paradigm like (1), the
direct object must be in a single position throughout, but the adverb must
be further to the left in (1a) than it is in (1b). Consequently, it can no
longer be maintained that sentence adverbs are always adjoined to VP.

(1) a. Jan dient Marie gisteren bekeest
   b. Jan dient Marie gisteren bekeest
      and John yesterday Mary kissed has
      *and John kissed Mary yesterday.

Third, movement of the direct object cannot target VP, because the
position adjoined to VP is not known as a position for licensing inflected
elements. In the minimalist approach, it is more likely that the noun
phrase movement targets the specifier position of Agr’s (Vanden
dyngaard 1988b). This is the designated position for checking the Case
features of the direct object. Assuming that the N-feature of Agr’ is
strong in Dutch, the need to eliminate these features yields a trigger for
the noun phrase movement.

We have seen in section 3.4 that scrambling in Dutch has one property
of A’ movement: it creates the configuration needed for parasitic
paraphrasing. If we now assume that scrambling is movement to a position
where Case is checked, we expect scrambling to look more like A
movement. Most recent research suggests that this is in fact the case, as
already pointed out in section 3.4. I will return to this issue in section
IV.2.2.

Finally, if neither scrambled noun phrases nor sentence adverbs are
adjoined to VP, object clitics (which appear to the left of both scrambled
noun phrases and sentence adverbs) cannot be adjoined to VP either. This
accords well with the generally held idea that clitics must adjoin to a

4.2.5 Extraposition

In the standard analysis, it is assumed that elements appearing to the
right of the verb in embedded clauses have undergone movement to the
right (extraposition). This was shown to be problematic because
‘extraposed’ clausal complements are not islands.

In the minimalist analysis, extraposition is an impossible movement.
All movements must be triggered by the need to eliminate inflectional
features, and for this reason they must target designated positions. There
is no known position to the right of the final verbal position designated for checking inflectional features. Similarly, there is no inflectional feature all cross-paired elements have in common.

Extraposition, then, should not be part of a minimalist analysis of Dutch (see also Klaas 1992, Kayne 1993).

It will turn out that this conclusion has serious consequences for the assumption that Dutch is an SOV language. This issue will be addressed in chapter IV.

4.2.5 Conclusion

The problems the standard analysis of Dutch syntax faced in the Government and Binding framework still exist in the minimalist framework. If the minimalist approach is adopted, many additional problems for the traditional analysis arise, and certain key aspects of the analysis turn out to be untenable.

This is particularly true of the two basic assumptions underlying the traditional analysis. The assumption that Dutch is a basic SOV language is questionable from the point of view of possible parametric variation. The assumption that the finite verb invariably moves to C in main clauses would be a far from straightforward implementation of the Minimalist Program.

4.3 Dutch Syntax: A Minimalist Approach

Let us now return to the phenomena of Dutch syntax described in section 1, and see how these phenomena might be analyzed from a minimalist point of view.

Consider first the difference between tensed main clauses and untensed main clauses (section 1.2):  

\begin{verbatim}
(1) a. Jan kuste Marie
    John kissed Mary
    "John kissed Mary"

b. * Jan Marie kuste
    John Mary kissed

(2) a. * Jan kussen Marie
    John kiss Mary
    "John kiss Mary"

b. Jan Marie kussen
    John Mary kiss

\end{verbatim}

Finite verbs move up front, infinitives do not. This is also clear from constructions containing more than one verb:

\begin{verbatim}
(3) a. Jan heeft Marie gekust
    John has Mary kissed
    "John has kissed Mary"

b. * Jan heeft gekust Marie
    John has kissed Mary

c. * Jan Marie heeft gekust
    John Mary has kissed

d. * Jan Marie gekust heeft
    John Mary kissed has

\end{verbatim}

Only the finite verb moves to the left, the non-finite verb stays behind.

Finite verbs in Dutch express both tense and subject agreement. Non-finite verbs express neither tense nor agreement. Apparently, verb movement is a function of tense and/or agreement.

In the minimalist approach, the features for tense and subject agreement are represented in the functional heads T and AgrS. We may now hypothesize that T and/or AgrS have a strong V-feature. This feature must be eliminated before Spell Out, therefore the verb carrying the corresponding features (the finite verb) moves to T and or Agr, in violation of Precrystallization. Assuming, as we have done, that AgrS is higher than T, it must be the case that the finite verb moves to AgrS, via T.

However, this hypothesis yields a problem, since finite verbs do not move to the left in embedded clauses:

\begin{verbatim}
(4) a. * Ant Jan nuist Marie
    that John kisses Mary

b. * Ant Jan Marie nuist
    that John Mary kisses

"that John kisses Mary."

\end{verbatim}

In (4a), it is unclear why the finite verb * 'kust' does not have to move to the position it apparently moves to in (1a). Therefore we must reject the hypothesis that a strong V-feature of T and or AgrS triggers the verb movement in (1) and (3).

We could try to avoid this problem by assuming that in (4) the complementizer occupies the AgrS position, so that the movement of the verb to AgrS is blocked. But this does not solve anything, because if the

* Recall that in the minimalist approach, 'not having to' amounts to 'not being allowed to'.
movement is blocked, the strong V-feature triggering the movement would not be eliminated, and the derivation would crash at PF.\footnote{For the same reason, assuming that the verb moves to C in (1) and (3) does not solve the problem why verb movement is restricted to main clauses.}

Therefore, something else must be going on. Recall that functional heads carry both V-features (triggering head movement) and N-features (triggering XP-movement). Assuming that the verb in (1) and (3) is in a derived position, there must be an N-feature triggering movement of the subject to a position in the functional domain in at least (1) and (3).

In subject initial main clauses, the subject is adjacent to the finite verb:

\begin{enumerate}
  \item \begin{tabular}{l}
  Jan \tab \textit{klei}\tab \textit{kt} \tab \textit{Marie} \\
  John \tab \textit{kisses} \tab Marie
  \end{tabular}
\end{enumerate}

This suggests that the subject is in a local licensing relation with the head hosting the finite verb. If the finite verb moves to AgrS, the subject must be in the spec position of AgrS.

In this position, the N-features of AgrS are checked off against the inflectional features of the subject (person, number, and Case).\footnote{The picture is slightly more complicated if the N-feature for Case is represented in T.} These N-features, therefore, must be strong. If so, it is expected that the subject occupies the spec position of AgrS in embedded clauses as well. (4) suggests that this is indeed the case. The hypothesis that the N-features of AgrS are strong appears to account for the distribution of the subject. But how does this explain the distribution of the finite and non-finite verb? Apparently, this verb movement must be a subsidiary movement, required only as a last resort. This is only possible if the V-features of AgrS (or T) are not themselves strong.

How exactly this works out will be the main problem to be studied in Chapter III. The phenomenon of complementizer agreement will be crucial to the analysis presented there. It will turn out that the functional head AgrS moves to C if and only if C is present, and that this AgrS-to-C movement overrides V-to-AgrS movement. I will argue that AgrS-to-C movement has a morphological reflex in the phenomenon of complementizer agreement in various dialects of Dutch.

Let us next consider the distribution of elements in topicalizations and wh-constructions. These constructions show subject-verb inversion:

\begin{enumerate}
  \item a. \textit{Waarom Jan \textit{bleidt} \textit{kt} \textit{Marie}}
  \textit{why John \textit{kiss}es \textit{Mary}}
  b. \textit{Waarom \textit{bleidt} \textit{kt} \textit{Jan Marie}}
  \textit{why \textit{kiss}es \textit{John \textit{Mary}}}
  c. \textit{"Again John \textit{kiss}es \textit{Mary}}
  d. \textit{"Again \textit{kiss}es John \textit{Mary}}
\end{enumerate}

Topics and wh-elements typically move to a position in the left periphery of the clause. In the minimalist approach, these movements must be triggered by the need to eliminate a morphological feature. Chomsky (1992) proposes to include features like [+topic], [+wh] in the set of morphological features. Assuming (with Kosori 1970, Den Besten 1977, Chomsky 1977) that topicalization and wh-movement involve movement to the CP-domain, these features must be characterized as N-features of the head of CP, C.

The sentences in (6)-(7) suggest that the features [+topic] and [+wh] are strong in Dutch.\footnote{Watanabe (1992) suggests that the wh-feature is universally strong. He argues that in so-called wh-locative languages like Japanese the wh-feature is eliminated by movement of an empty operator to the spec position of CP.} This would explain the preposing of the non-subjects.

But again, this does not suffice to explain the distribution of the verb in these constructions.

Now we may assume that C also has a strong V-feature associated with topicalization and wh-movement, such that verb movement to C is required whenever the [+topic] feature or the [+wh] feature are present in C (i.e. in topicalizations and wh-constructions). The fact that English topicalizations do not, or not always, require verb movement, could then be explained as an instance of parametric variation of the strength of the relevant features in C. Compare (6) with (8):

\begin{enumerate}
  \item a. \textit{Again John \textit{kiss}es \textit{Mary}}
  b. \textit{Again \textit{kiss}es \textit{John \textit{Mary}}}
\end{enumerate}

For the moment this will suffice as an hypothesis, but we will see in Section III.5.3 that this analysis must ultimately be rejected for an analysis linking the verb preposing in topicalizations and wh-constructions to AgrS-to-C movement.

Let us next consider scrambling and clitic placement.
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Clitic placement is not addressed in Chomsky (1992). Sportiche (1992) proposes that clitics are generated as functional heads in the clause structure. However, also in this analysis, clitics must be allowed to undergo head movement. It is not clear whether this clitic movement can be accounted for in terms of feature checking requirements, as is desirable in a minimalist approach. Kayne (1993) argues that clitics are subject to what we have called the Extended LCA (section 1.3.3). It follows that if clitics undergo head movement, they can only adjoint to the left. In section III.2, I will adopt Sportiche's assumption that clitics are generated as functional heads. On the other hand, the prohibition of right adjoinment of clitics of Kayne (1993) will turn out to be problematic for the analysis of cliticization in German.

In contrast, the Minimalist Program appears to fit scrambling like a glove. Consider the standard scrambling paradigm in (9):

(9) a. *dat Jan gisteren Marie gekust heeft
b. *dat Jan Marie gisteren gekust heeft
   "dat John kissed Mary yesterday."

Recall that the minimalist approach does not allow optional movement. Consequently, the movement of the object which is clearly visible in (9a) must also be present in (9a). The obvious hypothesis, therefore, is that the N-feature of Agr0 is strong in Dutch, triggering movement of the object to the specifier position of Agr0.

This is correct, the N-features of both AgrS and Agr0 are strong. Chomsky (1992:11) argues that there should be a symmetry between the the inflectional systems associated with the subject and the object. In other words, the feature specifications of both Agr heads should be identical, in the ideal case. This appears to be the case in Dutch.

Consider the consequences for adverbs. It must be possible to generate these in various positions in the course of the derivation of a sentence. But this is an attractive consequence. If adverbs are not freely generated, they too must undergo movement. This movement should be triggered by the need to license inflectional features. But at present it is unclear what features are associated with adverbs, and where in the functional domain these features would be represented. Therefore, the assumption that adverbs are freely generated is not unattractive.

Many other problems are associated with scrambling in Dutch. Some of these will be discussed in section IV.2.2.

Turning to extraposition finally, this type of movement is not possible in the minimalist approach, as we have seen. There is no known specifier to the right of the VP in which the features of extraposed elements could be checked. Also, this type of movement is excluded by the ELCA (section 1.3.3). What, then, explains the relevant word order patterns?

Recall that there are two sets of extraposition facts. Clausal complements must appear to the right of the final verbal position:

(10) a. *.dat Piet zei dat Jan Marie kuste
   that Pete said that John Mary kissed
   "that Pete said that John kissed Mary."
b. *.dat Piet dat Jan Marie kuste zei
   that Pete that John Mary kissed
   that Pete that John Mary kissed said

All other extraposed material may also appear to the left of the final verbal position (illustrated here for adjunct clauses):

(11) a. *.dat Jan Marie kuste toen de film begon
   that John Mary kissed when the movie started
   "that John kissed Mary when the movie started."
b. *.dat Jan teken de film begon kuste
   that John the movie started kissed
   "that John kissed Mary when the movie started."
c. *.dat Jan teken de film begon Marie kuste
   that John when the movie started Mary kissed
   "that John kissed Mary when the movie started."
d. *.dat teken de film begon Jan Marie kuste
   that when the movie started John Mary kissed
   "that when the movie started John kissed Mary."

We may set the latter category apart, and consider them to be freely generated in the course of a derivation. We must make the same assumption to account for the fact that adverbs occupy various positions in the scrambling paradigm.9

Clausal complements, on the other hand, appear to be internal arguments of a verb. An implicit assumption in the minimalist approach is that Generalized Transformations first join a head and its internal argument. If no movements take place, then, the verb and the complement clause are both in their initial positions in (10a).

Do complement clauses undergo movement? To answer this question, we should look for inflectional features associated with the complement clause, and for functional projections in which these features should be licensed. In the absence of established knowledge in this respect, we should conclude that complement clauses, at least those of the Dutch type,

9 See Kayne (1992) for an analysis of 'extraposition' of these elements.
do not undergo movement. This is corroborated by the fact that these clauses are not islands, as we have seen.

The observation that clausal complements in Dutch are not islands must be accounted for in terms of Binding Theory. I will assume, following Chomsky and Lasnik (1991), that the notion of L-marking (Chomsky 1986b) is crucial in this respect. I will make the following assumptions. A maximal projection is transparent only if it is L-marked. A projection is L-marked only if its sister is an L-related head. A head is L-related only if it is a lexical head or a functional head hosting features associated with a lexical head. Hence, clausal complements are L-marked by the lexical head V if they are in their basic position.

If this is correct, it may very well be the case that Dutch has a basic SVO structure.

In the next two chapters, this minimalist analysis of the syntax of Dutch will be developed in more detail.

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III

VERB MOVEMENT IN DUTCH: THE POSITION OF THE FUNCTIONAL HEADS

I have argued in section I.3.3 that the most straightforward implementation of the Minimalist Program does not involve a directionality parameter. This is also expressed in the extended version of the Linear Correspondence Axiom of Kayne (1993) (the ELCA).

The more detailed discussion of the phenomena of Dutch syntax in this chapter and in chapter IV will start from that angle. Many aspects of the standard analysis are based on the assumption that Dutch is an SOV language. In connection with this, it is also generally assumed that the functional heads in Dutch, with the exception of C, are generated to the right of the lexical projections. I will take issue with these two basic assumptions.

In this chapter, I will present several arguments in support of the idea that the functional projections in Dutch are head initial. These arguments include an analysis of the preposition/inflensional marker in (section 1), clitics in Dutch (section 2), complementizer agreement (section 3), and the position of the verb in subject initial main clauses (section 4) and in inversion constructions (section 5). In the course of this chapter, an analysis of verb movement in Dutch will be developed, in which the verb moves to Agr$ in subject initial main clauses, and to C in inversion constructions (cf. section II.4.3).

The position of the lexical heads will be discussed in chapter IV.
1 The Syntax of te

The Dutch morpheme te, a cognate of English to and German zu, is generally considered to be an infinitival marker. On the assumptions underlying the standard analysis of Dutch syntax, te must be generated in INFL. Since te invariably appears to the immediate left of the infinitival verb, the standard analysis of infinitival constructions involves raising of the infinitival verb to INFL, with right-adjunction of the verb to te.

As noted by Giusti (1991), this analysis, though generally adopted, has never received any empirical justification. Giusti attempts to fill that gap by proposing an analysis of infinitival preposing in German which crucially relies on the assumption that infinitival verbs adjoin to as in INFL.

In this section, I intend to argue for two points. First, te is not an infinitival marker and is not generated in INFL. Consequently, the adjacency of te and the infinitival verb does not support rightward movement of the infinitival verb and adjunction to te in INFL. Second, the infinitival preposing facts studied by Giusti have no bearing on the issue of the position of either te or INFL.

1.1 The Status of te

1.1.1 Origin and Distribution of te

There is little doubt that the Dutch morpheme te, commonly characterized as an infinitival marker, originated as a preposition. This preposition, taking dative complements, is morphologically related to English to, German zu, and Gothic du. Its meaning would be roughly equivalent to towards, onto, at, and for.\(^1\) Te as a preposition is no longer in productive use in Dutch, except in combination with place names (te Groningen 'in Groningen').\(^2\)

\(^1\) Other infinitival markers like Scandinavian sitt 'sit', French à, Flemish aan, and the morphemes on (Dutch), on and um (German, cf. Blust and Schmitz 1990), and for (English) derive from prepositions of the same semantic field.

\(^2\) Te does figure in idiomatic expressions like daar te huis 'at home'.

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Verb Movement

As a preposition, te could take a deverbal noun as its complement.\(^3\) In Old English, Old High German, and Middle Dutch, and to the present day in certain dialects of Dutch, the prepositional status of te in this combination is apparent from the dative Case morphology on the infinitival, yielding forms like te leeren.\(^4\)

These aspects of the history of te do not necessarily affect the analysis of present day te as an infinitival marker, generated in INFL. However, infinitival verbs do not strictly speaking require the presence of te. Te is excluded in a number of contexts, listed below. The invariant morphological element in infinitival verbs in Dutch is not te, but the prefix -den. If infinitival morphemes were generated in INFL, -den, not te, should be generated there.

Te is excluded in the following contexts:

- infinitival main verbs

1. ("Te") knuessep?
   John Mary te kisse that never
   "John kisses Mary? Never!"

- infinitival imperatives

2. ("Te") stoppen
   te stop
   "Stop!"

- infinitivals used as subjects or objects\(^5\)

3. a. ("Te") knuesse on te kiss
   is fan
   "Kissing is fun."

b. Jan Marie ("Te") knuesse leerde
   that John Mary te kisse
   "that John taught Mary kissing."

---

\(^3\) Historically, the Indo-European infinitive is considered to be a verbal noun in the accusative Case, ending in -nom, where -nom is the accusative Case suffix, -en a nominalizing suffix, and -e a blocking vowel (Krause-Maier 1968:116). In Germanic, the -e part of the ending was lost, in North Germanic -en of the nominalizing suffix was lost as well. In West Germanic, the infinitive appears to have been aligned with other nouns, acquiring a full set of Case endings.

\(^4\) VanOostendorp (1965:421), Laatsch (1951:78), Bayer (1965), and references cited there.

\(^5\) In the -bouwene, the infinitive occurs to the left of the matrix verb, like object NPs. When the infinitive appears to the right of the matrix verb, we are no longer dealing with an object infinitival, and it is possible: die Jan Marie leerde te kussen 'that John taught Mary to kiss'.

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1 Other infinitival markers like Scandinavian sitt 'sit', French à, Flemish aan, and the morphemes on (Dutch), on and um (German, cf. Blust and Schmitz 1990), and for (English) derive from prepositions of the same semantic field.

2 Te does figure in idiomatic expressions like daar te huis 'at home'.

3 As a preposition, te could take a deverbal noun as its complement. In Old English, Old High German, and Middle Dutch, and to the present day in certain dialects of Dutch, the prepositional status of te in this combination is apparent from the dative Case morphology on the infinitival, yielding forms like te leeren.

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   "John kisses Mary? Never!"

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2. ("Te") stoppen
   te stop
   "Stop!"

- infinitivals used as subjects or objects

3. a. ("Te") knuesse on te kiss
   is fan
   "Kissing is fun."

b. Jan Marie ("Te") knuesse leerde
   that John Mary te kisse
   "that John taught Mary kissing."
nominal infinitives

(4) Dat alesmaar meisjes (*te) kozen wordt vervelend
that all the time girls to kiss becomes boring

complements of auxiliary verbs

(5) a. Jan wil Maria (*te) kozen
John wants Mary to kiss

b. Jan kust Maria (*te) kozen
John kisses Mary to kiss

complements of perception verbs and causative verbs 7

(6) a. Piet ziet Jan Marie (*te) kozen
Pete sees John Mary to kiss

b. Piet laat Jan Marie (*te) kozen
Pete lets John Mary to kiss

Te is required in the following contexts:

complements of prepositions and nouns

(7) a. ...door Marie (*te) kozen
...by Mary to kiss

"door kussen Mary"

b. Jan houdt er van Marie (*te) kozen
John holds there of Mary to kiss

"John loves it to kiss Mary"

c. de mogelijkheid Marie (*te) kozen
the possibility Mary to kiss

"the possibility of kissing Mary"

Verb Movement

in tough-constructions 7

(8) a. Marie is moeilijk (*te) kozen
Mary is hard to kiss

b. Een vaaas om de as in (*te) ontvangen
A vase to receive the vase in to receive

"A vase to receive the vase in.

in gerundives

(9) a. Marie is (*te) vertrokken
Mary is to leave

"Mary can be trusted."

b. En dan (*te) bedenken dat...
and then to think that

"To think that..."

in the complement of control verbs 8

(10) a. Jan probeert Marie (*te) kozen
John tries Mary to kiss

b. Jan meent intelligent (*te) zijn
John believes intelligent to be

"John, thinks he is intelligent."

in the complement of certain raising verbs

(11) a. ...JE schijnt Marie gekozen (*te) hebben
...he seems Mary kissed to have

"John seems to have kissed Mary."

7 In Middle Dutch, it was not excluded in the complement of causative does 'te' does to seem 'let know' (Boest 1977:233).

8 In Flemish dialects, it appears to be absent in certain control complements (cf. De Rooij 1969).
1.1.2 Further Properties of te

It is tempting to consider Dutch te as a prefix attached to an infinitive. However, there are at least four reasons not to describe te as a prefix.

First, as shown by the distribution of te in 1.1.1, te appears to have the syntactic function of a complementizer/preposition. Such elements are not generally described as prefixes, but as (functional) heads.

Second, te and the infinitive can be separated in certain dialects of Dutch, especially Gennins (Schuurman 1987).

(14) a. Zal er een kussen? Oh, he has a table?  
    b. Zal een kussen? Oh, he has a table?

Schuurman (1987) observes that this construction does not have most of the expected properties of incorporation constructions. For instance, as is clear from (14b), the noun phrase intervening between te and the infinitive can be marked for number. Also, the intervening constituent can be a complete Noun Phrase:

(15) Sect. volk genoeg te hoe in zwijn dragen?  
    Have enough people to carry the hog?  
    *Do you have enough people to carry the hog?"

These and other phenomena studied in Schuurman (1987) make it unlikely that the Groningen construction is an instance of incorporation. Consequently, te cannot be a prefix attached to the infinitive here.

Third, te can in some dialects appear on the 'wrong' infinitive (Van Hale 1998):

(16) a. ...voor kennis te werken  
    dialect of Geel  
    ...to come and work.
    b. ...aan te werken  
    Standard Dutch  
    ...to come and work.

The complementizers om (Standard Dutch) and oor (Southern dialects) introduce adjunct clauses or control complements. Te is required on the infinitive leading the complement of these complementizers. In the sentences in (16), this infinitive is an auxiliary verb komen 'come'. This verb does not require te on the head of its complement (cf. (5b)). The construction in (16b), therefore, is as expected. In (16a), te appears to have

- in durative constructions*
  
(12) Jan staat Marie voor te kussen.
  John stands Mary to kiss.
  "John stands and kisses Mary." "John kisses Mary (for some time)."

- in infinitival questions
  
(13) a. Jan weet niet wat te doen.
      John knows not what to do.
      "John didn't know what to do."
  b. Wat te doen?
      What to do?
      "What should we do?"

In all of the examples (11-13), the non-finite tense on the verb is expressed by the morpheme -en. This, then, appears to be an infinitival morpheme. Like all tense markers in Dutch, -en is a bound morpheme appearing as a suffix to the verb.

Te, on the other hand, may be present or absent, depending on the configuration in which the infinitival verb appears. Te, then, appears to be involved in expressing a syntactic relation rather than tense. In this respect, te looks like a complementizer or a preposition, more like an inflectional element.

This does not exclude the possibility that te in Modern Dutch functions as a tense marker rather than as a preposition. However, this would be strange given the fact that there is a clear infinitival marker -en on Dutch infinitives, and given the fact that te is excluded in a number of contexts where infinitivals appear. What we can say is that te signals the presence of an infinitive, but not that the tense features of the infinitive are represented in te. Also, the intimate connection between te and the infinitival may be due to the circumstance that te is no longer productively used as a preposition, rather than to the presence of infinitival features in te.

In the next subsection, I will investigate the properties of te in a little more detail.

* If the durative verb is an infinitival, te is optional: Jan kust Marie aan te kussen 'oh. He always kisses Mary.' This also happens whenever the durative verb is in the complement of the auxiliary hebben 'have'. In that case the durative verbs always take the form of an infinitival instead of a past participle (the Infinitive as Pre Participle or IPP effect).
shifted to the complement of the auxiliary. Let us refer to this phenomenon as te-shift.

Te-shift is an unexpected phenomenon if te should be analyzed as a prefix of the infinitival verb. Fourth, one te suffices for two coordinated bare infinitives:

(17) ...om in LA te leven en (te) sterven
for in LA to live and to die
"to live and die in LA."

This is impossible with prefixes like perfective ge-

(18) ...om in LA gebooren en (ge)sterven te zijn
for in LA born and died to be
"to be born and have died in LA."

The properties of the coordination of te-infinitivals are peculiar and merit further exposition.
Te must be present on both infinitives if one of them has an object:

(19) a. ...om in LA te lezen en kinderen (te) kijgen
for in LA to read and to look
"to read and get children in LA."

b. ...om in LA kinderen te kijgen en (te) sterven
for in LA children to look and to die
"to get children and die in LA."

On the other hand, one te suffices when the two infinitives share the same object:

(20) ...om boeken te kopen en (te) lezen
for books to buy and to read
"to buy and read books."

When one of the infinitives is a particle verb and the other is not, te cannot be left out when the two infinitives are coordinated:

(21) a. ...om kinderen op te voeden en (de) verwennen
for children up to feed and to spoil
"to raise and spoil children."

b. ...om kinderen te kijgen en op (de) woorden
for children to look and up to speak
"to get and spoil children."

But when the two verbs are construed with the same particle, te can be left out again:

(22) ...om dat bericht door te fassen of (door te) bellen
for that message on to fax or on to call
"to forward that message by fax or phone."

Apparently, a complete parallelism between the two infinitives is required for leaving out the second te. This suggests that leaving out te is an instance of gaping, if so, te cannot be a bound morpheme.

This suffices as an argument against analyzing te as an infinitival marker. A more positive approach to the phenomena at hand will not be attempted here. An interesting suggestion might be that te started out as a prepositional complementizer, on a par with in in Scandinavian and to in English. The combination of te with the infinitival complementizer om is considered to be pleonastic in Middle Dutch (Stuett 1977:204). In present-day Standard Dutch, however, te is regularly combined with om in infinitival clauses (with the exception of raising complements and control verbs selecting states like mogen ‘think’). Apparently, the syntactic function of te has changed. One possibility could be that te has been reduced to a clitic. This may be supported by the observation that te, unlike English to, cannot be stressed. I will leave this as a subject for further study.

83 See Leech (1992) for arguments that te is a complementizer.

84 Possibly, the reduction of te to clitic status has not been completed in the Groningen dialect. This makes it unnecessary to analyze the Groningen phenomena studied in Schuerman (1987) as incorporation phenomena.
1.2 Preposing of Infinitivals

In this subsection, I will discuss an argument advanced in Giusti (1991) in support of the idea that INFL is generated to the right of the VP in German. The argument assumes that German zu (Dutch te) is an infinitival marker generated in INFL. I will assume that too, for the sake of the argument. Giusti contends that certain phenomena of infinitival preposing can only be accounted for on the assumption that the infinitival verb raises to INFL and adjoins to zu. The argument is based on German facts, but the facts in Dutch are similar, and both the argument and my refutation of it are applicable to both languages.

1.2.1 Giusti (1991)

In Dutch and German, past participles and infinitives can be preposed. The phenomenon is illustrated in (23) with examples from Dutch:

(23) a. Geeksuz heeft Jan niet kissed has John not
    *John did not kiss Mary." 

b. Kussen wil Jan Marie niet kiss wants John Mary not
    *John does not want to kiss Mary." 

The preposed elements in (23) may include complements of the verb, as well as VP-adverbs:

(24) a. Snel Marie gekust heeft Jan niet quickly Mary kissed has John not
    *Kiss Mary quickly is not what John did." 

b. Snel Marie gekusen wil Jan niet quickly Mary kiss wants John not
    *Kiss Mary quickly is not what John wants." 

It is generally assumed that the sentences in (24) are derived from the representations in (23) by moving the complement of keep 'has' and weil 'wants', respectively, to the specifier position of the matrix CP.\(^\text{10}\)

(25) a. Jan niet [zu] snel Marie gekust [heeft]
    John not quickly Mary kissed [has]

b. Jan niet [zu] snel Marie gekusen [wil]
    John not quickly Mary kiss [wants]

(23) appears to be different from (24). In (24), the preposed element is a phrase, whereas in (23), the preposed element appears to be a head. If the preposed element in (23) really is a mere head, (23) must be analyzed in a different way than (24), because heads cannot move to a specifier position. In view of the obvious parallels between (23) and (24), this would be an undesirable consequence.

For this reason, Den Besten and Weelhuth (1987) argue that in (23) the preposed element is a phrase, just like in (24). It only looks like a head, because all other elements have been moved out of the phrase through scrambling, prior to the preposing operation. What is preposed, then, is the remnant of a phrase, but it is still a phrase. Therefore, the movement to spec of CP is allowed and (23) and (24) can be described in the same terms. Den Besten and Weelhuth call the preposing in (23) remnant topicalization.

Giusti (1991) now mentions the following facts of preposing of zu-infinitivals in German:

(26) a. * Zu schreiben hast er mich den Bericht ermuntert
to write has he me the report encouraged
    "He encouraged me TO WRITE the report." 

b. Zu schreiben hat er den Bericht verwechselt
to write has he the report tried
    "He tried TO WRITE the letter." 

(26b) appears to be a simple case of remnant topicalization: den Bericht 'the report' is first scrambled out of the most deeply embedded VP den Bericht zu schreiben 'to write the report', after which the remnant of the VP is preposed to the specifier of CP.

However, (26a) can be derived by the same mechanism. This would leave unexplained why (26a) is ungrammatical and (26b) not. Therefore, an additional step in the analysis is required.

Giusti notes that the complement of verzwecken 'try' is more transparent than the complement of ermuntern 'encourage', a phenomenon already noticed in Evers (1975). Consequently, she hypothesizes that in (26b), den Bericht 'the report' is scrambled into the matrix clause, and that zu schreiben 'to write' is not the remnant of a VP, but the remnant of a clausal category (CP or CP). In (26a), den Bericht 'the report' cannot be

\(^{10}\) Giusti in particular argues that the preposed constituent is a CP, but that does not affect the argument here.

I will leave the status of the complement of auxiliary verbs open.
scrambled into the matrix clause, because of the opacity of the complement of verbs like _ermmemtrn 'encourage'. As a result, preposing of a clausal category like in (28b) will result in (27), not in (28a):

(27) Den Bericht zu schreiben
    the report to write
    hast er mich ermuntert
    has he me encouraged

To make this solution work, another problem must be solved. Suppose we choose to prepose a VP instead of a clausal category in (26a). Then, assuming again that _den Bericht_ can be scrambled out of the VP, (26a) would still be expected to be a grammatical instance of remnant topicalization.

This problem is solved if we assume that _zu-infinitivals_ are always in DNl. In that case, the VP in (26) is completely empty. The proposed category has to be at least an IP, and inevitably contains the scrambled object as well. Hence, (27) is the only grammatical outcome.

The upshot of this discussion in Giusti (1991) is that it provides evidence for the following two assumptions:

1. The verb moves to INFL in embedded clauses in German
2. IP is head final in German

The first assumption is directly supported by the analysis of remnant topicalization of _zu-infinitivals_. The second assumption is not directly supported by this analysis, unless it is assumed that scrambling is adjunction to VP. In that case, _zu schreiben_ in (27) would precede _den Bericht_ if IP were head initial, contrary to fact.

In the next section, I will address this argument in support of a head final IP in German. It will turn out that if topicalization is studied from a minimalist point of view, the argument vanishes.

### 1.2.2 A Minimalist Analysis

Giusti’s (1991) analysis of infinitival preposing obscure two points that I think are essential to an understanding of the phenomenon.

First, it is a remarkable fact that only non-finite verbs can be preposed. See (28), from Dutch:

(28) a. Schrijven denk ik niet dat hij dat boek wil
    write think I not that he that book want
    "I don’t think he wants to WRITE that book."
    b. * Schrijven denk ik niet dat hij dat boek
    write think I not that he that book

Following the analysis of topicalization in Koster (1978b), we may assume that in (28b) the _d-word_ has been preposed, leaving a trace, and that the proposed VPs are generated in a left adjacency position.7

The _d-word_ analysis is independently needed for examples of VP-preposing where reconstruction of the proposed VP does not give a grammatical result. An example is given in (30):

(30) a. Meisjes knussen (dat) doet Jan niet
    kiss girls (that) does Jan not
    "Kissing girls is not something John does."
    b. * Jan doet niet knussen meisjes
    Jan not does kiss girls
    "John does not kiss girls."
    c. Dat doet Jan niet
    that does Jan not
    "That is not something John does."

As can be seen, reconstruction of the _d-word_ does lead to a grammatical result.

Surprisingly, the pattern of (30) is repeated when the object of the preposed verb is not part of the preposed constituent.

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7 See section 5.2 for a more detailed analysis of topicalization.
Dutch Syntax

(31) a. Kussen (dat) doe Jan Marie niet
John does Jan Marie not
b. Jan doe Jan Marie niet kussen
John does Marie not kiss
c. Dat doe Jan Marie niet
John does not kiss Marie.

(31c) is only grammatical when a certain verb is present in the context or the discourse so that its lexical content can be substituted for X in the translation. A similar phenomenon is found in (32):

(32) a. Kussen? Dat doe Jan Marie niet
John does Jan Marie not
Jan does not kiss Marie.
b. * Dat is mooi weet. Dat doe Jan Marie niet
It is nice weather. John does Jan Marie not

Remarkably, constructions with dat as a placeholder for a verb or verb projection are only grammatical when there is at least one verb left:

(33) Kussen? Dat denk ik niet is dat Jan Marie * (doet)
It is, I don't think John does that Jan Marie * (does)
"I don't think John does that Jan Marie.

This is reminiscent of the impossibility to propose finite verbs (cf. (33)).

Let us now consider those phenomena from a minimalist point of view. Two questions should be answered. First, how is it that finite verbs cannot be proposed? Second, why is it that there always has to be one verb left in the non-preposed part of the construction?

The first question is easy to answer. A finite verb carries a feature associated with the finite inflection. This feature must be checked off against the corresponding features in the functional domain. If these features are not checked off against each other, the V-features of the relevant functional head will not be eliminated at the interface levels and the derivation will crash. Notice that this answer is only valid if the d-word is unable to check off the relevant features. So let us assume that.

The second question can be answered along the same lines. Consider a standard case of remnant topicalization:

(34) Gekeust (dat) heeft Jan Marie niet
John has Marie not
John has not KISSED Marie.

Under the d-word analysis, (34) is derived from (35):

(35) Jan heeft Marie dat niet
John has Marie that not

In (35), the d-word dat is reconstituted in the final verbal position. However, as we have assumed, dat is not equipped with the features needed to match the V-features of the functional heads in (35). For instance, Marie, the object of the understood verb, checks its Case features in the spec position of an AgrO somewhere in (35). This AgrO also has V-features, and these must be checked as well. Dat cannot do that.

Fortunately, there is another verb left in (35), the auxiliary verb heeft 'has'. This verb can check off all the V-features present in the functional heads needed in the derivation of (34). In fact, the minimalist approach predicts that in remnant topicalization constructions there always has to be at least one verb left in the non-preposed part of the construction. Without this verb, certain V-features (associated with AgrS, AgrO) would remain unchecked, and the derivation would not converge.

This analysis presupposes a particular organization of the functional domain with respect to the lexical domain. More exactly, it must be assumed that the functional projections associated with elements of an embedded clause may be part of the functional domain of the matrix clause. Thus, the AgrO associated with Marie in (35) must not be generated in the embedded clause but in the matrix clause. Only then will the matrix verb be able to move through AgrO and check the relevant V-features.

We will see in section 2 that this assumption is independently needed to account for the position of the embedded subject and object in Exceptional Case Marking constructions (see also Kais 1992, Haseman 1992a). For now, let us assume that this is at least a possibility.

We are now in a position to address Giusti's (1991) argument. Consider again the constrast in (26), now exemplified in Dutch:

(26) a. Te kussen beek Piet Jan Marie gestamuleerd
To kiss has Piet John Marie stimulated
"He stimulated John to KISS Mary.
b. Te kussen beek Jan Marie niet gependurend
To kiss has Jan Marie not used
"John didn't try to KISS Mary.

As noted by Giusti, the complements of the verbs that allow the construction in (35) (like proberen 'try', German versuchen) show transparency effects. Giusti maintains elicit placement and scrambling from the embedded clause into the matrix clause as examples. See (37) for an example of scrambling into the matrix clause in Dutch:

(37)
Since scrambling in the minimalist approach is analyzed as movement to the specifier position of AgrOP (cf. section II.4.3), this confirms the assumption made above: apparently the AgrOP needed to check off the features of the embedded object may be part of the functional domain of the matrix clause.

In contrast, verbs like stimulieren ‘stimulate’ (and German ermuntern ‘encourage’) do not show these transparency effects. Crucially, no scrambling into the matrix clause is allowed:

(33) a. *dat Piet Jan Marie gestimuleerd heeft te kussen
   that Pete John Mary stimulated has to kiss
   "dat Piet stimuliert John to kiss Mary."
   "that Pete stimulated John to kiss Mary."

b. *dat Piet Jan gestimuleerd heeft Marie te kussen
   that Pete John stimulated has Mary to kiss
   "dat Piet stimuliert John to kiss Mary."
   "that Pete stimulated John to kiss Mary."

This implies that in these constructions the functional projections associated with elements in the embedded clause cannot be part of the functional domain of the matrix clause.

This has a major consequence for remnant topicalization in these constructions. Consider (38a):

(38) a. *te kussen heeft Piet Jan Marie gestimuleerd
   to kiss has Pete John Mary stimulated
   "Pete stimulated John to KISS Mary."

In the d-word analysis, (38a) looks like (39a), derived from (39b):

(39) a. *te kussen dat heeft Piet Jan Marie gestimuleerd
   to kiss dat has Pete John Mary stimulated
   Piet heeft Jan [Marie dat] gestimuleerd
   "Piet has John Marie dat stimulated"

In (39b), as in (33), dat stands for a verb the lexical content of which is present in the context or the discourse. Marie is a direct object of this verb, and has features to be checked in the specifier of an AgrOP. Since stimulieren ‘stimulate’ takes an opaque complement, Marie must check its features in an AgrOP inside the complement clause. Consequently, the V-features of the head of this AgrOP must be checked by a verb in the embedded clause. But there is no such verb in the embedded clause, just the d-word dat. As a result, the V-features of the AgrO in the embedded clause will remain unchecked, and the derivation will crash.

In this analysis, the contrast in (26) and (28) is explained in general terms, in accordance with the minimalist approach. The analysis provides an explanation for the contrast noted by Giusti (1991), but in addition explains why preposing of finite verbs is impossible, and why there always has to be at least one verb that is not preposed.

A minor result of this analysis is that Giusti’s conclusions as to the position of INFL and the occurrence of verb movement to INFL in infinitivals in German (and Dutch) are not valid. The impossibility of preposing zu schreiben and stranding den Bericht in (28a) has nothing to do with the position of zu schreiben. (28a) is ungrammatical because preposing zu schreiben robs the embedded clause of its only verb. This makes it impossible to check the V-features of the functional heads of the embedded clause. In (28b), preposing of zu schreiben and stranding of den Bericht is grammatical, because the functional projections associated with the embedded clause are part of the functional domain of the matrix clause. This assumption is independently needed to account for scrambling of den Bericht into the matrix clause. As a result, the V-features of the functional heads of the embedded clause can be checked by the matrix verb.

In fact, the paradigm in (28) is spurious, because (28a) is ungrammatical for independent reasons: den Bericht has been scrambled out of an opaque domain. The correct paradigm is (28′) below:

(28′) a. *zu schreiben hat er mich ermuntert den Bericht
   to write has he me encouraged the Report
   "he encouraged me to write the report."
   "He encouraged me to write the report."
   "He tried to write the report."

It is clear that (28′a) is wrong for the same reason that (28b) is wrong. There is no verb left to remove the V-features of the functional heads of the embedded clause.

This analysis predicts that (28b) becomes grammatical again when the embedded clause contains a second verb selecting a transparent complement. This is correct.

(40) *te kussen heeft Piet Jan gestimuleerd [Marie te proberen
   to kiss has Pete John stimulated Mary to try
   "Piet stimulated John to try to KISS Mary."

Compare also the following (Dutch) contrast:
2 Clitics in Dutch

In this section, and in the following sections, I will provide positive evidence in support of the hypothesis that the functional projections in Dutch are head initial. The first piece of argumentation comes from an analysis of clitic phenomena in Dutch.

The argument has three steps. First I will discuss the nature of the weak pronouns in Dutch, and conclude that they are syntactic clitics (section 2.1). Second, I will discuss the categorical status of clitics, and adopt the hypothesis that clitics are generated as heads of functional projections (section 2.2). It then follows from the distribution of the clitics in Dutch that there are functional heads to the left of the VP in Dutch. In section 2.3, an attempt at a minimalist analysis of clitic placement will be made.

The argument goes back to Zwart (1990b), and has been developed in subsequent work (Zwart 1991a, 1992b).

2.1 The Status of the Weak Pronouns in Dutch

2.1.1 Types of Clitics

In Zwicky’s 1977 discussion of clitics from the point of view of generative syntax, three classes of clitics are distinguished: simple clitics, special clitics, and bound words.

Bound words are unaccented bound morphemes that can be associated with a variety of bases, like Latin -que ‘and’. Simple clitics are phonologically reduced free morphemes that show no special syntax, like English ‘in’ in (1):

(1) I can’t stand him [something]

Special clitics are unaccented bound forms that act as variants of stressed free forms, and show special syntax, like French le in (2):

1 Jaspers (1989) was the first to conclude from the distribution of clitics in Dutch that there must be functional heads to the left of VP in Dutch. However, his analysis is not generalized over all functional heads in Dutch. Hagelgans (1991) applies the analysis of clitics in Dutch of Zwart (1991a) to West Flemish and reaches similar conclusions as to the position of the functional heads. See also Cardinaletti and Cerrada (1991) and Cardinaletti (1992a) for further discussion of clitics in German.
(2) Je le voie
1 him see

Simple clitics and special clitics are sometimes difficult to tell apart.
Simple clitics are obviously the result of phonological reduction, as in
casual speech. Accordingly, in (1) the clitic can be replaced by an
unreduced variant:

(3) Ik kan't hem zien. 'I can't stand him.'

But special clitics are often morphologically related to unreduced
variants as well, as in French le and lui. In that case, they may be
analyzed as simple clitics that have achieved a special syntactic status in
some way (Zwicky 1977:6).

Accordingly, the clitic in (2) cannot be replaced by its full variant:

(4) *Je lui vois
1 him see

Thus, the behavior of simple clitics is to be described in phonological
terms, whereas the behavior of special clitics is to be described in terms
of syntax.3

The weak pronouns in Dutch, repeated here from section II.1.5, are
obviously morphologically related to the corresponding strong variants:

(5) Strong subject pronouns

<table>
<thead>
<tr>
<th>1SG</th>
<th>1PL</th>
<th>2SG</th>
<th>2PL</th>
<th>3SG</th>
<th>3PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ik</td>
<td>wij</td>
<td>jij</td>
<td>jullie</td>
<td>hijij</td>
<td>huijt</td>
</tr>
</tbody>
</table>

3 From the facts presented here, it cannot be concluded that clitics in French are not simple
clites. It may be that the natural pattern of French sentence intonation blocks full variants
in certain positions. However, it can be shown that the general pattern of intonation does not
restrict the occurrence of French clitics. In affirmative imperatives, the pattern of intonation
requires stress on the ultimate, but this does not restrict clitics from that position, as in rou-
ler 'kill him'.

(6) Weak subject pronouns

<table>
<thead>
<tr>
<th>1SG</th>
<th>1PL</th>
<th>2SG</th>
<th>2PL</th>
<th>3SG</th>
<th>3PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ie</td>
<td>ons</td>
<td>je</td>
<td>jullie</td>
<td>lui</td>
<td>hun</td>
</tr>
</tbody>
</table>

(7) Strong object pronouns

<table>
<thead>
<tr>
<th>1SG</th>
<th>1PL</th>
<th>2SG</th>
<th>2PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>mij</td>
<td>ons</td>
<td>je</td>
<td>jullie</td>
</tr>
</tbody>
</table>

(8) Weak object pronouns

<table>
<thead>
<tr>
<th>1SG</th>
<th>1PL</th>
<th>2SG</th>
<th>2PL</th>
<th>3SG</th>
<th>3PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>me</td>
<td>ons</td>
<td>le</td>
<td>li</td>
<td>m'n</td>
<td>hen</td>
</tr>
</tbody>
</table>

The question arises whether these weak pronouns show special syntax
compared to the strong variants. In other words, should they be regarded
as simple clitics or as special clitics in Zwicky's terminology?

2.1.2 Phonological Reduction.

Berenholtz (1986) argues that the weak pronouns in Dutch are not derived
from the strong pronouns through phonological reduction. His argument
is based on the observation that the weak pronouns may have a
specialized meaning which the strong pronouns lack. This indicates that
they are stored in the lexicon as weak pronouns, and that their weakness
is not a result of phonological rules.

For example, the weak forms of the 2SG and 3PL pronouns may have
a generic interpretation ('people'), but the corresponding strong forms may
not:

(9) a. Ze zeeggen zwaard
      they say sword
      "they say a sword."

b. Zij zeeggen zwaard
      they say sword
      "they say a sword."

3 In addition to the object clitics listed here, some dialects of Dutch have a partitive object
clitic 'sense'.

Similarly, the weak JPL pronouns (both subject and object) can be used to refer to both persons and things, whereas the strong JPL pronouns can only be used to refer to persons (cf. Kayne 1975, 46):  

This semantic specialization is unexpected if the weak pronouns are derived from the strong pronouns by phonological rules. Hence, it must be the case that the weak pronouns and the strong pronouns, though morphologically related, are stored in the lexicon separately.

Berendsen also shows that in SSG and 2SG only weak pronouns are used as SE-anaphora (in the terminology of Reinhart and Reuland 1991). Thus:

Again, if the weak pronouns are phonologically reduced forms of strong pronouns, this syntactic specialization of the weak pronouns is unexpected. In addition, Berendsen argues that separate storage of weak pronouns in the lexicon is needed to account for the fact that certain idiomatic expressions involving pronouns allow only the weak form. The examples Berendsen gives are of the following type:

---

1. It is assumed that people cannot be repaired.
2. In SSG and 2PL, a special pronoun sich is used as a SE-anaphor.
form, then the fact that they are always used with the pronouns in reduced form does not imply that weak pronouns are stored in the lexicon.

It is a common property of idiomatic expressions to require phonologically reduced forms. An example not including pronouns is given in (16). Again, this does not show that phonologically reduced forms are lexically stored.

(16) Blij knijpt 'm als een ouwe-vade dief.
be smiles him like an old thief.

"He is very much afraid that he will be caught."

Berendsen's argument implies that oude 'old' is also lexically stored separately from oude 'old'. In that case, we seem to be missing a generalization, considering the existence of pairs like gouden-gouwe 'golden', houten-houwe 'old'.

Nevertheless, Berendsen's observations do warrant the conclusion that the status of the weak pronouns in Dutch is not due to a phonological reduction operation taking place during sentence production. This forms the first piece of evidence that these weak pronouns are 'special clitics' rather than 'simple clitics', in Zwicky's terminology.

2.1.3 Heads or Phrases


According to standard argumentation, this is demonstrated by the fact that clitics cannot be modified, conjoined, or used in isolation. We can use these tests to determine the status of the weak pronouns in Dutch. However, it appears that these tests are not sufficient, since they generalize over 'special clitics' and simple clitics.

Consider the following examples from French (Kayne 1975):

(17) a. Ne sue qu'aux deux.
NEG kill than THEY two
"Kill only the two of them."

b. Tue-le *('tue-
"Kill them."

(18) a. Tue Jean et Marie.
kill John and Marie
b. Tue-le *('tue-
"Kill him and her

In Dutch, the weak pronouns cannot be modified, conjoined, and used in isolation, whereas the strong pronouns can (Koster 1979a, Eversent 1986):

(19) a. Dood hem tweeën.
kill them two
b. Dood ze ('tweeën)
kill them two
(20) a. Dood hem en haar.
kill him and her
b. Dood 'm ('m en haar)
kill him and her

 "Who did you see?" - Him.

Kayne (1975:32) in addition shows that French weak pronouns cannot be contrastively stressed:

(21) a. Je la préfère.
I prefer her.

This is true for the weak pronouns in Dutch also:

(22) Ik wil je-JE'WOU.
I want you

However, reduced pronouns in English ('simple clitics' in Zwicky's terminology) cannot bear contrastive stress either:

(23) Je ne me connais pas.
I don't know me.

(24) Je ne nous connais pas.
I don't know us.

There are curious exceptions to this rule. See note 3 of this section, and the following piece of dialogue I caught in the film "Nuit d'été en ville" (Michel Deville, director, 1991).
DUTCH SYNTAX

(25) I want you/you

In other words, this test does not distinguish special clitics from simple clitics.

Similarly, the tests involving modification, conjunction, and use in isolation do not allow us to draw the line between simple clitics and special clitics. Compare the following examples involving reduced pronouns in English:

(26) a. Kill him over there  [what man over there]
    b. Kill'm (over there)

(27) a. Kill him and her
    b. Kill'm (*and 'm)

(28) Q: Who did you see?
    A: Him/*him

Thus, the tests for clitic status involving stress, modification, coordination, and use in isolation generalize over simple clitics (phonologically reduced pronouns) and special clitics (weak pronouns with special syntax). Consequently, we cannot use them to argue that Dutch weak pronouns are special clitics.

This is also true of another test for clitic status mentioned in Everaert (1986) in connection with Dutch weak (object) pronouns. According to this test, clitics cannot be topicalized (Koster 1978a, Travis 1984):

(29) Hem/*him zie (k)
    him  see 1
    "Him, I see."

Again this does not obviously identify weak pronouns as clitics, since reduced pronouns in English cannot be topicalized either:

(30) Him/*him I like

To conclude, the tests discussed in this section do not allow us to draw a line between simple clitics and special clitics. Therefore they do not serve to determine the exact status of the weak pronouns in Dutch.

The tests mentioned here are also generally taken to suggest that weak pronouns are heads, rather than phrases. This distinction is of great significance for the nature of the position these pronouns are generated in or moved to. However, the fact that weak pronouns cannot be stressed, modified, conjoined, used in isolation, or topicalised appears to be related

to their status as 'weak' elements in general, since the English reduced pronouns perform exactly like unsuspected clitics in those tests.

Nevertheless, it may very well turn out to be the case that the weak pronouns in French and Dutch are heads rather than phrases (and possibly this would yield the conclusion that the weak pronouns in English are heads as well). However, this should be decided on the basis of word order phenomena. The crucial test must demonstrate that the weak pronouns occupy positions that cannot be occupied by noun phrases.

2.1.4 Word Order I

In French, the weak object pronouns occupy positions that noun phrases cannot occupy:

(31) a. Je voie Pierre voit
    [him/see]
    "I see him."
    b. Je voie Pierre*le
    I  see  Pierre*him
    "I see him."

(32) a. Lui Pierre as-tu vu?
    him/Pierre have you seen
    "Have you seen him?"
    b. As-tu vu Pierre*le?
    have you seen Pierre*him
    "Have you seen him?"

(33) a. Le/Pierre voit l'arm/ danger aux
    [him/see the arm/dangerous]
    "To see him would be dangerous."
    b. Voire Pierre*le voir l'arm/ danger aux
    Pierre*him see the arm/dangerous
    "To see him would be dangerous."

Kayne (1975) argues that the weak pronouns differ from full noun phrases in that they are adjuncts to V. On the assumption that only heads can adjoin to heads (Salva 1982, Chomsky 1988b), this would effectively identify the French weak pronouns as heads. As heads, these weak pronouns would have a special syntactic status, and therefore fall in the category of special clitics in the terminology of Zwicky (1977).

The English reduced pronouns do not obviously occupy positions that cannot be occupied by phrasal noun phrases:

(34) I've seen /him/John
124

DUTCH SYNTAX

(33) Have you seen im/John?

(35) To see im/John would be dangerous.

This confirms their status as simple rather than special clitics.7

As shown in section II.1.5, the weak pronouns in Dutch in certain
constructions occupy positions that cannot be occupied by noun phrases

This is most clearly the case in Exceptional Case Marking construc-
tions:

(37) a. *dat Piet en Jan heeft zien kussen
   that Pete and John has see kiss
   "that Pete saw John kiss her."
   b. *dat Piet Jan en John heeft zien kussen
   that Pete Jan and John has see kiss
   "that Pete saw John kiss her."
   c. *dat Piet Marie/haar Jan heeft zien kussen
   that Pete Marie/haar Jan has see kiss
   "that Pete saw John kiss Mary."  
   d. *dat Piet Jan Marie/haar heeft zien kussen
   that Pete Jan Marie/haar has see kiss
   "that Pete saw John kiss Mary/her."

In (37)–(38), Jan is the subject of the embedded clause. The object of
the embedded clause, Marie/haar/er can precede the subject of the
embedded clause only if the object is a weak pronoun.

In the minimalist approach, the paradigm in (37)–(38) must be
analyzed as follows. Assume that the functional domain in Dutch has a
syntactic structure as in Figure 1 of section I.2.2. Recall that we have
assumed that in Dutch, direct objects always move to the specifier of
AgP (see section II.4.3). This assumption is necessary if we choose not
to accept optional movement. Therefore the object of the embedded clause
in (38) must be the specifier of an AgP head. The subject of the matrix
clause in both (37) and (38) is assumed to be in the specifier position
of AgP (section II.4.3). It goes without illustration here that the object of
the embedded clause cannot precede the subject of the matrix clause.
Therefore, the structure of (37) must have the following rough frame:

In (33), the distribution of noun phrases and pronouns differs in double
object constructions and partial verb constructions (cf. Jansen 1991b); they looked up
the information vs. "they looked up it." This suggests that English weak pronouns are
special clitics as well. I will leave this for further research.

The next question is, where to fit in the subject of the embedded clause.
This subject is formally an object of the matrix verb zien "see." This

(40) ...dat Piet hem/*bij Marie heeft zien kussen
    that Pete him/*beside Mary has see kiss
    "that Pete saw him kiss Mary/ her."

Hence, the embedded subject must be the specifier of an AgP as well
(Vanden Wyngaard 1995b, Haegeman 1992a). Apparently, this AgP is
located between the AgP and the embedded AgP designated for licensing
the embedded object:

(41) C specAgP AgP specAgP AgP specAgP AgP VP
    dat Piet Jan/Marie/haar heeft ...

The three noun phrases in (41) are moved from positions inside the VP
in such a way that their paths cross.8

(42) SUBJ-1  SUBJ-2  OBJ-2  [s-1  V-1  s-2  V-2  s-2 ]
    Piet  Jan   Marie   zien   kussen

As (38) shows, a derivation in which the paths of the embedded subject
and the embedded object do not cross correctly. This is surprising, given the
observation that dependencies are generally nesting rather than crossing
(Peestra 1992).8

8 The auxiliary heeft "has" in left cut in (42) for existential reasons. The lower case s and o
indicate the tracing of the subject and object, respectively. The number indicates the
hierarchy of the verb and the affiliation of the arguments with these verbs at the initial stage of
the derivation. It is assumed that the subject is first generated inside VP (Kuigor 1986, Svoronos
1989, many others).

9 Peestra (1992) formulates a Path Continuance Condition prohibiting crossing paths.
However, this condition was devised for dependencies involving A-positions, if the specifier
position of an AgP is in an A-position, we do not automatically export the Path Continuance
Condition to be applicable. It appears to be the case that movement to an agreement
projection is generally crossing rather than nesting (cf. Chomsky 1992b). Chomsky derives
the crossing character of movement to AgP from the shortest steps requirements of economy
of derivation, an option which is not available to us if we abandon the shortest steps
requirements, as proposed in section 1.5.3.1.
One way to ensure that the paths of the embedded subject and the embedded object cross is to assume that the AgrO designated for licensing the embedded object is generated in the complement of the matrix verb. However, it can be shown that this would not be correct.

Recall from section 2.2.3 that in constructions involving preposing of to-infinitival one verb always has to remain behind. I argued that this is explained on the minimalist assumption that the V-features associated with the object of the embedded clause have to be eliminated by this verb. As Giusti (1991) demonstrates, matrix verbs selecting a transparent complement clause allow preposing of the to-infinitival of the embedded clause with stranding of the object of the embedded clause. Following our reasoning, this should only be allowed if the matrix verb is capable of eliminating the V-features associated with the AgrO designated for licensing the embedded object. This is only possible if the AgrOP in which the embedded object is to be licensed is part of the functional domain of the matrix verb.

Liliane Haegeman (1992a) also presents an argument in support of the hypothesis that the ‘embedded AgrOP’ should be in the functional domain of the matrix clause. This argument is based on the assumption that the negative element nie ‘not’ in West Flemish (Dutch nie) is in the spec of NegP (Haegeman 1992b). If nie expresses sentential negation, this NegP must be in the functional domain of the matrix clause. Crucially, the embedded object in an Exceptional Case Marking construction in West Flemish has to appear to the left of nie:

(43) a. ..dat k eur da werk nie en-en en doen
that I her that work not NEG have see do
"that I haven’t seen her do that yet."

b. * ..dat k eur nie da werk en-en en doen
that I her not that work NEG have see do

If nie is in the specifier position in the functional domain of the matrix clause, the AgrO associated with the embedded object must be in the functional domain of the matrix clause as well.

Therefore, the crossing paths in (42) cannot be explained by assuming that the two AgrOPs involved belong to different functional domains. The strict ordering of the two AgrOPs therefore has to be explained in another way, which does not directly concern us here.18

What concerns us here is the fact that the embedded object does appear to the left of the embedded subject when the embedded object is a weak pronoun (37a). This indicates that there are different forces at work here. The full noun phrase object is forced to move to the spec of AgrO to get its Case features checked. After that, no further movement is allowed, by economy. The weak pronoun moves further to the left. We don’t know where it moves and what triggers the movement, but we do know that weak pronoun movement targets a different syntactic position than noun phrase movement.

Here we have the kind of evidence that allows us to conclude that the weak pronouns in Dutch are ‘special clitics’ in the sense of Zwicky (1977). Like the clitics in French, and unlike the weak pronouns in English, the weak pronouns in Dutch move to a position that cannot be occupied by a full pronoun or a full noun phrase. Consequently, if Kayne (1975, 1991) is correct in identifying the clitic position as a head position, we must assume that the weak pronouns in Dutch occupy head positions. If so, there is at least one functional head to the left of the VP and to the right of C in Dutch.

2.1.5 Word Order 2

Several other word order phenomena of Dutch support the hypothesis that the weak pronouns in Dutch are (special) clitics.

a. Scrambling

Recall from section 2.1.5 that clitics cannot appear to the right of sentence adverbs (Koster 1978b):

(44) a. ..dat Jan gisteren Marie gekust heeft
that John yesterday Mary kissed has
"that John kissed Mary yesterday."

b. ..dat Jan (‘gisteren’ ) Marie gekust heeft
that John yesterday Mary kissed has

This fact again shows that clitics and full noun phrases move to different positions.

In section 2.4.3 I argued that the direct object Marie in (44a) moves to the specifier position of AgrOP. The sentence adverb gisteren ‘yesterday’ may be adjoined in various positions, both to the right and to the left of the position of the direct object (cf. section 1.3.5).

(44b) now shows that the clitic moves to a position where it cannot be separated from the subject by adjunction of an adverb. This gives an indication as to the nature of the position occupied by the clitic.

We know from subject initial main clauses that the spec of AgrS (occupied by the subject) and AgrS (occupied by the finite verb) cannot be separated.

Dutch Syntax

(44) Jan (gisteren) heeft Marie gekust.
John yesterday has Mary kissed.

The strict adjacency of the subject and the object clitic in (44b) now follows if we assume that the clitic adjoins to AgrS.11

This approach makes the prediction that the object clitic can appear to the right of the sentence adverb if the sentence adverb appears to the left of the subject. This prediction is borne out:

that yesterday John her has kissed.
"That John kissed her yesterday.

(46) b. Gisteren heeft Jan 't gekust.
Yesterday has John her kissed.
"Yesterday John kissed her.

Notice that movement of the object clitic cannot be forced, in view of the grammaticality of (37b), repeated here:

(37b) *dat Piet Jan 't heeft zien kussen.
that Pete John her has see kiss
"That Pete saw John kiss her.

Since the embedded subject Jan is in a specifier position of AgrOP, and sentence adverbs may appear to the left of AgrO, we predict that the presence of a sentence adverb between Piet and Jan in (37b) will not interfere with the possibility of having a clitic to the right of Piet. This prediction is also borne out:

(47) *dat Piet gisteren Jan 't heeft zien kussen.
that Piet yesterday John her has see kiss
"That Piet saw John kiss her yesterday.

I agree with Haegeeman (1992a) that the following is ungrammatical:

(46) *dat Piet Jan gisteren 't heeft zien kussen.
that Piet John yesterday her has see kiss

This sentence is grammatical when the embedded object is a full noun phrase:

(48) *dat Piet Jan gisteren heeft zien kussen.
that Piet John yesterday has see kiss

Again, the object clitic and the full noun phrase appear to occupy different positions. The ungrammaticality of (48) suggests that in (37b), (47) the object clitic is adjoined to the AgrO associated with the embedded subject, Jan.

Consider finally a peculiar fact concerning weak pronouns and scrambling, not present in all dialects of Dutch.12 In section IV.2.2.3, I will argue that indefinite objects in Dutch move to specifier position of AgrOP just like definite objects do. This is at variance with the standard analysis of scrambling, according to which scrambling is an optional movement of definite noun phrases only. The optimal minimalist assumption appears to be that scrambling is an obligatory movement of all noun phrases carrying the relevant Case features.

In fact, scrambling of indefinite noun phrases is very well possible, but as soon as an indefinite noun phrase appears to the left of a sentence adverbial, it acquires a specific reading (see De Hoop 1992 for a recent discussion). Consider the paradigm in (50):

(50) a. *dat Jan vaak meeneemt kusten
that John often meeneemt kisses
"That John often kisses.

(50) b. *dat Jan meeneemt vaak kusten
that John meeneemt vaak kisses
"That John meeneemt vaak kisses.

In (50a), there is only one kissing event per girl, whereas in (50b) meeneemt has scope over often, which results in a reading involving multiple kissing events per girl.13

11 See section 3.3 on the issue of the direction of clitic adjunction.

12 The paradigm is present in southern dialects. My intuitions relate to the Leuvenish dialect spoken in the Middle South of the Netherlands and the Northern Central part of Dutch-speaking Belgium. Haegeeman (1991) demonstrates the existence of a similar paradigm in West Flemish.

13 If the weak in (50) is contrastively stressed, the adverb appears to be able to take wide scope again. This judgments in the text are about neutral stress patterns. In addition to the readings discussed in the text, (50a) lacks, but (50b) has, a generic reading of the indefinite noun phrase.
DUTCH SYNTAX

Now in the relevant dialects indefinite plural noun phrases can be replaced by a partitive weak pronoun 'r. This pronoun has to precede the sentence adverbial:

(51) a. *dat Jan weken 'r kust
    b. dat Jan weken kust

    that John often kisses
    *that John often kisses

In this respect, 'r behaves exactly like the weak object pronouns of Standard Dutch discussed above.

But, crucially, (51b) has both the reading of (50a) and the reading of (50b), with a clear preference for the reading of (50a). Thus, scopal relations appear to be determined on the basis of linear order where prasal noun phrases are concerned, but not where weak pronouns are concerned. This is unexpected if weak pronouns do not have a special syntactic status.

b. Double Object Constructions

The neutral order of constituents in double object constructions in Dutch is Indirect Object-Direct Object:

(52) a. dat Jan Marie het boek geveren heeft
    b. ? dat Jan Marie het boek geveren heeft

    that John Mary the book
    *that John the book Mary given has

The partitive weak pronoun 'r should not be confused with the NSG feminine weak pronoun r in Standard Dutch. The r in (51) appears to be morphologically related to the quantitative or 'there' in Standard Dutch (deel 1992). In Brabant, the NSG feminine weak object pronoun is or rather than 'r (Hansdijk Ramsema, p.e.).

The wide scope reading for 'r is triggered in sentences like (9).

(9) Some hou ik 'r van in dat werk, maar ik 't niet houden

"Sometimes I love it and then again I hate it too much."

In embedded clauses, some 'somewhere' obligatorily follows the weak pronoun, which shows (just like (51b)) that some is not determined by linear order where clitics are involved.

(10) *dat ik ("somewhere") 'r weken kus
    "that I sometimes kiss of others."

In addition, (51b) lacks the generic reading mentioned in note 12.

However, when one of the objects is a weak pronoun, the weak pronoun always has to precede the full NP:

(52) a. *dat Jan 'r Marie geveren heeft
    b. ? dat Jan Marie 'r geveren heeft

    that John Mary it given has
    *that John Mary it given has

(54) a. *dat Jan 'r het boek geveren heeft
    b. ? dat Jan het boek 'r geveren heeft

    that John the book it given has
    *that John the book it given has

When both objects are weak pronouns, the order is free, with a slight preference for the order Direct Object-Indirect Object:

(55) a. *dat Jan 'r het boek geveren heeft
    b. ? dat Jan het boek 'r geveren heeft

    that John it given has
    *that John it given has

These facts lend prima facie support for the hypothesis that the weak pronouns in Dutch are (special) clitics, and move to positions unavailable to strong pronouns and prasal noun phrases.

Full noun phrases have to move to a position in which they can be licensed: the specifier of a functional head. Apparently, it is required that the functional projection designated for licensing the Indirect Object is ranked in between the AgrSP and the AgrOP.12 But none of these considerations are relevant for the position of the double object clitics.

12 Unlike in West Flemish, the double object clitics in Dutch cannot be split. Neither can they adjoin to the complementizer, as is also the possibility in West Flemish, as well as in several dialects spoken in the South of the Netherlands. cf. Keppelman (1992a).

13 I assume here that Indirect Objects are noun phrases and that they are licensed in the specifier position of an AgrOP. As De Cock and Hulst (1991) show, the Indirect Object behaves just like the Direct Object in licensing prepositional gaps. The assumption that both objects move to their licensing positions in overt syntax in Dutch also accounts for a problem discussed in De Cock and Hulst (1991). This is the fact that the order of the two objects is invariant, no matter where the sentence adverb appears (the adverb may appear before and after each of the three argument noun phrases). This is explained under our assumption that scrambling paradigms do not involve additional movements of the objects, but adjunction of the adverb in different positions. In other words, the relative position of the two objects is fixed because their absolute position is.
This once again shows that the weak pronouns are syntactically different from the full noun phrases.

According to many speakers, including me, (52b) is grammatical when the double object verb contains a particle:

(56) a. *dat Jan Mari het boek teruggedgegeven heeft
   that John Mary the book back given has
   *"dat John gave Mary the book back."

   b. *dat Jan het boek Mari teruggedgegeven heeft
   that John the book Mary back given has
   *"dat John gave the book Mary back."

Furthermore, sentence adverbs can appear on either side of each of the two objects in both sentences in (56). Therefore, it cannot be the case that in (56), Maria is not in a position in the functional domain.

Also, a marked stress pattern enhances the acceptability of (52b):

(57) ?*dat Jan het boek *Maria gegeven heeft
   that John the book *Mary given has
   *"dat John gave Mary the book."

These observations, however, do not detract from the conclusion that in double object constructions, weak pronouns and full noun phrases display different syntactic behavior. None of these manipulations are needed to make the Direct Object-Indirect Object order acceptable when the two objects are clitics.

2.2.1 Conclusion

It is clear from the word order phenomena in Exceptional Case Marking constructions, scrambling constructions, and double object constructions that weak pronouns and full noun phrases do not occupy the same positions in Dutch. This is explained if the weak pronouns are clitics, on the standard assumption that clitics adjoin to functional heads, whereas full noun phrases move to the specifier position of an Agreement Phrase.

It follows that there are a number of functional head positions to the left of the VP in Dutch. The exact distribution of these functional heads will be investigated in the next section.

2.2 Clitics as Functional Heads

2.2.1 Base Generation versus Movement

There is a general consensus in the generative literature as to the status of clitics: they are heads. Our conclusion that object clitics in Dutch are heads ties in with that generalization.

Mere controversy surrounds the question of whether clitics are generated in head positions or in argument positions. The analyses taking the former option are generally referred to as 'base generation analyses' (Strevos 1976, Jaeggli 1980, Berer 1984). The analyses taking the other option are generally referred to as 'movement analyses', since in this type of analysis the clitic has to move from the argument position to the head position (Kayne 1975, 1991). The distinction in terms of movement vs. base generation is only partly felicitous, since nothing in principle excludes head movement of a 'base generated' clitic (cf. Sportiche 1989). Nevertheless, I will use the terms 'movement' and 'base generation' to refer to the two types of analysis, as is usual.

As Sportiche (1992) argues, there are sound arguments for both the movement analysis and the base generation analysis of clitics. I will mention just a few for each type of analysis.

First, the movement type of analysis is supported by the fact that clitics induce past participle agreement in French (Kayne 1987):

1 Many issues are constrained by putting the controversy in these terms. Thus, if one assumes that clitics are generated as heads, it could be that they are projected as affixes to the verb, or as determiner elements inside a DP, or as functional heads of some sort. Similarly, if clitics are generated as pronominal arguments, it could be that they are projected as affixes to the verb, or that they move to the specifier position of a functional head and adjoin to a functional head afterwards, or that they move and adjourn to a functional head directly. Not all of these analyses have been explored in the literature, to my knowledge. See Hopper (1981a) and Hume (1992) for discussion of some of these options. I assume, following Rooth (1982) and Kayne (1991), that clitics are always associated with a functional head. This leaves us with basically two options: either clitics are generated as affixes to functional heads, or they are generated on pronominal arguments and adjoin to functional heads in the course of a derivation. The latter option goes back to Kayne (1975), the former to Ster NESS (1978).
(1) a. Jean a repeint(‘rép.) les chaises
   John has repainted(AGR)
   the chairs
b. Jean a repeint(‘rép.)
   John has repainted(AGR)
c. les chaises que Jean a repeint(‘rép.)
   the chairs that John has repainted(AGR)
   "the chairs John repainted"

In (1a,c), but not in (1a), the past participle repeint ‘repainted’ may agree with its object. What differentiates (1a,c) and (1a) is that in the former, but not in the latter, overt movement of the object takes place. In Kayne’s analysis, past participle agreement is a morphological reflex of movement of the object through the checking domain of an agreement head. Hence, the fact that clitics induce past participle agreement indicates that something, presumably the clitic itself, must have moved through the specifier of the agreement phrase identified by Kayne.

A second observation supporting the movement type of analysis is that clitics have to be in one local domain with the verb of which it expresses one of the arguments, unless this local domain is transparent for noun phrase movement. Thus, in (2), from Dutch, neither the clitic nor the full noun phrase may be non-locally conjoined with the embedded verb, whereas in (3) both the clitic and the full noun phrase may appear in the matrix clause.

(2) a. ...dat Piet ziet dat Jan v’Merie kust
   that Pete sees that John kisses
   "that Pete sees that John kisses"
b. ...dat Piet v’Merie ziet dat Jan kust
   that Pete sees that John kisses
   "that Pete sees that John kisses"

(3) ...dat Piet Jan v’Merie ziet kussen
   that Pete John kisses
   "that Pete sees John kiss her/Mary"

This suggests that both the clitic and the full noun phrase are generated in close connection with the verb (say, as a sister of the verb), and that they both move up when such is required or allowed.

The latter argument is most familiar from Romance, but Haegeman (1992a) shows that it applies equally well to Germanic. Haegeman discovered that clitic placement in Germanic is always contingent on scrambling (taken to be movement to spec of AGR), in the sense that clitic placement is impossible wherever scrambling is impossible. This appears to be a strong argument in favor of the movement analysis of clitics.

The base generation type of analysis is supported by the phenomenon of clitic doubling, where the position of the argument associated with the clitic is taken by a full noun phrase:

(4) a. Lo vimos a Juan
   him we saw John
   "we saw John."
b. Mario o parla
   Mario he speaks
   "Mario is speaking."
c. Ze começ a
   she comes the
   "She’s coming."

In this type of construction, a certain argument of the verb is expressed twice, once as a clitic, and once as a full noun phrase or pronoun. This seems to argue against generating the clitic in an argument position.

Thus, both the movement analysis and the base generation analysis of cliticization phenomena are supported by prima facie evidence. For this reason, Sportiche (1992) concludes that both analyses are basically right, and I will follow him in this respect.

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2 Choisy (1995) takes the past participle agreement phrase identified in Kayne (1997) to be AGR(‘P). However, this is not very likely since in that case the full noun phrase object would have to move to this specifier position at LF, and we would not expect past participle agreement to be impossible in that case. Therefore, the past participle agreement phrase must be different. I will not discuss this issue here. (Originally, agreeing past participles were predicates of a resumptive Small Clause cf. Vendryes 1937). In Old French, the order Auxiliary-Object-Participle was still possible, and the participle agreed with the object in this construction, in contrast to to the order Auxiliary-Participle-Object, which was also possible but showed no agreement (Boersma 1948:80). Snijders-de Vogel 1971:701, Feuillet 1982:204. The resumptive construction has disappeared in Modern French.

3 However, there is not a bidirectional relation between clitic placement and scrambling, as shown in section 2.1.4. In Exceptional Case Marking constructions in Dutch, the clitic moves to a position unavailable to the full noun phrase.

4 It is in shown in Zwart (1995b) that the constituency of clitic placement vs scrambling explains the limited character of clitic placement in mainhanced Scandinavian languages (which lack scrambling).

5 Hauser (1995) argues that "the recent elaboration of phrase structure, whereby the verb picks up its inflectional endings in syntax, provides a strong argument in favor of a movement analysis and against base-generation." (10). The argument runs as follows: if the clitic is base-generated on V or as an AGR head, it would have to appear in between the
In particular, Sportiche argues that clitics are base generated as heads of independent projections, Clitic Phrases, and that at some point in the derivation the specifier position of the Clitic Phrase has to be filled by an empty noun phrase. This noun phrase is generated as an argument of the verb, associated with the clitic. It is lexicalized in clitic doubling constructions, but empty in all other clitic constructions. The agreement phenomena and the locality effects associated with clitic placement are caused by the movement of the (empty) noun phrase from the argument position to the specifier position of the Clitic Phrase.

Sportiche argues for the existence of a number of Clitic Phrases on top of AgrSP and dominated by CP. I will not follow his proposal in this respect. Instead, I will argue that the Clitic Phrases are equal to the familiar agreement phrases AgrSP and AgrOP, and that the clitics are generated as heads of these Agreement Phrases.3

My main argument for assuming that Sportiche’s Clitic Phrases are really Agreement Phrases is based on an analysis of the intricate facts of object cliticization in West Flemish (cf. Haegeman 1991, 1992a; Zwart 1992c). To the extent that the assumption that clitics are generated as heads of agreement phrases yields a rather straightforward analysis of West Flemish object cliticization, we may conclude that the introduction of Clitic Phrases, which would essentially double the work done by the Agreement Phrases, is unmotivated.

2.2.2 Object Clitics in West Flemish

In Standard Dutch, object clitics form a cluster (cf. II.1.5):

\[ \text{\_da Jan 't} \quad \text{\_dat Jan 'r} \quad \text{\_geven heeft} \]

We have assumed in section 2.1.5.a, that the object clitics in Standard Dutch adjoin to AgrS. If this is correct, (5b) indicates that all object clitics in Dutch must be adjoined to AgrS, and (5c) indicates that the object clitics in Dutch may not move on to adjjoin to C.

Recall from sections II.4.3 and 2.1.5 that I have argued that direct objects and indirect objects in Dutch have to move to the specifier position of an AgrOP in overt syntax. If object clitics always adjoin to AgrS in Dutch, we predict that they cannot appear to the right of phrasal objects. This is correct, as the following examples from section 2.1.5 show:

(6) a. \[ \text{\_dat Jan Marie 't} \quad \text{\_geven heeft} \quad \text{\_that John gave to Mary} \]

b. \[ \text{\_dat Jan het boek 'r} \quad \text{\_geven heeft} \quad \text{\_that John the book her given has} \]

In West Flemish (WF), a Dutch dialect spoken in the West of Belgium, the situation is more complicated (Haegeman 1991). First, object clitics may move to C.

(7) a. \[ \text{\_da Jan 't} \quad \text{\_geven heeft} \quad \text{\_that John did} \]

b. \[ \text{\_dat Jan het boek 'r} \quad \text{\_geven heeft} \quad \text{\_that John the book her given has} \]

c. \[ \text{\_dat Jan het boek 't} \quad \text{\_geven heeft} \quad \text{\_that John the book her given has} \]

As can be seen in (7c), the object clitics in West Flemish may move to C as a cluster, or one of the clitics may move to C leaving the other one behind. As in Standard Dutch, adverbs may not separate the subject and the object clitic(s):
Dutch Syntax

(8) a. *da Jan gisteren 't zee gegeven eet
    that John yesterday it her given has
b. *da Jan gisteren ze gegeven eet
    that John yesterday her given has

As for Standard Dutch before, we may conclude that the object clitics in West Flemish are in AgrS when immediately following the subject. The facts in (7) therefore show that there are two object clitic positions in West Flemish: C and AgrS.

Another difference between Standard Dutch and West Flemish is that in West Flemish the direct object clitic may appear to the right of a phrasal indirect object (cf. Dutch (6a)): (8a)

(9) a. da Jan 't Marie gegeven eet
    that John Mary given has
    *that John gave it to Mary
b. *da Jan Marie 't gegeven eet
    that John Mary it given has
    *that John gave it to Mary

However, as in Standard Dutch (cf. (8b)), the indirect object clitic may not appear to the right of the phrasal direct object in West Flemish:

(10) a. da Jan ze dienen boek gegeven eet
    that John her that book given has
    *that John gave her that book
b. *da Jan dienen boek ze gegeven eet
    that John that book her given has

Also as in Standard Dutch, the object clitic may never appear to the immediate right of an adverbial:

(11) a. da Jan Marie 't gisteren gegeven eet
    that John Mary it yesterday given has
    *that John yesterday gave it to Mary
b. *da Jan Marie gisteren 't gegeven eet
    that John Mary yesterday it given has

The paradigm in (9) shows that there is a clitic position to the right of Agr in West Flemish. In (9b), the direct object clitic *'t it cannot be adjoined to AgrS, because the indirect object Marie intervenes between the

direct object clitic and the subject Jan. Therefore, the object clitic must be in a position lower than AgrS in (9b).

Thus, the facts from West Flemish show that there must be at least three clitic positions: C, AgrS, and a head position to the right of AgrS. Haegeman (1981) argues that this third clitic position is the head of an Agr projection designated for the licensing of the indirect object. Haegeman assumes the following structure for the functional domain in West Flemish:

(12)

Haegeman assumes for West Flemish what we have assumed for Standard Dutch, namely that both direct objects and indirect objects move to the specifier position of an Agreement Phrase in overt syntax, and that the Agreement Phrase designated for licensing indirect objects is higher than the Agreement Phrase designated for direct objects (see section 2.1.5.b).

Haegeman also assumes the movement analysis of cliticization: the clitics are generated as arguments of the verb and moved to a head position at some point in the derivation. Haegeman argues that the clitics first move to the specifier position of the relevant Agreement Phrase, and from that position adjoin to the first head up. After that, subsequent head movement is possible to all the heads higher in the tree.

* Recall from section 1.1.2 that XP's may not intervene between a head and its specifier. In other words, whenever a phrase α and a head β are separated from each other by another phrase, α and β are not in a specifier-head configuration.
It follows from these assumptions that the higher AgrO head is the lowest clitic position. Consider cliticization of the direct object. The direct object first moves to the spec of the lower AgrOP. From there the direct object cliticizes to the head of the higher AgrOP. Subsequently, the direct object clitic may move to the head of AgrOP and to C. It follows that there are three clitic positions in West Flemish.

It also follows that the indirect object may precede the direct object clitic, as in (6b). The indirect object moves to the spec of the higher AgrOP in overt syntax. If the direct object clitic, after adjoining to the head of this AgrOP, does not move on, it will appear to the right of the indirect object. It also follows that the direct object may not precede the indirect object clitic, as in (10b). The direct object moves to the spec of the lower AgrOP in overt syntax. The indirect object clitic, after moving to the spec of the higher AgrOP, can only adjoin to AgrS and move on to C. Thus, the indirect object clitic will always appear to the left of the direct object.

These results of Haegeman’s analysis are maintained in a base generation analysis of cliticization. Under such an analysis, the clitics would not first move to the spec of an Agreement Phrase and subsequently adjoin to a higher head. Rather, the clitics would be base generated as functional heads themselves.

Consider again direct object cliticization. We now assume that the direct object clitic is base generated in the lower AgrO head. The indirect object moves to the spec of the higher AgrOP in overt syntax. Thus, the indirect object may precede the direct object clitic, as in (6b). The direct object clitic may also move on, to the head of the higher AgrOP, and to AgrS and to C. This yields the orders in (6b), (3a), and (7c), respectively.

On the other hand, the indirect object clitic is generated in, or adjoined to, the head of the higher AgrOP. The direct object moves to the spec of the lower AgrOP in overt syntax. It follows that the direct object may not precede the indirect object clitic, as in (10b).

Haegeman’s analysis, and its reformulation in terms of a ‘base generation’ analysis, allows us to draw an important conclusion: there is a relation between the position of the functional projections designated for the licensing of phrasal arguments and the possible position of argument clitics corresponding to these phrasal arguments. For example, the explanation for the ungrammaticality of (10b) is based on the assumption that indirect object clitics cannot appear in a position lower than the AgrP designated for the licensing of indirect object phrases.

This conclusion supports Sportiche’s (1992) proposal to analyze clitic placement as a combination of a) base generation of clitics in head positions and b) movement of corresponding, possibly empty, phrases to the spec positions of these heads. However, it does not support Sportiche’s proposal to identify the heads the clitics are generated in as heads of separate clitic phrases.

Suppose clitics are generated as heads of separate clitic phrases. These clitic phrases are all stacked between C and AgrS, as illustrated in (13) (the spec and intermediate projections have been left out):

(13)

This argument can be repeated in a variety of ways. For instance, verb movement can be seen to target the same positions in constructions with clitic arguments as in constructions with phrasal arguments. Consider Dutch. In subject initial main clauses, the finite verb immediately follows the subject.
We have argued in section II.4.3 that in subject initial main clauses, the finite verb is in AgrS and the subject in spec of AgrS. In (14a), the subject is a full pronoun. However, the word order facts are exactly the same when the subject is a clitic, as in (14b). In the latter case, the subject clitic must be generated as the head of the subject Clitic Phrase, and we must conclude that the verb is adjoined to the head of the subject clitic phrase. This makes sense, since there is an object clitic in (14b) as well, which indicates that the verb must be at least as high as the head of the object Clitic Phrase. But, returning to (14a), in (14a) there is an object clitic as well, which indicates that the verb must be as high as the head of the object Clitic Phrase in (14a) as well. Consequently, we must have been wrong in assuming that the verb is in AgrS in (14a), rather, it must have been in the head position of the subject Clitic Phrase (considering the adjacency effect), even though there is no subject clitic around. Again, there turns out to be no empirical distinction between AgrSP and the subject Clitic Phrase. As a result, there is no empirical evidence for the existence of separate Clitic Phrases, in addition to Agreement Phrases.

I will therefore continue to assume that Clitic Phrases do not exist. I adopt Sperino's (1992) proposal, but assume that argument clitics are base generated as heads of agreement phrases. Associated with the clitics are full noun phrases, which may be overt or empty, and which move to the spec positions of the agreement phrases at some point in the derivation. In addition to being generated as heads of agreement phrases, the clitics may undergo head movement. This will be the subject of section 2.3. First, I will make some minor adjustments to the analysis of cliticization in West Flemish presented above.

2.2.3 Clitic Doubling in West Flemish

The structure of the functional domain of West Flemish according to Haegeman (1991), illustrated in (12) in the previous section, differs slightly from the structure of the functional domain adopted in the Minimalist Program (cf. section 1.2.2, Figure 1). In particular, TP (the projection of the tense features) is the lowest functional projection in Haegeman's structure, whereas in the structure I have adopted, TP is situated in between AgrSP and the AgrOPs.

In Chomsky (1992), TP is considered to be closely associated with AgrSP, a reflection of the traditional close association of tense and agreement (cf. Chomsky 1981).

Far from being able to decide where TP should be located, I would like to consider here the question whether Haegeman's results will be lost when her structure is rejected in favor of the structure adopted in section 1.2.2. It will turn out to be the case that Haegeman's analysis of clitic placement in West Flemish can be maintained under the assumptions of the Minimalist Program.

The structure of the functional domain adopted in the Minimalist Program, and in this book, is illustrated in (15) (cf. (12)).

Recall that the following word order pattern has to be explained: in a double object construction in West Flemish, the direct object clitic may precede or follow the phrasal indirect object, but the indirect object clitic must precede the phrasal direct object. The relevant facts are repeated here for convenience.
It is easy to see that the position of TP does not affect the explanation of this word order pattern presented in section 2.2.2, based on Haegeman (1991). The direct object cleft is generated in the lower AgrO, and may stay there or move on to the higher AgrO, T, AgrS, or C. The indirect object moves to the spec of the higher AgrO in overt syntax. Hence, the direct object cleft may proceed or follow the phraseal indirect object. The indirect object cleft is generated in the higher AgrO. The phraseal direct object moves to the spec of the lower AgrO in overt syntax. Hence, the indirect object cleft may only appear to the left of the phraseal direct object. In sum, Haegeman’s analysis of the word order pattern in (9)-(10) stays in force when the minimalist structure of the functional domain in (15) is adopted.

However, the adoption of the minimalist structure has one non-trivial consequence. Because TP now dominates both object agreement phrases, an additional head is available for the object clitics to move to: T. In other words, (15) predicts that there are two clitic positions between the position of the subject (per AgrS) and the position of the indirect object (the spec of the higher AgrO), namely T and AgrS, whereas (12) predicts that there is only one such position, namely AgrS.

At this point, the West Flemish subject clitic doubling phenomenon becomes relevant (Dennis and Haegeman 1984; Haegeman 1990, 1991; De Geeet 1996; Zwart 1996). This phenomenon demonstrates that there is a landing site for clitics between AgrS and the higher AgrO, and hence, that there must be a TP between AgrS and the higher AgrO.

In West Flemish, subject clitics may be doubled by a pronoun. The pronoun obligatorily follows the subject clitic, but may be separated from it by the finite verb and by object clitics. The phenomenon is illustrated in (15)-(19).

(16) shows that the feminine 3SG clitic ze can be doubled by the full pronoun ze ‘she’, but not by a full noun phrase with the same features. (17) shows that the clitic has to precede the doubling pronoun. (17a), (18), and (19) show that the clitic and the doubling pronoun can be separated by the finite verb and by object clitics, respectively. (15) and (19) demonstrate the distribution of object clitics in clitic doubling constructions. These sentences also show that embedded clauses and topicalization constructions are identical in relevant respects, assuming the verb is in C in the latter (Den Besten 1977).

If we compare (17) and (19), we notice that the order of subject clitic and finite verb changes from Clitic-Verb in (17) to Verb-Clitic in (19). This suggests that the finite verb moves to different positions in the two types of construction.

I have assumed (in section II.4.3), that in subject initial main clauses in Dutch, the verb moves to AgrS, whereas in topicalizations, the verb moves to C (Den Besten 1977). Apart from the clitic doubling phenomenon, which is absent in Standard Dutch, subject clitics in Standard Dutch and in West Flemish display the same behavior. Standard Dutch has inversion of the subject clitic and the finite verb in topicalizations, like West Flemish.
We may assume, therefore, that the analysis of verb movement proposed for Dutch carries over to West Flemish, and that the verb is in AgrS in (17) and in C in (19).

Applying the base generation analysis of cliticization, we may further assume that the subject clitic is generated in AgrS in (17), and that the finite verb adjoins to AgrS. In (19), the verb apparently skips AgrS on its way to C. This part of the analysis will be presented more fully in sections 2.3 and 3.3.2.

If the finite verb is in AgrS in (17), the doubling pronoun must be further down. Assuming, with Haegeman (1991) that the doubling pronoun is a phrase and not a clitic, it must be in the spec position of a lower functional category. This lower functional category cannot be one of the object agreement phrases, as the presence of the doubling pronoun in the spec of an object agreement phrase would make noun phrase movement to this spec position impossible. This would leave the features in the head of the relevant agreement phrase unchecked, and would yield a crashing derivation. Therefore there must be a functional projection between AgrSP and the higher AgrOP. This supports the structure of the functional domain in (15), as adopted in the Minimalist Program.

If this is correct, we predict that object clitics may adjoin to the head of TP. This can be tested in double object constructions.

In double object constructions, the doubling pronoun precedes both objects when the objects are full noun phrases. When the objects are clitics, they either precede or follow the doubling pronoun.

Recall that I have assumed that economy of derivation does not contain a shortest steps requirement (section 1.3).
2.2.4 Conclusion

In this section, I have argued, following Sportiche (1992), that the clitics in Dutch are generated in functional head positions. I have also argued, contra Sportiche (1992), that the functional heads the clitics are generated in are the heads of the well-known agreement phrases for licensing subjects, objects and indirect objects. Again following Sportiche, I have assumed that clitics may undergo additional head movement. The properties of the relevant movement phenomenon will be discussed in section 2.3.

If clitics are generated in functional head positions, the word order phenomena of Dutch again lead to the conclusion that there are functional heads to the left of the VP in Dutch. On this assumption, the intricate word order facts of clitic constructions in West Flemish can be accounted for if the structure of the functional domain proposed in Chemisky (1992) is adopted.

2.3 Clitic Movement and Verb Movement

In the previous sections, I have argued that the Dutch clitics are heads, and I have adopted Sportiche's (1992) proposal, according to which clitics are base-generated as heads of functional projections. In this section, I will discuss one further aspect of the syntax of clitics, namely the fact that clitics may undergo head movement. This clitic movement interacts in an interesting way with verb movement, as is also clear from illuminating work by Kayne (1991), Chomsky (1988), and Haverkort (1992).

As has become clear in this work, the interaction of verb movement and clitic placement cannot be described in an attractive way if a strict version of the Head Movement Constraint (p. 19) is maintained. In order to achieve a maximally elegant analysis, the verb must sometimes be allowed to skip the functional head hosting the clitic.

This aspect of the analysis of clitic placement is not problematic from the minimalist point of view, if the minimalist extension is adopted according to which economy of derivation does not involve a shortest steps requirement (section 3.3.1). I will therefore assume that it is in principle possible for the verb to skip heads.

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(1) a. Gisteren er't Valérie Marie gegeven West Flemish yesterday has it Valérie Mary given
    "Yesterday Valérie gave it to Mary."
b. Ze had de Marie gisteren gegeven
    "She gave it to Mary yesterday."
c. Ze had de Marie 't gisteren gegeven
    "She gave it to Mary yesterday."
d. Ze had de Marie 't gisteren gegeven
    "She gave it to Mary yesterday."

As Haegeman (1991) shows, the pattern in (1) can be derived by assuming that clitics may optionally move from head to head. Optional movement, however, is not a part of the minimalist approach.1

Similarly, in the Minimalist Program all movements must be triggered by 'morphological' requirements. Thus, movement is excluded unless the movement contributes to eliminating (abstract) inflectional features. It is not at all clear that clitic movement is related to any kind of feature checking.

A third problem is that is unclear how differences in cliticization between languages should be parametrized in minimalist terms. In the Minimalist Program, parametric differences are expressed in terms of the strength of the inflectional features represented in the functional heads (section 1.2.4). Differences in strength yield different amounts of overt movement. However, if we consider the differences in cliticization between, say, Standard Dutch and West Flemish, a parametrization in terms of strength of inflectional features does not immediately suggest

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1 Optimal clitic movement is also attested in clitic climbing constructions (see Zwart 1992).
itself. Recall that in Dutch, object clitics always form a cluster, whereas in West Flemish, the object clitics can be scattered:

(2) a. ...dat Jan "t gegeven heeft
    dat John het gegeven has
    "that John gave it her."

(3) a. ...dat Valerie "t gegeven eet
    dat Valerie het gegeven eet
    "that Valerie gave it her."

Thus, it is not clear what a minimalist approach to cliticization should look like. On the other hand, it is clear that some ‘minimalist’ approach to the phenomena of cliticization is called for. For example, clitic movement does not appear to be lowering. Haegeman’s (1991) analysis of object clitics in West Flemish, discussed extensively in the previous section, is built on the crucial assumption that indirect object clitics cannot move to a position to the right of phrasal direct objects. Similarly, clitic movement is bounded, as many analyses of clitic climbing have brought to light (cf. Rizzi 1982, Kayne 1989, Ouhalla 1989, Haverkort 1992). These are all familiar properties of clitics, and consequently, a restrictive theory is as desirable for cliticization as it is for other movement processes.

Devising such a theory lies outside the scope of this book. Still, I wish to explore one aspect of clitic movement in some detail, because the phenomena of Dutch cliticization give rise to it. This aspect concerns the direction of clitic adjunction.

Kayne (1991, 1993) argues that clitics invariably adjoin to the left. Thus, when clitics move and adjoin to a functional head, a structure as in (4) results.

However, there are several languages in which cliticization can be argued to involve adjunction to the right. For example, when object clitics in West Flemish move to C, they always appear to adjoin to the right (cf. (3)). This has also been argued for subject clitic movement in embedded clauses and topological constructions in Dutch (Den Besten 1987, Zwart 1991a). Adjunction to the right would yield a structure as in (5):

I agree with Kayne (1991:648) that the correct analysis of cliticization should involve a uniform direction of adjunction. It is true that languages, and even constructions within a language, differ as to the relative order of clitic and verb. But Kayne (1991) demonstrates that the mechanism of verb movement is powerful enough to derive these differences. In view of this, we seem to be missing certain (potential) generalizations by parametrizing the direction of adjunction.

If clitic placement in Germanic must be analyzed as right-adjunction, it must be the case that clitics universally adjoin to the right. Recall that I have assumed that clitics are generated as heads of agreement projections, basically following Sportiche (1992). I also followed Sportiche in assuming that clitics may undergo additional head movement. I will now propose the following:

1. When a clitic α moves to a functional head β, α adjoins to the right of β.
2. When a verb α moves to a clitic β, α adjoins to the right of β.

Still assuming Kayne’s (1993) hypothesis that syntactic adjunction invariably takes place to the left, these generalizations suggest that clitic placement is not a syntactic adjunction operation.

Let us consider the consequences of the proposed clitic adjunction generalizations for Dutch and French.

The distribution of object clitics and verbs in Dutch can be summarized in the following way. In embedded clauses, the object clitics are right adjacent to the subject, and the verb is inside the VP. The object clitics may not adjoin to C. In subject-initial main clauses, the finite verb is right adjacent to the subject, and the object clitics are right adjacent to the finite verb. In topicalizations and wh-constructions, the verb is in C, and the object clitics are right adjacent to the subject. In infinitival clauses,
the verb follows the object clitics, but the object clitics are not adjacent to the
verb. In imperative constructions, the verb is in the first position and the
object clitics are right adjacent to the verb. These observations are
illustrated in (7).

(7) a. ...dat Jan 'erb... gisteren gegeven heeft
that John event yesterday given has
...that John gave it her yesterday.'

b. ...dat Jan gisteren 'erb... gisteren gegeven
that her yesterday event yesterday given
...that John gave it her yesterday.'

c. Jan heeft 'erb... gisteren gegeven
Jan has her yesterday event given
...John has her yesterday given

'John gave it her yesterday.'

d. Daarom/whaaron heeft Jan 'erb... gisteren gegeven
there for/where for has her yesterday event given
...That's why John gave it her yesterday.'

'Why did John give it her yesterday?'

e. Jan 'erb... morgen geven? Dat nooit!
that tomorrow give? That never!

'John is her tomorrow give that never
...John give it her tomorrow? Never!'

f. Geef 'erb... morgen!
Give it her tomorrow!

I have assumed that object clitics are generated as heads of agreement
phrases. I have also argued that the subject moves to the spot of AgrSP
in overt syntax in Dutch, and that in subject initial main clauses in Dutch
the finite verb is in AgrS. Therefore, the adjacency of the object clitics and
the subject in (7a, d, e) and of the object clitics and the verb in (7c)
suggest that after being generated in the AgrOPs, the object clitics move on to
AgrS by head movement.

We have also assumed that when a verb moves to a head containing a
clitic, or when a clitic moves to a head containing a verb, the adjacency
takes place on the right hand side. This leads to the following
conclusions for head movement in Dutch. a) In subject initial main
clauses, the verb skips the AgrO heads where the clitics are generated,
and moves across these heads to AgrS (possibly landing in T first). b) In
topicalizations and wh-constructions, the verb in addition skips AgrS and
moves to C in one swoop.²

These conclusions are forced upon us, because if the verb were to land
in any head occupied by a clitic, a Clitic-Verb order would result.
Therefore the verb has to skip the AgrO heads, and the clitics have to
adjacent to the verb, instead of the other way around. Similarly, the verb
and the clitic cannot merge in AgrS before the verb moves on to C.

1 The analysis of verb movement to C will be motivated more extensively in section 3.3.2.

Otherwise, we would expect the object clitic to appear right adjacent to
the verb in C in topicalization constructions, contrary to fact:

(8) a. Daarom/whaaron heeft 'erb... Jan gegeven
there for/where for has her yesterday given
'The reason why John gave it her yesterday.'

Turning to subject clitics in Dutch now, the following generalization
can be made: Subject clitics in Dutch are proclitic in subject initial main
clauses, and exclitic in embedded clauses, topicalizations, and wh-
constructions. This is illustrated in (9-111) (cf. Den Besten 1977):³

(9) a. Ik ('echter)... heb 'erb... gisteren gegeven
I/throw however her yesterday given
'I (however) gave it her yesterday.'

b. Ik ('echter)... heb 'erb... gisteren gegeven
I/throw however her yesterday given
'I (however) gave it her yesterday.'

(10) a. ...dat ('echter)... ik 'erb... gegeven heb
that yesterday I/throw her given have
...that I gave it her yesterday.'

b. ...dat ('echter)... ik 'erb... gevonden heb
that yesterday I/throw her found have
...that I found it her yesterday.'

(11) a. Daarom heb ('echter)... ik 'erb... geven
there for have yesterday I/throw her given
'That's why I gave it her yesterday.'

b. Daarom heb ('echter)... ik 'erb... gegeven
there for have yesterday I/throw her given
'That's why I gave it her yesterday.'

Assuming that subject clitics are generated in the head position of AgrSP,
the Clitic-Verb order in (9a) is as expected under our analysis. The finite
verb moves to AgrS, and adjoins to the right of the subject clitic. The
object clitics subsequently adjoin to the right of the Clitic-Verb complex.

³ The properties of topicalizations and wh-constructions are illustrated with examples of
topicalization only. The adjacency of the subject clitic and the finite verb in subject initial
main clauses cannot be demonstrated by inserting an adverbial adverb like gisteren
'yesterday', since full NP subjects and finite verbs are also necessarily adjacent in subject
initial clauses in Dutch. The element echter 'however', which is part of a group of modal
pragmatic exponents (especially interclausal transitions) (much like the Ancient Greek
particles aux, aor, for, de then, etc studied by Westergaard 1992), does bring out the difference.
The particles of this group, which also includes nu 'now', immers 'yet', dan 'then' as well as
certain others, may separate the first occurrence and the finite verb in Dutch, and may even
be seen to split the first occurrence, in constructions like Het eerste boek dat hij
zou hebben is bijzonder 'the first chapter however of Barriers is brilliant'.

²
In (10)-(11), the subject clitic apparently moves to C. Again, as expected, the clitic adjoins to the right of whatever element is in C. This analysis, like the analysis of object cliticization above, leads to the conclusion that verb movement to C in Dutch skips AgrS. Otherwise, the finite verb and the subject clitic would merge in AgrS, and the order Clitic-Verb would be expected in topologicalizations and wh-constructions, contrary to fact:

(12) "Dat was ik hem vandaag."

"That’s why I gave it to her."

The ungrammaticality of (12) also shows that subject clitics in Dutch do not adjoin to the left of the verb in C. Likewise, the subject clitics do not adjoin to the left of the complementizer in embedded clauses:

(13) "Ik had hem vandaag."

"I gave it to her."

Accepting Kayne’s (1991) point that the direction of adjacency in cliticization should be universal, (12) and (13) indicate that this direction is to the right rather than to the left.

A comparison of Dutch and French further strengthens this point. In constructions involving both object clitics and subject clitics, French and Dutch display completely opposite patterns:

(14) a. tu vas, je vas

"You saw it."

b. je habas geniessen

"You have it seen."

c. je vosp, je voss

"You are looking."

d. je habas gevoelen?

"Did you see it ever?"

(15) French

(16) Dutch

(14) illustrates the pattern in neutral order main clauses in French and Dutch. In (15) the pattern in inversion constructions in French and Dutch. These patterns are SOV, SVO, OVS, and VSO, respectively.

On the assumption that cliticization invariably involves right adjacency, these patterns can be derived fairly easily, as demonstrated above. The derivations are summarized in (16)-(19) below:
In these derivations, it is assumed that both verbs and clitics always adjoin to the left of an element in the higher head position. In (20), it must be assumed that the verb moves to T, skipping AgrO, and that the object clitic subsequently adjoins to the verb in T. Further movement to AgrS will be impossible, however, as this would yield the order Var-ass, which is not the correct order in neutral declarative constructions. In (22), the verb adjoins to the left of the object clitic in AgrO, and the complex possibly moves on to T. However, the verb will never end up in AgrS, just like in derivation (20), as this would yield the order Hebr'je, which is ungrammatical in any type of construction in Dutch. As a result, we could no longer maintain that the finite verb is in AgrS in subject initial main clauses in Dutch, which leaves the general adjacency of the subject and the finite verb unexplained. In (22), the verb will skip the AgrO position as in (20), after which the object clitic adjoins to the left of the verb in T. The Clitic-Verb complex can then be taken to adjoin to the left of the subject clitic in AgrS. This derivation is unproblematic. Derivation (23), however, yields some serious problems again. Here the verb moves to AgrS in one sweep, adjoins to the left of the subject clitic in AgrS. After that,

the complex may move on to C. However, the object clitic will have to remain in a fairly low position, unless we assume, contra Kayne (1991), that adjoinment of the clitic to a trace in AgrS is a possibility. If not, we are in trouble, because the object clitic arguably occupies AgrS (as can be derived from the adjacency of the object clitic and a phrasal subject, if there is one present), or even constitutes a cluster with the verb and the subject clitic in C. This latter possibility cannot be derived if clitic adjoinment is invariably to the left.

In sum, the derivations of the patterns in (24) and (25) are problematic in several respects if we assume that clitics invariably adjoin to the left. These problems are absent if we assume that clitics invariably adjoin to the right.

An interesting result of this approach is that cliticization basically works the same in French and in Dutch, in spite of the commonly held view that the clitic systems in Romance and Germanic are basically different. In the description of the phenomena proposed here, the differences in the syntax of cliticization between French and Dutch result from different applications of verb movement in the two languages. Obviously, it needs to be explained why the verb movements are different in the two languages, and by what principle the verb is allowed to skip functional heads.

It follows from the requirement that V-features be checked that such movement should not leave any features unchecked. Hence, if a verb is seen to skip a head, it must be the case that the features of the skipped head are checked in a higher functional head. This could be the result of independent functional head movement. In section 3, I will argue that independent functional head movement of AgrS to C has the result that the V-features of AgrS are checked in C. This suggests that functional head movement takes place whenever verb movement is seen to skip functional heads.

Space does not permit me to discuss this issue more fully here. It may suffice to state that a description like the one given above allows us to derive certain predictions for the syntax of verb movement and functional head movement from the attested orders of clitics and verbs.

The analysis of the clitic-verb orders in Dutch and French support the adjunction generalizations in (6). This is a somewhat puzzling result, considering that we have adopted Kayne's generalization that adjunction always takes place on the left hand side. It needs to be investigated to what extent clitic placement is subject to the ELCA deriving Kayne's generalization. This is another issue that has to be left for further research.
2.4 Conclusion

In this section I have argued for the following points:

1. Dutch weak pronouns are special clitics in the sense of Zwicky (1977).
2. Dutch clitics are generated in the head of agreement phrases.
3. Clitics may undergo additional head movement, involving conjunct in a functional head.
4. Clitic placement in Dutch involves either right-adjunction of the clitic to a functional head, or right adjunction of a verb to a clitic.

It follows from the first two of these points that the agreement phrases in Dutch are head initial. One of the consequences of the third point is that clitics may adjoin to T. I argued that this takes place in West Flemish. It follows that TP in Dutch is head initial as well. The fourth point is more contentious. However, this point does not affect the general conclusion to be drawn from this section, which is that the functional projections in Dutch are head initial.

3 Complementizer Agreement

In this section, the phenomenon of complementizer agreement (cf. section II.1.2.2) will be presented and discussed. The analysis of this phenomenon provides a second piece of evidence in support of the hypothesis that the functional projections in Dutch are head initial. This argument is based on the observation that certain Dutch dialects have one type of agreement for the complementizer and the verb in C, and another type of agreement for the verb that is not in C (I will refer to these dialects as double agreement dialects). In these dialects, the verb in subject initial main clauses has the second type of agreement. This leads to the conclusion that in the relevant dialects AgrS is situated to the left of the VP.

This section is organized in the following way. After a presentation of the relevant facts in section 3.1, previous analyses of complementizer agreement will be discussed in section 3.2. I will demonstrate, contra Hockstra and Markert (1989), that complementizer agreement is a reflex of abstract Agr-to-C movement, rather than movement of an overt agreement morphemes from Agr to C. Finally, in section 3.3 the phenomena will be analyzed in minimalist terms.

3.1 Complementizer Agreement Phenomena in Germanic Dialects

Numerous dialects of Dutch, German, and Frisian display a phenomenon of complementizer agreement, where the complementizer is inflected for person and/or number and agrees with the subject.1 At the same time, the finite verb is also inflected. The inflectional morphemes used are generally identical, but not always (cf. Van Haeringen 1988 and below).

The paradigms are mostly defective. For instance, East Netherlands has an agreeing complementizer only in the first person plural (1PL), South Holland only in 1PL and 3PL, Frisian only in 2SG, Munich

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Bavarian only in 2SG and 2PL. West Flemish has a complete paradigm (Goeman 1980, Haegeman 1990).

In large areas of the Netherlands (West Friesland, North Holland, South Holland, also in the Center and East of the country (Van Haeringen 1939, 1958)), the agreement morpheme for PL is a (sequence). In German dialects and in Dutch dialects spoken in the Northeast and the Southeast, as well as in Frisian, there is an agreement morpheme for 2SG (and sometimes 2PL) -r- or -t-; Luxembourgish combines the two types of agreement (Bruch 1973). The Brabantian dialect of Dutch has a morpheme -e- for 2SG/PL (Stoop 1887). The Flemish dialects of Dutch have a full paradigm, with a morpheme -e- for 1SG, 1PL, and 3PL, presumably a zero morpheme (0) for 2SG, and a -e- morpheme for 3SG/2PL (cf. Goeman 1980, Haegeman 1990).

The following are examples from the Dutch dialects South Hollandic (Van Haeringen 1939), West Flemish (Haegeman 1980), and Groningen (Van Ginneken 1889), from Frisian (Hooistra and Marden 1989), and from the German dialects Munich Bavarian (Kafner 1961) and Luxembourgish (Bruch 1973).

(1) a. dat ik kom
    b. dat we komen

South Hollandic

(2) a. de aakt ik kome
    b. de aakt ji kome
    c. de aakt u kome
    d. de aakt ze kome

West Flemish

(3) a. de ik kome
    b. de de kome

Groningen

(4) a. dat de jaan kome
    b. dat de jaan kome

Frisian

(5) a. dat de jaan kome
    b. dat de jaan kome
    c. dat de jaan kome

Munich Bavarian

(6) a. dat de jaan kome
    b. dat de jaan kome
    c. dat de jaan kome

Luxembourgish

In these dialects, the agreement morpheme on the complementizer is identical to the agreement morpheme on the verb. However, Van Haeringen (1958) reports on East Netherlands dialects in which the complementizer agreement (a) and the verbal agreement (b) differ.

(7) dat de wij spreken
    dat de wij starten

East Netherlands

The same appears to be the case in Brabantian.

(8) dat de gulle kome

Brabantian

Depending on the analysis of the phonological regularities connected with objectification, the West Flemish 2SG may provide a third example where

1 The status of the -r- ending on the complementizer in Germanic dialects has been hotly debated for about a century now. The -r- element, which also shows up in the verbal agreement, appears to be inflectional, but it may be the case that the -r- ending combines a complementizer agreement element and a subject clitic. See section 3.2. For recent discussion, cf. Van der Meer (1991) and De Haan (1992).

2 The Brabantian facts are from the dialect of my native town, Oos. They are representative of the situation in other Brabantian dialects, as far as I have been able to check (cf. Stoop 1967). The de morpheme is not a clitic, because it cannot appear in subject initial main clauses, whether independently or in conjunction with a clitic doubling element, as in West Flemish. However, the presence of de does make referential proclitic possible (de langt) that he-2SG you've being (that's).
the complementizer agreement and the verbal agreement differ (cf. 2b vs 2c).

(2) b. *de-2j gie konst West Flemish
    that 2SG you you come-2SG
    "that you come."

c. *de-2j if konst West Flemish
    that 2SG he he come-2SG
    "that he come."

In dialects where the complementizer agreement and the verbal agreement differ, the verb has verbal agreement in subject-initial main clauses, and complementizer agreement in subject-verb inversion constructions.

(9) a. Wij spelen West Dutch
    we play SP-loc

b. Waar spelen wij? East Dutch
    where play SP-loc
    "Where do we play?"

(10) a. Gulle kon-2j de
    you come SP-loc

b. Wanneer kon-2j gulle?
    when come SP-loc you
    "When do you come?"

(11) a. Gie kon-2j you
    you come SP-loc

b. Kon-Gi-2j gie? West Flemish
    come SP-loc you
    "Are you coming?"

This is reminiscent of a peculiar agreement phenomenon in Standard Dutch, where the choice of the 2SG morpheme depends on whether the verb precedes or follows the subject (section II.1.1.1; cf. Goeman 1993):

(12) a. Jij spelen-2j Standard Dutch
    you walk 2SG

b. Daar spelen-Gi-2j there walk 2SG you

I will argue that this parallelism is not coincidental.

However, let us first consider previous treatments of the Germanic complementizer agreement phenomenon.

3.2 Previous Analyses

3.2.1 Base Generation or Movement

The complementizer agreement phenomenon in Germanic has often been taken to indicate that in the relevant languages (Dutch, German, Frisian) C is an inflectional category. This leads to an analysis in which the agreement features are generated in C (see section II.2.3 and references cited there; cf. also Goeman 1980).

There is an obvious connection with the standard analysis of verb movement in main clauses in these languages. According to this analysis, the verb moves to C in all tensed main clauses (Den Bosten 1977). If C is analyzed as an inflectional category, it becomes understandable that the verb has to move to C whenever C is not occupied by the complementizer.

This analysis of verb movement in Germanic as attraction by a C hosting inflectional features was first proposed by Den Bosten in a 1983 Appendix to his 1977 paper. This appendix summarizes the main points of Den Bosten (1978). Den Bosten proposes that verb movement in Dutch (and German) is actually tense movement: movement of a tensed verb to a tensed C.

However, Den Bosten (1988:93) is very careful not to confuse the tense feature in C with the agreement features in C. He notes that “these person endings [on agreeing complementizers] must be generated in a position separate from the complementizer position, (...) because deletion of a lexical complementizer does not force a person marking to delete as well.”

The phenomenon Den Bosten has in mind is best illustrated with the following example from Luxembourgish (Bruch 1973:160):

(13) ..mat-wien (datat) s de spadeiere gung baas with whom that 2SG you walk gone am
    "..with whom you went for a walk."

* Liliane Haegeman (p.c.) suggests that in (2b) the complementizer agreement morpheme is not zero but a phonologically reduced -3 morpheme. However, this -3 does not reduce in 2SL, where the context appears to be the same (2c). Possibly, one could argue that the -3 of the 2SLX subject clitic is underlyingly different from the -3 of the 2SG subject clitic, but I have not seen any analyses in support of this possibility.

3 The theoretical possibility that complementizer agreement is phonetically or phonologically determined has been discounted as early as Van Haaften (1985), and will not be considered here (see also Hicken 1998).

4 This is essentially the same mechanism as movement for feature checking purposes in the Minimalist Program.
In (12) the complementizer is optional, but the agreement ending remains.

Den Besten analyzes the complementizer as a tense element (T) and the agreement ending as a person (P) element, and notes that the T-P ordering in the inflected complementizers is mirrored in the verbal morphology, where the person morpheme follows the tense morpheme:

(14) ze loach-sen Standard Dutch
    they have \textsc{past}\textsc{split}

Accepting Den Besten's point that the complementizer agreement morphology is not generated on the complementizer, we must conclude that there is a separate inflectional head associated with person agreement. This leads to a different type of analysis, in which complementizer agreement reflects movement from this separate functional head to C. Such an analysis is proposed by Hooekstra and Maríz (1989).

3.2.2 1-to-C Movement

Hooekstra and Maríz (1989) assume that C and I interact in the following way. C is the canonical locus for a "T-marker", a scope bearing element marking I for a specific tense feature. The relation between the T-marker in C and the tense feature in I can have two types of instantiation: either the T-marker binds tense, or tense moves to the T-marker (following Baker 1970). Languages may be parameterized with respect to tense movement. In view of this, Hooekstra and Maríz introduce the 1-to-C Parameter.

Hooekstra and Maríz propose that this parameter divides the Germanic languages and dialects into two groups. The languages positively specified for the 1-to-C parameter show complementizer agreement, the others do not.

In support of their analysis, Hooekstra and Maríz present and discuss three phenomena which they relate to a positive specification for the 1-to-C parameter. These phenomena are: referential pro-drop, verb ellipsis in irreasal complement clauses, and complementizer cliticization. I will illustrate these phenomena below.

Hooekstra and Maríz' analysis raises the following question. If there is a parameter governing overt complementizer agreement, there must be a cluster of properties that to a certain extent correlate with the presence of complementizer agreement. More exactly, the phenomena Hooekstra and Maríz discuss should be present in those Germanic dialects that have overt complementizer agreement, and absent in all others. If such a correlation cannot be attested, it is unlikely that the 1-to-C parameter determines the presence of overt complementizer agreement.

Let us therefore turn to the three phenomena Hooekstra and Maríz relate to the 1-to-C parameter, and see whether these phenomena constitute a cluster setting the complementizer agreement dialects apart.

a. Referential Pro-drop

Some dialects showing overt complementizer agreement allow referential pro-drop. Below are examples from Frisian and West Flemish, both taken from Hooekstra and Maríz (1989).

(15) a. Komst (do) jān?  
    Frisian
    come-2SG you tonight
    "Do you come tonight?"
    b. "...dat (do) jān komst  
       than-2SG you tonight come-2SG  
       "...that you come tonight."

(16) a. Goan-Caze (zie) goan werken?  
    West Flemish (cf. (2))
    go 3SG she-CL she go work
    "Is she going to work?"
    b. "...dat (zie) komst  
       than 3SG she-CL she come-2SG  
       "...that she comes tonight."

It can be shown in the case of Frisian that in the absence of overt complementizer agreement referential pro-drop is not possible.

(17) a. Komst "(er) jān?  
    Frisian
    come-2SG he tonight
    "Is he coming tonight?"
    b. "...dat (er) jān komst  
       than he tonight come-2SG  
       "...that he comes tonight."

In the case of West Flemish this cannot be demonstrated, because West Flemish has a complete complementizer agreement paradigm. However, it is clear that referential pro-drop in West Flemish is related to subject cliticsization rather than to complementizer agreement. If the subject clitic is left out and complementizer agreement retained, referential pro-drop is impossible. Consider the following SFL example: 
When we consider other Germanic dialects, there appears to be no correlation whatsoever between complementizer agreement and referential pro-drop. Hoekstra and Marres (1989) mention the case of Zurich German as problematic for their generalization (cf. Cooper and Engdahl 1989). This dialect shows referential pro-drop, but no complementizer agreement:

(20) a. daa (d6t) in Eni wohnen
    Zurich German
    "that you live in Zurich.

b. d6t (d6t) nach Eni kommen
    whether you go to Zurich come-
    "whether you come to Zurich.

Conversely, Hollandic dialects that show complementizer agreement never allow referential pro-drop.

(21) a. komme "(you) komme"  South Hollandic
    come-PL they
    "are they coming?"

b. komme "(you) komme"  South Hollandic
    whether-PL they come-
    "whether they come."

In short, there seems to be no significant correlation between overt complementizer agreement and referential pro-drop in the Germanic dialects. Certain dialects lacking overt complementizer agreement do have referential pro-drop, others that do have overt complementizer agreement lack referential pro-drop. Pending the analysis of the Friesian type referential pro-drop, it may even be the case that a single example of referential pro-drop in Germanic is related to complementizer agreement.

b. V-ellipsis
In Friesian infinitival complement clauses with an ‘unrealized future’ reading, the infinitive, along with the infinitival marker/proposition 'te', can be left out:

(22) Jan is da doen om not Lijouvert te (to go) Friesian
    John is of purpose for to Leeuwarden to to go:
    "John intends to go to Leeuwarden."

This is impossible in Standard Dutch.

(continued)

Also, as pointed out to me by Joost Bayer (p.c), even if there is historical evidence for the presence of a cleft element in the Friesian type inflected complementizer, this element does not function as a cleft anymore. Therefore, it may be the case that in certain languages and dialects, among which Friesian, pro-drop is licensed by agreement, and thus in others (assess (continued...))

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Jan is van plan om naar Leeuwarden te *be gaan* St Dutch
John is of plan for to Leeuwarden to go "John intends to go to Leeuwarden."

Hoekstra and Marček offer the following explanation for the contrast in (22)-(23). In these constructions, an irrealis feature is present in the embedded VP. This feature moves to C in Frisian, since Frisian is positively specified for the I-to-C parameter. The I-to-C movement of the irrealis feature turns C into a proper governor, licensing the ellipsis of the infinitival in (22). In Dutch, I-to-C does not take place, hence C is not turned into a proper governor, and ellipsis would result in a violation of the Empty Category Principle.9

Whatever the merit of this analysis, the point to be made here is that V-ellipsis is a phenomenon Hoekstra and Marček (1889) fail to demonstrate in any other Germanic dialect, with or without complementizer agreement.

Many dialects of German do not allow inspection of the presence of V-ellipsis, because of a distinct preference for finite subordinate clauses (Alemanic, Bavarian, Luxembourgish).10 But the Dutch dialects that show complementizer agreement pattern with Standard Dutch rather than with Frisian with respect to the possibility of V-ellipsis, as far as I have been able to ascertain.

(24) Dat ze van plan beman om naar Amsterdam te *be gaan* that-PL they of plan are for to Amsterdam to go "they intend to go to Amsterdam."

V-ellipsis, then, appears to be a curious property of Frisian, not of complementizer agreement dialects:

c. Complementizer Cliticization
Hoekstra and Marček (1889) note that Frisian has a phenomenon of complementizer cliticization which Dutch lacks. The phenomenon shows up in embedded questions and relative clauses:

10 Nevertheless, purpose clauses in Luxembourg can be expressed in a *for so* *for to* construction (Brom 1972:103). I have found no examples of the Frisian type V-ellipsis, however.

(25) a. Hij vroeg wie (of) *dat* vannavond konst Frisian
he asks who if that-CL tonight comes "he asking who is coming tonight."

b. Hij zegt wie (of) vannavond konst St Dutch
he says who if that-CL tonight comes "he asking who is coming tonight."

The complementizer clitic is absent in Standard Dutch:

(26) a. Hij vraagt wie (of) vannavond konst St Dutch
he asks who if that-CL tonight comes "he asking who is coming tonight."

b. Hij vraagt wie (of) vannavond konst St Dutch
he asks who if that-CL tonight comes "he asking who is coming tonight."

The origin of the complementizer clitic is unclear. De Rooij (1985a:110f) notes that it is the functional equivalent of *dat* in (Southern) dialects of Dutch, in constructions like (27):

(27) Hij vraagt wie (of) (dat) vannavond konst
he asks who if that that-CL tonight comes

But as far as I know, this *dat* is optional, unlike the complementizer clitic. A further difference is that *dat* is not allowed in relative clauses, unlike the complementizer clitic.11

(28) de vrouw die (dat) vannavond konst
the woman who that that-CL tonight comes

In both Frisian and Dutch, *dat* occurs as the complementizer in non-wh complement clauses. This *dat* cannot be deleted.12

11 The *dat dat* combination in relative clauses occurs in the dialect of Ghent, and may be shortened to *die* (Oversteyp 1997:800). Also, constructions like *de vrouw die vannavond konst* appear to be possible in certain dialects. Such constructions are found in Limburgian dialects (Commelin and Coomans 1986:115), Ravense (Bayer 1984a:215), Friesland 1993:214). Possibly the complementizer clitic can be analyzed as a reduced form of *dat* and *wh* and, perhaps also of *adverb, as De Rooij (1985a:110f) suggests.
12 I abstract away from the possibility that complementizerless embedded clauses are saved by verb movement, as is possible in German, and marginally so in Dutch and Frisian.
Let us now turn to Hoekstra and Marais’s description of complementizer cliticization in terms of I-to-C movement. Hoekstra and Marais offer an explanation for the fact that the complementizer clitic in (25) cannot be deleted (unlike the full complementizer in Dutch). Their suggestion is that in Frisian the complementizer has to remain overt because I must be hosted by a lexical item after moving to C. 

This analysis predicts that all dialects that have complementizer agreement must have something in C in relative clauses, either a clitic or a full complementizer.

This can easily be disproved. For instance, in West Flemish relative clauses, the complementizer can be left out (O indicates a phonetically empty element):

(32) deu vent die & hier gewoest set West Flemish
the man who has been here

"the man who was here"

West Flemish being a complementizer agreement language, we must assume, in Hoekstra and Marais’s analysis, that I-to-C takes place, and therefore that C cannot be empty. Hoekstra and Marais (1989-90) note that in this case the empty complementizer can be identified by spec-head agreement in CP, which is probably correct. But this leaves unclear why spec-head agreement does not also permit deletion of the complementizer clitic in Frisian in (25b).

In fact, there are many dialects in which complementizer agreement appears even if the complementizer is deleted. In addition to (13), consider the following facts from South Hollandois and Luxembourgish:

(33) a. jonge die-e werk wilde South Hollandois
guy who PL work want-PL
"the guy who wants a job"

b. van die nake, waar-e ze de gordijnen mee spanne of these frames where PL they the curtains with draw-PL
"the type of frames which they draw the curtains with"

(34) a. Gëi woer a de weis Luxembourgish
go where 2SG you want-2SG
"Go where you want"

b. Kenu de dei Lët, dei-en dat behaapst? know-2SG you these people who PL has claim-PL
"Do you know the people who claim that?"

This explanation is not incompatible with the structure of the complementizer system in (31), assuming that I-to-C movement targets the highest head in the complementizer system.

In (29a), dat cannot be replaced by the complementizer clitic:

(29) a. Wy tinkt · (dat) se · jan · koomt Frisian
he thinks that she tonight comes
b. Hij denkt · (dat) se vanavond · koomt Standard Dutch
he thinks that she tonight comes

In (29a), dat cannot be replaced by the complementizer clitic:

(29) a. Wy tinkt · (dat) se · jan · koomt Frisian
he thinks that CL she tonight comes

These facts suggest the following analysis.

Let us assume that the Frisian complementizer clitic is a reduced form of dat. Let us also assume that the complementizer system is more complex than standardly assumed, following much recent work (Bullocher 1991, Hoekstra 1992a, Müller and Sternefeld 1998, Hoekstra and Zwart 1999a). Constructions like (27) suggest that the complementizer system consists of (at least) a Wh-phrase, headed by of, and a second phrase, headed by dat. This is illustrated in (31):

(31) WhP

\[
\text{XP} \rightarrow \text{Wh}
\]

\[
\text{Wh} \rightarrow \text{CP}
\]

\[
\text{of} \rightarrow \text{C}
\]

\[
\text{C} \rightarrow \text{AanSP}
\]

\[
\text{dat}
\]

In Chomsky (1993) structures are built up in a bottom-up fashion, by successive application of generalized transformations, instead of in a top-down fashion, through a system of phrase structure rules and transformations. It follows from economy of derivation that structures are kept as simple as possible. In other words, the levels CP and WhP are added only if their presence is needed for convergence. Since the embedded clauses in (29) have no Wh-character, the Wh-level does not have to be added in the derivation of these sentences. It follows that in (29), C is the highest node in the complementizer system. In (33), on the other hand, both the WhP and the CP must be present.

We can now make the following generalization: complementizer cliticization in Frisian is possible when Wh is present. The process can be described as movement from C to Wh. This movement is impossible when Wh is absent, which explains (30).
In these constructions, the complementizer agreement appears to be attached to the wh-phrase. In view of the fact that complementizer agreement regularly shows up on heads rather than on phrases, it must be assumed that in (33) and (34) there is an empty complementizer hosting the complementizer agreement. If so, one cannot claim that I-to-C movement requires C to be lexically filled, as Hooekstra and Maricx do.

In sum, the complementizer cliticization facts do not allow us to make any generalizations over complementizer agreement dialects.

d. Conclusion

It seems fair to conclude that the four properties listed by Hooekstra and Maricx (1989) in connection with their I-to-C parameter do not constitute a cluster separating languages with overt complementizer agreement from languages without overt complementizer agreement.

This suggests that the I-to-C parameter as proposed by Hooekstra and Maricx has a very limited scope: it governs the presence or absence of overt complementizer agreement morphology only. This is an unsatisfactory state of affairs. A particular parameter setting generally has a number of tangible syntactic consequences, rather than a single morphological effect.

In section 4, I will argue that the I-to-C parameter is real, and that the syntactic consequences of the I-to-C movement (better: Agr-to-C movement) are pervasive. In particular, Agr-to-C movement will play a key role in the explanation of the verb movement patterns of Dutch, German, Friisian, and the Mainland Scandinavian languages. From this perspective, overt complementizer agreement is just a morphological reflex of abstract functional head movement, which happens to be suppressed in the standard varieties of Dutch and German (see Zwart 1993a).

First, however, let us consider the phenomenon of complementizer agreement from a minimalist point of view.

3.3 A Minimalist Analysis of Complementizer Agreement

The starting point of the analysis of complementizer agreement that I will propose in this section is the idea that complementizer agreement is a reflex of functional head movement (AgrS-to-C movement, cf. Hooekstra and Maricx 1989). I will mainly be concerned with two questions. First,

how can the functional head movement that yields complementizer agreement be described in minimalist terms? This means that we must identify a trigger for movement in terms of morphological feature checking requirements, and that the movement must meet conditions of economy of derivation and representation. Second, how does the functional head movement that gives rise to complementizer agreement interact with verb movement? I will propose that AgrS-to-C movement has the effect that verb movement to AgrS becomes unnecessary.

This section has four subsections. In section 3.3.1, the feature checking requirements giving rise to AgrS-to-C movement is discussed. I will conclude that AgrS-to-C movement serves to help eliminate the N-feature of AgrS. In section 3.3.2, the properties of double agreement dialects are discussed. This will reinforce our earlier conclusion that the finite verb is not in C in subject-initial main clauses. In section 3.3.3, the morphological aspects of complementizer agreement and the double agreement phenomenon are investigated. Finally, in section 3.3.4 the relation between complementizer agreement and verb movement is discussed.

3.3.1 AgrS-to-C Movement

Within the theoretical framework adopted in this book, complementizer agreement phenomena are problematic in two respects.

First, assuming that all languages have a functional domain with the structure in (35), we expect AgrS, not C, to be the locus of agreement (cf. Figure 1 in section 1.2.2)

(35) CP | AgrS | TP | AgrS ( VP )

Complementizer agreement is subject agreement. In the Minimalist Program, subject agreement features are located in the head position of a functional projection AgrS. These features must be checked off against the person/number features of the subject. Checking takes place in spec-head configurations exclusively. For this reason, the subject has to move to the specifier position of AgrS at some point in the derivation. From this point of view, it is surprising that subject agreement features show up morphologically in C.

A second problematic aspect of complementizer agreement is that it never seems to be specifier-head agreement. Thus, assuming that the complementizer is in C, we expect the subject to appear in the spec of CP when the complementizer shows subject agreement, contrary to fact:
Dutch Syntax

(36) a. *ik da-a-k komeen
    1SG dat-PL come-PL
    "that 1 come."
    West Flemish

b. *... da-4e komeen
    they dat-PL come-PL
    "that they come."
    South Hollandic

c. *... doe of-a komeen
    you whether 2SG come-2SG
    "whether you come."
    Groningen

Similarly, when the verb shows the complementizer agreement, the subject always follows it. This can be seen in dialects where the verbal agreement (v) differs from the complementizer agreement (c) (from now on: double agreement dialects):

(37) a. Wij *specule / speulen
    we play 3Pra / play 3PL
    "We are playing."
    East Netherlands

b. Specule / Specule wij?
    play 1PLa / play 1PLv we
    "Are we playing?"

In (37b), the verb arguably occupies the C position. Accordingly, it shows complementizer agreement morphology. As can be seen, the subject never appears in the specifier position of the head hosting the verb when the verb shows complementizer agreement morphology. Thus, although complementizer agreement is subject agreement, it does not seem to be spec-head agreement.

The first of these problems could be solved by assuming that the complementizer dot is in AgrS, instead of in C. This, however, would leave the second problem intact. Such a solution would also lead to the conclusion that the verb is in AgrS in subject-verb inversion constructions only, assuming that a verb with complementizer agreement morphology is in the same position as the complementizer. This is not an interesting conclusion, for the following reason.

In double agreement dialects, the complementizer agreement shows up in topologicalizations and wh-constructions. As in Standard Dutch, the topic/wh-element and the fronted verb are obligatorily adjacent:

(38) a. Daarom *(allehle) spee-4e wij
    therefore always play-PL we
    "That's why we play (all the time)."
    East Netherlands

b. Waarom *(allehle) spee-4e wij?
    why always play we
    "Why are we always playing?"

Verb Movement

If we take adjacency to be a diagnostic of a spec-head configuration, (38) indicates that the topic and wh-element are in the spec of the head occupied by the verb carrying complementizer agreement morphology. If this head is AgrS, the topic/wh-element would be occupying the spec of AgrS. But the spec of AgrS is the designated position for licensing the subject. Even if the subject does not have to appear in the spec position of AgrS in overt syntax, it will have to move there at some point in the derivation. This is impossible if that position is occupied by other elements. This makes it unattractive to assume that the verb is in AgrS in (38).

Consequently, it is unattractive to assume that the agreeing complementizers are in AgrS. This leaves us with the two problematic aspects of complementizer agreement mentioned before: C is not a designated agreement position, and complementizer agreement is never spec-head agreement.

In agreement with Zwart (1991b), I will adopt the following solution to these problems:

Complementizer agreement is a morphological reflex of AgrS-to-C movement.

AgrS-to-C movement is a case of functional head movement: the movement of a functional head independently of overt verb movement. Consider how AgrS-to-C movement solves the two conceptual problems associated with complementizer agreement.

First, since complementizer agreement results from AgrS-to-C movement, the features involved in complementizer agreement can properly be represented in AgrS, the designated head for subject agreement.

1 It would be argued that the topic/wh-element is remoted from the spec-AgrS position before the subject moves there, without leaving a trace. This requires a trigger for the additional movement of the topic/wh-element. If such a trigger exists, one wonders what the trigger for the movement of the topic/wh-element is spec-AgrS was.

2 Many analyses in the literature incorporate a more flexible approach to subject licensing. It is assumed, in these analyses, that the subject may be licensed in a lower specifier position or in the VP, under certain circumstances. This would leave the spec position of AgrS available for frontal non-agreeing elements like topics and wh-elements. As a matter of hypothetical principles, I will not consider this possibility before having tested a stricter version of the minimalist approach to syntax. This stricter version implies that the specifier position of a head is a designated licensing position for checking the features represented in a. As a result, this specifier position can only be occupied by elements carrying the features corresponding to the features of a.

3 Independent functional head movement is also proposed in Chomsky (1992:10), Sobolev and Caract (1992).
Second, since agreement originates in a lower functional head (AgrS), we expect subject agreement to be checked in the specifier position of that head, not in the specifier position of C. In short, the AgrSP still is the designated projection for subject agreement, even though the head of AgrS moves to C.4

Thus, the hypothesis that AgrS moves to C removes the problematic character of the Germanic complementizer agreement morphology. In section 4.1, I will argue that the AgrS-to-C hypothesis does more than that: it also explains the well-known asymmetry between main clauses and embedded clauses in Dutch, German, Frisian, and Mainland Scandinavian. However, we first have to further investigate the properties of AgrS-to-C movement from a minimalist point of view.

Recall that in the minimalist approach, every movement has to be triggered by the need to eliminate morphological features. Moreover, the economy-related principle of Greek prescribes that the moved element should benefit directly from the movement. We may wonder whether this applies to AgrS-to-C movement as well.

What morphological feature might be removed through the application of AgrS-to-C movement? Obviously, this morphological feature has to be represented in AgrS itself. If not, AgrS-to-C movement violates the Greek principle. We may therefore make the following conjecture:

AgrS-to-C movement eliminates a feature of AgrS.

Recall that AgrS hosts two features: a V-feature and an N-feature. The former has a counterpart in the features of the verb, the latter in the features of the subject noun phrase. Since complementizer agreement is subject agreement, it must be the N-feature of AgrS which is eliminated through AgrS-to-C movement (cf. Zwart 1991b).

However, at this point a problem arises. In the minimalist approach, N-features are eliminated through XP-movement, not through head movement. Thus, the N-feature of AgrS is standardly eliminated through movement of the subject to the specifier position of AgrSP in complementizer agreement dialects, like in Standard Dutch, the subject moves to the specifier position of AgrSP in overt syntax. Why does this not suffice to eliminate the N-features of AgrS?

I would like to propose the following solution to this problem. In section 1.3.2, I argued that feature checking invariably involves feature checking between sisters. The specifier is the designated position for checking the N-features of a head α, because it is the sister of the Projection of α (the first XP projection of α). I have assumed that the special status of the Projection of α is not expressed in bar-level status, but in feature content; the Projection of α may share the morphological features of α. If the Projection of α shares the N-features of α, movement of the relevant XP to the specifier position of α suffices to get the N-features of α checked.

In section 1.3.3, I suggested that the N-features of α may not be automatically present on the Projection of α as well. There is some room here for parametric variation. If α is [+accessible], the N-features of α will also be present on the Projection of α. In that case, movement of the relevant XP to the specifier position of α suffices for N-feature checking. If α is [-accessible], the features of α will not automatically spread to the Projection of α. In that case, something has to happen to α in order to make it possible for the N-features of α to spread to the Projection of α, so that feature checking under sisterhood can take place.

This approach suggests that in certain constructions or languages, a functional head must be affected in some way before its N-features can be checked. In those constructions, movement to the specifier position of that head does not suffice.

It is a quite general phenomenon that movement of an XP to the specifier position of a functional projection α is accompanied by movement of the verb to the head of α.5 Still, it is not always the case that XP movement is accompanied by head movement. For example, wh-movement to spec of CP triggers verb movement to C in English, but not in French:

(39) a. When did John arrive?  
   [English]  
   b. *When John arrived did arrive?

(40) a. Quand Jean est-il arrivé?  
   [French]  
   when Jean is-bcCL arrived  
   b. *Quand est-il arrivé quand Jean?  
   [when Jean is-bcCL arrived when]

This state of affairs can be described in two ways.

First, one could analyze English C as having both a strong N-feature and a strong V-feature, and French C as having a strong N-feature and a weak V-feature. The strong N-feature of C would force the wh-element to move to spec of CP in both English and French (abstracting away from the possibility of wh-in-situ). The strong V-feature of C would force the

* Chomsky (1995:19) argues that functional head movement changes the status of the spec position of the lower functional projection (cf. also Bošnjak and Carne 1995). I will discuss this proposal in section 4.3.

5 This phenomenon underlies e.g. the Wh-Criterion of Kast (1990b), and the Neg-Criterion of Heim and Kratzer (1991).
verb to follow suit in English, but in French, verb movement to C would be excluded because of the weak V-feature in C. Alternatively, one could assume that the N-features and V-features of C are specified in the same way in both English and French. In both languages, C would have a strong N-feature and a weak V-feature. However, the difference would be that C is [+accessible] in English and [-accessible] in French. This would explain the obligatory verb movement in (39), and the absence of it in (40).

There is one interesting difference between these two approaches that will become important in section 4. Only in the second approach is verb movement to a functional head with a weak V-feature possible. In the first approach, the relation between strength of V-features and verb movement is too direct to allow this. Let us therefore call the first approach the rigid approach, and the second approach the conditional approach.

Returning now to AgrS-to-C movement, I would like to propose that in complementizer agreement dialects AgrS has strong N-features and weak V-features, and that in addition AgrS is specified as [-accessible]. As a result, the specifier position of AgrSP has to be filled by the subject, but movement of the subject does not suffice to get the N-features of AgrS checked. Since AgrS is [-accessible], the N-features of AgrS are not present on the Projection of AgrS (the sister of the specifier), and feature checking under sisterhood cannot take place. Therefore, something has to happen to AgrS to make the N-feature of AgrS spread to the Projection of AgrS.

What I would like to propose is that AgrS-to-C movement serves this purpose:

**AgrS-to-C movement makes AgrS [-accessible]**

Thus, as a result of AgrS-to-C movement, the N-features of AgrS spread to the Projection of AgrS (the sister of the specifier of AgrS). As a result, checking of the N-features of AgrS under the required condition of sisterhood can proceed.

Notice that if this is correct, AgrS-to-C movement obeys the principle of greed. After all, it is the strong N-feature of AgrS itself that is going to be eliminated through the movement of AgrS to C. Accepting the conditional approach to feature checking, then, we may draw the following conclusion:

**AgrS-to-C movement indirectly eliminates the N-feature of AgrS.**

---

* I will argue in section 4 that these specifications carry over to Standard Dutch.

---

Thus, the proposed AgrS-to-C movement is a minimalist type of movement.

N-feature checking in complementizer agreement dialects can now be summarized in the following way. The N-feature of AgrS is strong. For this reason, the subject moves to the spec of AgrSP in overt syntax. However, the N-feature can only be eliminated if AgrS is [+accessible]. AgrS is specified as [-accessible], which would block N-feature checking unless AgrS is affected in such a way that it becomes [+accessible]. For this reason, AgrS moves to C, which makes AgrS [-accessible] (by hypothesis). As a result, the N-feature of AgrS spreads to the projection of AgrS, and N-feature checking can take place under sisterhood. This accounts for our earlier observation that AgrSP remains the locus for checking the features of AgrS, even after AgrS-to-C movement has taken place.

In section 4, the interaction of AgrS-to-C movement and verb movement will be discussed in greater detail. I will argue that verb movement to AgrS is another way to make AgrS [-accessible]. This has the result that the verb must move to AgrS in all and only those constructions in which C is absent. This accounts for the asymmetry between main and embedded clauses in Dutch, and allows us to maintain the minimalist assumption that in subject initial main clauses the finite verb is in AgrS.

One aspect of the interaction of AgrS-to-C movement and verb movement will have to be dealt with now, however. This concerns the morphology of verbs in C, especially in the dialects we have called double agreement dialects.

### 3.3.3 Double Agreement Dialects

In double agreement dialects the complementizer agreement and the verbal agreement differ. As mentioned before, the verb in these dialects has verbal agreement in subject initial main clauses, and complementizer agreement in subject-verb inversion constructions. This is illustrated in the following examples, partly repeated from section 3.1.

(41) a. Wij **spelen**-t
    we play

b. Waar **spelen**-t u wj?
    where play you

"Waar doen we spelen?"

"Waar doen wij spelen?"

---

Kees Netherlandic
Does the analysis of complementizer agreement developed in section 3.3.1
carry over to the subject-verb inversion constructions in (41b), (42b), and
(43b)?

In the analysis of complementizer agreement presented above, AgrS
moves to C independently of verb movement. In the b-sentences in (41-43)
however, the verb moves to C overtly (following Den Besten 1977). If the
verb moves through AgrS on its way to C, there is no room for
independent functional head movement from AgrS to C. This suggests
that in subject-verb inversion constructions, AgrS-to-C movement is part
and parcel of the movement of the lexical verb to C.

However, this yields a serious problem in double agreement dialects.
Recall that in these dialects, one type of agreement shows up on the verb
in subject-initial main clauses and in embedded clauses (the verbal
agreement), and another type of agreement shows up on the verb in
subject-verb inversion constructions and on the complementizer (the
complementizer agreement). This is illustrated in the following table (cf.
(41d)).

<table>
<thead>
<tr>
<th>position of verb</th>
<th>C</th>
<th>AgrS</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>agreement</td>
<td>v+e</td>
<td>v+e</td>
<td>v+e</td>
</tr>
</tbody>
</table>

In the Minimalist Program, verbs are inserted in fully inflected form.
Accordingly, morphology cannot change in the course of a derivation. If
subject initial main clauses are AgrSs, as we have assumed throughout,
we can associate verbal agreement morphology with verb movement to
AgrS, and complementizer agreement morphology with verb movement to
C. But if verb movement to C goes through AgrS, the verbal agreement

V E R B  M O V E M E N T

morphology apparently has to change into complementizer agreement
morphology, which is not allowed.

At this point we may wonder whether there is any reason for V-e (the
verb with complementizer agreement morphology) not to move to C
across AgrS. This would obviously violate the Head Movement Constraint (see
section 3.3.1). According to this constraint, heads can only move to the
next head up. In Chomsky (1992), the Head Movement Constraint is
reduced to the shortest steps requirement of economy of derivation.

However, I have argued in section 3.3.1 that economy of derivation
does not involve a shortest steps requirement. The fact that head
movement is as restricted as it is follows from the feature checking
requirements that are independently established in the minimalist
approach. If a lexical head α moves to a functional head β across an
intervening functional head γ, the derivation will not converge if γ
contains V-features that must be checked by α. In this core case of Head
Movement Constraint violations, the Head Movement Constraint is
completely redundant.

Suppose α is an inflected verb, β is C, and γ is AgrS. Movement of the
verb to C across AgrS yields a crashing derivation, because this would
leave the V-features of AgrS uncheckable. Thus, the effects of the Head
Movement Constraint are trivially derived.

Suppose next that AgrS moves to C by independent head movement
before verb movement takes place. This yields a chain (AgrSj), where
AgrS is adjoined to C, and j is the trace in the original position of AgrS.
We will assume that the V-feature of AgrS is present on both members
of the chain (AgrSj). In this situation, movement of the verb to C across
AgrS does not yield a crashing derivation. The verb adjoins to AgrS in C
and checks the V-features of AgrS under the required sisterhood condition.
This derivation is not allowed by the Head Movement Constraint, but it
is allowed by the minimalist principles which the Head Movement
Constraint must be derived from. This supports our earlier conclusion that
the shortest steps requirement is not part of economy of derivation.

Let us now return to the double agreement dialects. The problem we
faced was to account for the appearance of complementizer agreement
morphology on the verb in C. This is unexpected if the verb moves to C
through AgrS. Instead, the morphology on the verb in C suggests that the
verb moves to C directly, skipping AgrS. Such a movement was seen to
violate the Head Movement Constraint. Assuming the preceding
discussion to be essentially correct, this is not a problem, if it can be
shown that the verb movement to C across AgrS is part of a minimalist
derivation.

First, we have to wonder whether the verb movement to C is triggered
by the need to eliminate morphological features. This topic will be treated
more fully in section 5. Since AgrS moves to C, adjunction of the verb to AgrS serves to eliminate the V-feature of AgrS.

Secondly, we have to wonder whether the movement across AgrS (instead of through AgrS) is minimalistic. Normally, this would not be the case, since movement across AgrS precludes checking AgrS's V-features. However, in this case AgrS moves to C itself. As discussed above, this means that V may check AgrS's V-features in C. So, on both counts, verb movement to C across AgrS contributes to convergence.

A third question to ask is why movement across AgrS is preferred to movement through AgrS, instead of the other way around. The theory allows only one type of answer here: skipping AgrS must be the more economical derivation. Consider why this is in fact the case.

If economy of derivations does not contain a shortest steps requirement, it reduces to the requirement that the number of steps in a derivation be as small as possible. Assuming that AgrS-to-C movement turns C into a position where the V-features of AgrS can be checked, the V-features of C and AgrS can be checked in one step by moving the verb to C across the original AgrS position. Movement through AgrS is not barred by feature checking requirements, but would yield a derivation with more verb movement steps. This is excluded by economy of derivation.1

This answers the third question that the analysis of V-to-C movement in double agreement dialects poses. In sum, the proposed analysis, which involves a violation of the former Head Movement Constraint, is fully consistent with the Minimalist Program.

The agreement phenomena in double agreement dialects can now be derived in the following way. In these dialects, complementizer agreement is present on the complementizer and on the verb in inversion constructions. In subject initial main clauses, the verb shows another type of agreement, which we called verbal agreement. The verb must be generated in V in fully inflected form, either with complementizer agreement or with verbal agreement. A verb with complementizer agreement cannot move to AgrS, and a verb with verbal agreement cannot move to C. The derivation of subject initial main clauses therefore may not involve verb movement to C, and the derivation of inversion constructions may not involve verb movement to AgrS. This leads to two conclusions. First, subject initial clauses are not expanded up to the CP level. As a result, the verb can move only to AgrS, and the verbal agreement must appear. Second, the verb may not move through AgrS in inversion constructions. This follows from economy of derivation, as discussed above.1

In the next section, the morphological aspects of the double agreement phenomenon will be discussed in more detail.

3.3.3 Morphological Issues

We have now reached the following description of the agreement pattern in double agreement dialects. When the verb stays in V or moves to AgrS it shows verbal agreement morphology. When the verb moves across AgrS to C, it shows complementizer agreement morphology. In this subsection, I will try to be a bit more explicit about the relation between syntax and morphology in this pattern.

In the minimalist approach, elements enter the syntactic component in fully inflected form. This implies that in complementizer agreement dialects, there must be a paradigm of complementizers.2 A feature must be associated with each form of the paradigm. This feature has to match the feature of AgrS after AgrS-to-C movement.

It is tempting to suggest that complementizers universally carry features that have to match the features of lower functional heads. If this is correct, an explanation must be found for the fact the complementizer agreement is typologically rare. I will return to this issue in section 4.2.

If complementizers carry a feature, the question arises what kind of feature this is. Since complementizer agreement is subject agreement, one could argue that the complementizer feature is an N-feature. However, this raises the previously mentioned issue why subjects cannot be licensed in the specifier position of CP.

I would like to suggest that the feature carried by the complementizer is not an independent N-feature, but a duplicate of the N-feature of AgrS. When AgrS adjoins to C, its features have to match the relevant features of C, carried by the complementizer. The duplicate feature may be automatically eliminated when the N-feature of AgrS is eliminated. This

1 The question arises whether topologization of the subject in double agreement dialects would give rise to verbal agreement on the verb or complementizer agreement. The facts are that in these cases the verb always shows verbal agreement. This is also the case in the Standard Dutch SG, where the verb shows the double agreement pattern (DU goo)!Ven

2 Geeman (1980) reaches the same conclusion.
can be thought of as a result of the AgrS-to-C movement. Alternatively, we may assume that the duplicate feature is invisible at the interface levels, and hence need not be eliminated.17

Viewed in this way, the presence of a particular duplicate feature does not represent a trigger for movement, but a condition for movement. Put differently, AgrS-to-C movement is possible only on condition that the duplicate feature be non-distinct from the relevant feature of AgrS.

The concept of a duplicate feature allows us to set up a paradigm for verbs in double agreement dialects. As always, particular inflectional verb forms cannot be derived in the syntax. Hence, both the complementizer agreement verb form (V-<c>) and the verbal agreement verb form (V->c) must be present from the outset.

We can now say that the feature specification of V-<c> is equal to the feature specification of V->c, and that V-<c> in addition has the duplicate feature associated with the complementizer agreement. Thus, a particular V->c form like East Netherlandic speult will be [+present, [2PL, +agr]], and the corresponding V-<c> form speaks will be [+present, [1PL, +agr]], where agr is the duplicate feature of the N-feature of AgrS.18 It will assume that when the verb has a paradigm of forms in which one form is [+agr] and another form is [+2agr] the verb in C must take the marked [+agr] form. Thus, the condition on AgrS-to-C movement is that the duplicate feature of the element in C must be maximally non-distinct from the relevant feature of AgrS.

The mechanism of complementizer agreement can now be pictured as follows. AgrS moves to C, creating a chain (AgrS,C). This movement serves to make AgrS [+accessible], so that the N-features of AgrS can be checked. A condition on AgrS-to-C movement is that the features of the complementizer or the verb in C be maximally non-distinct from the features of AgrS. In double agreement dialects, this condition is not met when a verb with verbal morphology moves to C, because verbal morphology is associated with a feature [+2agr] in double agreement dialects, and another verb form with the duplicate feature [+agr] is available.

17 Notice that complementizer agreement never replaces the agreement on the verb. In this respect, complementizer agreement is fundamentally different from do-support. If the complementizer agreement feature is too weak to perform agreement on its own, it may also be weak enough not to occur as an illegitimate object at the LF.19

18 Notice that the duplicate feature is part of the person/number feature specification, not an independent feature. Thus, the two verb forms with verbal agreement morphology, one with complementizer agreement morphology constitute a paradigm within the person/number paradigm. The feature specification follows Jakobson (1935), where the unmarked value is neither + nor - . Consequently, we can assume that the duplicate feature is present with the unmarked value specification in single agreement dialects.

In complementizer agreement dialects that do not display the double agreement pattern, the morphological technicalities are more straightforward, since the agreement of the complementizer is directly linked to person or number. Thus, the South Holland plural complementizer can be represented as [PL, +agr], and the singular complementizer as [Sg, +agr]. AgrS-to-C movement makes the non-distinctness condition on complementizer agreement in a trivial way.

In single agreement dialects which do not show complementizer agreement, neither the verb nor the complementizer shows a morphological paradigm in connection with AgrS-to-C movement. Hence, we may characterize the verb forms and complementizers as [Sg, +agr] in each case. As a result, AgrS-to-C movement is not excluded in these dialects, since the unmarked specification of the duplicate feature does not violate the non-distinctness condition on AgrS-to-C movement.

3.3.4 Complementizer Agreement and Verb Movement

In the analysis presented thus far, AgrS-to-C interacts with verb movement. In embedded clauses, where AgrS-to-C takes place, the verb does not move to AgrS. In subject-initial main clauses, where AgrS-to-C cannot take place, the verb moves to AgrS. This is especially clear in double agreement dialects, in which the morphology of the verb varies depending on whether the verb moves to AgrS or to C.

I have proposed that AgrS-to-C movement and verb movement to AgrS serve the same goal. Both operations have the effect that AgrS becomes [+accessible], i.e., the Projection of AgrS may take over the features of AgrS. As a result, the N-features of AgrS can be checked by feature matching between the subject in the specifier position of AgrS and its sister, the Projection of AgrS (cf. section 1.2.2).

This analysis makes the prediction that all complementizer agreement dialects show the verb movement asymmetry between main clauses and embedded clauses illustrated for Standard Dutch in section III.1.2.1. This prediction is borne out, as the following facts show:

(44) a. Ze komme morge. South Hollandic
     they come-PL tomorrow
     They come tomorrow.

b. ...danze ze morge komme
     ...that PL, they tomorrow come-PL
     ...that they come tomorrow.
In the dialects illustrated, the adverb follows the finite verb in main clauses (the a-sentences), but precedes it in embedded clauses (the b-sentences). In each of these sentences, a reversal of the verb-adverb order would be ungrammatical, just like in Standard Dutch.

At this point, recall the discussion of the syntactic properties of complementizer agreement dialects in section 3.2.2. It turned out that there is not a cluster of syntactic properties which are (or least) only complementizer agreement dialects share, and which could therefore be associated with AgrS-to-C movement. As (44-49) bear out, there is a syntactic phenomenon associated with abstract AgrS-to-C movement which is invariant across complementizer agreement dialects, namely the absence of verb movement when AgrS-to-C takes place.

Notice, however, that AgrS-to-C cannot be restricted to constructions with overt complementizer agreement. Many complementizer agreement dialects do not show a full complementizer agreement paradigm. For example, the complementizer agreement of the Groningen type is restricted to SSG. Yet the verb movement asymmetry is pervasive in all complementizer agreement dialects, regardless the person or number of the verb. This is accounted for on the assumption that the element in C has an unmarked (0-agr) duplicate feature when there is no sign of overt complementizer agreement. The presence of this feature still allows AgrS-to-C movement, since the unmarked feature is non-distinct from the N-feature of AgrS.

From here, it is only a small step to assume that dialects of Dutch without complementizer agreement, such as Standard Dutch, have AgrS-to-C movement as well. We may assume that in these dialects, the complementizer invariably carries the unmarked (0-agr) duplicate feature which allows AgrS-to-C movement. On these assumptions, the absence of verb movement in embedded clauses in Standard Dutch would be accounted for. This will be the starting point of the discussion of the verb movement asymmetry in Standard Dutch in section 4.

To conclude this subsection, recall that Standard Dutch is in a sense a double agreement dialect. This may be concluded from the agreement pattern in the second person singular (cf. Geeman 1992):12

12 It is not likely that the final -s in (59b) is elided, because of the impossibility of such elision in the third person in identical contexts (Wanneer kom ik kom? when comes a-his?). Also, under an elision analysis one predicts that the final -s will show up again when the SSG pronoun is modified, e.g. in (in) jij (see your). However, this is not the case. Remarkably, *wanneer kom jij ook jij? when comes you also; you are both included (while ook jij komt takes you come-a) and the imperative kom ook jij (come also you) are unproblematic, apparently because of a requirement that the SSG verb form be able to pass as a SSG verb form (considering the pair kom jij/kom jij thou come-you/thou come-t). The grammaticality of *wanneer kom jij ook jij? when comes you also you is unproblematic, but not of *wanneer kom jij ook jij? when come-become you also; thanks to Eric Newborn for this observation. The grammaticality of *wanneer kom jij ook jij? when come-also you is slightly better than *wanneer kom ook jij? when come-also you in my judgment.)
3.4 Conclusion

In this section, I have described complementizer agreement as a morphological reBeX of AgrS-to-C movement. It has also become clear that AgrS-to-C movement is an abstract functional head movement, which may take place independently of verb movement. AgrS-to-C movement has tangible effects in the syntax of verb movement, since it makes verb movement superfluous. This will be discussed more fully in section 4. If verb movement and complementizer agreement do interact in the way suggested here, it becomes unlikely that AgrS-to-C movement be restricted to dialects with overt complementizer agreement. In accordance with this, it has become clear that there is not an obvious cluster of syntactic properties which all and only overt complementizer agreement dialects share.

Another important conclusion that can be drawn from the analysis presented here is that Dutch has a separate functional projection for subject agreement, AgrSF. This confirms the starting point of this book, according to which the structure of the functional domain of Dutch is as assumed in the Minimalist Program. The analysis presented here provides strong confirmation for the applicability of the Minimalist Program to the syntax of Dutch.

Finally, the analysis of double agreement dialects (which possibly include Standard Dutch) allows us to draw a conclusion as to the central issue of this chapter: the position of the functional heads in Dutch. In double agreement dialects, verbs in C carry special agreement, identical to the agreement on the complementizer. In subject initial main clauses, the verb has the ordinary verbal agreement. Hence, the verb cannot be in C in these constructions. Since the verb has clearly moved out of its basic position, and, furthermore, is obligatorily adjacent to the subject, the verb must be in a lower functional head in subject initial main clauses, presumably AgrS. AgrS, then, must be to the left of the VP in double agreement dialects. In the spirit of this section, this conclusion carries over to other dialects of Dutch, including Standard Dutch.

4 The Verb Movement Asymmetry

In section II.4.3, I argued that the most straightforward implementation of the minimalist approach to the syntax of Dutch entails that in subject initial main clauses in Dutch, the finite verb is not in C but in AgrS. This leaves one question open: Why does verb movement to AgrS not take place in embedded clauses as well?

In this section, I will present an analysis of this asymmetry between main clauses and embedded clauses. The central ingredient of the analysis will be independent AgrS-to-C movement.

AgrS-to-C movement was argued to take place in complementizer agreement dialects in section 3. I will now argue that the analysis presented there carries over to Standard Dutch. The upshot of the analysis will be that movement of AgrS to C makes movement of the verb to AgrS superfluous.

If this analysis of verb movement is correct, it constitutes another argument in support of the hypothesis that all functional projections in Dutch are head initial.

This section is organized in the following way. In section 4.1, the analysis of verb movement and complementizer agreement developed in section 3 is applied to Standard Dutch. In section 4.2, the hypothesis is advanced that in Germanic, all and only verb movement asymmetry languages (Dutch, Frisian, German, Mainland Scandinavian) have abstract AgrS-to-C movement blocking verb movement in embedded clauses. Finally, the effect of functional head movement on the status of specifier positions is discussed in sections 4.3 and 4.4.

4.1 The Verb Movement Asymmetry in Dutch

4.1.1 Generalizing AgrS-to-C Movement

The position of the finite verb in main clauses and embedded clauses in Dutch is illustrated in (1), repeated from II.3.2.1:

\[ 1 \] The question why movement of the verb to C in embedded clauses is excluded will be discussed in section 5.3.
position of each element has to be explained independently, and the apparent interaction of the two elements has to be described in terms of what explains their distribution in the first place.

Thus, postulating that the verb and the complementizer are in the same position in Dutch does not provide an explanation for the distribution of the complementizer and the verb. This explanation can only be reached if there is an independent reason for the verb to move to the position of the complementizer when the complementizer is not present.

At this point, the problem posed by the pattern in (1)-(2) can be formulated as follows. If the complementary distribution of the complementizer and the verb is explained by the fact that the verb has to move to the complementizer position, there must be a trigger TR for verb movement to C. But if TR exists, it must force the verb to move to C in embedded clauses as well. Since movement of the verb to C in embedded clauses is blocked by the presence of the complementizer, embedded clauses like (2a) are predicted to be ungrammatical. This is contrary to fact, hence TR does not exist. If TR does not exist, there is no reason for the verb to move to C in (1a) either.

It turns out, then, that the complementary distribution of the verb and the complementizer in Dutch can only be explained by assuming that the verb does not move to the complementizer position. Fortunately, this way of accommodating a complementary distribution is neither logically nor theoretically impossible. It may be the case, for instance, that the presence of a complementizer in C makes movement of the verb to a lower functional head superfluous.

An analysis along these lines was first proposed by Travis (1984, 1991). Travis argues that the verb movement in (1) is a function of the Empty Category Principle (ECP), applied to heads. Empty heads, in his view, must be either properly governed or filled. Assuming that subject initial main clauses are IPs (i.e. AgrSFs, in later terminology), the topmost functional head in (1) is not properly governed; therefore it has to be filled by the verb, moving to I (AgrS). In (2), on the other hand, the

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1 We might conceive of TR as a V-feature of C. However, it is not clear that C contains V-features to begin with. The features that are conventionally associated with C are not associated with the verb itself, but with other grammatical features like tense and aspect. Verbs, on the other hand, do not have apparent ‘complementizer features’. It may be necessary to draw a distinction between functional heads that are associated with grammatical features of the verb and functional heads that are not. If so, Agr and C belong to the former and C to the latter. The distinction is independently proposed in Chomsky and Lasnik (1993:27), who call the former category SpecAgr. The distinction is reflected in terms of the presence of V-features in Chemistry (1992:40), where it is suggested that C is not L-related (see section 4.5.1).

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2 Importantly, if it were correct that the finite verb in Dutch always moves to C, this would not prove, or even suggest, that functional projections in Dutch are not headInitial. On the contrary, this analysis would imply that CP in Dutch is head initial, and, in the absence of evidence to the contrary, we would have to draw a similar conclusion for the other functional heads.
empty head I is governed by the complementizer in C. This makes verb movement to I superfluous.\footnote{Travis' reduction of Germanic verb movement to the ECP has been criticized in Schwartz and Vikner (1989), Schwartz and Tomaselli (1991:270), Vikner and Schwartz (1991) (cf. also Holenberg 1986:126f, Tomaselli 1990:151).}

Schwartz and Vikner (1989:41) argue that the obligatory verb movement in (4), from German, is not expected if we assume that the matrix verb governs the C-position of the embedded verb:

(4) a. Womit glaubte sie das Kind das Brot gegessen?
   with what thought she the child the bread eaten
   "What did she think the child ate the bread?"

   b. * Womit glaubte sie das Kind das Brot gegessen?
      with what thought she the child the bread eaten

   The matrix verb glauben 'think' optionally takes a complement clause without a complementizer. In that case, the verb moves to the second position in the complement clause:

(5) a. Sie glaubte das Kind das Brot gegessen
    she thought the child the bread eaten
    "She thought the child had eaten the bread."

   b. * Sie glaubte das Kind das Brot gegessen
      she thought the child the bread eaten

As (4) shows, extraction out of the complementizerless embedded clause yields subject-verb inversion. Schwartz and Vikner argue, correctly, that this subject-verb inversion is not expected if the matrix verb governs the empty C-position.

Following Schwartz and Vikner (1989), we may conclude that the various verb movements associated with the paradigm in (2-12) are not explained by the ECP. However, even if Travis (1984, 1991) was misguided in reducing verb movement to the ECP, this in no way invalidates her description of the verb movement asymmetry in Dutch and German. The crucial point in that analysis remains that the presence of a complementizer in O blocks verb movement to a lower functional head, I. This is the type of analysis we need, as I have argued above.

I will therefore assume in what follows, that Travis' description of the verb movement asymmetry is essentially correct. I also hope to supplement her analysis with the correct trigger for verb movement in Dutch.

The key elements of this part of the analysis have all been introduced in section 3, on complementizer agreement.

Recall that two interesting conclusions about complementizer agreement dialects have emerged. First, although some dialects of Dutch (and German, and Frisian) allow overt complementizer agreement and others do not, a cluster of syntactic properties could be identified which correlates with the presence or overt complementizer agreement. Second, all dialects of Dutch (and German, and Frisian) have one syntactic property in common: the verb movement asymmetry.

Complementizer agreement was analyzed as a reflex of AgrS-to-C movement in section 3. AgrS-to-C movement takes place to ensure the elimination of the strong N-feature of AgrS. It was assumed that the N-feature of AgrS can only be eliminated if the N-features of AgrS are present on the Projection of AgrS, the sister of the specifier of AgrSP. This follows from the generalization that feature matching requires a sisterhood configuration (section I.3.2). Thus, movement of the subject to the specifier position of AgrS does not suffice if the Projection of AgrS has no access to the N-features of AgrS. The Projection of AgrS has access to the N-features of AgrS if and only if AgrS is [-accessible]. I assumed that AgrS is [-accessible] in complementizer agreement dialects, and that AgrS-to-C movement makes AgrS [-accessible].

Consider now what happens in subject-initial main clauses. Again, the N-feature of AgrS is strong. This forces movement of the subject to the spec of AgrS. However, this does not suffice, since AgrS is [-accessible]. Because of that, the Projection of AgrS has no access to the N-feature represented in AgrS, and N-feature checking under sisterhood cannot take place. Therefore, AgrS has to be made [-accessible] in some way.

I would like to propose that verb movement to AgrS has the same effect as AgrS-to-C movement: it makes AgrS [-accessible]. This, verb movement to AgrS, like AgrS-to-C movement serves to make checking of the strong N-features of AgrS possible.

Verb Movement to a head a makes a [-accessible].

The question arises what AgrS-to-C movement and verb movement to AgrS have in common that could yield the effect that AgrS is made [-accessible]. I will return to this issue in section 4.4.
Importantly, this analysis makes it possible to characterize the V-feature of AgrS as weak. If the V-feature of AgrS is weak, movement of the V to AgrS must be procrastinated until LF, unless violating Procrastination is the only way to contribute to convergence. In embedded clauses, the independent AgrS-to-C movement makes AgrS [accessible], hence verb movement to AgrS is superfluous. Thus, the absence of verb movement to AgrS in embedded clauses follows from the system. In neutral order main clauses, no AgrS-to-C movement is possible, and verb movement to AgrS takes place as a Last Resort operation. The net result is that AgrS is filled by the verb if and only if the C position is absent. In embedded clauses, and in topiicialization and wh-constructions, verb movement is excluded by the economy related principle of Procrastination. This result follows from two assumptions regarding complementizer agreement dialects:

1. The N-feature of AgrS is strong
2. AgrS is [accessible]

From these assumptions, and the general assumptions of the Minimalist Program, it follows directly that the complementizer agreement dialects should display the verb movement asymmetry.

Standard Dutch shows the same verb movement asymmetry as the complementizer agreement dialects of Dutch. It is now the optimal hypothesis to assume that Standard Dutch has AgrS-to-C movement just like the complementizer agreement dialects of Dutch.

This hypothesis is legitimized by the observation that no syntactic properties are crucially associated with overt complementizer agreement morphology. The AgrS-to-C movement underlying complementizer agreement morpholology is only very likely to cause some syntactic effect. On the assumption that AgrS-to-C movement takes place in all dialects of Dutch, AgrS-to-C movement has a very tangible syntactic consequence in that it makes V-to-AgrS movement superfluous. I will therefore assume that the analysis of verb movement in complementizer agreement dialects developed in section 3 carries over to all dialects of Dutch.¹

Following this hypothesis, the two assumptions regarding complementizer agreement dialects mentioned above apply to Standard Dutch as well. This automatically derives the verb movement asymmetry in Standard Dutch.

The verb movement pattern in this analysis can now be represented in the following way:²

(6) a. C present C SUBJ AgrS XP V
   b. C absent C SUBJ AgrS XP V

In embedded clauses (6a), AgrS moves to C, and no verb movement takes place. In subject initial main clauses, AgrS-to-C is not possible, and the verb moves to AgrS.

To summarize, it follows from a minimalist approach to syntax that the verb movement asymmetry of Dutch cannot be explained in the traditional way: if verb movement to C is obligatory, a complementizer in C cannot block the movement without yielding a crucial derivation. But it also follows from the minimalist approach that Travis' analysis of the verb movement asymmetry can be maintained: the absence of an element in C forces the verb to move to a lower functional head, in violation of Procrastination.

It is most important to realize that a verb movement asymmetry can only be described properly on the assumption that the relevant V-features

¹ In (6), 'present' and 'absent' may also be read as 'filled' and 'not filled'. In that case, C must also be represented in (4b). The relevant question is whether independent clauses are necessarily expanded up to the CP level before Spell Out takes place. If Chomsky (1995) is right in assuming that dynamic Generalized Transformation cannot take place after Spell Out, this reduces the question whether independent clauses are CPs at LF. It is generally assumed, since Chemla (1981), that they are. If so, C is just a bundle of features in independent clauses, and does not suffice as a target for Agr movement. (It could be, however, that an additional movement of the verb to C (across AgrS) turns C into a target for AgrS-to-C movement. This would yield an ungrammatical VSO order in neutral clauses. This derivation must be excluded, if C is absent, this is not a problem. If C is present but empty, this derivation may be excluded because the verb movement to C is not triggered by the need to eliminate a strong V-feature in C, nor by the need to satisfy the simulation of a strong N-feature in C. If this N-feature can only be checked conditionally. We may propose a condition on head movement, related to Green, according to which movement to a head C can never take place to retain in the elimination of the features of another head. This addition to Green is necessary if we adopt the conditional approach to feature checking. Assuming this condition, verb movement to C for the sole purpose of creating a host for AgrS-to-C movement is not allowed.)

² Recall that Procrastination can be violated without effect on grammaticality. Crucially, movement of the verb to a functional head carrying a weak V-feature does not violate Green, since the V-feature would have to be checked at some point in the derivation anyway.
are weak. An asymmetry of this kind could not exist if the V-feature of AgrS were strong. This would force the verb to move in both main and embedded clauses. On the other hand, if the V-feature of AgrS is weak, the absence of verb movement in embedded clauses is expected. It is exactly the independently established principle that Procrastination can be violated (cf. Chomsky 1992:45) that makes it possible to have verb movement in one type of clauses only.

Thus, the absence of verb movement in embedded clauses in Dutch follows from economy of derivation. The presence of verb movement in subject initial main clauses follows from the need to fill AgrS, in order to eliminate the N-feature of AgrS. Verb movement in topicalizations and wh-constructions, I claim, is an entirely different matter, which will be the topic of discussion in section 5.

If this analysis is correct, the conclusion that the Dutch IP-system is head initial is fully legitimate. In the following subsection, I will briefly review a number of standard arguments that have been adduced in the literature to support the view that verb movement in Germanic 'verb second languages' invariably targets C.

4.1.2 Arguments For Generalized V-to-C Movement


As I showed in section II.3.2, some of the more familiar arguments merely show that the verb is in C in inversion constructions.10 These are not arguments for generalized V-to-C movement. I will therefore leave them out of the discussion. For the moment, I will accept these arguments as showing that the verb moves to C in inversion constructions.

The following phenomena have been argued to support generalized V-to-C movement in Dutch and related languages:

1. The finite verb is not fronted in embedded clauses
2. The fronted verb and the complementizer show the same distributional effects
3. Narrative inversion
4. Auxiliary deletion in Swedish

These phenomena will be discussed in the following sections. It will turn out that they do not support the hypothesis that the verb moves to C in all main clauses in the relevant languages.

a. The finite verb is not fronted in embedded clauses.

This is the familiar verb movement asymmetry discussed in this section. The existence of the asymmetry is an argument for generalized V-to-C movement only if C is the only functional head to the left of the VP. The presence of other functional heads to the left of the VP cannot a priori be excluded, however. Therefore this phenomenon is irrelevant.

The following phenomenon from German is often quoted in this context (repeated from IL.2.2):

(7) a. Peter behauptet, dass Johann Maria kisse
Peter claims that John Mary kisses-SUBJ
b. Peter behauptet, Johann kisse, Maria
Peter claims John kisse-SUBJ Mary
"Peter claims that John kisses Mary."

If the complementizer is absent, the verb is fronted. However, in spite of what is usually claimed, it is not immediately obvious that the complementizer dal is in (7a) and the verb kisse in (7b) are in the same position. In (7a), the complementizer precedes the subject Johann, but in (7b) the subject precedes the verb.

These word order facts follow from our analysis, on the assumption that German has the same interaction of AgrS-to-C movement and V-to-AgrS movement as Dutch. In both (7a) and (7b) the subject moves to the spec of AgrSF. This movement is triggered by the strong N-feature of AgrS. In (7a), AgrS moves to C, making AgrS [+accessible], so that the N-feature of AgrS can be checked. No verb movement to AgrC (or C) is required. In (7b), the target for AgrS-to-C movement is absent (cf. note 5 of this section). AgrS can now be made accessible only by verb movement to AgrS. This explains why the verb appears to the right of the subject in (7b), while the complementizer position is to the left of the subject, as (7a) shows.

At this point, it is interesting to note that some varieties of Germanic, while displaying the verb movement asymmetry, permit embedded verb movement, even when the complementizer is present (cf. De Rooij 1985a:92f, 127f; Den Besten 1986 [1989:128]; Zwanz 1991a:88 fn 231). A case in point is Frisian (Overste 1982; De Haan and Weerman 1986; De Haan 1990; Van der Meer 1988, 1991:42)

This type of embedded verb seems to be limited to the complements of verbs of the class identified in Hooper and Thompson (1973) as allowing embedded root phenomena.

11 See section 5 of this chapter.
N-feature of AgrS can be checked. Verb movement and complementizer agreement interact exactly in the way predicted by our analysis. Thus, the complementary occurrence of complementizers and verb fronting follows from our analysis, as well as the apparent exceptions to this complementarity.

b. The fronted verb and the complementizer show the same distributional effects.

The phenomenon I have in mind figures in a classical argument in Den Besten (1977:29), which is already present in Paardekooper (1963). Paardekooper and Den Besten show that subject clitics in Dutch must be adjacent to both the complementizer and the fronted verb:

(10) a. *dat je gisteren ziek was that you were ill yesterday was
   "that you were ill yesterday."
   b. *dat gisteren je ziek was that yesterday you ill were

(11) a. Waarom was je gisteren ziek?
   "why were you yesterday ill"
   b. *Waarom was gisteren je ziek?
   "why were yesterday you ill"

Den Besten’s conclusion was that the fronted verb in (11) is in the same position as the complementizer in (10).

However, we cannot conclude from this paradigm alone that the fronted verb is always in the complementizer position. This can only be concluded if the order verb-subject clitic also shows up in neutral main clauses. As (12) shows, this is not the case:

(12) a. *Was je gisteren ziek
   "were you yesterday ill"
   b. Jo was gisteren ziek
   "you were ill yesterday."
   "You were ill yesterday."

If anything, the distribution of the subject clitics in Dutch shows that the fronted verb is not always in the complementizer position. Conversely, it is easy to show that the complementizer and the verb do not show the same distributional effects in a number of cases. For

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10 Holmberg (1986:110) proposes CP-recursion for similar facts in Swedish. Holmberg argues that CP-recursion (t-S-recursion) is justified by the observation that the order TSG-VSUBJECT is also possible in embedded verb second clauses (cf. Friesnik 1988:259). See also Marques (1989) for extensive discussion of CP-recursion.
example, subjects immediately precede the verb in neutral order clauses in Dutch, but are not allowed to precede the complementizer:

(13a) a. Jan (uit) kust Marie
    b. *Jan dat Marie kust
    John always kisses Mary
    *John that Mary kisses
    *that John kisses Mary

Similarly, topics immediately precede the verb in topicalization constructions, but are not allowed to precede the complementizer:

(14a) a. Hebben *dat Jan (uit) ziet Jan (uit)
    dogs always look John always
    "Dogs, John always looks"
    b. *Hebben dat Jan (uit) bijt
    dogs that John always bites
    "that John always bites dogs"

(13b) is puzzling on the standard assumption that the complementizer takes over the Nominative Case assigning property of the verb in embedded clauses. In that case, it is unclear why the verb would assign Case under spec-head agreement in (13a), whereas the complementizer apparently cannot assign Case under spec-head agreement in (13b).

In our analysis, the subject is always assigned Case (more accurately, always gets its features checked) in a siblinghood configuration in Ag-SF (see section 1.2 for the reduction of spec-head agreement to siblinghood). This excludes (13b), on the assumption that the complementizer is in C.

(14b) apparently demonstrates that topics cannot be in the specifier position of SF, when C is occupied by a complementizer. Since I have chosen to adopt Den Bsten’s analysis of topicalization as involving verb movement to C, (14b) is as much a problem for my analysis as it is for the standard analysis. I will therefore postpone discussion of this fact until section 5.

All other constructions in which the fronted verb and the complementizer show a parallel distribution are inversion constructions. These involve counterfactuals (15), conditionals (16), and imperatives (17):

(15a) a. Was jij op tijd gekomen...
    b. Als jij op tijd gekomen was...
    "Was you on time...
    "If you had been on time...

(16a) a. Ben je op tijd...
    b. Als je op tijd bent...
    "Are you on time...
    "If you are on time...

(17a) a. Wees jij nu eens op tijd!
    b. Dat jij nu eens op tijd bent!
    "Be on time for a change!
    "You be on time for a change!

All these constructions have no non-inverted counterpart. Therefore, they are useless if we want to find out whether the verb moves to C always.

c. Narrative inversion.

Den Bsten (1977; 1989-92) notes the existence in Dutch of constructions with the verb in the first position:

(18a) 1. Aan de, ik daar die vent toe.
    2. Begin-je te moe "to that guy prt"
    3. Hé ik begint me toch "start-be me a story on to hang"
    "So I went over to this guy, and he started to tell me a story (you"
    "I thought you would come tomorrow."
    "That I thought you would come tomorrow."
    "I thought you would come tomorrow."
    "I thought you would come tomorrow."

As Den Bsten indicates, this construction is particularly used in a certain narrative style of spoken Dutch, and is extremely effective in telling a story or a joke. Narrative inversion does not occur in complement clauses.
Den Besten analyzes the inversion in (18) as verb preposing (to C) without XP-preposing (to the spec of CP). It is unclear, however, why XP-movement is suppressed in this construction, and how the lack of XP-movement is related to the special character of this construction.

Let us follow Den Besten in assuming that the verb in the inverted construction in (18) is in C. If so, the order Verb-Subject is not unexpected in our analysis, since we have assumed that the subject always moves to the spec of AgrSP. The marked character of the inversion in (18) can then be analyzed as an additional movement of the verb to C.

At this point, there are two possibilities. Either there is an empty element in the specifier of CP in (18.2) which triggers the verb movement (see section 5), or there is no such empty element, and (18.2) is a kind of ‘verb topicalization’.

Verb topicalization without a triggering element in Spec,CP would be strange from a minimalist point of view. It could only take place if C hosted a particular V-feature which is strong in these constructions only. This would make a very ad hoc analysis. Verb topicalization in narrative inversion constructions generally does not show such stress features on the fronted verb. This also makes an analysis focusing on properties of the verb alone doubtful.

An analysis involving an empty operator triggering movement to Spec,CP in narrative inversion constructions appears to be more promising.

First, as Den Besten (1977,1989:33) observes, certain narrative inversion constructions come close to being conditional or concessive constructions:

(19) Held Jan van Marie, Marie zag meer in Poot
     held John of Mary Mary saw more in Poot
     “Although Mary loved John, Mary liked Pete better.”

The particular flavor of these constructions suggests the presence of an operator, just like in the conditional and counterfactual constructions (15-16).

Constructions like (19) can even be supplemented with a sentence initial element al or ook al (best translated as ‘if’ and ‘even if’).\(^{17}\)

\(^{17}\) I assumed such an analysis in Swart (1991a:79).

\(^{18}\) Ook “also” is used as a concessive particle in constructions like al nemen we ook nog so hard ‘even if they yelled as hard as they could’.

(20) (Ook) al hield Jan van Marie, Marie zag meer in Poot
     also if held John of Mary Mary saw more in Poot
     “Even though John loved Mary, Mary liked Pete better.”

The element (ook) al can be modified by zelfs ‘even’:

(21) Zelfs (ook) al hield Jan van Marie, ...
     even also if held John of Mary ...
     “Even if John loved Mary, ...”

This suggests that (ook) al is a phraseal element and not a head. If so, this could be the element in Spec,CP triggering verb movement in the familiar way (see section 5). In that case, (19) can be derived from (20) by a kind of topic drop (cf. Cardinaliatti 1990).

Following Cinque (1990), Cardinaliatti (1990:78) argues that top left drop involves an empty operator binding a pronominal variable. The construction is only possible if the operator is ‘sanctioned by the preceding discourse or by pragmatics’.

‘Sanctioning by preceding discourse or pragmatics’ appears to be generally possible in standard cases of narrative inversion like (18). The inverted continuation in (18.2) inevitably conveys the information that the two actions described are contiguous, and presumably also causally related. The non-inverted continuation in (18.2) characteristiclly lacks this information. We could describe the narrative inversion in (18.2) as containing an empty operator in the specifier of CP, which is pragmatically interpreted as indicating contiguity.\(^{14}\)

In the present tense, narrative inversion constructions are ambiguous between a conditional and a non-conditional reading:

(22) Speel ik een aan, speelt mijn partner tweek
     play I an ace plays my partner trump

(22) means: everytime I play an ace, my partner always trumps, or: when I played an ace, my partner trumped. The conditional interpretation is forced when an adverb like altijd ‘always’ is added in the second clause;
likewise, adding a temporal adverb like *op een* 'suddenly' forces the temporal interpretation:

(23) a. Speel ik een maas, speelt mijn partner altijd trouw
play I an see plays my partner always true
"Everytime I play an see my partner always trump."

b. Speel ik een maas, speelt mijn partner op een
trouw play I an see plays my partner at one
"I played an see. Then suddenly my partner trumped."

In both cases, the adverb *dan* 'then' can be used to introduce the second clause:

(24) a. Speel ik een maas, dan speelt mijn partner altijd trouw
play I an see then plays my partner always true
"Everytime I play an see, my partner always trump."

b. Speel ik een maas, dan speelt mijn partner op een
trouw play I an see then plays my partner suddenly true
"I played an see. Then my partner suddenly trumped."

The interpretation of *dan* is consecutive in (24a), and temporal in (24b). This suggests that in (23) an empty *dan* is present, the interpretation of which is determined contextually. Likewise, it appears reasonable to assume that there is an empty operator present in the first clause, receiving a conditional or temporal interpretation by the same mechanism.

Second, the presence of an empty operator can be concluded from the fact that narrative inversion constructions do not allow (additional) topic drop phenomena (cf. the argument in Cardinaliatti 1990). Thus, (25a) cannot be shortened to (25b), without loss of the narrative inversion interpretation:

(25) a. Sla ik die vent voor zijn bek
slap I this guy for his mouth
"So I knocked this guy in the face."

b. Sla ik voor zijn bek
slap I for his mouth
"I will knock (him) in the face."

(25b) is only grammatical as a topic drop construction of the type studied in Huang (1984). Following Huang, the interpretation of the empty object pronoun is mediated by an empty operator, which is discourse bound. Crucially, (25b) lacks all the properties of narrative inversion: it cannot be used in story telling, and in some cases *conspicuously* connects to a discourse situation in which a certain person is saliently present, not to an immediately preceding situation, like in narrative inversion constructions. Consequently, (25b) is preferably used as an answer to a question like *What will you do about that guy?*

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On the standard assumption that the specifier of CP can host only one operator, the absence of the narrative inversion interpretation in (25b) follows immediately. This explanation is not available if narrative inversion does not involve an empty topic/operator in CP.

A third argument linking narrative inversion to the presence of an empty topic in CP is that narrative inversion is limited to languages in which topics trigger verb movement to C. Thus, narrative inversion is absent in English and French, but present in German and the Scandinavian languages.19

To summarize, narrative inversion is characterized by the presence of an empty operator in the specifier position of CP.20 This empty operator is interpreted contextually, and gives the narrative inversion construction its special flavor. As will become clear in section 5, operators in the spec of CP always trigger movement of the finite verb to C.

Thus, the special character of narrative inversion is not explained by the lack of XP-movement to spec of CP, but by the presence of an empty element in the spec of CP triggering verb movement to C. What is special about narrative inversion is not the position of the subject, but the position of the verb.

The absence of narrative inversion in complemenar clauses now ties in with the general observation that topics are not allowed to precede the complementizer in Dutch (see 14).

If this is correct, narrative inversion cannot be viewed as an argument for general V-to-C movement in Dutch.

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19 For Old Dutch, see Roberts (1983), section 2.1.2. Vesna (1980). In Indo-Germanic, verb-first clauses are more general than in other Germanic languages (Thairness 1983). Following Sigurdsson (1994-95) we may assume that narrative inversion is only a subtype of a larger class of verb-first constructions in Icelandic. Narrative inversion, unlike the other verb-first constructions in Icelandic, is limited to root clauses.

20 I will not be concerned with the question what the empty operator lacks. The analysis of narrative inversion here shares certain aspects with the analysis of imperatives in Reuland and Coopmans (1989) and Den Dikken (1995b). Curiously, it appears to be the case that the empty operator facilitates pronominal gap interpretation. (It is surprisingly good, as in a pair with (30b) from Den Dikken (1995b))

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(30a) Leg ik (onder de poot in te bijkomen) de boeken weg
put I write poot in to come away books
"I put down the book without looking (!)"
Swedish ha-deletion.
Swedish shows the same pattern of verb movement as Dutch with respect to the asymmetry between main and embedded clauses. In subject-initial main clauses and in topologicalizations and wh-constructions, the finite verb is in the second position. In embedded clauses, the verb is further to the right.

In the next section, I will argue that in Swedish, this verb movement asymmetry is due to the same interaction of AgrS-to-C movement and V-to-AgrS movement as in Dutch. Thus, in subject-initial main clauses in Swedish, the verb is again not in C but in AgrS.

This makes it possible to address here another argument advanced in the literature to support the hypothesis that the finite verb moves to C in all main clauses of Dutch, Swedish, and related languages (Den Besten 1977, Flatvoets 1986, Holmberg 1986).

In Swedish, the auxiliary ha 'have' is optionally deleted in embedded clauses, but not in main clauses:

(26) a. ...ett han (har) varit sjuk
    that he has been ill

b. Han måste (on) varit sjuk
   he must have been ill

c. Han "har" varit sjuk
   he has been ill

d. "Här" han varit sjuk?
   here he been ill

Flatvoets (1986) and Holmberg (1986) both advocate an analysis of this phenomenon in which auxiliary deletion is the default case. This makes the non-deletion in (26c,d) the marked case.31

Flatvoets (1986) stipulates that the auxiliary can be deleted unless the auxiliary is in C. This suffices if the verb is C in both (26b) and (26d). The simplicity of this rule may count as an argument for generalized V-to-C movement.

Holmberg (1986:176,127) derives Flatvoets's stipulation from a theory of visibility of empty heads. In particular, Holmberg argues that empty heads that are not properly governed cannot be involved in assigning Case. In main clauses, the verb is involved in Nominative Case assignment (under Holmberg's assumptions, after having moved to C), and the verb is not properly governed. Hence, the verb may not be empty in main clauses.

Importantly, Holmberg's derivation of Flatvoets's stipulation removes the argument for generalized V-to-C movement in main clauses. If (26c)

is not a CP but an IP (or an AgrSP), the verb will not be properly governed, and hence cannot be deleted.

Holmberg's analysis can be transferred to the minimalist framework without problems. If we are correct, the auxiliary moves to AgrS in (26c) to assist in the elimination of the N-feature of AgrS. We can translate Holmberg's generalization, saying that the Swedish auxiliary may not be empty if it assists in N-feature checking in overt syntax.

Under our assumptions, this also captures the non-deletability of the auxiliary in inversion constructions like (26d). We have assumed that in these constructions, the verb moves to C directly, without landing in AgrS first. I will argue in section 5.3 that verb movement to C in inversion constructions is needed to make N-feature checking in CP possible. We may assume that in yes/no-questions like (26d) the specifier position of CP is occupied by an empty operator which checks the N-features of C. I will argue the lexical presence of the auxiliary is a necessary condition for this N-feature checking operation, making C (accessible).

This analysis is independently confirmed when the deletability of auxiliaries in embedded clauses is considered (Holmberg 1986:198). Here, there is a contrast between control infinitivals and Exceptional Case Marking constructions. The auxiliary can be deleted in the latter, but not in the former:

(27) a. Det är bra att PRO *hara* mikro komma
    it is good to have read it

b. Jag ansåg honom (ha) varit för passiv
   I consider him to have been too passive
   "I consider him to have been too passive."

In the Exceptional Case Marking construction (27b), the embedded subject honom is licensed in an AgrOP in the matrix clause. Thus, the auxiliary ha is not involved in checking the features of the embedded subject. In the control construction (27a), PRO must be licensed in the embedded clause.32 Assuming that in non-finite clauses no AgrS-to-C movement takes place, the auxiliary will have to be involved in checking the N-features of PRO (either in overt or in covert syntax). Hence, the fact that it cannot be deleted follows from our assumption that the lexical verb is involved in N-feature checking when AgrS-to-C does not take place.

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31 Thus, preserving the Poushane Principle, contra Anderson and Dahl (1974).

32 I follow Chomsky and Lasnik (1993) in assuming that PRO must be licensed (its features must be checked) in a specifier-head configuration, like all other arguments of the verb. Adapting the proposals made there, we may assume that PRO has Null features, which must be matched with Null features in a functional head, presumably Agr. If this implies that Agr also has Null V-features, we may assume that only infinitives are fit to check these features. This would explain the general impossibility of having PRO in finite constructions.
4.2 The Verb Movement Asymmetry in Other Germanic Languages

In section 4.1, a mechanism was proposed to account for the complementary distribution of complementizers and fronted verbs in Dutch and German, without having to assume that verb fronting always targets the complementizer position. This mechanism implies that the relation between the absence of the complementizer and the presence of verb fronting is indirect. When the complementizer is present, AgrS moves to C, making verb movement to AgrS superfluous. When the complementizer is absent, verb movement to AgrS is necessary. Both movements are needed to make sure that the N-features of AgrS are checked.

This analysis is most clearly supported in the complementizer agreement dialects of Dutch, in which AgrS-to-C movement has an overt morphological reflex. I have argued, however, that AgrS-to-C also takes place in dialects of Dutch which do not show complementizer agreement, and that the analysis of the verb movement asymmetry involving an interaction of AgrS-to-C movement and verb movement to AgrS carries over to these dialects. Foremost among these dialects, of course, is Standard Dutch.

The strongest hypothesis now appears to be that AgrS-to-C movement explains the verb movement asymmetry in all Germanic languages that display it. Conversely, the absence of such an asymmetry ought to follow from the lack of AgrS-to-C movement.

The Germanic languages that show the relevant asymmetry are Dutch, German, Frisian, and the Mainland Scandinavian languages (Danish, Norwegian, Swedish). This is illustrated in (1)-(4):\(^1\)

(1) a. Johann kisset Mari
   German John kisses Mary
   b. *Jean kisset Mary

(2) a. Ik sjocht in hynder
   Frisian I see a horse
   b. *dat ik in hynder sjocht
      *that I see a horse

The Germanic languages that do not show the relevant asymmetry are Icelandic, Faroese, Yiddish, and English.

Only (dialects of Dutch, German, and Frisian have remnants of complementizer agreement. In the Mainland Scandinavian languages no trace of complementizer agreement has been attested in the literature.

It is often said that the Mainland Scandinavian languages lack agreement, which is a statement about morphological agreement. There is no overt person agreement morphology in the Mainland Scandinavian languages. The present tense paradigm consists of only one form in Danish, Norwegian, and Swedish, ending in -or.

However, when agreement is considered to be an abstract syntactic licensing relation we cannot simply conclude from the absence of an overt agreement paradigm that a language lacks agreement. Saying that Swedish lacks agreement is like saying that English noun phrases lacks Case. There are several independent reasons to assume that Mainland Scandinavian languages do have abstract agreement.

First, Mainland Scandinavian dialects do show overt person agreement. For example, the Swedish Ändalsnäld dialect shows a full person agreement paradigm in the plural (1PL -om, 2PL -or, 3PL -o) (Platzer 1988, Vikner 1991b).\(^2\) Likewise, many Norwegian Midlandic dialects show a number distinction in the verbal paradigm, e.g. Hallingdal (SG -a, PL -o) (Torestuen, p.o., see also Torestuen 1989, quoted in Vikner 1991b).\(^2\)

\(^1\) The Mainland Scandinavian fats are taken from Malling (1978), ten Cate-Silverbrenneri (1973), Hiæna (1977), unless indicated otherwise. The Frisian fats are adapted from Ruisland (1999a).

\(^2\) Platzer (1988) notes that Ändalsnäld does not show the verb movement asymmetry, i.e., the finite verb precedes the sentence adverbials in embedded clauses. According to Levenson (1990:133), quoted in Platzer (1988:203), this is the only possible word order in embedded clauses.

\(^3\) Vigeland (1981:187) also reports the number paradigm in the central Midlandic dialect, especially the Helsingdal dialect. However, the endings reported there are slightly different (SG -o, PL -o). Both Vikner (1991b) and Vigeland (1981) note that the plural ending is the
Second, the Mainland Scandinavian languages generally do show a morphological difference between finite verb forms and infinitival verb forms. The infinitival ending -e is in Danish and Norwegian, and -e in Swedish. Infinitival are generally characterized as lacking tense, although some have argued that tense is also present in infinitival forms (notably Stowell 1981:400). There is no question, however, that there is an agreement opposition between infinitival and finite verb forms. This agreement opposition is morphologically encoded in the Mainland Scandinavian languages. Thus, although an internal person/number paradigm is absent, the finite verb form in itself does show the presence of agreement.

Third, Wexler (1991) shows that children acquiring Germanic pass through a stage where they master agreement and verb movement, but not tense (i.e., not the difference between present and past tense). This holds for both Dutch (an overt agreement language) and Swedish. If Swedish were to lack agreement altogether, we could not express Wexler's findings in a satisfactorily generalizing way. On the other hand, if Swedish does have abstract agreement, we can simply say that at this early stage children acquire abstract agreement. 4

Fourth, Mainland Scandinavian languages do show overt agreement phenomena in the nominal system. Noun phrase internal agreement is illustrated in (5), predicative agreement in (6).

(5) a. en stor mand =MASC big man
b. et stor hus =NTR big-NTR house

(6) a. maanden er syg =Danish
b. barnet er syg =NTR

c. jeg malede huset =great
f. painted house =the-NTR green+NTR

It would be strange if this agreement system were only operative in the nominal syntax. Moreover, since agreement features are obviously present in noun phrases (NP's), these features have to be checked in the syntax. This means that the structure of a clause must contain agreement phrases containing the designated positions for checking and eliminating the agreement features before the derivation reaches the interface levels.

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

This raises the question why complementizer agreement is never overt in Mainland Scandinavian, not even in the dialects that do show an agreement paradigm.

At this point, it may be relevant to consider the distribution of complementizer agreement in Dutch dialects. The distribution of complementizer agreement of the South Hollandic type among Dutch dialects is studied in E. Hoekstra (1993). The relevant dialects show number agreement pattern, where the complementizer ends in -e (schwa) when the subject of the embedded verb is plural. Hoekstra observes that this type of agreement is found only when both the verbal plural form and the nominal plural form end in schwa. When one of the plural forms ends in schwa and the other one in -en, complementizer agreement is systematically absent. 5

Put more generally, it is a precondition for complementizer agreement that the nominal plural forms and the verbal plural forms be identical. 6

Another precondition for complementizer agreement, Hoekstra notes, is that there be a morphological opposition between singular and plural in the verbal paradigm.

1 It does not follow from this observation that all dialects in which the plural ending of verbs and nouns are identical show complementizer agreement. This situation also obtains in Standard Dutch, for instance, where complementizer agreement is nevertheless absent.

2 Abstracting away from subregularities and irregularities in the verbal and nominal paradigm.
These preconditions for complementizer agreement appear to be absent in the Mainland Scandinavian languages and dialects. A survey check of Norwegian dialects shows that either the nominal and verbal plural forms are different, or the singular and plural verbal forms are identical. In Standard Danish, Norwegian, and Swedish, the nominal plural form ends in -er, just like the verbal plural form. Thus, one of the preconditions for complementizer agreement is met. However, the other precondition for complementizer agreement is not met, since there is no morphological opposition between singular and plural in the verbal paradigm.

This is also true of the Norwegian dialects I checked which showed similar endings for the verbal plural forms and the nominal plural forms. For instance, the dialects spoken in the North of Norway generally show a plural ending -e both in the nominal and in the verbal paradigm. However, these dialects also do not show a morphological opposition between singular and plural in the verbal paradigm. As in Standard Norwegian, there is only one present tense agreement form (ending in -e in these dialects: Lockertsen 1964).

Other Norwegian dialects, especially the Midlandisk area, do show a morphological opposition between singular and plural in the verbal paradigm. However, all the dialects I have been able to check fail to meet the other precondition for complementizer agreement: the non-distinctness of the plural ending in the nominal and the verbal paradigm. Thus, the Midlandisk dialects reported in Vigeland (1981:680) have in the present tense a singular ending -e or -e2 and a plural ending -e (if, according to Trosterud, p.c.), indefinite plural nouns, on the other hand, have a variety of productive plural endings. For several stems, the ending is -e, but this vowel does not have the same quality as the plural ending indicated by -e above (Trosterud, p.c.).

Similar conclusions can be drawn for older stages of the Mainland Scandinavian languages. Thus, the facts from Middle Danish reported by Vikner (1991a:131) show that the nominal plural ending is -er whereas the verbal plural ends in -e. Old Norse had a full person agreement paradigm in the plural, again excluding complementizer agreement.

If I am correct, the absence of overt complementizer agreement in Mainland Scandinavian is related to the fact that the nominal and verbal paradigms in the Mainland Scandinavian languages and dialects fail to meet the preconditions for the appearance of overt complementizer agreement. There is no reason, however, to conclude from the absence of overt complementizer agreement that AgrS-to-C movement does not take place. In this respect, Mainland Scandinavian is comparable to Standard Dutch and Standard High German, where the AgrS-to-C movement hypothesis provides a satisfactory account for the verb movement asymmetry in these languages. The optimal assumption, therefore, appears to be that AgrS-to-C movement takes place in Mainland Scandinavian as well, explaining the asymmetry between main clauses and embedded clauses with respect to the position of the finite verb in the familiar way.

4.3 The Status of Specifier Positions

In this section, I will discuss the following question: Does AgrS-to-C movement turn the specifier position of CP into a checking position for the N-features of AgrS? This question can also be phrased differently: Does not AgrS-to-C movement disqualify the specifier position of AgrS as a checking position for the N-features of AgrS?

These questions are relevant for the validity of the analysis of verb movement in subject initial main clauses proposed here, since this analysis entails that AgrS-to-C is a precondition for checking the N-features of AgrS in the specifier position of AgrSP. Consequently, it cannot be the case that AgrS-to-C movement disqualifies the specifier position of AgrS as the checking position for the N-features of AgrS. The idea that AgrS-to-C movement turns the specifier position of CP into a checking position for the N-features of AgrS is equally incompatible with the analysis of subject initial main clauses proposed here. If AgrS-to-C movement had this effect, we could assume that AgrS moves to C in subject initial main clauses as well, and then the subject would have to move to the specifier position of OP to get its N-features checked. Consequently, we would lose our argument for the head initial status of AgrSP.

More generally, the issue under consideration here touches on the question whether licensing positions are derived from head movement or fixed. I will argue that the restrictive theory of feature matching under sisterhood advanced in section 1.2.2 provides an answer to this question. The idea that functional head movement changes the status of the specifier positions involved has been put forward several times in the literature. In this view, AgrS-to-C movement would disqualify the specifier position of AgrSP as a position for checking the N-features of AgrS. Instead, the specifier position of CP would become a derived checking
position for the N-features of AgrS. This has been suggested as a way to refute a forceful argument against the generalized V-to-C analysis of Dutch and German in Travis (1984:121), based on the impossibility of moving weak pronouns to the specifier position of CP.

The idea that head movement creates derived checking positions will be illustrated and discussed in section 4.3.1. This discussion hinges on the definition of checking domain proposed in Chomsky (1992) to account for the properties of multi-argument verb constructions. I will conclude that the proper analysis of these constructions does not require the definitions to be set up as proposed in Chomsky (1992). In section 4.3.2, I will propose a more restrictive definition of checking domain, based on the theory of feature matching in section 1.5.2.

The conclusion will be that functional head movement may create derived checking positions for V-features but not for N-features.

This raises the question, whether AgrS-to-C movement in Dutch does not make the specifier position of CP available as a licensing position for the subject. This issue will be illustrated and discussed in section 4.3.2. The conclusion will be that the specifier of CP in Dutch never qualifies as a licensing position for the subject, and that Travis' argument is valid.

4.3.1 The Effect of Functional Head Movement

a. The Problem

It is commonly assumed that heads can enter into a relation with other elements, e.g. for the purpose of 8-role assignment or feature checking, only if conditions of locality. Thus, there is a limited set of positions in any X-bar representation that a head can access. Chomsky (1992:15) calls this set of positions the domain of a.

The domain of a is the set of nodes contained in the maximal projection of a, except a itself and the projections of a. A head b which is adjointed to a will also be part of the domain of a (Chomsky 1992:16).

4.3.2 The Domain of a

The domain of a consists of the complement of a, the residual domain, and the maximal residual domain. The minimal domain of a consists of the complement of a and the residual domain. The maximal residual domain is called checking domain (Chomsky 1992:17).

The internal domain of a consists of the complement of a. The checking domain of a consists of the specifier of a, including, possibly, an element adjointed to the specifier of a, and furthermore by elements adjointed to a (a raised head) or to projections of a.

In that case, the domain of a will equal the domain of a, with the exception that a itself is not part of the domain of a. Thus, the movement of a movement of b to a is that b acquires the domain of a.

It is slightly misleading to speak of the domain of a, when b moves to a, b heads a chain CH = (b,a). Therefore, not a is itself enters into relations with elements in the domain of a, but the chain CH = (a,b). Thus, adjunction of a to c has the effect that the domain of a becomes part of the domain of the chain (b,a). Chomsky further assumes that the domain of a head of a or b is divided into two complementary subdomains: the complement domain and the residual domain (Chomsky 1992:17). Of these, only the former is strictly defined: the complement domain of a or b is the complement of a and everything dominated by the complement of a. The residual domain of a is what is left of the domain of a when the complement domain is left out. Intuitively, the complement domain is relevant for 8-role assignment, and the residual domain is relevant for feature checking.

The set of nodes accessible to the head must be further reduced to comply with minimality (cf. Chomsky 1986b:42). For this reason, Chomsky defines the minimal domain of a head a the set of nodes in the domain of a, that are not dominated by another node of the domain of a (1992:16).

The minimal domain of a can now be divided into a maximal complement domain and a minimal residual domain. The minimal complement domain is called internal domain, and the minimal residual domain is called checking domain (Chomsky 1992:17).

The internal domain of a consists of the complement of a. The checking domain of a consists of the specifier of a, including, possibly, an element adjointed to the specifier of a, and furthermore by elements adjointed to a (a raised head) or to projections of a.


2 In particular, elements adjointed to the maximal projection of a are also part of the checking domain. This case is illustrated in section 4.3.2 of this paper. The analysis is based on the assumption that the elements are adjointed to the specifier of a, and thus included in the minimal domain (Chomsky 1992:17).
Let us now consider the effect of head movement on the definition of the internal domain and the checking domain of the moved head. The definitions provide a head $\beta$, which will move to $\alpha$, with an internal domain and a checking domain before the movement takes place. In (1), $\beta = Y$ and $\alpha = X$:

$$
\begin{array}{c}
\chi \downarrow \chi' \\
\chi' \downarrow \chi'' \\
\chi'' \downarrow \chi''' \\
\chi''' \downarrow \chi'''
\end{array}
$$

Then the internal domain of $Y$ in (1) is (UP), and the checking domain of $Y$ in (1) is (WP).

Chomsky (1995:217) notes that after $Y$ is moved to $X$, we do not want to ‘redefine’ the internal domain and the checking domain of $Y$. Rather, a new object, the chain $(\chi', \chi'')$, has emerged from the movement operation. For this new object, we have to determine the internal domain and the checking domain again. As noted above, the domain of a head $\alpha$ consists of the set of nodes accessible to $\alpha$ for the purpose of feature checking. We have assumed that in Dutch, AgrS moves to C in order to make it possible that the N-features of AgrS be checked off against the features of the subject in the specifier position of AgrS. AgrS-to-C movement creates a chain (AgrS). If the specifier position of AgrS is not in the checking domain of the chain (AgrS), AgrS-to-C movement could never serve the purpose of checking the N-features of AgrS.

Chomsky (1995:218) proposes that the complement domain of a chain $(\chi', \chi'')$ consists of the complement of $\chi'$ and whatever it dominates. Recall that the complement of a head $\beta$ which is adjoined to $\alpha$ is the complement of $\alpha$. Thus, in (2), the complement of $Y$ equals the complement of $X$, i.e., YP itself is excluded from the complement domain of the chain (Y), since it contains a member of this chain, $\chi$. But WP, dominated by YP, is part of the complement domain, and hence of the internal domain, of the chain (Y).

This implies that movement of a head $\beta$ to a head $\alpha$ disqualifies the specifier of $\beta$ as a checking position for the features of $\beta$. This conclusion puts our analysis of AgrS-to-C movement in jeopardy. If AgrS-to-C movement disqualifies the specifier position of AgrS as a checking position for the N-features of AgrS, the requirement that the N-features of AgrS be checked in overt syntax cannot be the trigger for overt AgrS-to-C movement.

However, Chomsky (1995:219) slightly revises the definition of the minimal domain so as to exclude YP from the minimal domain of the chain (Y), and to include WP in the internal domain of this chain. As before, the first maximal projection dominating the head of the chain determines the outer limit of the domain of the chain. In (2), the first maximal projection dominating Y is XP. Thus, all nodes represented in (2) are potentially part of the domain of Y, except XP.

\[\text{Notes that this revision also covers the original case, where CH is a trivial chain (consisting of only one member). The nodes of CH that are non-distinct from CH (i.e., the properties of CH) also contain CH.}\]
Let us therefore turn to a critical examination of the way the internal domain of a chain is defined in Chomsky (1992).

b. Larsonian Structures

In Chomsky (1992), the internal domain of a chain resulting from head movement consists of the complement and the specifier of the foot of the chain, say \( \beta \) (i.e., the internal domain of (\( \gamma, \delta \)) in (2) is (\( \gamma I.P \))).

Before head movement, the specifier of \( \beta \) does not belong to the internal domain of \( \beta \), but to the residual domain (also, the checking domain). Thus, head movement enlarges the internal domain of \( \beta \). More correctly, head movement of \( \beta \) to \( \alpha \) creates a chain \( (\delta, \beta) \) with an internal domain consisting of the minimal domain of \( \gamma \), the trace of \( \beta \).

Recall that the internal domain contains the positions relevant for 0-role assignment. We can now say that head movement makes an additional position for 0-role assignment available.

This ties in with the analysis of Larson (1988a,b) of multi-argument verbs like put in (3):

(3) John put the book on the shelf.

The verb put appears to have two internal arguments, roughly characterized as a theme (the book) and a location (on the shelf). On the assumption that syntactic representations consist of binary branching structures, constructions like (3) pose a problem, since the two internal arguments of put cannot both be a complement of the verb put.

To solve this problem, Larson (1988b) proposes that (3) be analyzed as containing two VPs, each with a head, a specifier, and a complement. The second VP is the complement of the first VP. Put is generated in the head of the second VP, and the head of the first VP is empty.9 This yields the following structure for (3):

(4) John \( e \) the book put \( \delta \) on the shelf

(3) is derived by moving put to the empty head of VP. This head movement yields a chain (put, \( e \)). Before head movement, the book is outside the internal domain of put. After head movement, the book is in the internal domain of the chain (put, \( e \)).

Thus, the definitions in Chomsky (1992) exactly give the required result for multi-argument verb constructions, under the assumptions of Larson (1988).10

However, it is not clear that these definitions have similar results outside the domain of multi-argument verb constructions.11 For instance, if \( \beta \) is a functional head moving to \( \alpha \), yielding a chain \( (\delta, \beta) \), the specifier of \( \gamma \) will belong to the internal domain of the chain \( (\delta, \beta) \). However, this result is void, since functional heads do not assign a 0-role.12

Thus, it looks like Chomsky's definition of the internal domain of head movement chains is ad hoc.

Recall that the crucial point in Chomsky's definition is that the internal domain of the chain \( (\alpha, \gamma) \) consists of a subset of the nodes of the complement of the head of the chain, \( \alpha \). Let us change this definition slightly, and propose that the internal domain of the chain \( (\alpha, \gamma) \) is the minimal complement domain of the foot of the chain, \( \alpha \).13

This will have the consequence that the specifier position of a moved head will not become part of the internal domain of the chain resulting from the head movement. Being outside the complement domain of the chain, it will automatically become part of the residual domain of the

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9 See Hawkins (1991) for a similar analysis, in which the head of VP, is empty and the lexical verb is generated in the head of VP.

10 In fact, the definitions are set up so as to achieve this result. Cf. Chomsky 1992:12.

11 The same point is made in Breckinridge and Den Dikken (1993).

12 Chomsky (1986b) assumes that I assigns a 0-role to the VP. However, I know of no constructions where it has been argued that a functional head (or a chain headed by a moved functional head) assigns a 0-role to an element in a specifier position.

13 Chomsky (1992:17) argues that head movement chains always consist of maximally two members, so that \( \alpha = \gamma \).
chain. On the assumption that nodes containing a member of the chain are not part of the domain of the chain, the specifier position of the foot of the chain will then be in the minimal residue of the chain, hence in its checking domain.

This is a desired consequence for us, since the specifier of AgrSP will be in the checking domain of the chain (AgrSP) resulting from AgrS-to-C movement.

Another consequence, however, is that the Chomsky-Larson analysis of multi-argument verb constructions is no longer available. Since head movement does not enlist the specifier of the foot of the chain in the internal domain of the chain, the generalization is lost that the theme the book is an argument of the verb put in (3).

At this point, we are fortunate that Larson's analysis of multi-argument verb constructions is not the only theoretically acceptable way to reconcile the properties of these constructions with the binary branching principle. In particular, it has been argued often that constructions like (3) contain a Small Clause of which the theme is the subject and the location the predicate.

This would give (3) the structure in (5):\(^{13}\)

\[ \begin{array}{c}
   \text{VP} \\
   \text{NP} \\
   \text{V} \\
   \text{XP} \\
   \text{X'} \\
   \text{PP} \\
   \text{John put the book on the shelf} \\
\end{array} \]

According to the structure in (5), put takes a propositional complement. The book is not an internal argument of put, but an external argument of on the shelf.

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\(^{13}\) See den Dikken (1992b) for a Small Clause analysis of constructions like John put the book down on the shelf.

\(^{14}\) See Carrier and Randall (1992) that the Small Clause analysis is inappropriate for reflexives, see den Dikken (1992). See also den Dikken (1992b) for extensive discussion.

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This gives multi-argument verb constructions of the type in (3) the same analysis as resultative constructions like (6):\(^{14}\)

(6)

a. John put the book down

b. John ran the pavement thin

In (6b), it is clear that the pavement is not an internal argument of ran but an external argument of thin. An analysis in which ran has been moved up in the same way as put in (3) does not seem to be available here. Likewise, we could argue that the book in (6a) and (3) is not an argument of put, but an (external) argument of down and on the shelf, respectively. The interpretation that the book is an argument of put in these constructions may be due to our knowledge of the world, since it cannot be avoided that John actually handled the book in order to put it down or on the shelf (cf. Kayne 1985, Hooekstra 1988, Sybesma 1992, Mulder 1992).\(^{15}\)

The Small Clause analysis of constructions like (3) captures the fundamental idea underlying the Larsonian structures, namely that all arguments are initially structured within the VP in subject-predicate form, with outermost elements being hierarchically most subordinate (Larson 1986b:8).

The two analyses differ in the role played by the verb put. In the Larsonian analysis, put is generated as the head of a lower VP, whereas in the Sybesma analysis, the head of the Small Clause is empty, and put is generated as the head of the higher VP.

In terms of Generalized Transformations, the first step in creating a Larsonian structure for (3) is to combine put with the PP on the shelf.
the Small Clause analysis, the first step consists in combining the PP on the shelf with an empty head. It may seem unattractive to start out a derivation by expanding an empty head. However, this is not an argument against analyzing (3) as involving a Small Clause. If Hornstein and Lightfoot (1987) are correct, Small Clauses generally contain an empty head. Thus, if Small Clauses exist at all, we must accept the possibility that derivations start out by expanding an empty head.

Let us assume that the empty head of a Small Clause is a copular verb, indicated by capital B. Then the Small Clause constructions in (6) can be paraphrased as in (7):

(7)

a. John put the book [on the shelf].
   John run the pavement [on the shelf].

The derivation of these constructions then starts out by combining BB and a predicate.

Likewise, (3) must be paraphrased as (8), in the Small Clause analysis:

(8)

John put the book [on the shelf].

More generally, we can state that a PP cannot function as a predicate unless it is first combined with a copular verb. The Small Clause analysis of (8) thus yields a 'small predicate' BB on the shelf, instead of a 'small predicate' put on the shelf. BB on the shelf is then predicated of the subject the book, just like the PP thin on the shelf in (7b). Then, by another application of Generalized Transcription, the resulting subject-predicate combination the book BB on the shelf is combined with put. In a Larsonian analysis, the derivation of (3) starts out by combining put with the PP on the shelf. The resulting 'small predicate' is combined with an external argument the book, which is combined with an empty verb to yield the larger predicate the book put on the table. Put is then moved to e in order to enlarge the internal domain of put: the book becomes the internal argument of the chain (put e).

This analysis has two problems which the Small Clause analysis does not have. First, the movement of put to the head of the higher VP is not obviously triggered by morphological requirements. Chomsky (1991) suggests that verbs are specified in the lexicon for the number of internal arguments that are associated with it. Let us call this the ID value (for Internal Domain). Put has ID = 2, because it requires a theme and a location. If put is the head of the lower VP, as in a Larsonian analysis, it has only one argument, the subject on the shelf, its internal domain. Chomsky suggests that put moves to the head of the higher VP in order to enlarge its internal domain. As a result of the movement, the book belongs to the internal domain of the chain (put e).

Thus, put moves to satisfy its ID value.

This amounts to saying, in pre-minimalist terms, that put moves in order to assign an Internal E-role. This runs counter to what seems to be one of the core ideas of generative syntax, namely the idea that generation of elements (binary operation) is motivated in terms of thematic relations, whereas movement of elements (singular operation) is motivated in terms of morphological relations (such as structural case, number, person). This idea is prominently present in the minimalist framework, which restricts movement to morphological feature checking. We could of course define the set of morphological features triggering movement in such a way that the ID value is included, but it is unclear whether this mixing thematic and morphological features is independently needed.

Chomsky (1992:286) argues against the idea that the initial representation is a fully fledged "D-structure." But even if we adopt the structure building process of generalized transformations, it appears that there has to be some order in the way structures are built up, to the extent that verbs are first combined with their complements rather than with adjuncts. If thematic relations can be satisfied by singular operations, nothing prevents generation of complements in the external domain. A stricter version of the minimalist approach would be to maintain that singular operations are driven by morphological licensing requirements only.

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14 Alternatively, if Small Clauses do not contain a head, the Small Clause results from combining the PP on the shelf with the subject the book.

15 See Hornstein and Muider (1990) for an analysis of material and positional unergative verbs which appear to take PP arguments, e.g. wash the shoe, as copular verbs.

16 This is a reformulation of the analysis in Larson (1995a, 1996b) in terms of the Minimalist Program, as in Chomsky (1995:198 and Fall term class lectures of 1991). In Larson\'s original analysis, put raises to the head of the higher VP in order to assign Case to the theme the book in the specifier position of the lower VP.

17 Including the ID value in the set of morphological features leads to the consequence that elements are always generated in order to eliminate "morphological" features. We could maintain that a verb with ID = 1, like kiss, is generated and combined with a direct object to satisfy the ID value of kiss. Obviously, this stretches the meaning of the term 'morphological' somewhat.

18 Chomsky (1992:286) mentions easy to place constructions as problematic for the concept of D-structure. He suggests that John in John is easy to place occupies a sub-

19 position, and hence cannot appear at D-structure. However, if we assume that he always has a Small Clause complement, John is generated in the position of external argument of the Small Clause, hence in a b-position. This assumes a structure at (10b,c), (11c)
A second problem with the Larsonian analysis of multi-argument verb constructions is that it is not clear whether examination of the number of arguments of a verb, and specification of the type of thematic role of these arguments, must be part of a minimalist theory of the organization of the lexicon. T. Hockstra (1990) forcefully argues that the combinatorial properties of lexical elements are to a large extent determined by the aspecral properties of these elements. Small Clauses specify a state (e.g., the pavement thin). The function of a state argument to a non-telic verb is to terminate the event being denoted (e.g., *John ran the pavement thin*). For this reason, resultative Small Clauses are only found when the predicate does not have an inherent termination point. This excludes Small Clause complements with verbs like kill (e.g., *John killed the house into a morgue*). So, the combinatorial properties of verbs like run and kill need not be specified in the lexicon. A specification of the aspectral properties of these verbs suffices.

Importantly, this makes it superfluous to specify verbs that can be combined with resultative Small Clauses as potential multi-argument verbs (contra Carney and Sandall 1992). A verb like run simply denotes a non-telic event which can be turned into a telic event by adding a Small Clause complement.

Ideally, this simplification of the lexicon carries over to other multi-argument verb constructions. In the case of put, this can be achieved by specifying that put lacks an inherent termination point. Therefore, it has to be combined with a Small Clause terminating the event, in order to create a meaningful predicate. Put differs from prove in that put has to combine with a state denoting element, whereas prove can also combine with a simple noun phrase.21 All that needs to be specified in addition is that put requires that the state denoted by its complement is locational or situational (to exclude *John put theborn red*).

This approach, initiated by Hockstra (1990) (see also Mulder 1992), promises a more minimalist theory of lexical information. In particular, it becomes possible to maintain that all lexical elements take one internal argument at the most.22 If so, the Chomsky-Larson analysis, in which put is first introduced as the lower verbal head, taking a PP as its complement, and then moves up to the higher verbal head to make sure that the theme noun phrase is included in the internal domain of put (or the chain (put)), is not satisfactory.

Positive evidence that the shelf in (3) is a predicate rather than an adjunct or a complement can be obtained if we consider the Dutch counterpart of (3):

(9) Jan zette het boek op de plank
    John put the book on the shelf

Dutch

In embedded clauses, the PP op de plank ‘on the shelf’ had to appear to the immediate left of the verb:

(10) a. dat Jan het boek gisteren op de plank zette
    that John the book yesterday on the shelf put
    b. *dat Jan het boek gisteren op de plank gisteren zette
    that John the book yesterday on the shelf yesterday put
    c. *dat Jan het boek gisteren zette op de plank
    that John the book yesterday put on the shelf

In this respect, op de plank in (10) differs clearly from adjunct PPs (Hoeckstra 1984:235) (11) and complement PPs (12):

(11) a. dat Jan Marie gisteren in de tuin knoopte
    that John Mary yesterday in the garden kissed
    b. *dat Jan Marie in de tuin gisteren knoopte
    that John Mary yesterday kissed
    c. *dat Jan Marie in de tuin knoopte
    that John Mary in the garden kissed

(12) a. dat Jan nooit alstublieft van Marie houdt
    that John never always of Mary holds
    b. *dat Jan van Marie nooit alstublieft houdt
    that John of Mary never always holds
    c. *dat Jan van Marie nooit alstublieft houdt
    that John and Mary never always holds

---

21 There are some special cases of put in which a Small Clause complement is not required, as in I don’t know what to put and You put first in that put.
22 See also K. Hockstra (1981) and Mulder (1992). Hockstra argues that licensing relations are unique in the sense that a verb can have only one complement, multi-argument verb constructions must therefore contain several verbs (1991:6). Mulder follows K. Hockstra in arguing that complementation serves to aspecrally bound the event denoted by the verb, and notes that it follows that verbs can have but one object, since events can only be bounded once. Mulder (1992:116) stresses the differences between his Single Object Corollary and Larson’s (1986b) Single Complement Hypothesis. The latter follows from binary branching.

(continued...)
FPs like op de plank in (3) share the property of being obligatorily left-
adjacent to the verb with particles, resultative predicates, and unexpect-
Small Clause predicates, as is demonstrated in (13)-(15):

(12) a. ...dat Jan het boek maar weer neer zette
    that John the book but again down put
    "that John finally put the book down again."

b. * ...dat Jan het boek maar weer zette
    that John the book down but again put

(13) a. ...dat Jan zijn gympies telkens door rende
    that John his sneakers time and again through ran
    "that John ran his sneakers through all the time."

b. * ...dat Jan zijn gympies door telkens rende
    that John his sneakers through time and again ran

(14) a. ...dat Jan Marie nog steeds aantrekkelijk vindt
    that John Mary still attractive considers
    "that John still considers Mary attractive."

b. * ...dat Jan Marie aantrekkelijk nog steeds vindt
    that John Mary attractive still considers

This left adjacency to the verb is generally taken to be a rock solid test for
Small Clause predicate status.

Finally, let us consider what happens when op de plank is combined with a
particle, as in (16):

(16) Jan zette het boek op de plank neer
    "John put the book on the shelf down"

In that case, the particle shows the distribution of a Small Clause
predicate, whereas the PP shows the distribution of a non-predicate (De
Dikken 1992a:70):

(17) a. ...dat Jan het boek neer zette op de plank
    that John the book down put on the shelf
    "that John put the book down on the shelf."

b. * ...dat Jan op de plank het boek neer zette
    that John on the shelf the book down put

c. * ...dat Jan het boek neer op de plank zette
    that John the book down on the shelf put

This becomes relevant when we consider one of the seemingly favorable
consequences of a Larsonian analysis for (3).

Larson (1988b) argues that Heavy NP Shift does not consist in
movement of a heavy NP to the right, but of movement of a predicate to
the left. In multiple-argument verb constructions like (3), the heavy NP
is in the specifier position of the lower VP, and the predicate moving to
the left is the ‘small predicate’ put on the shelf (1988b:11). This is
illustrated in (18):

(18) John [put on the shelf] [all the Tarzan novels be possessed] ?

In (18), the ‘small predicate’ put on the shelf, a V category, has been
reanalyzed as a V, and has moved to the head of the higher VP.

However, this analysis is inappropriate if we consider particle verb
constructions like (19):

(19) John put the book down on the shelf

The Dutch evidence shows that in this case, the particle down is the Small
Clause predicate, and the PP on the shelf is a non-predicate (cf. (17)). We
expect that if we turn (19) into a Heavy NP Shift construction, the adjunct
PP will not be part of the ‘small predicate’, and will not be able to move
along with the ‘small predicate’ put on the shelf to the head of the higher VP.

This, however, is not what we find:

(20) a. John put down on the shelf all the Tarzan novels be possessed
    b. ?? John put down all the Tarzan novels be possessed on the shelf

If Larson’s analysis of Heavy NP Shift in multi-argument verb
constructions is correct, we must conclude that the combination of a verb,
a particle, and an adjunct PP can be reanalyzed as a V and can move up
to a V-position. This seems to be an unattractive extension of the analysis.

Summarizing, it appears that much is gained by analyzing the theme
in (3) as not an internal argument of put (or of the chain (put(3))),
but as the subject of the Small Clause complement of put. Recall that
Chomsky’s (1992:19) definition of the internal domain of a head movement
chain (\alpha,\alpha’) was devised in such a way that the specifier position WP of \alpha
becomes part of the internal domain of the chain (\alpha,\alpha’). As a result, this
definition ensures that head movement disqualifies the specifier position
of the lower head as a checking position for features of the chain resulting
from the head movement.

We have seen that this definition is ad hoc. It is tailor made to fit the
analysis of multi-argument verb constructions of Larson (1988a). This in
itself is sufficient reason to amend the definition if such an amendment
is called for. In addition, we have seen that the Chomsky-Larson analysis
of multi-argument verb constructions can be replaced by a Small Clause
analysis with favorable results. If so, there is no empirical or conceptual
motivation for Chomsky’s definition of the internal domain of a chain left.
c. English and Irish

Chomsky (1992:44) employs the idea that head movement from $\beta$ to $\alpha$ disqualifies the specifier position of $\beta$ as a checking position to derive the Extended Projection Principle for English.

According to the Extended Projection Principle, the structural subject position must be realized (Chomsky 1981:40). In our framework, the structural subject position is the specifier position of AgrSP.

Chomsky assumes that some languages, English among them, adhere to the Extended Projection Principle, whereas other languages, like Irish, do not. The latter conclusion follows if these languages have overt verb movement to AgrS, but no overt movement of the subject to the specifier position of AgrSP. The overt SVO-VSO distinction between English and Irish suggests such an analysis (22 from Bobaljik and Carnie 1992):

(21) John kissed Mary

(22) Chomsky Seeks an ending

see PAST John the dog

"John saw the dog."

How can we ensure that the specifier position of AgrSP is always filled in English? The easiest way would be to state that the N-feature of AgrS is strong. However, Chomsky (1992:10,44) assumes that languages have only one AGR, which can be instantiated in various positions to check off different features. Thus, AgrS and AgrO are not inherently different. As a result, AgrS and AgrO cannot have different feature specifications: if AgrS has strong N-features, so has AgrO.

Consequently, if we assume that English AgrS has strong N-features, it must be the case that English AgrO has strong N-features as well. This means that the direct object in English overt syntax must not be inside the VP, but in the specifier position of AgrSP. On the assumption that this is not the case, we must define the N-features of Agr in English as weak.\(^{23}\) We must therefore find another way to make sure that the subject ends up in the specifier position of AgrSP in overt syntax in English.

At this point, we must introduce another assumption concerning English syntax made in Chomsky 1992. Chomsky (1992:10) notes that subject noun phrases check their features against AgrS, but that part of the properties of the features involved (in particular, the Nominative Case feature) depends on T. Likewise, part of the properties involved in checking the N-features of AgrO depends on V.

To express this close connection between T and AgrS for checking the features of the subject, Chomsky assumes that T raises to AgrS, yielding a complex head [T AGR] combining the Case features of T and the s-features of AGR.\(^{24}\)

Consider the consequence of this T-to-AgrS movement for checking the N-features of T. The N-features of T have to be checked in the specifier position of TP. However, according to the definitions in Chomsky (1992), the specifier position of TP is not in the checking domain of the chain (T, P), but in the internal domain of this chain. Recall that the minimal domain of a chain is the minimal domain of the head of the chain, with the exception of all nodes containing a member of the chain. The internal domain of a chain is the part of the minimal domain that is in the complement of the head of the chain, and the checking domain is the residual part of the minimal domain of the chain, basically the specifier of the head of the chain.

These definitions allow Chomsky to derive the Extended Projection Principle for English, by stipulating that the N-features of T in English are strong. Because of the independently established T-to-AgrS movement, the specifier position of TP is no longer available for checking the strong N-features of T. These features can only be checked in a position in the checking domain of the chain (T, P), hence, in the specifier position of AgrS. This, then, explains the obligatory presence of the subject in the spec of AgrSP in English.

The difference between English and Irish now follows simply by stating that the N-feature of T is strong in English and weak in Irish (Chomsky 1992:44).

This way of deriving the difference between English and Irish seems to provide independent support for the idea that head movement disqualifies the specifier position of the lower head as a checking position. However, Bobaljik and Carnie (1996) show that the analysis in Chomsky (1992) is built on incorrect assumptions concerning word order in Modern Irish.

In particular, Bobaljik and Carnie argue that in a Modern Irish VSO construction like (32) the verb is in AgrS and the subject in the specifier

\(^{23}\) The s-features are the features of person, number, gender.
position of TP. This suggests that, in Modern Irish, the N-features of T and the V-features of AgrS are strong.

The V-features of AgrS being strong, the verb must move to AgrS in a head-to-head fashion. The final step in this movement process takes the verb (actually the complex [[V AgrO] T]) from T to AgrS, yielding a chain (T, T), where T stands for [[IV AgrO] T] and is adjoined to AgrS, and the trace occupies the position of the head of TP.

As before, the specifier position of TP is not in the checking domain of the chain (T, T). This means that the N-features of T cannot be checked in the specifier position of TP when T-to-AgrS movement takes place. If the specifier position of TP is not in the checking domain of the chain (T, T), the subject should not be able to appear in this position.

Nevertheless, the subject in (22) appears in the specifier position of TP, as argued by Bobaljik and Carnie (1992). We therefore cannot accept the idea that head movement disqualifies the specifier position of the lower head as a checking position.

Let us therefore tentatively define the checking domain of a chain (a, b) as the union of the checking domain of a and the checking domain of b. This can be achieved by proposing the following definition of the internal domain of a chain (a, b):

(23) The domain of a chain (a, b), where ∅ is the tree of a, is the union of the domain of a and the domain of b.

(24) The internal domain of a chain (a, b), where ∅ is the tree of a, is the minimal domain reflexively dominated by the complement of b.

(definitions to be revised in section 4.4)

This means that the specifier positions of a and b are in the residual domain of the chain (a, b). Consequently, both ZP and WP in (2) are in the checking domain of the chain (Y, Z). As a result, the specifier position of AgrS remains a checking position for the N-features of AgrS, even after AgrS has moved to C.

The definition of internal domain in (24) answers one of the two questions we set out to investigate in this section. It follows from (24) that AgrS-to-C movement does not disqualify the specifier position of AgrS as the checking position for the N-features of AgrS. However, the definitions leave the possibility that AgrS-to-C movement turns the specifier of CP into a derived checking position for the N-features of AgrS wide open. This question will be discussed in the next section.

4.2.2 Does Head Movement Create Derived Checking Positions?

Consider again a simple head movement structure:

\[
\begin{align*}
\text{XP} & \quad \text{ZP} \\
\text{Y} & \quad \text{X} \\
\text{WP} & \quad \text{Y} \\
\text{UP} & \quad \text{Z}
\end{align*}
\]

In (2), the head of VP has raised and adjoined to the head of XP, yielding a chain (Y, Z). In the definitions of Chomsky (1992), this chain has a minimal domain consisting of the nodes (ZP, WP, UP). The checking domain of the chain is (ZP, WP, UP), and the internal domain is (WP, UP).

We have argued above, that WP should not be included in the internal domain of (Y, Z), but in its checking domain. The question to be asked now is whether ZP must be included in the checking domain of (Y, Z). If not, head movement has no effect on the definition of domains at all.

In other words, the question to be asked is whether derived checking positions exist at all. This question is familiar from the recent literature, predominantly from Rizzi (1991a), where it is argued that head movement may turn an A'-position into an A-position. In particular, if ZP in (2) is an A'-position, head movement from Y to X may turn ZP into an A-position.

Rizzi (1991a:46) proposes the following definition of A-positions, where [Agr] refers to agreement in s-features:

[25] In Chomsky (1981), A-positions are defined as `potential theta positions'. In the less articulated structures employed here, this comprises all VP-internal theta-positions, and the specifier position of CP. This is the position where the external theta role was assigned. The `potential' class ensures that in unaccusative constructions, in which no external theta role is assigned, the specifier position of CP would still count as an A-position, so that raising to
Rizzi then argues that (ii) should be interpreted “as meaning that a Spec in A when contrasted (coindexed) with an Agr specification in its head. The subject agrees with I at the IP level, then if the subject and I are moved to the CP level (I.), the spec of C will agree with C containing I., and will count as an A position under (26)(xii).”

Chomsky (1995:55 note 32) notices that this idea is problematic: “Note that if I adjoins to C forming [I \( \rightarrow \) C], SPEC of C is in the checking domain of the chain (I.). Hence SPEC of C is I-related (to I), and non-I-related (to C). A sharpening of notions is therefore required to determine the status of C after I-to-C raising.”

I propose the following sharpening of notions: a specifier cannot be construed locally with an adjoined head. Thus, no agreement is possible in (2) between \( Z_P \) and Y. The specifier of CP will therefore always be an A-position (a non-I-related position).

This restrictive notion of agreement follows from the minimalist theory of feature checking developed in section 1.5.2. This theory of feature checking requires that N-features be checked in a configuration of sisterhood. This can only be achieved if the N-features of a head \( \alpha \) are also present on the first projection of \( \alpha \), which we have defined as the Projection of \( \alpha \). I have therefore proposed that the morphological features of \( \alpha \) spread to the Projection of \( \alpha \) (under the condition of accessibility).

I have argued that the special status of the first projection of \( \alpha \) should not be expressed in terms of BIR level, but in terms of feature content. This special status of the first projection of \( \alpha \), I have assumed, derives from the circumstance that \( \alpha \) cannot be integrated into a larger structure (through Generalized Transformations) without this first projection. Since the first projection of \( \alpha \) is the only projection that is indispensable, I have proposed to call the first projection of \( \alpha \) Projection, and the other projections of \( \alpha \) Segments.

In this theory, the idea that the features of \( \alpha \) may spread to the Projection of \( \alpha \) leads to an extremely restricted mechanism of feature checking: it can only take place between sisters. Sisterhood, of course, is already known as the required configuration for the head-complement relation, and for checking of V-features. In the latter case, adjoinment to the head creates the required sisterhood configuration. Thus, the idea that features may spread actually leads to a more restrictive theory of feature checking.

At the same time, by limiting feature spreading to the head-Projection relation, the number of possible checking positions is maximally restricted. This leads to the following definitions of checking domain and internal domain:

(26) Checking domain
\[ a \text{ is in the checking domain of } \beta \text{ iff } \]
\[ (a) \text{ is in the residue of } \beta, \text{ and } \]
\[ (b) \text{ passes the morphological features of } \beta, \text{ and } \]
\[ (c) a \text{ and } \beta \text{ are sisters} \]

(27) Internal domain
\[ a \text{ is in the internal domain of } \beta \text{ iff } \]
\[ (a) \text{ is in the complement domain of } \beta, \text{ and } \]
\[ (b) a \text{ and } \beta \text{ are sisters} \]

In (26), it is not excluded that \( \beta - \gamma \). Thus, the checking domain of \( \beta \) contains the sister of \( \beta \) and the sister of the Projection of \( \beta \). According to (27), the internal domain of \( \beta \) is just the complement of \( \beta \), expressing the idea that heads have but a single complement.

Consider now the effects of head movement on the definition of checking domain. Assume the structure in (28), adapted from (2):

(28)...

(29)...

---

\(^{26}\) (continued)
subject has the properties of A-movement, not of A-movement. With the emergence of more functional projections, several other target positions for A-movement were introduced, but these could not be defined as potential theta-positions. Also, on the assumption that subjects are projected inside VP, the specifier position of \( ZP \) (Agr) could not be defined as a theta-position. In the course of these developments, A-positions came to be defined as positions that are coindexed in agreement with a head (B. Hesse 1991:24). On the assumption that the specifier of CP may also agree with C (for instance in wh-features), a further restriction defines as A-positions those specifier positions that are coindexed in agreement with a feature of the verb. Calling these features 'I-features', Chomsky and Lasnik (1991) replace the distinction between A-positions and A-positions by a distinction between I-related positions and non-I-related positions.

\(^{26}\) Where complement domain and residual domain are understood as in Chomsky (1992:18).

\(^{26}\) See note 26 for terminology.
Before head movement of Y to X, the checking domain of Y is \((H, WP)\). H is the sister of Y, WP is the sister of the YP Projection. Only Y and the YP Projection carry the morphological features of Y (see section 1.3.2).

Head movement of Y to X yields the structure in (29):

\[
\begin{align*}
(29) & \quad XP \\
    & \quad \underline{ZZ} \\
    & \quad \underline{XX} \\
    & \quad \underline{XY} \\
    & \quad \underline{WP} \\
    & \quad \underline{YP} \\
    & \quad \underline{Y} \\
    & \quad \underline{UP} \\
    & \quad H \quad Y
\end{align*}
\]

In (29), again only Y and the YP Projection carry the morphological features of Y. Hence, the checking domain of Y remains \((H, WP)\). Crucially, ZP is not in the checking domain of Y, since the sister of ZP is not a Projection of Y but of X.

This leads to the following conclusions:

1. Head movement creates a derived checking position for V-feature checking.
2. Head movement does not create a derived checking position for N-feature checking.

The conclusion that head movement creates a derived checking position for V-features ties in with our earlier analysis of verb movement to C across Agrs in inversion constructions in Dutch. In these constructions, Agrs moves to C. Additional verb movement to C then yields the substructure \((H \{Y\} \{X\})\) in (29), with HeV, Y = Agrs, and X = C. It follows from the definition in (28) that V and Agrs can check off the V-features of Agrs under sisterhood in this substructure.

The conclusions listed above do not change if we accept the point made in Chomsky (1992:17) that the head movement constructions like (28) is not the domain of Y, but the domain of the chain \((Y, Z)\) that results from the head movement. All that is required is the following definition of Projection of a chain:

\[
(30) \quad \text{Projection of a chain CH} \quad \text{if a is a Projection of a member of CH}
\]

Since the XP Projection is not a Projection of any member of the chain \((Y, Z)\), ZP cannot be in the checking domain of the chain \((Y, Z)\). But the YP Projection is the Projection of \(t\), and hence may carry the morphological features associated with the chain \((Y, Z)\). This makes WP a checking position for the N-features of Y (in fact, the only checking position for these features).

Finally, the position of the sister of \(t\) may be a checking position for the V-features of Y, but this position will never be used as such if we assume that adjunction to a trace is excluded.

It follows from this restrictive theory of feature checking that head movement does not create derived checking positions for N-feature checking. Let us therefore consider the empirical argumentation that has been advanced in the literature to support the existence of such derived checking positions (cf. Koster 1991a).

Consider the following paradigm (cf. Koster 1976:210, Travis 1984:123):

\[
(31) \begin{align*}
& a. \quad \text{Het taart niet} \\
& \quad \text{It doesn't work out.}
& b. \quad \text{Het》s iet niet} \\
& \quad \text{It can't be done.}
\end{align*}
\]

The weak object pronouns cannot appear in the first position, weak subject pronouns can. Travis (1984, 1991) takes this to indicate that subjects and topics occupy different positions in Dutch and German. In (31a), het Y is in the structural subject position, the specifier position of IP (Agrs), whereas in (31b), het is in the topic position, the specifier position of CP. The ungrammaticality of (31b) then follows from a restriction on topicalization, to the extent that unstressed pronouns may not topicalize (Travis 1984:129).

This leads to an analysis of Dutch and German subject initial main clauses in which the subject does not end up in the preverbal position by way of topicalization. Consider (32)
If we assume that the subject in (32a) is in the structural subject position (the specifier position of IP/AgRS) and the object in the topic position (the specifier position of CP), the ungrammaticality of (31b) follows from the ban on topicalizing unaccented pronouns. Hence, the subject dat 'that' in (32a) and the object dat in (32b) cannot be in the same structural position.

This analysis carries over to the minimalist framework in a natural way. In (32a), the subject moves to the specifier position of AgRS to check the X-features of AgS. In (32b), the object has a topic feature, which must be checked in the specifier position of CP. (31b) shows that weak pronouns lack a topic feature. Preposing weak pronouns therefore is not triggered by the need to check a topic feature. If so, the pronominal subjects in (31a) and (32a) cannot be topics either, and must occupy a different position from the pronominal objects.

It seems, then, that Travis’s analysis is clear and simple, and it ties in with the conclusions of this book, namely that the functional projections in Dutch, as in English, are head-initial, and that the verb moves to AgS in subject-initial main clauses, and not to C.

Rizzi (1991a) argues that the asymmetry in (31) may be analyzed in a different way if we assume (25ii). Rizzi assumes that non-operator elements, such as pronouns, can only survive in an A- position if they are focalized. Weak pronouns, by their nature, cannot be focalized. This excludes (31b), on the assumption that the object pronoun occupies the specifier position of CP, an A- position.

For (31a), Rizzi assumes the standard analysis of Dutch subject-initial main clauses (Den Besten 1977). Thus, the subject pronoun occupies the specifier position of CP, just like the object pronoun in (31b). However, (31a) differs from (31b) in one respect. In (31a), the head of CP is occupied by a verb which agrees with the subject pronoun. By Rizzi’s interpretation of (25ii), this spec-head agreement turns the specifier position of CP into an A-position in (31a). Consequently, no focalization is required for the pronoun to survive in the specifier position of CP in (31a).

Thus, the idea that verb movement to C may turn the specifier position of CP into an A-position allows Rizzi to maintain the traditional analysis of verb movement in German.

However, the analysis fails in an important respect. If the subject is licensed in the specifier position of IP (AgS/CP), there is no trigger for additional movement of the subject to the specifier position of CP. Therefore, by economy, this movement will not take place. The specifier-head agreement relation that existed between the verb and the subject at the IP level can never be reconstructed at a higher level, unless the subject has additional features that must be checked at that higher level (e.g. a topic feature to be checked in the specifier position of CP).

More generally, specifier-head relations can never be instantiated twice in a derivation. A specifier-head configuration can only be created to check a feature, say a. This feature a gets eliminated as soon as the specifier-head configuration is created. This precludes the possibility of restructuring the same agreement relation in a second specifier-head configuration.

Suppose subjects carry a second feature, say, b (topic feature, which forces an additional movement to the specifier position of CP. As will be discussed in section 5, this movement triggers verb movement to C. Adopting Travis’ (1984) topicalization restriction or Rizzi’s (1991a) focalization requirement leads to the prediction that only strong pronouns and full noun phrases will be able to move to the specifier position of CP.

If so, (31a) cannot be topicalization, as argued above. If we assume, with Rizzi (1991a), that subject-initial main clauses in German and Dutch involve a subject in the specifier position of CP, we predict that constructions like (31a) are non-existent in German and Dutch. This follows from the assumption, entertained by Rizzi (1991a) as well, that

---

26 A similar analysis is presented in Cardinaletti (1999:825). Cardinaletti argues that referential subject pronouns can be topicalized, as in (8), whereas reflexives cannot (8b). (8)

27 The difference between (8a) and (8b), however, follows from the fact that in (8a) there is always a climax, whereas in (8b) there can be a new climax.
subjects are first licensed in the specifier position of IP. This means that \( \phi \) is eliminated inside IP. The additional movement to the specifier position should then be restricted to focalized elements, since agreement with the feature \( \phi \) is no longer visible at the CP level.

It is obvious from constructions like (31b) that subjects in Dutch are licensed in the specifier position of IP (\( \text{AggrSP} \)). Assuming that licensing takes place in specifier-head configurations only, the subject in (31b) checks its N-feature against the N-feature of \( \text{AggrS} \). \( \text{AggrS} \) may be occupied by the trace of the verb which has moved to C, or, as we have assumed, by the trace of \( \text{AggrS-to-C} \) movement.\(^9\)

Thus, the analysis of (31) in Rizzi (1991a) cannot be taken to support the idea that head movement of \( \beta \) to \( \alpha \) turns the specifier position of \( \alpha \) into a checking position for the features of \( \beta \).

### 4.3.3 Conclusion

It follows from a restrictive theory of feature checking that head movement does not create derived checking positions for N-feature checking. Consequently, the proposed analysis in which \( \text{AggrS-to-C} \) movement in Dutch is a precondition for checking the N-features of \( \text{AggrS} \) in the specifier position of \( \text{AggrSP} \) can be maintained.

### 4.4 Accessibility and the Representation of Features

Let us try to make the accessibility parameter more precise. This parameter was introduced in section 1.3.2 and employed in this section to explain the verb movement asymmetry. In particular, we have to make clear why \( \text{AggrS-to-C} \) movement and verb movement to \( \text{AggrS} \) both have the effect of turning a [-accessible] \( \text{AggrS} \) into a [+accessible] \( \text{AggrS} \).

If we assume that feature checking invariably takes place in a sisterhood configuration, the N-feature of \( \text{AggrS} \) can only be checked by the \( \text{AggrSP} \) Projection (i.e., the first projection of \( \text{AggrS} \), see section 1.2.1). Therefore, the \( \text{AggrSP} \) Projection has to have access to the N-feature represented in \( \text{AggrS} \). The \( \text{AggrSP} \) Projection has access to the features of \( \text{AggrS} \) if and only if \( \text{AggrS} \) has the feature [+accessible]. This is expressed in (33)-(34):

\(^9\) Rizzi and Roberts (1989:5) likewise assume that \( \text{I-to-C} \) movement in Germanic does not destroy the specifier-head agreement configuration needed to license the subject in the specifier position of IP.
verbs to AgrS in C. In other words, AgrS-to-C movement yields a chain (AgrS-S), and the only member of the chain that is actively involved in V-feature checking is the head of the chain, AgrS. It then follows from (37) that the V-feature of AgrS is present only on the head of the chain (AgrS-S).

This has a number of consequences. One consequence is that
adjunction of the verb to the foot of the chain (the trace of AgrS) is excluded by economy of derivation. Since the V-feature of AgrS is only present in the head of the chain (AgrS-S), adjunction of the verb to the foot of the chain is not triggered by feature checking requirements, hence is excluded.

It is standardly assumed that adjunction to traces of heads is excluded (cf. Baker 1988). However, this does not follow from the condition of Strict Cyclicity, since this condition does not refer to the content of heads, and does not exclude head adjunction in general.29 But if head movement actually removes the V-feature, as expressed in (37), the ban on adjunction to traces follows from economy of derivation.30

A second consequence of (37) in the domain of head movement is that it is now possible to unify the effects of head movement of AgrS to C and head movement of the verb to AgrS. AgrS-to-C movement removes the V-feature from the AgrS position, since the V-feature of AgrS can only be represented on the head of the trace (AgrS-S). Verb movement to AgrS has the effect that the V-feature of AgrS is checked and eliminated. Both movement operations therefore have the same effect: the V-feature of AgrS is removed from the AgrS position.

If we now assume that the presence of the V-feature in AgrS blocks movement of the N-feature of AgrS to the AgrSP Projection, we can replace (35) by (36):

(36) a is [+accessible] if (and only if) the V-features of a have been removed

The and only if clause is only needed for languages in which the functional heads are not [+accessible] by parameter setting, like Dutch. The presence of the and only if clause in (36) therefore is the only instance of parametric variation in this system.

According to (36), the phenomenon that in some languages head movement is a precondition for N-feature checking is due to the fact that

29 See p. 38 in section 1.3.2 for a definition of the condition of Strict Cyclicity that allows head movement.

30 Notice that this does not in principle exclude adjunction of a clitic to the trace of a head, since it is not clear that clitic adjunction is triggered by morphological licensing requirements to begin with (see section 2.5).

in these languages the V-feature must be removed before N-feature checking can proceed. This, then, appears to be characteristic of the syntax of verb movement in Dutch.

4.5 Conclusion

In this section I have argued for the following analysis of the verb movement asymmetry in Dutch.

AgrS in Dutch has weak V-features and strong N-features. The strong N-features force movement of the subject to the position of sister of the Projection of AgrS (i.e., the specifier position of AgrSP). However, AgrS is specified as [-accessible]. As a result, the Projection of AgrS has no access to the N-features of AgrS. Since the N-features must be checked under sisterhood, AgrS has to be made [+accessible], so that the N-features of AgrS spread to the Projection of AgrS, and the specifier and Projection of AgrS can check off the N-features of AgrS under the required condition of sisterhood.

There are two ways to make AgrS [+accessible]. One way is to move AgrS to C. This takes place in embedded clauses, as discussed in section 3 for complementizer agreement dialects. AgrS-to-C movement does not violate Greed, since this movement serves to eliminate the N-features of AgrS. Since the V-features of AgrS are weak, Procrastinate ensures that no verb movement to AgrS takes place in embedded clauses. Another way to make AgrS [+accessible] is to move the verb to AgrS. This can be done, in violation of Procrastinate, since movement of the verb to AgrS serves to also check off the features of the verb against the V-features of AgrS.

Again, Greed is not violated. This derivation applies in subject initial main clauses. In inversion constructions, both AgrS-to-C movement and verb movement to C take place. In moving to C, the verb skips the original AgrS position, and adjoins to AgrS in C. As this results in the elimination of the V-features of AgrS, Greed again is not violated.

Movement from AgrS to C, by way of independent functional head movement or via head-to-head verb movement to C, does not turn the specifier of CP into a derived checking position for the N-features of AgrS. Hence, if verb movement to C takes place, the subject must always follow the verb (unless the subject carries additional features to be checked in the specifier position of CP).

It follows that the verb in subject initial main clauses does not occupy C but AgrS. This proves that AgrSP in Dutch is head initial.

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5 Topicalization and Wh-Movement

In the previous two sections, I have developed a minimalist analysis of subject initial main clauses in Dutch. In this analysis, the finite verb moves to AgrS and the subject moves to the specifier position of AgrSP. This analysis supports the idea that the functional projections in Dutch are head initial.

The analysis, however, also raises questions concerning the other 'verb second' constructions in Dutch, topicalizations and wh-constructions. Den Besten (1977) showed that verb movement in these constructions targets the position that is occupied by the complementizer in embedded clauses. If this is correct, we must conclude that subject initial main clauses on the one hand, and topicalizations and wh-constructions on the other hand, are different categories: the former are AgrSPs, the latter CPs.

In this section, I will argue that this distinction between subject initial main clauses and other main clauses in Dutch is correct. I will argue for an even stronger conclusion: subject initial main clauses, topicalizations, and wh-constructions are all categorially different. Subject initial main clauses are AgrSPs, topicalizations are TopPs, and wh-constructions are WhPs. This leads us to propose the following phrase structure:

\[(1)\]

```
WhP
  spec  Wh'

Wh
  spec  TopP

  spec  Top'

  spec  AgrSP

    spec  AgrP

  spec  TP

AgrS```

In section 5.1, I will point out certain differences between subject initial main clauses and topicalizations. In section 5.2, I will present the argumentation for splitting up CP into a WhP and a TopP. Finally, section 6.3 contains a minimalist account of the various movement processes associated with topicalizations and wh-constructions.

This section presents further arguments against collapsing all verb second phenomena in Dutch. In addition, it supports the general idea argued for in this chapter, namely that the functional projections in Dutch are invariably head initial.

5.1 Differences between Subject Placement and Topicalization

5.1.1 General Considerations

In the minimalist framework, all movement operations are triggered by the need to eliminate morphological features. These morphological features are represented in functional heads, and are eliminated through a matching operation with elements in the checking domain of these functional heads. The question whether two movement operations target the same position than reduces to the question whether the relevant features are represented in the same functional head.

I have assumed, following Chomsky (1982), that subject placement in general is triggered by the need to eliminate the N-feature of AgrS. This feature, represented in AgrS, must be matched with the corresponding feature on an XP in the specifier position of AgrSP. Let us also assume that topicalization is triggered by the need to eliminate a special ‘topic feature’, represented as [topic]. I assume that this feature, like all features, is represented in a functional head, and that a corresponding feature is present on the XP which is to be topicalized. Topicalization can then be described as a movement operation taking place to eliminate [topic].

The question whether subject placement and topicalization are the same then reduces to the question whether the features of AgrS and the [topic] feature are represented in the same functional head.

It is easy to see that this is not the case in Dutch. Since subject placement and topicalization are both overt in Dutch, we must assume that the N-feature of AgrS and [topic] are both strong in Dutch. This implies that both topics and subjects must be in their licensing position in overt syntax (assuming that no other features are involved that could trigger additional movements). Therefore, we can localize the licensing positions of subjects and topics in a simple topicalization construction like (2):

\[(2)\]

```
AgrS  __________
  spec  TP

AgrSP

  spec  TopP

  spec  Top'

  spec  Wh

  spec  Wh'

WhP```

1 For expository reasons, I abstract away from the actual operation of N-feature checking under movement, involving movement of the M-feature of a functional head to the Projection of a.
2 I assume that [topic] is an N-feature by definition. I will argue below that the [topic] feature is not present on the visibly topicalized XP, but on an empty element (the empty operator or a d-ellipsis) in the specifier position of the CP (to be defined as TopP below). Because of this, it is difficult to associate the [topic] feature with particular prosodic features like stress or pragmatic features like focus. The actual topic, I will assume, is adjacent to the TopP, and can be stressed or focalized at will.
(2) Dat boek ken ik niet.
    That book know I not.

In (2), the topic dat boek 'that book' must be in the designated position for licensing the feature [topic]. Similarly, the subject ik 'I' must be in the designated position for licensing the N-features of AgrS. Since the verb ken 'know' appears between these two positions, we must conclude that the positions designated for licensing the subject and the topic are different. Therefore, the feature [topic] cannot be represented in AgrS.

Thus, on standard minimalist assumptions, subject placement and topicalization differ in a trivial way.

Notice that even if the verb in (2) did not intervene between the subject and the topic, we would still have to conclude that the feature [topic] and the features of AgrS are represented in different functional heads. This situation obtains in English:

(3) That book I don't know

If the topic that book and the subject I were both in the checking domain of AgrS (with [topic] also represented in AgrS), we would have to stipulate that the topic always linearly precedes the subject.

(4) * I that book don't know

No such stipulation is needed if we assume that in (3), like in (2), the topic moves to the specifier position of a functional projection designated for licensing topics.

In the next section, I will present a number of independent differences between subject placement and topicalization, all leading to the conclusion that both movement operations target different positions.

5.1.2 Subject Placement vs. Topicalization

The following differences between subject placement and topicalization in addition suggest that both operations target different positions.

In the definitions of Chomsky (1981), elements adjacent to XP (i.e., not in the specifier position, but adjacent higher up) are in the checking domain of X. In sections 5.3.2 and 5.4.3. I argued that the checking domain consists only of the sister of X and the sister of the Projection of X, i.e., the specifier position of XP. This excludes adjuncts from the checking domain, and it also excludes the possibility of having two features represented in one functional head.
and the subject in the specifier position of CP, we would expect the trace of the subject in the specifier position of AgrSF to be not necessarily adjacent to the verb either. In other words, we would expect the adversial nega of 'ziet' in (6a) to be able to appear between the verb and the fact.

c. Restrictions on embedded topicalization

If subject placement and topicalization are the same process, topicalization should be possible wherever subject placement is possible. However, the two processes are clearly different in embedded contexts.

Notice first that the subject is placed outside the VP in embedded clauses in Dutch, just like in main clauses. This can be concluded from the position of the subject with respect to sentence adverbs, as in (7):

(7)  

On the other hand, topicalization in embedded clauses is severely limited:

(9)  

As can be seen, only adverbs can be topicalized in embedded clauses.

As shown by Nooën (1990), objects can also be topicalized in embedded clauses, provided they receive a strong 'focus intonation.' In addition, another constituent in the construction must be stressed, to achieve a kind of intonational balance:

(10)  

*Focus scrambling is clearly a marked phenomenon. Nooën (1990) shows that it has the properties of A'-movement. This suggests the presence of a third null-related XP-position (in addition to the specifier position of WhP and TopSF, perhaps comparable to the Polarity Phrase of Culler 1981.  

* In Middle Dutch topics can be seen to precede the complementizer (Glenn 1977:246, van den Berg 1992). However, in these cases it looks like an element of the embedded clause appears in the matrix clause, i.e., not in the specifier position of the embedded CP. This is evidenced by the presence of a resumptive pronoun in the embedded clause:

* Neuëman (1990) refers to this phenomenon as Focus Scrambling (cf. section II.1.4).
(10) a. * Piet zag Jan dat die meisjes kauste
    Piet saw John that the girls kissed
    "Piet saw that John kissed the girls."

b. * Piet zag die meisjes dat Jan kauste
    Piet saw the girls that John kissed
    "Piet saw that John kissed THE GIRLS."

However, this is not a very attractive assumption, considering the fact that the specifier of CP must be available as an intermediate position in constructions of long distance movement (cf. section 1.2.1).

A possibly more viable implementation would be based on the analysis of topicalization in Roversi (1978b) (cf. II.2.3; also Weerman 1988:52, Haider 1990, Konneker 1985). In this analysis topics are base generated as left peripheral adjuncts to a clause, coindexed with a resumptive demonstrative element (a d-word) in the specifier position of CP. This d-word is generated inside VP and moves to the specifier position of CP, just like a full topic would, explaining the movement effects associated with topicalization (cf. Chomsky 1977). The d-word may be phonologically null.

This analysis correctly predicts that a d-word may always be present in topicalization constructions in Dutch.  

(11) Marie (die) kwam Jan niet
    Mary that came John not
    "Mary John didn't kiss."

On the d-word analysis of topicalization, there must be room for two elements if topicalization is to occur, the d-word in the specifier position of CP, and the topic adjacent to CP.

We may now assume that there is room for a d-word in embedded clauses in Dutch, but not for a topic adjacent to CP. This may follow from a general ban on adjunction to arguments, as proposed in Holmberg (1988) and Chomsky (1986).  

On this analysis, the constructions in (8b) and (9) are not topicalizations. This is a welcome result, since the special intonational requirements in (9) suggest that the two constructions do not represent a unitary phenomenon.

Recall that we have assumed that sentence adverbs do not have a fixed position (section II.4.2.4). This assumption allows us to describe scrambling as movement to the specifier of AgrOP, hence as a minimalist type of movement. However, as (12) shows, adverbs may not be adjoined to AgrSP in main clauses:

(12) * Gisteren Jan kwam Marie
    yesterday John kissed Mary
    "That's why John kissed Mary yesterday."

The grammaticality of (8b) now suggests that in embedded clauses the domain in which adverbs may appear is stretched, so as to include the position adjoined to AgrSP.

The same domain stretching takes place in inversion constructions, as (13) shows:

(13) Daarom heeft gisteren Jan Marie gekust
    therefore has yesterday John Mary kissed
    "That's why John kissed Mary yesterday."

In our analysis, embedded clauses and inversion constructions have one thing in common: AgrS-to-C movement. It is tempting, therefore, to link the stretching of the domain for adverbs to AgrS-to-C movement, but I will not pursue that issue here.  

If this analysis of topicalization is on the right track, there is only one way to create an embedded topicalization construction in Dutch, namely by inserting a topic after the complementizer and by resuming it by a d-word. This yields a kind of anacolouthon, which can be observed quite frequently in spoken Dutch:

(14) Jan zei dat Marie (die) kwam bij niet
    John said that Mary that came he not
    "John said that Mary, he didn't kiss."

Notice that the (possibly empty) d-word triggers verb movement:

(15) * Jan zei dat Marie (die) kwam bij niet kuste
    John said that Mary that he not kissed
    "John said that Mary that he not kissed"

This can be analyzed in the same way as topicalization in main clauses. I will return to this construction in section 5.3.3, arguing that the complementizer in these constructions is not a target for AgrS-to-C.

* This does not exclude the possibility that language-particular constraints block adjunction of adverbs to AgrSP. As Liliana Hamburger informs me (p.c.), adverbs cannot appear between the complementizer and the subject in West Flemish, even though we must assume that in West Flemish, like in Dutch, AgrS-to-C movement takes place.
movement. As a result, the phrase in the complement of dat has the syntax of an independent CP or AgrS with matrix clause word order. The analysis of (14) closely resembles the analysis of Vikner (1991a) of embedded inversion phenomena in Icelandic and Yiddish. Importantly, these languages do not show the verb movement asymmetry of Dutch and German. In terms of our analysis, this suggests that Icelandic and Yiddish lack AgrS-to-C movement altogether. Possibly, languages without AgrS-to-C movement create constructions like (14) freely, whereas AgrS-to-C languages tend to regard (14) as an anacolouthon. In conclusion, embedded topicalization in Dutch is not freely possible. It has to be either Focus Scrambling or a kind of anacolouthon. This supports the idea that subject placement and topicalization are different.

d. Subject deletion.
In clausal coordination constructions in Dutch, the subject or topic of the second clause can be deleted under identity with the subject or topic in the first clause:

(16)

\[\text{Drie trein rijdt verder als intrekking naar Groningen.}\]
\[\text{This train goes on as intensity to Groningen.}\]
\[\text{en zal alleen stoppen te Assen.}\]
\[\text{and will only stop at Assen.}\]

\[\text{Ja zowel rijdt deze trein verder naar Groningen.}\]
\[\text{Also Zowel goes this train on to Groningen.}\]
\[\text{en zal alleen stoppen te Assen.}\]
\[\text{and will only stop at Assen.}\]

In (16), the subject of the second clause is deleted under identity with the subject of the first clause. The subject gap is filled in by a by-phrase. As argued in Zwart (1991c), the subject gap in (16b) should not be placed to the right of the verb zal ‘will’ (cf. also De Vries 1910-1911:170). This is clear from the agreement on the verb if the subject is the second

This phenomenon is not to be confused with the so-called Telic Topic construction, in which the expression on ‘and’ triggers inversion in the second clause (De Vries 1910-1911:170). This construction also appears in Middle Dutch (Van der Heet 1981:147) in Low German dialects (Jedig 1969:145). In present day spoken Dutch, the construction is felt to be extremely marginal, unlike the topic deletion constructions in the text.
These constructions are slightly odd, like (19b), but far from ungrammatical.\footnote{The marginal deletion constructions in the text contrast sharply with ungrammatical deletion constructions like (19a) and (20). In (19a) the trigger for the deletion is in subject position, in (20) deletion cannot take place under identity, since the trigger is an overt Case marked pronoun.} They indicate that grammatical function is irrelevant for deletion in coordinate structures (cf. Zwart 1991c).

Consider now the following ungrammatical deletion construction:

\begin{verbatim}
(20) * Na Zoete zal deze trein alleen stoppen in Assen.
    Na Zoete vil this train only stop at Assen.
    en = kens je dus better niet nemen
    and can you therefore better not take

"After Zoete this train will only stop at Assen, so you'd better not take it."
\end{verbatim}

A subject following the verb in the first clause cannot trigger deletion of a topic in the second clause.

We can account for this if we assume that an element in the second clause of a coordinate structure can only delete under identity with an element in the first clause if the two elements are in the same structural position.

In (20), the subject in the first clause triggering the deletion is in the specifier position of AgrSP, and the deletion site in the second clause is the specifier position of CP. Hence, the deletion is ungrammatical.

Turning back to the grammatical deletion construction (18b) now, we must conclude that the trigger and the deletion site are in the same structural position. The trigger in the first clause is an inverted subject, hence it is in the specifier position of AgrSP. Consequently, the deletion site in the second clause must also be in the specifier position of AgrSP. The second clause is a subject-initial 'verb second' construction. Hence, these facts lead to the conclusion that subject-initial main clauses can be AgrSPs.

This account of the contrast between (20) and (18b) also has consequences for the analysis of the grammatical deletion constructions in (18). Here, we must conclude that the second clause in (18a) and the first clause in (19a) are also CPs, with the subject in the specifier position of CP. This leads to the conclusion that subjects can be topics as well.

Notice that nothing in the analysis of subject placement proposed in this book excludes the possibility that subjects move on to the topic position, just like objects and adjuncts do. We cannot in principle exclude the possibility that subjects occasionally have a feature topic. If a subject has this feature, it is forced to move to the specifier position of CP. The important point, however, is that there is also no reason to assume that subjects always carry a feature topic, any more than objects and adjuncts do.

Concretely, in the second clause of (15a) and in the first clause of (15b), the subject has the feature topic and moves to the specifier position of CP. In that position, it can be deleted under identity with a topic in the first clause, or trigger deletion of a topic in the second clause.

There is empirical evidence that this is the correct approach. Recall that weak pronouns cannot appear in the specifier position of CP, so we predict now that a construction like (19b) is impossible when the subject in the first clause is a weak pronoun (18a) with a weak pronoun triggering the deletion would be out independently, because the first clause contains a topicalization in that construction.\footnote{Notice that in order to test this prediction, we need to select a weak pronoun that has identical subject and object forms (see section II.1.2). The SGG and the SSG order pronouns are the only candidates, therefore.}

The ungrammaticality of the sentences in (21) can be related to the impossibility of having weak pronouns in the topic position. It is not clear to what extent this affects the second clause of the coordination, since the

\begin{verbatim}
(21) a. * Je werk bij AW, maar - ken ik verder niet

You work for the Linguistics Department, but I don't know (you) further on.

b. * Het spelt perfect, maar - ken je nauwelijks leven

It plays perfectly, but you hardly hear

"It plays perfectly, but he can hardly hear it."
\end{verbatim}
weak pronoun is deleted before reaching PF. But under our analysis, the sentences in (2) could only occur when the subject in the first clause occupies the specifier position of CP as well, and this is excluded when the subject is a weak pronoun (Kristjánsson 1988:58, Merckens 1991:172, Koster 1978b:210, Travis 1984:123).

Summarizing, this analysis of coordinate structure deletion leads to the conclusion that subjects and topics in Dutch occupy different positions.

5.1.3 Conclusion

The hypothesis that the subject and the topic in Dutch occupy different positions in overt syntax follows from the minimalist approach, and is supported by several empirical observations.

5.2 Differences between Topicalization and Wh-Movement

In section 5.1, I have argued that topicalization and subject placement should be kept apart. Both movements are triggered by different feature checking requirements, and target different positions.

Müller and Sternefeld (1990) argue that topicalization and wh-movement should be distinguished likewise. Consequently, CP should be split up in a projection involved in wh-movement and a projection involved in topicalization (see also Müller and Sternefeld 1993, Hoekstra 1992a, Hoekstra and Zwart 1993a). In this section, I will present empirical evidence from Dutch in support of this 'split CP hypothesis'.

5.2.1 General Considerations

a. Terminology

In the literature, several types of constructions are distinguished in which arguments or adjuncts occupy a marked sentence initial position. Following Roe (1987), we may distinguish: topicalization constructions (1) and left dislocation constructions (2):

(1) a. John, I don't like
b. Jan Ik mag hem niet
"John, I don't like him."

(2) a. Jan, die mag ik niet
b. John that may I not
"John, I don't like."

In addition to these two constructions, Dutch has a construction in which the leftmost constituent is immediately followed by a d-word:

(3) a. Jan die mag ik niet
b. John that may I not
"John, I don't like."

This construction is absent from English. Following Rossmeijer (1993), I will refer to it as contrastive dislocation.

Contrastive dislocation must not be confused with a fourth type of fronting, clitic left dislocation (Cinque 1990):

(4) Giovanni, non lo conosco
"John, we don't know him."

The clitic lo resuming the fronted element Giovanni cannot be a topic pronoun (Cinque 1995:56), whereas the resumptive d-word in (3) does not have the phonetic or syntactic properties of a clitic. Thus, die in (3) can be stressed, and can be replaced by a phrasal category:

(5) a. Mec Jan, deerman praat ik niet
b. With John, I don't speak.
"With John, I don't speak."

(6) a. Jan die z'n ouders ken ik niet
b. John that his parents know I not
"John, I don't know his parents."

Another clear difference between lo in (4) and die in (3) is that lo can be clause internal, whereas die is the first element following the fronted element. In fact, die looks like a fronted element itself, triggering subject verb inversion:

(7) *Jan die Ik ken niet
John that I know not

Other differences between clitic left dislocation and contrastive dislocation are that clitic left dislocation can take place in embedded clauses and can involve a stacking of fronted elements (see Cinque 1995:56 for examples), whereas this is impossible in contrastive dislocation (see 5.1.2.c and 5.3.3 for the status of (7b)).
(7) a. * dat Jan die ik niet leer
    dat John that I not know
b. * dat Jan die leer ik niet
    dat John that I not

(8) a. * Jan, op school, daar die ik niet
    John at school there that I not
b. Jan, op school, daar die ik hem niet
    John at school there that I him not
    "John, I didn't see him at school."
c. * Jan, op school, die zag ik daar niet
    John at school that saw I there not

(Eb) and (Ec) contain a combination of contrastive dislocation and left dislocation. As can be seen, the left dislocated element appears to the left of the contrastively dislocated element.

b. Wh-movement

It is useful to compare these four types of left dislocation with wh-movement. In addition to fronting of a wh-element, wh-movement constructions characteristically show the presence of a gap, and much discussed locality conditions on the relation between the wh-element and the gap (Ross 1967, Chomsky 1977:92, Chomsky 1981, Chomsky 1986b, many others). If any of the four left dislocation constructions shows similar properties, it may be the case that covert wh-movement is involved.

It is clear that left dislocation and clitic left dislocation do not involve a gap. This suggests that these constructions cannot be reduced to wh-movement. The non-wh character of left dislocation was demonstrated in Ross (1967) and Chomsky (1977). Cinque (1990) shows the same for clitic left dislocation.1

Topicalization and contrastive dislocation do involve a gap. In addition, they show the same locality effects on the relation between the gap and the fronted element as do wh-constructions (Chomsky 1977:91). The same goes for contrastive dislocation constructions, as can easily be shown:

(9) a. * Wie vertelde Piet het verhaal dat hij het verhaald had?
    who told Piet the story that he had told
    "Who did Piet tell the story that he had told?"
b. * Jan vertelde Piet het verhaal dat hij het verhaald had
    John told Piet the story that he had told
    "John, Piet told the story that he had told."
c. * Jan, die vertelde Piet het verhaal dat hij het verhaald had
    John that told Piet the story that he had told
    "John, Piet told the story that he had told."

In (9a), there is an object gap in the object noun phrase inside the embedded clause, which cannot be related to the leftmost wh-element wie 'who' on standard locality conditions (cf. Ross 1967). Apparently, the same effect shows up in the contrastive dislocation construction in (9c).

Likewise, wh-movement, topicalization, and contrastive dislocation are all unbounded:

(10) a. Wie dacht je dat Piet zei dat hij geslikt had?
    who thought you that Piet said that he had
    "Who did you think Piet said he saw?"
b. Jan dacht hij dat Piet zei dat hij geslikt had
    John thought that Piet said he had
    "John, I thought Piet said he saw."
c. Jan, die dacht hij dat Piet zei dat hij geslikt had
    John that thought that Piet said he had
    "John, I thought Piet said he saw."

It is assumed that in (10a) the wh-element wie moves through the specifier positions of the embedded CPs to the specifier position of the root CP, in a successive cyclic manner (Chomsky 1973; see section 1.3.1 for a modification of successive cyclic movement in a minimalist framework). Again, topicalizations and contrastive dislocations appear to behave in the same way.

For these reasons, Chomsky (1977:21) assumes that topicalization involves wh-movement. This leads to the following structure for (1a):

(11) * Jan, dacht hij dat hij zei [dat hij ik niet]

Wh-movement in English triggers subject verb inversion, except in embedded clauses (including relative clauses). Chomsky assumes that the CP in (11) is a kind of free relative. This would explain the absence of inversion in topicalization constructions. On this analysis, (1a) could be paraphrased as (12a). As (12b) shows, free relatives do not subject verb inversion:

1 Cinque (1990) also shows that there are significant differences between left dislocation and clitic left dislocation, but these do not concern us here.
(12) a. John (as who) I don't like
   b. Who I don't like is John

However, if this is correct, topicalizations in Dutch (1b) should not show inversion either. (13a) is a free relative paraphrase of topicalization in Dutch, and (13b) a standard free relative construction in Dutch:

(13) a. Jan (as who) ik niet mag John is who I not may
   b. Wie ik niet mag is Jan who I not may is John
   "Who I don't like is John."

As can be seen, the constructions in (13) show no inversion, contrary to the topicalization construction in (1b)/(wan mag ik niet). It is difficult, then, to derive topicalization in Dutch from a free relative, in the way Chomsky proposes for English.

The Dutch evidence, then, suggests that (11) is not a completely correct analysis of topicalization. In particular, the empty element moved to the specifier position of CP cannot be a Wh-element.

This is not to say that the structure in (11) is inappropriate. It may well be the case that there is movement of an empty element inside CP, and that the topic is adjoined to CP (cf. II.2.3 and section 5.1.2.c). Only, the empty element cannot be a Wh-element. Rather, if it exists, it must be an element that triggers inversion in Dutch, but not in English.

c. Unifying Topicalization and Contrastive Dislocation

Koopman (1998:123) argues that topicalization and contrastive dislocation in Dutch are structurally similar. That is, both (1b) and (2b) have the structure in (11), where the element in the specifier position of CP is not a Wh-word but a possibly covert d-word:

(14) [CP Jan [CP die ik niet van]]

I will adopt this analysis, for the following reasons.

First, it is not clear that (1b) and (2b) have different properties. In the absence of evidence to the contrary, we want to reduce the two constructions to one type.

It is true that not all topicalization constructions allow insertion of a d-word, and that in not all contrastive dislocation constructions the d-word can be omitted. Thus, quantified noun phrases, personal pronouns, and unpronouned in topic position do not allow insertion of a d-word:

(15) a. iedereen die ik niet van know I
   b. hem (die) ik niet van him know I
   c. ik die ik niet van myself know I

On the other hand, when the topic is associated with a PP-internal gap, there must be a d-word:

(16) a. Jan die ik niet van John know I not of
   b. Jan die ik niet van John know I not of

As (16b) shows, the d-word in this case must have the feature [+R]; only elements carrying this feature can be moved out of the PP in Dutch (Van Riemsdijk 1978).

The obligatory presence of a d-word in (16a) is obviously related to this restriction on extraction out of PP. We may assume that in order to interpret (16a) correctly, the [+R] feature must be overtly realized. This does not exclude the possibility that in other contexts, the d-word is covertly present.

As for the obligatory absence of the d-word in the sentences in (15), I assume that that is the result of a feature matching requirement between the overt d-word and the topic. As observed in Lasnik and Utagawa

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3 Quine possibly, however, the presence of a d-word in these constructions is not grammatically enforced but syntactically preferred (cf. Janzen 1981).

4 An exception to the rule that the [+R] feature must be overtly realized is presented by so-called topic drop constructions (Cardinaletti 1990), as in Ch:

[Ch (D площадка не впускает him (bazaar) not to let] here know I not of
   "I don't know"

Other exceptions involve inanimate relatives and tough-constructions (iemand om ten 1993 to house someone camp of to hold] "someone to love", and infinitival imperatives (not overt phrases: "I want to talk 1993 to 1993 to talk about that") of De Dikken (1993/3). See Janzen (1981) for a discussion of proposition-embedding constructions in spoken Dutch involving extraction of topic [+R] elements.
1988:167), in topicalization constructions the features of the gap must match the features of the topic. For example, if the topic is an anaphor, the gap must also be interpreted as having the features of an anaphor:

(17) *Michaëlf niet Jan niet J SS-self sees John not "John does not see himself"

Likewise if the topic is a pronoun:

(18) a. *Him niet Jan, niet r, him sees John not

b. *Him wil Jan, niet dat Marie niet r, him wants Jan not that Mary not

In (18a) the pronoun *'him' cannot be interpreted as being coreferential with the subject *Jan, but in (18b) it can. Apparently, the gap indicated by *r functions as a pronoun for Principle B of the Binding Theory (Chomsky 1981).

An overt d-word cannot be used as a (non-demonstrative) personal pronoun, as the following examples suggest:

(19) a. Ik *kam hem"die I know him/that one

b. Ik praat over hem"die I talk about him/that one

Thus, it cannot be used to resume a pronounal topic, as in (15b). I assume that something similar excludes (15c).6

As for (15a), I assume that overt die would not match the semantic features of illocution 'everyone'. (15a) differs minimally from (20), where a d-word is allowed:

6 D-words with the feature (IE) can resume expressions, pronouns, and anaphors. Apparently, these d-words have features that match with all these categories. The relevant examples show that pronouns and anaphors are not in principle incompatible with resumptive d-words:

(20) a. Alle sprekers die kende Ik

b. Iedereen in de tuin die kende Ik

It seems that as soon as the quantified noun phrase refers to a subset of a well-known set, or to the individual members of such a subset, a resumptive d-word is allowed. Apparently, a quantified noun phrase can only be resumed by a d-word if its interpretation is linked to the discourse (D-linked, cf. Pesetsky 1987).

This effect is also apparent in the pair in (21):

(21) a. ?? Overal daar is paardehaar everywhere there is horse-hair

b. Overal daar is paardehaar everywhere where you look there is horse-hair

The d-word is inappropriate unless the quantified expression overal 'everywhere' is D-linked by the restrictive relative clause.7

Again, this is a generalization concerning the presence of an overt d-word. I assume that an empty d-word with the appropriate semantic features is still present in sentences like (15a), on a par with (20) and (21b). Since the availability of an overt d-word can be expressed in semantic terms, there is no need to conclude that (15a) has a completely different structure in exactly these cases.8

In sum, there does not seem to be a structural difference between (15) and (21).

6 E. Bockstra (1991:34) notes that quantified subjects can easily be combined with a resumptive d-word. However, in all the relevant cases the interpretation of the quantified noun phrase is fixed by the discourse, as in (20). If this is not the case, the d-word becomes impossible again (21):

(22) a. Iedereen die was er someone that was there

b. * Iedereen die was er someone that was there

7 Koster (1978a:207) notes the fact that existential adverbs like iedereen 'everyone' 'probably' cannot be resumed by a d-word. I assume that in some cases too there is a mismatch between the semantic properties of the adverb and the overt d-word, and that a null d-word with the required properties is present in the specifier position of CP.
A second argument for reducing topicalization to contrastive dislocation is based on "VP preposing" (cf. Haider 1990). In the constructions referred to as VP preposing, the topic is a verbal projection, not necessarily a complete VP, but possibly also including some functional projections. The relevant aspect of this type of construction here is that the VP topic cannot always be reconstructed without yielding an ungrammatical construction:

(22) a. Booken lesen (dat) does Jan niet books read that does John not
   "John does not read books."
b. "Jan, does niet booken lesen
   John does not books read
c. Jan leest geen boeken
   John reads no books
d. Jan doet dat niet
   John does that not
   "John doesn’t do that."

In (22a), the d-word dat is apparently optional. Suppose that when it is absent, the VP booken lesen is not base generated outside CP, but moved to the specifier position of CP, leaving a gap. Then we expect that the VP can be replaced in the position of the gap. As (22b) shows, this is impossible." The correct non-topicalized variant of (22a) (without the d-word) would be (22c), but (22a) and (22c) are presumably not derivationally related.

This suggests that the gap in (22a), with or without the d-word, is not left behind by movement of the VP booken lesen. Therefore, the gap must be created by moving something else. When the d-word is present in (22a), i.e. in the contrastive dislocation configuration, the d-word is the obvious candidate for creating the gap by moving to the specifier position of CP. As (22d) shows, the d-word can be replaced in the position of the gap without problems. The null hypothesis, then, is that the same movement operation takes place when the d-word is not overtly present.

A third argument supporting the reduction of topicalization to contrastive dislocation is provided by the following paradigm.

In some dialects, e.g. Brabantish, modal does ’t can appear as a matrix verb. In those dialects, however, (22b) would still not be a correct construction, as the combination of the negative element niet “not” and a bare plural noun phrase always yields a noun phrase with the determiner given ‘t, as in (22b).

Verbs like zich afvragen ‘wonder’ take as their complement a noun phrase (23c) or an embedded interrogative (23b). A CP introduced by dat “that” is ungrammatical in the complement of zich afvragen, but is (nearly) grammatical in the topic position (23a). For the interpretation of (23a), the presence of the d-word dat is completely irrelevant. Importantly, the topic CP dat Jan het boek gelezen heeft in (23a) does not have a presuppositional reading. It is not necessarily the case, in (23a), that John actually read LGB, and that I wonder about something that actually took place; I wonder whether it took place.

Again, this incompatibility of the topicalized construction and the non-topicalized construction can only be explained if the topic is base generated outside the CP, and the gap is related to a, possibly empty, d-word.

A similar argument can be construed on the basis of the following paradigm, pointed out to me by Marcel den Dikken:

(24) a. Marie (te) kussen (dat) zou ik nooit durven proberen
   Mary to kiss that would I never dare try
   "I would never dare try to kiss Mary."
b. Ik zou nooit durven proberen Marie (te) kussen
   I would never dare try
   "I would never dare try to kiss Mary."
c. Ik zou dat nooit durven proberen
   "I would never dare try."

Proverbs try selects either an infinitival complement with te (24b) or a noun phrase complement (24c). In the fronted infinitival construction in (24a), te is optional. As (24b) shows, reconstruction of the fronted infinitival construction without te is impossible. Hence, it must be that (24a) is derived from (24c) by topicalization of a possibly empty d-word, and that the infinitival construction in (24a), with or without te, is base-generated in a left-peripheral position.

For these reasons, I assume that topicalization reduces to contrastive dislocation. Hence, I will refer to both constructions indiscriminately as topicalization.
I will assume that topicalization in English also has a contrastive dislocation structure, as envisaged in Chomsky (1977), but I will leave this as a subject for further research.

d. Towards a Split CP
We have seen that topicalization is characterized by movement of a possibly empty d-element to the front of the sentence. This d-element triggers subject verb inversion in Dutch, but not in English. Wh-movement triggers subject verb inversion in both Dutch and English. Therefore, the movement of the d-element (d-movement) cannot be an instance of wh-movement (contra Weerman 1989:205).

If d-movement and wh-movement are not the same, we must distinguish between a feature triggering wh-movement and a feature triggering d-movement. Movement, then, takes place to eliminate the wh-feature or the d-feature. The d-feature is the [topic] feature mentioned in section 5.1.

If there are two different features involved in wh-movement and topicalization (d-movement), it is in the spirit of the Minimalist Program to locate these features in distinct functional heads. This means that the traditional CP must be split into a projection for wh-elements (WhP) and a projection for topics (TopP), where Wh hosts the [wh] feature, and Top the [d] feature (or [topic] feature).

In section 5.2.2, I will argue that various phenomena of Dutch syntax support such a split.

5.2.2 Evidence for the WhP-TopP Structure

a. Double Complementizers
Dutch has two complementizers for tensed embedded clauses: of and dat. Of is used in embedded interrogatives, and dat in embedded affirmative:

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*This section results from joint work with Eric Stockhammer. Many ideas expressed here are also found in Stockhammer (1999a) and Stockhammer and Sterr (1999). In addition, Dutch has the complementizer tot for embedded conditionals. See De Boeij (1986a) for use of aal [dat] in nonconditional complement clauses.

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**VERB MOVEMENT**

(25) a. Ik vraag of dat Jan het gedaan heeft
   * I ask (what) John did
   * "I asked whether John did it."

b. Ik vraag wat of dat Jan het gedaan heeft
   * I ask (what) John did
   * "I asked what John did."

c. Ik beweer dat of Jan het gedaan heeft
   I claim that (what) John did
   * "I claim that John did it."

The complementizer can always be expanded to oft dat, but the complementizer dat cannot:

(26) a. Ik vraag oft dat Jan het gedaan heeft
   * I ask whether (that) John did it

b. Ik vraag oft dat Jan het gedaan heeft
   * I ask what (that) John did

Hence, of and dat are not in complementary distribution. Rather, these facts suggest that of signals the presence of an additional CP layer on top of the CP headed by dat.

The nature of the additional CP layer introduced by of can be clearly established. Of only appears in the complement of verbs selecting an embedded interrogative. We may assume that of headed its own projection, and that this projection is the canonical structural realization of an interrogative argument. Let us call this projection of of 'Wh Phrase' (WhP), following Muller and Sterr (1999), Hoekstra (1995a).2

We can now understand that some verbs (like vragen 'ask') require a complement headed by of, and others (like beweren 'claim') do not allow a complement headed by of. For the latter class of verbs, we must assume that dat also heads its own projection, the canonical structural

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2 See Chomsky 1995a:806 and references cited there for the notion 'canonical structural realization'.

2 This use of the term WhP is not to be confused with the use of this term in Costello (1991), where WhP is an XP wh-element which moves to the specifier position of a Polarity Phrase, the head of which can be occupied by a wh-element or a Negational element. Terminology aside, our approach is largely compatible with the one put forward in Costello 1991.

2 Some verbs, e.g., verbs 'know', can have a complement headed by of as well as a complement headed by dat, and the interpretation of the complement varies accordingly, like in English *I know that he did it versus I know he did it*.
realization of embedded assertions. Let us call this projection 'Topic Phrase' (TopP), again following Hooistra (1992a).

As (29a,b) show, the TopP appears in the complement of the WhP. (25a,b) show that when the embedded clause is a WhP, the TopP may be absent, or may have an empty head (an issue I will not try to resolve here).

Hooistra (1992a) presents an empirical argument supporting the existence of two independent complementizers in Dutch, each heading its own projection. This argument is based on coordination.

If ofdat in (26a,b) were a complex complementizer, heading an undivided CP, we would not expect this complementizer to be split up under coordination. Hooistra shows that complex complementizers like omdat 'because' (literally 'for-that') behave as predicted:

(27) a. * Dat is grappig omdat Hardy dik is en dat Laurel dun is

b. Omdat Hardy dik is en (omdat) Laurel dun is

That's funny, because Hardy is fat and because Laurel is skinny.

However, ofdat can be split under coordination:

(28) Ik denk dat ofdat Hardy dik is en ofdat Laurel dun is

I think that if that Hardy is fat and Laurel is skinny.

Hooistra argues that in (28) two WhPs are coordinated when the second clause is introduced by ofdat. Likewise, when the second clause is introduced by dat it must be the case that two CPs are coordinated. This shows that of and dat head separate functional projections.

b. Long Distance Extraction

The distinction between WhP and TopP is also needed to account for differences between long distance wh-movement and long distance topicalization (Hooistra and Zwart 1992, 1993a).

First, consider the following contrast:

(29) a. Ik denk dat ofdat Jan Marie gekust heeft

I think that if that Jan Mary kissed has

I think that John kissed Mary.

b. Wie denkt ofdat Jan gekust heeft

Who thinks that if that Jan kissed has

"Who do you think that John kissed?"

Of and ofdat are out in (29a). This is understandable, since donker ‘think’ does not take an interrogative argument. However, in (29b) of and ofdat are possible. Apparently, this is related to the process of wh-movement out of the embedded clause.

In the traditional approach to movement, involving a requirement that steps be as short as possible, long distance movement takes place in a successive cyclic manner (Chomsky 1973). In this approach, wh-elements must first move to an intermediate landing site, and then move on to the next cycle. Assuming this analysis, the fact that the wh-complementizer of becomes available in (29b) suggests that the intermediate landing site must be the specifier position of a WhP.

Notice that this traditional approach yields a problem if we assume that elements that have their features checked can no longer move on (section 1.2.3). If a wh-element moves to the specifier position of a WhP (or CP, for that matter), it can only do so if its morphological features are checked as a result of this particular movement step. If so, further movement of the wh-element is not allowed, since its wh-features are already checked, and no trigger for movement exists anymore.

This supports the view on long distance movement explored in section 1.2.1. According to this view, the shortest steps requirement does not exist. Hence, wh-elements are allowed to move as far as is necessary. However, the structure resulting from the movement must also be interpretable. In particular, it must be possible to link the trace to its antecedent, the moved wh-element. I assumed that this is where the chain formation process comes in. Since the links connecting the trace and its antecedent must be local, intermediate empty wh-elements are needed in order to make a felicitous interpretation possible. For this reason, an empty wh-element must be generated in each cycle, by way of generalized transformations. This empty element will serve as the link between the trace and its antecedent in long distance movement constructions.

On this analysis, the fact that of becomes available in (29b) suggests that the intermediate element must be of a particular type. This is
explained if we assume that a chain must be internally consistent (cf. Browning 1987:231, Müller and Sternefeld 1992).\footnote{The uniformity condition cannot apply to chains resulting from independent functional head movement, since we assumed that the features of functional heads are represented in as few positions in the chain as possible. I take the uniformity condition to be a condition on interpretation, not on representation.}

(30) **Uniformity Condition on Chains**

In a chain of \( \ldots \), every \( \ldots \) must have \( \ldots \).

According to (30), the intermediate empty element in a long distance wh-movement construction must be a wh-element. Hence, this element must be generated in the specifier position of a WhP. This is explained if the Wh in the embedded clause has strong N-features which must be checked by generating a wh-element in its specifier position.

The traditional analysis and the Form Chain analysis both lead to the same conclusion: the intermediate element in long distance wh-movement constructions must occupy the specifier position of a WhP. This yields the following structure of (29b):\footnote{(29b) does not express the fact that \( \ldots \) in place, yielding **WhP in the embedded clause**.}

(29b) \[ \text{ex. whP} \ldots \text{ex. \( \ldots \) in place} \]

In (29b), \( \ldots \) is apparently optionally present, even though WhP must always be present in order to host the empty intermediate wh-element. The possibility of \( \ldots \) is also apparent when the specifier position of WhP is occupied by an overt wh-expression, as in (31)(cf. (29b)).

(31) **Ik vroeg wat (of) Jan gedaan heeft**

I ask what John done has

"I asking what John did."

In this analysis, the specifier position of the WhP is the designated position for all wh-elements: empty operators (29c), wh-phrases (29b), and empty intermediate wh-elements (29b).

Consider now long distance topicalization with **denken**. Here, introduction of \( \ldots \) is never possible:

\[
(32) \text{Marie (die) denkt (ik dat) \( \ldots \) Jan gedaan heeft to}\text{ken} \quad \text{Mary thinks (I think John done has to do)}
\]

"Mary, I think John kissed."

Topicalization, as concluded in section 6.2.1, involves base generation of a topic and fronting of a d-word. Assuming that long distance movement of this d-word, as like wh-movement, proceeds in the same way as discussed above for long distance wh-movement (keeping the results of Chomsky 1977), there must be an intermediate empty d-word somewhere in the CP system of the embedded clause.

The fact that \( \ldots \) in (32) is impossible indicates that the intermediate landing site cannot be the specifier position of WhP. Thus, we must assume that dat makes a different kind of specifier position available, in accordance with the Uniformity Condition on chains (30). This leads to the following analysis of (32):

(33) \[ \text{ex. Marie (die) \( \ldots \) --- \( \ldots \) in place} \]

In (33), the d-word moves to the specifier position of the matrix TopP, and is linked with its trace through the intermediate empty element in the specifier position of the embedded TopP. This intermediate empty element, I assume, is generated in the embedded TopP in order to check the N-features of Top.

We may now consider the specifier position of TopP as the designated position for the d-words involved in topicalization, and for the empty elements in chains headed by a d-word. Hence, the term **Top Phrase** for the maximal projection of the complementizer dat.\footnote{"D-word Phrase" might be more appropriate, but "DP" is reserved for the Determiner Phrase (Chomsky 1965).}

We are now in a position to understand the differences between topicalization and wh-movement described in section 5.2.1. The two processes involve different kinds of movement (dmovement and wh-movement). These two movement processes target different positions and employ different intermediate positions, as the complementizer selection facts above show.

**c. Parametric variation**

If topicalization and wh-movement target different positions, different features must be involved. Recall that parametric variation is expressed in terms of the strength of the morphological features represented in functional heads. Therefore, if topicalization and wh-movement involve different features, we expect that the features involved in topicalization can change from weak to strong independently of the specification of the
features involved in wh-movement, and vice versa. In other words, we expect synchronic and diachronic variation in topicalization and wh-movement to be independent.

This prediction is borne out by the facts. In present day Standard Dutch, both topicalization and wh-movement involve subject-verb inversion. However, in many languages subject-verb inversion takes place in wh-movement constructions only. English is a case in point.20

(23) a. Who are you?
   b. *Who you are?

(24) a. *Pan you are
   b. *Pan are you

This can be accounted for if there are two different functional heads involved in topicalization and wh-movement, each with an independent parameter setting triggering or prohibiting verb movement.

Diachronic data point in the same direction. In older stages of Dutch and German, wh-movement consistently triggers inversion, whereas topicalization does not do so consistently. Thus, we find examples like (25) in Middle Dutch (Van der Horst 1981:40):

(25) a. Alver Joseph reet Maria ghine
    when Joseph rode Mary went
   "When Joseph was riding, Mary would walk."

   b. Dierk Ewigt came in de koning's hall

On the other hand, wh-movement always triggers inversion in main clauses.

A similar discrepancy between topicalizations and wh-constructions is found in Old English (Van Kemenade 1987:198, Tomaselli 1990). Here, clitics may intervene between a topic and the finite verb, but not between the wh-element and the finite verb.22 This leads Tomaselli (1990) to conjecture that verb movement in cases of wh-movement is triggered by something "stronger" than in cases of topicalization. This suggests that different features, hence different heads, are involved in the two cases.

Finally, the same parametric variation occurs synchronically among dialects of Dutch, in particular in French Flemish and West Flemish dialects (Verhoeve 1985, Vanacker 1986, Hoeksma 1992). Again, topicalization does not necessarily trigger inversion, but wh-movement does. Thus, constructions like the following are found:

(26) a. Bijkevoi of kwenen geene inschrijvingen West Flemish
    as a result there came no subscriptions

b. Eek kienen me niemal foto gheen aan
   "We don't see many photos around here anymore."

Wh-constructions without subject-verb inversion are absent in these dialects, just like in Standard Dutch. These facts show that different features are involved in topicalization and wh-movement. Accordingly, these features must be represented in different functional heads.

d. Island violations.

Müller and Sternewald (1993) argue that long distance topicalization and long distance wh-movement employ different intermediate landing sites. The intermediate landing site for wh-movement is the specifier position of the embedded WhP, and the intermediate landing site for topicalization is the specifier of the embedded TopP.23

Suppose the specifier position of the embedded WhP is occupied, creating a wh-island. Long distance wh-movement is now predicted to be ungrammatical (range from impossible, in the case of adjunct wh-movement, to marginal, in the case of object wh-movement, cf. Lasnik and Saito 1984, Chomsky 1986a, Cinque 1990). What about topicalization? Long distance topicalization has its own intermediate landing site, the
specifier position of TopP. We therefore expect topicalization out of a wh-

As Müller and Sternerfeld (1993:424) show, certain facts of German

appear to confirm this expectation. The following paradigm is quoted from


(37) a. Radios kan ich mich nicht erinnern wer repariert hat
who repaired recover releasisor recall remember
"Radios, I don't recall who repaired them."

b. * Was kannst du dich nicht erinnern wer repariert hat?
what can you pro-REFL not recall who repaired has
"What don't you recall who repaired (them)?"

However, since Cinque (1996) has argued that object extraction facts are

unreliable, we need to consider topicalization of adjuncts and prepositional

objects as well. The following facts are from Dutch:

(38) a. Morgen weet ik hoe laat ik kan
morrow know I how late I can
"I know what time tomorrow I'm available."

b. * Wanneer weet je hoe laat je komt?
when know you how late you can
"When do you know what time you are available?"

In the intended reading of (38a), morgen "tomorrow" belongs to the

embedded clause, restricting the interpretation of the embedded

wh-phrase "hoe laat" 'how late'. This shows that topicalization out of an

embedded interrogative is possible. (38b) shows the familiar wh-island

effect on adjunct wh-movement, again under the intended interpretation

where wanneer 'when' belongs in the embedded clause.

Prepositional object movement shows the same asymmetry:

(39) a. Daarnet weet ik hoe vaak Jan denkt
then know I how often Jan thinks
"I know how often John thinks of this."

b. * Wanneer weet je hoe vaak Jan denkt?
when know you how often Jan thinks
"Of what do you know how often John thinks?"

Again, the wh-island configuration appears not to block topicalization.

If we remove the wh-element in the embedded clauses in (38) and (39),

the wh-movement cases improve considerably, but the status of the

topicalization cases does not seem to be affected. This supports the idea

25 Fasenlow (loc.cit.) remarks that others assign a question mark to sentences like (37a), and

that (37b) becomes better as an echo question.

that long distance topicalization makes use of a different intermediate

position for chain formation than does long distance wh-movement.26

e. Conclusion

In this section I have discussed several phenomena of Dutch syntax which

show that different features are involved in wh-movement and

topicalization. The minimalist assumption that different features are

represented in different functional heads accounts for many properties of

these phenomena, including the existence of double complementizers, the

distribution of the complementizers in long distance extraction

constructions, the parametric variation that exists, both diachronically

and synchronically, and the absence of wh-island effects in long distance

topicalization. In view of this, it seems appropriate to conclude that topics

and wh-elements are licensed in separate functional projections.

5.2.3 Conclusion

The general considerations and empirical observations discussed in this

section support the structure of the CP-system proposed in (1), repeated

here:

(40)

\[ \text{spec} \rightarrow \text{TopP} \]

In (40), the spec position of WhP is the designated position for checking

the N-features of Wh, associated with the [wh] features on wh-elements.

The spec position of TopP is the designated position for checking the N-

features of Top, associated with the [topic] feature on the empty

26 Many questions remain, however. First, the classical wh-island effect on topicalization

(Chomsky 1977:91, this book, I wonder who likes) is now an anomaly. Second, Müller and

Sternerfeld (1993) argue that adjunct topicalization out of a wh-island in German is

ungrammatical, contrary to what we found for Dutch. Other facts from German however,

involving indirect object topicalization out of a wh-island, are compatible with the Dutch

facts. Also, some speakers of Dutch consider (38a) and (38b) less than perfect, although

the relative judgments are clear. I will leave the explanation of the absolute judgments a subject

for further study.
resumptive 0-word. Topic phrases are adjoined to the TopP Segment (which, for independent reasons, is impossible if the CP-system is a full WhP). The subject is licensed outside of the CP-system, in the specifier position of AgrSP.

This analysis argues against the traditional approach to Dutch syntax, in which all verb second phenomena are subsumed under movement to O. This analysis now turns out to be insufficient even for wh-movement and topicalization, since these movement processes are seen to target different positions.

The analysis further supports the main point argued for in this chapter, namely that the functional projections in Dutch are all head initial.

In the final subsection, I will propose a minimalist analysis of verb movement to the head positions of Top and Wh.

5.3 A Minimalist Account of Topicalization and Wh-Movement

This section contains an analysis of topicalization and wh-movement in minimalist terms. The distinction between L-related projections and non-L-related projections, introduced by Chomsky in class lectures (see Mahajan 1988:10, Chomsky and Lasnik 1991:37), is crucial in understanding the properties of these constructions. This leads to the conclusion that Wh and Top, being non-L-related, do not have a V-feature that must be checked against features of the verb. Section 5.3.1 briefly summarizes the analysis of non-L-related XP-movement (i.e., topicalization and wh-movement) that has been developed in section 5.2. Non-L-related XP-movement and L-related XP-movement differ crucially in that the former, but not the latter, may be unbounded (assuming the Formal Chain approach to unbounded movement). In section 5.3.2, head movement of the verb to Top and Wh is analyzed. Since this verb movement cannot be triggered by the presence of a V-feature in Top and Wh, the V-feature triggering verb movement must reside in a functional head which has undergone independent functional head movement to Wh or Top. Finally, in section 5.3.3, the properties of embedded verb movement constructions in Dutch are briefly discussed.

5.3.1 Non-L-Related XP-Movement

Among the many phrasal positions in a syntactic tree structure, a natural distinction can be made between positions in which arguments are generated and all other positions. The former are called 0-positions in the Government and Binding framework (Chomsky 1981). In that framework, it was assumed that the subject of a clause is generated in the specifier position of IP. It was supposed to receive its b-role 'compositionally', from VP. However, the specifier position of IP could not generally be characterized as a 0-position, in view of the fact that unaccusative verbs do not assign an external b-role. Nevertheless, it seemed appropriate to group this structural subject position together with the structural object position, the sister of V. For this reason, the specifier of IP was defined as a potential 0-position, and, as potential 0-positions, the structural subject and object position were grouped together as A-positions. The residual XP positions were called A'-positions.

In the Government and Binding framework, the only A-position in the functional domain was the specifier position of IP. However, as the number of functional projections increased, so did the number of A-positions in the functional domain. For instance, Vander Bergs (1986a) and Mahajan (1986) clearly showed that the specifier position of AgrOP has the properties of A-positions. But this position could not be defined as a potential 0-position. In addition, many have argued that the specifier position of AgrSP or TP should not be regarded as a potential 0-position either, assuming that the subject NP is assigned to the specifier position of VP, or to a position adjacent to VP (Riggle and Behlma 1985, Kitagawa 1986, Spertics 1988, Koopman and Spertics 1991). These developments undermine the A/A' distinction, and lead to a distinction between 0-positions (in the lexical domain) and non-L-positions (in the functional domain).

Nondessos, there are clear differences among two types of non-L-positions. In the Government and Binding framework, these two types are most clearly represented by the specifier of IP on the one hand, and the specifier of CP on the other.

Intuitively, the two sets of non-L-positions can be distinguished in the following way. In every clause, whenever there is a verb, there must be at least one argument. For the derivation of a clause to be convergent, the arguments of the verb have to be licensed. A licensing position in the functional domain for each argument of the verb is therefore an essential part of every clause. I will call the set of licensing positions the existence of which derives from the presence of a lexical head L-related, following Chomsky and Lasnik (1991:37). The specifier positions in the IP system (AgrSP, AgrOP, TP) are L-related positions. The specifier positions in the CP system have a different status. Clauses can very well receive a convergent derivation without the presence of a TopP or WhP. It is a particular feature of the clause as a whole, rather than a property of the lexical head of the clause (the verb) that requires the presence of these functional projections. I will therefore call the positions in the CP system non-L-related (again following Chomsky and Lasnik 1991).
The distinction between L-related positions and non-L-related positions captures the wider distinction between A-positions and A’-positions. Notice that it would be insufficient to redefine the set of A-positions in terms of agreement with a functional head, since an element in the specifier position of WhP or TopP is in agreement with Wh or Top, just like an element in the specifier position of AgrSP is in agreement with AgrR (cf. Rizzi 1990c).

Much of the structure of the functional domain follows from the distinction between L-related and non-L-related features. The former are essential, the latter additional. The former are related to properties of the verb, the latter to properties of the clause as a whole. Assuming that the essential features are checked before the additional ones, it follows that L-related features must be checked before non-L-related features. Hence, the CP system must be situated outside the IP system.

It also follows that movement from a non-L-related position to an L-related position is impossible. All L-related features are already checked before movement to a non-L-related position takes place. Hence, movement back to an L-related position is never triggered, hence not allowed. This covers most of the ‘improper movement’ phenomena discussed in the literature.

In the previous sections, all checking operations took place in L-related positions. In this section, we have to focus on checking operations taking place in non-L-related positions. Non-L-related checking operations differ in certain important respects from L-related checking operations, a crucial difference being the unboundedness of non-L-related XP-movement.

The unboundedness of non-L-related XP-movement has been discussed in section 5.2. I argued there that long distance wh-movement and long distance topicalization involves movement of a wh-element or topic (actually, a d-word) to the specifier position of the matrix clause in one step. This derivation violates the shortest steps requirement of economy of derivation. However, I have argued in section 5.3.1 that the shortest steps requirement is a superfluous element in the Minimalist Program. Movement in one swoop does satisfy the fewest steps requirement of economy of representation (cf. Chomsky 1992:21).

I assumed that traces are interpreted by virtue of the existence of a chain linking the trace with its antecedent. The links of this chain must be local (cf. Koster 1987). If the links are not local, as happens in wh-idean configurations, the interpretation of the construction will be less felicitous in various degrees. Crucially, however, the derivation will converge, because no economy principles are violated. This explains the marginal character of many wh-idean violations.

A felicitous interpretation is achieved when an intermediate element is generated that can serve as a link in the chain between the trace and its antecedent. The uniformity condition on chains requires that a wh-antecedent must be linked with its trace through an empty wh-element. Likewise, long distance topicalization requires the presence of an intermediate d-element. These intermediate elements are introduced in the following way.

The derivation of a long distance wh-construction consists in a series of the generalized transformation, as always (see section 1.2.1). The generalized transformations build up a structure by combining phrase markers: a head with a complement, creating a Projection, and a Projection with a specifier, creating a Segment. Suppose the successive application of generalized transformations yields an AgrSP. At this point, a possible continuation would be to combine AgrSP with a non-L-related functional head, say Wh. Assuming Wh in the language under consideration to have strong N-features, a wh-element has to be generated in the specifier position of Wh in order to check and eliminate the N-features. At this point, two options are available. Either the wh-element can be introduced in the specifier position of Wh by a singular operation, i.e., by moving a wh-element out of AgrSP. Alternatively, a wh-element can be introduced by a binary operation, by generating an entirely new wh-phrase marker in the specifier position of Wh. Assuming the N-features of Wh to be strong, one of these options has to be chosen, or else the derivation will crash at the FP interface.

I have proposed that long distance wh-movement typically instantiates the second option. An empty wh-element is generated in the specifier position of the embedded WhP. The lexical wh-element tacked away in AgrSP moves to the specifier position of the matrix WhP at a later stage of the derivation through a singular operation. This movement is nonlocal, as argued above. The empty element in the specifier position of the embedded WhP then functions as an intermediate link in the chain, which is formed to combine the trace with its antecedent.

The other option, however, is also instantiated, namely in short distance wh-movement, but also in so-called partial wh-movement constructions (see McDaniel 1989). In these constructions, the lexical wh-element appears in the specifier position of the embedded WhP. The
specifier position of the matrix WhP is occupied by a quantificational wh-element, like German was (cf. Huybrechts 1992):

(2) Was glaubt du mit wen ich geredet habe German what believe you with whom I talked have
"Who do you think I talked to?"

The derivation of this construction differs minimally from the derivation of a long-distance wh-movement construction. In partial wh-movement constructions, when the embedded clause is expanded up to the Wh-level, the N-feature of Wh is checked with the lexical wh-element instead of with an empty wh-element. As a result, the N-feature of the matrix Wh can only be eliminated by inserting an additional wh-element, which appears not to have been extracted from within the clause.3

In short, the Form Chain approach consists of a combination of standard structure building procedures and long distance movement, in violation of the shortest steps requirement, but complying with the fewest steps requirement of economy derivation.

This approach, however, does raise the question why L-related XP-movement never appears to violate the shortest steps requirement. In other words, why is raising to the specifier position of an Agreement Phrase never unbounded?

I argued in section 3.3.1 that the impossibility of unbounded L-related XP-movement (so-called superraising) follows from the feature checking requirements of economy of representation. Thus, (2) is excluded because John cannot check the features of both the embedded AgrS and the matrix AgrS:

(2) * John seems is likely to win

Successive raising is excluded for the same reason that excludes successive wh-movement. If John moves to the specifier position of the embedded AgrS, its features will be checked there and then, and further movement of John is excluded. Hence, the N-features of the matrix AgrS will remain unchecked and the derivation will crash.

The question arises, however, why (2) cannot be salvaged by introducing an empty element in the specifier position of the embedded AgrS, followed by movement of John to the specifier position of the matrix AgrS in one swoop. This derivation must be excluded.

I suggest the following solution to this problem. Notice that the empty element required to appear in the specifier position of the embedded

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3 It is unclear to me why this additional wh-element has to be overt in German.
In these constructions, the empty element that is introduced during operation Form Chain lacks agreement features. Therefore, it cannot be pro, but must be a featureless empty element.

This, however, raises the question whether such an element really exists in (6) and (7). Recall that in operation Form Chain elements are introduced in the specifier of a functional projection in order to eliminate the N-feature of the head of that functional projection. Therefore, Form Chain is by definition unable to introduce featureless elements.

One could suggest that in this case, Form Chain introduces an empty element not for feature checking purposes, but to facilitate interpretation. The empty element thus introduced may serve as the link between the fronted lexical noun phrase and its trace. However, this would result in a non-uniform chain, with different features on the intermediate element and the head. Also, it is not clear that the locality condition on chain links forces the presence of an intermediate empty element in the subject position of a nonfinite embedded clause. One possibility is that raising constructions like the ones in (6) and (7) lack a CP (or a CP level, i.e., TopP and WhP). If Clousky and Lasnik's (1991) are correct in assuming that only nonL-related heads turn their sisters into barriers, phrases lacking a CP level will never constitute a barrier. As a result, John/Gianni and its trace in (6)/(7) are in one local domain, and interpretation of the fronted element can proceed without using intermediate empty elements.

The hypothesis that embedded clauses in raising constructions lack the CP level is supported by the fact that the infinitival complementizer om is always absent in raising constructions in Dutch:

(8) a. Jan schijnt (om) intelligent te zijn Dutch John seems COMP intelligent to be
    "John seems to be intelligent."
b. Jaa wordt gezocht (om) intelligent te zijn
    John is considered COMP intelligent to be
    "John is considered to be intelligent."

(9) contrasts with control constructions as in (9), in which the infinitival complementizer is optional (Koster 1987, Ch. 3; Rutten 1991):

The contrast between (8) and (9) suggests that raising complements are not CPs. If so, they lack a nonL-related functional head, and, on Chomsky and Lasnik's (1991) proposals, do not contain a barrier. As a result, long distance raising in these cases will still be local, and the insertion of an intermediate element is not required by conditions on chain links.

If this is correct, Form Chain never applies to nonL-related XP movement. If raising takes place out of a finite clause, the intermediate element must be pro and needs an independent 8-rule. If raising takes place out of a nonfinite clause, the embedded clause does not constitute a local domain for chain formation.

5.3.2 NonL-Related Verb Movement

As is illustrated in section 5.1.3, the verb always follows the first constituent in topicalizations and wh-constructions in Dutch. In previous analyses, this was described as verb movement to C. In the split CP analysis advanced here, we must assume that the verb moves to Wh (in wh-constructions) or Top (in topicalizations).

The question arises how this obligatory verb movement to Wh/Top can be accounted for in minimalist terms. An equally important question is whether the absence of verb movement in the same type of constructions in, for instance, English and French can be accounted for in the same terms.

The easiest way to describe the verb movement to Wh/Top in Dutch would be to assume that a strong V-feature is represented in Wh and Top which must be eliminated by checking it with the corresponding features of the verb. The difference between Dutch on the one hand and English and French on the other hand could then be accounted for by assuming that in English and French the relevant V-feature is weak.

However, since we have defined Wh and Top as nonL-related, this option is excluded. Being nonL-related, Wh and Top by definition do not represent features of the verb. Also, the verb in Dutch does not show any features that could be related to a particular instantiation of Wh or Top. In other words, it is not clear that the verb and Wh/Top are related at all.

1 As Marcel van Dijk points out to me, the distribution of floating quantifiers in raising constructions indicates the presence of intermediate NP-traces on the analysis of Spec-tica (1980, esp. fn. 17 or p. 486).
A second way in which we could attempt to explain the obligatory verb movement in wh-constructions and topicalizations in Dutch would be to resort to the concept of conditional N-feature checking. This concept was introduced in section 1.3.2, and put to use in section 4.3 in order to explain the verb movement asymmetry in Dutch.

I argued that AgrS in Dutch is [-accessible]. As a result, the N-features of AgrS cannot be present on the AgrSP Projection, so that N-feature checking under sisterhood cannot proceed. I also argued that the [-accessibility] of AgrS in Dutch reduces to an ordering condition on N-feature checking, to the extent that the V-features of AgrS must be removed before the N-feature of AgrS can be passed on to the AgrSP Projection. AgrS-to-C movement and verb movement to AgrS both serve to remove the V-feature from the AgrS position.

We could assume now that in Dutch, the N-features of Wh and Top likewise can only be checked if Wh and Top are made [-accessible] first. We might conjecture that this conditional N-feature checking is a defining characteristic of Dutch syntax, distinguishing it from the syntax of English and French.

However, this 'generalized conditional N-feature checking' approach to verb movement to C can only work if there are V-features represented in C. In the case of subject initial main clauses, movement of the verb to AgrS does not violate Greed, since the verb, in moving to AgrS, eliminates the (weak) V-feature of AgrS. Thus, the operation merely violates Coverability, which is allowed. But in the case of topicalization or wh-movement, movement of the verb to C in order to meet the condition on N-feature checking would not involve elimination of a V-feature, since no V-features are represented in Wh or Top. Hence, verb movement to C would violate Greed, which is not allowed.

As a first step in solving this problem, I suggest that the definition of accessibility (38) in section 4.4, repeated as (10), be understood as (11):

(10) \[ \psi \text{ is [-accessible] if and only if the V-features of \( \phi \) have been removed} \]

(11) \[ \psi \text{ is a feature of } \phi \text{ if } \begin{align*}
(1) & \quad \psi \text{ is present on } \phi, \text{ and} \\
(2) & \quad \phi \text{ does not exclude } \psi
\end{align*} \]

Adjunction of a head \( \beta \) to a head \( \alpha \) results in a representation in which \( \alpha \) does not exclude \( \beta \):

(12) \[ \begin{array}{c}
\alpha \\
\wedge \\
\beta \\
\wedge \\
\alpha
\end{array} \]

According to (11), the V-feature of \( \beta \) in (12) is also a V-feature of \( \alpha \). Consequently if a functional head \( \beta \) containing a V-feature adjoins to a functional head \( \alpha \) without a V-feature, the V-feature of \( \beta \) will count as a V-feature of \( \alpha \) for the definition of accessibility in (10).

Consider now the consequence of AgrS-to-C movement (where C may be Top or Wh). Since C lacks a V-feature, C is [-accessible] by definition. However, as a result of AgrS-to-C movement, C acquires a V-feature. Under the relevant parameter setting, it follows from (10) that this V-feature that C has acquired must be removed before the N-feature of C can be checked. As argued in section 4.3, adjunction of the verb to AgrS in C eliminates the V-feature of AgrS. This verb movement, then, removes the V-feature of C, so that the N-feature of C can be passed on to the DP Projection and N-feature checking under sisterhood can proceed.

Thus, the obligatory verb movement character in topicalizations and wh-movement constructions in Dutch follows from the independently established AgrS-to-C movement, in conjunction with the mechanics and definitions that have been proposed in connection with conditional N-feature checking.

This analysis generates one problem which I have not been able to solve in a satisfying way. Recall that AgrS-to-C movement takes place not only in inversion constructions, but in embedded clauses containing a lexical complementator as well. As a result, the V-feature of AgrS becomes a V-feature of C in embedded clauses. The definition of accessibility in (10) now requires that this V-feature be eliminated as a condition for checking off the N-features of C. This leads to the prediction that the verb in embedded clauses in Dutch adjoins to the complementizer, contrary to fact.

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7 If this analysis is correct, the obligatory verb movement to Wh in wh-constructions in English suggests that there is independent functional head movement to Wh in English as well (cf. Siewert 1991: chapter 1, Frazier 1992:273, 498). If Wh is specified as [-accessible] in English, verb movement is needed to activate the N-feature of Wh, and is allowed because it does not violate the V-feature of the functional head that has moved to Wh. The absence of verb movement to Wh in topicalizations in English would then be accounted for by assuming that Wh is [-accessible], so that no overt verb movement is needed to make N-feature checking in Wh possible. Topicalization and wh-movement in French never appear to involve overt verb movement to Top or Wh, respectively. I assume that French Complex Inversion (Quoted Wh-extr-adj) (when John is asked!) does not involve verb movement to Wh, but to a lower functional head (cf. De Wilde, prep: discussion). The absence of verb movement to Top/Wh is accounted for if Top and Wh are specified as [-accessible], or, alternatively, if no independent functional head movement to Top/Wh takes place (as in (11)), the V-feature will end up in the CP-system. Needless to say that this vast area of research has not yet been further studied.

8 I assume here that embedded interrogatives in Dutch (presumably universally) contain a lexical complementator, even when the relevant complementator (as) is not overtly present at the PF interface.
(13) * Ik denk kom dat Jan vastaag
I think comes that John today.'

A way out would be to propose that functional heads containing a lexical morpheme (such as a complementizer) are [-accessible] by definition.3 I will leave it to further research to investigate whether there is any substance to this proposal.

5.3.3 Embedded Verb Second Configurations

a. Embedded Verb Movement in Dutch
A final question that has to be addressed concerns the status of embedded verb second configurations in Dutch (cf. section II.1.2.1). Recall from section 5.1.2.2 that topics in Dutch are not allowed to precede the complementizer:

(14) * Piet sei dat boek dat hij gelezen had
Pete said that book that he read had
"Pete said that he had read THAT BOOK."

This we explained by assuming that topics are base generated in a position adjoined to TopP. The ungrammaticality of (14) then follows if we assume that embedded TopP's are arguments, and that adjunct to arguments is excluded (following Chomsky 1986b).

We also noted that embedded topicalization to the right of the complementizer is possible, yielding a construction which is frequently used in spoken Dutch, but would be judged as an anachronism in written Dutch:

(15) Piet sei dat dat boek had hij gelezen
Pete said that that book had he read
"Pete said that that book, he had read."

Spoken Dutch also has embedded subject initial verb second constructions, having the same status as embedded topicalizations of the type in (16):

(16) * Piet sei dat hij kende dat boek niet
Pete said that he knew that book not
"Pete said that he didn't know that book."

b. The Distribution of Embedded Verb Movement
Embedded verb movement in Frisian and Mainland Scandinavian has certain well known properties, which distinguish it from embedded verb movement in Icelandic and Yiddish. Those properties can be listed as follows:

1. In subject initial embedded verb movement constructions, the subject cannot be a clitic (De Haan and Weerman 1986:59):

(17) a. Pys sei dat huyer my sjeven hie
Pete said that he saw me
Frisian
Pete said that he saw me.
Pete said that he saw me.

b. Pys sei dat huyer hie my sjeven
Pete said that he saw me
Pete said that he saw me.
"Pete said that he saw me."

2. Embedded verb movement is excluded in the complement of 'negative' verbs like regret, doubt, and negated verbs (De Haan and Weerman 1986, Istridsdóttir and Kroch 1992 and references cited there; cf. Hooper and Thompson 1973):

3 Embedded wh-constructions in the complement of dat are impossible. This follows if embedded wh-clauses must be selected. In minimalist terms, a wh-clause in the complement of Top would not receive the required interpretation.
(19) a. Zet het verkeerd om dat hij mogen zijn.
    b. * Zet het verkeerd om dat hij mogen zijn.

3. Embedded verb movement is excluded in irrealis complements (De Haan and Weerman 1988:84):

(19) a. Zet het verkeerd om dat hij mogen zijn.
    b. * Zet het verkeerd om dat hij mogen zijn.

4. Embedded verb movement is excluded in adjunct clauses (Iatridou and Kroch 1992, citing De Haan, p.c.):

(26) a. Ik wil niet zien dat u de film niet zult zien.
    b. * Ik wil niet zien dat u de film niet zult zien.

5. Embedded verb movement is excluded in sentential subjects (Iatridou and Kroch 1992, citing De Haan, p.c.):

(21) a. Dat het film niet zult zien is fereolend.
    b. * Dat het film niet zult zien is fereolend.

6. Embedded verb movement constructions are islands for extraction (De Haan and Weerman 1988:87, Vink 1991a):

(22) a. Hyviken film sagde hun at Peter allerede havde set? Danish
    b. * Hyviken film sagde hun at Peter allerede havde set?

In Yiddish and Icelandic, embedded verb movement is generally possible in the contexts listed above. This shows that there are two types of embedded verb movement phenomena (Vink 1991a). I will leave the Yiddish-Icelandic type out of the discussion (see Delsing 1990, Samotini 1995, Rigvallsson and Thráins Gunnarsson 1990, Vink 1991a, Thráins Gonzalo 1992, Te Valde 1993).

Dutch is generally reported to lack the embedded verb movement construction of the Frisian-Mainland Scandinavian type. However, the colloquial Dutch embedded verb movement construction illustrated in (15-16) has exactly the same distribution as the standard Frisian-Mainland Scandinavian embedded verb movement construction:

1. No subject elision:

(23) a. Jan zei dat hij kendde dat boek niet. Cell Dutch
    John said that he knew that book not.
    "John said he didn't know that book.
    "
    b. * Jan zei dat ie kendde dat boek niet.

2. Not with inherently negative verbs and negated verbs:

(24) a. Jan betreurt dat het hij door het boek niet. John regrets that he didn't see the book.
    "John regrets that he didn't see this book.
    "
    b. * Jan betreurt dat het hij door het boek niet.

3. Not in irrealis complements:

(25) a. Jan had willen zeggen dat hij boek kendde. John had want say that he knew that book.
    "John would have said that he knew that book.
    "
    b. * Jan had willen zeggen dat hij boek kendde. John had want say that he knew that book.
    "
    c. * Jan had willen zeggen dat hij boek kendde. John had want say that he knew he
4. Not in adjunct clauses:

(25) a. 

We zien help niet als je maagpijn hebt
rubber helps not if you stomach ache have
"Rubber doesn't help if you have a stomach ache."

b. * We zien help niet als je hebt maagpijn
rubber helps not if you have stomach ache

c. * We zien help niet als je hebt maagpijn, heb je rubber helps not if you stomach ache have you

5. Not in sentential subjects:

(27) a. Dat Jan dat boek kent is verrassend
that Jan that book knows is surprising

b. * Dat Jan kent dat boek is verrassend
that John knows that book is surprising

c. * Dat boek kent Jan is verrassend
that book knows John is surprising

6. No extraction:10

(28) a. Welke film ziet je dat Jan al gezien had?
which movie saw you that John already seen had

b. * Welke film ziet je dat Jan had al gezien?
which movie saw you that John had already seen

c. * Welke film ziet je dat op video had Jan gezien?
which movie saw you that on video had John seen

It thus appears to be the case that the Colloquial Dutch embedded verb movement construction has exactly the same properties as the embedded verb movement construction in standard Frisian and Mainland Scandinavian. This indicates that the colloquial construction in (18-18) is not a mere idiosyncrasy of sloppy speech, but an instantiation of a widespread phenomenon of Germanic syntax, which, for some reason, was not admitted in the standard register of Dutch.

c. The Syntax of Embedded Verb Movement

The split CP hypothesis argued for in this book might seem to provide a suitable framework for analyzing recursive CP constructions. However, this is only apparently the case. In the split-CP hypothesis, the top layer of the CP system has Wh-features, and the second layer has topic features. One of the properties of recursive CP constructions appears to be that only featureless CPs may iterate (Iatridou and Kroch 1992). Recursive WhPs are not found in Frisian, Mainland Scandinavian, or Dutch.

Thus, CP-recursion (if it exists) takes place at the TopP level only. Iatridou and Kroch (1992) demonstrate that only those TopPs (CPs in their terminology) can iterate which lack features. Assuming that complement clauses of negative or negated verbs contain certain features that satisfy the selectional requirements of the matrix verb, the TopPs of these complement clauses are not featureless and hence cannot iterate. The same goes for irrealis complements.14

Let us assume that this generalization is correct. It follows that WhPs cannot iterate, because they are inherently contentful. Let us take one further step, and assume that TopP can iterate if and only if Top is also featureless. In minimalist terms, this means that Top has neither an N-feature nor a V-feature.

If the Top of the recursive TopP lacks an N-feature, we predict that long distance topicalization is impossible out of recursive TopP clauses. Recall that long distance topicalization involves insertion of an empty element in the specifier position of TopP, in order to eliminate the N-feature of Top. This empty element later on functions as the intermediate trace in the chain linking the topic (better: the d-word) to its trace. In the absence of an N-feature, this intermediate element cannot be introduced. Consequently, long distance topicalization out of recursive TopP constructions should be bad.

This prediction is borne out:

(29) a. Dit film ziet Piet dat hij op video gezien had
that film saw Piet that he on video seen had

b. * Dit film ziet Piet dat hij gezien had
that film saw Piet that he seen had

Thus, the assumption that the head of a recursive TopP has no features has favorable consequences.

Secondly, we predict that verb movement to a featureless Top is never triggered. This follows from our assumption that verb movement to Top-

14 Iatridou and Kroch (1992) suggest that iterating CPs must be semantically empty because the top CP is deleted at LF. One might argue that CPs that allow recursion are also subject to selection restrictions and hence are not semantically empty. Iatridou and Kroch propose that in this case, one must state that CP recursion is only possible when the context of the top CP is recoverable from the features of the second CP.
DUTCH SYNTAX

 takes place only in order to make checking of the N-feature of Top possible. But since Top in embedded verb second constructions lacks features, the need to check N-features will never occur.

 The hypothesis that Top in embedded verb second configurations is radically featureless also explains the verb movement in the embedded clause of these constructions.

 First we have to make it clear that the discussion of CP-recursion is generally cast in the wrong terms. As (16) and many other examples in this section bear out, not all embedded verb movement constructions involve the CP-level. In particular, the b-examples in (24)-(28) display subject initial ‘verb second’ clauses in the complement of the complementizer dat. There is no indication that these clauses are expanded beyond the AgrSP level. To our ear, colloquial Dutch subject initial embedded verb second clauses can have a weak pronoun as the subject:12

 (30) a. Jan zei dat het regent pijpenrook Cell.Dutch
     "John said that it rains pipe smoke."
     "John said that it is raining coal and dogs."
 b. Jan zei dat je leeft maar één keer
     "John said that you live but one time"
     "John said you only live once."

 Since weak pronouns cannot appear in the specifier position of TopP, the sister of the complementizer dat in (30) must be an AgrSP.

 Thus, not all embedded verb second constructions involve recursion. What seems to be the correct generalization is that in embedded verb second constructions Top does not participate in whatever syntactic operations link it to its complement. As a result, the complement of Top may be a neutral subject initial clause, as in (30) and the b-examples of (24)-(28), or a topicalization construction, as in the c-examples of (24)-(28).

 If Top does not participate in syntactic operations linking it with its complement, AgrS-in-Top cannot take place either. This can also be made to follow from the assumption that Top is radically featureless, if we follow up on the analysis of AgrS-to-C developed in section 3.3.3. There, I proposed that C contains a duplicate feature which must be non-distinct from the agreement feature of AgrS for AgrS-to-C movement to be successful. We may now assume that in the absence of the duplicate feature, AgrS-to-Top cannot take place.13

 The absence of AgrS-to-Top movement in embedded subject initial verb second constructions is obvious from the fact that complementizer agreement is impossible in these constructions (data repeated from section 4.1.2.a):

 (31) a. Het zei dat hij niet weet wat er moet P rinse
     "He said that he does not know what to do."
 b. Het zei dat hij niet weet wat er moet P rinse
     "He said that you should not believe such things."

 As a result of the absence of AgrS-to-Top movement, overt verb movement to AgrS is necessary in order to make the N-feature of AgrS accessible for feature checking. Likewise, when the featureless Top has a TopP as its complement, the head of this second TopP becomes the target of AgrS-to-Top movement, followed by verb movement to Top, in order to make the N-feature of TopP accessible.

 The hypothesis that Top in embedded verb movement constructions is radically featureless therefore explains both the distribution of embedded verb movement, on the analysis of Iatridou and Kroch (1992), and the restrictions on functional head movement in those constructions. These restrictions have the effect that embedded verb movement cannot take place in the complement of WhP, and at the same time make embedded verb movement in the complement of the featureless Top necessary, in agreement with the analysis of verb movement proposed above.

 5.4 Conclusion

 In this section I have argued that subject placement, topicalization, and Wh-movement involve three different functional projections: AgrSP, TopP, and WhP. All these projections are head initial, supporting the general claim of this chapter.

 I have argued that the N-features of AgrS, Top, and Wh are strong in Dutch. I have also argued that these N-features can only be checked after the V-features of the respective functional heads have been removed. This explains the curious circumstance that verb movement to the functional

 12 Unless the weak subject pronoun is 3SG masculine, in which is always existential (see note 27 in section 5.1.9). The weak pronoun in (30) cannot be pronounced as outside on the complementizer dat.

 13 Recall that I assumed that dialects without overt complementizer agreement, such as Standard Dutch, have an unmarked [spec] duplicate feature in C, which is consistent with the features of AgrS by definition.
heads in main clauses in Dutch is overt, even though the absence of verb movement in embedded clauses suggests that the relevant V-features are weak.

The analysis entails that verb movement in main clauses in Dutch targets different functional heads in each type of construction. However, the mechanism explaining the verb movement is by and large the same in each case.

6 Summary and Conclusions

In this chapter I have argued that the following hypothesis is correct:

The functional projections in Dutch are head initial

The evidence supporting this hypothesis is the following:

1. Citicis in Dutch occupy functional head positions to the left of the V.
2. Complementizer agreement phenomena in Dutch dialects indicate that Dutch dialects have an independent AgrS position; the verbal morphology in double agreement dialects shows that the verb is not in C in subject initial main clauses; hence, the functional projection hosting the verb in subject initial main clauses must be head initial.
3. It follows from a restricted theory of feature checking that the subject can only be licensed in the specifier position of AgrS; hence, the verb must be in AgrS in subject initial main clauses in Dutch, and AgrS must be head initial.
4. Verb second phenomena in inversion constructions involve verb movement to Wh or Top; hence, WhP and TopP in Dutch must be head initial.

I also argued that evidence in support of functional positions to the right of VP in Dutch is non-existent.

In the course of this chapter an analysis of verb movement in Dutch has evolved. This analysis is based on a minimalist theory of feature checking, which incorporates the following generalization:

Licensing relations are sisterhood relations

Accepting this generalization, V-feature checking must be a matching operation between an XP in the specifier position of a functional head a and the Projection of a. I argued that in Dutch the Projection of a has access to the N-features of a if and only if the V-features of a have been removed first. Thus, the and only if extension of the definition of accessibility applies to Dutch:

\[ \text{\textit{a} is [+accessible] if (and only if) the V-features of \textit{a} have been removed} \]

It follows from economy of representation that movement of a functional head a to C removes the V-feature of \textit{a} from the original position of C. Similarly, verb movement to a removes the V-feature of a through feature checking. Hence, movement of a and adjunction to a both have the effect that the V-features of \textit{a} are removed. This explains the observation that AgrS-to-C movement and verb movement to AgrS in Dutch both serve as a precondition for checking the N-features of AgrS.

This analysis can be extended to verb movement to Top and Wh. Top and Wh lack V-features, but acquire a V-feature as a result of AgrS-to-C movement (where C = Top, Wh). Assuming the N-features of Top and Wh to be strong in Dutch, the accessibility parameter again requires that the V-features of Top and Wh are eliminated before the N-features can be checked. Verb movement to C is the only available option to accomplish this. This movement does not violate Greed, since the AgrS-to-C movement makes the V-feature of AgrS end up in C, by economy of representation.

The absence of overt verb movement to AgrS in embedded clauses follows from economy of derivation, on the assumption that the V-feature of AgrS is weak. At the same time, this assumption makes verb movement to AgrS as a last resort possible, in violation of Procrastination. Embedded verb movement to AgrS in colloquial Dutch is explained if in these constructions AgrS-to-C movement does not take place. The absence of verb movement to Top and Wh in embedded clauses follows from the assumption that functional heads containing a lexical element (in this case, a complementizer) are always [+accessible].

This analysis, then, remains well within the narrow range of possibilities allowed in the minimalist approach. In fact, it crucially relies on a number of extensions to the minimalist approach, discussed in section 1.3, which were introduced independently of the minimalist approach even more restrictive.

In the next chapter, the consequences of one of these minimalist extensions, the absence of a directionality parameter, will be tested in the domain of the syntax of the lexical projections in Dutch.
IV

DUTCH AS AN SVO LANGUAGE:
THE POSITION OF THE LEXICAL HEADS

1 The Functional Domain and the Lexical Domain

In the previous chapter, discussion of the phenomena of Dutch syntax has been limited to the domain of the functional categories. An important result of this discussion has been that all functional projections in Dutch are head initial.

In most generative analyses of Dutch syntax, it is assumed either that Dutch has a very limited set of functional projections, or that in Dutch the functional projections other than C are located to the right of the VP. Neither assumption appears to be supported when the phenomena of Dutch syntax are analyzed from a minimalist perspective (or from any other perspective).

As far as the lexical domain is concerned, we have seen in chapter II that it is generally accepted, both in traditional (cf. Seagloun 1981) and in generative grammar (Kooter 1975), that the VP in Dutch and German is head final. Many researchers who did accept the existence of a separate INFL in Dutch and German mostly tacitly assumed that there exists a typological connection between the head final status of the VP and the head final status of the IP.

As I argued above, this connection was based on the incorrect assumption that inflected verbs always have to move to INFL overtly. Since the inflected verb appears in sentence final position in Dutch (or, more correctly, in a position to the right of the noun phrase object), it was concluded that IP in Dutch must be head final.
In the minimalist approach, the principle of Procrastination dictates that in the default case (i.e., when no strong V-features are present in the functional heads), the verb should stay in its basic position. In accordance with this, I assumed that Dutch Agrs (INF) has a weak V-feature, which in principle precludes overt verb movement. Consequently, the verb can be assumed to occupy its basic position inside VP in embedded clauses. In main clauses, other considerations force overt verb movement, in spite of the absence of strong V-features in Dutch (see section 3.4 and 3.5). Inasmuch as this analysis is supported, the head initial status of the functional projections in Dutch is supported.

As a result, the typological connection between the status of the lexical projections and the status of the functional projections appears to break down in Dutch. I will assume, however, that this connection is real. Consequently, if the functional projections in Dutch are so clearly head initial, the lexical projections in Dutch must be head initial as well.

Obviously, this does not imply that the results of Koster (1975) are incorrect (see §2.1). Koster’s arguments support the hypothesis that in Dutch the word order of the embedded clause is more basic than the word order of the main clause. This result still stands in the minimalist approach advocated here, since I have assumed that the verb is in V in embedded clauses, and in Apr or higher in main clauses.

However, I do wish to contend that the embedded clause word order (object-verb) does not reflect the most basic order of elements in the Dutch VP.

Two considerations immediately cast doubt on the standard analysis of Dutch as an SOV language (cf. sections 3.4.4-5).

First, there are indications that the position of the noun phrase object in embedded clauses in Dutch is a derived position. Recall that the direct object may be separated from the verb by sentence adverbs:

(1) ...dat Jan Marie waarschijnlijk gekust heeft.

...that Jan probably kissed Mary.

Assuming that the first step in building up the VP consists in combining the verb with its direct object, non-adjacency of the object and the verb can only arise as a result of movement. Let us exclude the possibility that the verbs in (1) have been moved to the right, accepting the results of chapter III. Therefore, the direct object Marie must have been moved to the left. The minimalist approach dictates that this movement has a trigger and a designated target. The target must be a position in the functional domain, and the trigger must be an N-feature represented there, which must be eliminated in overt syntax. If so, the movement cannot be optional. Consequently, even if the adverb waarschijnlijk ‘probably’ in (1) is absent and the object and the verb are adjacent, we must assume that the object is in a derived position. If the object is always in a derived position, the fact that it invariably appears to the left of the verb in embedded clauses merely indicates that the licensing position of the object is to the left of the position of the verb in embedded clauses. Crucially, nothing can be concluded regarding the basic position of the direct object inside the VP. In other words, because of the scrambling phenomena illustrated in (1), the position of the direct object is of no use if we wish to determine whether the Dutch VP is head final or head initial.

Second, recall that embedded clauses in Dutch invariably appear to the right of the verb:

(2) ...dat Piet denkt dat Jan Marie gekust heeft.
that Pete thinks that John Mary kissed has
...that Pete thinks that John kissed Mary.

As mentioned in section 3.3.5, these embedded clauses are transparent for wh-extraction:

(3) Wie zei je dat Piet dacht dat Jan gekust had?
who said you that Pete thought that John kissed had
‘Who did you say that Pete thought John kissed?’

Since extraposed clauses are islands for extraction (see section 3.3.5), the embedded clause in (2) cannot have been extraposed. Hence it must be in its basic position. Consequently, the Dutch VP is head initial when it contains a clausal argument. Assuming a uniform process of structure building, we are led to suppose that noun phrase objects are also generated in a position to the immediate right of the verb.1

Together, these considerations provide prima facie evidence in support of the hypothesis that Dutch is an SOV language. However, neither of them can be used as conclusive evidence. The argument based on scrambling is by definition inconclusive: it merely serves to shake the conviction that Dutch is an SOV language. The argument based on the position of clausal arguments is also unreliable: it may be the case that the verb(s) in (2) is/are in a derived position as well, having undergone just a short verb movement to the left. In that case, we are still not in a position to draw conclusions as to the basic order of elements in the VP in Dutch.

1 This conclusion also follows from Pesetsky’s (1980) proposal to derive categorical selection from semantic selection (cf. Chomsky 1986a), and from Bobot’s (1980) hypothesis of uniform 0-role assignment.
In the remainder of this chapter I will present more conclusive argumentation in support of the hypothesis that Dutch is an SVO language. To a certain extent, the material presented will also serve a more modest goal, namely to demonstrate that potential arguments in support of the traditional analysis cannot be accepted as such. These sections are nevertheless included, in order to create a proper understanding of the phenomena involved.

In section 2, the syntax of the VP is discussed. This section contains subsections on scrambling, on the distribution of Small Clause predicates, and on verb raising and extraposition. The first two subsections demonstrate that the fact that the verb in embedded clauses in Dutch invariably appears to the right of noun phrase objects and Small Clause predicates cannot be regarded as evidence for a head final structure of the VP in Dutch. I will argue that noun phrase objects and Small Clause predicates in overt syntax occupy designated licensing positions in the functional domain. The third section shows that the analysis of verb raising phenomena is much simplified if the VO-hypothesis is adopted.

In section 3, the structure of NP, AP, and PP is briefly discussed. I will argue that the overt syntax of the NP and AP does not allow us to draw conclusions as to the basic structure of these phrases, whereas the syntax of PPs can be described in a simple and elegant way on the assumption that the PP in Dutch is head initial.

If my attempts fall short of actually proving that Dutch is an SVO language, I hope that typological considerations will tip the scale in favor of the SOV hypothesis, on the assumption that the head initial character of the functional domain is also reflected in the structure of the lexical domain. These typological considerations are supported at the conceptual level by the extension of the minimalist program discussed in section I.3.3, according to which directionality parameters cannot exist and by the hypothesis of Kayne (1989), according to which structural hierarchy is universally mapped into linear precedence (see section I.3.3).

2 The Structure of the VP

2.1 Introduction

Much of the structure of the VP, in any language, is determined by the properties of the structure building process of Generalized Transformations (section I.2.1).

Let us assume that this process operates in a minimalist way, in the sense that it involves the smallest possible number of phrase markers in each step of the process. In other words, let us assume that a generalized transformation cannot combine more than two phrase markers at the same time. It follows that syntactic tree structures are always binary branching (cf. Kayne 1989). A second assumption I will make here, is that a head must be combined with its complement locally. In other words, the first generalized transformation affecting the verb should combine the verb with its internal argument. I will assume that this condition follows from the principle of Full Interpretation (thus, a string in which the verb, or its trace, and the internal argument of the verb, or its trace, are not adjacent, does not yield the desired interpretation). This again follows from the hypothesis that syntactic licensing relations are universally siblinghood relations (I.3.5).

It follows from these two assumptions that a verb has at most one complement, and that the verb and its complement must be adjacent in the initial stage of the structure building process. The hypothesis that heads have but a single complement is advanced and extensively supported in H. Hoekstra (1991), later also in Mulder (1992).

T. Hoekstra (1990) and Mulder (1992) in addition advance the important insight that the notion 'complement' should not be thought of as an element which is thematically linked to a head. Instead, Mulder argues, the complement of a verb should be thought of as a constituent affecting the eventual interpretation of the action referred to by the verb. I refer to the work mentioned for argumentation of this point. One of its consequences, however, is important for the discussion of the structure of the VP.

As is well known since Jespersen (1933), and might have been well known since Boers (1988), the verb found in (1) has a clausal internal argument the cage empty rather than a noun phrase internal argument.

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1 Kayne (1995) derives this property of the structure building process from his Linear Correspondence Axiom (cf. section I.3.3).
3 This condition excludes long distance 5-rule assignment of the type needed in an analysis of scrambling in which internal arguments are base-generated in their overt syntax position (cf. Neeleman 1996; Fodor 1995).
4 Since what endocentric, the term 'single complement' hypothesis was introduced in Larson (1988a). As Mulder (1992:91) perceptively remarks, Larson's hypothesis differs from the one entertained here in that Larson allows a verb to have two complements, the second of which it can only license after verb movement. The single complement hypothesis I have in mind allows a verb to have no more than one complement.
the cage. This is because what is found is not a cage, but the situation that the cage is empty.¹

(1) John found the cage empty

In generative grammar, the constituent *the cage empty* in (1) has been analyzed as a Small Clause, with the cage as subject and empty as predicate (Kayne 1984, Stowell 1983, T. Hoekstra 1984, many others). This analysis is in agreement with the single complement hypothesis.

As work by Kayne, Stowell, and T. Hoekstra, among others, has demonstrated, many more Small Clause constructions can be identified, some of which are less obvious than the type in (1). Some examples are resultative constructions (Hoekstra 1986), particle constructions (Kayne 1984, A. Den Dikken 1992a,b), double object constructions (Kayne 1984, A. Den Dikken 1992a,b), and constructions involving locational and positional verbs (Hoekstra and Mulder 1990a,b).

(2) a. Jan verft de deur rood
  John paints the door red
 b. Jan geeft zijn broer een appel
  John gives his brother an apple
 c. Jan trekt het schip aan
  John pulls the ship in
 d. Jan legt het boek bij
  John puts the book down

(3) a. Jan verft de deur af
  John paints the door off
 b. Jan legt het boek neer
  John puts the book down

(4) a. Jan geeft Marie een boek
  John gives Mary a book
 b. Jan geeft het boek aan Marie
  John gives the book to Mary

(5) a. Er staat een paard in de gang
  There is a horse in the hall
 b. Jan zet zijn vader vast
  John fastens his father

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Some of these constructions will return in section 2.3.² The important thing here is that they all involve a propositional internal argument.

However, if we wish to maintain that there has to be a thematic relation between the internal argument and the verb, some of the constructions in (1)-(5) could be problematic. For instance, it is not clear that in (2), the situation *de deur rood* 'the door red' is a thematic argument of the verb *verft* 'paints' in any obvious sense of the word 'thematic'. As far as thematic relations are understood, one might wish to maintain that in (2) *de deur* 'the door' stands in a thematic relation to the verb *verft*. This again could lead to a rejection of the Small Clause analysis altogether, as well as of the underlying minimalist principles of structure building (cf. Cassirer and Randall 1992).³

Therefore, the minimalist approach to the structure of the lexical domain can only be maintained if we deny that thematic relations are crucial to the process of structure building (cf. Chomsky 1992:270). The interpretation of thematic relations must then be considered as a function of the computational properties of the human mind, at work in the interpretive component of the grammar.⁴

The clausal complements in (1)-(5), however, do have a clear aspectual effect on the interpretation of the verb, as T. Hoekstra (1980) and Mulder (1995) show (see section 4.3.1.b). This effect can be described as 'measuring out the event' denoted by the verb (cf. Tonny 1987). The verb *verft* in (2) does not have aspectual properties by itself. Only when combined with another constituent does it denote an accomplishment (in fact, it yields a VP denoting an accomplishment). As Mulder (1992:51) shows, this 'other constituent' may be a Small Clause as well as a noun phrase: the effect of creating a VP denoting an accomplishment is the same in each case.

We may now assume that the first step in certain structure building processes is driven by the need to create an aspectually interpretable constituent. This yields the result that a verb and its complement are adjacent in the initial stage of the representation, without having to abandon the minimalist's attractive Small Clause analysis of multi-argument verbs and multi-predicate constructions.

¹ Jespersen (1913) calls the propositional internal argument in constructions of the type *John found the cage empty* ' nexus'. Hoekstra (1984) calls it 'complement van objectieve partijheid' (complement of objective state, cf. Van Dijk 1968).

² The list of constructions given is not exhaustive, and I do not wish to contend that the various types represent clear cut categories.

³ The arguments against the Small Clause analysis advanced in Cassirer and Randall (1992) are greatly weakened by the circumstance that the verbs used in their arguments are typically complex verbs. See note 18 of section 4.3.1.b.

⁴ This is how I understand Rant Sybesma's first thesis adjourned to Sybesma 1992. All interpretation is shadow interpretation.
This will serve as background for the discussion in the following sections. In what follows, I will be looking at the distribution, in Dutch, of noun phrase arguments (2.2), small clause predicates (2.3) and clausal arguments (2.4), and try to determine the relevance of these phenomena for the question of the position of the head in the Dutch VP.

2.2 The Distribution of Noun Phrase Complements

2.2.1 Introduction

As discussed in section II.1.4, direct objects in Dutch do not have to be adjacent to the verb in embedded clauses:

(1) *dat Jan Marie gisteren kuste
  "that John kissed Mary yesterday."

According to our assumptions, the direct object Marie must be adjacent to the verb kuste 'kissed' in the initial stage of the derivation of (1). Excluding the possibility of verb movement to the right (based on the absence of functional heads to the right of the VP), the non-adjacency of the direct object and the verb in (1) must be the result of object movement.

As we have seen in II.4.3, non-adjacency of direct object and verb can be easily accounted for in the minimalist approach. According to minimalist assumptions, objects have to be licensed in the specifier position of a functional projection (AgroP). The non-adjacency in (1) can then be thought of as the result of overt movement of the object to the specifier position of AgroP, triggered by the presence of a strong N-feature in AgroP.

The word order in (1) is not marked in any way. This seems to weigh against an explanation of object movement in terms of pragmatic factors, such as the distribution of given and new information. Let us develop this point a bit further.

It is often argued that (1) is not in itself neutral, but only neutral when the direct object referent is already known in the discourse domain. If this is not the case, for instance when (1) serves as an answer to the question Who did John kiss yesterday?, (2) is preferred:

(2) *dat Jan gisteren Marie kuste
  "that John kissed Mary yesterday."

On the basis of this pattern, one could make the generalization that object movement is pragmatically governed, affecting noun phrases that refer to known elements only. Alternatively, one could maintain that in (2) the adverb, presenting known information, is moved to the left. From this perspective, scrambling would be a defocusing operation.

However, the relevant observations are only correct when (1) and (2) are thought of as pronounced with a 'neutral' sentence intonation. (1) can serve as a perfectly acceptable answer to the question Who did John kiss yesterday? if Marie receives the appropriate intonation (with *r* receiving high pitch, and the parts following Marie pronounced with low pitch; cf. II.1.4). Likewise, the adverb gisteren can present new information, even in the position it occupies in (2), when its first syllable is high pitched. In other words, information packaging in Dutch is a function of intonation rather than word order, except, possibly, when certain marked fronting operations are applied (such as topicalization and focus scrambling).

The hypothesis that the object movement in (2) is triggered by the presence of a strong N-feature in AgroP is supported by a number of observations, which will be discussed in section 2.2.2. I refer to this movement operation as scrambling. Notice that scrambling should not be confused with free word order. The order of arguments in natural word order constructions in Dutch is fixed: subject - indirect object - direct object, as illustrated in (3).

(3) a. *dat Jan de kinderen het boek gaf
   that John the children the book gave
   "that John gave the children the book."

b. ?? *dat de kinderen Jan het boek gaf
   that the children John the book gave
   "that the children gave John the book."

c. *dat Jan de kinderen het boek gaf
   that John the children the book gave
   "that the children the book gave John."

d. *dat de kinderen Jan het boek gaf
   that the children John the book gave
   "that the children gave John the book."

The 'scrambling' aspect of word order in Dutch only applies to the relative order of arguments and adjuncts, as shown in (4) (cf. Roter 1974):

b Reserving the term object shift for previous movement in Mainland Scandinavian languages, cf. Holmberg (1986).
The hypothesis of scrambling as object movement to the specifier of AgroP immediately leads to three conclusions.

First, the coexistence of (1) and (2), as well as the complete pattern in (4), indicates that adverbs do have a fixed position. I will assume that adverbs in principle can be adjoined to any maximal projection.11

Second, the direct object must be assumed to occupy the specifier position of AgroP, even if this cannot be demonstrated by the presence and position of an adverb (section II.4.5). Thus, not only in (1) but also in (2) and (5) must the direct object be assumed to have moved to a position in the functional domain.

(5) a. „...dat Jan Marie kuste“
that John Mary kissed
„...that John kissed Mary.“

This follows from the absence of optional movement in the minimalist program. If scrambling is triggered by the need to eliminate a strong N-feature in overt syntax, the absence of scrambling will inevitably lead to a crashing derivation.

Third, the word order in (1) indicates that movement to the specifier position of AgroP can take place in the absence of verb movement to Agro. Since the direct object and the verb in (1) are not adjacent, they cannot be in a specifier-head configuration. Therefore, if the direct object occupies the specifier position of AgroP, the verb does not occupy Agro.12

This third conclusion runs counter to Chomsky’s (1992:23) conjecture that “overt object-raising will be possible only with overt V-raising.” This conjecture is based on the idea that head movement increases the internal domain of the head (or, more exactly, that movement of a head α to β yields a chain with an internal domain including the specifier position of αP). This makes the specifier position associated with the target of the headed movement (β) equivalent to the specifier position associated with the moved head (α), viewed from the perspective of the complement of the moved head (β). In other words, verb movement to Agro makes the specifier position of VP and AgroP equivalent to the object of V. As a result, movement of the object to the specifier position of AgroP across the specifier positions of the VP does not violate the shortest movement requirement.

Notice that we have already found independent reasons to reject this equidistance condition on movement. First, we found in section III.4.5 that the minimal domain of a head movement chain does not include the specifier position of the foot of the chain. Second, I hypothesized in section III.3.1 that the shortest steps requirement of economy of derivation is not a part of Universal Grammar. This hypothesis is supported by long distance head movement in clitic constructions (III.2.9) and in verb movement to the CP-system (III.4.3, III.5.3), and by long distance XP-movement in the Form Chain approach (III.5.3). Since the shortest steps requirement underlies the equidistance condition, the latter is not conceptually motivated. To this we can now add that the equidistance principle makes the wrong prediction for object movement in Dutch.13

This is a serious problem for Chomsky’s conjecture, since precisely Dutch and German provide the most compelling empirical evidence for object movement to the specifier position of a functional projection. As such, object movement in German is one of the highlights of the minimalist program. Chomsky’s conjecture about the relation between verb movement and object movement now can only be maintained if (1) displays a second object movement in addition to the movement to AgroP (or, alternatively, no movement to AgroP at all).14 But then much of the empirical evidence for object movement to AgroP would be lost to begin with. I therefore conclude that the minimalist approach to object

11 Kayne (1995) considers adjoinment to a maximal projection to be impossible, and assumes that adverbs move to the specifier position of a designated functional projection. See section I.3.2 for discussion.

12 Recall that we have excluded the possibility that Dutch has been final functional projections. Hence, specifier-head configurations always yield linear adjacency.

13 Chomsky (1992a,b) notes that his prediction concerning the relation between verb movement and object movement to AgroP “is apparently confirmed for the Germanic languages,” referring to Vliss (1991a). However, Vliss (1991a, section 4.2.5) explicitly states that scrambling (object movement to AgroP in our analysis) does not require the verb to move. In this respect, scrambling differs from the Scandinavian pronoun movement studied in Isenberg (1980). The latter phenomenon, however, cannot be analyzed as movement to the specifier position of AgroP, unless we assume that full noun phrases in Scandinavian cannot and need not eliminate the strong N-feature of AgroP.

14 Van den Wyngaert 1986a,b, Hulst 1990a,b.
movement is correct and applies to (1). Consequently, verb movement is not a precondition for object movement.14

Finally, the approach to object movement advocated here implies that there is a functional projection for the licensing of indirect objects as well, considering the fact that indirect objects precede direct objects (cf. (3)). This I will assume without further discussion.

As mentioned in section 1, the existence of object movement in Dutch makes it impossible to draw conclusions as to the basic ordering of verb and object in the VP in Dutch. However, one might argue that indefinite objects generally do not undergo scrambling (see, among others, De Hoop 1992). If so, the structure of the VP could be read off of embedded clauses involving indefinite objects. I will discuss this possibility in section 2.2.3, and dismiss it. First, however, I will discuss the evidence for scrambling as movement to the specifier position of AgrOP in section 2.2.2.

2.2.2 Scrambling as L-related XP-movement

a. Scrambling as movement to AgrOP

The idea that scrambling in Dutch consists of movement to the specifier position of a functional projection designed for object licensing was originally due to Vanden Wyngaard (1988a, b).15 Vanden Wyngaard shows that scrambling in Dutch has the properties of A-movement, and argues that A-movement should be defined as movement to a Case licensing position.

The relevant properties of scrambling here are 1. boundedness, 2. absence of weak cross-over effects, and 3. absence of reconstruction effects. These properties of scrambling, which are briefly illustrated below, were already well known by the time Vanden Wyngaard developed his AgrOP hypothesis (see Beekes and Hockstra 1984, Huybregts and Van Riemsdijik 1985, Holmberg 1986). What seems to have obscured a proper understanding of the phenomenon, however, is that scrambled objects were seen to license parasitic gaps, in marked contrast with other A-

14 This provides a fourth piece of evidence against the shortest steps requirement of economy of derivation. Apparenty, objects are allowed to cross the specifier position of VP on their way to AgrOP.

15 Vanden Wyngaard appears to have proposed AgrOP independently of Chomsky 1991 and Makkajai 1990. With respect to AgrOP as a separate category, reference is often made to Kayne 1987, but it is not clear that the agreement projection identified there should be equated with AgrOP.

17 Hence Weibelhuth's (1989) analysis of scrambling in German as movement to a 'mixed' position (displaying both A-properties and A'-properties). For the same reason, Vanden Wyngaard (1988a:258) adopts an additional object movement from the specifier position of AgrOP to an A'-position, cf. Makkajai 1990:56. See Deen & Eiten (1992) for discussion.

(7) a. *dat Piet mei Jan Marie gisteren kuste
  that Pete said dat John Mary yesterday kissed had
  "that Pete said that John kissed Mary yesterday."

b. *dat Piet Marie mei Jan gisteren kuste
  that Pete Mary said dat John gisteren had
  "that Pete Mary said that John yesterday kissed had"

This contrasts with topicalization, which is unbounded, as discussed in section III.5.5.

(8) Marie (die) mei Piet dat Jan gisteren gekost had
Mary (who) said Pete that John yesterday kissed had
"Mary, Pete said that John kissed yesterday."

Recall that raising to subject is bounded. This is illustrated here for Dutch:

(9) *Jan schijf dat e Marie gekust heeft
John seems that Mary kissed had
"John seems has kissed Mary."

I argued in section I.5.1 and III.5.3 that unbounded movement takes place by way of the process Form Chain (cf. Chomsky 1992:21), and that this process should be thought of as a combination of inserting intermediate empty elements first and moving the lexical constituent afterwards in a single step. The empty elements will then, in the interpretation process, be included in the chain linking the moved element with its trace. Long distance movement in this scenario proceeds stepwise and cyclically, as a part of the structure building process of generalized transformations.

Under these assumptions, the ungrammaticality of (9) follows if we assume that the empty element to be inserted in the process of long distance movement cannot have f-features. This follows if an empty element with f-features must also have an independent 0-role. In long distance raising constructions like (9), this is excluded, since only one
8-role is available for the subject Jan in the matrix clause and the empty element in the embedded clause indicated by e.

The ungrammaticality of (7b) can be accounted for in exactly the same way, on the assumption that scrambling is movement to the specifier position of AgrOP. In that case, (7b) can be derived by applying Form Chain in the familiar way. Assume that in (7b) the direct object of the embedded verb, Marie, is moved to a licensing position in the matrix clause (i.e., to the specifier position of the matrix AgrOP). This is parallel to the derivation of (9), in which the subject of the embedded clause is moved to the specifier position of the matrix AgrOP. The embedded verb, kwist, has a 5-feature (the object agreement feature) which must be checked against the V-feature of the AgrO in the embedded clause. When this AgrO is created as part of the structure building process of generalized transformations, it comes with a strong 5-feature (an automatic consequence of the hypothesis that scrambling is movement to AgrOP). Consequently, the 5-feature of the embedded AgrO must be checked and eliminated in overt syntax. This can be done by inserting an empty element, in the same way that empty wh-elements are inserted in the specifier position of the embedded WhP in the derivation of long distance wh-movement constructions. However, since the thus inserted empty element has a 5-feature (otherwise it could not check the 5-features of an Agreement head), it is an object pro, which, by our previous assumption, must have an independent 8-role. Thus, there are two elements, the displaced object Marie and the pro in the embedded AgrOP, competing for the same 8-role. One of the two will end up without a 8-role, which will make (9) uninterpretable.

Thus, by analyzing scrambling as movement to the specifier position of AgrOP, the property of boundedness follows from the familiar distinction between L-related and non-L-related XP-movement.

The other two properties of scrambling which link it to L-related XP-movement are well discussed in the literature and are illustrated only briefly here. First, scrambling of a direct object across an adjunct containing a prepositional which is coreferential with the direct object does not yield a weak crossover effect (10). In this respect, scrambling behaves like raising to subject position (11a) and unlike topicalization (11b).

(11a) Jan, kwist Marie, volgens haar, naarmaal, gekust
John, Mary, her directions, kissing
"John kissed Mary according to her directions."

(11b) Jan, kwist Marie, volgens haar, naarmaal, gekust
John, Mary, her directions, kissing
"Mary was kissed according to her directions."

Second, scrambling creates a felicitous configuration for binding purposes (12), like raising to subject (13a), and unlike topicalization (13b):

(12) a. Jan, kwist de kinderen aan elkaar, voorgesteld
John, the children, to each other, presented
"John presented the children to one another."

b. ?? Jan, kwist de kinderen aan elkaar, voorgesteld
John, the children, to each other, presented
"John presented the children presented."

(13) a. De kinderen werden aan elkaar, voorgesteld
the children were to each other presented
"The children were introduced to one another."

b. ?? Elkaar, konden de kinderen, t, niet
each other, could the children, t, not
"Each other, the children didn't know."

In (12a) and (13a), the overt syntax configuration reflects the c-command relation needed for binding of the anaphoric element elkaar 'each other' by de kinderen 'the children'. In (13b), de kinderen does not c-command the anaphoric element elkaar, apparently, the position of the trace of elkaar, indicated in (13b), is relevant for binding, not the overt syntax position of elkaar. The latter phenomenon is typical for non-L-related XP-movement.

b. Parasitic Gaps

The analysis of scrambling in Dutch as L-related movement faces one problem. As Bennis and Hoekstra (1984) demonstrate, scrambling in Dutch creates a configuration in which parasitic gaps can be licensed. This is illustrated in (14).

(14) a. "....dat Jan, [de kinderen e uit te lezen] het boek weglegde
...that John, [the children e out to read] the book put away
"...that John put the book away without finishing it."

b. "....dat Jan, het boek [de kinderen e uit te lezen] t weglegde
...that John, the book [the children e out to read] t put away
"...that John put the book away without finishing it."

Parasitic gaps can be interpreted only in the presence of another gap. This gap must be the trace of non-L-related XP-movement (A'-movement), and
must not c-command the parasitic gap (Chomsky 1982; cf. 1986b; Kayne 1984, many others); the fronted XP must c-command both gaps. This is illustrated for Dutch in (15):

(15) a. *Welk boek heeft Jan (sonder e uit te lezen) in weggelegd?* which book has John without out to read away put “What book did John put away without finishing?”

b. Dit boek heeft Jan (sonder e uit te lezen) in weggelegd this book has John without out to read away put “This book, John put away without finishing.”

In the sentence in (15), the gap in the adjunct clause, indicated by e, is parasitic on the trace of the wh-movement/topicalization (indicated by f in (15)).

In Bennis and Hoekstra’s analysis of (14b), the gap in the adjunct clause is parasitic on the trace of the scrambling movement which puts the object het boek ‘the book’ in front of the adjunct clause. This trace is also indicated by a f in (14b). The analysis entails that scrambling, like topicalization and wh-movement, is A’-movement (non-L-related XP-movement).

This result is problematic for the generalizations made in the previous section, according to which scrambling in Dutch displays the properties of L-related movement. Vanden Wyngaard (1988a) and Malchuk (1990) have attempted to reconcile the L-related character of scrambling with the non-L-related property of parasitic gap licensing, by postulating that scrambling contains two movements, one moving the object to the specifier position of AgrOP, and a second one moving the object to an adjunction position higher up. The trace f in (14b) would under this scenario indicate the specifier position of AgrOP, and the object het boek would be occupying the higher adjunction position when it precedes the adjunct clause.

This, however, is unattractive from a minimalist point of view, since it involves an optional movement which does not seem reducible to movement for feature checking purposes.

Another reason not to be completely satisfied with the Bennis and Hoekstra analysis is that it is impossible to provide a minimal pair demonstrating its correctness. (14) does not count as a minimal pair, because in (14a) the object het boek does not c-command the parasitic gap, which is a precondition for parasitic gap licensing. In other words, the ungrammaticality of (14a) may be unrelated to the presence or absence of an object trace.

On the other hand, it would be unwise to reject Bennis and Hoekstra’s analysis of parasitic gaps in Dutch, unless it can be shown that the parasitic gap construction in (14b) has distinctly different properties from the parasitic gap constructions in (15). In that case, it would not be clear that much is gained by analyzing (14b) along the same lines as standard parasitic gap phenomena, which are induced by non-L-related XP-movement.

It should be evident that I am hesitant to put forward the following observations, since they can serve only to weaken the existing analysis, without much promise of putting anything in its place. On the other hand, the phenomena themselves appear to be rather striking, and suggest that scrambling indeed parasitic gaps in Dutch are still less than fully understood.

As a first observation, at least according to my ear, (14b), though grammatical, is less acceptable than (15a) or (15b). This is unexplained if scrambling in parasitic gap constructions involves non-L-related XP movement. In connection with this, several contexts can be given in which the two types of parasitic gap constructions diverge.

The clearest contrast between parasitic gaps in scrambling constructions and wh-constructions is obtained by turning the clause containing the parasitic gap into an island. It turns out that scrambling induced parasitic gaps are impossible in even slightly more complicated adjunct clauses, whereas wh-movement induced parasitic gaps display the normal scale of deterioration under added complexity (cf. Chomsky 1986b:56). Compare the adjunct clauses in (17), assuming them to appear in the context in (16), with the adjunct clauses in (19), assuming the context in (18):

(16) Wie heb je --- opgebad? *Who have you --- called

*“Who did you call ---?”*
Dutch Syntax

(17) a. zonder te vroegen dat wij e a uitgenoegd hadden without to suspect that we pg already invited had
   b. zonder te weten dat wij e a uitgenoegd hadden without to know that we pg already invited had
   c. zonder te weten voor welk feest hij e moet uitnodigen without to know for which party he pg must invite
   d. zonder te weten van het plan dat we pg zouden inviteren without to know of the plan that we pg would invite

(16) Jan heeft de buren opgebeled
John has the neighbors called

(19) a. * zonder te vroegen dat wij e a uitgenoegd hadden without to suspect that we pg already invited had
   b. zonder te weten voor welk feest hij e moet uitnodigen without to know for which party he pg must invite
   c. zonder te weten van het plan dat we pg zouden inviteren without to know of the plan that we pg would invite

The judgments in (17) are as expected under Chomsky’s (1986b) analysis of parasitic gap constructions as involving empty operator movement in the adjacent clause. The judgments in (19), then, suggest that this empty operator movement does not take place in parasitic gap constructions with scrambling instead of wh-movement. Accepting Chomsky’s analysis, this amounts to saying that they are not parasitic gap constructions, or at least parasitic gap constructions of a completely different kind.

Second, consider the following parasitic gap construction involving, arguably, a complement clause (cf. Chomsky 1986b:62):

(20) Wie heb je te overtuigen dat we e zouden bezoeken? who have you to convince that we pg would visit

This sentence is grammatical (note that overtuigen ‘convince’ must be understood transitively, as is normal interpretation). Scrambling does not create the configuration that makes this parasitic gap construction possible:

(21) Ik heb Piet overtuigd dat we e zouden bezoeken we pg convinced that we pg would visit
I convinced Pete that we would visit

(21) is absolutely ungrammatical.

These observations indicate that parasitic gaps in scrambling constructions differ from parasitic gaps in wh-movement constructions in unexpected ways. Unfortunately, the observations presented here do not immediately suggest by what kind of mechanism constructions like (14b) receive a parasitic gap interpretation. The absence of the normal island effects in the adjacent clause in this construction, however, does suggest that the relevant mechanism is not the normal licensing mechanism for parasitic gaps.20

In the light of these uncertainties, it does not seem wise to maintain at all cost that scrambling is or can be non-L-related XP-movement. I will therefore adopt the minimalist analysis of scrambling as movement to the specifier position of AgrOP, triggered by morphological licensing requirements.

2.2.3 The Distribution of Indefinite Objects

If scrambling in Dutch is movement to the specifier position of AgrOP, it cannot be optional. Hence, the pattern in (22) must be taken to indicate that sentence adverbs may be adjoined both higher and lower than AgrOP.

(22) a. Dat Jan Marie gisteren gekust heeft that John Mary yesterday kissed has
   b. Dat Jan gisteren Marie gekust heeft that John yesterday Mary kissed has

   “That John kissed Mary yesterday.”

In (22), the object Marie is a definite noun phrase. With neutral sentence intonation, (22a) and (22b) differ only in that (22b) is more

20 A promising hypothesis could be that scrambling-induced parasitic gaps are really traces of across an empty operator, as proposed by Huybregts and Van Zaandel (1985), whereas who-induced parasitic gaps are real parasitic gaps. One problem that the across the board hypothesis faces is that localizing the ‘parasitic trace improve the construction, whereas each localization across the board extraction leads to severe ungrammaticality. This, however, follows if we assume that wh-extension out of证监会 constructions involves the presence of a second operator in the second conjunct. Localizing the trace would then lead to various quantification. This problem does not arise in across the board scrambling, since scrambling does not create an operator-variable structure.
felicitous than (22a) when Marie presents new information. This is because the neutral sentence intonation of Dutch puts the immediate preverbal element in focus (cf. section II.1.4). Thus, (22b) is the preferred answer to the question Who did John kiss yesterday? However, as mentioned earlier in section 2.2.1, (22a) is a perfect answer to this question when Marie receives a marked intonation (with high pitch on ‘it’). Apparently, focus may shift to the left, independently of scrambling.

When the object of the verb is an indefinite noun phrase, its preferred position is to the right of sentence adverbials:

(23) dat Jan gisteren een meisje gekust heeft that John yesterday a girl kissed has
   "that John kissed a girl yesterday."

The standard interpretation of this fact is that indefinite noun phrases do not undergo scrambling (cf. De Hoop 1992). If this were correct, een meisje ‘a girl’ in (22) would still be in its basic position. Still excluding verb movement to the right, we would have to conclude from (23) that the VP in Dutch is head final.

I will argue, however, that this conclusion is not warranted, because its premise, namely that indefinite noun phrases do not undergo scrambling, is false.

In the minimalist approach to scrambling underlying the analysis of (22), the assumption that (22) does not involve scrambling is questionable from the start. First, the approach dictates that object movement is required by the need to eliminate a strong A-Feature of AgrO. If so, the derivation of (22) will not converge unless the indefinite object moves to the specifier position of AgrOP. Second, we know from the pattern in (22) that adverbs may be adjoined both higher and lower than the specifier position of AgrOP. If so, (23) does not conclusively show that scrambling is absent. It could also be the case that the adverb is preferably adjoined higher in case the specifier position of AgrOP is occupied by an indefinite noun phrase.

The latter conjecture is supported by a number of observations. If the order in (23) is the result of the adverb being preferably adjoined in a position co-commanding the indefinite object, there must be a reason for this preference. In other words, it must be the case that a reversal of the adverb-indefinite object order has some effect on the interpretation of the sentence. Thus, we expect (24) not to be ungrammatical, but just different from (23):

(24) dat Jan een meisje gisteren gekust heeft that John a girl yesterday kissed has
   "that John kissed a girl yesterday."

This is exactly what we find. (24) is not ungrammatical, but een meisje has lost much of its indefinite character. The preferred interpretation of (24) is that there is a specific girl, whose identity is unknown, but whose existence is presupposed, and that John kissed that girl yesterday. The difference is rather subtle in (23)-(24), but becomes more apparent when the indefinite object is modified, as in (25):

(25) a. dat Jan gisteren een meisje uit zijn klas gekust heeft that John yesterday a girl from his class kissed has
   "that John kissed a girl from his class yesterday."

b. dat Jan een meisje uit zijn klas gisteren gekust heeft that John a girl from his class yesterday kissed has
   "that John kissed a girl from his class yesterday."

Een meisje uit zijn klas 'a girl from his class' is ambiguous; it can have the interpretation 'a specific girl from his class which I have in mind' or the interpretation 'some girl from his class'. Both interpretations are possible in (25a), but the former is much preferred in (25b).

Following De Hoop (1992), I will use the term 'strong reading' to refer to the special interpretation of indefinite noun phrases when they precede sentence adverbials. De Hoop (1992:50) distinguishes four types of strong readings. The type illustrated above is called 'referential'. The other strong readings are 'partitive', 'generic', and 'generic collective'. These will be illustrated shortly.

It should be noted here, however, that a weak (i.e. not strong) reading of the indefinite noun phrases in (24) and (25b) is not impossible. Thus, (24) and (25b) can in fact be used as answers to the question Who did John kiss yesterday?. In this respect, the pairs (23)-(24) and (25a)-(25b) are comparable to the pair in (22). (23) and (25a), like (22), have a word order in which the element presenting new information is in the position which is most likely to get focus in the unmarked sentence intonation. However, when pronounced with marked intonation, both een meisje in (24) and een meisje uit zijn klas in (25b) receive focus, just like Marie in (25a). With this intonation, (24) and (25b) present perfectly acceptable answers to the question Who did John kiss yesterday?. In other words, the interpretation of indefinite noun phrases is not a matter of word order per se, but of intonation.

There is a difference to be noted between (22) on the one hand and (23)-(25) on the other hand, however. If we think of these sentences as being triggered by the question When did John kiss Marie a girl (from his class)? then in (23), (22a) is the preferred answer, going along with the neutral sentence intonation which puts gisteren 'yesterday' in focus, and (22b) is also possible when gisteren gets the marked intonation. In contrast, (24) and (25b) are rather awkward in this context. Instead, (23) and (25a) would be used, again with marked intonation of the adverb.
This observation leads to the following generalization:

(26) Indefinite noun phrases may not precede focused material.

(26) must actually be sharpened to (27):

(27) An indefinite noun phrase which precedes focused material has a strong reading.

Thus, (25b) is a correct answer to the question *When did John kiss a girl from his class?* when a girl from his class has a referential interpretation. The judgment is subtle, but is confirmed in constructions in which the indefinite noun phrase is the subject of a Small Clause. Here, the Small Clause predicate can receive focus intonation only if the indefinite Small Clause subject has a strong reading:

(28) a. *dat Jan een meisje de tuin in stuurde that John a girl the garden in sent* "that John sent a girl into the garden."

b. *dat Jan een meisje uit zijn klasde tuin in stuurde that John a girl from his class the garden in sent* "that John sent a girl from his class into the garden."

In (28a), the Small Clause predicate de tuin in ‘into the garden’ cannot be focused (unless een meisje ‘a girl’ is understood as referential). In (28b), where the Small Clause predicate is focused, the Small Clause subject gets a referential interpretation.20

Now we have two generalizations concerning the distribution of indefinite objects with a weak interpretation. First, they can be non-adjectival to the verb only if they have the marked intonation signaling new information. Second, they cannot be followed by focused material. These two generalizations are compatible, since in Dutch an element with a marked intonation is followed by flat intonation material only.21 One could say that the marked intonation shifts to the left.

Let us now return to the question of how to account for the fact that adverbs must precede indefinite objects. This can now be easily explained given that adverbs, when intervening between the object and the verb, are in the natural focus position. This follows from the neutral pattern of sentence intonation in Dutch, which has the preverbal position as the unmarked focus position (see section II.1.4).22 If so, indefinite objects that are separated from the verb by an adverb, will have to either assume a marked intonation (signaling that they represent new information) or receive a strong interpretation.

Consider how these generalizations hold up in other contexts. The following pair illustrates another type of strong reading, the generic reading:

(29) a. *dat Jan vaak meek ziet that John often sees* "that John often sees girls” b. *dat Jan meek vaak ziet that John often sees* "that John sees often girls”

The normal interpretation of (29a) is that John has a habit of kissing girls, whereas (29b) means that, as far as girls are concerned, John kisses them a lot. (29b) illustrates the generic reading of meekvaak ‘often’.

Under our analysis, meek in (29b) must have a strong reading, because it is separated from the verb by an element in the natural focus position, the adverb vaak ‘often’. We predict, however, that meek in (29b) may have a weak reading, when it is appropriately stressed, so that vaak once receives a completely flat intonation. This prediction is borne out, as can be seen in (30):

(30) a. *Het valt mij op dat Jan meek VAAK KUIST he sees me that John often KISSES* "It strikes me that John often KISSES girls.”

b. *Het valt mij op dat Jan MEER vaak KUIST* "It strikes me that John often KISSES GIRLS.”

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20 As noted in section II.1.4, many other intonational patterns are possible. If the verb in an embedded clause is intransitive, it may carry the focus intonation itself (dat Jan vloek). Dutch that John often dances). Also, certain adverbs, like most mean ‘just’, resist focus intonation. Hence, the fact that indefinite objects preceding these adverbs receive a strong reading does not obviously follow from intonational considerations. I assume that the oddity of such a construction (for instance ? dat Jan a book just took vaak... dat Jan een boek voor een boek nam... is that John a book just took vaak... dat Jan een boek voor een boek nam... ) results from the assumptions that vloek cannot be the natural focus position. If the focus shifts leftward from vloek in een boek, so that een book comes to represent new information, the sentence becomes more acceptable. These and other observations suggest that much more research is needed before the interaction of intonation and interpretation in Dutch is fully understood.

21 In connection with this, (29b) also allows a reading where each kissing event involves a number of kisses. This reading is absent in (29a).
In (30a), *meisjes* has a generic reading. This is as expected, since it is followed by focused material. In (30b), however, *meisjes* has a weak interpretation. Here *naakt hoor* gets a completely flat intonation, and *meisjes* presents new information. The best paraphrase is *'it strikes me that what John often kisses is girls*, and not *'it strikes me that as far as girls are concerned, John kisses them a lot'.

Similar observations can be made for the other strong readings indefinite noun phrases may get. These are the particular reading (31) and the generic collective reading (32):

(31) a. *dat Jan twee meisjes gisteren gekust heeft*  
that John two girls yesterday kissed has

b. *dat Jan twee meisjes gisteren kussen*  
that John two girls yesterday kiss

(32) a. *dat Jan twee stroomen altijd door elkaars hals*  
that John two parts always through each other’s neck

b. *dat Jan twee stroomen altijd door elkaars hals*  
that John two parts always through each other’s neck

In (31a), *twee meisjes* gets the strong, partitive interpretation (i.e. 'two of the girls'). This makes sense, since in the natural sentence intonation, the verb *gekust kussen* would be in focus, or otherwise the adverb would. In (31b), however, *gisteren gekust heeft* gets a completely flat intonation, and the sentence can be used as an answer to the question *'did John kiss yesterday?*'. John in (32) should be thought of as having trouble keeping two simultaneous parts in a musical piece apart. (32b) then means that as soon as the music becomes two-part, John gets confused. In other words, *twee stroomen 'two parts' get a generic collective reading. In (32b), under the indicated intonational pattern, this reading is absent, and *twee stroomen* gets a weak, existential interpretation.

This analysis shows that the interpretation of indefinite objects in Dutch can be explained in terms of the intonational patterns of the sentence. Apparently, the intonational pattern is related to positions in a linear order rather than to positions in a hierarchical structure. As can be seen in the examples above, it is irrelevant for the interpretation of the indefinite noun phrase which constituent following it is stressed. This can be an adverb, or a Small Clause predicate (as in (28b)), or the verb itself. In all these cases, the indefinite noun phrase will receive a strong interpretation. In other words, there is no reason to link the interpretation of an indefinite noun phrase to its structural position in the tree.

Therefore, we may safely assume that indefinite objects, like definite objects, move to the specifier position of AgroP in overt syntax in Dutch. Hence, the structure of the VP in Dutch is not directly reflected in the order of the verb and the indefinite object in embedded clauses.

2.2.4 Conclusion

In this section I have argued that scrambling in Dutch can be analyzed as required by the minimalist approach, namely as obligatory movement of the object to the specifier position of AgroP. This makes scrambling an L-related XP-movement, which explains its A-movement characteristics, including the bounded character of the movement. I also argued that parasitic gap constructions involving scrambling differ from parasitic gap constructions involving non-L-related XP-movement. This suggests that scrambling induced parasitic gaps are not really parasitic gaps, although the exact nature of these gaps has to be left as a topic for further research. I also argued that all objects in Dutch, whether definite or indefinite, move to the specifier of AgroP in overt syntax. I have proposed that the interpretation of indefinite objects is a function of intonation rather than of syntactic position.

These considerations lead to the conclusion that the overt syntax position of direct objects with respect to the verb in embedded clauses in Dutch is irrelevant for the question whether the VP in Dutch is head final or head initial.

2.3 The Position of Embedded Predicates

2.3.1 Introduction

In section 2.2 we encountered the first potential problem for the hypothesis that Dutch is an SVO language. This problem, the distribution of indefinite objects, was removed by arguing that indefinite objects move to the specifier position of AgroP, just like definite objects do.

A second potential problem for the SVO hypothesis is posed by the distribution of Small Clause predicates. These invariably precede the verb in embedded clauses. Moreover, the embedded verb and the Small Clause predicate are strictly adjacent in almost all constructions. If Small Clause predicates occupy their basic position, we must conclude that the

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1 Only stranded prepositions may intervene between the Small Clause predicate and the embedded verb (cf. Koster 1990).
basic position of Small Clause complements is to the left of the verb. Still assuming that all types of complements start out from the same basic position, we would have to conclude that the VP in Dutch is head final.

I will argue that this problem can be removed in the same way as the first problem was. I will present arguments to support the hypothesis that Small Clause predicates are not in their basic position in Dutch. The arguments suggest that there exists a separate functional projection, the Predicate Phrase (PredP), which is designated for the licensing of embedded predicates. This functional projection is located between AgP and VP, and its head (PredP) must be thought of as having a strong N-feature in Dutch, triggering movement of the Small Clause predicate to the specifier position of PredP in overt syntax.

The upshot of this analysis is that the position of Small Clause predicates in Dutch provides no evidence for or against the head initial status of the Dutch VP.

In section 2.3.2, the relevant aspects of the syntax of Small Clauses in Dutch are discussed. In section 2.3.3, the arguments for the existence of the Predicate Phrase and for the overt predicate movement in Dutch will be presented.

### 2.3.2 The Syntax of Small Clauses

#### a. Adjacency effects

Small Clause predicates in Dutch always appear to the left of the verb in embedded clauses:

1. a. *dat Jan de TV uit zet* that John the TV out puts
   "*dat Jan turns off the TV."
   b. *dat Jan de TV zet uit* that John the TV puts out

2. a. *dat Jan de deur rood verf* that John the door red paints
   "*dat Jan paints the door red."
   b. *dat Jan de deur rood verf* that John the door paints red

3. a. *dat Jan het boek op de tafel legt* that John the book on the table puts
   "*dat Jan puts the book on the table."
   b. *dat Jan het boek legt op de tafel* that John the book puts on the table

The ungrammaticality of (3b) is significant since PPs in Dutch may generally appear to the right of the verb in embedded clauses:

4. a. *dat Jan Mar ice intelligent vindt* that John Mary intelligent finds
   "*dat Jan considers Mary intelligent."
   b. *dat Jan Mar ice vindt intelligent* that John Mary finds intelligent

The examples in (6) show that Small Clause predicates must appear to the immediate left of the verb in embedded questions:

5. a. *dat Jan de TV uit steeds zet* that John the TV out all the time puts
   "*dat John turns off the TV all the time."
   b. *dat Jan de deur rood verf* that John the door red paints
   "*dat Jan paints the door red again."
   c. *dat Jan het boek op de tafel legt* that John the book on the table again puts
   "*dat John puts the book on the table again."
   b. *dat Jan Mar ice intelligent nee altijd vindt* that John Mary intelligent never finds

Again, adjacent PPs differ from predicative PPs:

6. a. *dat Jan zijn boek op de tafel weer vond* that John his book on the table again found
   "*dat John found his book again on the table."

Small Clause predicates need not be left adjacent to the verb selecting the Small Clause. Left adjacency to the verbal cluster suffices:

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1 (3b) should not be confused with the complex particle construction *dat Jan het boek op de tafel sorg legt* "*dat Jan puts the book back on the table. In this construction, sorg "back" is the predicative element, and op de tafel is a non-predicate, which can appear to the right of the verb in embedded clauses. For extended prepositions, see below.
The Small Clause predicates in (8) may also appear inside the verbal cluster, to the left of the verb selecting the Small Clause:\footnote{Inside the verbal cluster, the Small Clause predicate does not have to be to the immediate left of the verb selecting the Small Clause, witness examples like \textit{dat Jan de TV uit heeft gezet} that \textit{John the TV out has put} \textit{"that John turned the TV off."} In West Flemish, this is also possible with plural Small Clause predicates (Vanacker 1979:146, dass 	extit{one monster naar huis komt gaan} that 	extit{they us must-FAST to house let go} “that they had to let us go home”).}

\begin{enumerate}
\item \textit{a. \textit{dat Jan de TV uit heeft gezet}} that \textit{John the TV out has put} \textit{"that John turned the TV off."}
\item \textit{b. \textit{dat Jan de deur rood wil verven}} that \textit{John the door red wants paint} \textit{"that John wants to paint the door red."}
\end{enumerate}

In Standard Dutch, phrasal predicates may only appear to the left of the verbal cluster as a whole, not inside the cluster:

\begin{enumerate}
\item \textit{a. \textit{dat Jan het boek op de tafel heeft gelegd}} that \textit{John the book on the table has put} \textit{"that John put the book on the table."}
\item \textit{b. \textit{dat Jan Marie intelligent moet vinden}} that \textit{John Mary intelligent must find} \textit{"that John has to consider Mary intelligent."}
\end{enumerate}

However, Hoeksema (1993) shows that this is a recent development, dating from the 19th century, and that this development is caused by stylistic rather than grammatical factors. The constructions in (11) are perfect in West Flemish. For this reason, I do not think that the contrast between (8-9) and (10-11) should be explained by assuming optional incorporation of the Small Clause predicate into the verb in (8-9).\footnote{For an analysis involving predicate incorporation, see Koster (1993).}

The Small Clause predicate and the verb in embedded clauses can also be separated by a stranded preposition, but crucially, not by adjunct FPs. This yields the following contrasts:\footnote{The preposition \textit{met} “with” becomes \textit{na} “when” when its complement is extracted.}

\begin{enumerate}
\item \textit{a. \textit{dat Jan de TV uit met de afstandsbediening zet}} that \textit{John the TV out with the remote control puts} \textit{"the remote control with which John turns the TV off."}
\item \textit{b. \textit{de afstandsbediening waar Jan de TV uit zet}} the remote control where \textit{John the TV out puts} \textit{"where John puts the TV off with."}
\end{enumerate}

\begin{enumerate}
\item \textit{a. \textit{dat Jan de deur rood met die kwast verf}} that \textit{John the door red with that brush paints} \textit{"John the door red with paint with the brush with which John paints the door red."}
\item \textit{b. \textit{de kwast waar Jan de deur rood met die kwast verf}} the brush where \textit{John the door red with that brush paints} \textit{"the brush with which John paints the door red."}
\end{enumerate}

\begin{enumerate}
\item \textit{a. \textit{dat Jan het boek op de tafel met een schering gebarst}} that \textit{John the book on the table with an elegant gesture puts} \textit{"the gesture with which John puts the book on the table."}
\item \textit{b. \textit{het gebarst waar Jan het boek op de tafel met een schering gebarst}} the gesture where \textit{John the book on the table with an elegant gesture puts} \textit{"the gesture with which John puts the book on the table."}
\end{enumerate}

\begin{enumerate}
\item \textit{a. \textit{dat Jan Marie intelligent om die reden vindt}} that \textit{John Mary intelligent for that reason finds} \textit{"the reason for which John finds Mary intelligent."}
\item \textit{b. \textit{de reden waar Jan Marie intelligent om vindt}} the reason where \textit{John Mary intelligent for finds} \textit{"the reason for which John finds Mary intelligent."}
\end{enumerate}

In all these cases, the stranded preposition may also appear to the immediate left of the Small Clause predicate, but not to the right of the verb in embedded clauses:

\begin{enumerate}
\item \textit{a. \textit{de afstandsbediening waar Jan de TV uit met de afstandsbediening zet}} the remote control where \textit{John the TV out with the remote control puts} \textit{"the remote control with which John turns the TV off."}
\item \textit{b. \textit{de afstandsbediening waar Jan de TV uit met de afstandsbediening zet}} the remote control where \textit{John the TV out with the remote control puts} \textit{"the remote control with which John turns the TV off."}
\end{enumerate}

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The preposition \textit{met} “with” becomes \textit{na} “when” when its complement is extracted.
In addition to the constructions illustrated here, Small Clause predicates may appear as footed elements in topicalizations and locative inversion constructions. I will leave these out of consideration here.\textsuperscript{4}

b. The Structure of Small Clauses
All I intend to do here is to raise some basic assumptions concerning the structure of Small Clauses which will be relevant for the discussion in the next section.\textsuperscript{1}

Traditionally, Small Clauses are treated as complete subject-predicate configurations which lack independent inflectional features. I will adopt this traditional view, and assume that Small Clauses do not have their own functional projections.\textsuperscript{5}

Another traditional viewpoint is that the subject and the predicate inside the Small Clause are sisters, and that the thematic status of the Small Clause is identical to the thematic status of the predicate of the Small Clause (cf. Swell 1983).\textsuperscript{6} There are both conceptual and empirical arguments, however, to assume that Small Clauses have the conventional X-bar structure, consisting of a head, a specifier, and a complement.\textsuperscript{10} I will therefore adopt this position, leaving the thematic status of the Small Clause unspecified.

If Small Clauses do not have functional projections, the elements making up the Small Clause will have to be licensed in the functional domain of the verb selecting the Small Clause. I therefore assume that the subject of a Small Clause is licensed in the specifier position of the AgrOP associated with the verb selecting the Small Clause. This yields the familiar 'missing to object' effects that are also present in exceptional Case marking constructions (Vanden Wyngaard 1989a). In both types of constructions in Dutch, the subject of the embedded clause constituent has the distribution which is characteristic of direct objects:

\begin{itemize}
  \item \textbf{17a.} \textit{Dat ik Jan gisteren heb horen zingen}
  \textit{that I John yesterday have heard sing}
  \textit{that I yesterday heard John sing.}
  \item \textbf{17b.} \textit{Dat ik Jan gisteren de diet in geduwd heb}
  \textit{that I John yesterday the diet in pushed have}
  \textit{that I yesterday pushed John into the ditch.}
\end{itemize}

In (17), the adverb gisteren 'yesterday' modifies the verb selecting the clausal complement, i.e. \textit{horen} 'hear' in (17a) and \textit{geduwd} 'pushed' in (17b). The subject of the clausal complement, Jan in both cases, appears to the left of the adverb, indicating movement to the specifier position of the AgrOP in the functional domain of \textit{horen} and \textit{geduwd}, respectively.\textsuperscript{11}

Exceptional Case marking constructions are furthermore illustrative, because they show that not only the subject of a clausal complement can be moved to a licensing position in the higher clause, but also all other constituents of that complement. Thus, the direct object inside the exceptional Case marking complement also shows the distribution effects indicative of movement to the specifier position of AgrOP in the higher clause.\textsuperscript{12}

\begin{itemize}
  \item \textbf{18a.} \textit{Dat ik Jan dat lied gisteren heb horen zingen}
  \textit{that I John that song yesterday have heard sing}
  \textit{that I yesterday heard John sing that song.}
\end{itemize}

Likewise, the verb of the exceptional Case marking complement, zingen 'sing' in (18a), appears to be licensed through raising to \textit{horen} 'hear'.\textsuperscript{13} Apparently, there are no licensing requirements on the exceptional Case marking complement as a whole: all its elements are licensed by moving to separate licensing positions.

I will assume that the same applies to Small Clauses. This means that the subject and the predicate of the Small Clause must be able to move separately.\textsuperscript{14} I will argue in the next section that the Small Clause

\begin{itemize}
  \item \textbf{11} It would be more correct to say that the AgrOP in question belongs to the domain of the auxiliary \textit{heb have}, but that is irrelevant in this context.
  \item \textbf{12} The only restriction here appears to be that the object of the embedded clause move to an AgrOP to the right of the AgrOP occupied by the subject of that clause.
  \item \textbf{13} See section 5.4. It is generally assumed that the phenomenon where a past participle is replaced by an infinitive verb form indicates that the infinitive verb is the target for raising of the verb in its complement. If we assume that adjuncts invariably take place to the left, this verb raising cannot be overt in Dutch.
  \item \textbf{14} Movement of the predicate of the Small Clause is already apparent in topicalization constructions and locative inversion constructions.
\end{itemize}
predicate moves to a designated licensing position in the functional domain of the verb selecting the Small Clause as its complement. 23

2.3.3 Raising to PredP

After these preliminaries, let us return to the question of the structure of the VP in Dutch. Since Small Clause predicates invariably appear to the left of the verb in embedded clauses, we must conclude that the VP in Dutch is head-final, unless it can be argued that Small Clause predicates are not in their basic position.

Notice that if Small Clause predicates are not in their basic position but in a licensing position, we do not expect them to ever show up to the right of the verb in embedded clauses (assuming the verb is in VI). This is because movement to a licensing position is obligatory, and licensing invariably takes place in a specifier-head configuration. Since specifiers are always assumed to be on the left, this would have the result that Small Clause predicates invariably appear to the left of the verb in embedded clauses in Dutch.

We therefore have to consider two questions. First, is it reasonable to posit a licensing position for Small Clause predicates in general? Second, is there any empirical evidence for the existence of overt raising of the Small Clause predicate to this licensing position in Dutch?

To answer the first question, consider the outlook of the grammar in the minimalist approach. In this approach, syntax consists of two parts: generation of elements in a head-complement or subject-predicate relation, and licensing of the same elements in a specifier-head configuration (actually, a specifier-Projection configuration, cf. 1.3.2). To achieve maximal generality, we would have to assume that all elements that are generated in the complement domain of a head must at some point be licensed in a specifier-head configuration. It is then an empirical matter to determine the nature of the relevant specifier-head configurations, and to determine at what point in the derivation movement to the relevant specifier positions takes place.

As for the particular case of Small Clause predicates, it has long been felt that a special relation exists between these predicates and the verb selecting the Small Clause as its complement. Many phenomena suggest that the verb and the Small Clause predicate function as a complex predicate, with the subject of the Small Clause as its complement. For example, the verb and the Small Clause predicate can be nominalized together, with the subject of the Small Clause appearing in a prepositional phrase:

(18) a. het op de tafel leggen van een boek
def on the table putting of a book
"the putting on the table of a book"
b. het rood verfven van de deur
def red painting of the door
"the painting of the door"

In this respect, the combination of the verb and the Small Clause predicate behaves exactly like a single verb:

(19) a. het lezen van een boek
def reading of a book
b. het verven van de deur
def painting of the door

The complex predicate character of the verb-predicate combination, however, cannot be expressed in the initial stage of the derivation. This is because in the Small Clause analysis, which we assume throughout, the Small Clause predicate is generated first in combination with the Small Clause subject, and this subject-predicate combination is subsequently combined with the verb.

Therefore, the complex predicate character of the verb-predicate combination must arise in the course of the derivation. The hypothesis I would like to argue for here is that the Predicate Phrase, occupied at LF by the Small Clause predicate and the verb selecting the Small Clause, is the structural expression of the complex predicate character of the verb-predicate combination.

This implies that in (18) the Predicate Phrase is the input for the nominalization operation (thought of in terms of Abney 1987, with a nominal functional head turning a verbal projection into a nominal one, cf. Zwart and Hoekstra 1989). But this is nothing unusual, if we consider other nominalizations in Dutch. Consider for instance the following nominalizations of an exceptional Case marking construction:

In minimalist terms, this could be analyzed as a verbal projection (e.g. a VP, an AgP, etc.) being combined with a nominal functional head by generalized transformation.
In (20a) the verb selecting the exceptional Case marking complement "horen zingen" is nominalized together with the verb of the complement "zingen 'sing'. The subject and the object of the complement clause appear in prepositional phrases. In (20b), the object of the complement clause is included in the nominalization. On our assumptions, this indicates that an AgrOP is part of the verbal projection that is turned into a nominal projection at some higher point in the tree (as in Almey 1987). In (20c), finally, the subject of the complement clause is also included in the nominalization, indicating that a second AgrOP is present in the verbal subpart of the nominalization structure. Hence, there is no reason why a Predicate Phrase should not be a possible input to the nominalization operation, yielding (18).

I conclude that the Predicate Phrase hypothesis is not conceptually unattestable. Crucial, however, is the second question: is overt movement to the Predicate Phrase from now on, PremP, empirically supported in Dutch?

To answer this question, consider again the distribution of Small Clause predicates in Dutch. These invariably appear to the left of the verb in embedded clauses, almost always adjacent to it. The adjacency could in principle indicate that both are in their basic position, or in a specifier-head configuration. Consider now the single element that is allowed in between the verb and the Small Clause predicate: a stranded preposition. Crucially, as the examples show, this is often the head of an adjacent PP, not an element of the Small Clause. Let us assume that it is generated as an adjunct to the VP (the maximal projection of the verb selecting the Small Clause).

Now if the verb and the Small Clause predicate are in their basic position, the stranded preposition could only intervene by lowering. On the other hand, if the verb and the Small Clause predicate are in a specifier-head configuration, the stranded preposition might intervene by raising from its position adjacent to the VP to the head of the PremP.

Lowering is a distinctly suspect operation in generative syntax. But lowering of a stranded preposition appears to be a pointless operation all in itself. Since the distribution of stranded prepositions is so limited, it is plausible that preposition stranding involves two operations: extraction of a noun phrase out of a PP, and raising of the head of that PP. Since PPs are generally islands (Van Riemsdijk 1978), we may assume that this head movement is necessary to make extraction out of the PP possible. It is well known that movement of the head X of a PP is blocked by higher X (Chomsky 1986b, 1990). If adjacent PPs are adjoined to VP, they are also c-commanded by the head selecting VP. Movement of P to this head therefore has the desired effect of making PP transparent. Lowering P, on the other hand, would be of no avail.

The distribution of stranded prepositions therefore decides in favor of the PremP hypothesis. Hence, we must assume that the (near) adjacency of the Small Clause predicate and the verb selecting the Small Clause is due to the circumstance that the predicate and the verb are in a specifier-head configuration. We must also assume that stranded prepositions, when intervening between the Small Clause predicate and the verb in Prem, are adjoined to the verb in Prem. This explanation of why stranded prepositions do not appear to the right of the verb in embedded clauses, and why full PPs do not appear between the Small Clause predicate and the verb. The latter fact follows from the impossibility of adjoined phrases to heads. The former is explained by the fact that PPs are islands: this makes it necessary in extraction constructions for the P to move to a head c-commanding the PP. This can only be a functional head, which are all on the left in Dutch, as we have seen. When no extraction takes place, there is no need for the P to move to Prem, hence the adjacent PP may remain in postverbal position. This, then, yields the standard "PP-over-V" effects, with the PP appearing to the right of the verb in embedded clauses.

---

(20a) het horen zingen door Marie van Leeuwen
the hearing sing by Mary of songs
"hearing Mary sing songs"

(20b) het liedjes horen zingen door Marie
the songs hearing sing by Mary
"hearing Mary sing songs"

(20c) het Marie liedjes horen zingen
the Mary songs hearing sing
"hearing Mary sing songs"

---

12 All maximal projections dominating the head in question also dominate the PP adjacent to VP.

13 As illustrated in section 3.5.2, the stranded preposition may also precede the Small Clause predicate. This shows if adjacent PPs are not necessarily adjoined to VP. If adjoined higher, the stranded preposition would have to move to a higher functional head in order to obtain the desired result of turning nonbaseorder of the PP. Since adjacent PPs may appear to the left of the Small Clause predicate as well, this distribution of the stranded preposition is normally produced. For a slightly different analysis, see Koster (1995).

14 This analysis must be supplemented by the assumption that adjoined of the stranded preposition is always left-adjoined. This is inevitable, if Kayne (1993) is correct.

15 It is not clear to me why PP-over-V is much more limited in Standard German. On PP extraction from VP, see Zwart (1990a)). I agree with Kayne (1993) that these constructions should be rephrased, allowing the possibility of movement to the right. For some possibilities, see Koster (1995).
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Notes that on this analysis it is not necessary to assume that adjacent PPs are adjoined to the right of the VP (a possibility rejected by Kayne 1993). If they are adjoined to the left of the VP, they will end up to the right of the verb after verb movement to Pred has taken place. Additional empirical evidence in support of movement of the Small Clause predicate to the specifier of PredP in Dutch is provided by phenomena involving agreement and extraction. Agreement between the Small Clause predicate and the verb also presents evidence that the verb and the predicate have to be in a specifier-head configuration. This agreement phenomenon shows up when the Small Clause predicate is a noun phrase, as in (21):

(21) a. Het zijn *ze* kooplieden
   dit are-PL/2SG merchants
   "They are merchants."

b. Het *zijn* ze kooplieden kunnen zijn
   dit should-PL/2SG merchants can be
   "They could be merchants."

The Small Clause subject het *zijn* normally triggers singular agreement on the verb, as (22) shows:

(22) Het is *zijn* gok
   dit is-Glass-PL crazy
   "It's crazy."

The existence of number agreement between the Small Clause predicate and the verb supports the idea that a licensing position for Small Clause predicates exists.

It is clear that kooplieden in (21) is a predicate. De Vries (1910:55) shows that predicate noun phrases take the non-agreeing resumptive d-word dat when they are topicalized, instead of the agreeing d-word die.

This can be illustrated by the following paradigm:

| Kooplieden also has to be adjacent to the verb in embedded clauses: |
| --- | --- |
| (23) a. De ouders maakten de oudste zoon de rijker (the parents made the eldest son the richest)
   b. De oudste zoon, die *dat* maakten de ouders de rijker
      the eldest son, *that* made the parents the richest
   c. De oudste zoon, die *aan* de ouders de oudste zoon
      the eldest son, *that* made the parents the eldest son
   "The richest son, that's what the parents made the eldest son."

Given that it is not in the power of parents to change the relative age of their children, de rijker 'the richest one' must be the Small Clause predicate in (23). As can be seen, the Small Clause predicate must be resumed by the neuter d-word dat, whereas the Small Clause subject must be resumed by the agreeing d-word die.

Applying this test to (21) shows that kooplieden 'merchants' is the Small Clause predicate.23

(24) Kooplieden, dat *die* zijn het
   merchants, that *those* are the
   "Merchants, that's what they are."

Recall that indefinite objects in general may appear to the left of sentence adverbs:

(25) *dat* het kooplieden (mag altijd) zijn
    "that* merchants still are"
    "that they are still merchants."

(26) *dat* Jan kooplieden (mag altijd) heet
    "that* John is merchants (and always is called)
    "that John still is merchants."

(25) is grammatical, be it that kooplieden receives a strong, generic interpretation (unless kooplieden is focused by a special intonation). Hence, kooplieden in (25) is significantly less mobile than kooplieden in (26). This indicates again that kooplieden in (25) is the Small Clause predicate.

23 Kooplieden, dat *zijn* het (merchants, these are it (grammatical) when *that* is interpreted as a predicate which receives its interpretation from the noun (e.g. when *that* is understood as 'twaalf' or 'houten'). In that case, kooplieden must be analyzed as the subject of the Small Clause.

For this analysis to work, we have to assume that Pred contains a V-feature which is strong in Dutch. Moreover, for the PP-een-V analysis to apply generally to a left adjoinement of PPs with short verb movement to Pred, we would have to assume that PredP is always present, even if no embedded predicate exists. This suggests that PredP is not merely designed for licensing embedded predicates, but has a more general function. I will leave speculations on this topic aside.
To see the evidence from extraction phenomena, consider what happens when the subject of the Small Clause is not a noun phrase but a clause. This occurs in constructions like the following:

(27) _dat Jan belangrijk vindt [dat hij zijn rijbewijs haalt]_ that John important finds that he his driver's license gets

"...that John considers it important that he gets his driver's license."

(27) has a variant in which _het 'it' _appears to the left of the predicate _belangrijk 'important'.

(28) _dat Jan het belangrijk vindt [dat hij zijn rijbewijs haalt]_ that John it important finds that he his driver's license gets

"...that John considers it important that he gets his driver's license."

Following Benka (1988), I assume that sentences (27) and (28), which differ only in the presence or absence of _het, _receive significantly different analyses. When _het _is present, it must be regarded as the subject of a Small Clause; in that case, the postverbal clause is an adjunct clause. When _het _is absent, on the other hand, the postverbal clause itself is the subject of the Small Clause.

This analysis predicts that extraction out of the postverbal clause is only possible when _het _is absent (cf. Hoekstra 1983). This prediction is borne out in the pair (27)-(28):

(29) a. Wat denk je dat Jan belangrijk vindt [dat hij haalt]?
   what think you that John important finds that he gets
   What do you think John considers it important that he gets his license?

b. Wat denk je dat Jan het belangrijk vindt [dat hij haalt]?
   what think you that John it important finds that he gets
   What do you think John considers it important that he gets his license?

The transparency of postverbal clauses argues against an extraposition analysis of these clauses. The facts suggest that the postverbal clause is in its basic position in (29a), but not in (29b).

The proposed analysis, involving raising to PredP, again brings a solution. Let us assume that clauses lack the morphological features that force movement to AgrOP. As a result, the clausal Small Clause subject must be assumed to stay in its place in (27) and (28). Then, in the absence of movement of the Small Clause predicate to the specifier position of PredP, we would expect the Small Clause predicate to appear to the right of the clauseless Small Clause subject, contrary to fact:

(30) _dat Jan vindt [dat hij zijn rijbewijs haalt] belangrijk_ that John finds that he his driver's license gets important

The ungrammaticality of (30) is explained by the obligatory movement of the Small Clause predicate to the specifier position of PredP.

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2.4 Verb Raising and 'Extraposition'

2.4.1 Introduction

The two preceding sections have served to dispel potential arguments in support of the hypothesis that the Dutch VP is head final. It was argued that indefinite objects move to the specifier position of AgrOP, and that Small Clause predicates move to the specifier position of PredP. Consequently, the fact that indefinite objects and Small Clause predicates invariably appear to the left of the verb in embedded clauses does not reveal the basic structure of the VP in Dutch.

Part of the analysis of the syntax of Small Clause predicates has been that the verb (in embedded clauses) moves up to the head of the PredP, thus explaining the strict adjacency of the predicate and the verb. This seems to make it almost impossible to gain reliable knowledge concerning the basic structure of the VP in Dutch.

In particular, the transparency of clausal complements becomes irrelevant for our concerns.1 Consider the examples in (1):

(1) a. _dat Jan zei dat hij Marie gekust had_ that John said that he Mary kissed had
   "...that John said that he had kissed Mary."

b. _Wie denkt dat Jan zei dat hij gekust had_ who think you that John said that he kissed had
   "Who do you think John said that he had kissed?"

The transparency of the clausal complement of _zeg 'said' _is explained if the complement clause is L-marked by the verb. Since adjunct clauses are islands, we must assume that clauses can only be L-marked by the verb if the verb and the clause are in a sisterhood relation. Hence, we can

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1. Thanks to Teun Hoekstra and Andries Holenberg for pointing this out to me at an early stage of this research.
safely assume that the clause *dat hij gekust had* 'that he had kissed' is in its basic position.

However, this does not allow us to conclude that the VP in Dutch is head initial. If the verb zei 'said' is not also in its basic position, nothing excludes a derivation in which the verb starts out from a position to the right of the complement clause. Since we have found evidence in the previous section that there is short verb movement to Pred in Dutch, (1) provides no empirical evidence either way.4

However, as I will show in section 2.4.2, (1) does in fact reflect the basic order of the VP in Dutch. This becomes apparent when the single verb zei in (1) is replaced by a verb cluster. It can be demonstrated that in that case, the assumption that all VPs involved are head initial makes a simple and elegant derivation possible, whereas the assumption that all VPs are head final yields a derivation which lacks a consistent direction of adjunction.

This point will be further strengthened in section 2.4.3, on Verb Raising in Dutch, German, and dialects of the two languages. The analysis leads to the conclusion that the SVO hypothesis allows us to dispense with the operation of Verb Projection Raising.

2.4.2 Verb Clusters in Dutch

Let us return to (1a) and replace the single verb zei 'said' by a verb cluster like verteld zal hebben 'will have told'.

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4 One could argue that the conclusions reached in section 2.3.3 concerning short verb movement to Pred do not carry over to (1), because there is no embedded predicate in (1). Consequently, the presence of a PredP in this construction would be untenable. If so, (1) would be unattackable as empirical evidence supporting the SVO status of Dutch. There are several reasons to leave this a moot point, however. First, it could be that the PredP is not just there for checking the features of an embedded predicate, but also for checking a certain feature of the verb (cf. note 22 of section 2.3.3). In that case, we cannot exclude the possibility that the PredP is always present. Second, adjuncts may intervene between the embedded verb and its complement clause (for example, *als Jan grote gesprek had* 'as Jan had a great conversation'). It is not certain that in (2) Jan had to say this to Pete that he would come, as observed (Kaz 1992:101 subscribes to Jack Endesma). That is explained under the short verb movement approach to PP-over-V phenomena taken in section 2.3.3: the adjunct could be adjoined to the VP, and would be skipped by the verb on its way to Pred. The possibility of having adjuncts intervene is not restricted to those constructions in which there is a Small Clause predicate (these, under the present assumptions, a PredP). Subsequently appears to be declining in the relevant constructions, but judgments are difficult. In view of these potential arguments in favor of generalized short verb movement, I will take the word order in (1) to be irrelevant.

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(2) *dat* 

In the verbal cluster in (2), *verteld 'told' is a past participle, *zal will is* the inflected modal verb, and *hebben 'have' is an infinitival auxiliary. The modal verb selects the infinitival auxiliary, and the auxiliary selects the past participle. The cluster thus can be characterized as 3-1-2, where the numbers reflect the hierarchical order of the verbs in the cluster.

Assuming that each verb heads its own VP, we must conclude that the embedded clause in (2) contains three hierarchically ordered VPs, the lowest of which contains the clausal complement *dat hij Marie gekust heeft* 'that he kissed Mary'.

Let us now assume that the two VPs in (2) are all head final, as illustrated in (3).

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Consider how the word order in (2) can be derived from the underlying structure in (3). The verbal cluster as a whole will have to end up in Pred, in order to derive the fact that the cluster precedes the complement clause (CP). This can be done by adjoining *V₂ to V₃, followed by adjunction of the two-verb cluster to V₄, followed by adjunction of the three-verb cluster to V₅. On closer scrutiny, however, this derivation will fail to yield the correct order of verbs in the cluster, which is 3-1-2. This order cannot be derived when *V₂ is first adjoined to V₃.* We therefore have to first adjoin *V₂ to V₃, followed by adjunction of *V₄ to the two-verb cluster, followed by adjunction of the three-verb cluster to Pred. Alternatively, the two-verb cluster could...
be adjoined to Pred, and V₃ could be adjoined to this cluster in Pred. Both derivations yield the correct word order.

Notice, however, that these derivations can only be successful if V₃ adjoins to the right of V₂. V₂ adjoins to the left of the V₁.V₂ cluster. In other words, if we start from a head final basic order, we cannot derive the surface order in (2) by sticking with a consistent direction of adjunction.

I do not need to mention that it would be more attractive if (2) could be derived with a single consistent adjunction operation. However, it would be the case that past participles have to be distinguished from infinitives, and that the direction of adjunction is a function of the morphological distinction between past participles and infinitives.

This would help in the case of (2). However, the 3-1-2 order in the verbal cluster in (2) is not the only one allowed in Standard Dutch. Next to (2), (4) is also possible.

(4) "Dat Jan zal hebben verteld dat hij Marie gekust heeft"

that John will have told that he Mary kissed has

"...that John will have told that he kissed Mary."

The cluster in (4) has the order 1-2-3. The three verbs have the same morphology and the same function as in (2). The only difference is that the past participle appears at the end of the cluster instead of at the beginning.

Unlike the cluster in (2), the cluster in (4) can be derived by adjecting V₁ to V₂, followed by movement of the two-verb cluster to V₂, followed by movement of the three-verb cluster to Pred. However, this would have to involve a consistent right adjunction. Even if we accept this as a possibility allowed by Universal Grammar (cf. note 4), we would have to drop the generalization that past participles adjoin to the left.

Hence, on the OV hypothesis, there can be no consistent direction of adjunction, neither in general, nor as a function of the morphological character of the verb.

Consider how (2) and (4) could be derived if we start from a sequence of head initial VPs, as in (5):

(5)

\[
\text{Pred} \rightarrow \text{Pred} \rightarrow \text{V₁} \rightarrow \text{V₂} \rightarrow \text{V₃} \rightarrow \text{VP₁} \rightarrow \text{VP₂} \rightarrow \text{VP₃} \rightarrow \text{CP}
\]

The order of the cluster in (2), 3-1-2, can be derived from (5) by moving V₁ across V₂ and adjoining it to V₃. Notice that this would be left adjunction. Alternatively, V₃ could move to Pred first, and V₂ could adjoin to V₁ in Pred, again by left adjunction.

The nonlocal character of the adjunction of V₃ to V₂ may seem unattractive. But this nonlocal movement is also present in the derivation of (2) starting from the structure in (3). Recall in addition, that I have argued independently at several places in this book that economy of derivations should not contain a requirement that steps be as short as possible. This makes the proposed adjunction a theoretical possibility. The movement is furthermore allowed if it is triggered, but this aspect of the syntax of verb raising is not under consideration here, anymore than it was in the evaluation of the derivations starting from an O V structure.

Hence, (2) can be derived from (5) by a single left adjunction. The derivation of the cluster in (4) is even more straightforward. The required order, 1-2-3, is already present in the basic structure in (5). We do not have to assume any movements, other than the short verb movement of V₂ to Pred.

Under this analysis, the sequence of verbs in (4), and partly also in (2), is not, strictly speaking, a cluster. Hence we predict that the verb sequence can be broken up by other lexical material. We will see in section 2.4.3 that this is generally correct.

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4 This is because V₃ crosses the potential landing site V₂ if it adjoins to the V₁.V₂ cluster in V₃. Notice that the equidistance principle of Chomsky (1995:234) does not apply to head movement, since a head is not contained in the minimal domain of the chain resulting from head movement of α to δ.
Let us first consider the difference between (2) and (4) in a little more detail, in the light of the two analyses under comparison here.

What is striking about the paradigm is that the placement of the past participle appears to be optional. This is strange from a minimalist point of view. There is reason to believe, however, that those speakers of Standard Dutch who accept both (2) and (4) are to a certain extent bilingual (cf. Hoekstra 1995b). This bilingualism is probably not the result of language contact. As Stroop (1970:250) shows, the verb cluster in (4) is hardly ever used by dialect speakers. Among dialects, the order in (2) is the most popular one. A third order, 9-2-1 (vervolg hebben zal 'told have will'), is dominant in dialects in the North, and a fourth order, 1-3-2 (and verteld hebben 'will told have') is also attested, albeit with limited distribution.

The bilingualism I have in mind is the result of purism. It is also apparent in the less complicated pair in (6):

(6a) a. "dat Jan Maria gekust heeft that John Mary kissed has "that John kissed Mary."

b. "dat Jan Maria heeft gekust that John Mary has kissed "that John kissed Mary."

(6a) and (6b) are both well represented among the dialects of Dutch. However, Stroop (1970:250), following up on earlier research by A. Pauwels, shows that the order in (6a) is overwhelmingly more prominent. Notice that in German, (6a) is the only order allowed:

(7a) a. "das Johann Maria geküsst hat German that John Mary kissed has "that John kissed Mary."

b. * "das Johann Maria hat geküsst that John Mary has kissed

Stroop shows that the order in (6b) was favored by copy editors, teachers, and other purists, who, as Stroop conjectures, considered the widely used order of (6a) as a German infestation. I presume that this language policy has led to a tendency to put the past participle at the end of the verb sequence, even if this yields an order which does not appear to have a systematical counterpart in any Dutch dialect, such as the order in (4).^8

This observation raises the question whether the order of the verb in (4) and (6b) is due to a linearization rule, or whether the language user creates these orders by ignoring the morphological character of the past participle, thus treating it like an ordinary infinitive. Only in the latter case can the variation be described in structural terms.

When the verb cluster in Dutch contains a modal verb (V3) and an infinitive (V1), the order 1-2 is clearly favored in both written and spoken Dutch (Stroop 1970:254, 255):^2

(8) a. "dat Jan Maria kussen wil that John Mary kiss wants "that John wants to kiss Mary."

b. "dat Jan Maria wil kussen that John Mary wants kiss "that John wants to kiss Mary."

When the verb cluster contains more verbs, the 3-1-2 order with V1 an infinitive is impossible (cf. Stroop 1970:256):

(9) a. "dat Jan Maria kussen zal willen that John Mary will kiss want "that John will want to kiss Mary."

b. "dat Jan Maria zal willen kussen that John Mary will want kiss "that John will want to kiss Mary."

I suspect that the order 1-2 in (6b) and the order 1-3-2 in (4) are modeled on the comparable orders in (8b) and (9b) where the most deeply embedded verb is an infinitive. If so, a linearization rule is not needed to account for (4) and (9b). The orders result from treating the past participles as infinitives. In the OV-analysis, this leads to right-adjunction

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^8 The puristic tendency to avoid verb sequences ending with the inflected auxiliary is in all probability also responsible for the word order phenomena reported in Modiano (1960), Yskandari (1961), and badass (1962). In the relevant constructions, S. Glaze predicates with the morphological shape of a past participle or a -infinitive optionally appear to the right of the inflected auxiliary (usually a form of zijn 'be') in an embedded clause. Examples: "zie niet tegen aarden zijn zijn (who eat against earth quakes are proof, 'who are not earthquake-proof')" next to 'bekend zijn,' 'onbekend zijn' is of -vrouwen (where name in is true, 'whose name is reliable') next to 'te vertroosten in. In both cases, the auxiliary-final order is the only grammatical one, but the other order is used quite frequently in written Dutch. H. Huyser (1995:39) notes that the predicate-final order is explicitly prescribed in a 1984 style manual of the newspaper De Volkskrant.

^9 The 2-1 order is only prominent in the dialects of the North.
of the past participle to the next higher verb, in the VO-analysis, to absence of verb movement.

Consider next how this variation can be described in minimalist terms. The only variation which the minimalist program allows is expressed in terms of the strength of morphological features represented in functional heads. If the features are strong, overt movement to the relevant functional projection is obligatory; if they are weak, overt movement is excluded. This seems to be insufficient to describe the creation of clusters. Apparently, movement of one lexical head to another (incorporation) must be allowed as well, as in Baker (1988), and Chomsky (1995:22). Assuming incorporation to be a universal process, it must exist overtly in those languages which do not show it overtly. This suggests that, again, certain features are involved which can be either strong or weak. If so, incorporation can be described within the narrow margins of a minimalist theory of parametrization.

Crucially, what is not part of a minimalist theory of parametrization is directionality of adjunction (section 1.3.3). If complex patterns of parametric variation can be described by employing the strong/weak distinction only, this appears to be the desired analysis from the minimalist point of view.

In the VO-analysis, the contrast between (2) and (4) can be described in these minimalist terms. The trigger in (2) is due to a feature triggering adjunction of the past participle to the highest verb. As (5) and (9) show, the trigger is somehow related to the morphological properties of past participles: infinitives are not affected by the same trigger. (4) can then be described by assuming that past participles in this type of construction are treated as infinitives, which again eliminates the trigger for movement.

In the OV-analysis, there must be a trigger for incorporation of the infinitives and for adjunction of the past participle to the highest verb. The derivation of (4) follows straightforwardly, on the assumption that past participles are treated as infinitives in these constructions. However, the derivation of (2) requires a specification of the direction of adjunction. As we have seen, this type of specification falls outside the bounds of the minimalist approach.

It is easy to see that the specification of the direction of adjunction in the OV-analysis is a parametric specification, and not a universal one. The dialects of Dutch spoken in the North of the country use a verb cluster of the 3-2-1 type (Stroom 1970-296), just like German.

(20) a. ...dat Jan Maria gekust hebben en Northern Dutch type that John Mary kissed have
will "John will have kissed Mary."

The derivation of these clusters requires that V2 be adjoined to the left of V1, and that V1 be likewise left-adjointed, either to V2 directly, or, in a later stage, to the two verb cluster V2,V1, in V1, or in Pred.13 Hence, in the OV-analysis the direction of adjunction must be parametrized.14

In the VO-analysis, no such parametrization is needed. On the assumption that incorporation is always left-adjunction, the difference between (10) and (23)/(4) is just a matter of overt vs. covert movement of the infinitival verbs involved.15

We may conclude that the VO-analysis is superior to the OV-analysis in its potential to explain the structure of verbal clusters in Dutch. Therefore, the order of the embedded verb and the complement clause in (1) must be taken to reflect the basic ordering of the verb and its complement in the VP.

This conclusion will be strengthened in the next section.

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13 In principle, one could also assume, in the OV-analysis, that verb clusters of the 3-2-1 type involve no adjunction at all. However, this would leave unexplained the fact that a 3-2-1 verb order can never be broken up by intervening material.

14 The Dutch dialects in question and German are traditionally analyzed as SOV languages, like Standard Dutch.

15 I have ignored the possibility that the past participle does not adjudge to a higher verb but raises to the specifier position of a PredP. Although this would strengthen the argumentation in support of the VO-hypothesis advanced in section 2.3, it would also make it harder to refute the OV-hypothesis on the basis of directionality of adjunction. The past participle could then be assumed to move to the PredP in (2), and adjudge to the right in (4), being treated as an infinitive, as we have assumed. This would yield right adjunction, but not an incorrect direction of adjunction. However, the assumption that past participles move to the specifier position of a PredP leaves unexplained why adverbial prepositions cannot intervene between the past participle and the higher verb:

de bekens voor je den dung naast (twee) mensen had
the breast with you in the door with passed was have
"The breast which you passed the door with!"

For this reason, I assumed that past participles move to a higher verb rather than to a specifier position.
2.4.3 The Many Faces of Verb Raising and Extraposition

If the VP in Dutch is head-initial, many aspects of the syntax of verb sequences in Dutch must be rethought. In the traditional SOV-analysis, when a verb selects an infinitival complement, two things can happen: Either the infinitival complement is extraposed and right-adjointed to a projection of the verb selecting it (V), or the verb inside the infinitival complement (V') is raised and right-adjointed to V. The former operation is called extraposition, the latter verb raising. The relevant phenomena are illustrated in (11) and (12), respectively.

(11) *dat Jan probeert Marie te kussen* 
    *that John tries to kiss Mary.*

(12) *dat Jan Marie wil kussen* 
    *that John Mary wants to kiss* 
    *...that John wants to kiss Mary.*

Extraposition and verb raising are not always easy to tell apart. The most reliable test is provided by the morphology of V', when it is itself selected by the auxiliary hebben 'have'. In that case, V will be a past participle in extraposition constructions, and an infinitive in verb raising constructions:

(13) *Jan heeft probeer* Marie te kussen 
    *John has tried to kiss Mary.*

(14) *Jan heeft probeer* Marie te kussen 
    *John has tried to kiss Mary.*

Other tests like the position of the direct object of the infinitival verb or the presence of the preposition infinitival marker *te* are not foolproof. As (15a) shows, extraposition of an infinitival complement is also possible when the direct object of the infinitival appears to the left of V, (Reuland 1982; see Den Besten, Ruitte, Veenstra, and Veld 1988, who dubbed this construction the Third construction). Likewise, (15b) shows that it may be present in verb raising constructions (cf. Ruitte 1991):

(15) a. *Jan heeft Marie geprobeerd te kussen* 
    *John has Mary tried to kiss* 
    *John tried to kiss Mary.*

(15b) *Jan heeft Marie geprobeerd te kussen* 
    *John has Mary tried to kiss* 
    *John tried to kiss Mary.*

(15a) is analyzed as a combination of extraposition and scrambling, cf. Den Besten and Ruitte (1988).

In addition to verb raising, extraposition, and the third construction, a fourth type of construction has to be distinguished. This construction is analyzed as a subtype of verb raising, but in this case the complement of Va is raised along with V. The morphology of V shows that verb raising is involved, not extraposition:

(16) a. *Jan mij wil ze vriendin kussen* 
    *John always wants his girlfriend kiss* 
    *John always wants to kiss his girlfriend.*

b. *Jan hij kussen* 
    *John wants his girlfriend kiss* 
    *John wants to kiss his girlfriend.*

It is assumed that a projection of V is adjoined to V, hence its name, Verb Projection Raising (cf. Den Besten and Edmondson 1983, Haegeman and van Riemsdijk 1986, Koster 1987 chapter 5, Vanden Wyngaert 1989c).

Verb Projection Raising constructions are not grammatical in present day Standard Dutch, but are quite common in earlier stages of Dutch and in present day Flemish dialects. If the VO-hypothesis is correct, the theoretical apparatus needed to derive these four construction types (extraposition, verb raising, the third construction, and Verb Projection Raising) is completely superfluous. Notice that under the traditional OV-hypothesis each of these construction types can only be derived by resorting to complex operations.

To derive the extraposition construction in (11), a clausal constituent has to be moved to the right. There is neither a clear trigger, nor a clear

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Footnote:
15 The % sign indicates that the status of the sentence shows dialectal variation. In present day Standard Dutch, Verb Projection Raising constructions are unacceptable, in West Flemish (and to a large extent in Standard Flemish), they are fine.

target for this movement. In addition, the extraposition does not lead to opacity of the infinitival complement:

(17) Wie heeft Jan geprobeerd om te kussen?
who has John tried COMP to kiss
“Who did John try to kiss?”

The derivation of verb raising (12) involves adjoinment to the right, a suspect operation if Kayne (1993) is correct, and something we found in the previous section to be not subject to parameterization. The derivation of the third construction (15a) is equally suspicious as the derivation of extraposition, since the former is a subtype of the latter. Finally, Verb Projection Raising (16) is a doubly suspect operation since it involves right-adjoining of a nonhead to a head (cf. Bultin 1982, Chomsky 1986).\(^6\)

\(^6\) Bennie and Holstia (1993) argue for a Texan-linking requirement governing the various movements in verb raising and extraposition constructions in Dutch (cf. also Bten 1991). In Bennie and Holstia’s analysis, all verbs in a construction have to be linked to the matrix tense. Texan linking takes place by creating a Texan-chain consisting of local links which connect a verb with tense, or by composing Texan-chains under a condition of some other auxiliary of an other Texan-chain. Bennie and Holstia argue that in Dutch, the V-position cannot be part of a Texan-chain. Hence, the verb has to move in T, the head of a head final TP. On the assumption that the V-position in Dutch is not part of a Texan-chain, the Texan-linking requirement explains extraposition of existential complements. The Texan-chain in the embedded clause has to be linked to the matrix Texan-chain by a chain-composition. Since the sister of the embedded clause, V, is not part of a Texan-chain, the embedded clause has to raise in order to maintain clause composition possible. Thus, the Texan-linking analysis is based on the assumption that the verb in embedded clauses moves to the right in Dutch, an assumption which have found to be unsupported in this book. Dropping this assumption would amount to accepting that the V-position in Dutch is part of the Texan-chain and would remove the proposed trigger for extraposition.

The complementizer on is included in the infinitival complement to exclude the possibility that (17c) is derived from a third construction extraposition. In that case, as V would be extracted from a position to the right of the past participle (AgOP in the matrix clause), presumably, the complementizer on is not allowed in the third construction type of extraposition, according to Dec. Bennin and Rutten 1989-95.

The phenomena underlying Verb Projection Raising have led to a number of more or less complicated analyses. The classical analysis involves adjoinment of a V. Hoekstra and Van Riemsdijk (1986) argue that adjoinment does not suffice, and resort to an analysis involving multiple type representations. Kazier (1997) argues that the latter step is unnecessary, and proposes a linearization rule allowing inversion of possibly unlike projections. V. Wynn (1996) argues that V or VP-movement is never involved, and presents arguments to assume that the phenomenon involves right-adjoining of an AgOP to a maximal projection. This is certainly the most attractive analysis of Verb Projection Raising based on the V'-hypothesis I have seen, inverting only the problem of movement and adjoinment to the right.

If we adopt the hypothesis that the VP in Dutch is head initial, all these problems disappear. In extraposition constructions (11), the infinitival complement clause can be assumed to occupy its basic position, whereas V, can has undergone short movement to Fred. The analysis of the third construction (15a) differs minimally from the analysis of extraposition. We must assume that in ordinary extraposition constructions, the infinitival complement contains an AgrOP, whereas this is not the case in the third construction. Instead, the object of V must be licensed in the functional domain of V. (cf. Kean 1992):\(^7\)

\(^7\) Details are left out from the representations in the text. The verbs are represented in their bare position. The status of the embedded clause in the third construction is left open. The captions extraposition, third construction, verb raising, verb projection raising obviously refer to acts of phenomena, not to actual movement operations of the type suggested by the terminology.
licenced in the functional domain of the matrix clause in standard verb raising constructions like (12).

Though many questions concerning the syntax of verbal clusters remain, we can immediately conclude that the SVO hypothesis leads to a simplification, both in taxonomy and in analysis. This is an important result, not just from the point of view of descriptive elegance, but also from a language learnability perspective.

Apart from morphological issues and questions of overt versus covert movement, what the language user has to learn in order to master the complex pattern of Germanic verb clusters is that not every clausal constituent needs to be expanded up to the AgrOF level, as long as an AgrOF is eventually created. This possibility is allowed by the universal structure building mechanism of generalized transformations, and therefore does not count as a burden for the language learner.

More generally, the question which cycle will best which functional projections must be answered in terms of locality theory. If a functional projection is created in a cycle which cannot be reached by the movement operations needed to eliminate its features, the derivation will not converge. The locality principles involved are presumably universal as well. In the case at hand, they allow speakers of Dutch to license the object of an infinitival complement clause in the functional domain of the matrix clause. This seems to remain within the narrow margins of language learnability.

In contrast, if the traditional analysis based on the SOV-hypothesis were correct, the language user would have to learn whether to move a clause, a head, or a projection of a head, and whether to adjoin those elements to the right or to the left. Then, in addition to that, it would have to be learned whether the element that is moved to the right contains an AgrOF or not, in order to distinguish between the extraposition and the third construction.\(^{34}\) The SVO-hypothesis clearly has the advantage over the traditional hypothesis here.

2.4.4 Conclusion

The syntax of verb clusters in Dutch can be described in a maximally simple way if we assume that the VP in Dutch is head initial. This suggests that the difference between German and Dutch verb clusters reduces to a difference between overt (in German) and covert (in Dutch)

\(^{34}\) Also, assuming Van den Wyngaard’s (1985) analysis, in order to distinguish between verb raising and Verb Projection raising.

leftward movement of embedded verbs. An analysis based on the alternative, according to which the VP in Dutch is head final, must express the difference between Dutch and German in terms of direction of adjunction.

2.5 Conclusion

In this section I have argued that the VP in Dutch is head initial. The verb final orders in embedded clauses in Dutch are all derived orders. Direct objects in Dutch move to the specifier position of AgrOF in overt syntax, embedded predicates move to the specifier position of PredP. Clausal complements appear to the right of the verb in embedded clauses in Dutch. It follows from the properties of verb clusters in Dutch and related languages that this overt verb-complement order reflects the basic structure of the VP in Dutch.

3 On the Structure of Other Lexical Projections

3.1 Introduction

In the preceding section, I argued that the VP in Dutch can profitably be analyzed as being head initial. Earlier, in chapter III, we reached a similar conclusion for the structure of the functional projections in Dutch. This suggests that all projections in Dutch are head initial.

In the final section of this chapter, I will consider very briefly the structure of the remaining lexical projections, the Noun Phrase (NP), the Preposition Phrase (PP), and the Adjective Phrase (AP).

A comprehensive treatment of the syntactic properties of these projections falls outside the scope of this book. My goal in these pages will be to discard \textit{prima facie} evidence for the head final status of these projections, and to discuss certain favorable consequences for the analysis of these projections emanating from the hypothesis that all projections in Dutch are head initial.

It is obvious that relative certainty about the basic structure of the NP, AP, and PP is hard to get without studying the internal syntax of these projections in more depth. Moreover, it is unclear whether more detail will bring more clarity in this issue. In the minimalist approach, syntactic licensing processes always involve movement to positions in the functional domain at some point in the derivation. It is well known that
the functional domain of at least NPs is as articulate as the functional domain of the VP (Abney 1987, many others). We may assume that APs and PPs have a functional domain of appropriate complexity as well. Therefore, we cannot exclude the possibility that elements are not in their basic position in the observable overt syntax. This makes it hard to draw any conclusions out of context.

Nevertheless, if we were right earlier in arguing that the functional projections and the VP in Dutch are head initial, the null-hypothesis must be that the remaining lexical projections do not deviate from the established pattern. Therefore, in the absence of evidence to the contrary, we must conclude that NP, AP, and PP are head initial as well.

In the following sections, aspects of the syntax of NP, AP, and PP are treated in that order.

3.2 NP

The issue of the basic structure of the NP is extremely difficult to resolve.

For one thing, it is not clear that nouns have complements. In contrast to prepositions, transitive adjectives, and verbs, nouns do not take noun phrase complements:

(1) a. de verwoesting *(van) de stad
b. Caesar verwoestte de stad
   Caesar destroyed the city

This is generally accounted for in terms of Case theory, nouns being unable to assign Case (Chomsky 1981:49). This explanation can be translated in minimalist terms by stating that the functional domain of a noun phrase lacks a licensing position for the noun's complement.1 Emonds (1985) rejects an account of (1a) in terms of Case theory, noting examples like the following:

(2) a. John arrived a welcome guest
b. John's arrival *(as) a welcome guest

Arrive being an unaccusative verb, the problems for Case assignment to a welcome guest are the same in both (2a) and (2b). Emonds proposes that

the preposition as in (2b) has to appear because nouns, unlike verbs, cannot assign a 0-role without intervention of a preposition.

However, in the minimalist framework (2b) may receive a similar explanation as (1a), on the assumption that a welcome guest in (2) is a Small Clause predicate. If Small Clause predicates must be licensed in the specifier position of a Predicate Phrase, as proposed in section 2.3, we can maintain the standard analysis by stating that the functional domain of a noun phrase not only lacks an AgrOP, but also a PredP.2 This possibility of unifying the analysis of (1a) and (2b) provides additional support for the existence of a PredP.

Nevertheless, the obligatory prepositional character of the complement of a noun raises the question how PPs are licensed. There appear to be two options. Either PPs are licensed in the specifier position in the functional domain of a noun, or PPs inside noun phrases must be considered as adjuncts.

There appears to be some support for the latter point of view. The prepositional complements of a noun is never obligatorily present:

(3) a. de verwoesting *(van) de stad
b. Caesar verwoestte *(de stad)
   Caesar destroyed the city

(4) a. John arrived
b. The arrival

But if the PPs inside noun phrases are adjuncts, the issue of the basic structure of the NP becomes void.

Let us therefore assume, for argument's sake, that the PPs inside noun phrases are generated as complements of the noun, and have to be licensed in the functional domain of the noun phrase. This, however, does not make it any easier to unravel the basic structure of the NP. As has become clear in recent years, nouns have a well developed functional domain (referred to as DP, and several analyses involving head movement of the noun into its functional domain have been proposed (cf. Abney 1987, Delsing 1988, Longobardi 1990, Valois 1990, Bernstein 1991, Rösser 1991, Holmberg, ed., 1992, Laitewitz 1992). In combination with the potential movement of the PP complement to a

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1 Note that nouns do take clausal complements. This supports the hypothesis that clauses are not licensed in AgrOP. This hypothesis is instrumental in the explanation of the distribution of noun phrase and clauses (see section II.4.3).

2 Many of the facts familiar from Kayne (1984, chapter 7) may be explained by the absence of a PredP in DPs (e.g. Mary proved a good companion - Mary's proof a good companion). It is unclear to me, however, why insertion of a preposition does not help in these cases, unlike in Emonds' examples.
position in the functional domain, this makes it difficult to determine the structure of the NP on the basis of overt word order. In Dutch, complement PPs always follow the head noun in overt syntax:

(8) a. de verwoestiging van de stad
   the destruction of the city
b. * de van de stad verwoestiging
   the of the city destruction

However, this fact does not prove that NP in Dutch is head initial. It could be that the noun verwoestiging has moved to a position in its functional domain in overt syntax.

On the other hand, it is not easy to demonstrate that head movement has taken place in (8a), either. The determiner and the noun are not necessarily adjacent, so the head noun cannot have been moved to the determiner, the head of DP:

(7) de complete verwoestiging van de stad
    the complete destruction of the city

Also, it is not likely that the head noun has been moved to the head of the Adjective Phrase (AP), since complete can be modified:

(8) de zo complete mogelijk verwoestiging van de stad
    the so complete possible destruction of the city

In (8), the circumpositional degree element zo...mogelijk 'as...as possible' modifies the adjectival head complettl 'complete'. This shows that the head noun verwoestiging is not adjoined to the adjectival head, and that the adjective complettl is not adjoined to the determiner.

The head movement in the Dutch DP, therefore, lacks a clear target. It may be that the PP van de stad 'of the city' is in its licensing position in the functional domain of the noun verwoestiging. If that is the case, we must conclude that verwoestiging has moved through the head of the functional projection in which the PP is licensed, to a functional head position to the left of the PP.

Lastewitz (1992) argues that this derivation takes place in the DP in German, where the postnominal PP can be a genitive DP:

(9) die Zerstörung der Stadt
    the destruction the-GEN city
    "the destruction of the city"

Lastewitz assumes that the postnominal genitive DP must be licensed in a specifier-head configuration with the head noun in overt syntax. Hence, the head noun Zerstörung 'destruction' must be in a derived position in (9).

Lastewitz argues that the derived position occupied by Zerstörung in (9) is the head of a functional projection the specifier of which is the designated licensing position for APs. This analysis is supported by the existence of morphological agreement between the head noun and the adjective, and by the observation that the AP and the head noun are strictly adjacent. Both phenomena can also be observed in Dutch:

(10) a. één oud*oude huiss
dutch-1SG old-PL house-GEN
b. twee oud*oude huiss
two old-PL house-PL

(11) a. het oudste huiss in de straat
     the oldest house in the street
b. * het oudste in de straat huis
     the oldest in the street house

In (10), the adjective shows number agreement with the noun (and with the numeral). In (11) the PP restricting the scope of oudste 'oldest' cannot appear between the adjective and the noun. These phenomena suggest that the noun and the AP are in a specifier-head configuration.

Let us therefore assume that this is the case. It follows that the head of the NP in (8a) is in a derived position, and that we can draw no conclusions as to the basic structure of the NP in Dutch.

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1 See section 3.3 on the structure of the AP.

4 It is clear that the entire AP must be in a specifier-head relation with the head noun, in view of constructions like de zo complete mogelijk verwoestiging 'the so complete possible destruction'. Notice, however, that the analysis implies that movement of N to the head of the adjectival agreement phrase also takes place when there is an AP around. Otherwise, the position of the postnominal genitive in German and of the postnominal PP in Dutch would not be accounted for in noun phrases without an adjective.
3.3 AP

The complement of an adjective is generally expressed in a PP in Dutch:

12 a. treeds op iets
   "proud of something"

b. verliefd op iemand
   "in love with someone"

The complement PP preferably follows the adjective in predicative constructions, but this is excluded in attributive constructions:

13 a. de man is treeds op zijn auto
   the man is proud of his car

b. de man is op zijn auto treeds
   the man is of his car proud

14 a. de op zijn auto treeds man
   the of his car proud-AGR man

b. * de treeds op zijn auto man
   the proud-AGR of his car man

c. * de treeds man op zijn auto
   the man that is proud of his car

As indicated in the glosses, the adjective shows agreement with the head noun in attributive constructions, but not in predicative constructions. There is a strict requirement of adjacency between the inflected adjective and the head noun in attributive constructions (cf. Van Riemrijck 1991). In (14a), the complement PP op zijn auto and the adjective treeds are not necessarily adjacent:

15 de op zijn auto nog altijd zeer treeds man
   the of his car still very proud-AGR man

This indicates that the complement PP in (14) is not in the basic complement position inside the AP. The complement PP may be in a licensing position to the left of the adjective, or it may have been generated as an adjunct in a position to the left of the adjective. In the latter case, we have to assume that the PP in APs is interpreted as a complement PP on the basis of our knowledge of the world, not as a function of 5-role assignment.

The nonadjacency in (15) indicates that the order in (14a) does not serve to indicate the basic order of elements in the AP. However, it is not clear that (13a) serves this purpose either. There are indications that the adjective itself is in a derived position.

Let us assume, following Corver (1991), that comparative and superlative APs involve a functional projection DegP (Degree Phrase). The morphology associated with the Degree features is visible on the adjective:

16 kort-e "shorter"
kort-er "shortest"
kort-est "shortest"

When the adjective is inflected, the agreement morphology is suffixed to the degree morphology:

17 kort-e-short-AGR "shorter"
kort-est-short-AGR "shortest"

In itself, these facts do not show that the adjective is in a derived position, since all features associated with the morphology could be checked in overt syntax. However, it is likely that the features associated with the agreement morphology are checked in a higher functional head position than the features associated with the degree morphology. The agreement features express a relation between the head of the AP and an element outside the AP, whereas the degree features are relevant inside the AP only.

We can express this by stating that the agreement morphology is generated in Deg, and that agreement between the AP and the head noun is really agreement of the head noun with DegP. The morphology in (17) then results from overt movement of korte, kortere, korteste to Deg.

This analysis is prompted by the existence of discontinuous degree elements in Dutch, in particular the expression zo...mogelijk

5 The idea of generating the adjectival morphology in Deg is not to be confused with the premaindian notion of generating inflectional morphology in functional heads. Rather, the adjectival morphology must be thought of as being part of a possibly empty degree element, and the inflectional features associated with the morphology are not checked in Deg but in a higher functional head.
In attributive APs, the agreement morphology is suffixed to mogelijk instead of to the adjective.

(18) a. een zo kort mogelijk route
b. * een zo korte mogelijk route
c. * een zo kort AGR possible route

This follows if we assume that mogelijk is generated in the head of DegP, carrying the agreement morphology. In this view, kort must be adjoined to Deg in (18a), to check its degree features. As predicted, the adjective's superlative degree morphology appears in between the adjective and mogelijk:

(19) a. de kortest mogelijkste route
b. * de korte mogelijkste route

c. de kort AGR possible route

The hypothesis of A-to-Deg movement in Dutch goes halfway in explaining the mandatory adjacency of the adjective and the noun. It makes the correct prediction that the only exceptions to this adjacency requirement involve adposition to an element in Deg.

What is missing in the explanation is an account of the absence of complement PPs between the adjective and the noun. But we had to conclude above, on the basis of (15), that complement PPs in APs are either in a position in the functional domain, or base generated as adjuncts. If adjuncts cannot be generated to the right, either approach fails to account for the obligatory adjacency of adjective and noun in Dutch, assuming, as in section 3.3, that AP (now including the functional domain of AP) and N are in a specifier-head configuration in overt syntax in Dutch.

* Zo...mogelijk should not be confused with zo...als mogelijk (zo... as possible). The latter expression is one of a productive paradigm of comparisons, including also zo groot als groot ‘as big as big’, zo goed als nieuw ‘as good as new’, etc. One of the differences between the two types of expressions is that in zo...mogelijk, mogelijk precedes complement PPs in predicative AAs (zie is zo traan mogelijk op zijn auto (zie is as proud of his car possible), zie is zo traan op zijn auto mogelijk (zie is as proud of his car possible)), whereas in zo...als mogelijk, als mogelijk may follow the complement PP (zie is zo traan op zijn auto als mogelijk (zie is as proud of his car as possible), zie is zo traan als mogelijk op zijn auto (zie is as proud as possible of his car)).

* This is only possible with zo...mogelijk, not with expressions of the type zo...als mogelijk (‘vera zo kort als mogelijkste route (vera as short as possible route), with the exception of zo goed als nieuw as good as new’, which has come to mean ‘practically new’.

If this is correct, the contrast between (13) and (14) suggests that an additional movement operation is involved in the derivation of predicative adjective constructions. Consider the structure of attributive DegPs, as suggested above:

\[
\begin{array}{c}
\text{XP} \\
\text{AcP} \\
\text{AcP'} \\
\text{Ac} \\
\text{N} \\
\text{XP} \\
\text{PP} \\
\text{DegP} \\
\text{Deg} \\
\text{AP} \\
\text{A'} \\
\text{A} \\
\text{pp}
\end{array}
\]

XP in (20) is the maximal functional domain of the adjective. PP is the position where the complement PP of the adjective is either licensed or base generated. In the first case, pp is a trace, in the second case, pp is empty. It is assumed that A moves to Deg, and that the features associated with Deg (the -s morphology) are in agreement with the features of the noun N.

The difference between predicative constructions and attributive constructions is that in the latter, the complement PP may not intervene between the noun and the adjective. This is accounted for in the structure in (20), if A is in Deg, and PP is in the position indicated by FP, as was assumed. The fact that the adjective may precede the PP in predicative constructions is accounted for if in these constructions DegP moves to the left, stranding the complement PP. This yields the word order in (13a). The word order in (13b), with the PP preceding the adjective, can be derived if the PP can be taken along in the movement of DegP, either because a larger category can be moved, or, if the PP is an adjunct, because the PP may be adjoined in various positions.
The alternative, according to which all elements are in their basic position in (13a), is doubtful, considering the absence of strict adjacency of the adjective and the complement PP in these constructions:

(21) de man is ze trots als een paauw op zijn auto
    the man is as proud as a peacock of his car

With this much in mind, let us turn to the transitive adjectives in Dutch (cf. Van Riemsdijk 1983).

Transitive adjectives take a noun phrase complement. Some, like the ones in (22), are obviously deverbal, others, like the ones in (23), are not:

(22) ontwend past participle of ontwennen ‘break a habit’
    ongewenst past participle of onwensen ‘outgrow’
    toegewijd ‘devoted to’, past participle of toegewijd ‘devote’
    toegewegen ‘affectionate’, past participle of toegewegen ‘affection’

(23) zich bewust ‘conscious of’
    zat ‘led up with’
    machtig ‘in command of’ (a language)
    dankbaar ‘thankful towards’
    indachtig ‘mindful of’
    moe ‘tired of’
    trouw ‘loyal to’
    waserd ‘worth’

The complement invariably precedes the transitive adjective:

(24) a. Hij is de winkelsluiting ontwend
    he is the shop-closing diss-used
    ‘He is no longer used to the opening hours of the shops.’
    b. * Hij is ontwend de winkelsluiting
    he is diss-used the shop-closing

(25) a. Hij blijft zijn principes trouw
    he remains his principles loyal
    ‘He remains loyal to his principles.’
    b. * Hij blijft trouw zijn principes
    he remains loyal his principles

(26) a. Een de winkelsluiting ontwende Nederlanders
    a the shop-closing diss-used Dutchmen
    ‘A Dutchman, no longer used to the shops’ opening hours.’
    b. * Een ontwende de winkelsluiting Nederlanders
    a diss-used the shop-closing Dutchmen

These facts could be taken to indicate that the AP in Dutch is head final. However, in none of these constructions is the complement necessarily adjacent to the adjective:

(27) a. Een zijn principes trouwe Catalaan
    a his principles loyal Catalan
    ‘A Catalan, loyal to his principles.’
    b. * Een trouwe zijn principes Catalaan
    a loyal his principes Catalan

(28) and (29) can be used in predicative and attributive constructions alike.

This indicates that the complement of a transitive adjective in Dutch is in a derived position in the functional domains of the adjective. We may assume that this derived position is a licensing position located somewhere between DegP and XP in (20). Consequently, the word order in transitive APs is irrelevant for the issue of the basic structure of the AP.

A final question to be answered is why the complement precedes the adjective in predicative transitive APs, whereas either order is possible in predicative intransitive APs. This follows if the functional projection designated for licensing the complement of the transitive adjective is always taken along by the movement of DegP to the left.

If this is correct, the crucial difference between intransitive and transitive adjectives resides in the position of the complement in overt syntax. The PP-complement of intransitive adjectives can be either stranded or taken along, the PP-complement of transitive adjectives must be taken along. Suppose that the part that is moved in predicative constructions is always the same category, some functional projection of the AP carrying the features relevant for the movement. Then the difference between transitive and intransitive APs could be that the licensing position of the complement of transitive adjectives necessarily falls inside that category. In contrast, the complement of an intransitive adjective could be defined as an adjunct, without a fixed adjunction position. Consequently, the PP in intransitive APs could be adjoined both inside and outside the category that is moved in predicative constructions.
It is tempting to suggest that the functional domain of transitive APs contains an AgrOP, like VPs, but unlike intransitive APs and NPs. This could be related to Van Riemsdijk’s (1992) characterization of transitive APs as verbal categories. Certain phenomena point to the verbal character of transitive adjectives, also with the non-verbal transitive adjectives listed in (32). For example, transitive adjectives, like past participles, cannot be modified with *too*, instead of which *te* *too much* must be used:

(20) a. Hij is zijn beginnen te *te* trouw
he is his principles too much loyal
b. Hij is te *te* trouw
he is too much loyal

Also, transitive adjectives generally appear to resist synthetic comparative and superlative formation.\(^*\)

(21) a. Jan is de TV meer saag*te*dat dan de radio
John is the TV more fed up than the radio
*John is more fed up with the TV than with the radio.*

b. Jan is saag*te*dat dan Piotr
John is more fed up than Peter

Possibly, these phenomena support the idea that transitive adjectives are verbal elements. This would make it possible for transitive adjectives to feature an AgrOP in their functional domain. This again would help explaining the fixed position of the complement of transitive adjectives, compared to (what looks like) the complement of intransitive adjectives. I will leave these and other aspects of the syntax of APs for further study.

In conclusion, the complement-head order in transitive APs cannot be considered as evidence in support of the idea that APs in Dutch are head final. Thus, the overt syntax of NP and AP does not allow us to draw any conclusions as to the basic structure of the lexical projections. In the next section, I will argue that the properties of complex APs do lead to the conclusion that the PP in Dutch is head initial.

\(^*\) An exception is formed by doonkwaar ’grisful’, which allows a synthetic comparative and superlative even when used transitively.

### 3.4 PP

Dutch has prepositional PPs, postpositional PPs, and circumpositional PPs:

(32) op het dak
on the roof
”on the roof”

(33) a. het dak op
the roof on
”on the roof”
b. er op
dere on
”on it”

(34) van het dak af
of the roof off
”off the roof”

Inside VP, prepositional PPs may be adjuncts or Small Clause predicates:

(35) a. *dat Jan op het dak sprong
that John on the roof jumped
*that John jumped on the roof*
b. *dat Jan sprong op het dak
that John jumped on the roof
*that John jumped onto the roof*

Postpositional PPs and circumpositional PPs inside VP are always Small Clause predicates:

(36) a. *dat Jan het dak op sprong
that John the roof on jumped
*that John jumped on the roof*
b. *dat Jan sprong het dak op
that John jumped the roof on

(37) a. *dat Jan van het dak af sprong
that John off the roof jumped
*that John jumped off the roof*
b. *dat Jan sprong van het dak af
that John jumped off the roof

As always, Small Clause predicates may not appear to the right of the verb in embedded clauses.
The fact that postpositional PPs and circumpositional PPs behave alike in this respect suggests that the latter are a subcase of the former. This would imply that circumpositional PPs are structured as in (38):

\[(P_r \rightarrow \text{NP} \rightarrow P_r)\]

Van Riemsdijk (1990) argues extensively for the constituent analysis of circumpositional PPs in German and Dutch in (38). This analysis is clearly supported in German, where prepositions govern overt Case morphology:

(39) a. unter dem Brotkreise German
    under the-bread circle (lexical)

b. durch den Brotkreis through the-across circle

In circumpositional PPs, the Case morphology on the noun phrase is governed by the preposition preceding it:

(40) unter dem Brotkreis durch
    under the-bread circle through
    "under the bridge (directional)"

Van Riemsdijk (1990) also argues that the relation between \(P_r\) and the PP to its left is not a head-complement relation. If this were true, it would have to be specified that the preposition through 'through' (cf. (39-40)) takes a noun phrase complement to its right and a PP complement to its left.

Van Riemsdijk (1990) also argues that the PP to the left of \(P_r\) is not an adjunct, and proposes an analysis of circumpositions in which \(P_r\) is a functional head. In this analysis, postpositional PPs can be regarded as circumpositional PPs with an empty functional head, which is filled by moving the lexical preposition to the functional head.\(^9\)

I fully agree with Van Riemsdijk (1990) that circumpositional PPs as analyzed in (38) do not display a head-complement configuration. However, the idea that \(P_r\) is a functional head is problematic, since \(P_r\) lacks one of the defining characteristics of functional elements: it has 'descriptive content' (in the sense of Abney 1987:65).

Consider the contrast between (32) and (33a). On the analysis in which \(P_r\) is a functional head, (33a) is derived from (32a) by moving the preposition op 'on' from \(P_r\) in (33) to the position of the functional head \(P_r\). However, whereas op in (32a) can be both directional and locational, op

\[^{10}\] More exactly, (32a) is used only when the direction is upward. Thus, it is impossible to say "De spoor de boer op (John jumped on the farmer). The prepositional group (32) can be used also when the direction is not upward: "De spoor op de boer (John jumped on the farmer) is fine.

\[^{11}\] When circumpositional PPs are used inside a VP, sometimes we may not be dealing with a circumpositional PP, but with an adjunct PP in combination with a particle (small clause predicate). In those cases, the nonadjacency of the particle and the adjunct PP is irrelevant, of course. In Dutch, the two situations can be kept apart because adjacent PPs can appear to the right of the verb in embedded clauses, whereas the PP included inside a circumpositional PP cannot. Also, particles cannot appear in nominalizations as true standing elements, whereas prepositions can (ii). The nonadjacency illustrated in the text also applies to genuine circumpositions.

\[^{1}\] Van Riemsdijk’s analysis is quoted from the handout of his presentation.
further indicates that the preposition is not in the head position of the relevant functional projection.

Let us therefore assume that circumpositions have the basic structure in (42), and that the overt word order in (34) is derived by movement of the complement of P₁ to the spec-position in the functional projection FP:

(42) \( \langle s, spec \ P^1 \langle s, spec \ P \rangle \ P \rangle \ DP \ \) [II]

\( af \) \( van \ de \) \( tafel \)

As can been, (42) is a consistently head initial structure.

There is some evidence that the analysis in (42) must be preferred over a consistently head final analysis of circumpositions, illustrated in (43):

(43) \( \langle s, spec \ P \langle s, spec \ DP \rangle \ P \rangle \ P_1 \) \( \langle s, \ \rangle \ P_1 \)

\( de \) \( tafel \) \( van \) \( af \)

The evidence is based on the existence, next to (34), of (44):

(44) \( van \ af \ de \) \( tafel \)

\( af \) \( of \) \( the \) \( table \)

Assuming the structure in (42), (44) can be derived by moving P₁ and left-adjoining it to P₂. This leads to a simple description of the alternation: either the head of the complement FP is adjoined to the higher P₂ or the entire complement is moved to a specifier position in the functional domain.

Assuming the structure in (43), more operations have to be involved.

To derive (44) \( van \ de \) \( tafel \) \( af \) \( of \) \( the \) \( table \)\, P₁ has to move to a position to the left of the noun phrase \( de \) \( tafel \) ‘the table’. The nature of this position is unclear, however. Then, to derive (44), P₁ has to be left-adjoined to P₂, yielding \( van \ af \), and the complex \( van \ af \) has to move leftward again to another position to the left of \( de \) \( tafel \).

Consider next how the structure of circumpositions in (42) sheds interesting light on postpositional PPs. We have noticed above that circumpositional PPs may be a subclass of postpositional PPs. If so, it may be desirable to analyze postpositional PPs along the same lines as circumpositional PPs. This can be done if we assume that in postpositional PPs P₁ is occupied by an empty preposition. This analysis makes it possible to account for the subtle differences of interpretation between (32) and (33a). As noted above, (33a) is necessarily interpreted as directional, whereas (32) may be analyzed as both directional and locational. Moreover, (33a) is only possible if the direction is upward (cf. note 9). Thus, (45b) is ungrammatical:

(45) a. Jan \ spreng \ op \ de \ inbreker
    John \ jumped \ on \ the \ burglar

b. * Jan \ spreng \ de \ inbreker \ op
    John \ jumped \ the \ burglar \ on

The core lexical content of the preposition op appears to be locational, involving an element of ‘highness’. This may account for the requirement that the direction of movement in (33a) has to be upward. Let us refer to P₂ as HIGH. However, the directional element in the postpositional PP in (33a) is still unaccounted for. This is where the empty preposition comes in. If we assume that op, if it selects a PP complement, requires that PP to be directional, this PP must have a directional preposition as its head. Let us therefore refer to P₁ in this analysis as TO.

This yields the following interpretation of (33a):

(46) \( \) \( to \) \( the \) \( table \), \( HIGH \)

(45b) is then excluded because the HIGH interpretation of P₂ involves that the movement indicated by the TO element of P₂ involves a high position. Accordingly, (45b) is not anomalous if Jan is, say, a flea.

If the directionality aspect of (33a) is accounted for by assuming the structure in (42) with an empty, directional P₁, a similar analysis must apply to (32) in the directional interpretation. So let us assume that directional prepositional PPs and postpositional PPs start from the same basic structure, involving the same lexical elements, including TO. The problem then is to account for the word order, and for the fact that the aspect of mandatory upward movement is lost (cf. (45a)).

This follows, however, if we assume that incorporation of P₁ into P₂ yields a complex with a slightly noncompositional interpretation. Thus, adjoining TO to HIGH does yield the interpretation movement with an aspect of highness, but now the interpretation is weakened to ‘movement to the high part of something’. This interpretation allows both (32) and (45a). Assuming this much, the directional postpositional PP can be derived by applying the same derivation that we needed independently to yield (44). Only this time, we have an empty P₁ instead of a phonetically visible one.

This yields the following interpretation of (32):

(47) \( \) \( TO-HIGH \), \( the \) \( table \)

The hypothesis that incorporation of prepositions affects the meaning of the target of the incorporation is also supported by the interpretation of
vanaf compared to van...af. In van...af, but not in vanaf, P as is necessarily interpreted as involving downward motion:

(48) a. de spring 'van de tafel' af
    'the jump of the table'
    the jump of the table
    'the jump from the table'

b. *de spring 'vanaf de tafel'

(49) a. vanaf maandag
    'af of Monday'
    'from Monday on'

b. *van maandag af
    'of Monday af'

As for the locational interpretation of (32), we may assume that in this case TO is absent, with HIGH selecting a noun phrase complement instead of a prepositional complement. This yields the interpretation in (50):

(50) HIGH the table

Turning finally to (33b), repeated here for convenience, this is an example of the core case of postpositional PPs in Dutch in which we know that the complement of the preposition is in a derived position (Van Riemsdijk: 1978):

12 The relatedness of DOWN and AWAY is suggested by expressions like down in history and down in Times.
13 From Monday 'af' can also be translated as van maandag 'of Monday af', where a third preposition, van 'of', contributes a static dimension. Assuming the basic structure to be (aan [af] van [aan] maandag)), van maandag of can be derived by moving van maandag to a specifier position to the left of af, and van maandag af to a specifier position in the left of af. Apparently, the static aspect contributed by van unctions to adjust the meaning of af in the required way. A similar analysis may be applicable to the mysterious PP van op van 'of up on'. such as in 'aan kant van boven op een' ('you can of him up on'. This can be derived from (aan [op] van [aan] kant)) in the same way as van (meaning) of can be derived above. Again, the strict upward motion interpretation of op as in left, even though no incorporation seems to have taken place.

Only elements with the morphological feature [-R] appear as complements in this kind of PP. This suggests that movement to a licensing position is involved. Accordingly, the noun phrase and the preposition are not necessarily adjacent:

(51) er weert op
    'there again on'
    'back on it'

This type of PP, then, does not even remotely suggest that the PP in Dutch has a head final basic structure.

The availability of both a directional and a locational interpretation suggests that (33b) is closer to (32) than to (33a). I will therefore assume that an empty directional PP is present in the complement of the locational PP, as in (32), and that P incorporates in P, yielding the interpretation paraphrased in (47). The difference between (33b) and (32) is that in the former case the noun phrase in the complement of P, a has a morphological feature which requires overt movement for licensing purposes, whereas in (32), for all we know, the noun phrase does not move in overt syntax.

Returning to the issue of the basic structure of the PP in Dutch, none of the PP-types in (32)-(34) provides evidence to support the idea that PPs in Dutch are head final. Conversely, certain intralexical patterns of word order and interpretation become understandable if we assume the simple head initial PP-structure in (42).

3.5 Conclusion

Assuming the minimalist approach, it is extremely difficult to compile empirical evidence regarding the basic structure of the lexical projections. The general possibility of moving elements into the functional domain makes it unclear whether the observed word orders reflect the basic order.

The discussions in this section lead to the conclusion that reliable evidence is not based on the observed word order, but on the elegance of the analysis of constructions involving a stack of lexical projections of the same category. Thus, multiple VP-constructions in Dutch receive the most elegant analysis if all VPs involved are head initial. Likewise, the structure and interpretation of complex PPs suggest that overt head final PF orders are derived from basic head initial structures.

In connection with the results from chapter III and the conceptual considerations discussed in section 1.3.2, this leads to the conclusion that
all projections in Dutch are head initial.

V

CONCLUSION

In the preceding chapters I have argued that the syntactic structures of Dutch all consist of molecular substructures with a universal hierarchical and linear organization, and that the processes affecting the elements in these substructures all conform to the requirements of the Minimalist Program of Chomsky (1992), or to the more restrictive modifications of the minimalist approach proposed here.

The hierarchical and linear organization of the molecular substructures underlying Dutch syntactic structures is as proposed by Kayne (1992, 1995), illustrated in (1):

(1) \[
\begin{array}{c}
XP \\
YP \\
X' \\
ZP
\end{array}
\]

In chapter III, I presented several arguments in support of the hypothesis that the functional projections in Dutch have the head-initial structure in (1). These arguments are based on the position of the infinitival marker preposition te to, the position of clitics in Dutch, the phenomenon of complementizer agreement, and verb movement in subject initial main clauses and inversion constructions.

In section III.1, it was argued that te is not an inflectional morpheme and that there is no evidence that te is generated in a right-peripheral functional head. On the minimalist assumption that inflected verbs preferably remain inside VP in overt syntax (by the economy-related principle of Procrastination), the clause-final position of the inflected verb
in embedded clauses in Dutch does not provide an argument for head final functional projections.

In section III.3, it was argued that clitics in Dutch are syntactic clitics, the distribution of which may be accounted for on the hypothesis that clitics are generated in and adjoin to functional heads. The differences in clitic placement between Dutch and French follow from independently established differences in verb movement between the two languages. Since clitics in Dutch appear to the left of the VP, it must be concluded that the functional projections in Dutch are head initial.

Complementizer agreement phenomena were analyzed in section III.3 as a morphological reflex of AgrS-to-C movement. The relevant phenomena are interesting in two respects. First, the interaction of AgrS-to-C movement with verb movement suggests that verb movement takes place as a Last Resort operation, when AgrS-to-C movement is impossible. This is a crucial step in understanding the absence of verb movement in embedded clauses, both in complementizer agreement dialects and in Standard Dutch. Second, certain complementizer agreement dialects have different forms for the inflected verb in subject initial main clauses and in inversion constructions. In these dialects, the verb in inversion constructions shows the same morphology as the inflected complementizer. This confirms the traditional view that the verb is in the complementizer position in inversion constructions (Den Berten 1977). It also confirms Travis' (1984) addition to this analysis, according to which the verb occupies a lower functional head in subject initial main clauses. This again supports the idea that the functional projections in Dutch are head initial.

In sections III.4 and III.5, the various verb second constructions in Standard Dutch were discussed. The analysis of the asymmetry between main and embedded clauses with respect to the position of the finite verb developed for complementizer agreement dialects in section III.3 applies to Standard Dutch as well, on the assumption that Standard Dutch has abstract AgrS-to-C movement. It was argued that the traditional generative analysis of verb movement in subject initial main clauses in Dutch, according to which the verb moves to C, is not empirically supported and not compatible with the restrictive minimalist approach. On the other hand, the traditional analysis of inversion constructions as involving verb movement to C is by and large supported, with one modification. C must be split up into two distinct functional heads, Top and Wh, and the verb targets Top in topizations constructions and Wh in wh-movement constructions (cf. Müller and Sternefeld 1993). Thus, verb second in Dutch is not a unitary phenomenon in the sense that the verb invariably targets a single position. It is a unitary phenomenon, however, in the sense that a specifier-head configuration in a designated functional projection is created in each case. The Vorfeld of Dutch

In Chapter IV, arguments were presented in support of the hypothesis that the lexical projections in Dutch are also structured as in (1). It was argued in section IV.2 that the OV order in embedded clauses, though being 'more basic' than the VO order in main clauses, does not reflect the basic structure of the VP, but is itself derived from an underlying VO order. The OV order in embedded clauses results from movement of the object to the specifier position of AgrOP, which invariably takes place in overt syntax in Dutch. The underlying VO order is still observable in embedded clauses with a sentential complement (a word order fact that had gone unexplained thus far), and in 'verb raising' constructions, in which the verbal cluster does not result from raising the verb but from moving the object to the spec of AgrOP. Arguments were presented which support the existence of an additional functional projection between AgrOP and VP, Predicate Phrase (PredP), which is designated for licensing embedded (Small Clause) predicates. This leads to the following structure of the Mitfeld:

```
(3)
```

In Dutch as an SVO language,
In this analysis, Verb Projection Raising can be dispensed with, and the relevant constructions can be analysed as involving functional projections (AgrOP, PredP) in the complement of the hierarchically higher verb.

In section IV.3, it was argued that the properties of the Dutch NP and AP present no arguments for a head final structure of these projections. On the other hand, the syntactic and semantic properties of complex PPs do support the hypothesis that the PP in Dutch is invariably head initial, even in postpositional constructions.

The analyses all support the hypothesis that syntactic structures in Dutch are uniformly built up according to the universal structure building instructions which yield (1).

The other objective of this book was to reach a maximally restrictive analysis of the various movement processes taking place in the verbal system. In chapter II, it was argued that the traditional generative analysis of verb movement in Dutch (involving generalized V-to-C movement) leaves several phenomena unexplained. Foremost among these is the supposed movement of the subject to the specifier position of CP in subject initial main clauses. The idea that subject placement is a subcase of topicalization was discussed and dismissed in section III.5.1.

In a minimalist approach to subject placement (cf. Chomsky 1995), the null hypothesis is that the subject moves to the specifier position of AgrS in neutral word order constructions (with overt subject movement). This follows from standard feature checking requirements, on the assumption that the N-feature of AgrS in the relevant language is strong. According to this approach to verb movement in Dutch, not the position of the subject is problematic, but the distribution of the finite verb.

The absence of verb movement in embedded clauses in Dutch makes it impossible to assume that the V-feature of AgrS is strong. The absence of verb movement in embedded clauses then follows from economy of derivations (the 'fewest steps' requirement). This, however, makes it necessary to provide a trigger for verb movement to AgrS in subject initial main clauses which overrules the fewest steps requirement.

In view of this, the hypothesis was advanced that verb movement to AgrS in Dutch takes place in order to make checking of the strong N-feature of AgrS possible. Assuming that licensing relations invariably are sisterhood relations (section 1.4.2), the first projection of AgrS (the Projection of AgrS) must play an active role in checking the N-features. It is proposed that a Projection of a head a has access to the N-features of a only if a is (+accessible). If a is (-accessible), it becomes (+accessible) if the V-features of a are removed first. The pattern of verb movement in Dutch is now explained if AgrS has the following feature specification:

\[
\text{\textbf{AgrS}} \quad \text{N-feature: strong, V-feature: weak, accessibility: negative}
\]

The strong N-feature forces the subject to move to the specifier position of AgrS. The weak V-feature in principle procrastinates verb movement to covert syntax (CP). However, the (-accessibility) feature dictates that the N-feature of AgrS cannot be checked until its V-feature is eliminated. Verb movement to AgrS then takes place as a Last Resort operation, checking and eliminating the V-feature of AgrS. As a result, the N-feature of AgrS is activated (becomes accessible to the AgrS Projection) and N-feature checking in overt syntax under sisterhood becomes possible.

I further assumed that economy of representation entails that features are present in as few positions as possible (section III.4.4). Thus, verb movement to AgrS actually has the result that the N-feature of AgrS moves to the AgrS Projection, feeding feature checking under sisterhood.

Another consequence of this view on the distribution of morphological features is that independent functional head movement of AgrS to C (where C stands for Top or Wh) removes the V-feature of AgrS from the original position of AgrS. Thus, AgrS-to-C movement has the same effect as V-to-AgrS movement: the V-feature of AgrS is removed, and the N-feature of AgrS is activated. For this reason, AgrS-to-C movement obviates verb movement. This explains the absence of verb movement in embedded clauses in complementizer agreement dialects. On the assumption that there is abstract AgrS-to-C movement in Standard Dutch as well, the absence of verb movement in Standard Dutch embedded clauses is also explained.

Another consequence of the hypothesis that the V-feature of AgrS is only present on the head of the chain resulting from AgrS-to-C movement is that AgrS-to-C movement removes the trigger for V-to-AgrS movement in inversion constructions. Thus, we may assume that in inversion constructions, the verb moves to C in one step, and adjoins to AgrS in C, thus checking the V-features of AgrS under sisterhood. Verb movement to C across AgrS is empirically supported, as it explains the obligatory standing of object clitics in AgrS in inversion constructions in Dutch.

Verb movement to C in inversion constructions in Dutch is likewise analyzed as a Last Resort movement (section III.5.3). It is assumed that the functional heads in the CP-system (Top and Wh) carry N-features but no V-features. The N-features are assumed to be strong in Dutch, triggering overt movement of topics and wh-elements. The absence of V-features follows from the definition of Top and Wh as non-related functional heads (Chomsky and Lasnik 1991). Since Top and Wh have no V-features, verb movement to the CP-system violates the economy principle Greed unless the V-feature of a lower functional head ends up...
in C as the result of independent functional head movement. In Dutch, this is the case if AgrS moves to C. Assuming now that Top and WH in Dutch are also specified as ‘accessible’, the V-feature of AgrS represented in Top/WH must be removed in order to activate the N-feature of Top/WH. This triggers verb movement to C, along the same lines as verb movement to AgrS is triggered in subject-initial main clauses.

The analyses in this book invariably take Chomsky’s Minimalist Program as their starting point. In certain areas, however, it appeared necessary to propose further restrictions.

One restriction, argued for throughout this book, is that economy of derivation does not entail that steps must be as short as possible. The abolition of the shortest steps requirement is suggested by the circumstance that local head movement is generally enforced by independently established feature checking requirements. In other cases, such as successive cyclic movement, local movement steps are replaced by the operation Form Chain of Chomsky (1992). I have taken this operation to proceed in such a way that intermediate links in a chain are introduced through generalized transformations before long distance movement takes place. It follows from the absence of the shortest steps requirement that the Equidistance Principle (Chomsky 1995) is not a principle of Universal Grammar. This is a welcome result, since the Equidistance Principle predicts that scrambling (movement to the specifier position of AgrIP) takes place only if verb movement to AgrO takes place as well. This prediction is refuted by the facts of Dutch and related languages. The Equidistance Principle, however, does derive part of the organization of the functional domain. This result is new, and the question of the derivation of the structure of the functional domain must be left as a subject for further study (see Hooftstra and Zwart 1993b for discussion).

A second refinement of the minimalist approach argued for in this book is the adoption of a one-level X-bar theory (cf. 2. Hooftstra 1991). This makes it possible to derive the effect of target extension in a generalized transformation in a simple way. The rule is that if α is adjacent to β by a generalized transformation, the projection of β has the categorical features of β and the bar level of α. I have proposed to distinguish the first projection of a head α (the Projection of α) from all other projections of α (the Segments of the Projection of α). Unlike in the two-level X-bar theory, this distinction is not expressed in terms of bar level status, but in terms of feature content: the Projection of α may host the morphological features of α, but Segments may not. Specifier can now be defined as a sister of a Projection, and Specifier-head agreement can be reduced to a sisterhood relation between a specifier and a Projection carrying the N-features of its head. Since V-features are also checked in sisterhood configurations (resulting from adjunction to a functional head), and theta-role assignment also requires a sisterhood configuration, we can formulate the following hypothesis:

(5) All theta-assigning relations are sisterhood relations

As was illustrated above, the active role of the Projection of α in checking the N-features of α is instrumental in explaining the verb movement pattern in Dutch.

It follows from (5) that the definition of the notion checking domain can be sharpened. Assuming Chomsky’s (1995) distinction between complement domain and residual domain, the checking domain of α consists of those positions in the residual domain of α that are the sister of α (for checking V-features) and the sister of the Projection of α (for checking N-features). The internal domain of α can still be defined as the minimal complement domain of α, i.e. the sister of α in the complement domain of α. It also follows that head movement does not have the effect on the definition of checking domain that was argued for in Chomsky (1989). Since head movement of α to β does not turn the Projection of β into a Projection of α, the Projection of β cannot be involved in checking the N-features of α. Thus, the specifier of α, and not the specifier of β, is part of the checking domain of the chain resulting from the movement of α to β. Consequently, the specifier of α does not become part of the internal domain of this chain, contrary to what is proposed in Chomsky (1992). These definitions make it impossible that the specifier-head configuration (actually, the specifier-Projection configuration) needed for licensing the subject in AgrIP is recreated in CP, as proposed by Rizzi (1991a). The definitions do not exclude, however, that head movement creates a derived checking position for V-features. This follows from the assumption that the V-features of a head α are carried along in the movement of α to β. As a result, the V-features of α must be checked by adjoining the lexical head (the verb, in this case) to α in its derived position. As mentioned above, this derivation takes place in inversion constructions in Dutch.

Finally, as illustrated above, the idea that the Projection of α must perform the checking operation that eliminates the N-features of α makes it possible to introduce a third instance of parametric variation associated with functional heads. Next to the strength of N-features and V-features, the accessibility of functional heads to their Projection can be parametrized. We may consider this as an arbitrary specification of a functional head, like the other instances of parametric variation in the minimalist approach. The accessibility parameter is needed to account for the phenomenon that sometimes a head must be affected in some way, for instance by verb movement or by independent functional head movement, before its N-features can be checked. The N-feature checking in these
cases is conditional: it takes place only when assisted by such movement operations. (The principle of Grid is not violated because none of the movements proposed takes place exclusively to help out other elements.) The accessibility parameter is intended to express this, linking the notion of conditional feature checking to the independently established universal mechanism of feature checking in a sisterhood configuration.

References


1 Sentences containing de/dan, se, or wendes are listed under D, T, and V, respectively.
REFERENCES


REFERENCES


Dutch Syntax


TE-VELDE, J. (1985) 'Subject-Object and Coordinate Asymmetries and the Syntactic Structure of German.' In R. Lüdi-Green, ed., Recent Developments in German Grammar, John Benjamins, Amsterdam, 177-190.


THIESCH, C. (1973) Topics in German Syntax. Dissertation, MIT.


REFERENCES


VAN DER MEER, G. (1988) 'Reported Speech and the Position of the Finite Verb (Some Facts from West Frisian).' Leuvense Bijdragen 77, 301-324.


VAN NEMERSK, V.P. (1949) 'Over enkele morfuwvormen van voewoeren.' Taal en Werkwoord 1, 103-112.


