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GOTHENBURG MONOGRAPHS IN LINGUISTICS 1

**FORM AND FUNCTION
OF SUBORDINATE CLAUSES**

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**Dept. of Linguistics
University of Göteborg
1975**



FORM AND FUNCTION OF SUBORDINATE CLAUSES

LARS-GUNNAR ANDERSSON

Ströyers dagbok



Det är bröllop i TV i dag.

ii.

Till Farsan och Morsan!

PREFACE

For the last couple of years, one of my main linguistic interests has been subordinate clauses. In this thesis, I try to bring together some of the phenomena related to subordinate clauses that have occupied my thoughts.

While the contents of my thesis were fairly clear from the start, the title was not. Several titles came up for consideration: 'Die Leiden des Jungen Grammatikers', 'Such a Clause' and 'Subordinate Clause and Social Class', to mention only a few. Among several strong candidates, the one that was chosen was 'Form and Function of Subordinate Clauses'. Hopefully, this title will cover the contents.

The outline of the thesis was neat and clear when I started to write. Unfortunately, the end result is not as neat. There are several loose ends sticking out here and there. Nevertheless, I have done my best to keep the line of reasoning straight.

In my education in life and linguistics, I have benefited from a lot of people of whom only a few will be mentioned. First of all, I want to thank my father and mother who have encouraged me to study although they have never had a chance of doing so themselves. I also want to thank my wife and my son for putting up with me during a rather busy period of writing and wondering.

The manuscript of my thesis has been subjected to the critical scrutiny of friends and colleagues in the Linguistics Department here in Göteborg. I have benefited from the ideas, criticisms and corrections of Jens Allwood, Anders-Börje Andersson, Östen Dahl, Jerker Järborg and Roger Källström. Special thanks are due to Magnus Ljung in the English Department, University of Göteborg, who not only fixed up my English but who also spotted numerous weak points in my arguments. For reasons of pride and laziness, I have not accepted all of their suggestions.

I spent the academic year 1972-1973 at the University of Massachusetts at Amherst and I want to thank the American-Scandinavian Foundation for making this financially possible. I also want to thank people in and around the Linguistics Department in Amherst for making my stay linguistically and socially fruitful. In particular, I benefited

greatly from classes and discussions with Adrian Akmajian, Frank Heny, Jim Heringer, Barbara Partee and Tom Peterson.

My thanks also go to the majority, i.e. all you who have not been mentioned here but who have, nevertheless, been involved in this enterprise one way or another.

Finally, I want to express my gratitude to Kerstin Nauclér, Zofia Wilscyńska and Tore Hellberg who transformed a messy manuscript into several copies of readable text. If you still find my thesis unreadable, none of the persons mentioned above should be blamed for this. The responsibility for the final product is mine alone.

Göteborg, November 20, 1975

Lars-Gunnar Andersson

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CHAPTER 0

WHY SUBORDINATE CLAUSES MIGHT BE OF INTEREST TO THE LINGUIST

0.1. The recursive property of sentences

A very quick glance at language reveals that sentences or sentence-like structures occur within other sentences. A sentence may be a part of another sentence.

Let us assume that it is the task of a grammar for a language to specify which combinations of morphemes count as grammatical sentences in that language. In the terminology of generative grammar, it is said that the grammar of a language should generate all the grammatical sentences of that language and no ungrammatical ones. To reach this goal, Chomsky (1957) proposed that the description of a language be made in terms of two sets of grammatical rules. The phrase structure rules generate an underlying syntactic structure (the Deep Structure). The deep structure is converted into a superficial syntactic structure (the Surface Structure) by the successive application of transformational rules. A surface structure is an abstract representation of an actual sentence before the application of morphophonological and phonological rules. The final representation of a sentence provided by the grammar is called the Phonetic Representation.

The grammatical model described above is a transformational grammar. It is important to note in this context that a generative grammar does not have to be a transformational grammar. An alternative to a transformational grammar is a categorial grammar (see Partee 1975). Several versions of transformational as well as categorial grammars have been proposed in the literature. All these versions take it as a task for the grammar to enumerate the set of grammatical sentences of the language in question. However, these different versions of generative grammars will not be discussed in this thesis. My belief is that the description of natural languages should be made in terms of a generative grammar.

In this thesis, I will present a set of problems that the generative grammarian will encounter when attending to describe the way subordinate clauses function in natural language, regardless of which type of generative grammar he favors.

In several places, I will use a transformational framework in my analyses of the different structures exhibited by subordinate clauses. This does not imply that the problems discussed are specific to a transformational grammar. It is rather the case that some theoretical framework is needed to make the questions comprehensible. Since transformational grammar is the most well-known version of generative grammar (as it is presented in Chomsky (1965), for example), it is rather natural to choose this model as a framework for syntactic analyses.

I have tried to confine myself to a discussion of problems that emerge from language rather than from the theory of transformational grammar.¹ I think it is important to be aware of the distinction between these two types of linguistic problems. The second set of problems will die with the theory of transformational grammar while the first set of problems will continue to exist, but in a new formulation, of course. And that transformational grammar will die just as all other schools of linguistics have died is rather obvious. It is equally obvious that the problems created by language will continue to puzzle people in general and linguists in particular. It is, however, admittedly hard to draw the line between those problems that emerge from language directly and those that emerge from some particular theory of grammar.

My own approach here has been to take as little as possible of the technical machinery of transformational grammar for granted. In chapters I and II, transformational grammar is of relatively little importance. In chapter III, where the structure of subordinate clauses is discussed, however, the transformational model plays a greater role.

After these remarks about linguistic analyses in general, I will return to the fact noted in the first sentence of this chapter, viz. that sentences occur as parts of other sentences. They do this in at least two different ways, as is illustrated by (1) and (2).

(1) John defeated Bill and Bill defeated Sam and Sam defeated Max and Max defeated me and I defeated no one.

(2) John asked if Bill had told them that Sam explained how Max proved that I defeated no one.

The combining of sentences as in (1) is referred to as coordination. It is usually said that the sentences in a coordination have the same syntactic rank. The term 'rank' is used by Jespersen (1968) to indicate syntactic prominence, loosely speaking. The combining of sentences as in (2) is called subordination. In the same terminology, it is said that a subordinate clause does not have the same syntactic rank as a main clause.

This study deals with the sentences that are parts of other sentences in the way exemplified in (2). In (2), we find the following subordinate clauses.

- (3) (a) if Bill had told them that Sam explained how Max proved that I defeated no one.
(b) that Sam explained how Max proved that I defeated no one.
(c) how Mas proved that I defeated no one.
(d) that I defeated no one.

As was mentioned above, a generative grammar should generate all the grammatical sentences of a language and no ungrammatical ones. Since sentences occur as parts of other sentences, as in (1) and (2), the rules of grammar must specify that one sentence may consist of several sentences. In the case of coordination, a rule like (4) can be proposed to account for this fact.

(4) $S \rightarrow S \text{ (and } S)^n$

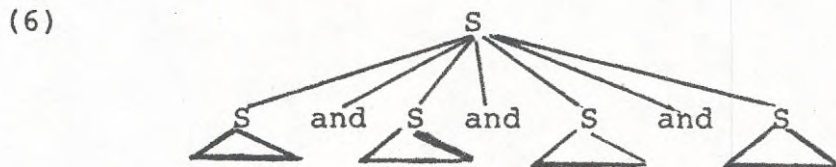
This rule says that a sentence may consist of one sentence followed by any number of sequences of and followed by another sentence. The same set of rules that specify how one sentence in a coordination may be constructed also specify how the other sentences of the coordination may be constructed.

What I refer to here is the very obvious fact that if there is a

phrase-structure rule like (5) that specifies what a sentence may look like, this rule should be used to derive all the sentences in a coordination and not only the first one, for example. The parentheses indicate that the symbol enclosed may optionally be chosen in the expansion of the node to the left of the arrow.

(5) $S \rightarrow NP$ (Adv) TENSE VP (AdvP)

This means that rule (5) should be used to develop all the S's in a coordinate structure like (6) and not just a sub-set of these S's.²



Subordination is somewhat harder to deal with. In this study, I will show that there are a number of syntactic differences between main and subordinate clauses. This situation suggests two possible solutions in a transformational framework. Either we have one set of rules developing main clauses and another set of rules developing sub-clauses, or we let the same set of rules develop both main and subordinate clauses and then we account for the differences between the two types of clauses in terms of transformations that are restricted in their application to either main clauses or sub-clauses. These two alternatives can be described in the following way.

(i) alternative one:

Different grammars for main and subordinate clauses, i.e. two different sets of rules.

(ii) alternative two:

The same grammar for main and subordinate clauses. To the extent that it is possible, the same set of rules is used to develop both main and subordinate clauses. Where syntactic differences appear between the two types of clauses, a special set of transformational rules with restricted applicability is proposed to account for the differences.

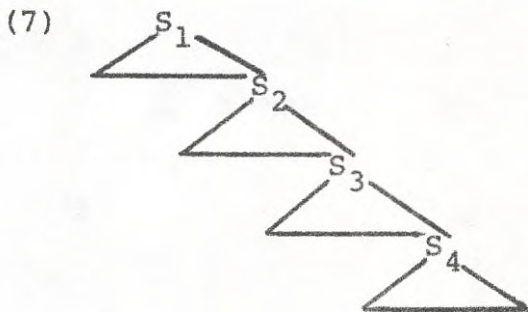
Alternative one is the natural choice for a linguist of the taxonomic tradition. In his positional syntax, Paul Diderichsen pro-

posed that there are two different positional schemas for main and subordinate clauses (cf. eg. Diderichsen 1966).

From a generative point of view, alternative two is the natural choice, unless main and subordinate clauses have totally different structures, But, as we know, they do not. In his discussion of the syntactic differences between main and subordinate clauses in English, a generative linguist like Emonds does not even consider alternative one (Emonds 1970).

Since the syntactic differences between main and subordinate clauses are rather small, I will accept alternative two without further discussion. If alternative one had been chosen, we would be faced with the problem of explaining why the two types of clauses have so many structural similarities. This comes out as a natural fact of alternative two.

The following situation emerges when alternative two is accepted. The same rules will be used to develop all the S's in a structure like (7).



Then a special set of rules, principles, or strategies has to be proposed to distinguish S_1 (the main clause) from S_2 , S_3 and S_4 (the subordinate clauses). What these rules, principles or strategies are like in Swedish is a main theme of this thesis. Although the discussion mainly concerns Swedish, many of the problems considered are relevant for the grammars of other languages as well.

0.2. Recursive Rules

Since sentences occur as parts of other sentences, we need some rules that allow us to generate one sentence within another. It is well-known that sub-clauses function as subjects, objects and adverbials in language. The following sentences illustrate these functions.

- (1) That syntax can be tricky has been well documented.
- (2) MIT students think that syntax must be tricky.
- (3) It is not easy to be a linguist because syntax can be tricky.

Let us assume, although this point will be further discussed in chapter III, that the subject and object clauses are dominated by an NP, i.e. that they are noun phrases. Let us further assume that the adverbial clause is dominated by a node AdvP., as is usually done.

This means that among other things, we must have a rule that expands NP as a sentence. This rule can be given the form of (4) as a first approximation. Likewise, the rule that expands the Adv.P.-node must expand it as a sentence, as is indicated by (5). This rule, too, should be viewed as a first approximation. Of course, rules (4) and (5) do not represent the only possible expansions of NP's and Adv.P's, respectively.

- (4) NP → S
- (5) AdvP → S

The important thing to note about the rules (4) and (5) is that they introduce recursiveness in the grammatical system. That the phrase-structure rules of the language have this recursive property insures that it will be possible to generate an infinite set of sentence structures with a finite set of rules. Any natural language contains in principle an infinite set of sentences, i.e. there is no limit on the number of sentences that can be expressed in a natural language, but the knowledge of the grammatical system within the brain of any human being must be finite, otherwise it would take an infinite amount of time to learn the grammar of a language, which of course it does not.

Therefore our linguistic competence as speakers of a natural language must also consist of a finite set of rules that generates an infinite set of sentences. In this respect, the recursiveness of the grammatical system can be said to mirror our linguistic competence.

In (6), I have summed up the phrase-structure rules given so far (in this and in the preceding section). Rule (6iii) is the only rule not given earlier in the text and it is introduced here in order to account for the object clauses.

- (6) (i) $S \rightarrow S \text{ (and } S)^n$
- (ii) $S \rightarrow \text{NP (Adv) Tense VP (AdvP)}$
- (iii) $\text{VP} \rightarrow \text{V (NP) (PP)}$
- (iv) $\text{NP} \rightarrow \text{S}$
- (v) $\text{AdvP} \rightarrow \text{S}$

It is easy to see that these rules can be applied iteratively to generate sentence structures of any length. Once rule (6ii) has applied, rule (6iv) can apply, and once rule (6iv) has applied, rule (6ii) can apply, etc.

A rule system like the one in (6) predicts that all S-nodes (i.e. sentences), whether they represent main clauses or sub-clauses, will have the same syntactic structure. However, it turns out that these two types of clauses differ syntactically in some respects. How these differences are to be handled will be discussed in this thesis.

The most striking difference between main and subordinate clauses is that the latter but not the former are usually introduced by some particle or conjunction like that, for example. This difference can be handled by replacing rules (6 iv) and (6 v) with rules looking approximately like (7).

- (7) (i) $\text{NP} \rightarrow \bar{\text{S}}$
- (ii) $\text{AdvP} \rightarrow \bar{\text{S}}$
- (iii) $\bar{\text{S}} \rightarrow \text{COMP S}$

These rules separate out particles like that from the S. The node \bar{S} , an S with a bar, is introduced as an arbitrary sign to indicate that this node is not identical to an ordinary sentence node. The node COMP (complementizer) is used as a category symbol for particles that introduce subordinate clauses. It should be noted that the rule system as changed by the rules in (7) is still recursive. The only change introduced by (7) is that the grammar now provides a place for the particles that introduce sub-clauses.

Note that the rules in (7) do not change the most essential feature of the system. The same set of phrase-structure rules are used to specify the structure of both main and subordinate clauses.

Below, I will discuss how the COMP-node can be used to define what a subordinate clause is. How the notion of 'subordinate clause' should be defined is another main topic of this thesis. I will also discuss what morphemes occur under the COMP-node in the grammar of Swedish, i.e. what morphemes can be called complementizers in Swedish.

If you ask a seven year old child what a subordinate clause is, you are not likely to receive an answer. Yet, a child of that age is able to master the syntactic differences that exist between main and subordinate clauses, which means that the child unconsciously knows what a subordinate clause is. This fact, simple and evident as it is, provides an excellent reason why we should try to obtain an understanding of what a subordinate clause is and how it differs from a main clause.

0.3. Subordinate clauses and traditional grammar

In most traditional grammar books, subordinate clauses are not discussed in terms of recursive rules, nor do traditional grammars worry about the syntactic rules specifying the construction of subordinate clauses, unless the language described shows great syntactic differences between main and subordinate clauses, as for instance the verb-final property of German sub-clauses.

Rather, an ordinary grammar book takes the existence of subordinate

clauses for granted and attempts a good classification of them. Concepts like 'subject clause', 'object clause', 'predicate clause', 'attributive clause' and 'adverbial clause' have been used in such classifications. Adverbial clauses are further divided into 'purpose clauses', 'causal clauses', 'temporal clauses' and so on. I take these concepts to be well-known and will not discuss them here, nor will what I have to say in this study have any bearing on the relevance of these classifications.

In my view, these classifications do not constitute anything like a theory of subordinate clauses. However, there have been more theoretically oriented studies of subordinate clauses in the pre-transformational linguistic literature. An excellent example of this is Brøndal (1937).

I choose to leave most of this earlier work out of the study. The only older linguistic studies frequently cited in the text are Jespersen's "Philosophy of Grammar" from 1924 and Beckman's "Svensk Språklära" from 1916.

The reason for my leaving out earlier works is that most of these theoretical studies concern the psychological difference between the two types of clauses and these differences are expressed in terms of different psychological theories with a great deal of technical terminology that lies outside the scope of this study. Furthermore, it is my personal belief that sweeping generalizations about the differences in question will not yield much of an understanding of what a subordinate clause is.

One such sweeping generalization is "huvudsak i huvudsats, bisak i bisats" (Wellander 1973:231) (translation: 'main things in main clauses, subordinate things in subordinate clauses'). According to such a generalization, a sentence like (1) should be more or less without informative importance. But, as far as I can see, it is not.

(1) That Sweden cooperates with Vietnam shows that Sweden can hardly be regarded as a member of the free world.

The only word in (1) that is not a member of a subordinate clause

is the verb shows. Is that the only important word in the sentence? The answer is obviously: No.

Sweeping generalizations like the one above will be avoided in this study. The problems discussed here are framed in the theory of generative grammar. On the descriptive level, generative grammar provides an explicit model in which linguistic problems can be handled. On the explanatory level, however, generative grammar has not advanced so far. In explaining what a subordinate clause is or what the function of a certain transformation is, generative grammar is not of much help. Such problems have to be discussed in more impressionistic terms.

CHAPTER I

WHAT IS A SUBORDINATE CLAUSE ?

I.0. Introduction

This chapter deals with problems in connection with the notion 'subordinate clause'. In nearly all grammatical works this notion is referred to, but we seldom find any discussion of the notion itself. We rarely find explicit definitions of the concept. Often a definition is given in passing, to make sure that everyone knows what is being talked about. However, I feel that the concept merits a more detailed investigation. The discussion below is therefore to a large extent concerned with the question of providing a definition of the notion 'subordinate clause'.

Another major concern of this chapter is the syntactic differences that exist between main and subordinate clauses. By looking at syntactic peculiarities of subordinate clauses, we may learn something about what kinds of things these clauses are. In order to account for some of these syntactic phenomena, I will propose that a distinction should be made between 'syntactically subordinate clauses' and 'semantically subordinate clauses'.

I.1. Definitions and criteria

First we have to make a distinction between a definition and a criterion for 'subordinate clause'. As a typical criterion for subordinate clauses we can take that based on the placement of the negation in Swedish. In Swedish, the negation (inte) is placed after the finite verb in main clauses but before it in sub-clauses.

- (1) (a) Vi kunde inte öppna kokosnöten.
'We could not open the coconut'
- (b) Vi var ledsna därför att vi inte kunde öppna kokosnöten.
'We were sorry because we could not open the coconut'

We demand of a definition that it should tell us in a general fashion which clauses are subordinate. The negation test does not, however. It tells us to perform a certain syntactic operation (negation) on a sentence and look at the result. This criterion (or test) tells us nothing directly about sentences without a negation. If we placed the negation before the verb in a sentence like Fåglar äter ('Birds eat'), would it be a subordinate clause then? No, rather we would judge it as an ungrammatical Swedish sentence. The important question to ask in connection with the placement of the negation is the following. How do Swedish speakers know when they should place the negation after the finite verb and when they should place it before it? The answer to this question must be that they know what a main clause is and what a sub-clause is. This tacit knowledge is part of their linguistic competence. An adequate description of Swedish must therefore provide a definition of the concept 'subordinate clause'. The placement of the negation presupposes a definition of the concept.

Since many other languages (English and German included) show syntactic differences between main and subordinate clauses, similar arguments can be presented showing that also descriptions of these languages must include a definition of 'subordinate clause'. It might reasonably be argued that the definition of the concept should be given by the universal linguistic theory. However, in the following I will mainly discuss Swedish and only comment briefly on other languages.

There are several differences in the applicability of transformations in main and subordinate clauses. The negation inte is not the only morpheme that shows up on different sides of the finite verb in the two types of clauses. Rather inte belongs to a fairly large class of adverbials including kanske ('perhaps'), troligen ('probably'), uppenbarligen ('obviously'), ofta ('often'), alltid ('always') and aldrig ('never').³ Another difference between the two types of clauses in Swedish is the optional deletion of the auxiliaries har ('have/has') and hade ('had'), which only occurs in subordinate clauses.

- (2) (a) Liverpool har vunnit cupen.
(b) *Liverpool vunnit cupen.
'Liverpool has won the cup'

- (3) (a) John vet att Liverpool har vunnit cupen.
(b) John vet att Liverpool vunnit cupen.
'John knows that Liverpool has won the cup'.

In Emonds (1970), a number of movement transformations are mentioned that, according to him, are only applicable in main clauses in English. Even though a number of exceptions to Emonds' claims have been given (cf. Hooper & Thompson 1973), it must be concluded that the applicability of movement transformations like Topicalization, Negated Constituent Preposing and Directional Adverb Preposing is severely restricted in subordinate clauses. The corresponding movement transformations in Swedish are similarly restricted (A-B Andersson 1973). Another language in which the difference between main and subordinate clauses is important is German, where the finite verb is placed in sentence-final position in sub-clauses but in sentence-second position in main clauses.

Several other languages show syntactic differences between main and subordinate clauses and more examples could be added from the languages mentioned. But no more examples are needed to prove the point: There are syntactic differences between the two types of clauses.

I.2. Definitions

The speaker's ability to place morphemes and apply transformations correctly presupposes a definition of the concept 'subordinate clause'. This definition must be part of his linguistic competence.

In pseudo-technical terms we can say that transformations must "know" whether a certain sentence is subordinate or not to ensure that they do not operate in a subordinate clause, in cases when application there would yield an ungrammatical result.

The following five definitions are idealizations of the definitions of the concept that are found in the literature.

A: A SUBORDINATE CLAUSE IS A CLAUSE THAT CANNOT BE AN
UTTERANCE BY ITSELF.

This definition can be falsified in both directions. Firstly, subordinate clauses can occur as utterances by themselves as is seen in (1).

- (1) (a) Att han vågar.
'That he dares'. ('It is amazing that he dares')
(b) Om han kunde komma.
'If he could come'. ('I wish that he would come')

(1a) and (1b) are sub-clauses because the negation would be placed before the finite verb and the auxiliaries har and hade can be deleted in sentences like (1). Furthermore, the sentences of (1) have a meaning very different from that of the corresponding main clauses.

Secondly, there are main clauses that cannot occur as utterances in isolation but only in combination with a sub-clause.⁴

- (2) (a) *Nixon hävdade.
'Nixon claimed'.
(b) *Så kommer jag.
'Then I'll come'.
(3) (a) Nixon hävdade att han var oskyldig.
'Nixon claimed that he was innocent'.
(b) Om hon är där, så kommer jag.
'If she is there, then I'll come'.

In addition, it is hard to know what is meant by the expression "an utterance by itself" or alternatively "an utterance in isolation". Intuitively one feels that an answer to a question is an "utterance by itself", but as such, sub-clauses often occur. Since almost every phrase, clause or sentence may occur as an answer to a question, definition A seems untenable.

Q: Why didn't you come?

A: Because I missed the train.

B: A SUBORDINATE CLAUSE IS A CLAUSE THAT FUNCTIONS AS A PART OF ANOTHER CLAUSE OR SENTENCE.

This is the definition that one finds in most grammar books and even though it is widely accepted, it meets with some problems. Its advocates must, for example, show that the second part of (4) is not embedded as a constituent of that sentence in the same way as the second part of (5) is in its sentence.

(4) Maja beställde telefonväckning ty hon var rädd att missa tåget.

'Maja ordered an alarm call for she was afraid to miss the train'.

(5) Maja beställde telefonväckning därför att hon var rädd att missa tåget.

'Maja ordered an alarm call because she was afraid to miss the train'.

The second parts of these two sentences appear to have both the same function and meaning, although the grammar book tells us that ty is a coordinating conjunction while därför att is subordinating.

Furthermore, B excludes the possibility of regarding isolated sub-clauses as subordinate clauses. Such sub-clauses were exemplified in (1). These isolated sub-clauses can hardly be regarded as constituents of another sentence, since there is no other sentence to be a constituent of. For the moment, we disregard the possibility of analyzing these clauses as parts of underlying sentences with deleted main clauses.

C: A SUBORDINATE CLAUSE IS A CLAUSE (S-NODE) WHICH IS NOT A "ROOT".

This definition is closely related to the theory of transformational grammar and its tree-structures. Emonds defines a "root" as an S-node which is either the highest S of the tree or an S-node which is directly dominated by the highest S or an S-node which is embedded as a direct quotation under a verb of saying (Emonds 1970). Emonds uses this concept to show that there are a number of transformations that can only be applied in "roots" but in traditional terms "root" is to be equated with the term

'main clause'. The transformations that he discusses are those that only apply in main clauses, for example, Negated Constituent Preposing, Topicalization, and Left Dislocation. For a discussion of Emonds' thesis, see A-B Andersson (1973) and Hooper & Thompson (1973).

One problem with this definition is that it is based on constituent structure and there is no general agreement about constituent structure among linguists. Those who advocate C must give sentences (4) and (5) above different constituent structure, unless they are willing to give both of the adverbial clauses equal status. It is not evident that that should be done. Moreover, C will not categorize isolated sub-clauses as subordinate clauses, (1). In general, C can be regarded as a transformational variant of B and as such, it meets with the same difficulties. It is, however, a much more explicit definition than B.

D: A SUBORDINATE CLAUSE IS A CLAUSE INTRODUCED BY A SUBORDINATING CONJUNCTION.

Together with a list of the subordinating conjunctions in Swedish, this definition would give us a key to what a sub-clause is. This definition will be further discussed below and then in relation to definition E.

E: A SUBORDINATE CLAUSE IS A CLAUSE INTRODUCED BY A "COMPLEMENTIZER".

This definition is similar to D but not identical to it. The reason for this is that many of the subordinating conjunctions can be analyzed as sequences of a preposition and a complementizer.

(6)	PREP	COMP		
	genom	att	'through that'	-'by'
	därför	att	'because that'	-'because'
	efter	(det)att	'after that'	-'after'

Before continuing the discussion of definition E, let me make a few points clear about what a definition of subordinate clauses should do. The definition should divide clauses into two groups

so that all clauses which may have the sentence adverbial before the finite verb and which may delete temporal auxiliaries are classified as subordinate clauses. These are the two criteria used in the above discussion of different definitions. Furthermore, I have argued that a definition of the concept 'subordinate clause' is needed because such a definition is part of our linguistic competence. More specifically: we place sentence adverbials and delete temporal auxiliaries according to this definition.

It should also be pointed out that the distinction between definitions and criteria is not as clear as could be hoped. It could, for example, be argued that the presence of a complementizer in clause-initial position is a criterion for sub-clauses rather than a definition. Here, I take the occurrence of a clause-initial complementizer as a defining characteristic of subordinate clauses. The definition provided for the notion 'complementizer' in chapter III is constructed in such a way that it can be considered reasonable to take complementizers as defining characteristics of subordinate clauses. The general point remains, however, that there is no obvious and sharp distinction between criteria and definitions.

Another question is whether this definition should be made language specific or language universal. It is evident that a similar definition is needed for languages closely related to Swedish as English and German, for example, since these languages also show syntactic differences between main and sub-clauses. Looking at grammars of different languages, it appears that they all have constructions that one would want to call subordinate clauses but these are formed in many different ways and it is certainly not easy to give a syntactic definition of the concept that is universal. I will return to these problems below but first the Swedish sub-clause will be analyzed in more detail.

I.3. Main clause features in subordinate clauses

In Emonds' terminology, a rule that only applies in main clauses is called a "root transformation". There are several exceptions to Emonds' claims, i.e. there are sub-clauses where root transformations have been applied. This section deals with such sub-clauses in Swedish.

Teleman (1967) has investigated sub-clauses in a fairly large corpus of spoken language and he found numerous sentences where root transformations had been applied in subordinate clauses. Also in the written language, many such sentences can be found and it is not correct to mark them as ungrammatical. According to the intuitions of the speakers, they are grammatical, even though grammar books mark them as ungrammatical. A study of which subordinate clauses it is that allow root transformations might lead to a better understanding of what a subordinate clause is.

Below is a short summary of Teleman's findings concerning the placement of sentence adverbials in sub-clauses.

att 'that'

Sentences introduced by att often have the word order of main clauses, i.e. with the sentence adverbial after the finite verb. The att-sentences correspond to the English that-complements.

för, för att, därför and därför att 'because'

Sentences introduced by these conjunctions normally have main clause word order, according to Teleman, and when they do, Teleman claims that these conjunctions should be regarded as coordinating conjunctions.

'Här är alltså för, för att, därför och därför att närmast att uppfatta som samordnande konjunktioner, talspråkliga motsvarigheter till skriftspråkets ty.' 5
(1967:170)

I agree with Teleman that för can be a coordinating conjunction but I refuse to regard därför att as one. Later in the text, I will present an analysis that handles these problems. The reason for Teleman's claim is that he regards the placement of the adverbials as a definition of sub-clauses.

I.4. Some semantic intuitions

As an argument against definition B, it was mentioned that a ty-clause just as well as an eftersom- or a därför att-clause could function as an adverbial within the sentence. Thus, it seems to

me that (1) and (2) are synonymous, in spite of the fact that ty is considered to be a coordinating conjunction while the other two conjunctions are considered to be subordinating.

(1) Robin studerar lingvistik ty han har alltid varit intresserad av språk.

(2) Robin studerar lingvistik { därför att } han har alltid varit intresserad av språk. { eftersom }

'Robin studies linguistics because he has always been interested in languages.'

Note the main clause word order in (2): the adverbial alltid ('always') is placed after the finite verb har. We could, of course, have given (2) sub-clause word order but my intuition tells me that we then would get a slight change in meaning. I am not the only one to have these intuitions but they are shared by the people I have discussed it with. This semantic difference is correlated with a difference in intonation. Also in this case, my claim is based on my intuition but they do correspond to Telemans' findings for så- and så att-sentences (1967:173). Linguists seem to agree that coordination and subordination differ in intonation but the problem is how this difference should be described. One easily recognized difference is that a pause typically occurs between two coordinated sentences, but not between the main clause and the subordinate clause. In the first case, we can talk about two phonological phrases but in the second case, only about one. (3) shows two sentences that differ in the same way as (1) - (2).

(3) (a) Hugo studerar lingvistik men han har egentligen aldrig varit intresserad av språk.

(b) Hugo studerar lingvistik fastän han har egentligen aldrig varit intresserad av språk.

'Hugo studies linguistics { (a) but } he has really { (b) although } never been interested in languages'.

In grammar books, men ('but') is listed among the coordinating conjunctions and fastän ('although') among the subordinating ones. Nevertheless, (3a) and (3b) have the same meaning as well as the

same intonation pattern. In (3b), the adverbials egentligen and aldrig ('really, 'never') occur after the finite verb, just as in a main clause. However, if the adverbials are placed before the finite verb, the sentence changes its intonation as well as its meaning.

- (4) Hugo studerar lingvistik fastän han egentligen aldrig har varit intresserad av språk.
'Hugo studies linguistics although he has really never been interested in languages'.

Another interesting fact is that when the subordinate clauses in the above sentences are preposed, these adverbial clauses must be given the appropriate word order for subordinate clauses, i.e. with the adverbials preceding the finite verb. This is shown in (5) and holds for all adverbial subordinate clauses.

- (5) (a) { *Därför att } han har alltid varit intresserad av språk,
 { *Eftersom } studerar Robin lingvistik. (cf. (2))
(b) { Därför att } han alltid har varit intresserad av språk,
 { Eftersom } studerar Robin lingvistik.
(c) *Fastän han har egentligen aldrig varit intresserad av språk, studerar Robin lingvistik. (cf. (3b))
(d) Fastän han egentligen aldrig har varit intresserad av språk, studerar Robin lingvistik. (cf. (4))

Clauses introduced by the coordinating conjunctions ty and men may never be preposed in this way, no matter how we fix the word order in them. This is shown in (6).

- (6) (a) *Ty han har alltid varit intresserad av språk, studerar Robin lingvistik. (cf. (1))
(b) *Men han har egentligen aldrig varit intresserad av språk, studerar Robin lingvistik. (cf. (3a))

From (5) and (6), we find that a main clause or a sub-clause with main clause word order may never be fronted by the rule which we could call Adverbial Clause Preposing.

Hooper and Thompson (1973:476) give the following and other sentences to show that root transformations may not apply in sentential complements that occur in subject position but only in sentential complements that occur in extraposed position.

- (7) (a) *That never in his life has he had to borrow money is true.
(b) It's true that never in his life has he had to borrow money.
- (8) (a) *That this building, it would be demolished was decided.
(b) It was decided that this building, it should be demolished.

Let us now look at sentential complements in Swedish and how the sentence adverbial is placed in them. In subject position, the adverbial has to be placed before the finite verb but in extraposed position, both orders are possible.

- (9) (a) Att Henry { inte har } varit i sin lägenhet är uppenbart.
 { *har inte }
- 'That Henry has not been in his apartment is obvious'
- (b) Det är uppenbart att Henry { inte har } varit i sin
 { har inte }
- lägenhet.
'It is obvious that Henry has not been in his apartment'

These facts are related to the deletability of the complementizer. In (9b), the complementizer att may optionally be deleted but it cannot be deleted in (9a). The deletability of att in combination with därför follows the same pattern. Hence, att is deletable when the subordinate clause follows the main clause as in (2), but it is not deletable when the sub-clause is preposed as in (5b). This means that att is deletable in the contexts where the subordinate clause may show either main clause or sub-clause word order.

In connection with sentences (1) - (4) above, it was said that there was a difference in meaning between subordinate clauses which have main clause word order and those that have sub-clause word order. I suggest that this difference should be described in terms of the distinction between the concepts 'proposition' and 'assertion'

or 'statement'. This is also the suggestion given in Hooper and Thompson's article (1973), as was said above.

Proposition is the semantic concept that is used to refer to the meaning of a sentence. The meaning of a sentence is the proposition that the sentence expresses (I disregard the distinction between sentence type and sentence token, which is irrelevant for the present discussion). In some contexts, the proposition is stated or asserted and in some contexts, it is not. If the proposition of a clause is asserted, the clause is said to express a statement (or an assertion) and if it is not, the clause is said to express a proposition. I take the terms 'assertion' and 'statement' to be synonymous. This is the terminology that will be used in the following discussion. Compare the following two sentences.

(10) Erod believes that Robin studies linguistics.

(11) Robin studies linguistics.

In (11), it is stated that Robin studies linguistics. This is not stated in (10). When (11) is embedded as an object to believe, then the sentence no longer expresses a statement, but rather a proposition. The general principle is that a subordinating conjunction incorporates a proposition (the sub-clause) in the statement (the main clause).

It is now suggested that a subordinate clause can show main clause word order (i.e. allow root transformations) only if it is asserted. There are two ways in which a sub-clause may express an assertion. Either it is an assertion on the part of the speaker or it is an assertion on the part of someone else. In the latter case, the sub-clause represents reported speech. The sub-clause may show main clause features in both of these cases but the prime interest of this study is the sub-clauses that express assertions on the part of the speaker. The examples that follow here will make this point evident.

As was mentioned above, a sub-clause may show main clause properties when it occurs after the main verb of the sentence (focus position) but never when it occurs before it (topic position). In

general, we can say that the topic position is used for old and known things in the discourse while the focus position is used for new things. According to this general picture, it seems natural that the proposition of a sub-clause may only be asserted in focus position. However, this generalization is only correct for sub-clauses that express assertions on the part of the speaker. A sub-clause representing reported speech is not similarly restricted. A sentence like Att aldrig i hela sitt liv hade han sett en sådan röra sa han till oss ('That never in his whole life had he seen such a mess, he told us') is grammatical. The sub-clause in this sentence does not really make a statement, it rather describes a statement made by someone else. Let us now continue to look at sub-clauses that express assertions on the part of the speaker. The following sentence is ambiguous.

(12) Robin studerar inte lingvistik därför att han är intresserad av språk.

'Robin does not study linguistics because he is interested in languages'

In one interpretation, the causal relationship between the two clauses is negated, i.e. there might be some other reason for his studying linguistics. In the other interpretation, only the main clause is negated, i.e. Robin does not study linguistics and the reason for this is that he is interested in languages. Only in the latter interpretation may the coordinating conjunction ty be substituted for därför att. In this case, the sub-clause represents an assertion on the part of the speaker. An interesting feature of (12) is that it is impossible for the negation in the main clause to negate the causal relationship between the two sentences if the 'causal' clause expresses a statement. While (12) is ambiguous, the two sentences in (13) are not. This is explained by the fact that a ty-clause always expresses a statement.

(13) (a) Robin studerar inte lingvistik ty han är intresserad av språk.

'Robin does not study linguistics for he is interested in language'

(b) Det är inte fallet att Robin studerar lingvistik ty han är intresserad av språk.

'It is not the case....'

If the hypothesis that was presented above is correct, it follows that main clause word order in the sub-clause of (12) would make the sentence unambiguous and it would then have the second interpretation where only the main clause is negated. This can be tested by introducing a sentence adverbial in (12). When the adverbial is placed after the finite verb, the result is the unambiguous sentence (14), which confirms the hypothesis.

(14) Robin studerar inte lingvistik därför att han har alltid varit intresserad av språk.

If, however, the adverbial alltid ('always') is placed before the finite verb har (sub-clause word order), then the first interpretation becomes the natural one and for some people I have asked, the only one.

(15) Robin studerar inte lingvistik därför att han alltid har varit intresserad av språk.

The two interpretations demand different intonation and pausing, which makes it hard to judge between them. Informants generally break down when I pronounce (14) with sub-clause intonation and main clause order and ask them to repeat the sentence. It once happened that the sentence was repeated ten times with sub-clause word order even though I said that the repeated sentence had incorrect word order after each time. It seems that one word order is connected with one intonation pattern while the other word order is connected with another intonation pattern. How these connections are to be described, I do not know.

Another relevant factor is the auxiliary har ('has') in the sub-clause. If this auxiliary is deleted in (15), the sentence becomes unambiguous and can only be interpreted as a negation of the causal relationship between the clauses. The rule deleting har ('has') or hade ('had') applies only in subordinate clauses; a rather unusual rule, in other words.

Sentences introduced by så att ('so that') show the same ambiguity as sentences introduced by därför att. Hence, (16) is ambiguous. It can either mean that Erod did not fight and as a result of this

he will not get his job back or it can mean that he actually did fight but not enough to get his job back.

(16) Erod kämpade inte så att han får tillbaka sitt jobb.

'Erod did not fight so he will get his job back'

We can now see what happens if a sentence adverbial is introduced in the sub-clause of this sentence. First we give the sentence main clause word order. According to the hypothesis, the sub-clause should express an assertion in this situation and it is then predicted that only the main clause is negated and not the relation of result between the two clauses.

(17) Erod kämpade inte så att han får aldrig tillbaka jobbet.

'Erod did not fight so (that) he will never get his job back'

The prediction is confirmed. (17) is unambiguous and it can only mean that Erod did not fight and as a result he will never get his job back. However, if the sub-clause is given the normal sub-clause word order with aldrig ('never') before the finite verb får ('will get'), we get the other interpretation where it is said that Erod did fight but not to such an extent that he will get his job back.

(18) Erod kämpade inte så att han aldrig får tillbaka sitt jobb.

'Erod did not fight to such an extent that he will never get his job back'

Besides negation, another good test for the correctness of the hypothesis is to make the relevant sentences into questions. As we saw above, the causal relation between two clauses could only be denied if the sub-clause was not asserted and, consequently, showed sub-clause word order. Likewise, the causal relation between two clauses can only be questioned if the subordinate clause is not asserted. The general principle is that only the part of a sentence that is stated can be negated or questioned when the sentence is made into a negation or a question. If we take a sentence like (19), where the sub-clause may have either main clause or sub-clause word order, and make this sentence into a question, then the hypothesis predicts that the sub-clause must have sub-clause word order.

The hypothesis predicts that (20) is grammatical and that (21) is ungrammatical, which is shown to be correct.

(19) Nicke läser på universitetet därför att han $\left\{ \begin{array}{l} \text{inte kan} \\ \text{kan inte} \end{array} \right\}$ få
jobb.

'Nicke studies at the university because he cannot get a job'

(20) Läser Nicke på universitetet därför att han inte kan få jobb?

'Does Nicke study at the university because he cannot get a job?'

(21) *Läser Nicke på universitetet därför att han kan inte få jobb?

Another premise needed to predict that (21) is ungrammatical is the claim that a därför att-clause can not be loosely connected with a question but only closely connected with it, i.e. the därför att-clause can not make a comment on the question but only be a part of it, as in (20). This is also a fact of Swedish grammar. Eftersom-clauses differ from därför att-clauses in that they can be loosely connected with a question.

(22) Har du varit ute och vandrat på åkern $\left\{ \begin{array}{l} \text{eftersom} \\ * \text{därför att} \end{array} \right\}$ dina
stövlar är så smutsiga?

'Have you been out walking in the fields $\left\{ \begin{array}{l} \text{since} \\ \text{because} \end{array} \right\}$ your
boots are so dirty?'

Loose connection with a question is also impossible for så att-clauses; like the därför att-clauses, så att-clauses must be part of the question. Hence, the hypothesis predicts that it is impossible to have main clause word order in a så att-clause that follows a question. And in this case, too, the prediction is carried through. (24) is clearly grammatical and (25) is just as clearly ungrammatical.

(23) Kalle söp så att Eva $\left\{ \begin{array}{l} \text{ville inte} \\ \text{inte ville} \end{array} \right\}$ gå ut med honom

'Kalle drank so (that) Eva did not want to go out with him'

(24) Söp Kalle så att Eva inte ville gå ut med honom?

'Did Kalle drink to such an extent that Eva did not want to go out with him?'

(25) *Söp Kalle så att Eva ville inte gå ut med honom?

The same result is obtained for fastän-clauses, when the relation between the two clauses is a part of the question.

(26) Vann Nisse fastän han inte ansträngde sig?

(27) *Vann Nisse fastän han ansträngde sig inte?

'Did Nisse win though he did not exert himself?'

As we see from the above sentences, after fastän ('although') the negation must precede the finite verb ansträngde sig ('exerted himself'). On the other hand, the finite verb may precede the negation, if the fastän-clause makes a comment on the question or the act of questioning. Sub-clauses like the ones in (22) and (28) will be discussed in section II.5, where they are classified as speech act adverbials.

(28) Vann Nisse (?) fastän jag borde kanske inte fråga.

'Did Nisse win (?) although I should perhaps not ask'

According to the hypothesis presented above, sentences like (21) and (27) are ungrammatical in the same way and for the same reason as sentences like (29) and (30), i.e. the second clauses in these sentences express assertions. Så att is taken out of the comparison, since there is no coordinating conjunction corresponding to it.

(29) *Läser Nicke på universitet ty han kan inte få jobb?

(synonymous with (21))

(30) *Vann Nisse men han ansträngde sig inte?

(synonymous with (27))

I.5. Hooper and Thompson's analysis

In the preceding section I gave some arguments in support of the claim that a subordinate clause may show main clause word order only if it is asserted/stated.

The only word order feature that was used in the preceding discussion was the placement of the negation and other sentence adverbials. In Hooper & Thompson (1973), the applicability of root transformations in subordinate clauses as well as in main clauses is investigated. They claim that the function of transformations like VP-Preposing, Negative Constituent Preposing, Directional Adverb Preposing, Participle Preposing, Prepositional Phrase Substitution, Topicalization and Left Dislocation is to emphasize some constituent of a sentence. This notion of 'emphasis' referred to here is a vague one and it may be that more than one type of emphasis has to be recognized and it may also be that the root transformations listed here could be collapsed in some way. The preposing of an element into sentence initial position is a property that they all share. However, these things will not be discussed here. Whatever the emphasizing function may be, it is clear that the rule that places sentential adverbs after the finite verb in main clauses does not have such an emphasizing function.

Let us suppose that sentence adverbials are generated in a position before the finite verb in Swedish, independently of whether this is an auxiliary, modal or main verb. Then there is a rule (Adverb Placement) which postposes these adverbials into a position after the finite verb in main clauses and asserted sub-clauses. This rule is obligatory in main clauses and optional in asserted sub-clauses.

The hypothesis of Hooper and Thompson is that root transformations only apply in clauses that are asserted. Hence, their proposal differs from the one given in the preceding section in that they claim that root transformations may not apply in main clauses that are not asserted. I will return to this difference below, but first I will give a brief summary of their argument.

Hooper and Thompson divide predicates that take sentential complements into five classes depending on their semantic properties. The criteria by which a certain predicate is classified as belonging to a certain class of predicates is given in their article and will not be discussed here.

Class A: say, report, claim, be true, be certain, be sure,
be obvious.

The verbs of this class are all verbs of saying. The other predicates are grouped together with these verbs because they share the possibility of functioning parenthetically (Urmson 1963), i.e. in this function, the sub-clause represents the main assertion of the sentence. In this use, the sub-clause allows root transformations.

Class B: suppose, believe, think, expect, guess, it seems, it happens, it appears.

The complements following these predicates can also express statements and they do allow root transformations. When the complements are asserted, these predicates often become rather meaningless and have a parenthetical function within the sentence, according to the authors.

Class C: be (un)likely, be (im)possible, be (im)probable, doubt, deny.

The complements of these predicates cannot be asserted and do not allow root transformations.

Class D: resent, regret, be sorry, be surprised, be odd, be strange, be interesting, bother.

The complements of these predicates are said to be presupposed and therefore, they cannot be asserted. Consequently, they should not allow root transformations.

Class E: realize, learn, find out, discover, know, see, recognize.

These predicates are called 'semi-factives' by Hooper and Thompson, following Karttunen (1971). The complements of these predicates can be asserted and they allow root transformations. These complements are not presupposed, as was once believed (which gave them the name semi-factives).

In the following, I will go through the different classes of predicates and check whether the acceptability of root transformations in their complements is the same in Swedish and English. I will start with the class A predicates.

1 (a) Topicalization:

Hugo påstod att den här boken kommer du aldrig att läsa.
'Hugo claimed that this book you will never read'

(b) Left Dislocation:

Hugo påstod att den här boken, den kommer du aldrig att läsa.
'Hugo claimed that this book, you will never read it'

(c) Directional Adverb Preposing:

Lisa sa att nedför Kalles tänder rann snuset.
'Lisa said that down Kalle's teeth ran the snuff'

(d) Prepositional Phrase Substitution:

Journalisten rapporterade att på väggen hängde ett porträtt av Mao.
'The journalist reported that on the wall hung a portrait of Mao'

(3) Negative Constituent Preposing:

Det är sant att aldrig hade hon sett en sådan röra.
'It is true that never had she seen such a mess'

(f) Adverbial Placement:

Henry sa att presidenten { aldrig har } haft en kinesisk
älskarinna. { har aldrig }

'Henry said that the president has never had a Chinese mistress'

These examples show that also Swedish class A predicates allow root transformations in their complements. I have included Adverb Placement in the above presentation to see if it has the same distribution as other root transformations. It is not self-evident that it should since it does not have the same emphasizing function that the other root transformations have.

Next I will check if the six transformations above are applicable in complements to class B predicates in Swedish.

2 (a) Topicalization:

Han antog att den här boken kommer du aldrig att läsa.

'He supposed that this book you will never read'

(b) Left Dislocation:

Pelle gissade att den här boken, den kommer du aldrig att läsa.

'Pelle guessed that this book, you will never read it'

(c) Directional Adverb Preposing:

?Lisa trodde att bort från bilen sprang Sluggo.

'Lisa thought that away from the car ran Sluggo'

(d) Prepositional Phrase Substitution:

?Eva tyckte att på väggen klättrade en björn.

'Eva thought that on the wall climbed a bear'

(e) Negative Constituent Preposing:

Jag föreställer mig att aldrig har hon sett en sådan röra förut.

'I imagine that never has she seen such a mess before'

(f) Adverb Placement:

Jag tror att han $\left\{ \begin{array}{l} \text{aldrig har} \\ \text{har aldrig} \end{array} \right\}$ varit här.

'I think that he has never been here'

On the whole, root transformations are applicable in complements to class B predicates but some sentences with Directional Adverb Preposing and Prepositional Phrase Substitution sound a bit awkward. What about class C predicates?

3 (a) Topicalization:

?Det är troligt att den här boken kommer du aldrig att läsa.

'It is likely that this book you will never read'

(b) Left Dislocation:

?Det är möjligt att den här boken, den kommer du inte att förstå.

'It is possible that this book, you will not understand it'

(c) Directional Adverb Preposing:

*Jag förnekar att nedför Kalles tänder rann snuset.

'I deny that down Kalle's teeth ran the snuff'

(d) Prepositional Phrase Substitution:

?Det är möjligt att på väggen hänger ett porträtt av Mao.

'It is possible that on the wall hangs a portrait of Mao'

(e) Negative Constituent Preposing:

*Jag tvivlar på att knappast har du sett en sådan röra förut.

'I doubt that hardly have you seen such a mess before'

(f) Adverb Placement:

Det är otroligt att presidenten { alltid har } haft en kinesisk
älskarinna. { *har alltid }

'It is unbelievable that the president has always had a Chinese mistress'

In these C class complements, it is harder to apply root transformations than it is in the A and B class complements, but it would be wrong to say that it is always impossible. The sentences with question marks above, would all be starred if the negative prefix o- (un-/im-) were added to the C class predicates in these sentences.

In order to make the picture look more consistent, the predicates är troligt ('is likely') and är möjligt ('is possible') could be included in class B instead, while the negative counterparts of these two predicates are kept in class C. This means that class C would consist only of negative predicates. Note that the two verbs tvivla ('doubt') and förneka ('deny') include a negative element. This is seen from the fact that the negative polarity item nånsin ('ever') can occur in the complements of these verbs. The English translations show that the same argument goes through for English, since ever is a negative polarity item in English.

(4) (a) Lisa tvivlar på att Sluggo nånsin varit kär.

'Lisa doubts that Sluggo has ever been in love'

(b) Sluggo förnekade att han nånsin varit kär

'Sluggo denied that he had ever been in love'

It should also be noted that the predicates in class B are resistant to root transformations in their complements, when they are negated. According to my intuitions, all the sentences in (2) become ungrammatical if a negation is introduced in the matrix clause of these sentences. This argues for a regrouping of the predicates under consideration in such a way that the negative counterparts of the predicates in class B are included in the class C predicates. As far as I can see, this regrouping would not be impossible from a semantic point of view.

Next, we turn to class D predicates.

(5) (a) Topicalization:

*Jag ångrar att den här boken läste jag.

'I regret that this book I read'

(b) Left Dislocation:

?Det är intressant att den här boken, den läste Kalle på tre timmar.

'It is interesting that this book, Kalle read it in three hours'

(c) Directional Adverb Preposing:

Jag var överraskad av att bort från bilen sprang Sluggo.

'I was surprised that away from the car ran Sluggo'

(d) Prepositional Phrase Substitution:

*Jag avskyr att på väggen hänger ett porträtt av Mao.

'I resent that on the wall hangs a portrait of Mao'

(e) Negative Constituent Preposing:

*Det är konstigt att aldrig har hon sett en sådan röra

'It is strange that never has she seen such a mess'

(f) Adverbial Placement:

Jag ångrar att jag { inte har } läst lapska.
 {*har inte }

'I regret that I have not studied Lappish'

In general it appears to be impossible to apply root transformations in the complements of class D predicates.

Finally, we turn to class E predicates.

(6) (a) Topicalization:

Hon insåg att den här boken borde hon läsa.

'She realized that this book she ought to read'

(b) Left Dislocation:

Vi upptäckte att den här boken, den hade vi inte läst.

'We discovered that this book, we had not read it'

(c) Directional Adverb Preposing:

?Vi såg att bort från bilen sprang Sluggo

'We saw that away from the car ran Sluggo'

(d) Prepositional Phrase Substitution:

Alla vet att på väggen hänger ett porträtt av Mao.

'Everyone knows that on the wall hangs a portrait of Mao'

(e) Negative Constituent Preposing:

Vi insåg att aldrig skulle vi få uppleva en sådan seger igen.

'We realized that never would we experience such a victory again'

(f) Adverbial Placement:

Jag vet att Pelle { inte har } varit här
 { har inte }

'I know that Pelle has not been here'

These "semi-factive" predicates do allow root transformations in their complements.

The five different classes of predicates that have been investigated here fall into two groups. The first group includes A, B and E predicates; the complements of these predicates allow root transformations. The reason for this is that these complements may be asserted. The other group includes C and D predicates; the complements of these predicates may not be asserted and root transformations are not applicable in them. This is the same result that Hooper and Thompson report for English, but the distinction between the two groups becomes much more clear, I think, with the revision proposed here (on pp. 32-33).

From (1f), (2f), (3f), (5f) and (6f), it can be seen that Adverb Placement behaves like the other root transformations in that the post-posing of sentential adverbs around the finite verb only occurs in complements to A, B and E class predicates. This means that Adverb Placement should be regarded as a root transformation even though it does not have the emphasizing function of the other root transformations.

The main thesis in Hooper and Thompson (1973) is that asserted clauses allow root transformations and that non-asserted clauses do not. This claim differs from the one I made in the preceding section in that it does not allow root transformations in non-asserted main clauses. This is an empirical difference which may seem easy to test. However, it is not so easily tested because it is hard to agree on the grammaticality of some of the sentences.

The crucial cases are, of course, presupposed or non-asserted main clauses. Consider the following sentences.

(7) Robin studerar lingvistik därför att han alltid varit intresserad av språk.

'Robin studies linguistics because he has always been interested in languages'

(8) Robin studerar inte lingvistik därför att han alltid varit intresserad av språk.

'Robin does not study linguistics because he has always been interested in languages'

(8) means that Robin studies linguistics but not because he has always been interested in languages but for some other reason. In this case, it is evident that both (7) and (8) logically imply that Robin studies linguistics. This means that the main clause of the sentences above is presupposed. The definition of the concept 'presupposition' that is used here is that given in Keenan (1971), which is used and cited in Hooper and Thompson (1973), as well. (Note that sentences of type (8) were used also in section I.4.)

'A sentence S logically presupposes a sentence S' just in case S logically implies S' and the negation of S, $\sim S$, also logically implies S'. In other words, the truth

of S' is a necessary condition on the truth or falsity of S.'

Keenan (1971:45)

According to Hooper and Thompson's thesis, root transformations should not apply in the main clause of the sentences above. But look at the placement of the negation in (8). The negation follows the finite verb studerar ('studies'), which is the normal main clause word order. The negation in (8) cannot possibly precede the finite verb, which is seen from (9).

(9) *Robin inte studerar lingvistik därför att han alltid varit intresserad av språk.

This is not only a fact about Adverb Placement but other root transformations are also applicable in a presupposed main clause.

(10) (a) Topicalization:

Lingvistik studerar inte Robin därför att han alltid varit intresserad av språk.

'Linguistics Robin doesn't study because he has always been interested in languages'

(b) Left Dislocation:

Lingvistik, det studerar inte Robin därför att han alltid varit intresserad av språk.

'Linguistics, Robin doesn't study it because he has always been interested in languages'

(c) Directional Adverb Preposing:

In i skogen sprang inte Sluggo därför att han var rädd för polisen.
'Into the woods didn't Sluggo run because he was afraid of the police'

(d) Prepositional Phrase Substitution:

På väggen hänger inte ett porträtt av Mao därför att partiet vill det.

'On the wall does not hang a portrait of Mao because the party wants it'

(e) Negative Constituent Preposing:

Aldrig har någon studerat lingvistik därför att Chomsky är söt.
'Never has anyone studied linguistics because Chomsky is cute'

All the above sentences are grammatical in Swedish. In each case, the main clause is presupposed. The negations in the sentences above can and should be read in such a way that they negate the causal relationship between the two clauses and not the main clause.

I do not know if the English translations of the sentences in (10) are grammatical on the intended reading. If they are not, it follows that S-initial fronting rules have a wider applicability in Swedish than in English. Hooper and Thompson give the following three sentences to show that root transformations are inapplicable in presupposed main clauses in English (Hooper and Thompson 1973: 493). I do not know if these sentences represent the facts of English properly or if they are exceptional in some way.

(11) (a) *In came Jerry because it was raining.

(b) *That house, there are ghosts in it because they like it there.

(c) *Sitting in the corner was Tom because he'd hidden grandma's teeth.

Hooper and Thompson also take the impossibility of root transformations in direct questions as evidence for their hypothesis. Indeed, it seems to be impossible to apply root transformations in questions and questions are of course not asserted clauses.

(12) (a) Into the woods ran Sluggo

(b) *Did into the woods run Sluggo?

Also in Swedish, it is impossible to apply such a root transformation in a direct question. Corresponding to (12b), we have sentence (13) in Swedish, which is just as clearly ungrammatical.

(13) *Sprang in i skogen Sluggo?

Fronting of the finite verb is, however, not the only way to form a question in Swedish. Another way is to insert the morpheme väl in sentence adverbial position. A question cannot be an assertion and therefore root transformations should be inapplicable in väl-questions according to Hooper and Thompson's hypothesis. But as is seen from the following sentences, root transformations are in fact applicable in väl-questions.

- (14) (a) The Times läser han väl inte så mycket nu för tiden?
'The Times he does not read so much these days, does he?'
(b) Den här boken, den har du väl läst?
'This book, you have read it, haven't you?'
(c) På väggen hängde väl ett porträtt av Mao?
'On the wall hung a portrait of Mao, didn't there?'
(c) Aldrig får vi väl uppleva en sådan seger igen?
'Never will we experience such a victory again, will we?'

In the translations of the Swedish väl-question, I have used English tag questions, since the function of väl corresponds fairly well to that of the English tag. A positive väl-question waits for an affirmative answer and a negative väl-question waits for a negative answer. Nevertheless, väl-questions are questions. It is probably too strong a statement to say that the sentences of (14) are without any features of assertions. The correct statement is probably to say that these väl-questions contain both affirmative and interrogative features. The important point is that the semantic property of 'being a question' does not exclude the application of root transformations.

The same kind of argument can be given for the type of question that is made by imposing the rising question intonation on an ordinary declarative sentence. (15) is clearly grammatical even if it is read with question intonation.

- (15) Lingvistik har du studerat?
'Linguistics you have studied?'

Since I am arguing against the hypothesis of Hooper and Thompson I have to find some other explanation for the "fact" that root

transformations are not applicable in the ordinary type of direct questions.

First it can be shown that it is not entirely correct to say that root transformations are inapplicable in questions. The negation and other sentence adverbials are always placed after the finite verb in a question. This is rather evident, since the finite verb is in sentence initial position in a question. Anyhow this is the main clause word order. More interesting is that Left Dislocation is allowed in direct questions and this transformation is recognized as a root transformation by Hooper and Thompson, as well as by Emonds (1970).

(11) (a) Aspects, har du läst den?

'Aspects, have you read it?'

(b) Utförsåkning, har du provat på det?

'Down-hill skiing, have you tried it?'

These two Swedish sentences are grammatical and, as far as I can see, the corresponding English sentences are as well. Now, the obvious question to be asked is: Why is Left Dislocation applicable in direct questions but not other root transformations like Topic-alization, Directional Adverb Preposing, Prepositional Phrase Substitution and Negative Adverb Preposing? The answer is, I think, that all these root transformations that are inapplicable in direct questions involve a fronting of some element into sentence initial position and so does Question Formation, where the verb is fronted. In general, only one rule that fronts an element into S-initial position can be applied in each sentence. This is shown by the following examples.

(17) (a) *In i skogen aldrig sprang Sluggo.

'Into the woods never ran Sluggo'

(b) *Aldrig Peter har jag sett.

'Never Peter have I seen'

The explanation given here is syntactic. It says that only one fronting rule into S-initial position is allowed in each sentence. This explanation also accounts for the fact that the two root transformations Left Dislocation and Adverb Placement apply in

questions. These two transformations do not front an element into S-initial position. In the case of Adverb Placement, this is obvious and in the case of Left Dislocation, there is good evidence that the fronted constituent is Chomsky-adjoined to the left of the sentence.

One syntactic argument from Swedish can be given for the claim that Left Dislocation represents a movement out of the clause under discussion. In Swedish, Subject-Verb Inversion occurs whenever some constituent is moved into S-initial position. Topicalization, Directional Adverb Fronting, Prepositional Phrase Substitution and Negative Adverb Preposing all trigger Subject-Verb Inversion as can be seen from the examples given in (1), (2), (6) and (10). Compare Topicalization and Left Dislocation in the following sentences.

(18) (a) Mina studenter klarar jag inte av längre.

'My students, I can't handle any more'

(b) *Mina studenter jag klarar inte av längre.

(19) (a) Mina studenter, jag klarar inte av dem längre.

'My students, I can't handle them any more'

(b) *Mina studenter klarar jag inte av dem längre.

Furthermore, there is a clear pause after a dislocated element but not after a topicalized one.

In this context, it can be noted that Langacker (1974) regards Topicalization (or Y-Movement, as he calls it) as representing a movement out of the clause, i.e. the fronted constituent is Chomsky-adjoined to the S-node. He says: 'I will adopt the Chomsky-adjunction alternative for the sake of discussion, without insisting on its correctness.' (Langacker 1974: 642). Whatever the facts of English may be, I maintain that it is rather obvious that Topicalization represents an S-initial fronting in Swedish, while Left Dislocation does not.

Another argument to the effect that root-transformations are not generally excluded from questions is given by languages which do not have to front the verb or a question-word in interrogatives.

Russian is such a language.

From the declarative sentence (20), the questions of (21) can be formed.⁶

(20) Ty čital gazetū.

'You have read the newspaper'

(21) (a) Ty čital gazetū?

'You read the newspaper?'

(b) Gazetū ty čital?

'The newspaper you read?'

(c) Čital li ty gazetū?

'Read Q you the newspaper?'

(li is a question particle, which I have indicated by Q in the translation.)

(21b) shows a Topicalization of the object NP in a question. The force of this argument may be diminished by the fact that word-order in Russian is far freer than in either English or Swedish. Anyway, we can certainly conclude that there is no universal ban on root-transformations in questions.

However, Russian behaves rather like English and Swedish with respect to the applicability of root-transformations in subordinate clauses. Chvany (1973) gives a good presentation of how root-transformations are used in Russian.

This concludes my presentation of and argumentation against Hooper and Thompson's hypothesis that root transformations are applicable only in asserted clauses. Against this, I have argued that root transformations are applicable in main clauses and asserted subordinate clauses.⁷

I.6 Syntactic and semantic subordination

It may seem like a contradiction to speak about asserted sub-clauses as was done in the preceding section. Subordination is often thought of as a way to give linguistic material a less im-

portant role in the communication. Someone might say that the important parts of a message are communicated through the main clause (there we do the stating, asking and commanding) and that the less important parts of the message are given in the subordinate clauses (we use them to refer to ideas, beliefs and facts).

As we have seen in the preceding section, there are several counter-examples to the view sketched above. A main clause can play a parenthetical role within the sentence while the important information is given in the subordinate clause. This was also recognized by a so-called traditional grammarian like Jespersen in his Philosophy of Grammar (1968 : 105)

'The definition of the term "clause" necessitates some remarks on the usual terminology, according to which the clauses here mentioned would be termed 'dependent' or 'subordinate' clauses as opposed to 'the principal clause' (or 'principal position') corresponding terms are used in other languages, e.g. G. 'nebensatz, Hauptsatz.' But it is not at all necessary to have a special term for what is usually called a principal clause. It should first be remarked that the principal idea is not always expressed in the 'principal clause', for instance not in "This was because he was ill". The idea which is expressed in the 'principal clause' in "It is true that he is very learned", may be rendered by a simple adverb in "Certainly he is very learned" - does that change his being learned from a subordinate to a principal idea?'

I do not think any linguist today wants to contradict Jespersen's statement. Nevertheless, it is true that subordinate clauses often play a secondary role in a speech act. An example will give more substance to this statement.

(1) The tourist went to the place where Jesus is supposed to have been born.

This sentence asserts that the tourist went to a certain place. The sentence does not state, assert or claim that Jesus is supposed to have been born. The sentence Jesus is supposed to have been born is only used to describe a certain place. Although this sentence is a declarative sentence, it does not function as a statement in (1). A clause that does not make a statement, ask a question or give a command can be said to be semantically subordinate. This will later be used as a definition of the concept 'semantically subordinate

clause'. The sentence Jesus is supposed to have been born is together with where also a syntactically subordinate clause according to any of the five definitions mentioned in section I.2. This means that there is a clause in (1) that is both syntactically and semantically subordinate.

The asserted sub-clauses in sections I.4. and I.5. are examples of syntactically subordinate clauses but semantically main clauses.

Furthermore there are syntactically main but semantically subordinate clauses. Examples of this type of clauses are presupposed main clauses as in (2).

(2) Robin doesn't study linguistics because he has always been interested in languages (but because he wants to impress his girlfriend).

The main clause in (2) is semantically subordinate because it does not state or assert that Robin does not study linguistics. Neither does it state or assert that Robin does study linguistics - this is merely implied.

Speaking about presupposed main clauses as I do here (and as I did in the previous sections or as Hooper and Thompson do in their article (1973)) may be inappropriate because it rests on certain assumptions about what a main clause is. It rests on the assumption that a main clause can be defined as what remains when the sub-clauses are taken away. According to this definition, the main clause of (2) is (3).

(3) Robin doesn't study linguistics.

However, there is no S-node that dominates just that material in the usual structural representation of (2). Furthermore, it is also somewhat misleading to call (3) a presupposed main clause because the negation is not included in the presupposed part of the clause. From a logical point of view, the most natural choice for a main clause in (2) is (4).

(4) not (S_1 därför att S_2)

Of course, structures like (4) could be introduced in the underlying syntactic structure. Whether this should be done or how this should be done will not be discussed here.

In the following, I will continue to talk about presupposed main clauses even though the status of this concept is unclear. I use the term in the same way as Hooper and Thompson (1973). The term has a certain heuristic value and it makes the system of clause-types symmetric (see below). Let me point out one place where the concept seems to be relevant for syntactic analysis. If there is a difference in grammaticality between the Swedish and English sentences in (10) of the preceding section as Hooper and Thompson's hypothesis implies there is, how is this difference to be described if not in terms of presupposed main clauses?

Finally, there are clauses which are both syntactic and semantic main clauses. This class includes all sentences that express statements, questions or commands.

- (5) (a) Ingemar is skiing.
- (b) Does Chomsky have a sister?
- (c) Finish your article!

These four types of clauses are represented in the following schema.

(6)

	SYN.MAIN	SYN.SUB.
SEM.MAIN	semantically main syntactically main	semantically main syntactically subordinate
SEM.SUB.	semantically subordinate syntactically main	semantically subordinate syntactically subordinate

In chapter II, I will show that these four types of clauses are useful in syntactic analysis. Some syntactic phenomena are distributed according to clause-type. To a certain extent these clause-types have been established to explain syntactic facts, such as

the applicability of root transformations. The study of the syntactic differentiation of the clause-types will be continued below.

In the next section, I will discuss definitions of the concept 'syntactically subordinate clause' and for the remainder of this section, I will discuss the difference between semantically main and semantically subordinate clauses.

It was suggested above that a clause that does not make a statement, question or command should be called semantically subordinate. This preliminary definition uses concepts from the theory of speech acts or pragmatics, if that term is preferred.

The chief insight of the theory of speech acts is that we do things with language. We use our language to make statements, ask questions and give commands and we also express promises, warnings, threats, wishes and approvals. The first three types of speech acts have their own syntactic forms, even though there are cross-classifications - a syntactic question may express a command, for example. However, it is much harder to distinguish promises, warnings, threats, wishes and approvals on a syntactic basis. In general, these speech acts have the same syntactic form as declarative sentences, but there might be some differences in intonation. Until more is known about these types of speech acts, I will restrict myself to statements, questions and commands. A semantic main clause might then be defined as follows.

A SEMANTICALLY MAIN CLAUSE IS A CLAUSE THAT MAKES A STATEMENT,
ASKS A QUESTION OR GIVES A COMMAND.

It is possible that this definition should include things like expressing warnings and promises. Or the definition should perhaps be reformulated to say that a semantically main clause is a clause that expresses one of the main types of speech acts. Then it would be up to other studies to decide what the extension of the expression 'main type of speech act' is.

A SEMANTICALLY SUBORDINATE CLAUSE IS A CLAUSE THAT DOES
NOT MAKE A STATEMENT, ASK A QUESTION OR GIVE A COMMAND.

Alternatively, we could say that a semantically subordinate clause is a clause that does not perform one of the main types of speech acts. What a semantically subordinate clause does is rather denote facts, beliefs, ideas, places, times, etc.

It could be argued that we should include a phrase like by the speaker in both of these definitions. A semantically main clause would then be one where the speaker makes a statement, asks a question or gives a command and a semantically subordinate clause would be one where the speaker does none of these things. I do not think it is necessary to make this addition in the definitions but the distinction between clauses that are semantically main because of what the speaker does and those that are semantically main because of what someone else has done (reported speech) should be kept in mind (compare the discussion of these issues on p 22).

The only alternative I can see to these two definitions is to define the difference between semantically main and subordinate clauses in terms of presuppositions. This alternative definition runs as follows:

A SEMANTICALLY MAIN CLAUSE IS A NON-PRESUPPOSED CLAUSE.

A SEMANTICALLY SUBORDINATE CLAUSE IS A PRESUPPOSED CLAUSE.

I am sceptical about this definition because there seem to be syntactically subordinate clauses which can hardly be said to be presupposed, even though they appear to be semantically subordinate. Consider the problem of deciding whether the sub-clause in (7) is presupposed.

(7) The girls left because they saw Fred.

I guess everyone agrees that this sentence implies that the girls saw Fred, but is the sub-clause presupposed? According to Keenan's definition of presupposition, we should check this by negating the sentence.

(8) The girls didn't leave because they saw Fred.

This sentence is ambiguous. The ambiguity depends on the scope of

the negation. The ambiguity of (8) is shown by the following elaborations of the sentence.

- (9) (a) The girls didn't leave because they saw Fred. They were about to leave but when they saw him they decided to stay.
(b) The girls didn't leave because they saw Fred. They left because there was no wine left.

In (9a), the main clause is negated and in (9b), the causal relation between the two clauses is negated. On the (b)-reading, it is clear that the main clause is presupposed. Both (7) and (9b) imply that the girls left. In a semi-formal way the difference between the two readings can be described as follows.

- (9) (a') not p because q
(b') not (p because q)

As was said, p is presupposed on the (b)-reading but not on the (a)-reading. What about the subordinate clause, q? Is it presupposed on both readings, on neither reading or on one reading and in that case, which?

The negation test does not give us an answer to this question. (9a) implies that the girls saw Fred but in this case, it may be said that the negation is not a negation of (7), but only a negation of the main clause in that sentence. In (9b), however, we find a negation of sentence (7) but here the sub-clause is not presupposed as the following elaboration of the sentence shows.

- (10) The girls didn't leave because they saw Fred. They left long before that and I guess they left because there was no more wine around.

The reasoning in (10) sounds both semantically consistent and syntactically well-formed. Since (10) says that the girls left before Fred came, they cannot possibly have seen him. This means that q is not presupposed in this case. Still, we want to say that the subordinate clause of the sentence is semantically subordinate. It obviously does not make a statement or perform any of the other types of speech acts.

The argument here shows that not all semantically subordinate clauses are presupposed. I think it is safe to say that the class of presupposed clauses is a subset of the class of semantically subordinate clauses. Therefore, it has to be concluded that the first definition of the concept 'semantically subordinate clause' that was given is the better one, which does not mean that it is the best one ever to be found. Until some better definitions are proposed, I will stick to the following two definitions, repeated here.

A SEMANTICALLY MAIN CLAUSE IS A CLAUSE THAT MAKES A STATEMENT, ASKS A QUESTION OR GIVES A COMMAND.

A SEMANTICALLY SUBORDINATE CLAUSE IS A CLAUSE THAT DOES NOT MAKE A STATEMENT, ASK A QUESTION OR GIVE A COMMAND.

I.7. A definition of syntactically subordinate clauses.

In this section, I will argue for one of the five definitions of the concept 'syntactically subordinate clause' that were given in section I.2.

I will not discuss definition A once again. A is so vague that it is hard to see what is meant by it. Moreover, the counter-examples to A that were given in section I.2. are sufficient to exclude it from further consideration.

For convenience the five definitions are repeated here.

- A. A subordinate clause is a clause that cannot be an utterance by itself.
- B. A subordinate clause is a clause that functions as a part of another clause or sentence.
- C. A subordinate clause is a clause (S-node) which is not a root.
- D. A subordinate clause is a clause introduced by a subordinating conjunction.

E. A subordinate clause is a clause introduced by a complementizer.

Let us turn our interest to B and C first. Interestingly enough these two definitions have the same difficulties connected with them. First, B and C make it impossible to regard the sentences in (1) as subordinate clauses (when I use the term 'subordinate clause' in this section, it should be understood to denote syntactically subordinate clauses).

(1) (a) Att du aldrig kan lära dig knipa käft.

'That you never can learn to keep quiet'

('It is annoying that you can never learn to keep quiet')

(b) Om han bara ville komma.

'If he only would come'

Advocates of definitions B and C have to say that these sentences are derived from complex sentences with deleted matrix clauses. Such an endeavor is in principle possible but it leads to serious difficulties. Consider (1b). This sentence means something like 'I wish that he would come'. If a deep structure like that is proposed for (1b), we have to explain a rather mysterious complementizer substitution (om ('if') is substituted for att ('that')). Another possible deep structure would be one with a conditional clause like (2).

(2) Om han ville komma så skulle jag bli glad.

'If he would come then I would be glad'

In this case, the complementizer is the correct one but, on the other hand, (2) does not really capture the meaning of (1b).

Furthermore, if a source like (2) is proposed for (1b), there is an infinite set of possibilities for what the main clause of the sentence should be. It is questionable whether such non-recoverable deletions should be allowed. In addition, the morpheme bara ('only') in (1b) has disappeared and this morpheme has another meaning when it occurs in conditionals. In conditionals, bara has the meaning of 'only' but in utterances like (1b), this morpheme is more or less without meaning (I will return to this use of bara in section II.4.). There is also a difference in intonation between utterances

like (1b) and ordinary conditionals. Thus, if a source like (2) is proposed for (1b), it would be rather hard to explain the peculiarities of utterances like (1b).

A second problem for B and C is to assign different constituent structure to sentence pairs like (4)-(5) of section I.2. above in a non ad hoc way. In that sentence pair we had one sentence with the coordinating conjunction ty and one with the subordinating conjunction därför att. Yet the two sentences appear to be identical in function and meaning.

A third problem for these two definitions is to assign different constituent structure to sentence pairs like the following.

- (3) (a) Nedsmutsningen blir framtidens största problem,
företspådde han.
'Pollution will be the greatest problem of the future,
he predicted'
- (b) Att nedsmutsningen blir framtidens största problem, företspådde han.
'That pollution will be the greatest problem of the future,
he predicted'
- (4) (a) Tvätta alltid händerna före en måltid, kommenderade han sina barn.
'Always wash your hands before a meal, he commanded his children'
- (b) Att de alltid skulle tvätta händerna före en måltid, kommenderade han sina barn.
'That they always should wash their hands before a meal, he commanded his children'
- (5) (a) Har han läst Aspects, blir jag imponerad.
'Has he read Aspects, I will be impressed'
- (b) Om han har läst Aspects, blir jag imponerad.
'If he has read Aspects, I will be impressed'

In some way, it has to be explained that the first clause of the (a)-sentences above is a syntactically main clause and that the corresponding first clause of the (b)-sentences is a syntactically

subordinate clause. It is not at all clear how this is to be explained if one of the two definitions B and C is adopted. The first clause in the sentence pairs above has the same function and meaning, whether it is a main or a subordinate clause.

The three problems for B and C mentioned above constitute serious criticism of these definitions and they must be regarded as inappropriate until these problems are solved. It is not surprising that B and C have the same problems connected with them. The parts of a sentence that were recognized in the traditional grammar correspond to structural configurations in a transformational grammar.

Let us now turn to D and E. These two definitions are similar in that they focus on the introductory word/words of the subordinate clause. For a couple of reasons, however, I believe that E is superior to D. First of all, if E is adopted rather than D, we avoid cross-classifications of a number of morphemes as both prepositions and conjunctions (or parts of a conjunction, to be more precise). Several subordinating conjunctions in Swedish have the form given in (6).

(6)	PREP.	DET.	PARTICLE	
	efter	det	att	after it that 'after'
	före	det	att	before it that 'before'
	genom	det	att	through it that 'by'
	på	det	att	on it that 'so that'
	under	det	att	under it that 'while'

Secondly, by adopting E, the parallel between (7a) and (7b) is brought out explicitly. In (7a), we have a preposition followed by an ordinary NP and in (7b), we have a preposition followed by an NP which consists of an S introduced by a subordinating particle (a complementizer).

(7) (a) Efter sin examen fick han ett jobb i Tromsö.

'After his exam he got a job in Tromsö'

(b) Efter det att han avslutat sin examen fick han ett jobb i Tromsö.

'After he had finished his exam he got a job in Tromsö'

Thirdly, if E is adopted, we can make significant generalizations about subordination. It can be predicted which complementizer will occur in a certain type of complement, as will be shown in chapter IV. If we do not recognize complementizers as a separate category, these predictions would seem rather mysterious.

Fourthly, it seems intuitively more satisfying to say that a certain clause is subordinate because it is introduced by a member of the very small set of complementizers than to say that it is subordinate because it is introduced by a member of the much larger set of subordinating conjunctions.

These arguments lead me to adopt E as a definition of syntactically subordinate clauses: A SYNTACTICALLY SUBORDINATE CLAUSE IS A CLAUSE THAT IS INTRODUCED BY A COMPLEMENTIZER.

This definition can handle the problems that B and C encountered. If we return to sentences (3), (4) and (5), we see that these sentences differ in that the (b)-sentences are introduced by a complementizer but not the (a)-sentences. The differences in word order found in the sentence pairs are only automatic consequences of the fact that we have main clauses in the (a)-sentences and sub-clauses in the (b)-sentences, i.e. the word order differences are automatic consequences of the presence of a complementizer in one set of the sentences (the (b)-sentences). The (a)-sentences should probably be related to the (b)-sentences by a rule of COMP-node Deletion - a rule which changes the syntactic status of a clause from a sub-clause to a main clause, in accordance with definition E.

E also handles the difference between causal clauses introduced by därför att and ty. After därför att, a sub-clause follows because of the complementizer att but no sub-clause follows ty, since ty is a coordinating conjunction. Furthermore, E predicts that the sentences in (1) are sub-clauses, which seems to be the correct prediction.

In connection with the sentences in (1), we can say that we can deprive declarative sentences of their status as statements by putting a complementizer in front of them, (for the moment we disregard

asserted sub-clauses). A sentence like (8) states/asserts that you can never learn to keep quiet. This is not stated by any of the sentences in (9).

(8) Du kan aldrig lära dig knipa käft.

'You can never learn to keep quiet'

(9) (a) Att du aldrig kan lära dig knipa käft.

'That you can never learn to keep quiet'

('It is annoying that you can never learn to keep quiet')

(b) Om du bara kunde lära dig knipa käft.

'If you only could learn to keep quiet'

The same effect can never be reached by assigning sub-clause word order to (8).

(10) *Du aldrig kan lära dig knipa käft.

If (10) was uttered, we would understand it to make the same statement as (8) and besides that, we would draw the conclusion that the speaker was a non-native speaker of Swedish.

The proposed definition E could perhaps also function as a universal definition of the concept 'syntactically subordinate clause'. However, much more need to be known about subordination in different languages before this issue can be settled. Some general remarks concerning complementizers can be made, however. In SVO and VSO languages, the complementizers occur in S-initial position and in SOV languages, they typically occur S-finally. Another common strategy is to mark the complementizer in the morphology of the verb but this type of subordination should perhaps not be treated as instances of complementizer subordination. These clauses should perhaps not be treated as true subordinate clauses. With these remarks, I leave these very important questions for the moment, but I will return to them below.

Which morphemes should be considered complementizers in Swedish, i.e. which morphemes are generated under the COMP-node in Swedish? The obvious members of this class are att ('that'), som ('that', in relative clauses) and om/huruvida ('if/whether'). Another strong

candidate is än ('than'). This class will be further discussed in subsequent chapters.

In this section, it must also be asked how well Swedish fits into the picture presented here. First it has to be recognized that many sub-clauses lack a complementizer on the surface. There is optional deletion of att and som but this fact should not worry us, I think. More serious problems are created by subordinating conjunctions like fastän ('although'), medan ('while') and då ('then/when'). It seems that we have to posit an obligatory complementizer deletion after these morphemes. In the majority of cases, however, definition E works fine.

Ulf Teleman counted the sub-clauses in his investigation of spoken Swedish and found that 87 % of the sub-clauses were such that they either had att and som in initial position or did not have an att or a som, but could have had it. The om-sentences covered 9 % of the corpus. This means that 96 % of the sub-clauses in Teleman's data fit into the schema given here (Teleman 1967). Furthermore, some of the sentences in the corpus certainly had sub-clauses with än, which will be discussed in chapter III. These figures are not given to show that definition E is correct but only to show that there is some empirical content in it.

CHAPTER II

CLAUSE-TYPES AND DOMAINS OF GRAMMATICAL PHENOMENA

II.0. Introduction

In this chapter, the behavior of different grammatical phenomena with respect to main and subordinate clauses will be further investigated. The main part of the investigation is in the form of a test where the ability of some grammatical phenomena to occur in different types of sentences is examined. The rest of the chapter is concerned with describing and explaining the results of the test. Before we go on with this, let me make a somewhat far-fetched analogy.

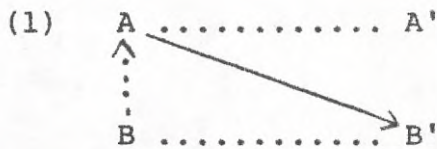
A screw-driver is usually thought of as a tool for driving in screws. As such, we are interested in how broad, long and thick it is. However, a screw-driver can also be used for other things, stabbing people, for example. In this case, we are mostly interested in how sharp it is.

More or less everything that we have around us in our daily life has a purpose of some kind but all these things can always be used to do something else, as well.

Now, a subordinate clause is generally used for expressing ideas, thoughts, facts and the like. However, it may also be used for making a statement. In this use, we may be interested in emphasizing some particular constituent by fronting it, which is something that is not done when the sub-clause is used in its ordinary function. I am not sure how good the analogy with the screw-driver is but the point is that a syntactic structure that is used in some exceptional way receives some properties that it normally does not have.

Suppose that the two syntactic structures A and B usually have the two functions A' and B', respectively. When A is used to perform function B', it may receive some syntactic properties that are ordinarily attributed to B. The following figure indicates this. The dot-

ted line between B and A indicates how a syntactic property can be borrowed from B to A in this case.



One example of this is the asserted sub-clause. This is a sub-clause that is used to perform the function of main clauses. In this use the sub-clause may receive main clause properties like allowing S-initial fronting transformations and allowing certain morphemes that are usually only used in main clauses. Similarly, we may expect a non-asserted main clause to lose some of its main clause properties. Things like these will be discussed in this chapter.

Some other grammatical phenomena that fit schema (1) can be pointed out. Consider sentence (2), where the participle can be both singular and plural.

(2) (a) Hela laget har blivit anställt vid Volvo.

(b) Hela laget har blivit anställda vid Volvo.

'The whole team has (have) been employed at Volvo'

The prescriptivist only recognizes (2a) as grammatical but the interesting thing is that also (2b) is used by people. The singular noun phrase in subject position governs a plural inflection of the participle in (2b) because the NP refers to a group of individuals.

Similarly, when a question is used to give a command, it receives the intonation of imperatives and when a declarative sentence is used to ask a question, it receives question intonation.

When an adjective is the head of an NP, it may show properties that usually only nouns have. In this use, the adjective may be followed by a genitive -s, for example.

(3) De rödas uppror var kraftfullt.

'The reds' revolt was powerful'

'The revolt of the reds was powerful'

These examples have been included to show that the inclusion of main clause features in subordinate clauses is by no means without parallels in other areas of the language.

II.1. Clause-types

In chapter I, four clause-types have been discussed and defined. The four definitions were:

A semantically main clause is a clause that makes a statement, asks a question or gives a command.

A semantically subordinate clause is a clause that does not make a statement, ask a question or give a command.

A syntactically main clause is a clause that is not introduced by a complementizer.

A syntactically subordinate clause is a clause that is introduced by a complementizer.

The four clause-types that these definitions distinguish are represented graphically in (1).

(1) SYN.MAIN SYN.SUB.

SEM.MAIN	CT1	CT3
SEM.SUB.	CT2	CT4

As the figure indicates, I will use the following terminology: CT1 refers to the set of clauses that are both semantically and syntactically main clauses.

CT2 refers to the set of clauses that are syntactically main but semantically subordinate.

CT3 refers to the set of clauses that are semantically main but syntactically subordinate.

CT4 refers to the set of clauses that are both semantically and syntactically subordinate.

In this section, I will try to decide which types of sentences belong to which clause-type. These decisions are often hard to make. There are two things that complicate the decisions.

- i. If a clause is without an introductory complementizer, it can either be regarded as a main clause or it can be analyzed as a sub-clause with a deleted complementizer.
- ii. The distinction between semantically main and semantically subordinate clauses is made in semantic/pragmatic terms that refer to our intuitions which may be weak in some of the cases.

Considering these two facts, it may be regarded as impossible to make a coherent classification of different clauses into the four CT's discussed above. Nevertheless, I will try to make such a classification and this classification will be tested for adequacy in the next section, where different sentence-types and clause-types are investigated to see if they allow or block certain grammatical phenomena.

Below I will give some examples of sentence-types that fall under each of the four CT's. After each example, a circle with a number in it is found. These numbers will be used in the next section to refer to the sentence-types they represent.

CT1

The obvious members of this class are the simple declarative, interrogative and imperative sentences.

(2) (a) Vi köpte bilen.

'We bought the car'

1

(b) Har du köpt en ny bil?

'Have you bought a new car?'

2

(c) Vem köpte bilen?

'Who bought the car?'

3

(d) Köp bilen!

'Buy the car!'

4

The clauses that express a causal relationship and are introduced

by the coordinating conjunction ty ('for', 'because') are also included in CT1. The underlined part of (3) gives an example.

- (3) Lasse gick till Ullevi ty han ville se Blå-vitt vinna. (5)
'Lasse went to Ullevi for he wanted to see Blå-vitt win'

Clauses connected by other coordinating conjunctions should, of course, also be regarded as members of CT1. The ty-clause is perhaps the most interesting example because it marks a relation that is also marked by subordinating conjunctions.

Other candidates for a membership in CT1 are main clauses that occur in the position where sub-clauses normally appear. In the following sentences it appears as if a main clause had been substituted for a sub-clause.

- (4) (a) Jag tror Blå-vitt vinner serien. (6)
'I believe Blå-vitt will win the league'
(b) Jag undrar kommer du hit ikväll? (7)
'I wonder will you come here tonight?'

In (4b), it is obvious that the sentence carries the same force as an ordinary question. I am much more sceptical about (4a). Should it be analyzed as a main clause (CT1) or is it a question of a low-level rule of complementizer deletion (CT3)? I will return to this question later.

CT2

Examples of this clause-type are hard to find. The obvious members of CT2 are presupposed main clauses like those in (5), on the reading where the relation between the two clauses is negated.

- (5) (a) Robin läser inte lingvistik därför att Chomsky är söt. (8)
'Robin does not study linguistics because Chomsky is cute'
(b) Erod slogs inte så att han förlorar jobbet. (9)
'Erod didn't fight so (that) he will lose his job'

A similar example is (6), where the causal relationship between the two clauses is questioned. The main clause is formed like a main clause question but does not carry the force of such a question. Hence, the main clause of (6) is a member of CT2.

- (6) Övergav Lisa Sluggo därför att han studerar lingvistik?
'Did Lisa leave Sluggo because he studies linguistics?' (10)

Another member of CT2 is the conditional clause that is formed like a direct question.

- (7) Vinner IFK över Blomstermåla, så går de upp i division 1.
'Wins IFK over...'
'If IFK defeats Blomstermåla, then they will reach division 1. (11)

It is obvious that the first clause of (7) has the form of a main clause question and it is equally obvious that this clause does not carry the force of such a question. Thus it should be a member of CT2.

Besides these examples, it seems hard to find sentences that have clauses of CT2. Someone might suggest that the underlined parts of the following sentences represent members of CT2.

- (8) (a) Namnet på filmen var 'Hon dansade en sommar'.
'The name of the movie was 'She danced one summer' '
(b) Polisen måste få bättre vapen. Detta krav återkommer hela tiden i de konservativas argumentering.
'The police must be better armed. This demand recurs all the time in the argumentation of the conservatives'
(c) IFK har vunnit igen, berättade han för sina barn.
'IFK has won again, he told his children'

It is true that the underlined parts of these sentences do not constitute statements made by the speaker but, since they all represent some kind of direct quotation, there are no syntactic differences between them and clauses of CT1. The reason is that when these sentences were first heard from another speaker, they did in fact constitute statements. Direct quotations will not be discussed in this study.

CT3

This CT contains so-called asserted sub-clauses. Complements of the A, B and E-class predicates of Hooper and Thompson's analysis belong to this group.

- (9) (a) Eva sa att Chomsky har spelat i Änglarna. (12)
'Eva said that Chomsky has played for the Angels'
(b) Eva tror att Chomsky har spelat i Änglarna. (13)
'Eva believes that Chomsky has played for the Angels'
(c) Eva visste att Chomsky har spelat i Änglarna. (14)
'Eva knew that Chomsky has played for the Angels'

The three types of clauses represented in (9) are sometimes members of CT3 and sometimes members of CT4. When they express assertions, they are members of CT3 and when they do not, they are members of CT4. What is important is that they can belong to CT3.

The same situation obtains for adverbial clauses expressing a relation of causality. They sometimes belong to CT3 and sometimes to CT4.

- (10) Pelle har slutat på Volvo därför att han har aldrig (15)
riktigt känt sig hemma där.
'Pelle has left his job at Volvo because he never really
felt at home there'

The same holds for concessive clauses, which sometimes belong to CT3 and sometimes to CT4.

- (11) Erod slutade med lingvistik fastän han kommer säkert (16)
tillbaka.
'Erod gave up linguistics although he will surely return'

Non-restrictive relative clauses belong to CT3. The relative clause makes a separate statement within the sentence. This description is in accordance with the traditional analysis of non-restrictives, which looks upon a non-restrictive relative clause as derived from a conjoined statement (Stockwell et al 1973).

(12) Linguistic Inquiry, som är en relativt dyr tidskrift, publicerar artiklar skrivna i Massachusetts, Connecticut och New York.

17

'Linguistic Inquiry, which is a relatively expensive journal, publishes articles written in Massachusetts, Connecticut and New York'

There are other types of non-restrictive relative clauses but these appear to show the same syntactic characteristics as the ordinary type in (12). Therefore, non-restrictives of the types presented in (13) will not be included in the next section's discussion.

(13) (a) Tore slutförde Vasaloppet i år, vilket är starkt av en 75-åring.

'Tore finished the Vasa-race this year, which is remarkable for a 75-year old'

(b) Vi mötte Arafat i juli förra året, när vi tillbringade hela sommaren i Libanon.

'We met Arafat in July last year, when we spent the whole summer in Lebanon'

(c) Vi hyrde en stuga i Småland, där förresten allt fler utlänningar köper sommarstugor.

'We rented a cottage in Småland, where, by the way, more and more foreigners buy summer-houses'

CT4

In this clause-type, we find complements of C and D-class predicates.

(14) (a) Roger betvivlar att Chomsky spelat i Blå-vitt.

18

'Roger doubts that Chomsky has played for Blå-vitt'

(b) Gunnar ångrade att han inte köpte en blå- och vitrandig pyjamas.

19

'Gunnar regretted that he did not buy blue and white striped pyjamas'

Furthermore, restrictive relative clauses should be included in CT4.

(15) Den man som smög förbi igår är tydligen eftersökt av polisen.

20

'The man that sneaked by here yesterday is evidently wanted by the police'

Temporal när-clauses (when-clauses) can occur as restrictive as well as non-restrictive clauses just like relative clauses. In (13b), a non-restrictive när-clause was given and (16) gives an example of the more common restrictive use of temporal subordinate clauses, i.e. the sub-clause is a member of CT4.

(16) Olyckligtvis anlände vi till staden när alla människor var på väg hem från jobbet.

21

'Unfortunately, we arrived in the city when everyone was on his way home from his job'

Embedded questions are also members of CT4. They do not ask for information like ordinary questions do.

(17) (a) Jill kunde inte få reda på om Jack hade köpt äpplen.

22

'Jill couldn't find out whether Jack had bought apples'

(b) Vi frågade aldrig vem som hade köpt äpplena.

23

'We never asked who had bought the apples'

This exposition certainly does not exhaust CT4. As was said above, causal clauses, concessive clauses and complements of A, B and E-class predicates sometimes belong to CT4. We can look at CT3 as the vanguard of subordinate clauses. These clauses originate as clauses of CT4 but have the possibility of being asserted (i.e. of moving into CT3). This description is not appropriate for non-restrictive relative clauses, which rather originate as main clauses.

Problematic clauses

As was pointed out earlier, clauses like the complement in (4a) constitute a problem, since it is not clear whether clauses of this type should be included in CT1 or whether they are to be analyzed as members of CT3.

Problems are also created by subordinate clauses that can be uttered in isolation, i.e. which can be uttered without any accompanying main clause. As was argued in a preceding section, these clauses appear to be syntactically subordinate clauses. Their semantic status is harder to determine. For one thing, they do not make statements or ask questions but they do perform some kinds of speech acts. (18a) expresses a wish and (18b) expresses a somewhat irritated regret. In the next section, these sentence types will be compared with other sentence types and from this comparison, their clause-type membership can be determined by syntactic criteria.

(18) (a) Om bara Blå-vitt gick upp i division 1.

24

'If only Blå-vitt would reach division 1'

(b) Att du aldrig kan lära dig att lägga en hörna.

25

'That you can never learn to make a corner kick'

II.2. Domains of grammatical operations

In this and the following section, it will be shown that certain grammatical phenomena are restricted to one, two or three of the four clause-types discussed in the preceding section. The general case is that a grammatical operation is applicable in all CT's. Transformations like Passive, Reflexive and Indirect Object Movement cover all the four CT's, as is indicated in (1).

(1) SYN.M. SYN.S.

SYN.M.		
SEM.S.		

However, the transformations that Emonds called root transformations, e.g. Topicalization, Left Dislocation, Prepositional Phrase Substitution, Negative Adverb Preposing and Directional Adverb Preposing present a different picture. From what was said in section I.5, we can infer that these transformations are applicable in the following CT's.

(2)

	SYN.M.	SYN.S
SEM.M.		
SEM.S.		

In this section, these and other grammatical phenomena that are restricted to certain CT's will be presented. The point of this presentation and the following test in the next section is to show the relevance of these clause-types, and, more importantly, to describe these phenomena themselves. Such a description will tell us how they function in language and what sort of animal a sub-clause is. Hence, the four clause-types should first of all be regarded as an auxiliary device or as a tool for investigating certain grammatical phenomena with restricted domains.

The class of CT's covered by a certain grammatical phenomenon will be called the 'domain' of that phenomenon. This means that the domain of the so-called root transformations is that described in (2).

Besides emphatic root transformations, the rule of Adverb Placement was discussed at length above. The domain of this transformation is that of (2) but if we distinguish between obligatory and optional application of the rule, the situation becomes different. (3) gives the domain of obligatory Adverb Placement and (4) gives the domain of the optional application of the rule.

(3)

	SYN.M.	SYN.S.
SEM.M		
SEM.S.		

(4)

	SYN.M.	SYN.S.
SEM.M.		
SEM.S.		

Figures (3) and (4) are somewhat misleading, I believe. We should rather say that the domain of Adverb Placement is that shown in (2) but that its use is restricted in that it applies optionally and not obligatorily in CT3. A grammatical operation with the domain of (4) is probably non-existent in language. In a following section, II.6, more will be said about the possible domains of grammatical operations.

Next, a set of grammatical phenomena, a-1, will be presented. These phenomena all have domains that are restricted in some way. The presentation will take the following form.

- A Twelve grammatical phenomena with restricted domains are presented.
- B Each of these phenomena is tested in each of the sentence-types (1-25) of the preceding section.
- C From this test, which is presented in a chart towards the end of the next section, we infer which CT's the phenomena in question cover.

The point of this test is to see if the domains of different grammatical phenomena can be systematized in some way. The test will also show to what extent the different clause-types are relevant in determining the domains of grammatical phenomena.

Let us now look at some grammatical phenomena relevant for this investigation.

(a) ju, väl

Not only transformations can be distinguished by having different domains but also certain morphemes. We will consider Swedish sentence adverbials. I take the term 'sentence adverbials' to refer to the adverbials that are generated under the S-node. These adverbials have also been called 'nexus adverbials' (Diderichsen 1966).

For the grammatical description of Swedish, I propose the following phrase structure rules.

- (5) (a) S → NP AdvP Tense VP
(b) VP → V VP
 [+Aux]
(c) VP → V (NP) (PP) ...

(5b) and (5c) indicate how the VP-node is analyzed and how the need for a special Aux-node is abolished. Instead of an Aux-node, (5b) proposes recursive VP-nodes (see Emonds (1970:161) and Peterson (1974) for a similar proposal concerning English). (5a) shows that sentence adverbials are analyzed as being generated before the VP. This is also the normal position of these adverbials in subordinate clauses. The rule of Adverb Placement gives the adverbs the correct position in main clauses. There is some evidence that the adverbs are not generated after the verb and that Adverb Placement does not move the adverbs in the opposite direction. Evidence is given by sentences with verb and particle constructions.

- (6) (a) Erod ger aldrig upp.
 'Erod gives never up'
 'Erod never gives up'
(b) *Erod aldrig ger upp.
(c) *Erod ger upp aldrig.

It seems strange to generate the adverbials between the verb and the particle, since these two constituents should probably be generated together. Furthermore, if the rules of (5) are accepted, it is much easier to ensure that there will only be one AdvP-node in each sentence. If AdvP is generated after the verb in VP, some way must be found to stop the generation of an adverbial after each V in a sentence with a sequence of verbs. In a sentence like (7), there are five verbs and the only possible place for the adverbial aldrig ('never') is after the first verb, which is also the finite verb.

- (7) Björn Borg borde aldrig ha börjat försöka sälja tandkräm.
 'Björn Borg should never have started to try to sell
 tooth-paste'

The important thing for the present discussion is what appears under the AdvP-node in (5). The AdvP-node generated by (5a) can consist of a sequence of at most four adverbials. (8) gives a rough indi-

cation of what these sequences look like.

(8)⁸

<u>pos. 1</u>	<u>pos. 2</u>	<u>pos. 3</u>	<u>pos.4</u>
ju	faktiskt 'actually'	egentligen 'really'	aldrig 'never'
väl	egentligen 'really'	kanske 'perhaps'	inte 'not'
nog	säkerligen 'certainly'	-	alltid 'always'
	troligen 'probably'	faktiskt 'actually'	ofta 'often'
	möjligen 'possibly'	∴	sällan 'seldom'
	∴		∴

The first class of adverbs is the most interesting in this context. The three morphemes in this class have not been translated into English because it is hard to find good translations for them. Instead, I will give a brief description of their uses. Ju is an assertive particle. By inserting this particle in a sentence, the speaker indicates that the truth of his statement is undisputable. I'm sure, to be sure and surely convey some of its meanings in English. When the speaker wants confirmation of a statement that he makes, he may insert väl in the sentence (in my own Göteborg dialect, la is used instead of väl). The function of this morpheme corresponds to that of English tag-questions. The third morpheme nog indicates the speaker's uncertainty about a statement he makes. I believe that these three morphemes are the only adverbials that may occupy position 1.

Let us investigate the domain of the two adverbials ju and väl. I do not include nog in the test because it seems to be less restricted in distribution than the other two morphemes. The occurrence of ju and väl in clauses that are both semantically and syntactically main is unproblematic. In these clauses, they occur freely, but only in declaratives.

(9) Peter kommer { ju } inte imorgon.
 { väl }

'Peter will XXX not come tomorrow'⁹

These morphemes also occur in CT3, but not in CT4. They do not occur in temporal subordinate clauses, which belong to CT4.

(10) *Vi träffade presidenten efter det att Peter $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ hade försvunnit.

'We met the president after Peter had XXX disappeared'

They do occur in non-restrictive relative clauses but not in restrictive ones.

(11) Igår träffade jag Eva, som du $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ känner bättre än jag.

'Yesterday I met Eva, who you XXX know better than I do'

(12) *Vi undersökte den bil som $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ krockade igår.

'We investigated the car which XXX had an accident yesterday'

An interesting point is that these adverbials must be placed before the finite verb in non-restrictive relative clauses. (13) is clearly ungrammatical.

(13) *Igår träffade jag Eva, som du känner $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ bättre än jag.

'Yesterday I met Eva, who you know XXX better than I do'

On the other hand, in complements to class B predicates, where these adverbs also occur, they tend to be placed after the finite verb, i.e. the sentences show main clause word order.

(14) (a) Reportern trodde att IFK har $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ stora chanser att vinna.

'The reporter believed that IFK has XXX a good chance of winning'

(b) *Reportern trodde att IFK $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ har stora chanser att vinna.

'The reporter believed that IFK XXX has a good chance of winning'

It appears that sub-clauses introduced by som are strongly resistant to Adverb Placement, even if these clauses express assertions. Clauses introduced by att, on the other hand, favor Adverb Placement when they are asserted. This tendency is especially strong with

the adverbs ju and väl.¹⁰

We said that the adverbs under consideration occur in CT3 but not in CT4. Accordingly, they occur in complements to class B predicates (cf. 14) but not in complements to class C and D predicates.

(15) (a) *Det är konstigt att Bengt har $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ inte blivit avskedad.

'It is strange that Bengt has XXX not been fired'

(b) *Palme ångrar att han släppte $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ in Bengt i regeringen.

'Palme regrets that he let XXX Bengt into the government'

Complements to class E predicates may express assertions and, therefore, they should allow these adverbs.

(16) Vi insåg att Bengt skulle $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ bli populär i det jobbet.

'We realized that Bengt would XXX become popular in that job'

A fair amount of evidence has been presented above for the claim that the domain of ju and väl includes CT1 and CT3 but excludes CT4. What about CT2?

One of the few good examples of clauses belonging to CT2 are the presupposed main clauses found in sentences with adverbial conjunctions. Consider the following sentence.

(17) Flickorna sprang $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ inte hem när de fick syn på Fred.

'The girls did XXX not run home when they saw Fred'

On the reading where the main clause is presupposed, these adverbs do not modify the main clause. Rather, they modify the negation which in turn modifies the temporal relation between the two clauses. This situation is described in the following formula.

(18) $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ not (p when q)

It seems impossible to obtain a reading like (19), where the main clause is presupposed and modified by these adverbs.

(19) *not ({ ju } p when q)
 { väl }

Although I am not sure how these facts should be interpreted, I believe that we should say that the two adverbials in question may occur in clauses of CT2. Obviously they do occur in these clauses on the surface but they do not modify them.

The real problem is to decide how main clauses should be defined. Since we have defined main clauses syntactically, we have to conclude that ju and väl occur in main clauses of CT2, even if they do not modify these clauses.

Conditional clauses formed as main clause questions also belong to CT2 but they do not help us out of this problem, because ju and väl do not occur in questions.

This presentation of phenomenon (a) has been rather extensive in order to show the method of investigation used. The other grammatical phenomena to be dealt with will only be given very brief presentations.

② för guds skull 'for heaven's sake'

För guds skull belongs to a class of phrases that also includes för allt i världen, för hela friden, för böveln and för helvete. The English phrase for heaven's sake has the same function as these Swedish phrases. As far as literal meaning is concerned, these phrases range from heaven to hell. In either case, their function is to give emphasis to what the speaker says.

Phrases like för guds skull usually occur in one of the following two positions in a sentence.

(20) Sven har ju för guds skull aldrig varit nykter.
 'Sven has XX for heaven's sake never been sober'

(21) Sven har ju aldrig varit nykter, för guds skull.
 'Sven has XX never been sober, for heaven's sake'

(20) shows that för guds skull occurs under pos.2 and pos.3 in chart (8) above. However, the position that the phrase has in (21) is what is of interest at present. In which CT's may a phrase like för guds skull occur at the end of a clause? This question will be investigated below.

(c) din idiot 'you idiot'

This phrase and others with the same function only occur at the end of a clause.

(22) *Jag gillar din idiot inte stekta bananer.
'I like you idiot not fried bananas'

(23) Jag gillar inte stekta bananer, din idiot.
'I don't like fried bananas, you idiot'

Din idiot belongs to a class of adverbial expressions that also includes din djävel, din pundsork, din klantskalle, etc. This class is potentially infinite and some speakers show an admirable creativity in generating new expressions of this type. In principle, any sequence din NOM, where NOM has a derogative meaning, is acceptable.

An interesting difference between Swedish and English is that Swedish has the possessive pronoun din in front of the NP while English has the personal pronoun you in that position. The domain of phrases like din idiot will be investigated below.

(d) va

Just as din idiot, va is a morpheme that only occurs at the end of the clause. As the following sentences show, va cannot occur in the AdvP position inside the sentence but only at the end of the sentence.

(24) *Du gillar va inte TG?
'You don't like, do you, TG?'

(25) Du gillar inte TG, va?
'You don't like TG, do you?'

In these sentences, va has the function of asking for confirmation of a statement, just as the English tag-question and the Swedish adverb väl do. If we substitute väl for va in (24), a grammatical sentence results. It would also give a fairly acceptable result to substitute väl for va in (25).

Since some adverbial constructions like din idiot and va only occur in sentence final position, an adverbial position has to be generated at the end of the sentence.

There is another function of va, or another morpheme va, which is illustrated in (26). In this use, the speaker does not ask for confirmation. Rather, he gives emphasis to what he says or he wants to make sure that the listener really listens. The idiomatic translation of this use of va is probably 'you know'. (26a) shows the normal use of this morpheme and (26b) shows the epidemic use, which is not uncommon.

(26) (a) Jag gillar inte TG, va.

'I don't like TG, you know'

(b) Farsan, va, han har köpt en ny bil, va, fastän han inte har något körkort, va.

'My old man, you know, he has bought a new car, you know, although he hasn't got a license, you know'

e) då då

The phrase which is of interest here is pronounced ['do: dɔ], first a long and then a short vowel. This adverbial phrase only occurs in sentence-final position.

The meaning of this phrase is very hard to state. It expresses some kind of surprise or irritation on the part of the speaker.

(27) Har du tid på lördag, då då?

'Do you have time on Saturday, { or what } ?'
{ then }

I am not at all sure of how då då should be translated into English and dictionaries are of no help since phrases of this type are not included in them.

A phrase closely related to då då is då, with a short vowel. I suspect that då has the same domain as då då and since the semantic and functional differences are small between the two phrases, there is no reason to include more than one of them in the present investigation.

(f) tyvärr ('unfortunately', 'regrettably')

Tyvärr has a restricted distribution as will be shown below. This adverb occurs next to the verb as well as in sentence final position. We will here be concerned with the first of these two positions, i.e. the position of tyvärr in (28).

(28) Vi träffade honom tyvärr i Paris förra året.

'We unfortunately met him in Paris last year'

Tyvärr belongs to the class of adverbs that occur in positions 2 and 3 (se (8), above) and I am fairly sure that tyvärr is not the only member of this class of adverbs that has a restricted domain. Other qualified candidates are kanske ('perhaps'), händelsevis ('by chance') and olyckligtvis ('unfortunately').

(g) härmed ('hereby')

Below, we will also investigate in what types of clauses a performative may occur. Most performative verbs can be used both performatively and non-performatively. The morpheme härmed ('hereby') is usually taken as an indication of the performative use. In two Linguistic Inquiry squibs, it was shown that a performative may occur in a non-restrictive relative clause but not in a restrictive one (Fairclough 1973 and Ayres 1974).

(29) (a) Här kommer GAIS, som jag härmed lovar att vi skall slå.

'Here comes GAIS, which I hereby promise that we shall defeat'

(b) *Här kommer den flicka som jag härmed lovar att förföra.

'Here comes the girl who I hereby promise to seduce'

The domain of performatives will be investigated below.

- (h) Left Dislocation
- (i) Topicalization
- (j) Directional Adverb Preposing

The three transformations referred to here as h, i and j have been discussed quite a bit in preceding sections. However, I will include them in the investigation and in the presentation in the chart below to see if there is a good correspondence between their application and the possibility of the occurrence of the adverbs that have been discussed in this section. These transformations are examples of what Emonds called root transformations and we already know that they have restricted domains but we do not really know exactly what these domains are.

- (k) Complement Preposing

Complement Preposing should also be a root transformation in Emonds' terminology. He talks about a rule of Quote Preposing, which is rather similar to Complement Preposing (Emonds 1970:14). Complement Preposing is a more general rule than Quote Preposing. Not only quotes (direct or indirect) may be preposed but also other complements.

(30) (a) Administratörerna är oärliga, sa Peter.

'The administrators are dishonest, said Peter'

(b) Administratörerna är oärliga, trodde Peter.

'The administrators are dishonest, Peter thought'

The effect of the rule is to convert a structure like (31a) to one like (31b). (31b) is then converted to (31c) by the rule of Subject-Verb Inversion.

(31) (a) NP-V-S

(b) S-NP-V

(c) S-V-NP

There are several problems connected with this rule. Different opinions about how structures like (30) should be generated will

be presented in sections II.3. and II.5. For the present analysis, the solutions to these problems are irrelevant because we will only discuss the domain of structures like those of (30).

① COMP-Complement Preposing

COMP-Complement Preposing results in structures like (32).

(32) (a) Att administratörerna är oärliga hävdade Peter med bestämdhet.

'That the administrators are dishonest, Peter firmly asserted'

(b) Att administratörerna är oärliga har vi alltid vetat.

'That the administrators are dishonest, we have always known'

COMP-Complement Preposing differs from Complement Preposing in that the fronted constituent has a complementizer in initial position. This rule also behaves like an ordinary S-initial fronting rule.

§ § §

The phenomena discussed under a-1 all have restricted domains of some sort, i.e. they do not occur in all sentence-types discussed in the preceding section. In the next section, I will present a test that shows to what extent each of the twelve grammatical phenomena discussed may occur in the 25 sentence-types of the preceding section.

II.3. The test and discussion of the results

Let us now test the twelve different grammatical phenomena (a-1) in the 25 different sentence types. The test results in 300 sentences with varying degrees of grammaticality. It should be clear that these judgements are very hard to make in some cases. It is in itself an interesting linguistic question why some grammatical operations should give such ambiguous results while other operations give very clear results. Constructions having to do

with the domains of grammatical operations typically give ambiguous results.

To save space, I have not translated the 300 example sentences into English. In the discussion of the results, however, I will translate the more interesting ones.

The judgements to be presented below are not only my own. I have consulted friends and colleagues more than once about the grammaticality of these sentences.

After the example sentences, the results are summed up in a chart (p.88, below). This chart then serves as starting point for a discussion of how the grammatical phenomena in question are constrained and how these constraints are to be handled by the grammar of the language.

ju, väl

- (1) (a) Peter har $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ spelat ishockey.
- (2) (a) *Har Peter $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ spelat ishockey?
- (3) (a) *Vilket lag har $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ Peter spelat ishockey i?
- (4) (a) *Köp $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ bananer!
- (5) (a) Eva gillar inte Peter ty han har $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ spelat ishockey.
- (6) (a) Jag tror Blå-vitt vinner $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ lätt matchen.
- (7) (a) *Jag undrar spelar du $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ ishockey?
- (8) (a) Peter studerar $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ inte lingvistik därför att Chomsky är söt.
- (9) (a) Peter sjöng $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ inte så att lamporna gick sönder.
- (10) (a) *Studerar Peter $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ lingvistik därför att Chomsky är söt?
- (11) (a) *Kommer Peter $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ hit så blir jag nöjd.

- (12) (a) Roger sa att IFK vinner {ju } matchen.
{väl}
- (13) (a) Roger tror att IFK vinner {ju } matchen.
{väl}
- (14) (a) Roger vet att IFK vinner {ju } matchen.
{väl}
- (15) (a) IFK vann därför att dom spelade {ju } bäst.
{väl}
- (16) (a) IFK vann fastän dom spelade {ju } inte speciellt bra.
{väl}
- (17) (a) Här kommer Eva, som du {ju } känner mycket bättre än jag.
{väl}
- (18) (a) *Nils betvivlar att IFK vann {ju } matchen.
{väl}
- (19) (a) *Nils ångrade att han köpte {ju } en segelbåt.
{väl}
- (20) (a) Den flicka som du {ju } känner mycket bättre än jag var
här. {väl}
- (21) (a) ?Vi mötte Anders när han {ju } var på väg hem till Laxå.
{väl}
- (22) (a) *Vi frågade Anders om han {ju } hade sett Peter.
{väl}
- (23) (a) *Vi frågade Anders vem han {ju } hade sett.
{väl}
- (24) (a) *Om du {ju } bara kunde lära dig att stava.
{väl}
- (25) (a) *Att du {ju } aldrig kan lära dig stava.
{väl}

för guds skull

- (1) (b) Jag tror dig, för guds skull.
- (2) (b) Har Peter varit här, för guds skull?
- (3) (b) Vem är det som har sett Eva, för guds skull?
- (4) (b) Kom hit, för helvete!
- (5) (b) Vi gick aldrig hem till Åke ty han hade ju ingen sprit,
för helvete!
- (6) (b) Jag tror Blåvitt går upp i division 1, för guds skull.
- (7) (b) Jag undrar kommer du hit, för helvete?
- (8) (b) *Olof studerar inte lingvistik, för guds skull därför att
han är intresserad av språk.
- (9) (b) *Erod slogs inte, för helvete så att han fick sparken.
- (10) (b) *Vinner alltid IFK, för guds skull därför att de spelar
bäst?

- (11) (b) *Kommer du hit, för helvete så blir jag glad.
- (12) (b) Dom sa att IFK spelade bäst, för guds skull.
- (13) (b) Dom tror att IFK spelade bäst, för guds skull.
- (14) (b) Dom vet att IFK spelade bäst, för guds skull.
- (15) (b) Peter läser aldrig en bok därför att han har ju aldrig gått i skolan, för guds skull.
- (16) (b) Peter läser mängder med böcker fastän han har ju aldrig fått någon utbildning för det, för helvete.
- (17) (b) Conny, som ju har spelat i GAIS, för guds skull, har gått över till Norrby.
- (18) (b) Jag betvivlar att New York Times är sämre än Göteborgs-posten, för guds skull.
- (19) (b) Jay ångrade att han skickade sin artikel till GP, för guds skull.
- (20) (b) Idag såg jag den älg som bodde i vår källare i vintras, för helvete.
- (21) (b) Hela familjen hade somnat när gästerna kom, för guds skull.
- (22) (b) Dom undrade om New York Times är sämre än GP, för helvete.
- (23) (b) Dom undrade vem som läser GP, för guds skull.
- (24) (b) ?Om bara han ville komma hit, för helvete.
- (25) (b) ?Att du aldrig lagar bilen, för guds skull.

din idiot

- (1) (c) Jag skall ge dig en ny kikare, din fördömde skoptofil.
- (2) (c) Har Jerker köpt en ny båt, din idiot?
- (3) (c) Vem var det Knutte dansade med, din idiot?
- (4) (c) Kom hit, din tjurskalle.
- (5) (c) Eva följde inte med Peter hem, ty han har ju ingen färg-TV, din idiot.
- (6) (c) Jag är säker ÖIS har inte en chans i allsvenskan, din idiot.
- (7) (c) Jag undrar vinner ÖIS allsvenskan, din idiot.
- (8) (c) *Eva gillar inte Peter, din idiot därför att han har en färg-TV.
- (9) (c) *Eva slängde inte glaset, din idiot så att TV'n gick sönder.
- (10) (c) *Köpte Pelle fisk, din idiot därför att han ville ha kvicksilver till middag?

- (11) (c) *Vinner IFK matchen, din idiot så blir jag glad.
- (12) (c) Harry sa att Jerry kommer, din idiot.
- (13) (c) Harry tror att Jerry kommer, din idiot.
- (14) (c) Harry vet att Jerry kommer, din idiot.
- (15) (c) ?Harry slog till Eva därför att han gillar inte tjejer, din idiot.
- (16) (c) ?Jag har alltid gillat fotboll fastän det har man ju inte mycket för, din idiot.
- (17) (c) *Vi mötte Peter, som inte gillar fotboll, din idiot, när vi var på väg hem.
- (18) (c) Nils betvivlar att IFK vinner, din idiot.
- (19) (c) Nils ångrar att han gick på matchen, din knöl.
- (20) (c) *Den flicka som vi träffade, din idiot, bor i Laxå.
- (21) (c) ?När vi kom hem ifrån partyt, din idiot, upptäckte vi inbrottet.
- (22) (c) Jag undrar om han kommer hit, din idiot.
- (23) (c) Jag undrar vem som var här, din idiot.
- (24) (c) *Om bara Peter kunde komma, din idiot.
- (25) (c) *Att han aldrig kan lära sig spela fotboll, din idiot.

va

- (1) (d) Du träffade Peter, va?
- (2) (d) Har du varit i Stockholm, va?
- (3) (d) Vem kan låna mig en femma, va?
- (4) (d) Låna mig en femma, va!
- (5) (d) Gunnar var ledsen ty han hade varit och sett IFK spela, va.
- (6) (d) Jag tror dom var på matchen, va.
- (7) (d) Jag undrar har du sett resultatet, va.
- (8) (d) *Peter läser inte lingvistik, va därför att han är intresserad av språk.
- (9) (d) *Peter bråkade inte, va så att han fick sparken.
- (10) (d) *Läser Pelle lingvistik, va därför att han tycker att Chomsky är söt?
- (11) (d) *Vinner kamraterna sin bortamatch, va så går vi på nästa hemmamatch.
- (12) (d) Nils sa att dom träffade Peter i Paris, va.
- (13) (d) Nils tror att dom träffade Peter i Paris, va.

- (14) (d) Nils vet att dom träffade Peter i Paris, va.
- (15) (d) Nils gick hem från festen därför att han gillar inte tjejer, va.
- (16) (d) Nils stannade på festen fastän han inte gillar tjejer, va
- (17) (d) Jerker, som vi träffade nyss, va, har köpt en ny båt.
- (18) (d) Dom betvivlar att Peter träffade Henry i Kairo, va.
- (19) (d) Knut ångrade att han hade bjudit in lingvisterna, va.
- (20) (d) *Den man som Knut bjudit in, va, vägrade att lämna festen.
- (21) (d) Fred kom hit när terminen var slut, va.
- (22) (d) Jan undrar om du har sett min fru, va.
- (23) (d) Jan undrar vem du träffade i baren, va.
- (24) (d) Om bara Fred kunde sluta röka, va.
- (25) (d) Att han aldrig kan lära sig spela boll, va.

då då

- (1) (e) Jag sitter (väl) barnvakt, då då.
- (2) (e) Har du varit i Stockholm, då då?
- (3) (e) Vem kan låna mig en cykel, då då?
- (4) (e) Låna mig en cykel, då då!
- (5) (e) Du kan kännadig nöjd ty jag sitter väl barnvakt, då då.
- (6) (e) Jag vet jag sitter väl barnvakt, då då.
- (7) (e) Jag undrar fick du stryk då då?
- (8) (e) *Pelle läser väl lingvistik, då då därför att han är intresserad av språk
- (9) (e) *Pelle tränade väl, då då så att han fick benhinneinflammation.
- (10) (e) *Studerar Pelle lingvistik, då då därför att Chomsky är söt?
- (11) (e) *Anmäler du dig till doktorandutbildningen, då då, så blir vi glada.
- (12) (e) Nils sa att du gick väl hem, då då.
- (13) (e) Nils tror att du gick väl hem, då då.
- (14) (e) Nils vet att du gick väl hem, då då.
- (15) (e) Nils gick hem tidigt från festen därför att han gillar väl inte tjejer, då då.
- (16) (e) Nils stannade länge på festen fastän han gillar väl inte tjejer.
- (17) (e) Jerker, som vi väl träffade nyss, då då, har köpt sig en ny båt.

- (18) (e) Dom betvivlar att Knut träffade väl Henry i Kairo, då då.
- (19) (e) Knut ångrade att han hade väl bjudit in lingvisterna, då då.
- (20) (e) *Den man som Knut bjudit in, då då vägrade att lämna festen.
- (21) (e) *Fred kom hit när terminen var slut, då då.
- (22) (e) Jag undrar om du har sett min fru, då då.
- (23) (e) Jag undrar vem du träffade i baren, då då.
- (24) (e) *Om bara Fred kunde sluta röka, då då.
- (25) (e) *Att han aldrig kan lära sig spela fotboll, då då.

tyvärr

- (1) (f) Vi träffade honom tyvärr förra året.
- (2) (f) *Har du tyvärr sett min fru?
- (3) (f) *Vem kan tyvärr låna mig en cykel?
- (4) (f) *Låna mig tyvärr din cykel!
- (5) (f) Vi blev ledsna ty vi stötte tyvärr ihop med Peter i Paris förra året.
- (6) (f) Jag misstänker dom träffade honom tyvärr i Paris förra året.
- (7) (f) *Jag undrar har du tyvärr sett min fru?
- (8) (f) Peter läser tyvärr lingvistik därför att han är intresserad av språk.
- (9) (f) Peter hoppade tyvärr omkring så att golvet gick sönder.
- (10) (f) *Studerar du tyvärr lingvistik därför att du tycker att Chomsky är söt?
- (11) (f) *Får du tyvärr syn på min fru, så ring upp mig omedelbart.
- (12) (f) Nils sa att dom tyvärr träffade Peter i Paris.
- (13) (f) Nils tror att dom tyvärr träffade Peter i Paris.
- (14) (f) Nils vet att dom tyvärr träffade Peter i Paris.
- (15) (f) Nils gick hem därför att han gillar tyvärr inte flickor.
- (16) (f) Nils stannade på festen fastän han gillar tyvärr inte flickor.
- (17) (f) Jerker, som vi tyvärr träffade nyss, har köpt en ny båt.
- (18) (f) *Vi betvivlar att Peter tyvärr träffade Henry i Kairo.
- (19) (f) *Knut ångrade att han tyvärr hade bjudit in lingvisterna.
- (20) (f) ? Den man som Knut tyvärr hade bjudit in vägrade att lämna festen.

- (21) (f) ?Fred kom hit när terminen tyvärr var slut.
- (22) (f) *Jag undrar om du tyvärr har sett min fru.
- (23) (f) *Jag undrar vem du tyvärr träffade i baren.
- (24) (f) *Om bara Fred tyvärr kunde sluta röka.
- (25) (f) *Att han tyvärr aldrig kan läras sig spela fotboll.

Left Dislocation

- (1) (h) Nixon, honom gillar dom inte.
- (2) (h) Nixon, har ni hört något om honom på sistone?
- (3) (h) Nixon, vem träffade han i Miami?
- (4) (h) Nixon, lyssna inte på honom!
- (5) (h) Det blev bråk i senaten ty Nixon, honom litar dom inte på.
- (6) (h) Jag tror Nixon, honom gillar dom inte.
- (7) (h) Jag undrar Nixon, har ni hört något om honom på sistone?
- (8) (h) Lingvistik, det studerar inte Eva därför att Chomsky är söt.
- (9) (h) På Volvo, där jobbar man inte så att det slår gnistor.
- (10) (h) Lingvistik, studerar Eva det därför att Chomsky är söt?
- (11) (h) Nixon, kommer han hit, så emigrerar jag.
- (12) (h) Henry sa att Nixon, han är på väg hit.
- (13) (h) Henry trodde att Nixon, han är på väg hit.
- (14) (h) Henry vet att Nixon, han är på väg hit.
- (15) (h) USA har startat ett nytt krig därför att Nixon, han är ju inte klok.
- (16) (h) USA har startat ett nytt krig fastän Nixon, han lovade ju att dom inte skulle göra det.
- (17) (h) *Dom träffade Eva, som Peter, han har väl alltid gillat henne.
- (18) (h) ?Dom betvivlar att Henry, han skall bosätta sig i Sverige.
- (19) (h) ?Dom ångrade att Henry, honom bjöd dom in.
- (20) (h) *Här kommer den flicka som Peter, han känner så väl.
- (21) (h) *Vi kom till Stockholm när Henry, han var på väg till Kairo.
- (22) (h) *Vi frågade om Henry, han var på väg hit.
- (23) (h) *Vi frågade vem som Henry, känner honom.
- (24) (h) *Om Henry, han bara ville komma hit.

(25) (h) *Att Henry, han aldrig kan lära sig stava.

Topikalisering

- (1) (i) ÖIS gillar vi inte.
- (2) (i) *Gillar ÖIS du? eller ÖIS gillar du?
- (3) (i) *Vem ÖIS gillar? eller ÖIS vem gillar?
- (4) (i) *ÖIS hata!
- (5) (i) Jag följer inte med på Ullevi ty ÖIS gillar jag inte.
- (6) (i) Jag tror GAIS gillar han bäst.
- (7) (i) *Jag undrar har en bra målvakt ÖIS?
- (8) (i) Lingvistik studerar inte Eva därför att Chomsky är söt.
- (9) (i) På Volvo jobbar man inte så att det slår gnistor.
- (10) (i) *Studerar lingvistik Eva därför att Chomsky är söt?
- (11) (i) *ÖIS vinner allsvenskan så hoppar jag i kanalen.
- (12) (i) Henry sa att ÖIS gillar han inte.
- (13) (i) Henry tror att ÖIS gillar han inte.
- (14) (i) Henry vet att ÖIS gillar han inte.
- (15) (i) Vi följer inte med därför att ÖIS gillar vi inte.
- (16) (i) Vi följer med fastän ÖIS gillar vi inte.
- (17) (i) ?Vi träffade Eva, som hos Peter äter middag varje dag.
- (18) (i) ?Dom betvivlar att IFK tycker vi är bäst.
- (19) (i) ?Han ångrade att ÖIS spelade han för.
- (20) (i) ?Här kommer den flicka som hos Peter äter middag varje dag.
- (21) (i) ?Vi åkte genast hem när Peter vi hade talat med.
- (22) (i) *Dom frågade om ÖIS Peter spelade för.
- (23) (i) *Dom frågade vem som ÖIS hejade på.
- (24) (i) *Om IFK han bara ville gå över till.
- (25) (i) *Att ÖIS han aldrig kan sluta heja på.

Directional Adverb Preposing

- (1) (j) Ut i köket sprang Olle.
- (2) (j) *Sprang ut i köket Olle?
- (3) (j) *Vem ut i köket sprang?
- (4) (j) *In i huset spring!
- (5) (j) Vi blev alla överraskade ty ut i köket sprang plötsligt Olle.

- (6) (j) Jag tror ut i köket sprang Olle.
- (7) (j) *Jag undrar sprang ut i köket Olle?
- (8) (j) Ut i köket sprang inte Olle därför att kaffet kokade.
- (9) (j) In i skogen sprang inte Olle så att björnarna kröp i ide.
- (10) (j) *Sprang ut i köket Olle därför att kaffet kokade?
- (11) (j) *Springer ut i köket Olle, så går jag hem.
- (12) (j) Dom sa att ut i köket sprang Olle.
- (13) (j) Dom tror att ut i köket sprang Olle.
- (14) (j) Dom vet att ut i köket sprang Olle.
- (15) (j) Vi blev överraskade därför att ut i köket sprang plötsligt Olle.
- (16) (j) Allt var lugnt fastän ut i köket rusade Olle var femte minut.
- (17) (j) ?Vi fick syn på Clark, som in i skogen hade sprungit med väldig fart.
- (18) (j) *Vi betvivlar att in i skogen sprang Olle.
- (19) (j) *Tjuven ångrade att in i skogen hade han sprungit.
- (20) (j) *Den tjuv som in i skogen hade sprungit blev snart gripen.
- (21) (j) *Vi satt och talade när ut i köket {sprang plötsligt Olle.
Olle plötsligt sprang.}
- (22) (j) *Vi undrade om in i skogen tjuven hade sprungit.
- (23) (j) *Vi undrade vem som in i skogen plötsligt sprang.
- (24) (j) *Om ut i köket han bara ville springa nu.
- (25) (j) *Att in i skogen du alltid måste springa.

Complement Preposing

- (1) (k) Kamraterna går upp i allsvenskan, tror jag.
- (2) (k) Går kamraterna upp i allsvenskan, tror du?
- (3) (k) Vilka lag åker ur allsvenskan, tror du?
- (4) (k) ?Du har sett terroristerna, glöm det!
- (5) (k) Ni kan vara lugna ty Kamraterna går upp i allsvenskan, tror jag.
- (6) (k) Jag tror Kamraterna går upp i allsvenskan, hoppas du.
- (7) (k) Jag undrar går Kamraterna upp i allsvenskan, tror du?
- (8) (k) *Kamraterna går inte upp i allsvenskan, tror jag därför att dom spelar bäst.
- (9) (k) *Kamraterna spelar, tror jag så att dom enkelt går upp i allsvenskan.

- (10) (k) *Går Kamraterna upp i allsvenskan, tror du därför att de spelar bäst.
- (11) (k) *Går Kamraterna upp i allsvenskan, tror du så tycker jag att du är mer än lovligt dum.
- (12) (k) *Jag sa att Kamraterna går upp i allsvenskan, misstänker jag.
- (13) (k) *Jag tror att Kamraterna går upp i allsvenskan, misstänker jag.
- (14) (k) *Jag vet att Kamraterna går upp i allsvenskan, misstänker jag.
- (15) (k) ?Jag är fylld av tillförsikt därför att Kamraterna går upp i allsvenskan, tror jag.
- (16) (k) *Jag är inte helt glad, fastän Kamraterna går upp i allsvenskan, tror jag.
- (17) (k) ?Tore, som röstar på socialdemokraterna, tror jag, har en stuga på Tjörn.
- (18) (k) *Jag betvivlar att socialdemokraterna är bäst, tror Tore.
- (19) (k) *Tore ångrade att socialdemokraterna skulle vinna valet, hoppades han.
- (20) (k) *Den man som röstar på socialdemokraterna, tror Tore kommer hit idag.
- (21) (k) *Spelet rasade ihop för oss när vi redan hade vunnit matchen, trodde vi.
- (22) (k) *Jag vet inte om Kamraterna går upp i allsvenskan, tror Tore.
- (23) (k) *Tore visste inte vilka lag som åker ur allsvenskan, tror du.
- (24) (k) *Om bara du skall vinna, önskade du.
{du önskade.}
- (25) (k) *Att Kamraterna går upp i allsvenskan, tror du.
{du tror.}

COMP-Complement Preposing

- (1) (1) Att IFK spelade bättre förr i tiden hävdar Tore.
- (2) (1) *Hävdar att IFK spelade bättre förr i tiden Tore?
- (3) (1) *När att IFK är det bästa laget i Sverige skall Tore begripa?
- (4) (1) *Att IFK spelade bättre förr erkänn!
- (5) (1) Tore är uppriktig ty att IFK spelade bättre förr erkänner han.

- (6) (1) ?Jag tror att IFK spelade bättre förr erkänner Tore.
- (7) (1) *Jag undrar erkänner att IFK spelade bättre förr Tore?
- (8) (1) Att IFK spelade bättre förr hävdar inte Tore därför att han vill fjäska med gaisarna.
- (9) (1) Att IFK spelade bättre förr skrek Tore ut så att rutorna skallrade.
- (10) (1) *Erkänner att IFK spelade bättre förr Tore därför att han vill fjäska med gaisarna.
- (11) (1) *Hävdar att IFK spelade bättre förr Tore så skrattar jag ihjäl mig.
- (12) (1) ?Jan sa (att) IFK spelade bättre förr hävdade Tore.
- (13) (1) ?Jan tror (att) IFK spelade bättre förr hävdade Tore.
- (14) (1) ?Jan vet (att) IFK spelade bättre förr hävdade Tore.
- (15) (1) *IFK går upp i allsvenskan därför att (att) dom kommer att spela bättre i fortsättningen vet jag.
- (16) (1) *IFK går inte upp i allsvenskan fastän (att) dom kommer att spela bättre i fortsättningen, vet jag.
- (17) (1) *IFK, som att dom kommer att spela bättre i fortsättningen Tore vet, går säkert upp i allsvenskan.
- (18) (1) *Tore betvivlar att (att) IFK kommer att spela bättre i fortsättningen hade jag hävdad.
- (19) (1) *Tore ångrade att (att) IFK skulle gå upp i allsvenskan hade han sagt.
- (20) (1) *Den grabb som att IFK skulle gå upp i allsvenskan hade sagt är en gammal vän till mig.
- (21) (1) *Vi blev glada när att IFK hade slagit Malmö vi fick reda på.
- (22) (1) *Jag undrar om att IFK är det bästa laget i Sverige Tore tror.
- (23) (1) *Jag undrar vem som att IFK är det bästa laget i Sverige hade sagt.
- (24) (1) *Om bara att IFK är det bästa laget i Sverige {Tore kunde} begripa. {kunde Tore}
- (25) (1) *Att (att) IFK är det bästa laget i Sverige {du aldrig kan} begripa. {kan du aldrig}

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
<u>ju, väl</u>	a:	OK	*	*	OK	OK	*	OK	OK	*	*	OK	OK	OK	OK	OK	OK	*	*	OK	?	*	*	*	*
<u>för guds skull</u>	b:	OK	OK	OK	OK	OK	OK	*	*	*	*	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	?	?
<u>din idiot</u>	c:	OK	OK	OK	OK	OK	OK	*	*	*	*	OK	OK	OK	?	*	OK	OK	*	?	OK	OK	*	*	*
<u>va</u>	d:	OK	OK	OK	OK	OK	OK	*	*	*	*	OK	OK	OK	OK	OK	OK	OK	*	OK	OK	*	OK	OK	OK
<u>å då</u>	e:	OK	OK	OK	OK	OK	OK	*	*	*	*	OK	OK	OK	OK	OK	OK	OK	*	*	OK	OK	*	*	*
<u>tyvärr</u>	f:	OK	*	*	OK	OK	*	OK	OK	*	*	OK	OK	OK	OK	OK	OK	*	*	?	?	*	*	*	*
<u>härmed</u>	g:	OK	OK	OK	OK	OK	*	OK	OK	OK	*	OK	?	OK	OK	OK	OK	*	*	?	?	*	*	*	*
<u>Left Disl.</u>	h:	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	*	?	*	*	*	*	*	*	*
<u>Topicalization</u>	i:	OK	*	*	OK	OK	*	OK	OK	*	*	OK	OK	OK	OK	OK	?	?	?	?	*	*	*	*	*
<u>Dir. AdvP</u>	j:	OK	*	*	OK	OK	*	OK	OK	*	*	OK	OK	OK	OK	OK	?	*	*	*	*	*	*	*	*
<u>Compl. P.</u>	k:	OK	OK	OK	?	OK	OK	OK	*	*	*	*	*	*	?	?	?	*	*	*	*	*	*	*	*
<u>COMP-Compl. P.</u>	l:	OK	*	*	OK	?	*	OK	OK	*	*	?	?	?	*	*	*	*	*	*	*	*	*	*	*

Three symbols are used in representing speaker's judgements of the sentences.

OK - Indicates that the grammatical phenomenon in question may occur in the sentence-type under discussion.

* - Indicates that the grammatical phenomenon in question may not occur in the sentence-type under discussion.

? - Indicates that it is hard to decide between OK and *.

No clear picture of the phenomena involved is given by the chart above. In terms of CT's, we get a strange result as to what the domains of the phenomena involved are. I will now try to clarify the picture. The method will be to separate out the set of sentences that are ungrammatical for reasons other than those having to do with clause-types.

First of all it is clear that certain grammatical phenomena are restricted in their occurrences to sentences in a certain mood.¹¹ Some of the phenomena discussed are restricted to declarative sentences. This holds for the adverbials ju and väl, for example. In (1) below, a 0 is introduced to indicate that the ungrammaticality of the sentence is due to mood rather than clause-type.

This means that the line in the chart for phenomenon (a) (the occurrence of ju and väl) will be changed to (1).

(1)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
a:	OK	0	0	0	OK	OK	0	OK	OK	0	0	OK	OK	OK	OK	OK	OK	OK	*
	19	20	21	22	23	24	25												
	*	OK	?	0	0	*	*												

(4) represents an imperative sentence and (2), (3), (7), (10), (11), (22) and (23) represent interrogative sentences. That (22) and (23) are included here indicates that I regard embedded questions as interrogative clauses. This should not be controversial, I think. (11) is more controversial. What I say here is that "question-formed conditional clauses" are really interrogative clauses. These clauses have the syntactic form of questions but do not carry the illocutionary force of a question. However, they will be regarded as interrogative clauses here.

Exactly the same change as was made in (1) has to be made in line (f), which indicates the occurrence of the adverbial tyvärr ('unfortunately'). The reason why ju, väl and tyvärr are possible only in declarative sentences is certainly semantic in nature. These adverbs are speaker-oriented in the sense that they express the attitude of the speaker towards the proposition of the sentence.

If these adverbs were used in a question, the speaker would ask about his own attitude towards a proposition - something which it is rather pointless to do, since the speaker knows this best himself.

In imperative clauses, the range of possible adverbs is even smaller. It seems that adverbs in positions 1, 2 and 3 are in general excluded from imperative clauses. Only the adverbs in position 4 are possible in imperatives, as is shown in the following sentences.

(2) Läs detta!

'Read this!'

(3)*Läs ju detta!

väl

(4)*Läs säkerligen detta! ('certainly')

troligen ('probably')

kanske ('perhaps')

tyvärr ('unfortunately')

(5) Läs aldrig detta! ('never')

alltid ('always')

inte ('not')

More will be said about restrictions on grammatical phenomena with respect to mood in the next section.

Next, I will consider sentences that are ungrammatical because of the general restriction that only one S-initial fronting rule is allowed per sentence. This restriction was discussed in section I.5. (p. 39). By this restriction, S-initial fronting rules are excluded from imperatives and main clause interrogatives. That main clause interrogatives involve an S-initial fronting of the verb is rather obvious. It is somewhat more controversial to claim that imperatives involve this kind of fronting but I will argue for just that in the next section.

The S-initial fronting rules among the twelve grammatical phenomena under discussion are Topicalization (i), Directional Adverb Preposing (j) and COMP-Complement Preposing (l). Left Dislocation (h) and Complement Preposing (k) are not included here as examples of S-initial fronting rules. As was argued above (section I.5.), it is evident that Left Dislocation is not an S-initial fronting rule in

Swedish. The role of Left Dislocation in Swedish is also discussed in Andersson (1974b). The rule of Complement Preposing is discussed in Ross (1973a) under the name of SLIFTING (i.e. Sentence Lifting). This rule is given the following formulation by Ross, where it is clear that he regards the sub-clause as being lifted out of the matrix clause and Chomsky-adjoined to it (# is the sign for Chomsky-adjunction).

$$(6) \quad X - S(Y - S(\text{that} - S)S)S - Z$$

SD:	1	2	3	4	5
SC:	1	$4 \# \begin{matrix} (2 \\ S \end{matrix}$	\emptyset	\emptyset	$)_S$ 5

I accept Ross's analysis here for two reasons. First, I have no counter-arguments to it and secondly, it fits my data fairly well.

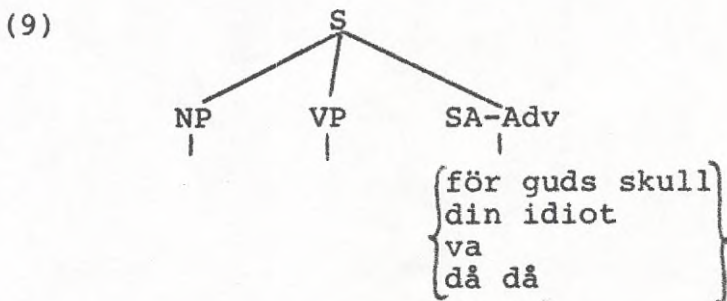
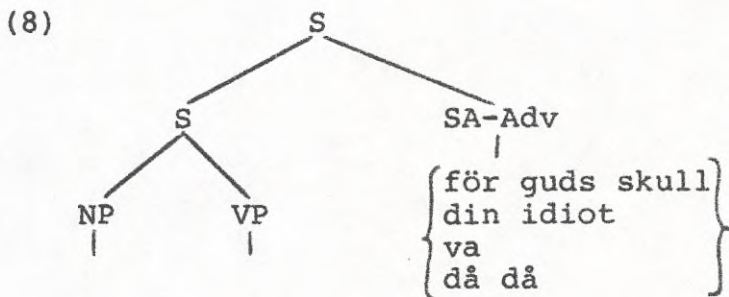
Let us go back to the S-initial fronting rules. The rows in the chart for phenomena (i), (j) and (l) have to be changed in accordance with (7) below, where a 0 is substituted for the * we had in the original chart. In other places, the lines remain as they were in the original chart, i.e. a 0 indicates that the sentence in question is ungrammatical because of the general restriction that only one S-initial fronting rule is allowed per sentence.

(7)	1	2	3	4	5	6	7	8	9	10	11	12	...	25
		0	0	0			0			0	0			

Maybe I should take a stricter line here and introduce zeroes in columns (17), (20), (21) and (23). However, this question is of little importance here because it does not substantially change the result of the test.

Next, I will discuss a very tricky problem concerning the S-final adverbial phrases för guds skull (b), din idiot (c), va (d) and då då (e). These adverbials can be called 'speech act adverbials'. The reason behind this terminology is that they differ from the so called sentence adverbials in the following way. Sentence adverbials like inte ('not') or kanske ('perhaps') modify the proposition

of the sentence in some way. The speech act adverbials, on the other hand, modify the utterance of the sentence. They indicate how the listener should interpret the sentence or they give reasons why the speaker says what he is saying at that moment. These speech act adverbials have no bearing on the truth value of the sentence to which they are attached (compare the very different semantic behavior of sentence adverbials). Section II.5. will be devoted to a discussion of the class of speech act adverbials. In section II.5., I will argue that sentences containing speech act adverbials in sentence final position have the structure of (8) rather than that of (9).



A problem peculiar to sentences with speech act adverbials that has to be considered here is that it is impossible to determine to which clause the adverbial is attached in a sentence like e.g. (10), which is identical to (13d) in the chart above.

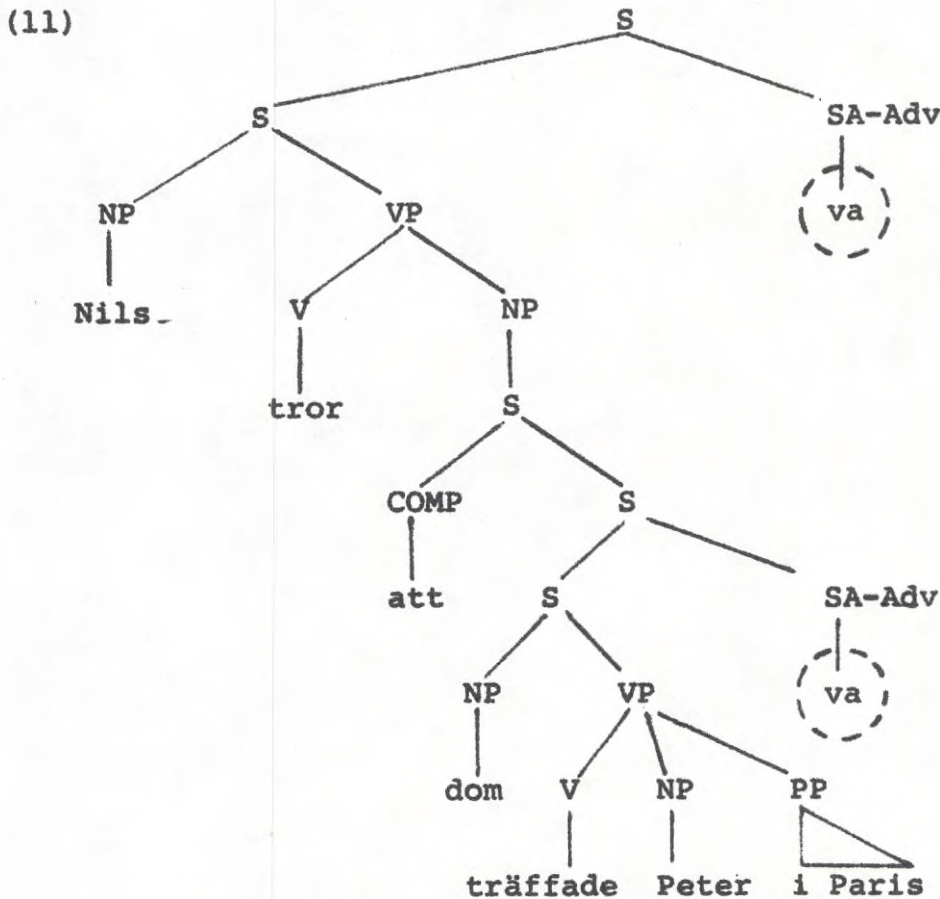
(10) contains va, which functions like an English tag-question.

(10) Nils tror att dom träffade Peter i Paris, va.

'Nils believes that they met Peter in Paris, { doesn't he (?) }
{ *didn't they (?) }'

As the English translation indicates, the tag-question has a different form when it occurs on the matrix sentence and when it occurs on the constituent sentence. The form of va does not change in this

or any other way. Therefore, it is impossible to determine which of the two possible positions va should be given in a structure representing sentence (10). The two positions that va could have are encircled in (11).



What should have been tested by (10) was, of course, whether va could occur on an S-complement of the verb tror ('believe'). Since it is impossible to distinguish between the two positions of va in structure (11), sentence (10) is useless for testing what was intended to be tested. Since (10) only has one possible English translation, there may be some reason to suspect that va may not occur on the lower clause.

This problem recurs for a great many of the example sentences above. It shows up not only in complements of certain verbs but also in sentences with adverbial clauses and with sentence final relative clauses. The easiest way out of the problem is certainly to introduce zeroes at all the critical places in the chart, thus indicating that these sentences are exempted from the comparison, but I am reluctant to do so, since so many sentences are involved that the

basis for comparison between these adverbials and the other grammatical phenomena will disappear.

What alternatives are there? The most obvious alternative is to change the sentence so the sub-clause will not be in final position any longer.

(12) ? Nils tror att dom träffade Peter i Paris, { för guds skull,
din idiot,
va (?),
då då, }

sedan han insett att de var därnere i affärer.

'Nils believes that they met Peter in Paris, { for heaven's sake
you idiot
didn't they }

after he had realized that they were down there on
business'

Similar examples can be constructed for other kinds of complements. However, there is a possible source of inconsistency involved in this procedure. It is clear that a sub-clause in non-final position is less apt to show main clause properties than one that occurs in final position.

(13) (a) Att dom inte träffade Peter i Paris är uppenbart.

'That they did not meet Peter in Paris is obvious'

(b) *Att dom träffade inte Peter i Paris är uppenbart.

(14) (a) Det är uppenbart att dom inte träffade Peter i Paris

'It is obvious that they did not meet Peter in Paris'

(b) Det är uppenbart att dom träffade inte Peter i Paris.

(13) shows that it is not possible to have main clause word order with respect to the order of the finite verb and a negation in a sub-clause in subject position. When the sub-clause is extraposed, however, it may occur with main clause word order, as is seen from (14b).

In (12), the subordinate clause did not appear in subject position. It occurred in object position followed by an adverbial clause. In such a position, a sub-clause may show main clause word order, as (15) shows.

(15) Nils tror att dom träffade aldrig Peter i Paris, sedan han insett att dom var därnere i affärer.

'Nils believes that they never met Peter in Paris, after he had realized that they were down there for business'

Considering sentence (16), (17) and (19), we see that adverbs like ju and väl (a) and tyvärr (f) as well as Topicalization (i) may occur in object clauses to tro ('believe') when these are followed by an adverbial clause. These sentences give further support for the correctness of the proposal to change the relevant examples in such a way that the sub-clauses do not occur in S-final position.

(16) Nils tror att dom träffade $\left\{ \begin{array}{l} \text{ju} \\ \text{väl} \end{array} \right\}$ Peter i Paris, sedan han hade läst rapporten.

'Nils believes that they metXXX Peter in Paris, after he had read the report'

(17) Nils tror att dom tyvärr träffade Peter i Paris, sedan han hade läst rapporten.

'Nils believes that they unfortunately met Peter in Paris, after he had read the report'

(18) Nils tror att Peter träffade dom i Paris, sedan han hade läst rapporten.

'Nils believes that Peter they met in Paris, after he had read the report'

The change indicated in (12) will be made in lines b (för guds skull), c (din idiot), d (va) and e (då då). The sentence types that need to be reconsidered in this way are 12-23, which is a rather large set of sentences. The list of sentences is given below. The numbers that are given to the sentences are identical to the numbers of these sentences in the previous list.

(12) (b) ?Dom sa att IFK spelade bäst, för guds skull, efter att sett matchen.

(13) (b) ?Dom tror att IFK spelade bäst, för guds skull, efter att ha sett matchen.

(14) (b) *Dom vet att IFK spelade bäst, för guds skull, efter att ha sett matchen.

- (15) (b) *Peter läser aldrig en bok därför att han har ju aldrig gått i skolan, för guds skull, eftersom han är född före första världskriget.
- (16) (b) *Peter läser mängder med böcker fastän han har ju aldrig fått någon utbildning för det, för guds skull, eftersom han bara fick gå i skolan i fem år.
- (17) (b) Conny, som ju har spelat i GAIS, för guds skull, har gått över till Norrby.
- (18) (b) *Jag betvivlar att New York Times är sämre än Göteborgsposten, för guds skull, efter att ha läst utredningen.
- (19) (b) *Jay ångrade att han skickade sin artikel till GP, för guds skull, efter att ha sett vad de gjorde med den.
- (20) (b) *Den älg som bodde i vår källare i vintras, för guds skull, såg jag idag.
- (21) (b) *Hela familjen hade somnat när gästerna kom, för helvete, fastän de försökte hålla sig vakna.
- (22) (b) *Dom undrade om New York Times är sämre än Göteborgsposten, för helvete, trots att de har läst utredningen.
- (23) (b) *Dom undrade vem som läser GP, för guds skull, trots att de har läst utredningen.
- (12) (c) ?Harry sa att Jerry kommer till Göteborg, din idiot, efter att ha sett programmet.
- (13) (c) ?Harry tror att Jerry kommer till Göteborg, din idiot, efter att ha sett programmet.
- (14) (c) ?Harry vet att Jerry kommer till Göteborg, din idiot, efter att ha sett programmet.
- (15) (c) *Harry slog till Eva därför att han gillar inte tjejer, din idiot, så fort han fick syn på henne.
- (16) (c) *Jag har alltid gillat fotboll fastän det har man ju inte så mycket för, din idiot, trots att jag aldrig ägt en egen läderboll.
- (17) (c) ?Vi mötte Peter, som ju inte gillar fotboll, din idiot, när vi var på väg hem.
- (18) (c) *Nils betvivlar att IFK vinner serien, din idiot, sedan han såg dem spela mot Skövde.
- (19) (c) *Nils ångrar att han gick på matchen, din knöl, därför att han har så mycket annat att göra.
- (20) (c) *Den flicka som vi träffade, din idiot, bor i Laxå.

- (21) (c) *Vi upptäckte inbrottet när vi kom hem från festen, din idiot, därför att han har så mycket annat att göra.
- (22) (c) *Jag undrar om han kommer hit, din idiot, trots att han har lovat.
- (23) (c) *Jag undrar vem som var här, din idiot, därför att jag hörde ett sånt mystiskt ljud.
- (12) (d) ?Nils sa att dom hade träffat Peter i Paris, va, fastän han hade läst rapporten.
- (13) (d) ?Nils tror att dom hade träffat Peter i Paris, va, fastän han hade läst rapporten.
- (14) (d) ?Nils vet att dom hade träffat Peter i Paris, va, fastän han hade läst rapporten.
- (15) (d) *Nils gick hem från festen därför att han gillar inte tjejer, va, trots att han hade lovat att stanna.
- (16) (d) *Nils stannade på festen fastän han inte gillar tjejer, va, när vi bad honom.
- (17) (d) Jerker, som vi träffade nyss, va, har köpt sig en ny båt.
- (18) (d) *Dom betvivlar att Peter träffade Henry i Paris, va, fastän dom har hört nyheterna.
- (19) (d) *Knut ångrade att han bjudit in linqvisterna, va, trots att han var tvungen till det.
- (20) (d) *Den man som Knut bjudit in, va, vägrade att lämna festen.
- (21) (d) *Fred kom hit när terminen var slut, va, trots att han lovat att komma tidigare.
- (22) (d) *Janne undrar om du har sett min fru, va, fastän du sa att du inte hade det.
- (23) (d) *Janne undrar vem du träffade i baren, va, fastän han borde veta det bäst själv.
- (12) (e) ?Nils sa att du gick väl hem, då då, trots att vi intygade motsatsen.
- (13) (e) ?Nils trodde att du gick väl hem, då då, trots att vi intygade motsatsen.
- (14) (e) *Nils visste att du gick väl hem, då då, trots att vi intygade motsatsen.
- (15) (e) *Nils gick väl hem tidigt från festen därför att han inte gillar tjejer, då då, fastän han tycker om sång och dans.
- (16) (e) *Nils stannade länge på festen fastän han gillar väl inte tjejer, då då, därför att han fick ingen taxi.

- (17) (e) Jerker, som vi väl träffade nyss, då då, har köpt sig en ny båt.
- (18) (e) Dom betvivlar att Knut träffade Henry i Paris, då då, eftersom de läst rapporten.
- (19) (e) Knut ångrade att han bjudit in lingvisterna, då då, fastän han ju inte ville det.
- (20) (e) Den man som Knut bjudit in, då då, vägrade att lämna festen.
- (21) (e) Fred kom hit när terminen var slut, då då, trots att han lovat att komma mycket tidigare.
- (22) (e) Jag undrar om du har sett min fru, då då, trots att du intygat motsatsen.
- (23) (e) Jag undrar vem du träffade i baren, då då, fastän jag borde naturligtvis veta det.

When these changes are taken into account, we get a new chart of the form shown on the next page. The three changes discussed are the following:

I: Zeroes are introduced in columns 2, 3, 4, 7, 10, 11, 22 and 23 for lines a and f. These changes are due to restrictions on grammatical phenomena with respect to mood.

II: Zeroes are introduced in columns 2, 3, 4, 7, 10 and 11 for lines i, j and l. These changes are due to the general restriction on grammatical operations that not more than one S-initial fronting is allowed per clause.

III: New sentences and judgements are given for lines b-e in sentence types 12-23. These sentences have been enclosed in a square in the chart on p.99. The changes are due to the difficulty in judging some of the sentences of the previous list.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
<u>ju, väl</u>	a:	OK	0	0	0	OK	OK	0	OK	OK	0	0	OK	OK	OK	OK	OK	*	*	OK	?	0	0	*	*
<u>för guds skull</u>	b:	OK	OK	OK	OK	OK	OK	*	*	*	*	?	?	*	*	OK	?	*	*	*	*	?	?	*	*
<u>din idiot</u>	c:	OK	OK	OK	OK	OK	OK	*	*	*	*	?	?	*	*	?	*	*	*	*	*	*	*	*	*
<u>va</u>	d:	OK	OK	OK	OK	OK	OK	*	*	*	*	?	?	*	*	OK	*	*	*	*	*	*	*	OK	OK
<u>då då</u>	e:	OK	OK	OK	OK	OK	OK	*	*	*	*	?	?	*	*	OK	*	*	*	*	*	*	*	*	*
<u>tyvärr</u>	f:	OK	0	0	0	OK	OK	0	OK	OK	0	0	OK	OK	OK	OK	OK	*	*	?	?	?	0	0	*
<u>härmed</u>	g:	OK	OK	OK	OK	OK	OK	*	OK	OK	OK	*	OK	?	OK	OK	OK	*	*	?	?	*	*	*	*
<u>Left Disl.</u>	h:	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	*	?	*	*	*	*	*	*	*
<u>Topicalization</u>	i:	OK	0	0	0	OK	OK	0	OK	OK	0	0	OK	OK	OK	OK	?	?	?	?	?	*	*	*	*
<u>Dir. AdvP</u>	j:	OK	0	0	0	OK	OK	0	OK	OK	0	0	OK	OK	OK	OK	?	*	*	*	*	*	*	*	*
<u>Compl. P.</u>	k:	OK	OK	OK	?	OK	OK	OK	*	*	*	*	*	*	*	?	?	*	*	*	*	*	*	*	*
<u>COMP-Compl. P.</u>	l:	OK	0	0	0	OK	OK	0	OK	OK	0	0	?	?	*	*	*	*	*	*	*	*	*	*	*

Four symbols are used in representing speaker's judgements of the sentences.

OK - Indicates that the grammatical phenomenon in question may occur in the sentence-type under discussion.

* - Indicates that the grammatical phenomenon in question may not occur in the sentence-type under discussion.

? - Indicates that it is hard to decide between OK and *.

0 - Indicates that the sentence in question is left out of the comparison (its ungrammaticality is due to factors other than those having to do with clause-type).

This new chart is far clearer than the earlier one and it can serve as basis for a discussion of restrictions on grammatical phenomena of different sorts. Some aspects of these restrictions will be discussed in the next four sections.

II.4. Mood

The term 'mood' has sometimes been taken to refer to different characteristics of the verb and sometimes to different "attitudes of mind" that are expressed by different sentence-types. The first use can be classified as being morphological and the second as semantic (see Jespersen (1968: chapter XXIII) for a discussion of these two uses).

Beckman (1916: 107), taking the first approach, states that the Swedish verb has three moods: indicative, subjunctive and imperative. Jespersen (1968: 313) seems to settle for these three categories as well but in his case, the language under consideration is English.

Traditional grammars often distinguish between moods and types of sentences or utterances. The following chart indicates the classification of Beckman (1916).

mood:	classes of sentences:
declarative	declarative (narrativ sats)
subjunctive	interrogative (frågesats)
imperative	imperative (uppmaningssats)
	optative (önskesats)
	interjection (utropssats)

In his classification of sentences, Beckman uses semantic criteria, while his classification of mood is strictly formal. Personally, I doubt that both types of classifications (moods and classes of sentences) are needed in the syntactic study of the language.

Jespersen also sees mood as a formal category of language:

"Further it is very important to remember that we speak of 'mood' only if this attitude of mind is shown in the form of the verb: mood thus is a syntactic, not a notional (=semantic - LGA) category."

(Jespersen 1968: 313)

In my opinion, Jespersen's use of the term 'mood' is morphological rather than syntactic. On the other hand, I intend to use the term in a syntactic sense. The reason for this terminological discussion is that I want to include 'interrogative' among the moods of Swedish, as well as of English for that matter.

Furthermore, it is evident that the rather vague expression 'attitude of mind' that we find in Jespersen's quotation plays an important role in the definition of mood. Not all different forms of the verb represents different moods. Only when a different form of the verb represents a separate attitude of mind or a separate type of speech act, to use a more recent terminology¹², do we talk about a different mood. Different tense-endings, infinitives and participles are normally not counted as separate moods. Here, I will consider sentences as representing certain moods only when the specific syntactic characteristics of the sentence are associated with a certain type of speech act. According to this definition of mood, declarative, imperative and interrogative are clear cut cases of moods. These three moods have clear syntactic characteristics and are easily distinguished. Just as clear is that it amounts to different things to make a statement, ask a question or give a command. It is also evident that a declarative sentence in certain situations may count as an order or perhaps as a question. (1) is normally a statement but can also be a command under certain circumstances.

(1) Erod opens the door.

The fact that a sentence in a certain mood may have the illocutionary force that sentences of another mood normally have is well known and has been discussed in the speech act literature for some time (see Austin (1962), Searle (1969) and Hudson (1975)). This fact does not constitute a counter-argument to the proposed definition of mood.

So far, I have said that declarative, imperative and interrogative are moods of Swedish. What about subjunctive? First of all, it should be noted that subjunctive is very uncommon in modern Swedish. Secondly, to the extent that it is used it is not at all clear that it represents a special attitude of mind, speech act or sincerity condition. In view of this, I choose to disregard 'subjunctive' as a mood of Swedish. This is not an important point in the discussion and the choice I have made has no bearing on what will be said in the following.¹³

Now, consider the following sentence taken from Hudson (1975: 8) and its Swedish counter-part in (2b).

- (2) (a) What a pretty dress that is!
(b) Vilken snygg klänning det är!

Hudson regards a sentence like (2a) as representing the mood of 'exclamatives' and like him, I regard (2b) as a Swedish sentence in the exclamative mood. To justify this, it has to be shown that these exclamatives differ syntactically from other sentence structures. Hudson (1975: 8-9) has done this for English. (2b) is most similar to an interrogative sentence in Swedish but it differs from it in certain respects.

Compare (3) and (4).

- (3) Vilken bil har han köpt?
'Which car has he bought?'
- (4) Vilken bil han har köpt!
'What a car he has bought!'

(3) is a question and (4) is an exclamation. They differ in the following ways.

- i. (3) shows subject-verb inversion but (4) does not. In this respect (4) is more like a subordinate clause. Embedded questions do not show subject-verb inversion.
- ii. In my own dialect, sicken is substitutable for vilken in (4), but never in (3).

- iii. In (4), en sådan bil ('such a car') can be substituted for vilken bil without a change in meaning, but this may never be done in (3).
- iv. Another difference is that the interrogative word hur ('how') corresponds to va(d) ('what') or så ('so') in exclamatives. Compare (5) and (6).

(5) Hur djupt är det?
'How deep is it?'

(6) Va djupt det är!
'How deep it is!'

- v. Exclamatives but not interrogatives can be embedded under phrases like Det är otroligt ('It is unbelievable').

(7) Det är otroligt {vilken bil han har köpt.}
 {*vilken bil har han köpt.}
'It is unbelievable {what a car he has bought.}'
 {*which car has he bought. }

These five differences should be enough to establish the syntactic distinction between interrogatives and exclamatives. The semantic/pragmatic differences are too obvious to require discussion. On the other hand, we must ask ourselves whether structures of the type exemplified in (2), (4) and (6) are the only members of the category of exclamatives. Hudson says that they are, without discussing other structures that potentially belong to this category.

What structures could then be considered as cases of exclamatives besides the ones mentioned? This question will be discussed below but first, I want to make a brief summary of the discussion up to now. Moods are taken to be syntactic categories and I have argued that the grammar of Swedish should contain four moods. These four moods (exclamative, interrogative, imperative and declarative) will be discussed in the following sub-sections.

In a recent grammar of English (Quirk et al. 1972), the same four categories of mood are found. This grammar also recognizes how- and what- structures as exclamatives, but no other structures. How-

ever, as the following quotation indicates, the authors of this grammar do not exclude the possibility of there being other members of the category of exclamatives, rather they suggest the opposite.

"In discussing exclamatives as a formal category of sentences, we restrict our attention to the type of exclamatory utterance introduced by what or how."

(Quirk et al. 1972: 406)

Exclamatives

In ordinary conversation, many utterances are called exclamations, for example Oh God! and Damn it! These one or two word utterances will not be discussed below. Here, I will only consider sentences and sentence-like structures as exclamatives. Next, I will list a set of structures that I think should be classified as exclamatives. These structures can be grouped together into different classes as is indicated below. The first type has already been discussed.

wh-type

(8) Vilken söt flicka vi såg!

'What a pretty girl we saw!'

One problem with this type is that we find utterances like (9) besides (8). The problem is that (9) is not a sentence, nor a clause, nor a sentence-like structure.

(9) Vilken söt flicka!

'What a pretty girl!'

Yet, structures like (9) should be recognized as exclamatives. One possibility is to derive them from sentence-like structures like (8).

Of the same type as (8) is (10), where the wh-word va corresponds to the hur of questions, as was mentioned above.

(10) Va fort hon sprang!

'How fast she ran!'

Another structure that also belongs to the wh-type is represented in (11). This structure has the same form as free relatives. It does not have an explicit wh-word but can still be regarded as a wh-structure, just as relative clauses can be regarded as wh-structures even though they do not always contain wh-words.

(11) Den som ändå kunde hitta en teori till de här data!

'The one who only could find a theory to these data!'

meaning: 'I wish I could find a theory for these data!'

A final example of a structure that I regard as a member of the wh-type of exclamatives is represented in (12).

(12) Som vi jobbade!

'How we worked!'

In Swedish, we can marginally also say Hur vi jobbade!, with the meaning of (12) but (12) is far more common. However, it should be clear that (12) is related to a wh-structure in some way. Possibly, by a deletion of the wh-word (hur). Note that we also have the form Va vi jobbade! in Swedish, which is just as common as (12) and which shows the correspondence between hur and va(d) discussed above.

declarative type

With this term, I will refer to such exclamatives as (13).

(13) Att du inte kan sluta suga på tummen!

'That you cannot stop sucking your thumb'

'It is annoying that you cannot stop sucking your thumb'

This type expresses some kind of irritation (in some cases: admiration) over the fact referred to in the sentence. The formal characteristic of this type of exclamative is that it is introduced by att (corresponding to the English complementizer that). Note that this type of sentence was referred to as sentence type 25 in the discussion of section II.3.

The other member of this type is represented in (14), which is

a good response to an utterance like Ni fick en massa fisk, antar jag ('You got a lot of fish, I suppose').

(14) Att vi fick!

'That we got!'

meaning: 'We sure did!'

Sentences of this type can only be used as a response to statements and questions. They have an emphasizing function besides giving an affirmative response.

interrogative type

An example of an exclamative sentence of this type is given in (15). Such sentences were referred to as sentence type 24 in the preceding section. These sentences express a wish.

(15) Om hon bara ville komma!

'If she only would come!'

'I wish she would come'

The formal characteristic of this type is that these structures are introduced by the complementizer om (if), which is normally used in conditional clauses and embedded questions. In expressing a wish, structures like (15) are similar to those of (11). Such sentences are sometimes in traditional grammar recognized as a special category of sentences called 'optative' or simply 'sentences expressing a wish' (Beckman 1916: 234).

Another structure which also belongs to the interrogative type of exclamatives is exemplified in (16). Sentences of this type, like that of (14), function as responses to previous questions. Assume that someone asks Fick ni mycket fisk? ('Did you get a lot of fish?'), then we may respond by (16).¹⁴

(16) Om vi fick!

'If we got'

meaning: 'We sure did'

This is not only an affirmative answer to the question but it also

expresses how impressed we are by the amount of fish we got. Both (14) and (16) require heavy stress on the complementizer, which is a surprising fact, since complementizers are not usually stressed. Another strange fact is that (14) and (16) appear to be functionally equivalent. One would perhaps guess that the declarative type occurred after declarative sentences and that the interrogative occurred after interrogative sentences. However, (14) and (16) are interchangeable in the contexts under discussion, at least in my own dialect. One difference between (14) and (16) is that (16) may be reduced to a one-word sentence Om! (a sentence consisting of only a complementizer!) but this may not happen to (14).

§ § § § §

The structures discussed above are those that I want to call exclamative. The following two questions are important in discussing this class of exclamatives:

What are their formal characteristics?

What are their semantic characteristics?

The formal characteristic of the sentences above is that they all consist of subordinate clauses standing by themselves, i.e. a subordinate clause without an accompanying main clause. The three obvious cases of complementizers in Swedish are att, om and som. As we have seen, all three occur in exclamatives. Som is the complementizer of wh-structures. Since there is no som present on the surface in sentences (8) and (10), we may doubt their status as sub-clauses. However, in these sentences no subject-verb inversion has taken place even though the sentences have wh-elements in initial position. This is what we expect of sub-clauses but something that never happens in a main clause. The formal characteristic of exclamatives then is that they are realized as sub-clauses in isolation. This definition can be compared with the one provided by Quirk et al.

"Exclamatives are sentences which have an initial phrase introduced by what or how, without inversion of subject and operator (=finite verb - LGA)."

(Quirk et al. 1972: 386)

This definition is far less general than the one proposed here. This, of course, is due to the fact that the grammar of Quirk et

al. only counts what- and how-structures as exclamatives.

Let us now look at the semantic or functional characteristics of a class of exclamatives as wide as suggested here. Quirk et al. state that 'exclamations are primarily for expressing the speaker's own feelings'. According to this functional characteristic all the structures listed above fall into this class of exclamatives. The problem with this definition is, of course, that it is too vague to be useful.

The sincerity condition that Hudson (1975: 10) gives for exclamatives is more specific: 'The speaker is impressed by the degree to which a property defined in the proposition is present'.

However, this sincerity condition is constructed only for what- and how-exclamatives and it may be asked how well it covers the other structures considered here as exclamatives. In (i) - (iii), I have classified the exclamative sentences (8) - (16) into three groups according to semantic criteria.

i. The speaker is impressed by the extent to which something is the case.

(8) Vilken söt flicka vi såg!

(9) Vilken söt flicka!

(10) Va fort hon sprang!

(12) Som vi jobbade!

(14) Att vi fick!

(16) Om vi fick!

ii. Expressing a wish on the part of the speaker.

(11) Den som ändå kunde hitta en teori till de här data!

(15) Om hon bara kunde komma!

iii. Expressing the speaker's irritation or admiration over some fact.

(13) Att du inte kan sluta suga på tummen!

(13) expresses the speaker's irritation while (17) expresses his admiration over another fact.

(17) Att han kunde klara av den situationen!

'That he could handle that situation'

'It is really good that he could handle that situation'

When as many structures as these are taken into account, it appears that Hudson's sincerity condition is too specific to cover all the instances. Rather, it seems that we have to be content with the definition of Quirk et al. 'exclamations are primarily for expressing the speaker's own feelings'.

It is clear that an exclamative utterance does not make a statement - rather the content of the sentence is implied by the utterance. It refers to a fact or a situation rather than stating it. In this respect, exclamative sentences are not only syntactically subordinate but also semantically subordinate. Hence, exclamatives belong to CT4. As can be seen from the charts in section II.3, sentence-types 24 and 25 show the same syntactic characteristics with respect to domains as other members of CT4.

Declarative, interrogative and imperative

The declarative, interrogative and imperative moods do not need much discussion in this context. Their forms are well-known and rather uncontroversial.

A declarative sentence is characterized by the presence of both subject and predicate, where the subject precedes the verb unless another constituent of the sentence has been fronted.

An interrogative sentence is characterized by having either the verb or a wh-word in initial position. Like declarative sentences, interrogatives may not have their verbs in the imperative form.

An imperative sentence is characterized by having the verb in sentence initial position and in the imperative form.

The following chart indicates how the two features of 'S-initial verb' and 'verb in imperative form' can be used to distinguish these three moods.

	declarative	interrogative	imperative
S-initial verb	-	+	+
V imperative form	-	-	+

In connection with the syntactic characteristics of sentences in the imperative mood, a comment on the transformational treatment of imperatives is in its place. What most transformational treatments of the imperative have in common is a deletion of a 2'nd person subject of the sentence. At least for Swedish, this is an incorrect treatment of imperatives. Swedish imperatives, especially in the spoken language, often contain a subject, as the following examples indicate.

(18) (a) Kom du hit!

'Come you here - 'Come here!'

(b) Gå du och lägg dig!

'Go you to bed - 'Go to bed!'

(c) Ta du din säng och gå!

'Take you your bed and leave - 'Take your bed and leave!'

As these sentences show the deletion of the subject is not obligatory. These imperatives without subject-deletion are not new or marginal things in the language. In his grammar from 1916, Beckman gave examples of sentences like (18) (Beckman 1916: 117).

Imperative sentences in Swedish are characterized by the presence of an imperative verb form in sentence-initial position.

As for the derivation of Swedish imperative clauses in a transformational grammar, I suggest the following steps.

(19) (a) Give the verb imperative form.¹⁵

(b) Move the imperative verb into S-initial position.

(c) Optional deletion of the subject.

This proposal is rather similar to that given for English in Stockwell et al. (1973), which contains an optional deletion of the subject.¹⁶

I have now defined the four different moods that I think should be recognized in a grammar of Swedish. In the next sub-section, I will give a few examples of restrictions on grammatical phenomena with respect to mood.

Restrictions with respect to mood

In section II.3, some examples were given of grammatical phenomena that only occur in declarative sentences. These were the adverbials ju and väl (a) and tyvärr (f). Hence, we know that certain morphemes may only occur in declarative sentences. It is not hard to find more examples of adverbs that have such a restricted distribution. Olyckligtvis ('unfortunately') is one additional example.

These words are restricted to declaratives because of their meaning. Their meaning is such that they do not fit in other moods than the declarative. How such restrictions are to be stated will be further discussed below (section II.7, in particular).

The next problem to be discussed is whether there are morphemes and phrases that are restricted in their occurrence to one of the other moods. As will be shown in the discussion below, such elements are rather hard to find. Next, I will go through each of the other moods and look for syntactic peculiarities in them.

Interrogatives: The rather unusual morpheme månne may be an element that is restricted to interrogatives. Månne occurs in yes-no-questions as well as in wh-questions as the following sentences show. I have translated månne with 'I wonder', although this is not a perfect translation.

(20) Har Henry varit i Kairo, månne?

'Has Henry been to Kairo, I wonder?'

(21) När kom hon hem i natt, månne?

'When did she get home last night, I wonder?'

According to Beckman (1916: §211), however, månne may also precede a declarative sentence, thus making it into a question.

(22) Månne han redan är här?

'I wonder, he is already here?'

Sentences like (22) sound strange to me. Nevertheless, such sentences occur in some people's speech even today. In my own dialect, however, månne is only used after interrogatives, if it is used at all. Interestingly enough, månne appears to be restricted to sentence-initial position when it occurs in a declarative sentence. Even in a väl-question, it is impossible to place månne at the end of the sentence.

(23) *Du har väl varit i Stockholm, månne?

'You have been to Stockholm, haven't you, I wonder?'

From this discussion, we can conclude that månne may be regarded as a phrase that is restricted to interrogatives. At least, this seems to be so when månne occurs sentence-finally. However, the facts are far from clear and there are obvious dialect differences (or perhaps, differences in style).

Imperatives: The first thing that comes to mind is the phrase är du snäll ('please', 'if you'd be so kind'), which can be tacked on to imperatives. The sequence är du snäll (literally 'are you kind') occur in many other contexts but this is not relevant. The important thing is that är du snäll is tacked on to imperatives in sentence-final position.

(24) Hämta lien är du snäll!

'Fetch the scythe, please!'

(25) *Du kan hämta lien, är du snäll.

'You can fetch the scythe, please'

However, this phrase may occur after both väl-questions and interrogatives that express requests.

(26) (a) Du kan väl hämta lien, är du snäll!

'You can XXX fetch the scythe, please'

(b) Kan du hämta lien, är du snäll!

'Can you fetch the scythe, please'

Hence, är du snäll may occur after imperatives and after questions that express requests, which means that this phrase is not confined

to syntactically imperative sentences.

Another expression which seems at first sight to occur only in imperatives is eller jag tar livet av dig ('or I'll kill you'). This phrase occurs after ordinary imperatives, as in (27).

- (27) Låna mig en femma, eller jag tar livet av dig!
'Lend me a dollar, or I'll kill you'

This phrase may not occur after questions that express requests.

- (28) *Du kan väl låna mig en femma, eller jag tar livet av dig!
'You can XXX lend me a dollar, or I'll kill you'
(b) *Kan du låna mig en femma, eller jag tar livet av dig!
'Can you lend me a dollar, or I'll kill you'

However, this phrase may occur after declaratives that express commands.

- (29) Nu lånar du mig en femma, eller jag tar livet av dig!
'Now you lend me a dollar, or I'll kill you'

Hence, neither är du snäll nor eller jag tar livet av dig is an example of a phrase that is restricted to syntactically imperative sentences. As for the difference between är du snäll and eller jag tar livet av dig, we can note that är du snäll occurs after soft commands (let us call them requests), while eller jag tar livet av dig occurs after more harsh commands. This difference in occurrence between the two phrases can be attributed to the meaning or function of the two phrases. What the two phrases have in common is that they only occur after clauses that semantically/pragmatically express commands.

Exclamatives: One interesting restriction with respect to domains is the occurrence of the morphemes ändå and bara in exclamatives and especially those of type (ii), those expressing a wish. Ändå normally means something like 'in spite of that/something' and bara means 'only'. In the context of exclamatives of type (ii), however, these morphemes lose their original meaning and are present

only to express a wish. It might even be asked whether (30) would express a wish if neither of the morphemes ändå and bara were present.

(30) Om hon {ändå} ville komma!
 {bara}

If she only would come

'I wish she would come'

There are sentences where the presence of bara ('only') is a necessary condition for them to count as exclamatives. As has been said above, conditional clauses sometimes occur in the form of main clause interrogatives. This is also the case with exclamative conditional clauses. Hence, we find sentences like (31).

(31) Ville hon bara komma!

Would she only come

'I wish she would come'

However, if bara is deleted from (31), the sentence can no longer be an exclamative but only an interrogative.

(32) Ville hon komma?

'Did she want to come?'

Ändå and bara also occur in other types of exclamatives. In (33) and (34), the original meanings of ändå and bara disappear.

(33) Vad snygg hon är ändå!

'How pretty she is!'

(34) Att du bara inte kan sluta röka!

That you only cannot stop smoking

'It is annoying that you cannot stop smoking'

In spite of the fact that there is a close connection between the mood 'exclamative' and the morphemes bara and ändå, it would be wrong to say that these morphemes only occur in exclamatives. At least one of them, bara, may also occur in imperatives and interrogatives.

(35) Släng böckerna bara!
'Throw away the books only!'

(36) Gick hon hem bara?
'Did she go home only?'

Ändå may for example occur in väl-questions.

(37) Hon gjorde det väl ändå inte med flit?
'She didn't do it on purpose, did she?'

From this discussion, it must be concluded that it is very hard, if not impossible, to find morphemes and phrases that are restricted to only one of the four moods, except for the declarative mood. Whenever a morpheme or phrase was found that appeared to be restricted to one mood, it was possible to find sentences of another mood that allowed this element when the sentence performed a function identical or similar to that of the first mood. The only mood that clearly has elements restricted in distribution only to that mood is the declarative. In all the cases discussed above, I think it is correct to say that the distribution of the elements is determined by the meaning or function of these elements. How such facts are to be handled in a grammar will be discussed in sections II.6. and II.7.

II.5. Speech act adverbials

In this section, I will discuss phenomena (b)-(e) in a larger context. För guds skull (b), din idiot (c), va (d) and då då (e) are all what I want to call speech act adverbials. These four phrases are called speech act adverbials because they do not contribute anything to the information about the world given by the clause on which they occur. Rather they indicate how the listener should understand the sentence.

In section II.2., where I described the twelve grammatical phenomena to be investigated, I gave brief descriptions of the functions of these four speech act adverbials. In Andersson (1975), more detailed descriptions are given of these four as well as other speech act adverbials.

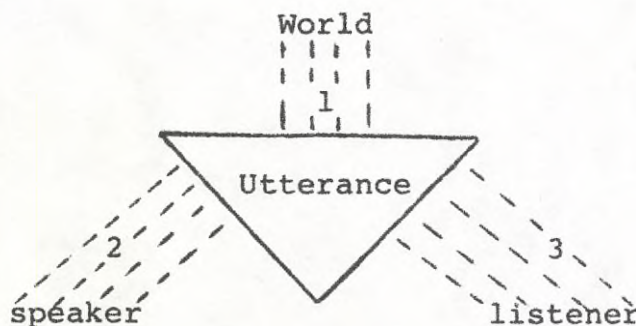
I will only make a few general points about speech act adverbials here. Just as a sentence adverbial is defined as an adverbial modifying a sentence, so a speech act adverbial is defined as an adverbial modifying a speech act. With this in mind, we can compare the following two sentences.

- (1) Nixon was a good president.
- (2) Nixon was a good president, you idiot.

(1) and (2) make the same statement. If one is true, so is the other. However, there are situations where (1) might be appropriate but not (2), in a televised speech by president Ford, for example. By adding you idiot ('din idiot') to a statement, the speaker indicates that the truth of the statement is obvious and that there is no need to repeat it time after time.

To clarify the function of speech act adverbials, we can use Bühler's schema of a normal speech situation (Bühler 1934). The utterance has a relation to the world (1). This is the relation studied in semantics. But in addition to this, the utterance also has a relation to the speaker (2) and a relation to the listener (3). Speech act adverbials are linguistic (as opposed to extra-linguistic) elements indicating what relations (2) and (3) are like. The speaker may indicate his own attitude towards what he is saying or he may give reasons for saying what he says. He may also indicate to the listener how he should understand what is said. Hence, speech act adverbials have to do with relations (2) and (3) in the following figure.

(3)



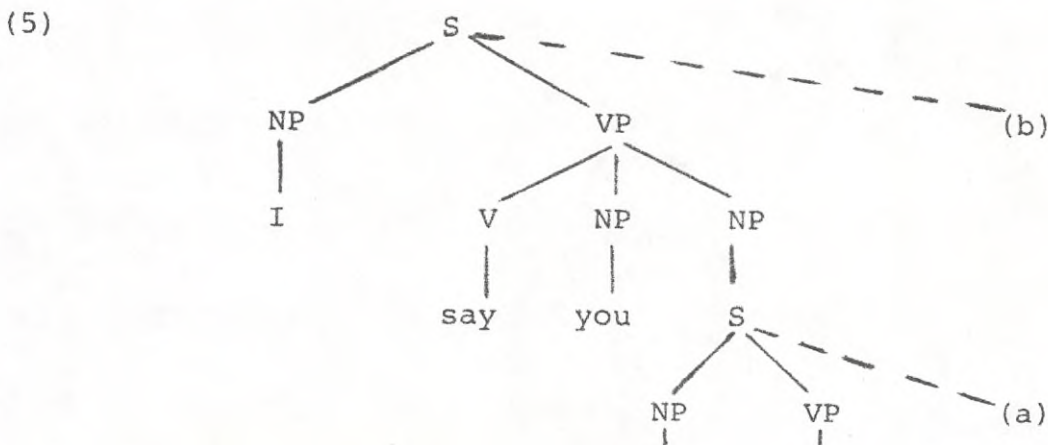
Not only do these idiomatic expressions serve as speech act adverbials - ordinary clauses do as well. Let me bring up one example that has been discussed in the linguistic literature. Rutherford

(1970:100) states that a sentence like (4) is potentially ambiguous. Intonation is likely to disambiguate the sentence.

(4) He beats his wife because I talked to her.

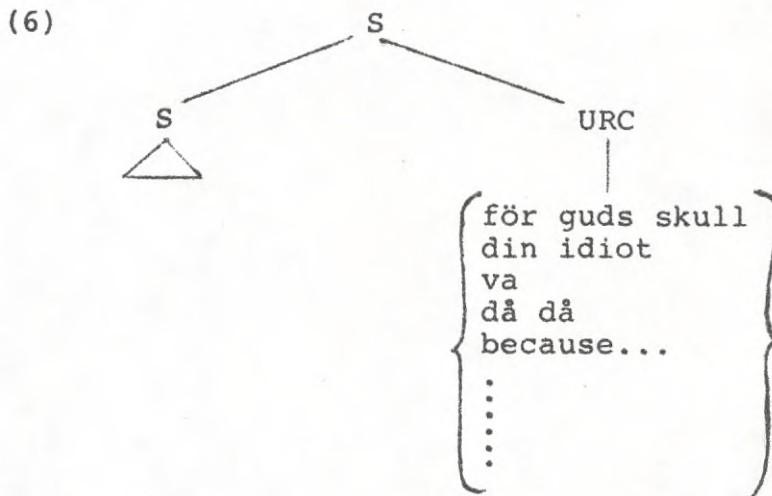
This sentence may mean that he beats his wife and the reason for this is that I talked to her. On this reading, the reason adverbial is used in its ordinary causal sense. On the other reading (with comma-intonation), the reason adverbial modifies the speech act rather than the main clause. On this reading, (4) may be paraphrased as 'He beats his wife and I can state this because I talked to her and she told me so'. In this use, the causal clause functions as a speech act adverbial. As a speech act adverbial, the sub-clause gives the reasons why the speaker makes his statement.

In distinguishing the two uses, Rutherford argues in favor of the so-called performative analysis. In the first interpretation of (4), Rutherford assigns the causal clause a position like (a) in (5) and in the second interpretation, position (b). Rutherford supplies more elaborate structures but (5) conveys the distinction he wants to make¹⁷.



This means that there is a structural difference between the two uses of the adverbial clause. It is not clear to me how Rutherford wishes to maintain this structural difference when Performative Deletion (the rule which deletes the performative matrix clause - the top S of (5)) has been applied. The intonation difference between the two uses of the causal clause indicates that this difference should be maintained in surface structure.

As I am sceptical about the performative analysis, I want to suggest an analysis of speech act adverbials other than that of (5).¹⁸ My suggestion is that these sentence-final speech act adverbials are placed in the position called URC (Upper Right Corner) in (6).



After these general remarks about speech act adverbials, we can return to the restricted distribution of phenomena (b) - (e). It is not the fact that these four phrases are speech act adverbials that predicts their restricted distribution. It is rather the fact that they appear in position URC of (6) that predicts it. The argument behind this statement is twofold. First, väl and probably also ju are speech act adverbials but they may occur in CT2 and CT3, while phenomena (b) - (e) can hardly do so.¹⁹ Secondly, the rule of Complement Preposing (k) has the same restricted distribution as (b) - (e), i.e. it occurs more or less only in CT1. Complement Preposing relates sentences (7) and (8).

(7) They hope that the president is honest.

(8) The president is honest, they hope.

A clause like they hope in the position it has in (8) is called a parenthetical clause (Urmson 1963).²⁰ According to Ross (1973a), these parenthetical clauses are situated in the position occupied by URC in (6) (see Ross's formulation of the rule SLIFTING (1973a: 82). There is thus a structural similarity between parenthetical clauses and speech act adverbials in sentence final position. Another indication of this structural similarity is that neither speech act adverbials nor parentheticals may be clefted, as the

following sentences show.

- (9) (a) The president is honest, because they said so on the news.
(b) *It is because they said so on the news that the president is honest.

- (10) (a) The president is honest, they believe.
(b) *It is they believe that the president is honest.

In general, no element in the URC position of (5) may be clefted. The reason is certainly that these elements are never essential parts of the statements made. This also indicates that there is a functional similarity between speech act adverbials and parentheticals. Neither belongs to the statement made, rather they indicate the circumstances accompanying the statement. This functional similarity may even be so good that it could be claimed that parentheticals really are speech act adverbials. The following generalization about parentheticals substantiates this hypothesis: 'They help the understanding and assessment of what is said rather than being part of what is said.' (Urmson 1963: 240). For the time being, however, I will keep this as a hypothesis and not make it into a claim.

The cleft construction is a fairly good test for checking whether a certain phrase is a speech act adverbial or not. If a phrase can be clefted, it is not a speech act adverbial (or a parenthetical clause) and if it cannot be clefted, it is a speech act adverbial, a parenthetical clause or something else (like the negation not, which cannot be clefted.). The following two sentences end with a prepositional phrase but only the PP in the second one is a speech act adverbial.

- (11) (a) Henry went to Spain for two weeks.
(b) Henry went to Spain for heaven's sake.

- (12) (a) It was for two weeks that Henry went to Spain.
(b) *It was for heaven's sake that Henry went to Spain.

The scope of both parenthetical clauses and speech act adverbials is the whole sentence and not some part of the sentence. This is why they only marginally occur after sub-clauses of CT3. When they occur after these, the sub-clause is interpreted as a separate statement. They may, for example, occur after non-restrictive relative clauses and these clauses may be relatively autonomous to the rest of the sentence.

That speech act adverbials require the whole sentence as their scope and not some part of the sentence is rather natural. Their function is to modify a speech act, be it a statement, question or command. Parts of sentences such as sub-clauses are not normally counted as separate speech acts.

What I want to say, then, is that there is not a general prohibition against speech act adverbials in subordinate clauses. Speech act adverbials are usually not present in sub-clauses because these normally do not constitute separate speech acts.

These generalizations about speech act adverbials leave one additional fact to be explained. The morphemes discussed under phenomenon (a), ju and väl, should probably also be regarded as speech act adverbials. Yet, their domain is larger than the domain of the phrases discussed in this section. Furthermore, härmed ('hereby') has a domain like that of phenomenon (a) and it seems reasonable to claim that the clause in which härmed occurs must be a separate speech act. We must, then, seek an explanation for the fact that sentence final speech act adverbials have more restricted domains than other speech act modifying elements. I believe the explanation is to be given in terms of position. Härmed, ju and väl all occur in nexus adverbial position. In this position, the scope of the adverbials is evident. The scope is the sentence in which they occur and all the material dominated by it. It is not so easy to determine the scope of the sentence final speech act adverbials when they occur after complex sentences (compare the discussion on p. 92 f.). An example showing how the listener may have difficulties in interpreting a sentence with an SA-adverbial in sentence-final position is given in the next section where the discussion returns to the rule of Complement Preposing.

The speech act adverbials require that the sentence in which they occur constitutes a separate speech act. This partially explains the rather strange judgements I received for the speech act adverbials (b) - (e) in sentence-types (24) and (25). These two sentence-types represented independent sub-clauses, i.e. att- and om-clauses without an accompanying main clause. As can be seen from the chart on p. 99, all the twelve grammatical phenomena under consideration gave undisputably ungrammatical results for these two sentence-types, except for the sentence-final SA-adverbials, where I received very diverging judgements. On this point, the chart looks much nicer than the sum of judgements I received because it represents only the consensus of these. For the other grammatical phenomena that were considered, sentence-types (24) and (25) behaved like members of CT4 and were in some respects even more restrictive than these. Why is it the other way around for SA-adverbials? They are completely out in CT4 but they may in some cases occur in sentence-types (24) and (25).

The answer to this question is that sentence-types (24) and (25), the expressing of a wish or of admiration/irritation, constitute separate speech acts. This answer does not explain the great confusion in the judgements received. An explanation of this confusion and the differences between the different SA-adverbials is to be given by a more detailed analysis of the meaning and function of the four SA-adverbials considered here.

As an illustration, we can consider din idiot, which may not occur in sentence-types (24) and (25). A speaker may insert this phrase after a declarative sentence when he thinks that the listener should know what is being said and when he is irritated by the fact that he has to say it (because the listener asked about it, for example). Since exclamation marks are primarily for expressing the speaker's own feelings, it is rather natural that the speaker cannot insert a phrase like din idiot and thereby blame the listener for not knowing the feelings of the speaker. This is why we do not find din idiot after sentence-types (24) and (25). We cannot blame someone for not knowing our own feelings.

However, there is one situation in which din idiot could possibly occur after an exclamation mark. This is when the sentence has to be

repeated because the hearer did not listen carefully enough.

(13) A: Att han inte kan lära sig stava!

B: Vad sa du?

A: Att han inte kan lära sig stava, din idiot.

'A: It is irritating that he cannot learn how to spell.

B: What did you say?

A: It is irritating that he cannot learn how to spell,
you idiot'

That sentence-types (24) and (25) are possible with a va following them needs some clarification. When the relevant sentences are judged as grammatical, the va we find in them is not the cousin of the English Tag-question. It is rather the other va (meaning 'you know' or 'OK') that occurs in them. This va, or this other use of the original va, was mentioned above on p. 73.

Although much more could be said about speech act adverbials, I will leave this subject matter here.

II. 6. Implicational hierarchies

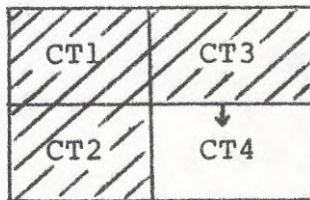
Under this heading, I would like to discuss some of the restrictions that are imposed on certain grammatical phenomena and to relate these restrictions to earlier studies in the linguistic literature. In section II.4., restrictions with respect to mood were discussed and the primary concern of this section is the restrictions that can be attributed to clause-type. In the previous discussion in this chapter, four clause-types have been defined (CT1 - CT4). I first want to go through the twelve grammatical phenomena (a - l) again and state their domains of application with relation to clause-type.

a ju and väl

As the chart on p. 99 indicates, the adverbials ju and väl may occur in CT1 to CT3. Furthermore, there are severe restrictions on their occurrence in CT4. It seems that these adverbials may occur in restrictive relatives and possibly also in när-clauses (corresponding

to English when-clauses). It appears that these two sentence-types behave differently with respect to some other grammatical phenomena (the occurrence of tyvärr ('unfortunately') and the performative use of härmed ('hereby')). The domain of a) is represented as (1).

(1)



The arrow going down into CT4 in the figure indicates that the adverbials under consideration may marginally occur in CT4.

b för guds skull

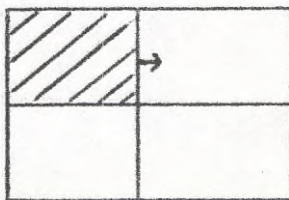
c din idiot

d va

e då då

These four types of phrases can be treated together here since they show similar restrictions. Furthermore some of the differences between them have already been discussed in the previous section. Their domain with respect to clause-type is that of (2).

(2)



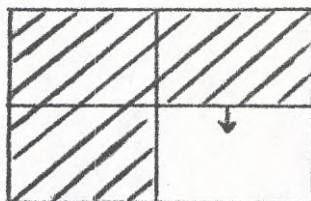
f tyvärr

g härmed

These two adverbials can be treated together even though they express very different things. Tyvärr ('unfortunately') expresses a value judgement of the content of the clause while härmed ('hereby') has to do with whether the clause in question can contain an

explicit performative or not: Anyway, their domains appear to be identical.

(3)

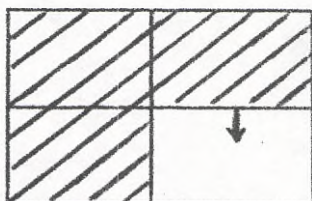


The arrow indicates that these adverbials may marginally occur in restrictive relatives and när-clauses (when-clauses). It is rather surprising that härmed should distribute in this manner since it has been claimed that explicit performatives may not occur in restrictive relatives, at least not when the head of the relative construction is definite (Fairclough 1973 and Ayres 1974).

h Left Dislocation

The domain of Left Dislocation is shown in (4).

(4)



As the chart on p. 99 indicates, Left Dislocation is rather marginal in non-restrictive relative clauses even though these belong to CT3. The sentence that was given in the test was (5).

(5) ?Dom träffade Eva, som Peter, han har väl alltid gillat henne.
'They met Eva, who Peter, he has always liked her'

As we see, a pronominal copy (henne) of the head of the relative (Eva) has been inserted to make the sentence better. Without this pronominal copy the sentence is hopelessly ungrammatical.

(6) *Dom träffade Eva, som Peter, han har väl alltid gillat.
'They met Eva, who Peter, he has always liked'

Just like (a) ju and väl, (f) tyvärr and (g) härmed, Left Dislocation

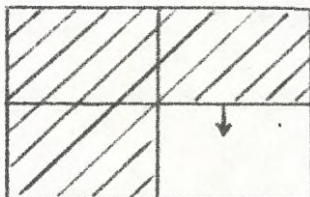
goes down into CT4. There is a difference though. While (a), (f) and (g) can marginally occur in restrictive relatives and när-clauses, Left Dislocation may marginally occur in the complements of class C and D predicates. Why is not Left Dislocation possible in relative clauses and när-clauses? The reason is probably a general restriction to the effect that movements are not normally allowed in clauses of the wh-type (relatives and när-clauses). The common sense explanation for this restriction is, of course, that such clauses will be hard, if not impossible, to comprehend if the elements in them are moved around. The movements partly destroy the syntactic structure of a clause and when the clause has an 'empty slot' (relatives do not normally have a pronominal copy of their heads), this is even more destructive. Keenan (1972) has shown that languages with relatives without pronominal copies of their heads are subjected to a wider range of grammatical constraints than those languages which retain pronouns in relative clauses. Sentences (5) and (6) above can be taken as an illustration of this point.

These remarks are relevant for other movement rules as well and can be taken as an explanation for the question marks for sentences (17i) and (17j) in the chart on p. 99. These sentences concern the applicability of Topicalization and Directional Adverb Preposing in non-restrictive relatives.

i Topicalization

The rule of Topicalization extends fairly deep down into CT4 in Swedish. It would be interesting to make a comparative study of this rule. I am fairly sure that Topicalization has a larger domain in Swedish than in English, for example.

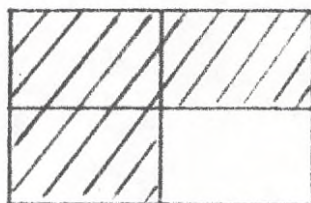
(7)



j Directional Adverb Preposing

This rule has the domain of (8).

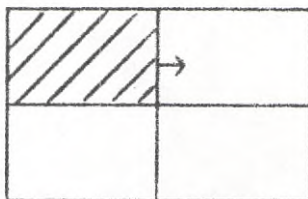
(8)



k Complement Preposing

This rule has the restrictive domain of (9).

(9)



The restrictions on Complement Preposing are much like those of the speech act adverbials (b - e). These restrictions were discussed in the previous section. One additional fact of relevance can be pointed out here. Complement Preposing is impossible in complements to class A, B and E predicates (as well as in complements to class C and D predicates). Let us look at sentence (13k) of section II.3., which is repeated here as (10).

- (10) *Jag tror att Kamraterna går upp i allsvenskan, misstänker dom.
'I believe that Kamraterna will reach division 1, they suspect'

In hearing this sentence, the listener will get the impression that I believe that Kamraterna will reach the first division and then he encounters the parenthetical clause misstänker dom ('they suspect'). At this point, he has to reinterpret the sentence and in doing this he has two possibilities, at least in principle. The listener can reconstruct the source of the sentence as either (11) or (12).

- (11) Dom misstänker att jag tror att Kamraterna går upp i allsvenskan.
'They suspect that I believe that Kamraterna will reach division I.'

(12) Jag tror att dom misstänker att Kamraterna går upp i all-svenskan.

'I believe that they suspect that Kamraterna will reach division 1'

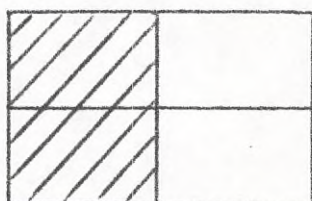
The interpretative principles of the listener, however, give (11) as the only possible source of the sentence. One way to formulate this is to say that the parenthetical clause must have the widest possible scope, as was indicated in section II.5.²¹ Why our interpretative principles are such I am not sure, but it may simply be a reasonable way to avoid confusion. It may also be that this is the interpretation which is most compatible with the original interpretation of the listener, i.e. that the sentence concerns my belief about Kamraterna and not my belief about certain people's suspicions.

These remarks are also relevant for explaining why the rule of COMP-Complement Preposing does not occur in CT3 and CT4.

1 COMP-Complement Preposing

The domain of this rule, finally, is that shown in (13).

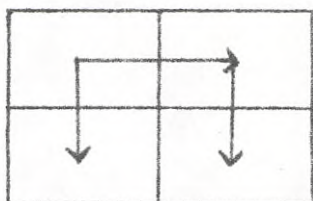
(13)



§ § § § §

The general picture of the domains of the different grammatical operations should be clear by now. What the test in section II.3 shows is that we have implicational hierarchies in the domains of different grammatical phenomena. (14) gives the general schema according to which grammatical operations extend into different clause-types.

(14)



The schema should be read in the following way: Suppose that *p* is an arbitrary grammatical phenomenon (the application of a certain transformation or the occurrence of a certain phrase).

p in CT4 implies *p* in CT3 implies *p* in CT1
p in CT2 implies *p* in CT1

Both these implicational hierarchies are needed because there is no convincing implicational relation between CT2 on the one hand and CT3 and CT4 on the other hand.²²

The implicational hierarchies presented here are similar to Ross's Penthouse Principle (Ross 1973b), which says approximately (15).

(15) Everything that happens in a subordinate clause may also happen in a main clause, but not vice versa.

(Ross's actual wording 'more goes on upstairs than downstairs', is more elegant but less transparent than the one I present in (15). As Ross says, the truth of his principle is testified by millions of people who live in apartment houses.)

Ross intends his statement to cover both the application of transformations and the occurrence of morphemes. Further, Ross explicitly says that his statement also covers complementizers that occur without accompanying main clauses. I explicitly want to exclude the complementizers from the generalization given by the implicational schema of (14). This is an absolutely necessary move considering the definitions I have given of the four CT's.

Are complementizers the only exceptions to the implicational hierarchies? The answer to this question is probably 'No' and in connection with it, I want to discuss a counter-example to Ross's

Penthouse Principle that has been brought up (Andersson & Dahl 1974). Andersson and Dahl mention the deletion of the temporal auxiliaries har ('have/has') and hade ('had') in Swedish subordinate clauses.

(16) and (17) show that the auxiliary har may be deleted in sub-clauses but not in main clauses.

(16) (a) Pelle, som har bott i USA i tio år, har glömt sitt modersmål.

'Pelle, who has lived in USA for ten years, has forgotten his native language'

(b) Pelle, som bott tio år i USA, har glömt sitt modersmål.

(17) (a) Pelle har glömt sitt modersmål.

'Pelle has forgotten his native language'

(b) *Pelle glömt sitt modersmål.

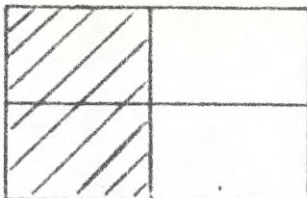
The domain of the deletion of the temporal auxiliaries har and hade is that of (18).²³

(18)



This deletion rule must be taken as a counter-example both to Ross's principle and my implicational hierarchies. However, a better understanding of what goes on is obtained, I think, if we turn the whole thing around and look at it in the following way. Temporal auxiliaries are necessary in main clauses but optional in sub-clauses in Swedish. Hence, the domain of the necessary presence of finite temporal auxiliaries is that shown in (19).

(19)



The deletion rule itself is an exception to the implicational hierarchies but this exception is completely rational. Clauses where the temporal auxiliaries have been deleted lack finite verbs and we certainly do not expect main clauses to lack finite verbs in Swedish while it is not so strange to envisage sub-clauses without finite verbs. In many languages non-finite verb forms are characteristic of subordinate clauses. Turkish is such a language but we do not have to go further than to the English Poss-ing construction or to the infinitive constructions in a host of European languages to find examples of this.

Furthermore, my implicational hierarchies can be saved from this counter-example by turning to literary language. The first lines of Tegnér's Frithiofs saga are given in (20).

(20) Där växte uti Hildings gård
 två plantor under fostrarns vård.
 Ej' ø norden förr sett två så sköna,
 de växte härligt i det gröna

The third line in (20) constitutes a main clause but it lacks the temporal auxiliary hade in sentence-second position. This is more a note in passing than a linguistic claim and should not be taken very seriously. Poets often extend the use and domain of a transformation in directions that are not normal in ordinary language.

Personally, I am not very disturbed by exceptions to claims, principles and theories. Such exceptions may, when carefully analyzed, provide a good illustration of the principle.

The two exceptions to the implicational hierarchies discussed here, the complementizers and the deletion of temporal auxiliaries, are to a considerable extent the very marks of subordination.

§ § § § §

There is another example of a rule which may be interpreted as a counter-example to the implicational hierarchies. It concerns the rule of Extraposition. This rule is posited to relate a sentence like (21a) to one like (21b), i.e. it moves an embedded clause to the end of its matrix clause.

(21) (a) That soccer is a great sport is obvious.

(b) It is obvious that soccer is a great sport.

This rule is obligatory in most subordinate clauses, as is witnessed by the following examples.

(22) (a) They all agreed that it was obvious that soccer is a great sport.

(b) *They all agreed that that soccer is a great sport is obvious.

(23) (a) The claim that it is obvious that soccer is a great sport was not refuted.

(b) *The claim that that soccer is a great sport is obvious was not refuted.

This rule shows the same distribution in English and Swedish. In general, the rule is optional in main clauses and obligatory in subordinate clauses in both languages. There are some exceptions to this general claim, however.

Not only that-clauses can be extraposed but also relative clauses and for-to complements. According to Subbarao (1973: 644), (24b) is grammatical and I am convinced that the grammaticality of (25b) is undisputable. (24) and (25) show that Extraposition may be optional also in sub-clauses.

(24) (a) Bill thinks that it is important for him to become a boss.

(b) Bill thinks that for him to become a boss is important.

(25) (a) I claim that the man is an idiot who washes his hair in whisky every morning.

(b) I claim that the man who washes his hair in whisky every morning is an idiot.

However, if we restrict ourselves to extraposition of that-clauses, the claim seems to hold. Extraposition is optional in main clauses and obligatory in sub-clauses. This fact is not directly a counter-example to the implicational hierarchies in that Extraposition covers main as well as subordinate clauses but it can be interpreted to say that the application of Extraposition is wider in sub-clauses than in main clauses, which is a rather unusual situation.

This unusual situation is to be explained along the lines of Kuno (1974), I think. Kuno argues that there is a general prohibition against center-embedding as well as against juxtaposition of complementizers (especially when these complementizers are identical). As we see, both (22b) and (23b) show center-embedding of the form shown in (26) as well as the sequence that that. It is therefore to be expected that these sentences are judged ungrammatical.

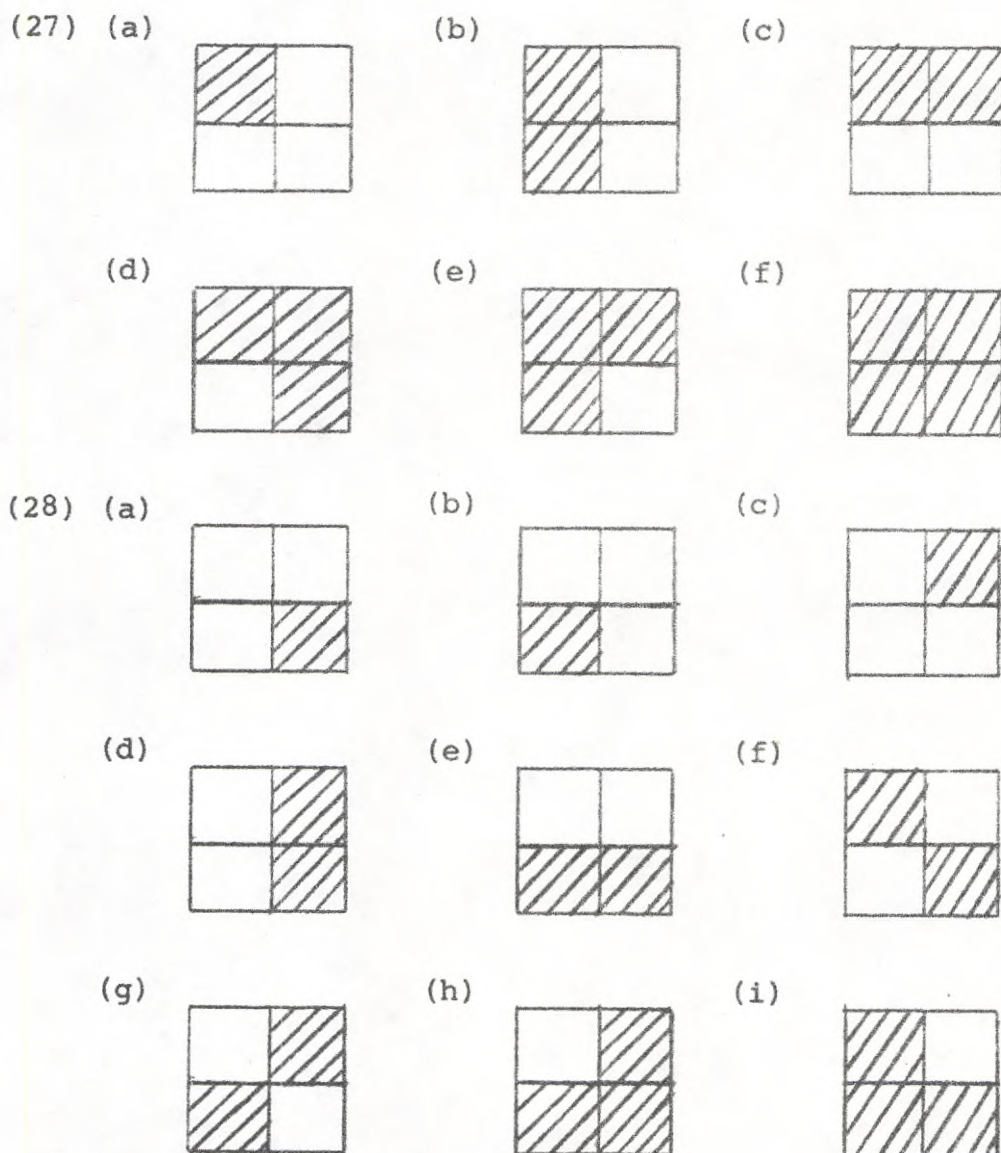
(26) S_1 (... S_2 (that S_3 (that soccer is a great sport) S_3 is
obvious) S_2 ...) S_1

Although these facts about Extraposition do not constitute a real counter-example to the implicational hierarchies, I wanted to mention them, because it has been argued by Emonds on the grounds of the domain of Extraposition that we need to change the rule of Extraposition into a rule of Intraposition (i.e. a rule having the opposite effect of Extraposition) (Emonds 1972). For a discussion of the problems connected with such an endeavour see Subbarao (1973) and A-B Andersson (1974). The point I want to make here is that such a reformulation of Extraposition is not necessitated by the formulation of the implicational hierarchies given above.

These restrictions on center-embedding and juxtaposition partially explain why COMP-Complement Preposing has a more restricted domain than other S-initial fronting rules like Topicalization and Directional Adverb Fronting, for example.

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The general schema of implicational hierarchies in (14) makes some definite predictions about the possible domains of grammatical phenomena. If there were no exceptions to these hierarchies, we would obtain the following situation, where (27) indicates the possible domains and (28) the impossible ones.



(27f) marks the general case. A grammatical phenomenon may usually occur in all the four clause-types. (27a), (b) and (e) are exemplified above. (27c) and (d) have not been exemplified above but (2) and (9) show domains that come rather close to (27c). Phenomena with the domain of (27c) should be things characteristic of semantically main clauses and it may, in fact, be reasonable to say that speech act adverbials are just that. (For a discussion of the non-existent domain (27d), see footnote 22).

The exceptional cases we have noted are both of type (28d), indicating the characteristics of syntactically subordinate clauses. It may be that all exceptions to the implicational hierarchies are of this type but to prove this point is hard if not impossible. There seem to be no logical reasons for the hypothesized non-existence of domains like (28a), (c) or (e), for example. We could imagine a morpheme of some sort that could only occur in semantically subordinate clauses, which would give it the domain of (28e). Yet, it may be an empirical fact of language that no such morphemes exist.

The facts being discussed now belong to linguistic theory and not to the particular grammars of different languages. The implicational hierarchies of (14) are part of linguistic theory. This general theory of domains tells us that an arbitrary phenomenon A in some language B will, if it occurs in CT₄, also occur in CT₃ and CT₁, unless it is not specifically stated otherwise in the description of A.

How the particular grammar of a language handles the questions concerning the domains of grammatical phenomena will be discussed below.

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Several other points need to be discussed in this context. When the domains for different grammatical phenomena were given above, the figures contained small arrows going from one CT into another. These arrows indicate that the phenomenon in question may marginally occur in a certain CT or that it may occur in some instances of the CT but not in others. They further indicate that there are no sharp lines of division between the different clause-types. This was not to be expected either. Anyone interested in linguistics and especially those interested in Ross's theories about squishes know that such sharp lines exist in grammatical theories but not in languages (see, for example Ross 1972).

The clause-types identified in this chapter may be a good tool for linguistic analysis in spite of their fuzzy borderlines.

The CT's give a tool for analyzing the domains of grammatical phenomena. The domain of a certain phenomenon is the set of structures

in which that phenomenon may occur. This set (the domain) contains an infinite set of structures in each case and one way to describe this set is in terms of clause-types.

However, certain things are messier than others in language. This should be taken as an insight. What it means is that speakers of a language are more confident (have a better knowledge) about certain things in their language and are less sure about certain other things.

As far as transformations go, I am convinced that a speaker has a better knowledge of the structural description and the structural change of the transformation than about its domain. Another way of saying this is that the conventions are more fixed for the structural description and the structural change of transformations than for their domains. As will be explained in the next section, the structural description and the domain of a transformation must be considered as two distinct things.

Why do the speakers of a language have a better knowledge about the form of a transformation than about its domain? I do not think the explanation for this is that the sentences that come up in discussing the border lines of domains are so strange that they are never encountered in normal conversation. Rather, I think the situation is something like the following. When we learn a transformation, as native speakers of the language, we learn its structural description, its structural change and its function (i.e. what the transformation is good for, what it can be used for). We also learn such general restrictions like the fact that no more than one S-initial fronting is allowed per sentence as well as restrictions of the form that Ross pointed out in his dissertation (Ross 1967). All this taken together gives the domain of the transformation.

This means that speakers do not directly learn what the domain of a transformation is, neither do they worry about it. Speakers apply the transformation where there is need for it and it just so happens that the transformation is not applied in some types of structures. This may depend on some general restriction on the application of transformations or on the fact that the function of the transformation is such that it does not fit into those particular structures.

A parallel explanation can be given for the occurrence of morphemes with restricted domains. Speakers learn their form and meaning and the meaning of a certain morpheme may be such that it does not fit into certain types of structures. An example of this is the impossibility of tyvärr ('unfortunately') in clauses other than declaratives.

What I have said here obviously has some implications for how transformations and morphemes are to be represented in grammar. What these implications are will be discussed in the next section.

Somehow, we have to account for the fact that S-initial fronting rules are difficult and in some cases impossible to apply in CT4. This fact is rather difficult to explain. Yet it should not be not be impossible. The S-initial fronting rules have the effect of giving the fronted constituent a more prominent position in the clause compared to the other constituents of the clause. It appears that this kind of prominence should generally not be given to constituents that occur in clauses of CT4. Clauses in CT4 are used to refer to facts, ideas, situations and the like and in expressing such concepts, there is no place for emphasizing some constituent or other of the clause. This is essentially the idea of Hooper and Thompson: "We claim that their (S-initial fronting rules and the like) restricted distribution is a natural consequence of their emphatic function, since many embedded structures cannot be made emphatic."²⁴ Hooper and Thomson 1973: 472). Something along these lines is the correct explanation for the facts under discussion, I think. The essential feature of this explanation is that it is the function rather than the form of the transformation that determine the domain.

An alternative explanation for these problems is offered by Emonds (1970). Emonds' thesis was written before it became popular to discuss the function of transformations. Emonds points out a number of transformations that only apply in main clauses. He defines two classes of transformations: Root Transformations (those which only apply in main clauses) and Structure-Preserving Transformations (those which apply in both main and subordinate clauses). Actually, Emonds defines a third class of transformations (Minor Movement Rules) but these can be left out of the present discussion. Emonds' claim concerning the applicability of root transformations has been

discussed and criticized above and here I will bring up another aspect of Emonds' theory.

According to Emonds, it is predictable whether a certain transformation is a root or a structure-preserving transformation. This means that there is no need to give the domain for each transformation in the grammar. All that is needed is a claim about the domain of each of the different classes of transformations. How this should work becomes clear from Emonds' definitions of the two classes of transformations.

"A root transformation is one in which any constituents moved, inserted, or copied are immediately dominated by a root (=the highest S in a tree structure, approximately - LGA) in the derived structure."

(Emonds 1970: 7)

"A structure-preserving movement rule is a transformation such that (i) the structural description specifies the location in trees of two nodes B_1 and B_2 bearing the same label X, and (ii) the structural change moves B_2 and all the material dominated by it into the position of B_1 , deleting B_1 ."

(Emonds 1970: 28)

This means that if a movement rule does not have the structural properties of structure-preserving transformations, it is a root transformation and has the properties of these (leaving the minor movement rules aside). To make the English language consistent with this analysis, Emonds proposes some reanalyses of established rules of English syntax. The difficulties he runs into in doing this will not be discussed here.

A general point of interest is that root transformations have restricted domains of application (i.e. they are "root" transformations) because they do not have the formal characteristics of structure-preserving transformations. The reason behind the restricted application of root transformations is thus formal and not functional according to Emonds.

This formal explanation might, however, receive a functional explanation. It might reasonably be claimed that root transformations destroy more of the syntactic structure of sentences than

structure-preserving transformations do. In fact, the names of the two classes of transformations indicate just that. We would then have to posit a general restriction saying that less distortion of syntactic structure is allowed in CT4 than in the other clause-types.

Personally, however, I believe that a functional explanation in terms of the emphatic function of certain transformations and the subjective meaning of certain morphemes and phrases is more likely to be correct.²⁵

II.7. Another way of looking at grammatical phenomena

In this section, I want to speculate about how different grammatical phenomena should be represented in grammar. The goal is to represent transformations and morphemes in such a way that their domains become predictable.

The domain of a grammatical phenomenon is the set of structures in which this phenomenon may occur. Domains can be described in terms of clause-types and different moods. Somehow, the grammar has to determine what the domains of different grammatical phenomena are. How should this be done?

It would not do to list the set of structures in which the phenomenon under consideration may occur. This would force us to list an infinite set of structures under each morpheme and transformation in the language. A more reasonable alternative is to list only restrictions with respect to clause-type and mood in the grammar. However, I do not think that this is the correct approach either.

In the preceding section, I said that the domain of a grammatical phenomenon is determined by a number of factors such as the form and function of this phenomenon and the set of general restrictions. Let me indicate by some examples how I think that the domain of a grammatical phenomenon should be determined by the grammar.

First, we can look at the morpheme tyvärr ('unfortunately'). As Saussure said at the beginning of this century, a linguistic sign

has two sides: 'signifiant' (the expression plane) and 'signifié' (the content plane). In this case, we have the phonological form of tyvärr on the expression side. On the content side, we have something like "the speaker indicates that he is sorry that what he says is true". This is a rough description of the meaning or function of the adverbial tyvärr. If we use this word correctly (according to its meaning), we cannot use it in questions or commands. This is evident because these types of sentences are not true or false. It is a bit harder to determine why tyvärr ('unfortunately') is generally not allowed in CT4. I think something along the following lines is correct.

(1) Carl ångrar att han reste till Alaska för att fiska.

'Carl regrets that he went to Alaska to fish'

(1) gives an example of a complement that belongs to CT4. Why cannot tyvärr occur in the sub-clause of (1)? The answer is probably this. The speaker says that Carl regrets something and if he is to say that it is unfortunate that something he has said is true, he must say (2a) and not (2b).

(2) (a) Carl ångrar tyvärr att han reste till Alaska för att fiska.

'Carl unfortunately regrets that he went to Alaska to fish'

(b) *Carl ångrar att han tyvärr reste till Alaska för att fiska.

'Carl regrets that he unfortunately went to Alaska to fish'

Next, we can look at a transformation like Topicalization. I think that transformations can be handled in the same way as morphemes, i.e. that they can be considered as linguistic signs containing both an expression plane and a content plane. On the expression side, we have the syntactic operation of the transformation (its structural description and its structural change) and on the content side, we have its function or its communicative effect (if that term is preferred).²⁶ Topicalization can perhaps be described as in (3).

(3) Topicalization

expression side: Move an NP into clause-initial position

content side: The fronted constituent is given more emphasis
in what is said by the speaker.

Does this statement of the rule give any reason to expect that it cannot apply in questions or commands? No. However, I argued above that there is a restriction against more than one S-initial fronting per sentence and this will prevent Topicalization in questions and commands because these types of sentences involve an S-initial fronting of the verb. If we take a sentence like (4), we can see what possibilities there exist for Topicalization to apply, c.f. (5).

(4) Det är konstigt att Carl gifte sig med Ada.
'It is strange that Carl married Ada'

(5) (a) Ada är det konstigt att Carl gifte sig med.
'Ada, it is strange that Carl married'

(b) *Det är konstigt att Ada gifte Carl sig med.
'It is strange that Ada, Carl married'

(5a) is allowed by the function of the rule because an NP is fronted and given more prominence in what is said by the speaker, i.e. that Carl regrets something. (5b) is ruled out, however, because the NP is fronted in the sub-clause and the sub-clause is not what the speaker has said but only a part of what he has said.

Describing a transformation as in (3) should not be regarded only as a trick to determine what the domain of a transformation is but also as a hypothesis about how speakers of the language conceive of a grammatical operation. Note that I have stated the expression side in a simple statement in non-theoretical language. Of course, we could have stated the transformation in the ordinary way in terms of structural description and structural change. However, the way the purely syntactic part of Topicalization is stated in (3) indicates how simple this operation really is.

Consider the alternative of stating the restrictions on the rule in the formal description of it. Such a statement of the rule could be as in (6).

(6) Topicalization

X	S (Y	NP	Z	condition: if 2 is a sub-clause, the rule may apply only if 2 is semantically main.
1	2	3	4	5	
1	2+4	3	∅	5	

This formulation seems rather uncomplicated but it has certain disadvantages. Firstly, it is not clear how a transformation "knows" that it operates in a semantically main clause. Secondly, the condition included in (6) is semantic rather than syntactic. Thirdly, we are forced to include the same condition in the statement of a whole class of transformations. It seems that all the other S-initial fronting rules require the same condition. Fourthly, we miss the parallel that exists between the occurrence of morphemes and the application of transformations that was described above. Fifthly, this statement of the rule does not explain why the rule is restricted in the way it is.

In order to illustrate the last point, I want to cite a passage from Hooper and Thompson's article.

"The facts isolated and discussed here suggest to us that some transformations are sensitive to more than just syntactic configurations. It does not seem possible to define the domain of an RT in terms of syntactic structures in any general way. However, it is important to point out that, even if it were possible to define in syntactic terms the conditions under which RTs can apply, this correlation would still require an explanation. That is, the question of why these transformations can apply in certain syntactic environments and not others would still be unanswered. What we have done here is to provide an explanation for the restricted applicability of RTs, in terms of the communicative function of this class of rules."

(RT = root transformation - LGA)

(Hooper and Thompson 1973: 495)

I can certainly agree with this and, as I argued above, I think this explanation can be generalized to hold for morphemes as well. Now, there may exist exceptional cases, both for morphemes and transformations.

As far as morphemes and phrases are concerned, I discussed possible exceptions to this generalization in section II.4. The conclusion of that discussion was that it is very hard, if not impossible, to find such exceptions. To qualify as an exception to this generalization, the morpheme or phrase must be such that its domain is not determined by its meaning or function.

The clauses är du snäll ('please') and eller jag tar livet av dig

('or I'll kill you') are not exceptional in this way. The function of the first of these two clauses is to indicate that the preceding sentence is to be understood as a request. This function predicts the occurrence of this clause in imperatives as well as requests in the form of an interrogative clause. The second clause indicates that the preceding sentence is to be understood as an order or a command. This function predicts the occurrence of this clause in imperatives as well as declaratives expressing commands. Hence, the different functions of these two clauses predict their different domains (cf. the discussion of these clauses in II.4.).

It should be noted that the vast majority of morphemes in the language are not restricted in any of the ways discussed above, i.e. most morphemes are like grammar and may occur in any clause-type and mood. It should also be pointed out that I do not include selectional restrictions in this discussion. However, it is not inconceivable that what has been discussed as selectional restrictions in the literature can be treated in a similar fashion but this question lies outside the scope of this study.²⁷

Let us turn to transformations next. Adverb Placement and the deletion of temporal auxiliaries appear to be counter-examples to the general picture. As far as I can see, there is nothing in the function of Adverb Placement that should require this rule to apply differently in main and subordinate clauses. Neither does there seem to be any general restriction that would prohibit the rule from applying in CT4. In this case, we have to include a special statement in the rule to the effect that the rule is inapplicable in CT4. This restriction may have the following form: The rule may only apply in syntactically or semantically main clauses.²⁸ In the case of the deletion of temporal auxiliaries, it seems that we have to include a condition saying that this rule may only apply in syntactically subordinate clauses. If some rational principle can be found (either in the function of these rules or in the form of a general restriction on transformations) that determines the domains of these rules, these conditions can be taken away. As long as no such principles are found, these conditions must be kept.

At several places in this and in the preceding sections, I have

talked about and exemplified general restrictions on grammatical phenomena. The following restrictions have all been mentioned in the preceding sections.

- (7) (a) Not more than one clause-initial fronting is allowed per clause.
- (b) Ross's constraints: the Coordinate Structure Constraint, the Complex NP Constraint and the Sentential Subject Constraint.
- (c) Do not front constituents in a relative clause.
- (d) Juxtaposition of complementizers should be avoided.

What is the point of all these restrictions? Why do they exist? It seems fairly clear that all these restrictions serve to make sentences of the language easier to comprehend. Violations of these restrictions result in sentences that are hard to understand. The restrictions set limits on how much we are allowed to change the basic word order of the language.

Note that these restrictions are not universal. Many languages have a much freer word order than either Swedish or English. How free the word order of a language is seems to be correlated with other facts of the language like case marking, for example. Among the general restrictions of (7), only Ross's constraints have been claimed to be universal (Ross 1967) but this claim is incorrect. In Swedish, there are counter-examples to both the Complex NP Constraint and the Coordinate Structure Constraint (see Andersson 1974b).

One of the many unsolved problems of linguistic investigation is where these restrictions should enter the linguistic description. Ross (1967) indicates that his constraints give general restrictions on the application of transformations, i.e. whenever a rule violates one of his constraints, the alarm goes off and the sentence is blocked (marked as ungrammatical). A restriction like (7d), on the other hand, should rather be regarded as an output condition on sentences (like Perlmutter's Surface Structure Constraints (Perlmutter 1971)). (7d) can hardly be regarded as a constraint on the application of transformations because the sentences that violate it are usually ungrammatical because they have failed to undergo the rule of Extraposition. Furthermore, (7a) appears to be a global

constraint on the application of movement rules, i.e. if one S-initial fronting has occurred in the clause, no other such rule may.²⁹ This spectrum of different constraints is quite a mess and we can only hope that the future will bring more system into it.

The important thing to note in this context is that the construction of a system of general restrictions has to be made with the representation of transformations in mind. Establishing a general restriction may have the effect of making specific conditions on a set of transformations unnecessary.

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I hope I have given some explanations for the restricted domains of certain grammatical phenomena that we find in language. I have also indicated how I believe that questions concerning domains should be represented in grammar.

Let us return to the test of section II.3. for a moment. This test can be viewed as posing 300 linguistic questions of the form: Why is (not) the grammatical phenomenon A possible in the syntactic structure B? In sections II.4. - II.7., I have tried to answer these 300 questions, not one by one but class by class. Some of these questions, however, have not been answered and some of the answers given may be wrong. Nevertheless, I hope to have clarified some aspects concerning the restricted domains of certain grammatical phenomena.

CHAPTER III

THE SYNTACTIC STRUCTURE OF SUBORDINATE CLAUSES

III.0. Introduction

In chapter I, the following definition was given of a syntactically subordinate clause: A syntactically subordinate clause is a clause that is introduced by a complementizer. The first chapter also recognized a class of semantically subordinate clauses in language. Their definition was given in semantic or pragmatic terms: A semantically subordinate clause is a clause that does not express a statement, question or command.

In chapter I, it was also argued that both the notion of syntactically and semantically subordinate clauses are needed in the grammar of Swedish for syntactic reasons. The distribution of certain morphemes and the applicability of certain transformations are sensitive to these notions and this is why they are needed in the grammatical description.

This chapter is concerned with the constituent structure of syntactically subordinate clauses. The term 'subordinate clause' is used to refer to syntactically subordinate clauses in this chapter.

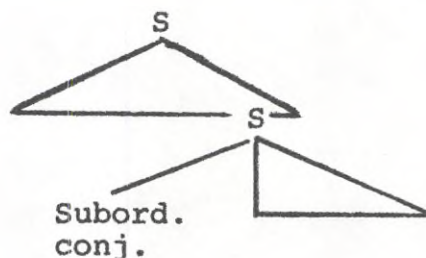
Fairly much has been said about the deep structure representation of subordinate clauses but their surface structure representation has been neglected to a large extent. In view of this, I have chosen to pay considerable attention to their surface structure.

The categorial status of elements that are called subordinating conjunctions in traditional grammar is discussed in this chapter. One conclusion of this chapter is that there is no need for a category 'subordinating conjunction' in the grammatical description of Swedish.

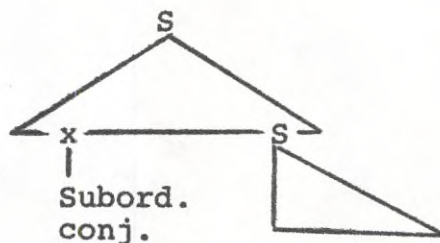
III.1. Arguments for the COMP-S Analysis

First of all it should be clear that subordinating conjunctions belong to the same constituent as the sentence that follows. This means that (1a) rather than (1b) is an appropriate representation of a subordinating conjunction and its sentence.

(1) (a)



(b)



The evidence for this is that a subordinating conjunction must be moved together with its clause as can be seen from the following sentences.

- (2) (a) I have never claimed that Spiro would become president.
- (b) That Spiro would become president, I have never claimed.

- (3) (a) I will leave when the Germans show up.
- (b) When the Germans show up, I will leave.

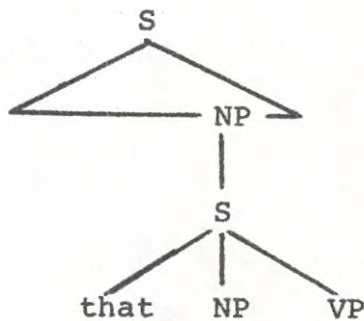
Compare the different behavior of sentences with coordinating conjunctions.

- (4) (a) John went to Bali and Bill went to Sumatra.
- (b) *And Bill went to Sumatra, John went to Bali.

This argument depends on the principle that transformations apply only to constituents. That (1a) is the structure of embedded sentences rather than (1b) has, as far as I know, never been disconfirmed. However, knowing that (1a) is the best representation of

embedded sentences does not get us very far because that structure is vague enough to leave us with several alternatives among which we have to choose. If we consult books and articles written within the theory of transformational grammar we will find that (5) is the most common representation of that-sentences.

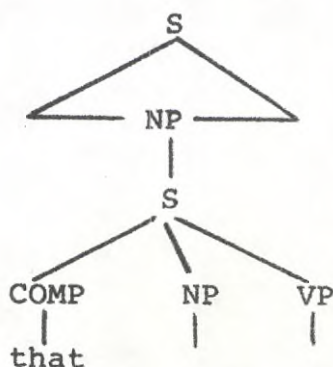
(5)



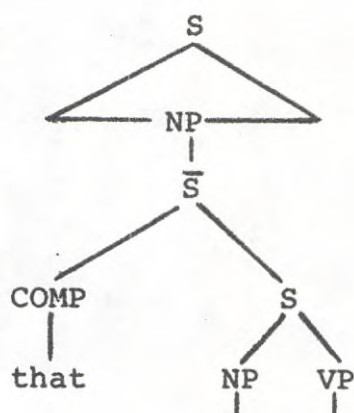
In this representation, that is immediately dominated by the same S-node which dominates the NP and VP of the subordinate clause. This representation is most commonly set up without any argument at all. Although most linguists probably regard that as belonging to a category with more than one member, there is no category label dominating that in (5). This is unsatisfactory and, therefore, I will use the category label COMP (for 'complementizer') above that. The name of this category is of minor importance. The important thing is that we have such a category.

Having decided this much we can go on to look for empirical evidence that will choose among the two alternatives (6) and (7) for representing an embedded that-clause.

(6)



(7)



In (6), the COMP-node is the first member of the embedded sentence and in (7), the COMP-node is Chomsky-adjoined to the embedded sentence. Of course, there are several other alternatives but I regard (6) and (7) as the two most interesting ones.³⁰ So, let us now look for empirical evidence that will help us choose between the two alternatives.

Both (6) and (7) have been proposed as representations of embedded sentences. Emonds (1970) uses (6) and Bresnan (1972), (7). Neither of them gives any arguments for their choice of structure. In the following quotation, Robin Lakoff (1968) asserts that the choice between (6) and (7) is hard to make.

"It is at present an open question as to how that is adjoined to S. There are two possibilities that are equally likely. Perhaps that is adjoined by a convention suggested by Chomsky (in the spring of 1966), the effect of which is that a new node is created above the S node by the adjunction, which is also labeled S. In this interpretation, the surface structure of I said that he was here is as shown in diagram (28).

Alternatively, that may be adjoined below S, rather than above it, to become a sister of NP and VP of the lower sentence. If this is the case, the resulting surface structure of the sentence just given is represented by diagram (29).

At present, there are no arguments supporting either of these possibilities over the other.

(Robin Lakoff 1968: 25)

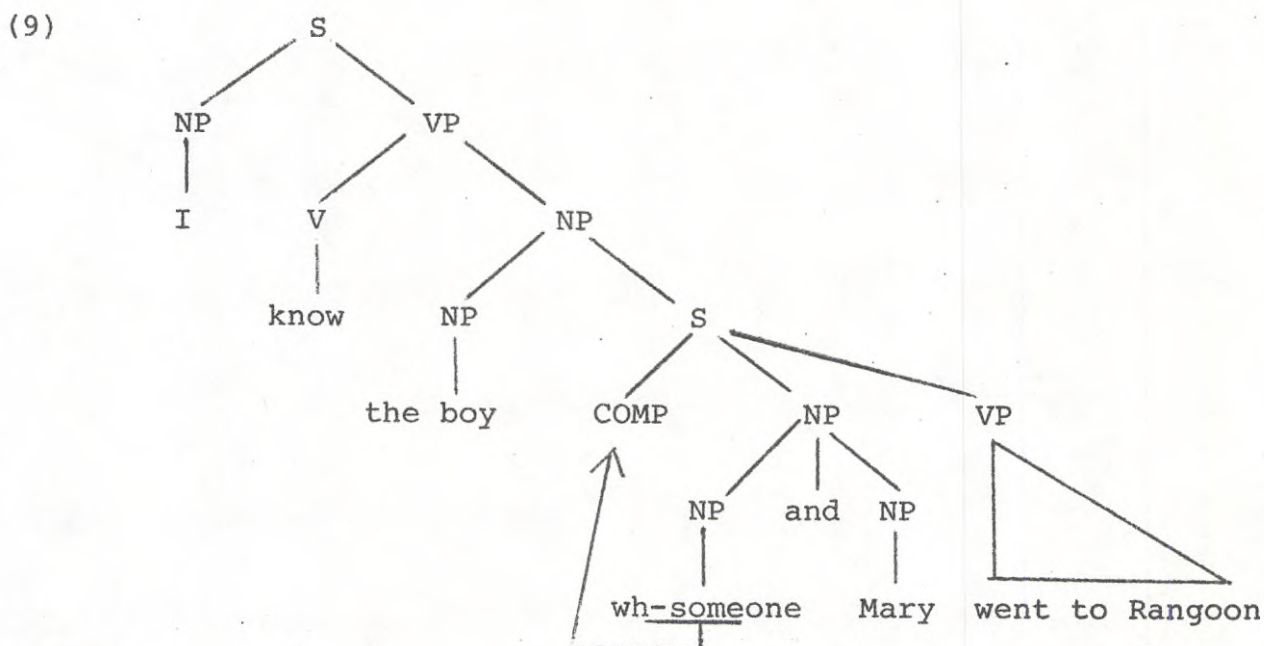
(Her structures (28) and (29) correspond to (7) and (6), respectively.)

One of the few arguments for deciding between (6) and (7) that I recall from the literature is one given by Ross (1967: 101). Ross

argues that wh-words should be Chomsky-adjoined to the sentence they originate from (i.e. he argues for (7)) because, otherwise, a sentence like (8) would not be ruled out by the Coordinate Structure Constraint.

(8) *I know the boy who and Mary went to Rangoon.

The Coordinate Structure Constraint is one of Ross's better universals and there are good reasons for wanting (8) to be ruled out by this constraint. However, Ross's argument is not very strong because (8) could be ruled out by the CSC even if we accepted analysis (6). This can be seen from (9). What is important here is that the wh-constituent is moved out of the conjunction (into an S-initial COMP-node, for example).



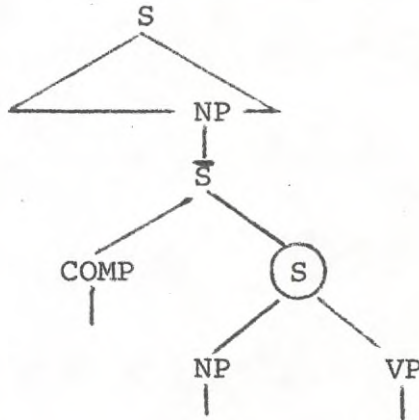
If wh-movement applies as in (9) it violates the CSC. (9) is, of course, no argument against (7). It only shows that (9) is consistent with (6) as well as with (7).

I will now proceed to give a few arguments in favor of (7). The arguments are not too strong, but together they may give some evidence that (7) is preferable to (6).

With these arguments, I wish to show that there are transformations that operate on the encircled node in (10). Since the applications of transformations are restricted to constituents, such arguments show that what follows the complementizer in an embedded sentence

forms a constituent. Such arguments show that (7) is to be chosen rather than (6) because only in (7) is the complementizer followed by a constituent.

(10)



All but one of the arguments to be presented involve some kind of pronominalization. Below, I will also present an argument from Bresnan (1974) showing a movement of the encircled S-node.

My first argument involves echo questions. Att ('that') and om ('if') are obvious cases of complementizers in Swedish and they may be followed by a question word indicating an echo question, as is shown in (11) and (12).

(11) Palme sade att VAD DÅ?
'Palme said that WHAT?'

(12) Kissinger undrade om VAD DÅ?
'Kissinger wondered if WHAT?'

Although I have not investigated the problem, I am fairly sure that only constituents can be echo questioned. For example, we regard (14) as ungrammatical.

(13) John gav en bok till Mary.
'John gave a book to Mary'

(14) *John gav VAD DÅ?
'John gave WHAT?'

The second argument involves the rather unusual 'si och så'-pronominalization of Swedish. The pronoun si och så may be said to

correspond to the English expression so and so. There is also a pronoun ditt och datt in Swedish, which may correspond to this and that in English.³¹

First, let me give some examples of the use of si och så.

(15) Han gav boken till si och så.

'He gave the book to so and so'

In (16), a constituent is pronominalized but the sentence is still ungrammatical.

(16) *Han gav boken si och så.

'He gave the book so and so'

(17) *Han gav si och så.

'He gave so and so'

(18) Han mötte si och så.

'He met so and so'

Which constituents can be pronominalized by si och så (or ditt och datt) is hard to determine but it is clear that 'being a constituent' is a necessary but not sufficient condition on this kind of pronominalization. Furthermore, it is interesting to note that (15) is grammatical while (16) is not; the relation between a preposition and its object shows several similarities with the relation between a subordinating conjunction and its sentence. Let us now see how this kind of pronominalization works in embedded sentences.

(19) Om si och så, så ditt och datt.

'If so and so, then this and that'

(20) *Si och så, så ditt och datt.

'So and so, then this and that'

(21) Nixon frågade om så och så.

'Nixon asked if so and so'

It thus appears that the encircled S-node in (10) can be 'si and så'

pronominalized. Hence, that S-node forms a constituent and the complementizer is not a member of that constituent. This is the last argument involving pronominalization that I want to present.

In a squib in *Linguistic Inquiry*, Joan Bresnan argues for structure (7) by showing that the encircled S-node of (10) can be moved by the rule of Right Node Raising (Bresnan 1974: 614). This rule derives (23) from (22).

(22) He tried to persuade them that he was right but he could not convince them that he was right.

(23) He tried to persuade them, but he could not convince them, that he was right.

The effect of Right Node Raising is to take a constituent in VP that occurs in both conjuncts and lift it out to the right of the second conjunct. As Bresnan showed, Right Node Raising applies only to constituents but not to all constituents. Pronouns may not undergo this rule, for example. The restriction seems to be that only heavy constituents like the S-complement of (22) can undergo this rule.

Bresnan supplies the following set of sentences to show that the S minus the COMP must be a constituent, i.e. that (7) is the correct structure rather than (6). If (6) were the structure of subordinate clauses, sentences like those in (24) would not be possible to derive.

(24) (a) Tell him almost as much as, but certainly not all that, he'd like to know.

(b) Tell him all that, and perhaps more than, he'd like to know.

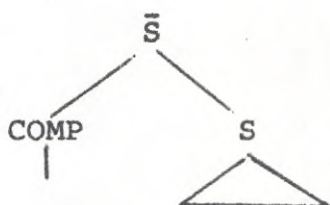
(c) Tell him no more than, nor even all that, he'd like to know.

(d) I can tell you when, but I cannot tell you why he left me.

(e) I've been wondering whether, but I wouldn't positively state that, your theory is correct.

My next argument is an attempt to show not only that (7) is superior to (6) but also that only subordinate clauses are introduced by a COMP-node. Bresnan (1972) argues that main clauses also have the underlying structure of (25) but I think that this structure should be restricted to sub-clauses.

(25)



The argument runs as follows: Swedish is a typical "verb second language". With this I mean that the subject-verb order is reversed when another constituent of the clause is fronted to sentence initial position. Hence, the verb will always appear in the second position of the sentence. This is illustrated by topicalization and adverb fronting.

(26) (a) Finalen måste jag se.

'The finals I have to watch'

(b) Förra året spelade jag inte mycket fotboll.

'Last year I didn't play much soccer'

These two fronting rules also apply to some subordinate clauses where the same subject-verb inversion takes place.

(27) (a) Jag har alltid sagt att finalen vägrar jag att missa.

'I have always said that the finals I refuse to miss'

(b) Jag måste erkänna att förra året spelade jag inte mycket fotboll.

'I must confess that last year I did not play much soccer'

Hence, when topicalization or adverb fronting applies in either a main or a subordinate clause, subject-verb inversion also applies. The subject-verb inversion should be formulated approximately as in (28).

(28) X S (Y NP V Z) S W

1 2 3 4 5 6 → 1 2 4+3 ∅ 5 6

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condition: Y is a non-null symbol. (It can be NP, PP or Adv)

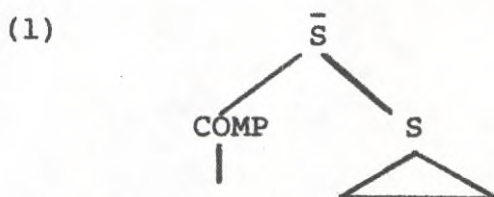
The conclusion of this section is that subordinate clauses and only subordinate clauses have a COMP-S structure like that shown in (7) and (25).

We will now turn our attention to other questions concerning the constituent structure of subordinate clauses.

III.2. Wh-words and the COMP-node

In the previous chapter, I argued that the COMP-node occurs as a defining characteristic of subordinate clauses, which implies that there cannot possibly be a COMP-node in a main clause.

However, Bresnan (1972) argues that every clause, subordinate as well as main, is introduced by a COMP-node. Bresnan's claim is that every clause has a deep structure like (1).



In general, this COMP-node is deleted in the highest S but in one case it remains. The COMP-node remains in structures underlying sentences like (2).

- (2) (a) Who is going to Cairo?
(b) When did Henry leave Cairo?
(c) Why did Henry leave Cairo?

Sentences like these constitute the main reason for introducing a COMP-node in main clauses. The argument is built on the following implicit premises.

- (3) i Wh-words in subordinate clauses are dominated by the COMP-node.
ii If wh-words are dominated by the COMP-node in subordinate clauses, they are so in main clauses as well.

First I will argue that (3ii) stands without any empirical support and that there are syntactic differences between direct and indirect wh-questions that are disregarded by Bresnan's analysis. Later, I will argue that (3i) is falsified by data from Swedish.

There is syntactic evidence that the Swedish morphemes that correspond to the English wh-words are not complementizers.

A direct wh-question triggers Subject-Verb Inversion while an indirect wh-question does not. How is this difference accounted for under Bresnan's analysis? The structures for direct and indirect wh-questions are identical so there is nothing in the structure that suggests that this difference should appear. Instead, Bresnan would need a separate rule stating that Subject-Verb Inversion applies in main clauses but not in subordinate clauses. Furthermore, the definition of main and subordinate clauses that she has to give is that given by Emonds, i.e. that a sub-clause is a clause that is not a 'root'. The disadvantages of this definition have already been discussed. Since all clauses are introduced by a COMP-node under her analysis, the COMP-node cannot possibly be a defining characteristic of subordinate clauses.

As far as I can see, nothing is gained by having main clauses introduced by COMP-nodes, rather it complicates things. If there is no COMP-node dominating wh-words in main clauses, the Subject-Verb Inversion in direct wh-questions does not have to be treated by a special rule that applies only when a COMP-node dominates the wh-word in a main clause. Rather the Subject-Verb Inversion can be treated as an instance of the general rule that was given in (28) of the preceding section. This rule said that Subject-Verb Inversion takes place whenever some element is moved into sentence initial position.

By not having main clauses introduced by a COMP-node, three things are gained.

- (a) The Subject-Verb Inversion of direct wh-questions can be treated as an instance of a well motivated rule already present in the grammar.
- (b) The COMP-node can be kept as a defining characteristic of subordinate clauses.
- (c) We get an intuitively more satisfying analysis. (This point is rather subjective, of course.)

By the third point, I mean that it is unintuitive to introduce a COMP-node before main clauses and then delete it in almost all cases. To propose such a thing, one needs strong arguments but so far, such arguments do not exist. Furthermore, I see no reason just to assume that (3ii) is true and I have not seen any arguments for this premise.

In the case of Swedish, it does not really matter whether (3ii) is true or false, since there is good syntactic evidence that wh-words in sub-clauses are not dominated by the COMP-node in Swedish. This leads us to premise (3i). Bresnan has given some arguments in favor of this premise and I will show that these arguments do not hold for Swedish.

The first argument is taken from Bresnan (1970), where she says:

"Consider the fact that, just as recognized complementizers that and for are mutually exclusive, so that, for and WH are all mutually exclusive:

- i. *I know that whether he came.
- ii. *For whom to own a rifle doesn't affect me?
- iii. *It doesn't matter to them whether that you march.
- iv. *I asked what for John to do. "

(Bresnan 1970: 311)

The sentences given by Bresnan in this quotation are obviously ungrammatical and I also think it is correct to regard the impossibility of cooccurring with each other as a property of complementizers, i.e. it does not hold if wh-words are complementizers, as Bresnan says they are. In Middle English, sequences like who that and which that could introduce relative clauses, as Bresnan, in fact, notes. Bresnan suggests that these alleged sequences of complementizers really are nothing but instances of the complex complementizers WH+ that, which is at best an ad hoc solution.

Swedish is like Middle English in that it contains structures with sequences of a wh-word and a complementizer. Consider the following sentences.

(4) (a) Jag vet vem som köpte hans gamla bil.

'I know who (that) bought his old car'

- (b) Jag undrar vem som Maja seglade med.
'I wonder who (that) Maja sailed with'

Bresnan's way of analyzing these complementizers would be to say that there is a complex complementizer WH+som in the sentences above. Such an analysis has its disadvantages. It offers no explanation of the fact that som is deletable in (4b) but not in (4a). Furthermore, the deletability of som in embedded questions follows the same pattern as the deletability of som in relative clauses. The generalization is that som is optionally deleted if the clause that follows has a subject. The same condition holds for the deletion of that in English relative clauses. In Swedish, this condition holds for both restrictive relative clauses and embedded wh-questions, as is shown in the following sentences.³²

- (5) (a) Jag vet vem som köpte hans gamla bil.
'I know who (that) bought his old car'
(b) *Jag vet vem köpte hans gamla bil.
- (6) (a) Flickan som köpte hans gamla bil är min vän.
'The girl who bought his old car is my friend'
(b) *Flickan köpte hans gamla bil är min vän.
- (7) (a) Jag undrar vem som Jan mötte på puben.
'I wonder who (that) Jan met at the pub'
(b) Jag undrar vem Jan mötte på puben.
- (8) (a) Flickan som Jan mötte på puben är min vän.
'The girl that Jan met at the pub is my friend'
(b) Flickan Jan mötte på puben är min vän.

The (b)-sentences above indicate the result of complementizer deletion to the corresponding (a)-sentences. Complementizer deletion as in (5a) and (6a), gives ungrammatical results because there is no subject present in the subordinate clauses that follow. Since the condition on complementizer deletion is exactly the same in relative clauses and embedded questions, I do not want to posit different complementizers for these two structures. The conclusion seems to be that WH is not a complementizer.

Sequences of WH and som does not only occur in embedded questions but also in free relatives as is shown by (9).

(9) (a) Vi åt vad som bjöds.

'We ate what (that) was offered'

(b) Vi gör vad som väntas av oss.

'We do what (that) is expected of us'

In neither of these two sentences is som deletable and this is so because there is no subject in the subordinate clause. Hence, the restrictions on the deletability of som are the same in free relatives as in embedded questions and normal relative clauses. If any other constituent than the subject is made the head of the free relative then som is deletable.

(10) (a) Vi åt vad som Kalle bjöd oss.

'We ate what Kalle offered us'

These facts point to a syntactic similarity between embedded questions and free relatives that will be further investigated below. They also show that the argument given above with respect to embedded question and normal relatives could equally well be given by using free relatives and normal relatives.

Hence, sequences like vem som occur in free relatives and embedded questions but not in ordinary relatives. Bresnan's suggestion to have complex complementizers leads to the following situation.

embedded wh-question:	WH+som
embedded yes-no questions:	WH
free relatives:	WH+som
ordinary relatives:	som

Since the deletion of som follows the same restrictions in the above cases, the situation would look better if we had the same complementizer in embedded wh-questions, free relatives and ordinary relatives. Furthermore, if we have WH+som as a complementizer of indirect wh-questions, what is the complementizer of direct wh-questions? Is it WH+som or only WH? I will not try to sort out these matters here but it should be noted that all these problems disappear if we re-

strict COMP-nodes to subordinate clauses and regard wh-words as not being dominated by the COMP-node.

Another peculiar property of Bresnan's WH-complementizer is that this complementizer is inflected while no other complementizer is.

A second argument for premise (3i) is given in Bresnan (1974). The main argument of Bresnan (1974) is that the COMP-node is a sister constituent of the embedded S, since this embedded S may undergo Right-Node Raising leaving the complementizer behind. This argument was discussed in the preceding section and in (24) of that section, Bresnan's example sentences were given. One of these examples was (11), which was used to argue that wh-words are complementizers.

(11) I can tell you when, but I cannot tell you why, he left me.

(11) does not really show that the wh-words when and why are complementizers but rather that they are not constituents of the sentence he left me.

Let us apply this test of constituency to Swedish clauses with wh-words and see what happens with the sequences of a wh-word followed by som. If wh-words are complementizers in Swedish, they must form complex complementizers together with som, otherwise we cannot account for sequences like vem som.

Consider the following sentence.

(12) Jag vet vem som har varit här men du vet nog inte vem som har varit här.

'I know who (that) has been here but you probably don't know who (that) has been here'

Under the analysis that embedded questions in Swedish have the complementizer WH+som, we would expect (13) to result from Right Node Raising on (12). (13) is, however, ungrammatical.

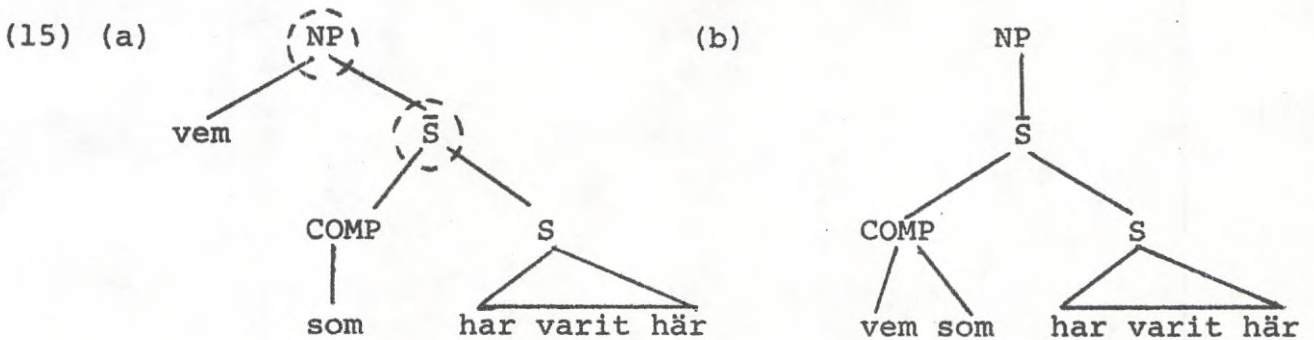
(13) *Jag vet vem som, men du vet nog inte vem som, har varit här.

'I know who (that), but you probably don't know who (that), has been here'

The complex complementizer analysis predicts that the following sentence is ungrammatical, since what is moved does not form a constituent under that analysis.

- (14) Jag vet vem, men du vet nog inte vem, som har varit här.
'I know who, but you probably don't know who, (that) has been here'

(14) is clearly grammatical, which shows that vem som cannot possibly be a constituent. This means that the complex complementizer analysis is incorrect. This forces us to adopt a structure like (15a) rather than one like (15b). (13) and (14) argue for the existence of the two encircled nodes in (15a), but how they should be labelled is another question.



The following set of sentences all argue that (15a), or something like it, is the correct structure for embedded wh-questions.

- (16) (a) Pelle frågade var, och Eva frågade när, som vi träffades.
'Pelle asked where, and Eva asked when, (that) we met'
- (b) Hugo vet vilken kille, men inte vilken tjej, som var med i filmen.
'Hugo knows which guy, but not which girl, (that) took part in the movie'
- (c) Hugo kan möjligen ha sett vem, men Eva kan omöjligen ha sett vem, som spelade Hamlet.
'Hugo can possibly have seen who, but Eva cannot possibly have seen who, (that) played Hamlet'

As we have shown here, neither of Bresnan's two arguments for the claim that wh-words are dominated by a COMP-node holds for Swedish. The conclusion must be that Swedish wh-words are not complementizers and that they are not dominated by the COMP-node.

In this section, I have not discussed embedded S-questions (yes-no-questions). It appears that Swedish om, corresponding to English whether/if, occurs as a complementizer in these.

III.3. Further questions concerning constituent structure

In the representations of subordinate clauses above, I have posited an NP-node above the subordinate clause. I think the NP-status of subordinate clauses is fairly well established but it may not be totally uncontroversial. Rosenbaum (1967) and Emonds (1972) argue for the existence of sub-clauses that are not dominated by an NP. In the preface of his book, however, Rosenbaum (1967: IX) seems to withdraw the claim for the existence of what he calls "verb-phrase complementation" - an embedded sentence directly dominated by VP.

Anders-Börje Andersson (1974) discusses Emonds' arguments for postulating sub-clauses that are not NP's. The conclusion of Andersson's paper is that Emonds' arguments apply less well to Swedish than to English and that it would be rather unfortunate to postulate sub-clauses that are not NP's in Swedish.³³ The critical cases are att-clauses (that-clauses) without head nouns. Let me bring up one example. It is usually said that only constituents of identical categories may be conjoined. With this in mind, compare the following three sentences.

- (1) (a) ?Den gamla grundlagen och att kungen står utanför rättsväsendet utgör en fara för den svenska demokratin.
'The old constitution and that the king is outside the judicial system constitutes a danger for the Swedish democracy'
- (b) Den gamla grundlagen och det att kungen står utanför rättsväsendet.... 'and it that...'
- (c) Den gamla grundlagen och det faktum att kungen står utanför....
'and the fact that...'

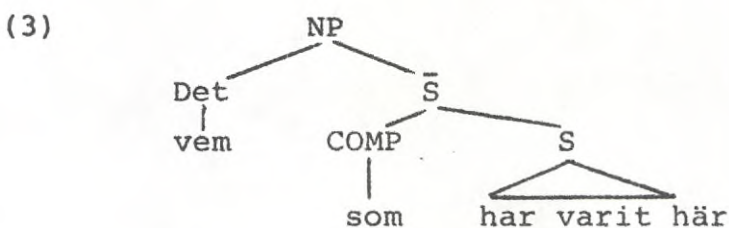
I regard (1a) as grammatical but a true prescriptivist might claim that it is not. However, when the determiner det or the head noun det faktum is added, as in (1b) and (1c), the sentence becomes perfect. Suppose that someone wanted to block (1a), then he would have at least two options. He could either go Emonds' way and say that the att-clause in (1a) is not dominated by an NP or he could impose a restriction saying that the determiner det may not be deleted from the sub-clause when it is conjoined with an ordinary NP. If I were forced to block (1a), I would choose the second of these two alternatives.

Let us move to a more complicated question. In the previous section, I argued that wh-words are not complementizers, at least not in Swedish. Then, what are they?

In most works on transformational grammar, e.g. Chomsky (1964), Katz & Postal (1964), Kuroda (1969) and Stockwell et al. (1973), wh-features are taken to be properties of the determiner node. Considering phrases like vilken rödhårig kvinna ('which red-haired woman'), this looks appropriate. It looks a bit worse when we consider examples like vem ('who') and vad ('what'), which look more like nominal expressions but there are, of course, ways to derive who and what (and the corresponding expressions in Swedish) from sequences like wh-someone and wh-something, respectively. Such an analysis is actually proposed in Chomsky (1964: 38 ff.) and Katz & Postal (1964: 93). Anyway, for the sake of consistency, we keep wh-words under the Det-node.

In the previous section, it was argued on the basis of sentences like (2) that the wh-word and the \bar{S} -node must be sister constituents. (3) results as the representation of the embedded question in (2).

- (2) Jag vet vem, men du vet nog inte vem, som har varit här.
 'I know who, but you probably do not know who, (that) has been here'



Structures like (3) are by no means uncontroversial and it should also be noted that there are few explicit proposals concerning what the derived structure of different subordinate clauses looks like. There is actually more agreement about what the deep structure of the subordinate clauses looks like. From an intuitive point of view, it seems rather strange that surface structures should be less accessible to structural representation than deep structures. Let me give a few examples of how wh-words are treated in some works in the transformational literature. These examples concern the use of wh-words in relative clauses.

Katz & Postal (1964):

The wh-words occur in clause-initial position (one example is given on p. 147).

Bever & Langendoen (1972):

It can be inferred from their rule of wh-fronting that the wh-word occurs in clause-initial position. However, nothing is said about the potential merits of such an analysis.

Bresnan (1972):

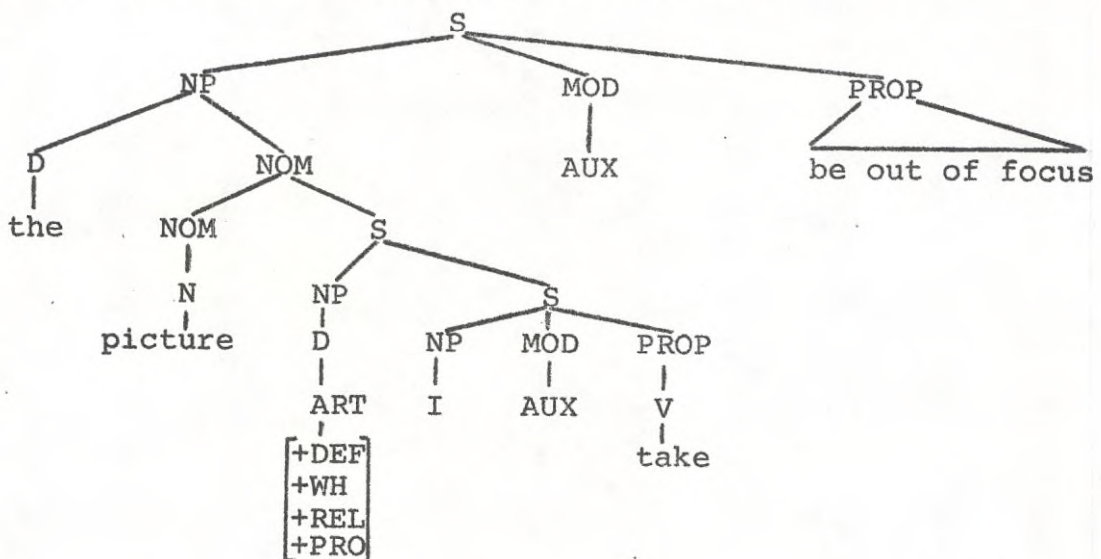
Relative clauses are not the main concern of Bresnan's thesis but from her general remarks it can be inferred that she would place both that and wh-words under the COMP-node out to the left of the relative clause.

Stockwell et al. (1973):

The authors propose a structure like (5) for a sentence like (4). As we see, the wh-word is outside of the relative clause (Stockwell et al. 1973: 480).

(4) The picture which I took was out of focus.

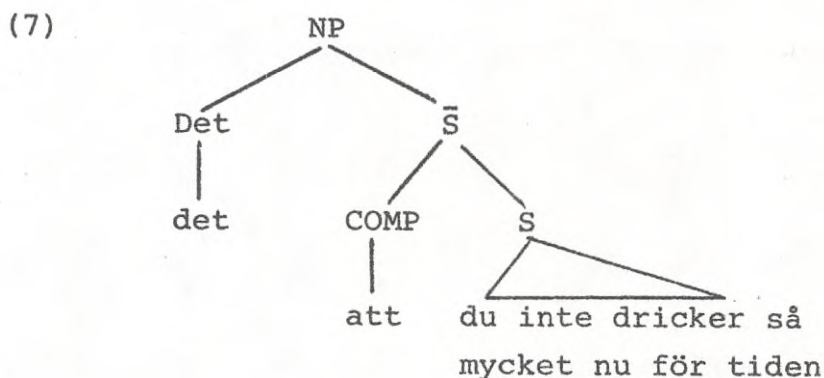
(5)



I will not discuss these different proposals here but their differences and similarities to my own proposal will become apparent soon.

The structure of (3) should be compared with the structure of an ordinary att-clause, which is given in (7). (7) represents the structure of (6).

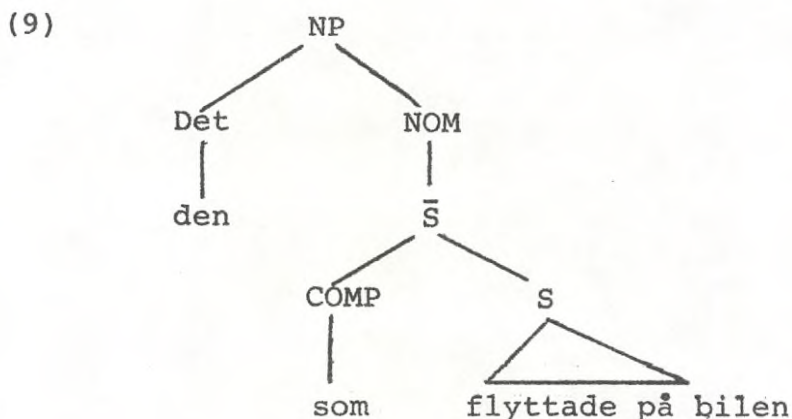
- (6) Jag gillar det att du inte dricker så mycket nu för tiden.
'I like it that you do not drink so much these days'



It should be said that the determiner det is preferably deleted in (6). The principles governing the deletion of the determiner are rather mysterious, just as the rules for deleting it in this position are unclear in English (see Rosenbaum 1967: 34 ff. for a discussion of the presence and absence of it in English sub-clauses).

Structure (3) can also be compared with free relatives, which lend themselves to a parallel analysis. A free relative like (8) should probably be assigned a structure like (9).

- (8) Den som flyttade på bilen måste ha varit stark.
'The one who moved the car must have been strong'

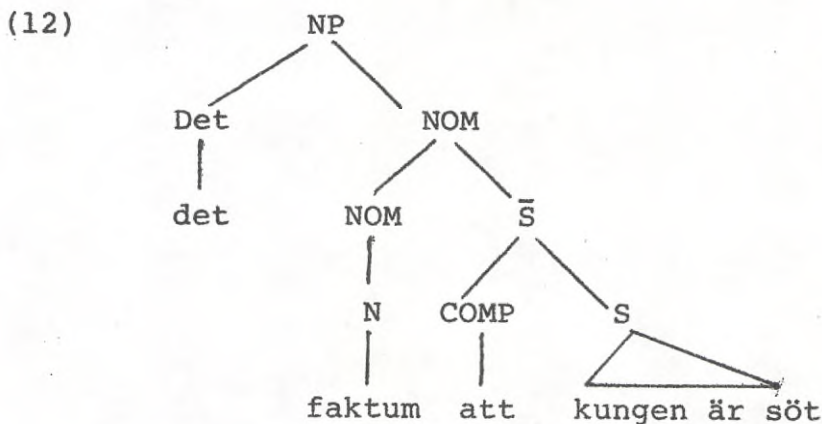


At this point, it may be helpful to introduce the following phrase-structure rules.

- (10) i. NP → Det - NOM
 ii. NOM → { (NOM) - \bar{S} }
 { (adj) - N }

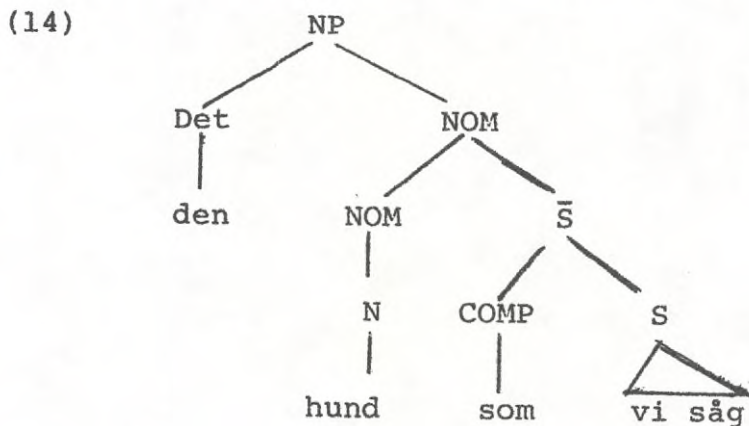
The NOM-node in (10) proves to be necessary when it comes to representing sentences like (11).

- (11) Det faktum att kungen är söt irriterar många republikaner.
 'The fact that the king is cute irritates many republicans'



Relative clauses with som as the complementizer raise no problems. A relative clause like the one in (13) can be given a representation like (14) in a straight-forward manner, which will give it a structure parallel to that of (12).

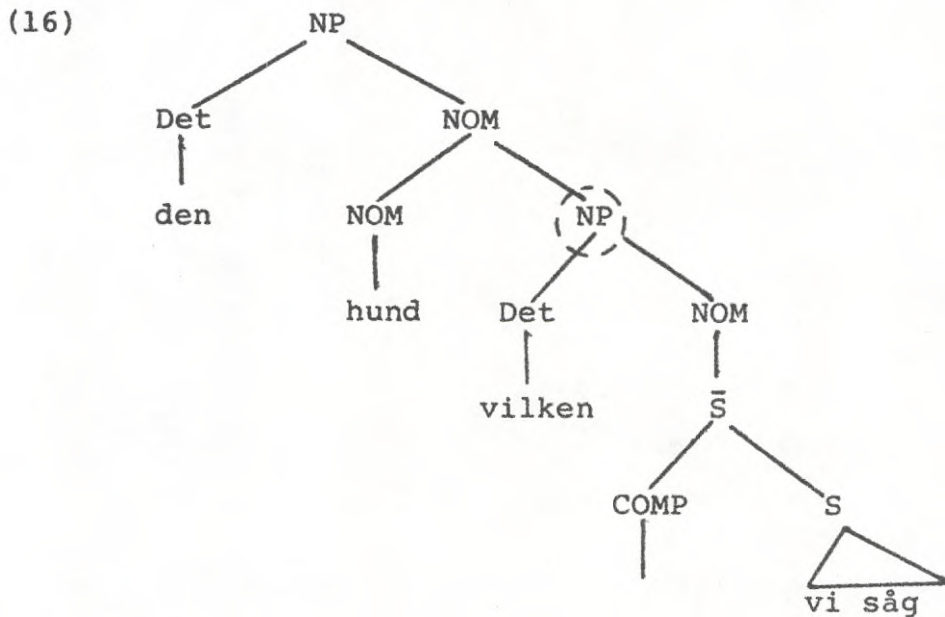
- (13) Den hund som vi såg heter Rasmus.
 'The dog that we saw is called Rasmus'



A problem is raised by relatives like the one in (15), however.

- (15) Den hund vilken vi såg heter Rasmus.
 'The dog which we saw is called Rasmus'

When this sentence is considered together with the claim that wh-words are not complementizers but rather determiner elements, as in structure (3) above, we must, for the sake of consistency, assign (15) a structure like (16).



This structure is more elaborate than the ones that are generally found in the literature (compare the proposals from other works on transformational grammar mentioned above). The crucial problem is to what extent the encircled NP-node above is justified. Another problem concerns the empty COMP-node in (16).

As was said earlier, the general restriction on the occurrence of som is that it is optionally deleted when the following clause has a subject and obligatorily not deleted when the following clause lacks a subject. Now, in relatives like the one in (15), som may not occur even if the subject of the following clause has disappeared. Hence, (17) is ungrammatical, which clearly goes against the generalization about the occurrence of som just made.

- (17) *De hundar vilka som var här är farliga.
 'The dogs which (that) were here are dangerous'

(17) is clearly grammatical when som is erased but ungrammatical with som. Obviously, it ought to be the other way around if both the above-mentioned generalization about som and the proposed structure of (16) are correct. If we want to keep structures like (16), we have to include a rule which obligatorily deletes one of the elements in a sequence of a wh-word and som when this sequence occurs in adnominal position. Such a rule is not impossible and there is in fact some evidence that such a rule exists in the grammar of Swedish (an argument is given below).

Note that I here take it for granted that the wh-words of questions and relatives are animals of the same kind and that they should be handled in some kind of unified analysis. But it could also be claimed that the similarities between wh-words in questions and relatives are purely accidental, which means that vilken ('which') would represent two different unrelated morphemes - one in questions and one in relatives (see Kuroda 1969 for a discussion of these issues). A reasonable view seems to be that we should attempt a unified analysis of wh-words as far as possible and that the differences between the two uses of them be handled by features of the determiner system. The feature 'definite' would, for example, be crucial for this difference. It would take the value + in relatives and the value - in questions. A clear exposition of different opinions on these matters is given in Stockwell et al. (1973: 447). I will not try to cut my way through the jungle of questions that are raised by wh-words but it is worth noting that if structures like (16) are accepted, we could have one and the same rule for wh-fronting in embedded questions and relatives. On the other hand, if we place wh-words under the COMP-node in relatives, we obviously need different wh-fronting rules for questions and relatives.³⁴ In justifying structure (16), I have to argue for the existence of the encircled NP-node of that structure and for a rule that deletes one of the elements in a sequence of a wh-word followed by som when this sequence occurs in adnominal position.

Free relatives strengthen the case for structures like (16). In these, som occurs as the complementizer following the wh-word when there is no subject in the sub-clause. Thus, som cannot be deleted from (18) without yielding an ungrammatical sentence. Free relatives do not occur in adnominal position and they allow sequences of a

wh-word and som, according to the generalization given above.

(18) Vad som köps måste ätas.

'What is bought must be eaten'

Free relatives which are not introduced by wh-words display the same characteristic. Hence, som cannot be deleted from (19).

(19) Det som köps måste ätas.

'That which is bought must be eaten'

As a note in passing, I want to point out that there are several morphemes that differ from each other in exactly the same way as the determiners of (18) and (19) do. We have pairs like vem ('who') - den ('that one'), när ('when') - då ('then'), var ('where') - där ('there'), etc. When they introduce sub-clauses, these morphemes occupy the Det-node. The two members of each pair should probably be related to each other by a difference in features (⁺ Definite, for example). It is interesting to note that all Swedish speakers accept sequences like då som and där som while rather few accept and use sequences like när som and var som. This fact provides some support for the claim that one of the members in a sequence of a wh-word and som has to be deleted.

In favor of structure (16), we can also point to some structures in which an NP appears to be modifying another NP.

(20) (a) Pelle, den idioten, var här igår.

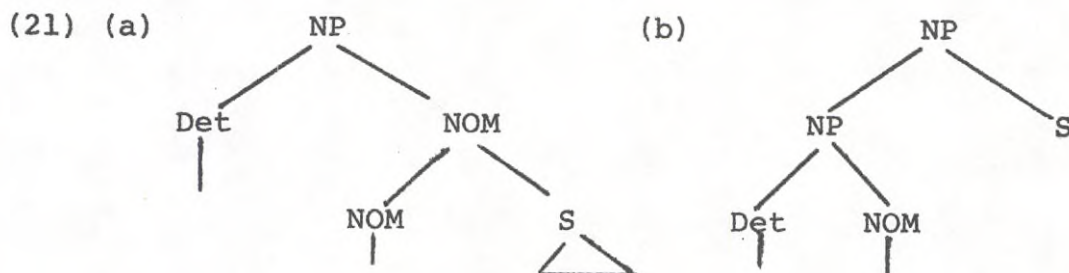
'Pelle, the idiot, was here yesterday'

(b) Haver ni sett Karlsson, han som lägger ner rör.

'Have you seen Karlsson, he who fixes the pipes'

The following facts are probably more interesting. As we know, relative clauses also occur modifying verb-phrases and sentences. These relative clauses are always non-restrictive. Whether this is damaging to the argument or not, I am not sure. It has been argued that the structure of the head of the relative is different in restrictives and non-restrictives, but not that the complement sentence should be given a different representation. According to Rodman (1972), a restrictive relative clause modifies a nominal ex-

pression and a non-restrictive relative clause modifies a noun-phrase. Thus, (21a) represents a restrictive and (21b) a non-restrictive clause.



This is probably the correct way of representing the difference between restrictive and non-restrictive relatives as far as the head is concerned. The main argument for this analysis is semantic. In (21a), the determiner picks out the (or some) individual who has both the property that NOM indicates and the property that S indicates. In (21b), on the other hand, the determiner picks out the (or some) individual who has the property indicated by NOM. In this case, the S indicates an additional property of the head NP, not used in identifying the person or thing in question.

A syntactic argument in favor of the distinction indicated by (21) can be found in Swedish. (22) represent restrictive and (23) non-restrictive relatives.

(22) (a) Jag såg den lampa som Peter köpte i Paris.

'I saw the lamp which Peter bought in Paris'

(b) Jag såg lampan som Peter köpte i Paris.

'I saw lamp-the which Peter bought in Paris'

(23) (a) *Jag såg den lampa, som Peter förresten köpte i Paris.

'I saw the lamp, which Peter by the way bought in Paris'

(b) Jag såg lampan, som Peter förresten köpte i Paris.

'I saw lamp-the, which Peter by the way bought in Paris'

In the non-restrictive case, the definite article must be placed after the head noun while it may be placed either before or after it in the restrictive case. When the definite article precedes the noun, there is an attribute to the noun. This attribute is usually an adjective but it may be a relative clause as we see from (22a). Hence, we have den gröna lampan ('the green lamp')

but not *gröna lampan ('green lamp-the').³⁵ This difference in the use of the definite article in restrictive vs. non-restrictive relative clauses can be accounted for if the two structures are distinguished as in (21).

It is important to note that neither of these arguments say anything about whether the relative clause is dominated by an NP or whether there is any difference between restrictives and non-restrictives at this point.

Let me return to relative clauses modifying VP's and S's after this digression. (24) indicates what a relative clause modifying an S may look like and what it may not look like.

- (24). Tore körde Vasaloppet på mindre än 14 timmar i år,
'Tore finished the Vasa-race in less than 14 hours this year,'
- (a) vilket verkligen överraskade oss.
'which really surprised us'
 - (b) något som verkligen överraskade oss.
'something that really surprised us'
 - (c) *som verkligen överraskade oss.
'that really surprised us'
 - (d) *vilket som verkligen överraskade oss.
'which that really surprised us'
 - (e) *något vilket verkligen överraskade oss.
'something which really surprised us'

From (24d), we can conclude that the same impossibility of co-occurrence of a wh-word and som is found in relatives modifying an S as in ordinary relatives. The same situation obtains for relative clauses modifying a VP. Som cannot introduce a relative of this type by itself, (24c), it has to be accompanied by a preceding determiner (något). The two possible ways of introducing a relative of this type are given in (24a) and (24b) - vilket and något som. We may take this to mean that a relative of the type being discussed has to be introduced by a determiner. Hence, (24c) is out. (24d) is out because of the general restriction against having a wh-word followed by som. These two principles predict the forms of relatives modifying S's (and also VP's). (24e) is out because both något and vilket are determiners and do not cooccur.

These facts lend structures like (16) some support - note (25b) in particular. This type of relatives is introduced by a determiner. Hence, they are noun-phrases.

The tentative conclusion of this discussion is that structures like (16) are the correct representations of relative clauses in Swedish.

The preceding discussion of constituent structure can be summed up in a set of phrase-structure rules, whose effect is to generate structures appropriate for subordinate clauses.

- (25) i. NP → Det - NOM
- ii. NOM → $\left\{ \begin{array}{l} \text{(NOM) - } \left\{ \begin{array}{l} \bar{S} \\ \text{NP} \\ \text{PP} \end{array} \right\} \\ \text{(adj) - N} \end{array} \right\}$
- iii. \bar{S} → COMP - S
- iv. PP → Prep - NP

The rules of (25) generate all the structures needed to represent the sub-clauses of Swedish. Rule (25iv) has not been discussed or used above but I have included it here because it is needed to represent a whole class of adverbial clauses. All the adverbial clauses in (26) are introduced by a preposition.

(26) (a) Pelle fick ett jobb i Tromsö efter det att han avslutat sin examen.

'Pelle got a job in Tromsö after he had finished his exam'

(b) Pelle studerade lingvistik tills det att han fick jobb i Tromsö.³⁶

'Pelle studied linguistics till he got a job in Tromsö'

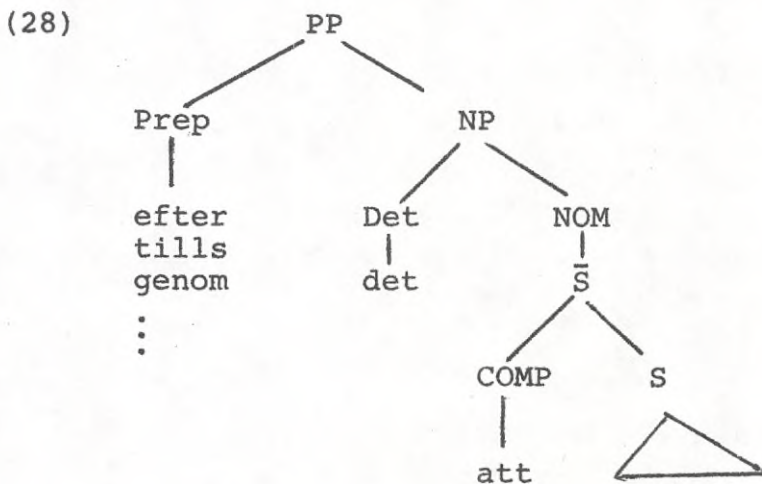
(c) Pelles karriär är avslutad genom det att han fick jobb i Tromsö.

'Pelle's career is finished because he got a job in Tromsö'

There are other combinations of the same type.

- (27) före det att 'before'
- i och med (det) att 'by', 'because' (literally: in and with it that)
- på det att 'in order that'
- under det att 'while'

All these phrases can be represented in the following manner.



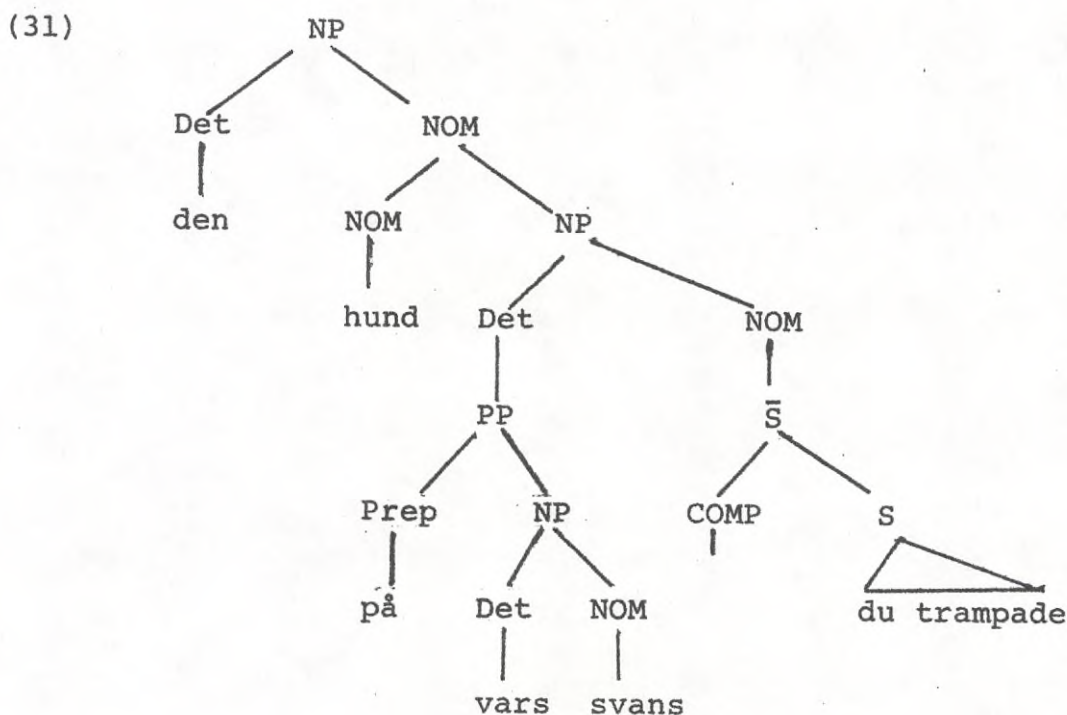
In this section, I have given an exposition of how I think that subordinate clauses should be represented in the grammar of Swedish. I will now proceed to discuss some points that may remain unclear after the exposition above.

I have argued that wh-words occur under the Det-node in the derived structures, i.e. wh-words function as determiners in language. In my analysis, as in all other syntactic analyses known to me, there is a wh-movement rule that moves a wh-marked constituent. In the analysis proposed here, the wh-marked constituent is placed under the Det-node. In other analyses, it is placed in other positions.

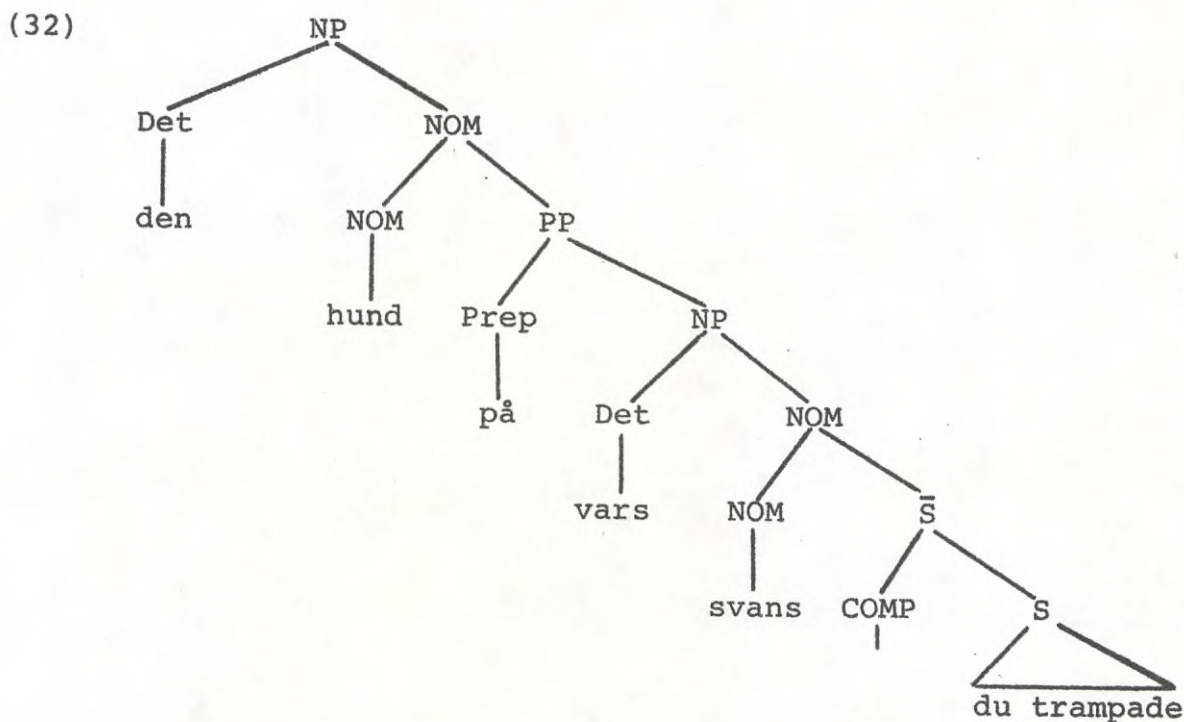
Consider the following sentences where the underlined parts indicate the fronted wh-constituent.

- (29) (a) Den pojk vars föräldrar inte gillar fotboll får det besvärligt.
 'The boy whose parents are not interested in soccer will be in trouble'
- (b) Den hund på vars svans du trampade heter Rasmus.
 'The dog on whose tail you stepped is called Rasmus'
- (30) (a) Jag undrar vilket lag som är bäst.
 'I wonder which team is the best'
- (b) Jag undrar för vilket lag hans hjärta klappar.
 'I wonder for which team his heart beats'

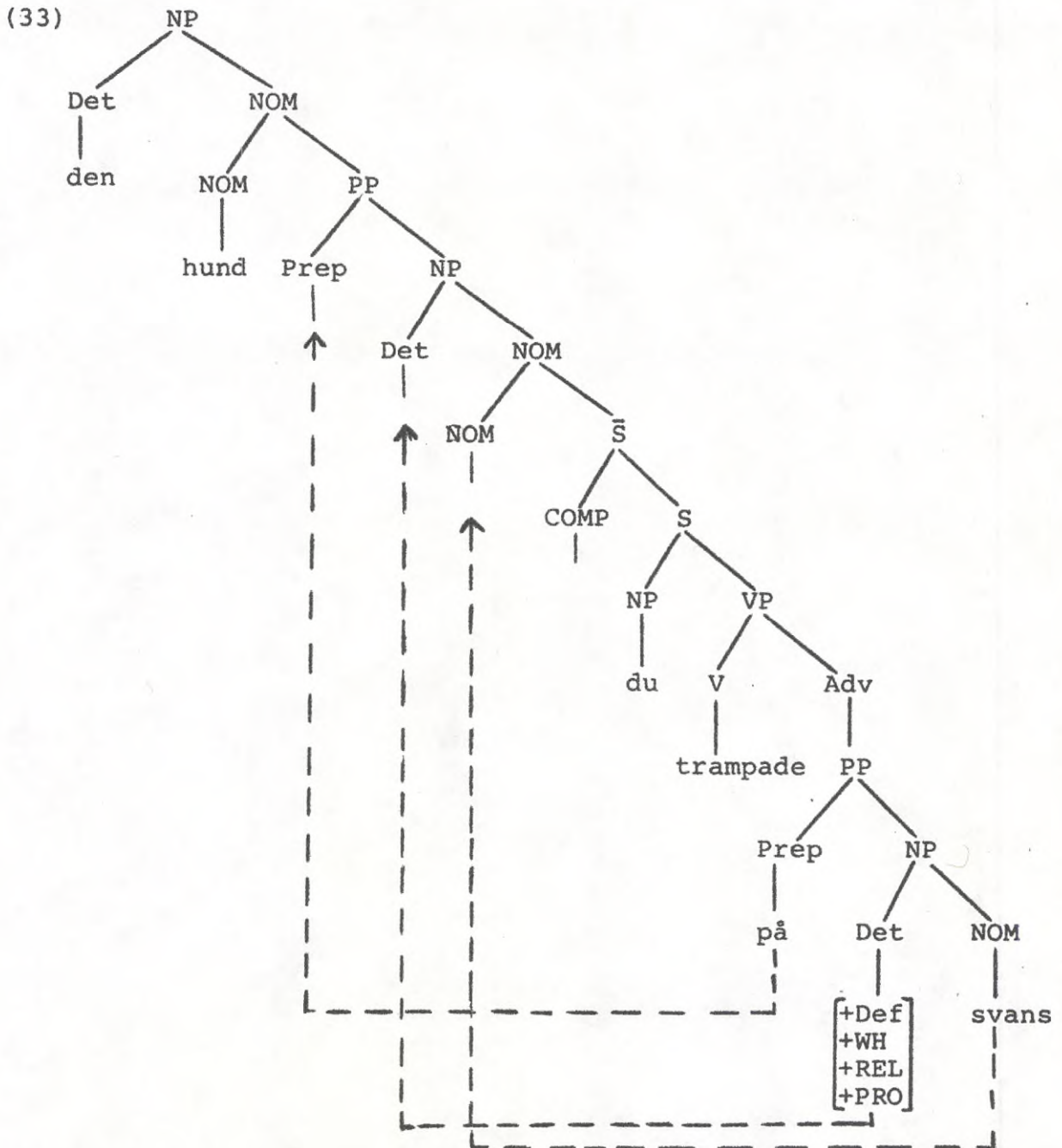
In the analysis presented in this section, the underlined constituents are placed under the Det-node. The derived structure of (29b) looks like (31) according to this analysis (leaving irrelevant things aside).



The Det-node in (31) seems rather complex. However, it is very hard to find an alternative. (32) gives an alternative but as we will see, this alternative has some unwanted consequences.



If this alternative is accepted, the rule of wh-movement has to perform an operation not usually allowed. (33) indicates how this rule would have to work if structures like (32) are accepted. It is clear from the figure that wh-movement moves a constituent but the moved constituent is not placed as a constituent in the derived structure, as (33) indicates.

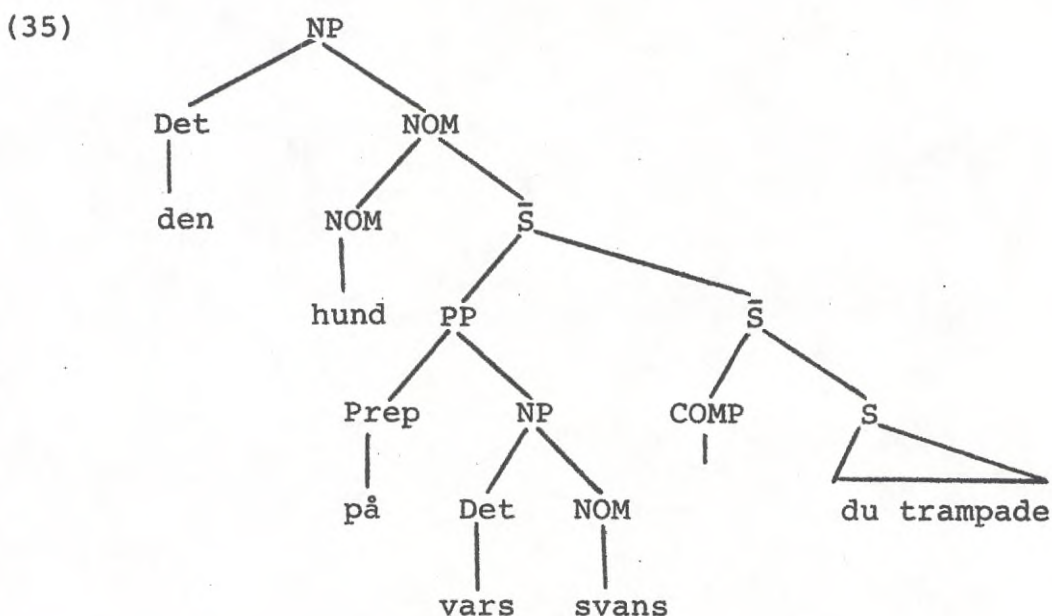


Another disadvantage of this alternative is that the base rules have to be complicated in order to generate the empty nodes needed in a structure like (33), not to mention the complications needed to generate the empty nodes necessary for the following sentence (taken from Ross 1967). The underlined part indicates the moved

constituent (the wh-constituent).

(34) Reports the height of the lettering on the covers of which the government prescribes should be abolished.

Thus it seems correct to conclude that the alternative indicated by structures (32) and (33) is untenable. Let me point out another alternative to (31). Instead of placing the wh-words under the Det-node in relative clauses, we could Chomsky-adjoin them to the \bar{S} -node. This alternative gives us (35) as the representation of the sentence discussed above. This is essentially the proposal of Stockwell et al. (1973). (Compare structure (5) above.)



(35) differs from (31) on the following crucial points. First, there is no need for an NP modifying the head of the relative. This may be taken as an advantage of this alternative, although there are some arguments that an NP may modify the head of the relative (cf. the arguments given above). Secondly, alternative (35) has the obvious disadvantage of giving us one rule of wh-movement for ordinary relatives and another for free relatives and embedded questions. I do not think it can be justified to generalize alternative (35) to hold for free relatives. In those it appears to be correct to place the wh-words under the Det-node, as I have argued above.

The crucial question here seems to be to what extent the NP-node that modifies the head in (31) is justified. To strengthen the case

for alternative (31), I want to point out some structures where this NP-node seems to be necessary. Temporal när-clauses ('when-clauses') are NP's according to the analysis of this section. However, these clauses occur in adnominal position in a relative clause and so do temporal clauses formed as prepositional phrases. Consider the following sentences, which indicate that an NP (or a PP) may modify the head of a relative clause.

(36) (a) Den veckan när min fru var bortrest var väldigt tråkig.

'The week when my wife was away was very boring'

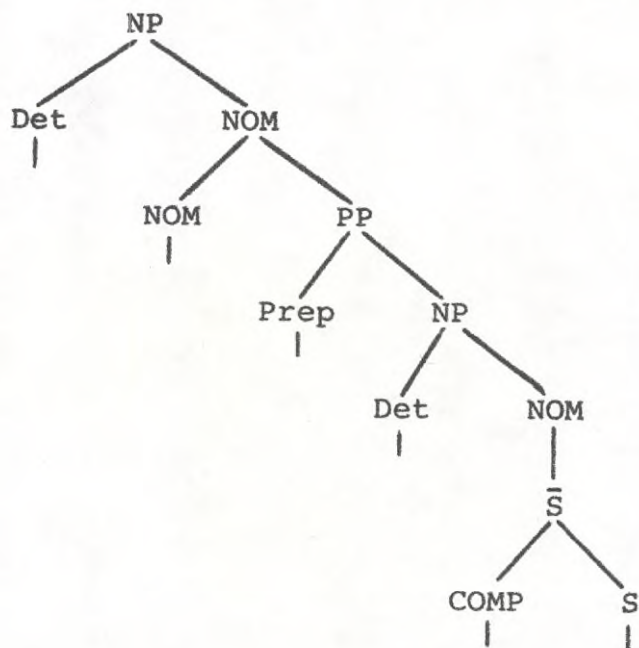
(b) Månaden efter det att vi hade kommit tillbaka till stan var hektisk.

'The month after we had returned to the city was hectic'

These remarks conclude my discussion of what the appropriate structures for subordinate clauses in Swedish are like.

The contents of this section can be summed up by giving a structural-positional schema for the subordinate clause in Swedish. A structural-positional schema shows both linear and hierarchial structure (compare Diderichsen's positional schemas (1966), which only shows linear structure although some aspects of hierarchial structure can be deduced from them). A structural-positional schema for sub-clauses should be the maximally complicated structure shown by subordinate clauses in Swedish. (37) shows what this schema is like.

(37)



A sentence like (36b) fills all the nodes in this structure. Less complex sentences fill some sub-part of the schema in (37), which usually means that the phrase-structure rules generate only this sub-part (the phrase-structure rules needed are given in (25) above).

Some notes of general interest can be made with respect to (37). This schema gives the structure of adnominal sub-clauses, i.e. relative clauses and the like.

When nominal sub-clauses are under consideration, we restrict our attention to the PP-node in (37) and the material dominated by it. This is the structure of subordinate clauses introduced by what is traditionally called 'subordinating conjunctions' if the analysis of this section is accepted. Under the analysis presented here, the elements or sequences of elements recognized as subordinating conjunctions are morphemes or sequences of morphemes that occupy one or more of the nodes Prep, Det and COMP in (37). Another major claim of this section is that wh-constituents occur under the Det-node.

III.4. What is a complementizer? and Which morphemes are complementizers?

Above, a subordinate clause has been defined as a clause introduced by a complementizer. The next question to ask is: What is a complementizer?

Note that it would not suffice to define a complementizer as a morpheme which introduces a subordinate clause. Such a definition would make the whole argument circular.

In the case of Swedish, we could, of course, just list the set of complementizers and leave it at that but this would be rather unsatisfactory from the point of view of linguistic theory. Nevertheless, this is the usual approach in articles dealing with complementizers and complementation.

It would certainly be an advantage to be able to speak of complementizers as a category in linguistic theory or universal grammar. For one thing, the placement of complementizers differs from language

to language depending on general characteristics of the word order in the language. In general, VSO and SVO-languages have S-initial complementizers while SOV-languages have S-final complementizers. Exceptions to this general pattern do exist, as with all other "word-order universals" (Greenberg 1966). If we want to state such general facts about the placement of complementizers, we need to speak about complementizers as a category in linguistic theory.

Furthermore, the different complementizers in one language are distributed according to various properties of sentence-types such as statement, question, factivity, activity, subjectivity and the like. A discussion of these distributional principles in the particular language or in universal grammar requires a category of complementizers and such a category needs to be defined in some way.

As far as I know, there is no definition of the term 'complementizer' offered in the literature. The following quotation from Bresnan may be indicative of what linguists feel about this issue.

".... without detailed and careful research into many languages, one cannot begin to define "complementizer" in an adequate way."

(Bresnan 1972: 6)

What Bresnan says here may well be true but it does not stop one from attempting to find a definition of the concept in question. Everyone who writes about complementizers must, of course, have some understanding of what this concept refers to. Furthermore, there seems to be a fair amount of agreement among linguists as to what counts as a complementizer.

So the problem really is to pin down what this implicit understanding of the term 'complementizer' is like. In doing this, one's own understanding of the concept is most readily accessible to investigation. Therefore, the following proposal concerning a definition of what a complementizer is will to a large extent mirror my own personal views. In the light of the preceding discussion, I would like to propose the following definition.

A COMPLEMENTIZER IS AN INVARIABLE MORPHEME WHOSE EFFECT IS TO CONVERT A SENTENCE TO A NOMINAL.

There are two things I want to discuss in connection with this definition. First; Do complementizers really have to be invariable morphemes Secondly; Are sentences the only possible domain for the operation of complementizers? As for the first question, I think complementizers should be uninflected morphemes. For one thing, it is hard to see what they should be inflected for and, besides, I have not seen any examples of inflected complementizers. As was argued above, I do not regard wh-words as complementizers. It must be noted that the class of complementizers is not necessarily co-extensive with the class of morphemes that occur under the COMP-node in some language. In the view of Bresnan (1972), for example, the wh-words are not complementizers but they are moved into the COMP-node by a transformation. Such an analysis should not be ruled out by the definition given above, although I am personally rather sceptical about such an analysis. Note that the previous discussion of this chapter attempted to show both that wh-words are not complementizers and that they do not occur under the COMP-node at any stage in the derivation.

The requirement that complementizers should be uninflected is perhaps an unnecessary part of the definition. It is probably better to regard it as a property of complementizers rather than a defining characteristic of them (a property they have instead of a property they have to have to be what they are).

Accepting the view that complementizers are always uninflected may help us to understand some historical developments better. The following chart is copied from Bever & Langendoen (1972).

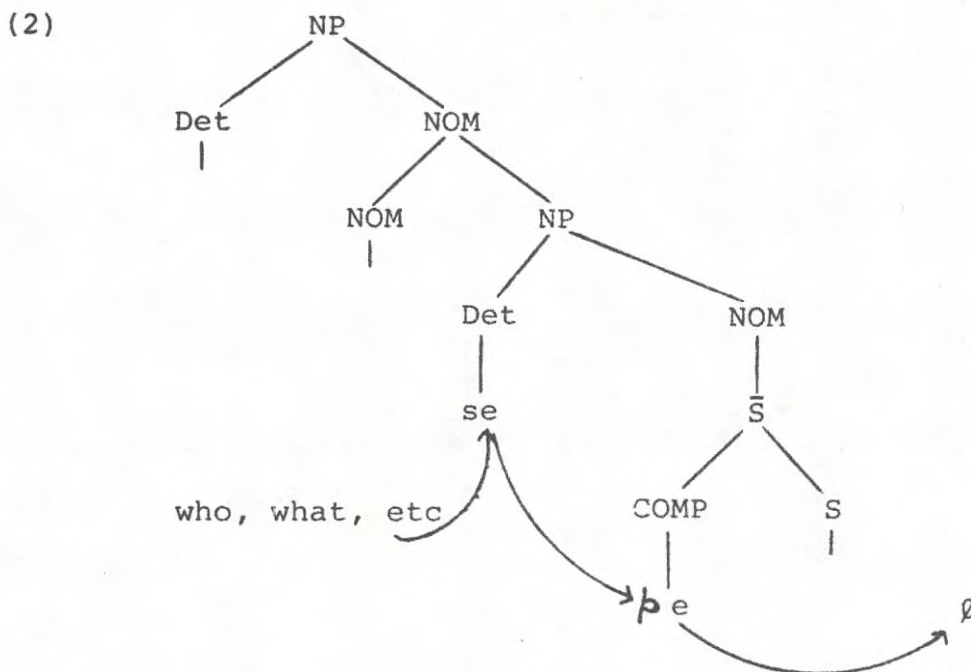
(1)	<u>Stage 1</u>	<u>Stage 2</u>
undeclined rel. marker	þ e	demonstrative (that)
declined rel. marker	demonstrative (se)	interrogative (who, what, etc)

"It is clear that in Stages 1 and 2 (indeed even in Modern English) there was both a declined and undeclined function word available to introduce relative clauses. However, at Stage 2 the demonstrative marker se that had been declined at Stage 1 now appeared in the form þæt as the (undeclined) relative clause marker, while the inflected interrogative pronoun was now used as the inflected relative clause

marker. Furthermore, just as se could optionally precede be in Stage 1, the interrogative pronoun introducing a relative clause could appear optionally before bet in Stage 2. Thus the only change between Stage 1 and Stage 2 in the relative clause markers themselves was that be became bet while the inflected demonstrative as relative clause initial was replaced by interrogative pronouns."

(Bever & Langendoen 1972: 70)

This change is, as Bever and Langendoen say, hard to describe by modification of phrase-structure and transformational rules. The change can be described in the rules but the nature of the change will not be revealed. However, by using the structural-positional schema of the preceding section, we can rather easily see what happened.



I am not sure what causes what in this change but I would think that something like the following happened. The determiner se becomes a complementizer. As such it is uninflected. The neuter form bet is used. The old complementizer be disappears from the language. Now there will be no determiner introducing relative clauses. The interrogative pronouns take up this function.

This is not an explanation of why all this happened. I would guess that an explanation is to be found in facts like the following. At the time of the change, bet was already the complementizer of object complements so it may be appropriate to use it as a complementizer

also in relative clauses. The interrogative pronouns were the determiners of embedded questions so why should they not also be the determiners of relative clauses. If my guesses are correct, the change was caused by an attempt to make the complement system more systematic.

This example from the history of English was given as an illustration of the usefulness of regarding complementizers as undeclinable morphemes.

Let us now turn to the second of the two questions above. Maybe we should allow VP (besides S) in the domain of the operation of complementizers. The infinitival complements of Swedish and English (expressed by att and to, respectively) are typical means of making verb phrases into nominal expressions and they are productive, to be sure.

I think we are justified in calling the infinitival complement of the following sentence an NP, since it occupies the subject position.³⁷

(3) Att spela fotboll är kul.

'To play soccer is fun'

Infinitival complements also occur after prepositions as in (4), for example. After med ('with') only NP's occur.

(4) Vi kom på honom med att spela flöjt.

We found him with to play flute

'We caught him playing the flute'

In the case of English, it has been argued that most or maybe all of the to-complements are derived from for-to-complements through a deletion of the initial for NP-constituent (e.g. Rosenbaum 1967). Bresnan (1972: 78) argues against such a view on English infinitival complements (she argues against the motto "where to appear, for was there").

The derivation of infinitival complements from for-to-complements seems to be even less appropriate for Swedish than for English.

As far as I know, a för-att-structure may never occur as the subject of a Swedish sentence. While (5) is said to be a grammatical sentence of English, (6) is clearly ungrammatical in Swedish (the English sentence is taken from Jacobs & Rosenbaum (1968: 164).

(5) For Metternich to leave Austria was astonishing.

*För Metternich att lämna Österrike var överraskande.

A rephrasing of sentences (3) and (4) with för-att-structures would likewise yield ungrammatical sentences.

(7) *För någon att spela fotboll är kul.

'For someone to play soccer is fun'

(8) *Vi kom på honom med för honom att spela flöjt.

'We found him with for him to play the flute'

It might be argued that the infinitival complement in (4) is derived from a full sentence through the application of Equi-NP-Deletion. The problem with this proposal is that the source, which would look like (9), seems to mean something different from (4). Moreover, it is not even clear that (9) is grammatical. (4) means that we caught him in the act of playing the flute while (9) means that we found out that he was a flute-player.

(9) ?Vi kom på honom med att han spelade flöjt.

We found him with that he played flute

'We found out that he was a flute-player'

The point of this discussion is to show that there are some infinitival complements in Swedish that cannot be derived from either för-att-complements or full clauses through deletion.

Furthermore, I can see no theoretical reason for not allowing both VP- and S-complementizers. With the remark that att may well be a VP-complementizer, I leave the subject of infinitival complements in Swedish.³⁸

We now turn to the second question of this section. Which morphemes are complementizers in Swedish? This question is unfortunately

rather hard to answer. Note that the definition of complementizers proposed above does not give much help before the constituency of the structures under consideration is determined. As I have argued above att, om and om are, when they are followed by sentences, the obvious cases of complementizers in Swedish. These morphemes only occur in subordinate clauses, they occur clause-initially, they do not co-occur with each other, they occur in different types of complements and they are not distributed randomly over the different types of complements in which they occur but according to certain principles (more will be said about these principles in the next chapter), i.e. they show all the properties that Bresnan (1972) requires of complementizers.

Above, I have argued that wh-words are not complementizers and in this section, I have said that the att introducing infinitive complements may be regarded as a complementizer. This att would be a VP-complementizer.

Another morpheme to be mentioned is huruvida ('whether'), which may introduce an embedded question. As I have said above, om introduces questions and conditionals and in this respect, it corresponds to English if. Huruvida is more like whether in that it only introduces embedded S-questions. Because of this correspondance between Swedish and English, it might be of interest to mention that Bresnan regards whether as a complementizer, or rather as an instance of the WH-complementizer. She does not regard if as a complementizer, however. The only comment on if that I have found in her dissertation is the following.

"Though if is related to whether, I do not identify WH with if, for they differ in distribution: Whether he'll come is not known vs. *If he'll come is not known'.

(Bresnan 1972: 54)

As far as I can understand, this comment is irrelevant to the question of whether if is a complementizer. Then, what is the relation between om and huruvida in Swedish? I would like to make the following suggestion. Om is the complementizer of questions and conditionals in Swedish and in some sophisticated people's speech, huruvida may be substituted for om in questions. Huruvida is not part of everyday Swedish.³⁹

Next, I will turn to the rather tricky question of comparatives. Bresnan (1972) has argued that the morphemes than and as which introduce comparative clauses are complementizers. Corresponding to than and as, we have än and som in Swedish.

(10) (a) Anders är starkare än hans far är.

'Anders is stronger than his father is'

(b) Anders är lika stark som hans far är.

'Anders is as strong as his father is'

The question to be investigated is whether the morphemes än and som in the sentences above are to be counted as complementizers in Swedish.

Let us start with än. I will argue that än is a preposition and that it may be unnecessary to postulate a complementizer än. The alternative is to postulate two morphemes än - one a preposition and the other, a complementizer. The following two sentences illustrate this point.

(11) Gösta talar högre än man brukar.

'Gösta speaks louder than one usually does'

(12) Gösta talar högre än vad som är brukligt.

'Gösta speaks louder than (what that) is usual'

In (11), än looks like a complementizer followed by a subordinate clause. This much is uncontroversial. Sentence (12), on the other hand, raises a number of problems. In it we find the sequence än vad som. This seems more than strange when we consider the following facts. Än is usually considered as a complementizer (it is considered to be a subordinating conjunction in traditional grammar). Vad is a wh-word (corresponding to what in English) and also wh-words are sometimes considered to be complementizers (Bresnan 1972). Som is the complementizer of relative clauses in Swedish.

When these facts are taken together we end up with a sequence of three complementizers in (12). This is an undesirable conclusion. Even worse is that Bresnan takes it as a defining property of complementizers that they never cooccur with each other.

I agree with Bresnan that sequences of complementizers do not occur but then we must find a suitable analysis of (12) in order to accommodate this fact. Above, I have argued that wh-words are not complementizers. I claim that the only possible analysis of (12) is to regard the constituent vad som är brukligt as a free relative or, possibly, as an embedded question.⁴⁰ The constituent in question can appear as a free relative or as an embedded question.

(13) (a) Vad som är brukligt är att tala med tämligen låg röst.

'What is usual is to speak in a fairly low voice'

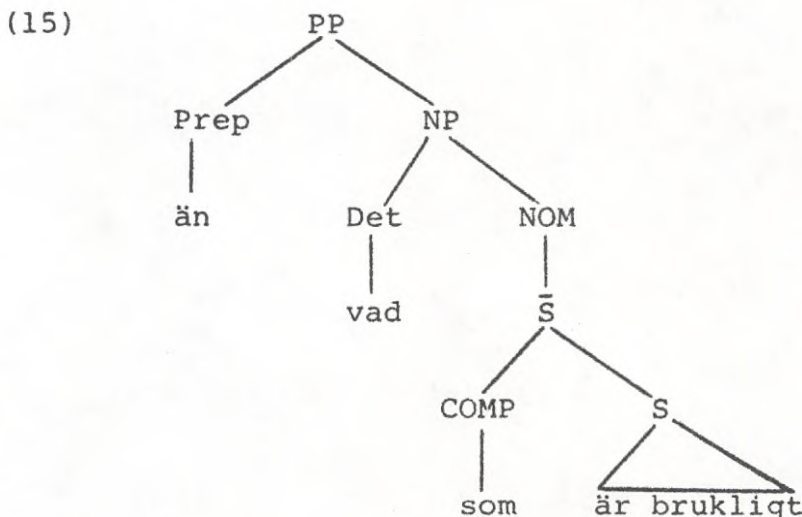
(b) Till frukost åt han vad som är brukligt.

'For breakfast he had what is usual'

(14) Jag undrar vad som är brukligt.

'I wonder what is usual'

If än is a preposition in (12) and free relatives (or embedded questions) NP's, this would give us a perfectly normal PP consisting of preposition followed by a noun phrase.



What is interesting about (15) is that there seems to be no other way to get (15) than by introducing a PP-structure in the deep structure of sentence (12). There are, of course, several other sentences where än is followed by an NP but these can be derived by conjunction reduction. It is not necessary to posit a preposition in the underlying structures of the sentences in (16).

(16) (a) Kalle är starkare än Olle.

'Kalle is stronger than Olle'

(b) Ingen är lyckligare än $\left\{ \begin{array}{l} \text{mig} \\ \text{jag} \end{array} \right\}$.

'No one is happier than $\left\{ \begin{array}{l} \text{me} \\ \text{I} \end{array} \right\}$ '

(c) Danskarna gillar norrmännen mer än svenskarna.

'The Danes like the Norwegians more than the Swedes'

In the sentences of (16) we can have an underlying complementizer än and explain in terms of deletion transformations why it is that this complementizer is followed by an NP only. However, a case for än as a preposition can be made from (16b) in the version än mig, where we find the oblique form of the personal pronoun. We could then distinguish the two variants of (16b) by having a preposition in one and a complementizer in the other. However, this difference could be accounted for by changing the domain of the case-marking transformation.

Another argument similar to the first one for establishing a preposition än is given by (17), which also includes what appears to be a sequence of complementizers.

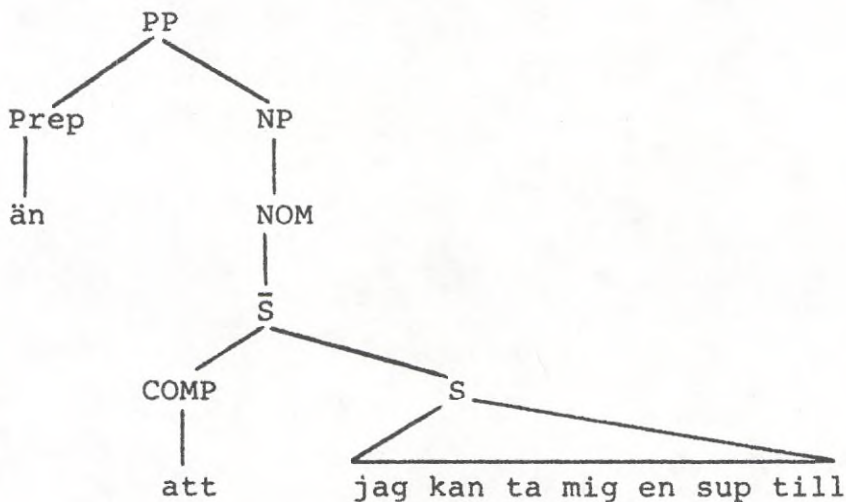
(17) Jag är inte sämre än att jag kan ta mig en sup till.

I am not worse than that I can have another drink

'I'm quite capable of having another drink'

If anything is a complementizer in Swedish, att is. It is the complementizer of subject and object complements. Swedish att-clauses as well as English that-clauses are usually considered to be NP's. Furthermore, it is not easy to find an analysis under which the att-clause can be regarded as what remains of a sentence after deletion. The same was true of (12). There, too, we had to posit an NP in deep structure. This is the difference between (12) and (17) on the one hand and (16) on the other. The structure of the sub-clause in (17) should be something like (18).

(18)



Sentences like (12) and (17) give rather convincing arguments for establishing a preposition än. The underlying structures of the sub-clauses in (12) and (17) must be roughly (15) and (18), respectively.

I have argued that some instances of comparative än must be considered as prepositions but the really difficult question is whether all instances of comparative än are prepositions.

Sentence (11) can be taken as evidence for a complementizer än, but on the other hand, there is nothing that prevents a clause from being the object of a preposition, the clause itself being an NP. Bresnan (1972: 287) seems to argue that than cannot be a preposition because it can be followed by a clause or a clause remnant. Bresnan's reasoning must be unsound in this respect. As far as I know, there is no universal principle to the effect that a preposition may not be followed by a clause.

In Swedish, prepositions freely occur in front of clauses. In English, however, there seems to be a rule that deletes prepositions in front of clauses but this rule is not without exceptions (in that, except that and save that).

One indication that än might be a preposition also in (11) is given by (19), which is a common variant of (11) in the spoken language.

(19) Gösta talar högre än vad man brukar.

'Gösta speaks louder than (what) one usually does'

(19) indicates that the comparative clause is a wh-structure. There is the same indication that also English comparative clauses may be wh-structures. Bresnan gives the following quotation from Jespersen's Modern English Grammar III.9.6. (the quotation is given in Bresnan 1972: 223).

"Vulgar speech has a redundant combination with what; Shaw ... your're nearer my age than what he is. Higgins (gently) Than he is: not "than what he is". Thus also Mackenzie I'm more in earnest than what you are.... I hope you can walk quicker than what you eat. Similarly with as they're just as quick with their tongues as what you are I'm not near so deep as what you are."

I do not know how common or how vulgar this is in English. In spoken Swedish, I find (11) and (19) equally acceptable. The use of a wh-word in front of the comparative clause may be more common in Swedish than in English but there is also a more notable difference between the two languages. Compare the following two pairs of sentences in (20).

- (20) (a) More progress has been made than seems to be possible.
(b) More progress has been made than_what seems to be possible.

- (21) (a) *Större framsteg har gjorts än verkar möjligt.
(b) Större framsteg har gjorts än_vad_som verkar möjligt.

(21b) is of the same type as (12) above. When the clause introduced by än begins with a finite verb, the wh-word and the complementizer som are obligatory. However, this is not the case in English, where (20a) is grammatical (I found (20a) in Bresnan 1972: 283). To what extent (20b) is grammatical in present day English, I do not know.

So far, I have argued that än is a preposition in Swedish but I have not excluded the possibility that there may also be a complementizer än. A relevant point to consider is that a wh-word may always occur between än and a following clause in Swedish. By using Occam's razor we may conclude that there is only one morpheme än in Swedish and it is a preposition.⁴¹

It should also be noted that Hankamer (1973) argues that English contains both a preposition and a complementizer than. His arguments are based on certain ambiguities and island constraints exhibited by comparative clauses.

If we turn our attention to the comparative use of som next, it should first of all be noted that also in this case, it is possible to supply a wh-word between som and the following clause. Thus, if we take (10b) above, it can be rephrased as (22). This is, of course, an indication that also comparative som is a preposition.

(22) Anders är lika stark som vad hans far är.

'Anders is as strong as what his father is'

Next, we have to look at comparative som-clauses beginning with a finite verb, i.e. clauses parallel to those that showed the sequence än vad som, (12) and (21b).

(23) (a) *Han talar lika högt som är vanligt för en politiker.

'He speaks just as loud as is usual for a politician'

(b) Han talar lika högt som vad som är vanligt för en politiker.

'He speaks just as loud as (what that) is usual for a politician'

If som ('as') is a complementizer, we should expect (23a) to be grammatical and (23b) to be ungrammatical. If som is a preposition, however, we would expect (23b) to be grammatical and so it is. The sentences of (23) indicate that som is a preposition just as those of (21) indicate that än is a preposition. Another argument for the claim that this comparative som is a preposition is given by the following facts. An embedded sentence introduced by the complementizer om ('if') can occur as the object of som in a comparative clause. This is an expected and unproblematic fact if som is regarded as a preposition but an unexpected and problematic fact if som is a complementizer.

(24) Han uppför sig som om han bara hade en dag kvar att leva.

'He behaves as if he had only one day left to live'

Even more striking is the following fact. At several places in the preceding chapters, it has been noted that conditional clauses may

undergo the rule of COMP-node Deletion, which turns them into main clause interrogatives. (25) shows the result of COMP-node Deletion in (24).

- (25) Han uppför sig som hade han bara en dag kvar att leva.
'He behaves as had he only one day left to live'

If comparative som is a complementizer, we would never expect a sentence like (25) to appear (it would be a main clause introduced by a complementizer).

Further arguments for the claim that this som is a preposition are given by the following sentences, which are like (24) in that they show a sentence introduced by a complementizer or a determiner after som. These sentences are consistent with the claim that comparative som is a preposition but not with the claim that it is a complementizer.

- (26) (a) Att du kommer hit är lika bra som att du stannar hemma.
That you come here is just as good as that you stay at home
'It is just as well for you to come here as to stay at home'
- (b) Det här var lika roligt som när Magnus försökte dyka med flytvästen på.
'This was just as much fun as when Magnus tried to dive with his life vest on'

Before I leave the subject of comparative clauses introduced by som, I want to point out two things of relevance. First, comparative som is different from the som found in relative clauses, embedded questions and cleft sentences. Thus, claiming that comparative som is a preposition does not imply that these other uses of som show a preposition. Secondly, there is one use of som in which som obviously functions as a preposition. (27) gives some examples.

- (27) (a) Som en idiot sprang han ut ur huset.
'Like an idiot he ran out of the house'
- (b) Flickor som henne borde skeppas tillbaka till USA.
'Girls like her should be shipped back to the States'

(c) Som ung student läste jag mycket poesi.

'As a young student I read a lot of poetry'

This use (or these uses) of som should be related to comparative som, I think. Sentences like (27) can be taken as some indirect evidence that comparative som is a preposition.

After this discussion of än and som, I want to conclude that it is by no means evident that comparative än and som are complementizers. Rather, I have argued that they are prepositions. This is, of course, contrary to common belief.

The conclusion of this section is that att, som and om are the obvious cases of complementizers in Swedish. Among the potential complementizers, the att of infinitival complements is the strongest candidate.

CHAPTER IV

THE DISTRIBUTION AND RELEVANCE OF COMPLEMENTIZERS

IV.0. Introduction

Languages tend to have more than one complementizer and the set of complementizers in a given language is not distributed randomly over the sub-clauses of that language but according to certain principles. What these principles are like for Swedish will be discussed in this chapter. The discussion will concentrate on som because it has the most interesting distribution among the complementizers of Swedish. I will argue that the introduction of som as a complementizer depends on the application of certain syntactic operations, which means that not all complementizers are introduced in deep structure.

In the last section of this chapter, I will discuss the relevance of postulating a class of complementizers in grammar. I will argue that complementizers play a role in language use and language change and not merely in the description of these phenomena.

IV.1. The distribution of the Swedish complementizers

There are three non-controversial complementizers in Swedish: att, om and som. In this section, I will discuss the distribution of these. These three complementizers do not stand in complementary distribution according to some simple syntactic principles. There are several contexts in which more than one of them can occur. However, one complementizer cannot be substituted for another without a significant change in meaning and function of the sentence.

(1) Vi behandlar problemet $\left\{ \begin{array}{l} \text{som} \\ \text{om} \end{array} \right\}$ klassen diskuterade.

'We consider the problem $\left\{ \begin{array}{l} \text{that} \\ \text{whether} \end{array} \right\}$ the class discussed'

- (2) Det faktum $\left\{ \begin{array}{l} \text{att} \\ \text{som} \end{array} \right\}$ klassen diskuterade är intressant.
'The fact $\left\{ \begin{array}{l} \text{that} \\ \text{which} \end{array} \right\}$ the class discussed is interesting'
- (3) Henry vet $\left\{ \begin{array}{l} \text{att} \\ \text{om} \end{array} \right\}$ Dick kommer på festen.
'Henry knows $\left\{ \begin{array}{l} \text{that} \\ \text{whether} \end{array} \right\}$ Dick will join the party'

Several other examples like (1) - (3) could be given and we must ask ourselves according to what principles these complementizers are distributed.

Att and om are distributed according to sentence-type. Om is used in embedded questions and conditionals and att is used in declaratives and imperatives. There is no apparent difference between embedded declaratives and embedded imperatives in Swedish. Att is the unmarked complementizer. Its function is simply to make a nominal expression of a sentence.

Om also makes a nominal expression of a sentence but says, in addition, that the resulting nominal expresses a proposition that is in doubt in some way. The intention behind this generalization is to include questions and conditionals under one hat. This generalization is made in vague terms but will be sharpened below.

Why do conditionals take the same complementizer as embedded questions? Are conditionals more closely related to interrogatives than to declaratives? I will argue that conditionals are to be regarded as interrogatives, which, of course, predicts that they will take the complementizer om.

The choice of complementizer indicates that there is a close relationship between questions and conditionals. Note that this is not a peculiarity of Swedish. English has if in both questions and conditionals and the same holds for French si. German, however, has wenn in conditionals and ob in embedded questions and differs from the other languages in this respect. But in another way, we see the connection between conditionals and questions in German syntax. A conditional clause in sentence initial position can be construc-

ted as a main clause question.

- (4) Kommt sie, dann werde ich froh.
'If she comes, I will be glad'

The same construction is present in Swedish.

- (5) Kommer hon, så blir jag glad.
'If she comes, I will be glad'

English can have this construction if the verb is in the subjunctive.

- (6) Were you half the man you pretend to be, you would never do such things.

The similarities between questions and conditionals might be said to be accidental depending on the genetic relationship of the languages under discussion. Turkish, however, which is unrelated to the languages mentioned above, has the same construction (Lewis 1967: 267).

- (7) (a) O geldi mi ben burada durmam.
 He came Q I here stop-not.
 'If he has come, I'm not stopping here'
(b) Asıldın mı İngiliz sicimiyle asıl.
 'If you are hanged, be hanged with an English rope'

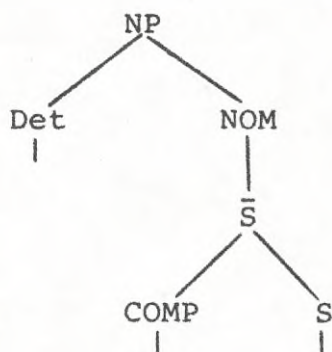
I regard the conditional clauses in (4) - (7) as syntactically main clauses. One way to derive these clauses would be by a deletion of the COMP-node. This COMP-node Deletion makes a syntactically main clause of a syntactically subordinate clause. As a consequence of this deletion, the clause receives the properties of main clause interrogatives (e.g. subject-verb inversion) because it is no longer a syntactically subordinate clause. The clause in question remains intact in function and meaning under this process, which means that it is still semantically subordinate in the examples above. In the terminology of chapters I and II, this means that the conditional clause is moved from CT4 to CT2 by the rule of COMP-node Deletion.

As far as Swedish is concerned, the historical process has been claimed to have gone in the opposite direction (e.g. Ståhle 1958 and Wessén 1965). In the oldest Swedish texts, Västgöotalagen from around 1250, for example, the by far most common way to form a conditional clause is by means of a main clause question. There were other less frequent ways of forming conditional clauses in Old Swedish (in particular, by the adverbial nu ('now') or by the particle än). This difference in frequency is usually taken as an indication that the interrogative clause alternative is the original way of constructing a conditional clause in Swedish.

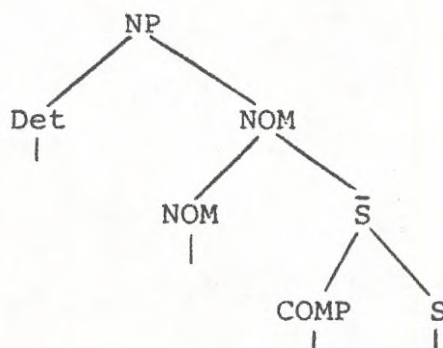
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Relative clauses are usually considered as adnominal (or attributive) sub-clauses while att- and om-clauses are considered as nominal sub-clauses. Structures (8) and (9) below show the structural difference between nominal and adnominal sub-clauses.

(8) nominal clause



(9) adnominal clause



As the following sentences show, each of the three complementizers under discussion may occur in nominal as well as in adnominal position. Hence, it is impossible to give the principles for the distribution of the complementizers in terms of these two positions, since they do not distinguish between the three complementizers in any way.

(10) (a) Huset som de bor i är byggt 1897.

'The house that they live in was built in 1897'

(b) Jag betvivlar påståendet att huset var byggt 1897.

'I doubt the claim that the house was built in 1897'

(c) De besvarade frågan om huset verkligen var byggt 1897.

'They answered the question whether the house was built 1897'

(11) (a) Gästerna åt vad som sattes på bordet.

'The guests ate what (that) was put on the table'

(b) De påstod att gästerna diskuterade Bebbens frisparkar.

'They claimed that the guests discussed Bebben's free kicks'

(c) Vi frågade om gästerna ville diskutera Bebbens frisparkar eller politik.

'We asked whether the guests wanted to discuss Bebben's free kicks or politics'

The sentences in (10) show that att, om and som all occur in adnominal position and those in (11) show that all of these three complementizers also occur in nominal position.

Verbs and nominals that have something to do with saying, stating, thinking and believing are subcategorized for taking att-complements. Verbs and nominals that have something to do with asking and wondering are subcategorized for taking om-complements. A verb like fråga ('ask'), for example, may never take an att-complement and påstå ('claim') may never take an om-complement. Other verbs like äta ('eat') and sparka ('kick') take neither att- nor om-complements, while some verbs like veta ('know') take both kinds of complements, as was seen in (3). Evidently, it is the semantic properties of the verbs that determine which, if any, type of complement it will take. This, however, only holds for att- and om-complements.

No similar categorization can be made for verbs and nominals taking som-complements. A som-complement may occur in every position where an NP may occur. Hence, we have to look somewhere else for a generalization predicting the distribution of som. This is the subject matter of the next section.

IV.2. som

It is fairly clear what the distribution of att and om is like. Their distribution was described in the preceding section. In this section, I will discuss the distribution of som, which is rather hard to state as will be seen below.

The procedure to be used is to list the set of structures in which som occurs as a complementizer and then discuss the similarities between these different structures.

A. restrictive relatives

- (1) De lingvister som tror på generativ semantik måste flytta till Kalifornien.

'The linguists who believe in Generative Semantics must move to California'

B. non-restrictive relatives

- (2) Bebben, som spelade i IFK, var expert på hörnor.

'Bebben, who played for IFK, was an expert on corner-kicks'

C. pseudo-cleft sentences

- (3) Vad som fordras är en ny teori.

'What is needed is a new theory'

D. free relatives

- (4) (a) Vad som göms i snö kommer upp i tö.

'What is hidden in snow comes up in thaw'

- (b) Det som göms i snö kommer upp i tö.

'That which is hidden in snow comes up in thaw'

E. temporal clauses

- (5) (a) När som björnen kom, blev vi rädda.

when that

'When the bear showed up, we got scared'

- (b) Då som björnen kom, blev vi rädda.

then that

'When the bear showed up, we got scared'

Som is not normally used in the sentences in (5) but it can be in-

serted and in some people's speech, it appears more or less all the time. Examples parallel to those of (5) can be given with var ('where') and där ('there').

F. embedded wh-questions

- (6) Vi kunde inte få reda på vem som hade varit på toaletten.
'We could not find out who had been to the toilet'

G. comparative clauses

- (7) Gösta talar högre än vad som är brukligt
'Gösta speaks louder than is usual'

Note that the som mentioned here is not the som translated by as in English (see section III.4. for a discussion of this other comparative som).

H. some exclamatives

- (8) (a) Vilken idiot som var här!
'What an idiot that was here!'
(b) Som vi jobbade!
'How we worked!'

I. cleft sentences

- (9) Det var faktiskt en flicka som var här.
'It was actually a girl that was here'

J. problematic clauses

All the above uses of som may be hard to analyze but the following is by far the worst one.

- (10) (a) Tore var dum som gick hem.
'Tore was a fool to go home'
(b) Tore gjorde ett misstag som gick hem.
'Tore made a mistake in going home'

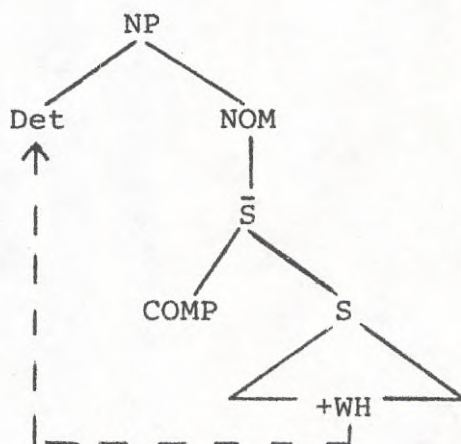
These ten structures with som could probably be reduced in number by transformationally relating one structure to another. The first constituent of a pseudo-cleft construction is probably a free relative and cleft sentences can be derived from pseudo-cleft sentences according to Akmajian (1970). However, the possible transformational

relationships between structures A - J is not the main interest of this section. Rather, it is the search for a generalization about the distribution of som. Thus, the main question of this section is: What do the ten structures above have in common?

The first thing to note is that structures A - H are all wh-structures. However, there is no indication that either I or J is a wh-structure. This means that it would not do to say that som is the complementizer of wh-structures.

In the discussion of chapter III, the following form was given to wh-movement when it occurs in a subordinate clause.

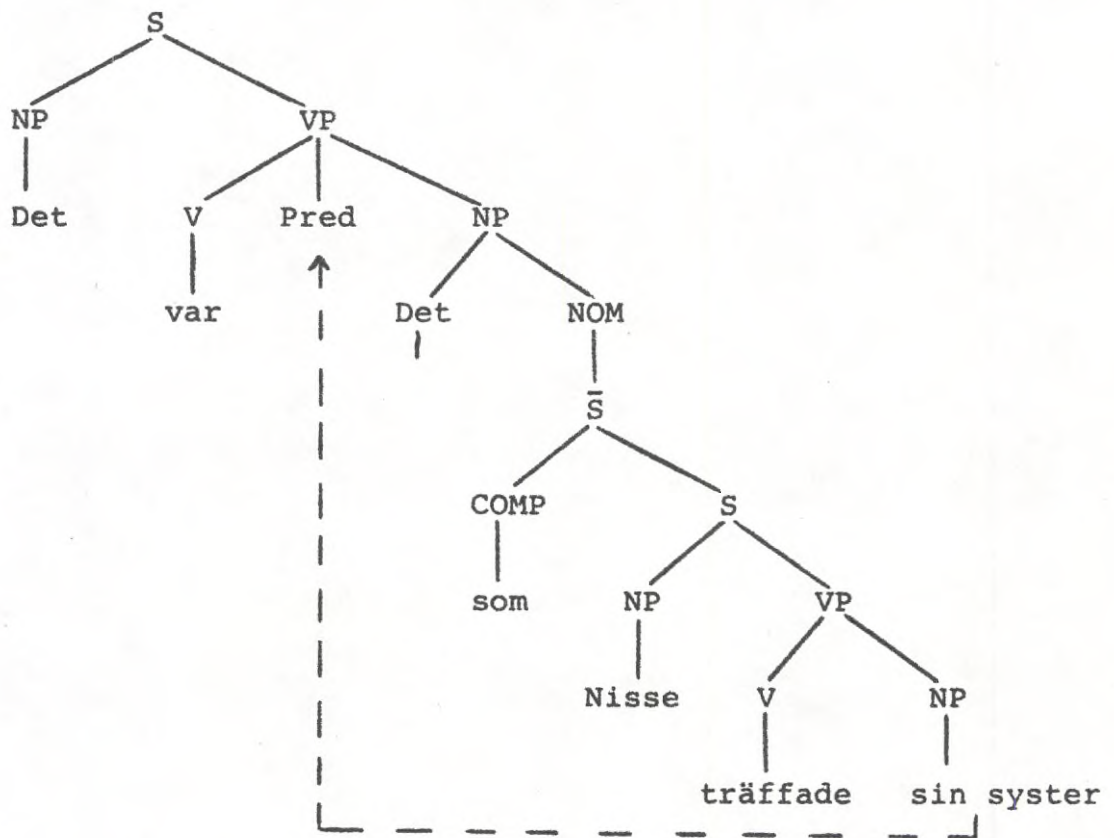
(11)



Cleft sentences are usually derived by extracting one element from the sub-clause (e.g. Schachter 1973: 31). Take sentence (12), for instance. The constituent in focus position is sin syster, which is crucial because sin is the possessive-reflexive pronoun. Sin requires that antecedent and pronoun are clause-mates, i.e. that they occur in the same clause. If the analysis represented in (13) is accepted, this form of the pronoun is predictable.

- (12) Det var sin syster som Nisse träffade.
'It was his sister that Nisse met'

(13)⁴²



If we disregard the problematic J-clauses for the moment, we can try to find possible generalizations for som as it occurs in wh-structures and cleft sentences. First, we can try a generalization which looks at the surface shape of the som-clauses.

G1: Som is the complementizer of embedded clauses which are both logically and syntactically open sentences.

A logically open sentence is a sentence with at least one free variable and a syntactically open sentence is a sentence with at least one empty position (one empty slot), i.e. at least one constituent is needed for the clause to qualify as an ordinary sentence. A logically but not syntactically open sentence is for example a clause with an anaphoric pronoun where the antecedent occurs in another clause.

There are at least two good reasons for not accepting G1. First, infinitival clauses too, appear to be both logically and syntactically open sentences. Secondly, we have the underlined clauses in (14).

- (14) (a) Vem tror du att Knut kysste?
'Who do you think that Knut kissed?'
(b) Knut tror jag att Kerstin kysste.
'Knut, I think that Kerstin kissed'

The object has been moved out of the sub-clauses in (14). According to G1, we expect to find som as the complementizer in these sentences but we do not. Att is the only possible complementizer of the sub-clauses in (14).

A syntactic generalization which is rather similar to G1 is G2.

G2: Som is the complementizer of embedded clauses from which a constituent has been moved.

Infinitival complements are not obvious counter-examples to this generalization because these are often base-generated or derived by deletion transformations (like *Equi*, for example). However, the underlined clauses in (14) are counter-examples to G2. (14a) is derived by question-word movement and (14b) is derived by Topicalization.

At this point we must ask ourselves how the movements in (14) differ from the movements we find in *wh*-structures and cleft sentences. One way to state this difference is given in G3.

G3: Som is the complementizer of embedded clauses from which a constituent has been moved into an empty node.

In Emonds' structure-preserving framework (Emonds 1970), this generalization could be rephrased as saying "from which a constituent has been moved by a structure-preserving transformation". The transformations illustrated in (14) above are what Emonds calls root transformations.

One additional complication comes to mind. What about Subject-Raising, as illustrated by (15)?

- (15) (a) Jag såg att han stal cykeln.
'I saw that he stole the bike'

(b) Jag såg honom stjäla cykeln.

'I saw him steal the bike'

Either we have to say that Subject-Raising is not a structure-preserving transformation, i.e. that the subject of the sub-clause is not raised into an empty position in the matrix clause or we have to say, which is a rather likely suggestion, that (15b) lacks a subordinate clause. This latter suggestion means that there is no S-node dominating the constituent stjäla cykeln ('steal the bike') in the surface structure. There is independent syntactic evidence that this is the case. Compare the following sentences.

(16) (a) Professorn_i såg att katten smet in på $\left\{ \begin{array}{l} \text{hans}_i \\ *sitt_i \end{array} \right\}$ rum.

'The professor saw that the cat sneaked into his room'

(b) Professorn_i såg katten smita in på $\left\{ \begin{array}{l} sitt_i \\ *hans_i \end{array} \right\}$ rum.

'The professor saw the cat sneak into his room'

In (16b), we find the possessive-reflexive pronoun sitt. This is only possible if the antecedent and the pronoun occur in the same clause. Compare (16a), where we must have hans and not sitt and where there is a sentence boundary between the pronoun and the antecedent. This indicates that there is no embedded S in (16b). Hence, we would not expect (16b) to contain a complementizer and accordingly, Subject-Raising cannot possibly be a counter-example to any of the generalizations discussed above.

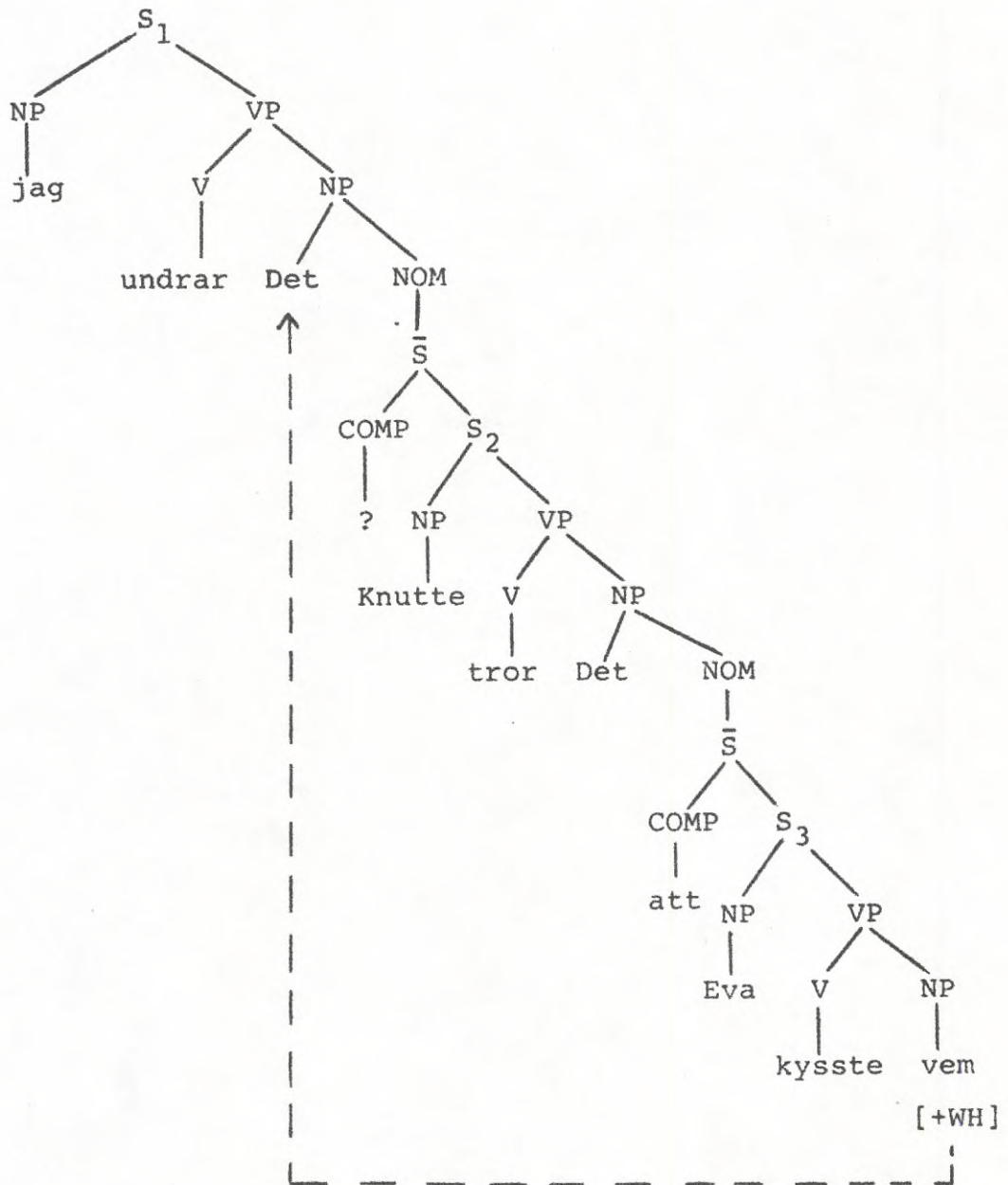
Next, we have to consider a rather important structure. (17) appears to be a counter-example to G3.

(17) Jag undrar vem som Knutte tror att Eva kysste.

'I wonder who Knutte thinks that Eva kissed'

The interrogative pronoun has been moved out of the underlined clause of (17). The movement is into an empty node in this case but the lowest clause has att as a complementizer and not som. (18) represents the underlying structure of (17).

(18)



When the movement rule indicated takes place, it takes a WH-marked constituent out of S_2 and puts it into the Det-node above S_2 . And, as G3 predicts, we find som as the complementizer of S_2 . At the previous cycle, when S_3 was accessible to such movements, nothing occurred and as a consequence, att remains as the complementizer of S_3 .

This example is of some theoretical importance. It has been argued by Bresnan (1970) that complementizers are base-generated and not transformationally inserted. One of her arguments in favor of this position is the following. If complementizers were transformationally inserted, the transformation in question would have to apply on the cycle following the cycle of the clause whose COMP-node is

to be filled because the choice of complementizer is sensitive to the next higher verb. This is strange according to Bresnan because Chomsky has stated a universal to the effect that nothing may be inserted into a lower clause (Chomsky 1965: 146). I find this argument weak. It is not clear that complementizer insertion would violate this constraint because it is not really a movement into the sub-clause, rather into the COMP-node, which is outside the clause. Furthermore, Chomsky's universal is by no means universally accepted. Rules like Quantifier-Lowering have been proposed in the linguistic literature and these certainly violate this constraint.

What I want to point out here is that som appears to be a complementizer that is transformationally inserted. In fact, this is exactly what follows if G3 is correct. Note that it does not follow that all complementizers are transformationally inserted if som is. I do not want to exclude the following suggestion from consideration. Att and om are inserted in deep structure. Om is inserted in all interrogative complements and att in all other complements. Then, whenever a movement rule of the type indicated by G3 applies, the complementizer in question is replaced by som. Thus som may replace both att and om, i.e. som may introduce both declarative and interrogative clauses.

This suggestion can be illustrated by structure (18) above. The COMP-node preceding S_2 would be filled by om in deep structure, if this suggestion is correct. Later, when the wh-movement has occurred, om is replaced by som.

This suggestion accounts for some of the differences noted between som and the other two complementizers. While att and om subcategorize verbs, som does not. Att and om are distributed according to mood but som is not.

If generalization G3 is correct, it follows that som is distributed according to syntactic principles and in this respect, som is different from the other complementizers.⁴³ However, G3 may be wrong. Even if G3 is wrong, I am convinced that it is impossible to find a distributional principle for som in semantic, pragmatic or functional terms. It seems clear that som is distributed according to some syntactic principle(s), which may be identical or similar to G3.

G3 was constructed on the basis of structures A - I and the problematic J structures were not taken into account. Unfortunately, I have no analysis ready for these structures. Let me start by giving some different examples of this type of som-clauses (including the examples of (10)).

(19) (a) Pelle var dum som inte köpte huset.

'Pelle was stupid not to buy the house'

(b) Pelle var en idiot som inte köpte huset.

'Pelle was an idiot not to buy the house'

(c) Pelle gjorde ett misstag som inte köpte huset.

'Pelle made a mistake in not buying the house'

In all three cases, Pelle is interpreted as the subject of the som-clause. It is also clear that the sentences in (19) can be paraphrased as sequences of two sentences, as in (20).

(20) (a) Pelle var dum. Han köpte inte huset.

'Pelle was stupid. He didn't buy the house'

(b) Pelle var en idiot. Han köpte inte huset.

'Pelle was an idiot. He didn't buy the house'

(c) Pelle gjorde ett misstag. Han köpte inte huset.

'Pelle made a mistake. He didn't buy the house'

In each case, the second sentence of the sequence has two functions. First, it says something about Pelle. Secondly, it gives the reason for stating what is said in the first sentence. This second function distinguishes these clauses from non-restrictive relatives. Furthermore, these structures are distinguished from non-restrictives by two other facts. They do not allow förresten ('by the way'), which is often taken as a test for non-restrictives and they do not follow immediately after the head (in this case: Pelle) - they have to occur in extraposed position. It is equally clear that these structures cannot be considered as restrictive relatives. These do not occur after proper names without an article. Restrictive relatives are used to identify persons or things but the som-clauses in (19) do not.

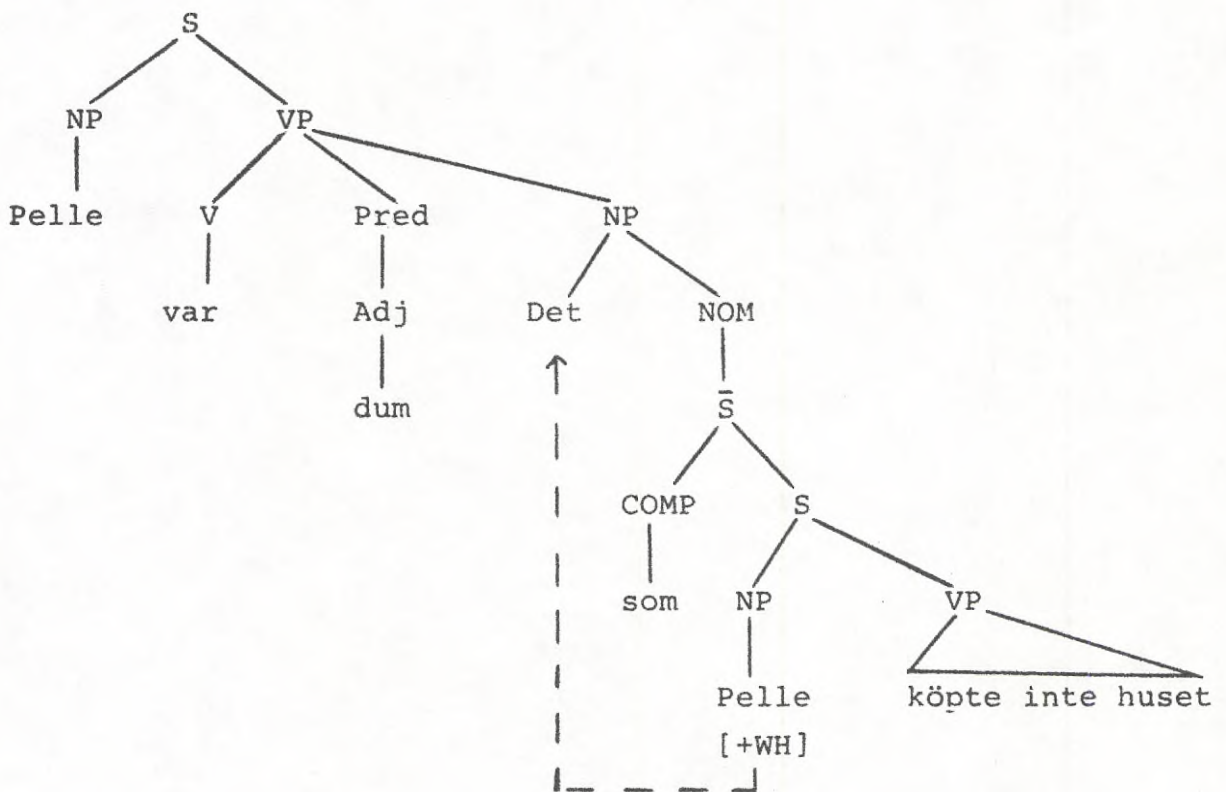
Hence, the sentences in (19) are neither restrictive nor non-restrictive relative clauses. It may be that these som-clauses show a dis-

tinct type of relative clauses: a type that could be called 'causal relative clause'.

The problem is to find a suitable analysis for the structures in (19). If we want to keep G3 as a generalization about the distribution of som we have to derive these structures in a way that is consistent with G3.

One way to derive these structures according to this generalization is the one illustrated in (21), which means that they are derived as wh-structures. We, then, have to posit an obligatory wh-word deletion that applies in this type of som-clause.

(21)⁴⁴



However, I am not sure that this is the correct analysis of the sentences in (19). (21) merely shows that it is not impossible to analyze these sentences in a way consistent with the generalization proposed for som, G3.

§ § § § §

In this section, I have discussed the problem of finding a principle that governs the distribution of the complementizer som. The principle that has been proposed is the following.

SOM IS THE COMPLEMENTIZER OF EMBEDDED CLAUSES FROM WHICH
A CONSTITUENT HAS BEEN MOVED INTO AN EMPTY NODE.

This generalization has the important implication that at least one complementizer in Swedish is not generated in the base but transformationally inserted at a later stage in the derivation. Even if the generalization proposed may be shown to be incorrect, it appears that the distribution of som follows syntactic principles rather than semantic or pragmatic principles.

IV.3. The psychological relevance of complementizers

In the previous chapters, I have argued that a complementizer is the defining characteristic of a subordinate clause and that complementizers can be defined as morphemes that make sentences into nominals. In this chapter, I have discussed how the different complementizers of Swedish are distributed over different types of subordinate clauses.

Are these claims about complementizers and subordinate clauses merely theoretical inventions or is there a psychological relevance to them? Do complementizers function as a class of morphemes in language and not only in grammatical descriptions of the language? To me, it seems clear that there is substantial psychological content to the ideas outlined above and I want to illustrate this point with a few examples.

Speakers of a language understand and use subordinate clauses. In the case of Swedish, this means that they know the rules according to which the complementizers are distributed over different types of subordinate clauses. This is true of most, if not all, languages. Generally, a language has more than one way of constructing a subordinate clause (it has more than one complementizer or it has more than one participle) and these do not stand in free variation. Speakers know when and how these different constructions can be used, which shows that their linguistic competence includes rules for the distribution of complementizers (and/or participles).

We seldom find mistakes in the choice of complementizers, at least

in Swedish. Therefore, I was glad to find the cartoon reproduced on the front page of this study, which is given here as (1).

(1) Nej, det är bara i sagorna att han som blir gift med prinsessan får halva kungariket.

'No, it is only in the fairy tales that he who is married to the princess gets half of the kingdom'

In (1), we find a cleft construction and we would expect som and not att as the complementizer. According to the grammar of Swedish, (1) is ungrammatical. Unless the choice of complementizer is a joke in (1), or due to foreign origin, I suspect that the author has been worried about having two som's close to each other, as in the grammatical version (2), and that he has substituted att for one of them.

(2) Nej, det är bara i sagorna som han som blir gift med prinsessan får halva kungariket.

Som is the complementizer with the most complicated distribution and it is to be expected that mistakes are more likely to occur with som than with other complementizers. However, as I said before, mistakes of this kind are very rare.

Next, I want to consider a phenomenon which is far more common. In the discussion of the proposed definition of syntactically subordinate clauses in section I.7., it was noted that there are conjunctions which do not fit into the definition that a sub-clause is a clause introduced by a complementizer. Examples of such problematic subordinating conjunctions are fastän ('although'), eftersom ('since') innan ('before') and medan ('while'). These conjunctions cannot be regarded as complementizers because they can only be used to create one special type of sub-clause. They do not fit into the set of complementizers, which are distributed according to general principles as discussed above.⁴⁵ Historically, these problematic conjunctions often derive from sequences that contained a complementizer (sequences like: preposition/adverb - determiner - complementizer). Let me give one example. Medan derives from a form like the Gothic mippaneī, where mip is med ('with'), pan is då ('then') and ei is a relative particle (Hellqvist 1939). This means that many of these conjunctions fit into the schema presented above, if we

look at them historically. Synchronically, however, it is incorrect to view them as sequences of morphemes including a complementizer. As evidence for this, we can consider sentences like (3). Of course, these sentences are ungrammatical according to the grammarbook but they do occur quite often in the spoken language.

(3) (a) Robin åt upp gröten fastän att han inte gillade den.

'Robin finished the porridge although he did not like it'

(b) Skörden blir tidig i år eftersom att det har varit så varmt.

'The harvest will be early this year because it has been so hot'

Sentences like the ones in (3) show that speakers intuitively regard complementizers as important parts of subordinate clauses. By inserting att after fastän and eftersom, the speaker shows that fastän and eftersom cannot possibly be regarded as complementizers or as sequences of morphemes including complementizers.

The speaker has also made the correct choice of complementizer in (3). Att is the complementizer we expect in concessive and causal clauses. Speakers would never put in om or som as the complementizer after fastän and eftersom. The fact that they choose the correct complementizer according to the generalizations proposed in the preceding two sections gives some evidence that these generalizations are correct.

In view of sentences like (3), I want to make the rather radical proposal that fastän and eftersom (and also medan and innan, in fact) are prepositions in Swedish, viz. prepositions that only occur in front of sentences. If this proposal is accepted, sentences like (3) create no problem at all. Rather, they follow the general pattern of subordination in Swedish.

It may seem like an unnecessary complication of the grammar to recognize a class of prepositions that only occur in front of clauses but note that it follows from the analysis proposed here that the need for a class of subordinating conjunctions is abolished, which is a significant simplification of the grammar.⁴⁶

At first glance, the form eftersom ('since') seems strange. Efter is a preposition ('after') and som is a complementizer in other

contexts. Why should som occur as a complementizer in a causal clause? Do these clauses show any sign of a movement into an empty node?

The explanation here is certainly that the eftersom-clauses originated as wh-structures of some kind (possibly of the hur-type ('how'-type)). The following examples indicate this.

- (4) (a) Herre, Nu låter tu tin tienare fara i fridh, effter som
du sagdt haffuer.
'Lord, Now thou lest thy servant go in peace, after what
thou hast said' ('according
to what you...')
(from the Bible translation of 1541)

- (b) Skalderna ristade ... sina runor i trä eller på stenar,
effter som the av sina förfäders bruk nummit hade.
'The poets carved ... their runes on wood or on stones, after
how they had learned from their ancestors'
(from Swedberg "Shibbolet", 1716)

Later these structures have received a use in which they express reason and after some time, their semantic relation to other wh-structures is lost. When this semantic relation is lost, i.e. not perceived by the speakers of the language, som will be seen as an incorrect complementizer in these structures. This may give a reason for incorporating som in the preposition efter. This line of reasoning is somewhat speculative but not obviously untrue.

This reasoning about the development of eftersom is included here because it may show how speakers of the language seek generalizations about the use of complementizers. Sometimes the development of the language disguises the rational use of the complementizers and then speakers may try to do something to get it back in order, as when som is incorporated in efter or when att is inserted after eftersom.

From this discussion, it could perhaps be predicted that all the subordinating conjunctions inconsistent with the general schema

(Prep-(det)-COMP) will disappear from the language. However, I am not at all sure that this prediction will be confirmed. There is a strong tradition in the written language and our teachers do their best in teaching us the "correct" use of the conjunctions. Moreover, it is not so hard to learn how a handful inconsistent subordinating conjunctions (or should we call the subordinating prepositions) are to be used.

We can turn to the history of English for an example of a development that goes in a direction opposite to that of the insertion of att after eftersom. The English grammar book tells us that the complementizer that may not be preceded by a preposition. The exceptions to this pattern are in that, except that and the rather unusual save that. In Middle English, however, sequences like the ones in (5) occurred. The list in (5) is taken from Keyser (1974:12).

(5)	<u>Prep / (adv)</u>	<u>COMP</u>
(a)	after	that
(b)	before	that
(c)	but	that
(d)	by	that
(e)	for	that
(f)	until	that
(g)	if	that
(h)	though	that
(i)	now	that
(j)	since	that
	⋮	

At this period of English, sequences like (6) were also present in the language (Keyser 1974).

(6)	<u>Det</u>	<u>COMP</u>
(a)	which	that
(b)	whom	that
(c)	how	that
(d)	when	that
(e)	why	that
(f)	while	that

The following changes occurred in the development of the English language.

- A. The complementizers in the sequences of (5) were deleted.
- B. The complementizers in the sequences of (6) were deleted.
(In (6a) and (b), either the complementizer or the determiner is deleted).

To some extent, these processes are related. The important feature in the development seems to be that the complementizer that is no longer an obligatory element of a subordinate clause, i.e. the domain of that is diminished.

Why did the use of that decrease and why did developments A and B take place? In this case, too, I can only guess. That was used in (almost?) all types of subordination in Middle English. It may have been the case, but I am not at all sure, that that did not stand in opposition to any other complementizer in Middle English. A crucial example here is the following sentence (taken from Keyser 1974: 11).

(7) Or ~~whether~~ that such cowards ought to wear this ornament of knighthood.

I take (7) to indicate that whether here functions as a determiner and that as a complementizer of embedded S-questions. If that did not stand in opposition to other complementizers, the only function of that would be to signal that "whatever follows is a subordinate clause". But in the sequences of (5) and (6), the preposition/adverbials and the determiners also indicate this. Moreover, these other parts of the sequences in (5) and (6) indicate in addition what type of subordinate clause follows.

The explanation for the fact that the complementizer may disappear from the sequences above is rational. That could be deleted because it was redundant, viz. it did not fulfill any function that was not fulfilled by some other constituent of the sequences.

Let me give some further illustrations of the principle that a redundant complementizer may be deleted.

When att-complements (or that-complements in English) occur in subject position, the complementizer may not be deleted.

(8) (a) Att kungen skulle vara en bra schackspelare verkar konstigt.

'That the king should be a good chess player seems strange'

(b) *Kungen skulle vara en bra schackspelare verkar konstigt.

'The king should be a good chess player seems strange'

If the complementizer is not present in a subject complement, the listener will misinterpret the sentence. The complementizer is not redundant in a sentence like (8a).

In object complements, att-deletion may often apply optionally. Thus, both of the following sentences are grammatical.

(9) (a) Jag hoppas att han kommer.

'I hope that he will come!'

(b) Jag hoppas han kommer.

'I hope he will come'

After some verbs, however, att-deletion is not applicable.

(10) (a) Jag gillar att han kommer.

'I like it that he will come'

(b) *Jag gillar han kommer.

'I like he will come'

Why should att be deletable in complements to hoppas ('hope') but not to gillar ('like')? I think this question is answered by the fact that the complementizer is redundant in (9) but not in (10). The generalization is that there is an optional att-deletion which only applies when the complementizer is redundant. A verb like hoppas can only take a sentence as an object, never an ordinary NP. Gilla on the other hand, takes both ordinary NP's and S's as objects. This is shown in (11).

(11) (a) *Jag hoppas Robin.

'I hope Robin'

(b) Jag gillar Robin.

'I like Robin'

There may be other factors involved in determining when att may be deleted but the redundancy of the morpheme is probably one of the more important factors.⁴⁷

It should also be noted that it is not enough to say that a complementizer is redundant if there is some other factor in the context that determines that a subordinate clause comes next. Although we know that only a sub-clause may follow Dom vet inte ('They don't know'), it is not possible to delete the complementizer introducing the clause that follows this phrase. Thus, (12) is ungrammatical.

(12) *Dom vet inte Simon bor i Stockholm
'They don't know Simon lives in Stockholm'⁴⁸

(12) is ungrammatical because we can have more than one complementizer in such a construction. Hence, the complementizer is not redundant.

(13) Dom vet inte att Simon bor i Stockholm
'They don't know that Simon lives in Stockholm'

(14) Dom vet inte om Simon bor i Stockholm.
'They don't know whether Simon lives in Stockholm'

Besides att and om, the sub-clause in this example may be introduced by a question word like var ('where'), när ('when') or hur ('how'). This shows that the complementizer is not redundant in the structure under consideration. This accounts for the ungrammaticality of (12).

Relative clauses provide another example of the same principles. If we restrict ourselves to restrictive relatives, the following generalization seems to hold. Som is optionally deleted if the relative clause contains a subject and if the subject has been relativized, som may not be deleted. On the face of it, this seems like a useless complication of the grammar, just like the facts about att-deletion in subject and object complements. Also in this case, however, we can find a functional explanation of the restrictions imposed on the deletion of the complementizer.

If it were possible to delete som in front of a relative clause without a subject, we would have a formidable source for misunderstandings.

(15) Pojken som rymde hemifrån är bara sju år.

'The boy who ran away from home is only seven years old'

(16) *Pojken rymde hemifrån är bara sju år.

'The boy ran away from home is only seven years old'

When the relative clause contains a subject, such misunderstandings do not occur, as we see from the following sentences.

(17) Pojken som vi mötte är sju år.

'The boy that we met is seven years old'

(18) Pojken vi mötte är sju år.

'The boy we met is seven years old'

However, when the relative clause is extraposed, the complementizer may not be deleted, even if there is a subject in the relative clause. From a formal point of view, this is a further complication of the rule of som-deletion but from a functional point of view, this is another clever device to help the listener interpret the sentence. When the relative clause is detached from its head, the complementizer is needed to help the listener understand what is said.

(19) Pojken är bara sju år som vi köper tidningar av på vår gata.

'The boy is only seven years old who we buy newspaper from on our street'

(20) *Pojken är bara sju år vi köper tidningar av på vår gata.

'The boy is only seven years old we buy newspaper from on our street'

If som is deleted, as in (20), we are likely to interpret the clause vi köper ('we buy....') as a separate statement.

The principles governing the rules of som- and att-deletion are very functional indeed and they clearly show that the primary function of a complementizer is to signal that a subordinate clause follows. The second function of a complementizer is to signal what type of subclause follows. The fact that speakers of the language follow these principles in their use of the language show that they must have a good knowledge of these principles and the function of complementizers.

The above discussion focusses on two trends in the use of complementizers. To some extent, these two trends have opposite effects.

- i. The trend towards a general system of complementation in the language. The use of a small set of complementizers distributed according to some syntactic, semantic and/or pragmatic principles.
- ii. The trend towards reducing redundancy in speech.

The first trend explains why we find sequences like eftersom att and fastän att in spoken Swedish (cf. (3) above). The second trend explains why the complementizers may be deleted in so many cases and why the proposed definition of subordinate clauses as clauses introduced by a complementizer is not as excellent as it could have been.

These two trends may also help us understand what happened in the history of English at the stage where the language had sequences like the ones in (5) and (6) above. Up to this stage, we see the effect of the first trend towards a general system of complementation. More or less every subordinate clause was introduced by that and the system was very general but the redundancy of it was enormous. At this stage, the second trend comes in and that disappears from many structures where other features of the context determine that the clause in question is subordinate.

§ § § § §

In this section, I have tried to show that complementizers play an important role in language and that their primary function is to mark the clause that follows as subordinate.⁴⁹ I have also speculated a little about some changes in the system of complementation in Swedish and English. My main aim has of course been to show that there is empirical content to the claims made about subordinate clauses and complementizers in this study. My hope is that the ideas about subordination put forward in this thesis will prove to be fruitful in other studies of complements of different types and in different languages.

CHAPTER V

SUMMARY

This study has been devoted to questions concerning the form and function of subordinate clauses. Questions about form have dominated the discussion. The reason for this is that linguistic theory provides far more tools for investigating form (structure) than for investigating function. Several aspects of subordinate clauses have been discussed above but still more remain. In this final chapter, I want to give a brief summary of the contents of this study.

In chapter 0, I make some introductory remarks about the recursive property of sentences and recursive rules in the grammatical description. There is also a short discussion of the treatment of subordinate clauses in traditional grammar.

Chapter 1 is concerned with the problem of defining what a subordinate clause is. On the basis of both the form and the function of these clauses, it is argued that we have to recognize both syntactically and semantically subordinate clauses. The following four definitions are proposed.

A syntactically subordinate clause is a clause that is introduced by a complementizer.

A syntactically main clause is a clause that is not introduced by a complementizer.

A semantically subordinate clause is a clause that does not make a statement, ask a question or give a command.

A semantically main clause is a clause that makes a statement, asks a question or gives a command.

In chapter II, four clause-types are defined. The clause-types (CT) are based on the definitions of chapter I.

- CT1: Semantically and syntactically main clauses.
- CT2: Semantically subordinate but syntactically main clauses.
- CT3: Semantically main but syntactically subordinate clauses.
- CT4: Semantically and syntactically subordinate clauses.

These four CTs are exemplified and it is shown that different grammatical phenomena are restricted to sub-classes of these CTs. Section II.3. presents a test indicating what these restrictions are like for a sample of grammatical phenomena. The rest of the chapter gives an analysis of these restrictions. Restrictions with respect to mood are discussed (section II.4.). The restrictive occurrence of speech act adverbials is discussed in another section (II.5.). Chapter II ends by giving an outline of a general theory of restrictions on grammatical phenomena (how they should be described and how they should be explained). It is suggested that the domain of a grammatical phenomenon is determined by the form and the function of that phenomenon as well as by a set of general restrictions on the application of grammatical operations.

Chapter III is concerned with the syntactic structure of different types of subordinate clauses. The syntactic status of the clause-initial morphemes of subordinate clauses is of considerable interest. The following definition of the term 'complementizer' is proposed.

A complementizer is an invariable morpheme whose effect is to convert a sentence to a nominal.

This definition is discussed and slightly modified. Chapter III recognizes att ('that'), om ('if') and som ('that', in relative clauses) as complementizers in Swedish. It is also argued that wh-words and wh-constituents occur under the determiner-node in Swedish, which means that these morphemes are not complementizers. The morpheme än ('than') and som ('as') which introduces comparative clauses are claimed to be prepositions.

The first sections of chapter IV try to state the principles according to which the different members of the set of complementizers are distributed over different types of subordinate clauses in Swedish. The following generalizations are given. Om is the complementizer of interrogative clauses, att is the complementizer of declara-

tive and imperative clauses and som is the complementizer of subordinate clauses from which a constituent has been moved into an empty node. The generalization given for som implies that this complementizer may introduce declarative as well as interrogative clauses.

Chapter IV also discusses the psychological significance of the class of complementizers. The role of complementizers in language use and language change is discussed. It is argued that we get a better understanding of changes in the system of complementation in a language if we recognize a class of complementizers. Furthermore, it is argued on the basis of the principles governing the deletion of complementizers that the primary function of a complementizer is to signal that a subordinate clause follows.

FOOTNOTES

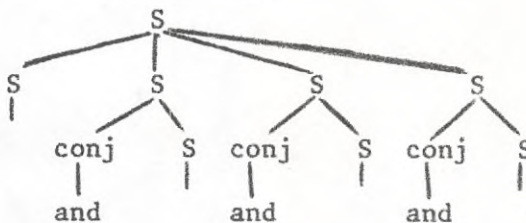
1

Someone might react to this statement and quite correctly point out that language itself creates no linguistic problems. Linguistic problems are always created by a certain way of looking at language. However, I still think the distinction I make between the two types of linguistic problems is correct, even if it may turn out that the distinction is one of degree rather than of kind. Two examples may illustrate this point. As an example of a linguistic problem that is posed by language itself, I regard the following: Why is sentence a grammatical and why is sentence b ungrammatical? On the other hand, we have problems like the following which are created by a specific theory of grammar (in this case: transformational grammar): What is a transderivational constraint?

2

I am not confident that (6) is the correct structure for coordinate sentences. It might be that something like (i) is more appropriate. However, I will not discuss these problems here.

(i)



3

It is hard to find a suitable term that covers this class of adverbials. We would perhaps like to call them sentence adverbials. In Diderichsen's positional syntax, the adverbials under consideration are called 'nexus adverbials' (Diderichsen 1966). This is a good term, I think, but unfortunately rather unknown. Beckman (1916: §225) calls these adverbials 'rörliga' ('movable').

4

This argument is perhaps unfair because it all depends on what counts as a main clause. The argument holds if the main clause is regarded as what remains when the sub-clause(s) have been taken away. If the main clause is defined as the whole utterance (including the sub-clauses), the argument does not hold.

5

Free translation:

"Hence, here we should regard för, för att, därför and därför att as coordinating conjunctions, the counterparts in the spoken language of the ty of the written language."

6

These Russian examples are due to Östen Dahl.

7

Strictly speaking, it may be that my conclusion only holds for Swedish. Hooper and Thompson argue on the basis of English while I argue on the basis of Swedish and it is, of course, a possibility that Swedish and English make different generalizations about the applicability of root transformations. However, I doubt that Hooper and Thompson's generalization is correct for English. At least, the rule of Left Dislocation appears to be a counter-example.

8

As can be seen from (8), pos. 1 and pos. 2 contain more or less the same adverbs. Probably, we should regard these adverbs as being included in one and the same class of adverbs. This class may then contribute two elements (in pos. 2 and pos. 3) to one sentence.

9

The position of the adverbials under consideration is indicated by XXX. I have not tried to translate ju and väl here because it appears to be impossible to do this in a non-confusing manner.

10

The rule of Adverb Placement was discussed above (p. 19, in particular). The form of the rule as it was discussed there would be something like (i).

(i)	X	AdvP	V	Y
	1	2	3	4
	1	∅	3+2	4

Now there is another possibility, which does not seem to be of much empirical difference at first. Instead of moving the adverbial node around the verb, we could move the verb around the adverbial node. This would give us a rule like (ii). (This form of the rule was first suggested to me by Anne Berglund).

(ii)	X	AdvP	V	Y
	1	2	3	4
	1	3+2	∅	4

(i) and (ii) will give the same output but (ii) may prove to be the better version. What is important is whether (ii) can be collapsed with the verb-fronting rule (often called Subject-Verb Inversion) that applies after S-initial fronting rules in Swedish. The effect of the verb fronting is to make sure that clauses will have their finite verbs in second position.

I brought up this question in this context for the following reason. As was noted on p. 31, Adverb Placement applies in complements to class B predicates, for example, but not in non-restrictive relatives, even though both types of clauses belong to CT3.

Compare the very similar restriction on Verb-fronting when it applies after Topicalization. In the complement of a class B predicate, it applies obligatorily.

(iii) *Reportern trodde att Ralf IFK hade köpt.
'The reporter thought that Ralf IFK had bought'

(iv) Reportern trodde att Ralf hade IFK köpt.

However, when Topicalization has been applied inside a non-restrictive relative clause, V-fronting will not apply. In the following examples, a time adverbial has been fronted.

(v) ? Svensson, som igår Kalle träffade, bor i Sala.
'Svensson, who yesterday Kalle met, lives in Sala'

(vi) *Svensson, som igår träffade Kalle, bor i Sala.

(vi) is ungrammatical on the reading where Kalle is the subject of the relative clause.

11

The term 'mood', as it is used here, refers to at least the following three categories: declarative, interrogative and imperative. No further distinctions have to be made for the present discussion. Mood will be further discussed in the next section, where I will state more explicitly what I mean by this term.

12

I am not sure that "type of speech act" is the correct expression in this context. It is clear that the syntactic categories of mood must be correlated with some semantic or pragmatic categories. But just what these categories are and how they should be termed is not clear. In the framework of Hudson (1975), it is claimed that the different moods are correlated with semantic categories representing sincerity conditions. We may also speak of different moods as representing different 'propositional attitudes'. (See Hudson (1975) and the references given there for a discussion of these problems).

13

This study may provide a framework for the analysis of the subjunctive. We may regard the subjunctive as a marker of semantic subordination. This rather speculative suggestion has the following implications. In a main clause, the subjunctive mood indicates that the clause should not be understood as a semantically main clause, i.e. it should not be understood as a statement, question or command but rather as a condition or a wish (c.f. (ia) and (ib)). In a subordinate clause, the subjunctive indicates that the clause is also semantically subordinate.

- (ia) Vore jag i dina kläder, så skulle jag tiga.
'Were I in your clothes, I would keep quiet'
(ib) Gud hjälpe mig!
'May God help me!'

14

Jespersen (1968: 304) discusses interrogative sub-clauses in a use similar to that of (16). The relevant paragraph is quoted here.

"Mention may here be made of the phenomenon which I have termed 'questions raised to the second power' (LPh 15. 52). One person asks "Is that true?" but instead of answering this, the other returns "Is that true?" - meaning "How can you ask?". Here most languages use the same form as in indirect questions:

"Om det är sant? / Ob das wahr ist? / Si c'est vrai?" though the sentences differ from ordinary indirect questions by having a much more marked rising of the interrogatory tone."

(Jespersen 1968: 304)

What Jespersen talks about here is not the same use of independent embedded questions as I talk about in connection with (16), although the two uses have nearly identical effects. To (i), both (ii) and (iii) are good responses. The only difference between (ii) and (iii) is their different intonation contours.

- (i) Fick ni mycket fisk?
'Did you get a lot of fish?'
(ii) Om vi fick? (the use that Jespersen discussed)
(iii) Om vi fick! (the use I discuss in connection with (16))

Why both these structures exist side by side is a mystery.

15

The easiest way to give the verb the imperative form from a syntactic point of view, is to regard IMP (imperative) as a tense. This proposal has two obvious advantages. Firstly, we explain why IMP never cooccurs with tense (PRESENT and PAST). Secondly, the verb will be given the imperative mood by the same rule that gives the verb a certain tense in other cases. The disadvantage of this proposal is that it may strike one as unpleasant to regard IMP as a tense.

16

In the analysis of Stockwell et al. (1973), also the English imperatives include an S-initial fronting, not of the verb but of the auxiliary. Crucial examples for validating this proposal are the following sentences.

- (ia) Don't you do that.
- (ib) Do try harder.

17

Rutherford does not only discuss reason adverbials. He also considers several other morphemes, phrases and clauses that, according to him, modify the higher performative verb. All the examples he considers are what I have called speech act adverbials here. (See Rutherford (1970: 110-112), in particular.)

18

The facts that Rutherford presents in his article can be taken as evidence for the correctness of the performative analysis. But as I show in this section, there are other ways of interpreting his data. I also find it hard to acknowledge the wisdom of putting phrases like you idiot and for heaven's sake into the performative head, which would be the likely thing to do from the point of view of Rutherford's article. In fact, I think that these SA-adverbials can provide a counter-argument to the performative analysis but no such argument will be given here.

The performative analysis is by no means generally accepted. There are several articles in the literature that provide criticism of the performative analysis (eg. S. Anderson 1970, Fraser 1973 and Ljung 1975).

19

In two articles by Frances Karttunen (Karttunen 1974a and 1974b), the syntax and pragmatics of some Finnish clitics are discussed. It is clear that their function is like that of speech act adverbials. Some of them (-han, -s, and -kin/-kaan) are termed speech act modifiers (Karttunen 1974b: 12). Karttunen also notes that these clitics have a restricted domain. I gather from the articles that these clitics occur in CT1 - CT3 but hardly in CT4, i.e. their distribution would be similar to that of the Swedish speech act adverbials ju and väl.

20

There is no general agreement about what the terms 'parenthetical clause' and 'parenthetical verb' refer to. Urmson (1963) obviously has a semantic notion in mind while Ross (1973a) and Emonds (1973) have a syntactic notion in mind. I am not sure they all agree to call they think a parenthetical clause both in (i) and (ii). Anyway, that is my terminology.

- (i) The king is cute, they think.
- (ii) The king, they think, is cute.

This terminological question is of little importance, at least for the purpose of this study.

21

It is not impossible to find sentences which have been subjected to Complement Preposing twice. The following example is taken from Ross (1973a: 136).

i. Frogs have souls, Osbert feels, I realize.

Although there are two parenthetical clauses in (i), there is no problem in determining their respective scopes. The outermost one must be given the widest scope, as (ii) indicates.

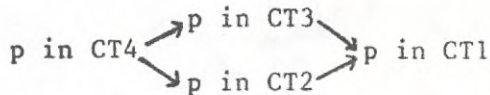
ii. (((Frogs have souls) Osbert feels) I realize)

22

Since I have found no examples of phenomena that occur in CT4 but not in CT2, it might be argued that there is an implicational relation between these two CT's like the following.

p in CT4 implies p in CT2

This would give us an implicational hierarchy like the following which is much neater than the one presented in the text.



However, I find this suggestion somewhat unnatural. I see no intuitive link between CT4 and CT2 and there are no phenomena I can imagine passing the borderline between CT2 and CT4, metaphorically speaking.

However, this suggestion has the advantage of immediately excluding the non-existing domain of (27d) on p. 133, below.

23

The rule mentioned here is the one that deletes finite verb forms (har and hade). There is another rule which deletes infinitive forms of the temporal auxiliary (ha). However, this rule also applies in main clauses.

- i. (a) Du borde ha fattat det här för länge sedan.
'You should have understood this a long time ago'
- (b) Du borde \emptyset fattat det här för länge sedan.

- ii. (a) Han kunde inte ha köpt TV'n billigare någon annanstans.
'He could not have bought the TV cheaper anywhere else'
- (b) Han kunde inte \emptyset köpt TV'n billigare någon annanstans.

24

To say that a constituent is given more prominence or emphasis in the sentence by being subjected to an S-initial fronting rule is admittedly to speak in rather vague terms. Unfortunately, it seems hard to do better than this at the present state of the art. Langacker, who has discussed movement rules in a functional perspective, says that these fronting rules "increase the prominence of the transported constituent" (Langacker 1974: 652).

The key-concept in Langacker's article is "objective content", which is approximately the state of affairs described by the sentence without its temporal, aspectual and modal modifications. The speech act adverbials discussed in the previous section can be regarded as typical examples of constituents that do not belong to the objective content of the sentence. Langacker discusses classes of transformations and says that fronting rules (as well as some other classes of

transformations) "serve to make the objective content of sentences prominent".

Unfortunately, Langacker's terms are as vague as the ones used here or the ones used in Hooper and Thompson (1973) - compare also the use of the term 'foregrounding' in Schachter (1973).

25

Even if Emonds' generalizations about root transformations and their restricted domains are not entirely correct, it remains to be explained how there can be so much to his generalizations as there is. The reason is the following, I think. The great majority of root transformations are S-initial fronting rules. These all have an emphatic function which predicts their restricted domains. That these S-initial fronting rules are non-structure-preserving transformations is a mere accident and does not explain their syntactic domains.

26

Transformational grammar has until recently only concerned itself with the expression side of transformations. Some of the more common transformations in the literature do not fit into a functional framework very well. It is hard to find out what the functions of Particle Movement and Dative Movement are, not to mention Affix Hopping. However, this is only a problem from an aesthetic point of view. From a theoretic point of view, nothing prevents us from saying that the content side of a transformations is null.

Note how one's theoretical framework changes what counts as a problem. In Katz and Postal (1964), the problem was to explain away transformations that contributed something to meaning. One of their main claims was that transformations may never change the meaning of a sentence. From a functional point of view, the problem is rather to explain how some transformations can lack a semantic effect.

27

Although I do not want to make a major point of it, I want to mention that the semantic dogma 'Don't look for the meaning of a word, look for its use!' can be understood in terms of the description of morphemes proposed here. Wittgenstein (1953) is one of the proponents of this theory. In the framework presented here, the use of a morpheme is determined by its meaning, which means that one way to find the meaning of the word is to look for its use. This is probably not the way Wittgenstein wants us to understand the dogma. Nevertheless, it describes a reasonable way to understand it. The important thing is that there is a clear relation between meaning and use.

28

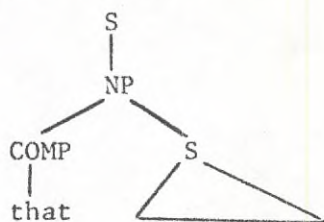
There is a difficulty hidden in this statement. Adverb Placement occurs in presupposed main clauses (CT2) but in these cases the adverbials are not really understood as parts of the presupposed main clause (these matters were discussed above, pp. 70 f.).

29

Instead of calling this constraint a global constraint, we could call it a derivational constraint. What is crucial is that it is a constraint that has to look at what has happened earlier in the derivation (concerning the terms, see Lakoff 1970).

30

Another plausible structure is the following



This proposal is structurally similar to that of (7) and some of the arguments that will be given for (7) could, perhaps, also give this proposal some support.

31

I call these expressions pronouns, since I cannot find a better term for them. But, obviously, they are some kind of "pro-forms".

32

There are several peculiarities with the rule that deletes som. First, it does not apply in non-restrictive relatives.

i. (a) Aspects, som du äntligen har köpt, är svår att läsa.
'Aspects, which you have finally bought, is hard to read'

i. (b) *Aspects, du äntligen har köpt, är svår att läsa.

Secondly, som may not be deleted in an extraposed relative clause.

ii. (a) Den flicka kom inte som du talade om igår.
'That girl didn't come who you talked about yesterday'

ii. (b) *Den flicka kom inte du talade om igår.

Thirdly, som may not be deleted in a restrictive relative of the following rather unusual type (this was pointed out to me by Magnus Ljung).

iii. (a) Flickan som du vet var hon bor kommer hit.
'The girl who you know where she lives will come here'

iii. (b) *Flickan du vet var hon bor kommer hit.

33

Stockwell et al. (1973: 529) discuss the NP-status of subordinate clauses and conclude that they are dominated by an NP. Their discussion concerns English.

34

It should be noted that it follows from my analysis that we have to have different wh-fronting rules in main clause questions and embedded questions. Since I have not posited a COMP-node, nor a Det-node introducing main clauses, there is no way to collapse the wh-fronting rules of main and subordinate clauses. Note that this fact is independent of the problem of whether the wh-fronting rules are different in embedded questions and relatives.

35

NP's like gröna lampan are possible as proper names (or better: Such NP's are possible as 'lexicalized phrases' to use a term from Anward & Linell 1975). Thus Vita Hästen ('The White Horse') may be a restaurant and Svarta Tuppen ('The Black Cock') a dictator.

36

A sentence like (30b) is judged as ungrammatical by Wellander (1973: 171). Wellander says that tills is a conjunction while till is a preposition. According to Wellander, the italicized part of (30b) should read till det att or only tills. However, a lot of people (including myself) say tills det att, which shows that both till and tills are regarded as prepositions in Swedish. Historically, tills derives from till dess, where dess is the genitive form of det (till governed genitive in Old Swedish).

37

Further indication that an infinitival complement may be an NP is given by the following sentence, where a determiner occurs in front of the infinitival construction. I do not regard (i) as ungrammatical but I must admit that (3) sounds more natural. On the other hand, it does not seem worse to introduce a determiner in front of an infinitive construction than it is to introduce one in front of an att-clause ('that'-clause).

- i. Det att spela fotboll är kul.
'It to play soccer is fun'

Like an att-clause, an infinitive may be extraposed. In this case, just as with att-clauses, the determiner remains and may not be deleted.

- ii. Det är kul att spela fotboll.
'It is fun to play soccer'

38

The att in question is perhaps better called Predicate Phrase-complementizer than a VP-complementizer. The following sentences provide an argument for this statement.

- i. Att aldrig spela fotboll på en söndag var ett av de tio budorden i vår familj.
'Never to play soccer on a Sunday was one of the ten commandments in our family'
- ii. Att inte åka två på en cykel är en lag som alla måste följa.
To not ride...
'Never to ride two on one bicycle is a law that everyone must obey'

These infinitival complements consist of the potential complementizer att followed by a sentence adverbial (nexus adverbial) and an infinitive. If we have a phrase-structure rule of the following form, we can account for these sentences (see Chomsky (1965: 102) for a similar use of a predicate phrase node).

- iii. PredP → S-Adv - VP - (AdvP)

This means that the sentence adverbials occupy the first position of the predicate phrase. Then, att may be placed as a complementizer on this PredP-node. Tense, however, is a node that is directly dominated by the S-node because tense never occurs in these infinitival complements. (Note that Chomsky (1965: 102) includes tense under the PredP-node.)

39

I remember when I first became aware that huruvida is a morpheme in Swedish. It was when learning German at the age of 14 or so. In our German grammar book, we got the following instruction.

"Om is translated with ob when it means 'huruvida' and with wenn when it is used to indicate a condition."

This was a rather useless instruction because many of us did not know how huruvida could be used in Swedish. This morpheme was not part of our language. I take this as good evidence for the claim that om is the complementizer of questions and conditionals and that huruvida is something that we can put in instead of om in embedded questions if we want to make our language more fancy. This means that huruvida may well be a complementizer but as such, it is secondary, i.e. a complementizer that is used for stylistic reasons instead of another complementizer. In some contexts, huruvida may be substituted for om in order to avoid homonymy since there is also a preposition om ('about') in Swedish. Note that the choice between att, som and om is never determined by stylistic factors.

40

Bresnan (1972: 224) argues against the proposal that this constituent may be a free relative.

"Note especially that the what phrase in these examples is not a free relative: in I hope you can walk quicker than what you eat what is meant is "I hope you can walk more quickly than you eat" and not "I hope you can walk more quickly than the things you eat can walk (e.g. lobsters)."

I doubt that this argument is correct. A free relative cannot always be rephrased with a phrase like the thing/the things. Compare (i) and (ii).

i. What is considered well-educated is to speak in a fairly low voice.

ii.*The thing that is considered well-educated is to speak in a fairly low voice.

Of course, it might be argued that the wh-structure in (i) is not a free relative. But, then, what is it? Is it an embedded question?

In Andersson (1974c), I argued that it is predictable from the context whether a wh-structure is interpreted as a free relative or an embedded question. I think that the wh-structures of comparatives are of the same type as free relatives and embedded questions and that it is predicted by the context how the wh-structure is to be interpreted.

41

Actually there is another morpheme än in Swedish. That is the morpheme corresponding to English ever that we find in the following sentences.

i. Du är välkommen när än du kommer.
'You are welcome whenever you come'

ii. Vem du än träffar, så kommer du att få det trevligt.
'Whoever you meet, you will have a good time'

Furthermore, there is also an adverbial än ('yet').

iii. Har han kommit än?
'Has he arrived yet'

42

I am uncertain about a few things in this structural representation, how the sub-clause is to be attached in this structure and whether it should be dominated by an NP, for example.

43

It is always hard to draw the line between syntax and semantics. The generalizations saying that att is the complementizer of declarative and imperative clauses and that om is the complementizer of interrogative clauses are strictly speaking syntactic statements. On the other hand, the categories of mood are closely correlated with semantic categories (section II.4.). Som, however, is distributed according to a syntactic principle that is not closely correlated with any semantic category.

44

As in the case of structure (13) above, I do not know how the sub-clause should be attached to the matrix clause.

45

I do not think it has been explicitly claimed to be a criterion on complementizers that they are distributed according to some general principles. However, something like it appears to be implicit in Bresnan (1970), for example, and I think that it should be included among the defining characteristics of complementizers.

46

There are other complex prepositions besides eftersom ('since') and fastän ('although') in Swedish. Two examples of this are på grund av ('because (of)') and tack vare ('thanks (to)'). These complex prepositions can be regarded as 'lexicalized phrases' in the sense of Anward & Linell (1975). The following sentences show that på grund av and tack vare occur in front of both sub-clauses and ordinary NP's.

- i. (a) Det tog lång tid att köra dit på grund av att vägen var avstängd.
'It took a long time to drive there because the road was closed'
- (b) Vi var tvungna att åka hem på grund av min mor.
'We were forced to drive home because of my mother'
- ii. (a) Vi vann matchen tack vare att vi hade en bra målvakt.
'We won the game thanks to the fact that we had a good goalkeeper'
- (b) Vi vann matchen tack vare vår målvakt.
'We won the game thanks to our goalkeeper'

47

The generalization given, i.e. that only redundant complementizers may be deleted, is probably not without exceptions. However, the exceptions are few and do not leave this generalization without content. Some people claim that the following b-sentences are good while others claim they are bad. The possible counterexamples created by the following b-sentences are not disastrous to the generalization given. This generalization is a principle that it is advisable to follow in order to avoid ambiguity but it is not a rule of grammar.

- i. (a) Jag såg att han kom.
'I saw that he came'
- (b) ?Jag såg han kom.
'I saw he came'
- (c) Jag såg Petter.
'I saw Petter'
- ii. (a) Jag hörde att han snarkade.
'I heard that he snored'
- (b) ?Jag hörde han snarkade.
'I heard he snored'
- (c) Jag hörde the Beatles.
'I heard the Beatles'

48

There seems to be a difference in the deletability of the complementizers between English and Swedish. Magnus Ljunghas assured me that the English translation of (12) is grammatical while the corresponding Swedish sentence is ungrammatical. However, this fact should not be interpreted to say that the proposed generalization about complementizer deletion in Swedish is irrelevant for English. Rather, the same principle is at work in English but it behaves somewhat differently.

49

The role of complementizers in language is important. It is unjustified to regard them as grammatical morphemes without content that are inserted by transformations at various places in sentences. This is one of the basic claims in Bresnan (1972) and it is also the view behind this thesis.

When I look through this text, it becomes evident that Hooper & Thompson (1973) and Bresnan (1970 and 1972) are the studies that I criticize the most. This is somewhat unfair because these are the studies that I share most views with compared to other studies of subordination.

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