

**Discourse dependent
DP
(de-) placement**

by

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For R.

who showed and taught me the presumably
second most important thing in life

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An important part of this dissertation is very similar to the theories developed by Elena Anagnostopoulou, David Adger, Anoop Mahajan, Jeff Runner. Each of the listed linguists' dissertations has got its own, unique, particular characteristics. The main message, however, seems to me to be the same. On the one hand this creates an unpleasant situation, since we all could be accused of having copied from one another. This reproach applies to me all the more because I do not belong to the first who have formulated the proposal. I don't know who was the first to come up with the idea and when. But it is for sure that there was not much time between the publication dates of the dissertations. The theory is an offspring of this decade. I think everybody came to the idea independently from each other since after some groundwork the proposal was hanging in the air. We should all consider it from another perspective, because, on the other hand, the fact that so many people argue for very similar theories may be considered as a mutual confirmation of the basic idea. That's how I see it.

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List of Frequent Abbreviations

| | | |
|------|---|---|
| ACD | = | Antecedent Contained Deletion |
| Agr | = | agreement (morphology) |
| CE | = | contrastive element |
| GQ | = | Generalized Quantifier |
| LCA | = | Linear Correspondence Axiom |
| LI | = | Linguistic Inquiry |
| LF | = | Logical Form |
| MH | = | Mapping Hypothesis |
| NFC | = | Novelty-Familiarity-Condition |
| NS | = | nuclear scope |
| QR | = | Quantifier Raising |
| RC | = | restrictive clause (in Chapter 6: relative clause) |
| RM | = | Relativized Minimality |
| UG | = | Universal Grammar |
| UTAH | = | Universal Theta Assignment Hypothesis |
| > | = | precedes linearly |

Introduction

Some Philosophical Reflections

In this chapter I intent to present some rather philosophical background for the theory which I am going to develop in my thesis. In introductory books whose aim it is to present the Chomkyan theory of Generative Grammar, the language faculty is presented as a mental organ which belongs to the genetic equipment of the human race. This inheritable system is called Universal Grammar (UG). It is claimed that UG is an autonomous system which interacts with other conceptual modules, for example logical concluding or the treatment of concepts. UG thus is considered to be a specific module which is responsible only for the generation of linguistic structures. The viewpoint that the base for the acquisition of a language is something innate is largely accepted nowadays. Natural language is such a complicated system that is has been keeping generations of scholars busy to describe and to explain it. And there is still little agreement among them how to analyze the one or other phenomenon. Hence it would be very surprising that all normally intelligent children acquire such a complex system without much effort, and from a very restricted input of data, if there were not a base which enables them to do that. Thus there should be no doubt about the innateness of the main factors that guide language acquisition. The question that I want to address here is whether the language faculty as such is genetically fixed or if there is a more general base for UG. There is a debate among generative linguists whether there is a mental organ exclusively responsible for language or if UG is just an instantiation of a more general cognitive module (for the latter point of view see Koster (1987) Haider (1993a, 1994b) and especially Fanselow (1991, 1992b)). These authors have reflected about the possibility that the innate system is rather some general faculty which they call 'Formal Competence' and which goes beyond the specificity of UG. In their opinion, grammar is just an accidental use of this Formal Competence which is not biologically necessary. They show that some principles of UG, if formulated slightly more general, may cover over other principles that are effective in other

mental processes as well. Since this is of some importance, let me give an example. In the classical Government and Binding framework (GB) (Chomsky 1981), there were somewhat less than ten principles which determine what output of a generation procedure is grammatical. To these principles belong:

- (1) (a) X-bar theory
- (b) Case filter
- (c) Empty Category Principle (ECP)
- (d) Binding Principles A, B, C
- (e) Control theory
- (f) Theta - criterion etc.

The binding principles under (d) are supposed to act as filters for what sort of nominal phrase may or may not appear in what position. With respect to the referential force, the theory distinguishes three types of NPs: the so-called R-expressions, pronouns and anaphora. R-expressions have referential force of their own. They carry a lexical noun in them which has semantic content. R-expressions are NPs or DPs like *my aunt Christa, this thesis, a handsome linguist...* Pronouns are referentially dependent. They act as variables and need an R-expression as antecedent, or must be able to be identified by the situative context. Pronouns are NPs, DPs or D° elements like *it, someone, you, my, that...* While it is still possible for pronouns to get interpreted through the situative context, anaphora need a linguistic antecedent which bears a close relationship to them. Anaphora may never appear alone and are elements like *myself, each other* or Latin *suus* (special possessive form). Their distribution is restricted to certain structurally determined positions.

The restrictions of the different nominal expressions classified above are called the A, B, C of Binding Theory.

(2) Binding Principles

Principle A

An anaphor must be bound in its governing category¹.

¹ As for the technical terms 'bound' and 'governing category', I assume the reader to have some vague idea about them. An element is bound if it is c-commanded by a co-indexed element. Governing category is the minimal domain containing a subject, thus a local domain. I am aware that a reader who does not know what bound means, also hardly knows what c-command is. Thus the brief definition does not clarify much in that case. However, a detailed knowledge about Binding is not necessary in order to be able to follow the ongoing discussion. What is crucial here is that a governing category is a local domain, and that local domains are structural spheres where specific conditions must be fulfilled.

Principle B

A pronoun must not be bound (i.e. must be free) in its governing category.

Principle C

An R-expression must be free everywhere.

It has been noted that principle B as it stands is not very much in the spirit of the theory in which it constitutes an integral part. Whereas most grammatical principles require locality in order to be applicable, principle B is the only one which excludes the existence of a structural relationship within a locally defined domain. Principle B prohibits binding of a pronoun within its governing category. Therefore it would be better to have a theory that does without such a strange looking principle. Let us have a look at the motivation for the formalization of Principle B. It has been formulated to cover the data in (3) vs. (4)

(3) Anna_i hates herself_i

(4) *Anna_i hates her_i

The ungrammaticality of (4) shows that the pronoun in object position cannot be construed co-referentially with the subject as it is the case with the anaphora in (3). There are also empirical problems with this principle, however. English is a language that is very rich in reflexive forms. Many languages, however, do not have such a complete paradigm of reflexives. In German, for example, only third person (pro-) nouns distinguish pronouns from reflexives. All other persons do not make a morphological distinction.

| | | | |
|-----|--|--|---|
| (5) | Anna _i haßt sich _i . | *Anna _i haßt sie _i . | Anna _i haßt sie _j . |
| | Anna hates herself | *Anna hates her | Anna hates her |

| | | |
|-----|--------------------|------------------|
| (6) | Ich haße mich. | |
| | I hate <i>mich</i> | (I hate myself.) |

| | | |
|-----|------------------------|------------------|
| (7) | Anna haßt mich. | |
| | Anna hates <i>mich</i> | (Anna hates me.) |

As (7) shows, *mich* cannot be an anaphor. It is not bound. Therefore it must be a pronoun. As such, however, it should be excluded in (6) which it is not. Bavarian is even poorer in reflexive forms than Standard German. As most languages German (and its variety Bavarian) makes use of different pronouns when addressing people. Friends, relatives and so on are addressed by *du*, which is the second person singular pronoun, when there is only one addressee. When there are more, the pronoun *ihr*, which is second person plural, has to be used. The formal way of addressing people is to use *Sie*, which is third person plural. As said above, third person (pro-) nouns have different forms for pronouns and anaphora in Standard German. Bavarian, however, does not have a special reflexive form for the polite, i.e. formal form. It simply uses the pronoun form.

- (8) Standard German
Stellen Sie sich bitte vor, ...
imagine you 'yourself' please particle... (yourself = reflexive form)
'Please, imagine...'
- (9) *Stellen Sie Ihnen bitte vor, ...
imagine you 'you' please particle... (you = pronominal form)
- (10) Bavarian
Stelln's Eana voa ...
imagine you_{CL} you particle (you = pronominal form)

Thus, languages have more or less complete pronoun - anaphora paradigms. Some languages hardly have any anaphoric pronoun forms at their disposal. The generalization seems to be that if there exists an anaphoric form it must be used, if there is no special morphological anaphoricity marking, a usual pronoun may be used. The principle B requirement does not hold. Pronouns may be bound in their governing category without any problem if there is no corresponding anaphoric form. Anaphoric forms are more specific than pronouns. They are more informative in that they necessarily carry the information about co-referentiality with a c-commanding NP in their governing category. Thus the distribution of pronominal and anaphoric forms seems to be constrained by some other rule than principle B. Fanselow proposes that it can be derived from some other constraint which he calls the Proper Inclusion Principle (PIP):

(11) PIP:

If in a structure Σ , there are two possibilities A and B that compete with each other for the assignment of some feature (or referential index) it is impossible to apply A in Σ if A's domain of application is a proper subset of B's domain of application.

The domains that allow for pronouns are a superset of the domains that allow for the appearance of anaphora. Thus a pronoun is excluded where a reflexive pronoun with the same reference is possible. The advantage Fanselow attributes to his PIP is that it is not a specific syntactic principle any longer. He shows that other of the above principles are reducible to extra-syntactic, more general constraints as well. These constraints are likely to be principles of our Formal Competence. Interestingly, many of them apply in other cognitive domains as well. The PIP, for example, is very similar to the Elsewhere Condition in phonology (Kiparsky 1982). This condition states:

(12) Elsewhere Condition:

Rules A, B in the same component apply disjunctively to a form ϕ if and only if

(i) The structural description of A (the special rule) properly includes the structural description of B (the general rule)

(ii) The result of applying A to ϕ is distinct from the result of applying B to ϕ . In that case, A is applied first, and if it takes effect, the B is not applied.

Thus the Elsewhere Condition says that if in a phonological process two rules are applicable: Use the more specific one.

Another cognitive domain which is not purely linguistic, i.e. syntactic, where some related version of PIP has been proposed as well is communication strategy. Grice (1975, 1978) formulates a couple of rules which are obeyed under unmarked circumstances of conversation. His Cooperative Principle contains a quantity maxim which requires that within an act of communication the speaker make his/her contribution as informative as possible. For example, from an answer like 'Erika has three kids' which is a reply to the question 'How many children does Erika have?' the

hearer can (or even must) infer that Erika has only three kids. This inference is a consequence of the Gricean maxim of quantity which makes the hearer assume the speaker to be as informative as possible. Factually, the sentence 'Erika has three kids' is still true if she has four or eleven kids. The quantity maxim says, apart from the pure information a sentence conveys, that there is an implication that the statement that is contained in the sentence is the most specific information the speaker has evidence for. This makes inappropriate all other sentences which just truthconditionally imply the truth of the fact that Erika has three kids, i.e. 'Erika has four kids' for example. These sentences would fall in the superset domain which is ruled out by Fanselow's PIP. A similar case which comes from the field of concept uses is one Fanselow gives himself. An object like □ is usually categorized as a square, not just as a rectangle. The set of rectangles is clearly a superset of the set of squares.

If it can be shown that all those language specific principles (see above) can be reduced to more general constraints that determine other cognitive domains as well, the idea of UG as a language specific module must yield to a more general theory. Lately, especially since Chomsky's 'Minimalist Program' (Chomsky (1992) but also already (1989)), economy is considered to be one of the mayor constraints that condition language generation. Ideally, economy is to be understood as an independent notion. Economy means least effort, most effective use of capacities, lack of (too much) redundancy, taking the best advantage of resources, etc. These principles are on work in many systems different from language as well. It is very probable that (some of) these principles are also effective in other cognitive domains.

Under this view, language -or more specifically Universal Grammar (UG)- is not autonomous anymore. It might now be seen as something that is determined by the principles of Formal Competence, but which is not the Formal Competence per se. If the very abstract Formal Competence is what governs (almost) all our cognitive processes, then there is much more possible interaction between the structural representation and its meaning. I want to claim that it is the Formal Competence which 'translates' the object of communication into a code we call language. There is something a human being wants to convey to another human being (or sometimes even to him-/herself or an imagined creature), this may be some vague thought, a wish, a warning, something witnessed, etc. Since our physiology (the articulatory perceptual system) is made for producing and receiving sounds, we are able to use acoustic signals to transmit this. Our Formal Competence is asked to map this something which is supposed to be communicated to

someone else from the ‘fuzzy thoughts’, wishes and so on to a string of sounds.² What the system of Formal Competence does by solving this task is generation of language. Under such a theory, the function of language determines its form massively. This way, functional and structural linguistics are not contradicting anymore. The sense behind the existence of languages is to communicate with them. Natural language can then be seen as the outcome of peoples’ wish or need of communicating something provided by the general system of Formal Competence.

This thesis is an investigation of the syntax of the encoding of sentence functional perspective. It examines the question of whether there is a mapping between discourse representation and syntactic structure, i.e. whether different information packaging of an utterance is reflected through different structural representations of a sentence; and if so, what this mapping looks like. The dissertation is organized as follows. In chapter 1 I mainly present the most influential theories about sentence functional perspective. I sketch their advantages and drawbacks and close this chapter by a more detailed presentation of two relatively recent proposals about how syntax reflects the old : new articulation of a sentence which I consider as the immediate ancestors of the theory which I develop in the following chapters. The first approach which is of great importance is Diesing’s Mapping Hypothesis (1992) which splits the structural tree of a sentence into a domain where presupposed (discourse-old) material is mapped and a domain where discourse-new material is licensed. The second approach is de Hoop’s theory of Case³. This theory claims that noun phrases which can be characterized as being the anchor in the conversation get assigned a different Case from noun phrases that are discourse-new or do just not act as anchoring expressions.

Chapter 2 is concerned with the structure of the German VP. It will be argued that the VP is the syntactic domain of the comment which contains the assertion of the sentence. I will show that discourse-new material is base generated in the VP and remains there. The neutral order of VP internal constituents gives us the clue to the thematic hierarchy. I will show that, although the

² Fanselow states that the rules of the Formal Competence are not functionally motivated. This is certainly true. No reasonable person would claim that, among other things, language is constrained by economy principles because people want to be effective in their use of language or because economy already conditions the topics people talk about. The principles of Formal Competence are rather determined by the material structure of our brain. Language, however, can and should be viewed as partly functionally determined since it is the output of the system of Formal Competence whose task (function) it is to materialize the wish of communication.

³ Throughout the whole dissertation I will capitalize the word Case when I am talking about the linguistic concept. I do this because ‘Case’ is a crucial notion in this dissertation and I want it not to be mistaken with the homophonic word ‘case’ meaning ‘instance’.

German data seems confusing at first glance, the underlying structure is very simple and can be considered as a further confirmation of a universal thematic hierarchy.

Chapter 3 deals with derived representations. It is concerned with transformations that apply to the base order whose structure was elaborated in chapter 2. I will show that a certain class of arguments leave the base position. The trigger for this movement (scrambling) is the constituents' discourse status. My claim is that scrambling is triggered by a [+Topic] feature.

In the following chapter -chapter 4- I argue that this movement leads into the specifier of an agreement projection. It is in this chapter where I propose a new discourse : syntax mapping. Furthermore, chapter 4 deals with the intonational site of scrambling and related processes and tries to offer solutions to some theory-internal, but also generally acknowledged problems.

Chapter 5 brings more evidence from many typologically different languages which reinforces the claim that arguments which behave as topics trigger the activation of agreement projections. Chapter 6 focuses on a special property of topical constituents. It shows that topics act as weak islands for extraction out of them. One proposal of chapter 5 is called the 'Generalized Specificity Condition'. This condition is an abstraction over several up to now rather independent constraints on movement and linkage.

Chapter 7 deals with another sort of discourse dependent movement. It investigates the behavior of constituents which are especially focused. There it is shown, that narrowly focused constituents do undergo movement, and moreover, that this movement is in no way different from other related movement operations.

Remark:

Although, 'movement' is one of the most used word in this dissertation and the title contains the word '(de)placement', this thesis is not intended as an endorsement for a derivational approach. The theory presented here is independent of the issue derivational versus representational. Every use of the term 'movement' could easily be transferred into a representational chain dependency. Despite the derivational vocabulary, it will shine through at different places in this dissertation that I have more sympathy for a representational approach to the nature of grammar.

Chapter 1

Discourse Dependent Tree Splitting

1.1. Word Order and Intonation

The unmarked form in which language shows up is speaking. Any other encoding of communication like sign language, writing, morsing and so on are derived systems. One of the major goals of linguistics is to explain how meaning is encoded in the sound waves our speech organs produce. To put it differently, it is one task of linguists to formally describe how a string of sounds (phonetic form of an utterance, PF) is related to what this physical object is supposed to mean (the utterance's logical form, LF). Taking into consideration the material nature of the phonetic site of language, there are basically two ways of encoding linguistic information. As already stated above, spoken language comes as a consequence of sounds that are mapped onto abstract phonological representations. A string of sounds is mapped onto phonemes which in turn are grouped together and analyzed as morphemes that play some role in a structure of a higher level called syntax. This site I would like to call the linear site. Grammatical phenomena that fall under it are word order, complex word formation, affixation patterns and so on. The second kind of information a linguistic utterance can bear is provided through its 'melodical' shape. Thus not only the grouping of segments that linearly follow each other, but also things like accentuation, pitch, intonation play an important role in encoding and decoding information. This is the suprasegmental site. Whereas the first, the linear site, has been the area of syntactic research from the beginning -which lies in the nature of syntax- the second one, i.e. the suprasegmental site as an important field in information structure was discovered later and has always lead the life of a stepchild since. This thesis will not be an attempt of integrating phonology into syntactic theory. My intention, however, is to show that the phenomenon of information packaging makes intensive use of both sites. Languages differ with respect to which site is preferred over the other to mark

the parts of a sentence as new and old information. One example that illustrates that very nicely is narrow focus. Let us abstract for the moment from very sophisticated semantic analyses of narrow focus and assume with Szabolcsi (1981) that focus induces an exhaustivity interpretation. That means that the focused constituent denotes the only entity that satisfies the open proposition provided by the rest of the sentence (= background). Languages like English mark (narrow) focus almost exclusively by prosodic means; i.e. contrastively focused constituents get stressed. The exhaustivity reading is triggered by the phonological, suprasegmental shape of the utterance.

- (1) John wants to invite MARY¹.
'It is Mary John wants to invite.'

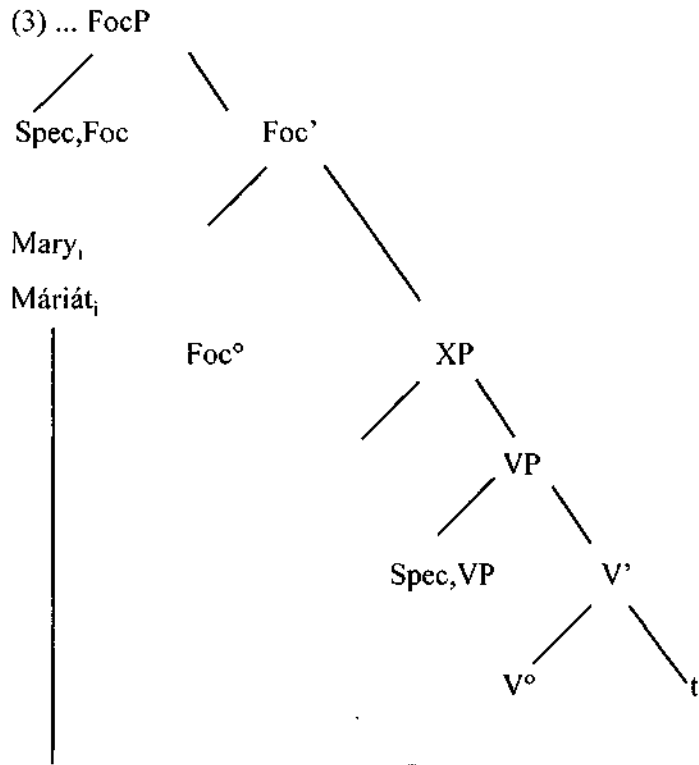
Other languages identify a narrowly focused constituent only by means of the structural position of that constituent. Such a language is Hungarian. There the focused phrase must be moved to some position where it is immediately followed by the verb. This position is called the focus position.

- (2) János Máriát akarja, hogy meg hívjuk
John Mary_{Acc} wants that Perf-Part invite
'It is Mary John wants to invite.' (= (1))

In view of the idea that natural languages differ only superficially, it would be desirable to assign to both sentences the same underlying structure. That means that the English stress pattern (suprasegmentally encoded) and the Hungarian word order (linearly encoded) should give rise to identical abstract representations. One way of doing that is to assume a level of logical form (LF). This is the way the Principle & Parameter approach and its offsprings handle it. In minimalist terms, one would say that in Hungarian the head of a focus phrase is associated with a strong XP feature. That means that overt movement of a constituent into the specifier position has to take place before spell-out. In English, the principle Procrastinate is on work (Brody 1995). This principle says that no movement is undergone unless there are driving forces. These are not there in English, thus the focused phrase remains in its base position. Nevertheless, in order to express the same the Hungarian sentence means the English focused constituent has to move to the same

¹ Throughout this thesis I will use capital letters to indicate phonological stress. I will try to only capitalize the accentuated (designated) syllable. This is not always possible, however. Occasionally when I quote from papers on languages which I do not speak, the whole word may be capitalized.

position at the level of LF. The result then would be the same for both languages: the focused phrase in order to be properly interpreted sits in its designated position which is [Spec,Foc]² from where it binds its trace in the base position:



This way both sentences come out the same. Linear and intonational information lead to the same output at LF. (In chapter 8, I will give more evidence for a [[Spec,Foc] ...t...] dependency.)

Apart from that one should bear in mind that in the normal case languages do not use the one or the other strategy for information packaging exclusively. Natural languages are rather mixed system with more or less strong preference for either. It seems to be the case that the so-called non-configurational languages use word order much more than configurational ones do. The latter stick much more to intonational encoding. Nevertheless, even English which almost exclusively uses the prosodic strategy, has a rule of overt focus movement.

(4) MARY, John wants to invite.

² Here the term ‘focus phrase’ is used to make reference to a functional projection within the extended projection of the verb. It should not be confused with the term in chapter 7 where the term refers to an arbitrary constituent which gets a contrastive interpretation and must be linked/moved to a scopal position. Thus, the former use (i.e. the use on this page) could be compared to the projection of C°, the latter use may be compared to a wh-constituent.

This sentence already resembles the Hungarian one much more. Apart from that, it is some sort of disambiguated variant of (1) since (1) may still serve for focus projection. On the other hand, also in the Hungarian example (2) *Máriát* is the phonologically most accentuated word. Thus, also Hungarian doesn't do it without intonation either.

A somewhat more economical representation, but basically in the same spirit would be to assume that in English there is an empty operator in the specifier position of the focus phrase which is associated with the intonationally marked constituent. The focus phrase is licensed by the intonational shape of the sentence.

1.2. The Encoding of Sentence Functional Perspective

In the introductory chapter, the exchange of information has been characterized as one main function of language. As a coherence strategy, sentences normally contain some known element(s) about which the speaker wants to convey some information to the hearer. For a felicitous communication it is necessary that there be some common knowledge to both speaker and hearer.³ This common knowledge which increases during the conversation serves as anchor for new information. The fact that (declarative) sentences can be split into some sort of anchor part on the one hand, and some other part containing the new information on the other, has been the research topic for generations of linguists. In the following, I will give a very short overview over the main proposals. More detailed information about the different trends of sentence functional perspective can be found in Vallduví (1992) and references quoted therein.

Theme : rheme

One split that goes back to Amman's (1928) 'Thema' and 'Rhema' is the division of a sentence into theme and rheme. This approach, however, is not yet very concrete about definitive criteria of the relevant parts. It merely says that there is some old, vehicular part (theme) which is opposed to the new, informative part (rheme).

³ This common knowledge may be minimal and is trivially given. Both, speaker and hearer, always know about each other's existence. Under normal circumstances, they also know about the situation around them. Thus, they are aware of some aspects of the nonlinguistic context of their communication.

Topic : comment

This split, according to Vallduvi, belongs to the more influential ones. The term which is more cared about is topic. Comment is the rest. Mathesius (1915) refers to the topic as that part of the sentence the speaker wants to give some information about. Thus, the topic constituents induce some aboutness feeling.

- (5) Pavarotti | is the best tenor of this century.
- (6) That Tosca recording with Carreras as Cavaradossi | I would never buy.

Reinhard (1982) integrates this idea in a more developed theory. For her, topics represent file cards (in the sense of Heim 1982, cf. see below) under which new information is to be stored. She also gives some tests to identify topics. Just to mention the probably most famous one: *as for* constructions. A constituent is a topic if it can be left detached and preceded by *as for* without introducing a informationally different structure from the input sentence. Thus the preposed constituent in (6) is a topic since it is (almost) equal to (7) in terms of information packaging.

- (7) As for that Tosca recording with Carreras, I would never buy it.

Halliday (1967) is more restrictive in what may be considered a topic. For him, it is crucial that a topic be sentence initial (in English). This is in accordance with the aboutness idea since initial constituents occupy an outstanding position from which some address status follows intuitively.

Focus : open proposition

This splitting concentrates more on the new information part, namely the focus. The part of the sentence that puts the communication ahead is the focus. The complement is the open proposition (Prince (1984)) or background. The background must be 'shared knowledge' by speaker and hearer, i.e. the speaker can put into the background only what she/he believes the hearer to know. It is important to note (also for the main proposal of this thesis) that focus is not a discourse-entity based notion. That means a focus is not defined by the (shape of) focus itself. What makes a focus a focus is its contribution in a sentence which is supposed to deliver some new information with respect to the previous state of shared knowledge between speaker and hearer. An illustration of this may be helpful.

- (8) (Peter was so drunk yesterday. He kissed almost everybody.) He even kissed ELisa.

The context is such that everything but *Elisa* belongs to the background. Thus the open proposition of the sentence is: *He (= Peter) kissed x*. The focus is *Elisa*. *Elisa*, however, is a proper name and as the sentence in its context suggests, the hearer must know of this *Elisa*. Thus *Elisa* as such is not necessarily new information. What is the new is that *Elisa* instantiates the variable in the open proposition. Thus, in terms of File Change Semantics (Heim 1982), new information does not necessarily mean new file cards or new entries on old ones, but new information may also be delivered by combining backgrounds with old discourse referents whereby the combination must be an informative statement.

Now I will come to the proposals that are the basis for my theory developed in this thesis.

1.3. Vallduví's Tripartition

Vallduví (1992) observed that neither the topic - comment, nor the focus - open proposition accounts could capture the twofold information encoding. The former accounts provided some techniques to single out the topic of a sentence, but they were unable to tell the old, given part of the sentence from the informative one.

- (9) These CDs, Mathias bought only for his FRIEnd.

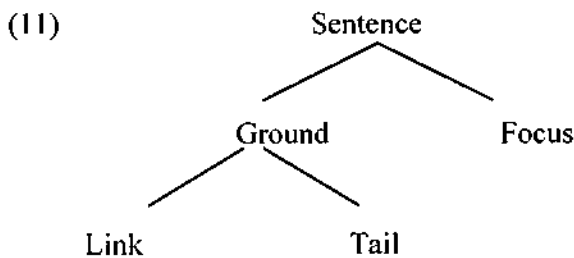
These accounts could say something about the topic - comment articulation. Thus, they are able to identify the pre-comma object as topic of the sentence. They are, however, unable to localize the informative part of the sentence. The comment is considered an atomic entity which does not split any further.

The focus - open propositions accounts on the other hand are only able to tell what new information the sentence brings, that is that the background consisting of the verb *buy*, its agent and theme arguments plus the past tense information are shared knowledge. The new is the focus associated with the focus sensitive particle *only*: *for his friend*. The marked word order in the background cannot be explained.

Vallduví successfully combines both accounts and comes up with a tripartite division of sentences. He calls his solution the ‘trinominal hierarchical articulation’. He first adopts the focus - open proposition proposal and divides the sentence into old and new information. The both results of this splitting are called focus and ground. The ground is of course the old part. This in turn is splittable one more time, namely in the prominent topic element(s) and the informationally less important other material. The topic element he calls link, the other elements which do not introduce an aboutness feeling are called tail elements. Their task is to facilitate the retrieval of the information from the focus part into the file card of the topic (link). Thus the Vallduví splitting looks like in the following sketches:

- (10) Sentence = { focus, ground }
 Ground = { link, tail }

and the sentence above can be analyzed:



These CDs, | Mathias bought only | for his FRIEnd.

1.4. Topic : Comment Structures

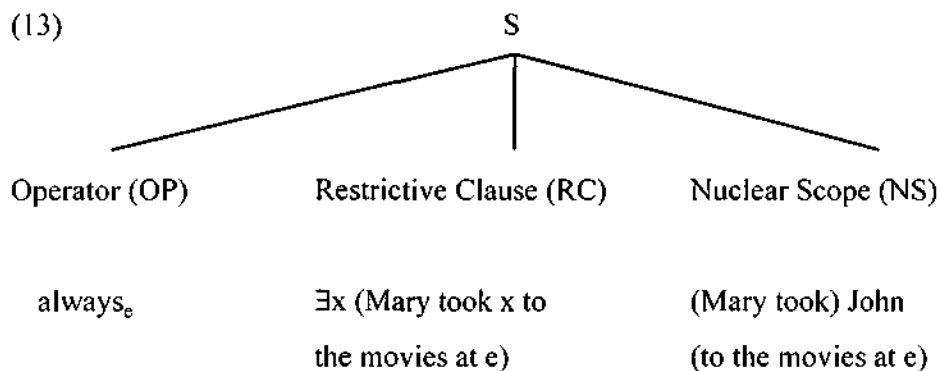
1.4.1. Partee's Proposal - Recursiveness in Focus : Background Splitting

Partee (1991) proposes that the informational task of a sentence can be represented as a structure involving quantificational properties. Since Heim (1982) it is common use in linguistics to analyze quantified constructions as tripartite structures. Quantification involves a Generalized Quantifier which has two arguments one of which is called the Restrictor (restrictive clause), the other one the Nuclear Scope (matrix)⁴. Assuming that most focus-sensitive constructions are

⁴ More about the theory of Generalized Quantifiers see section 1.4.5.1.2.

quantificational, she tries to show that, in general information packaging can be analyzed as quantification. She proposes that the topic⁵ part be mapped into the restrictive clause, whereas the focus part be mapped into the nuclear scope. Thus, for a sentence containing a quantificational element anyway, where the focus serves to identify the nuclear scope, she gives the following analysis.

(12) Mary always took [JOHN]_F to the movies.

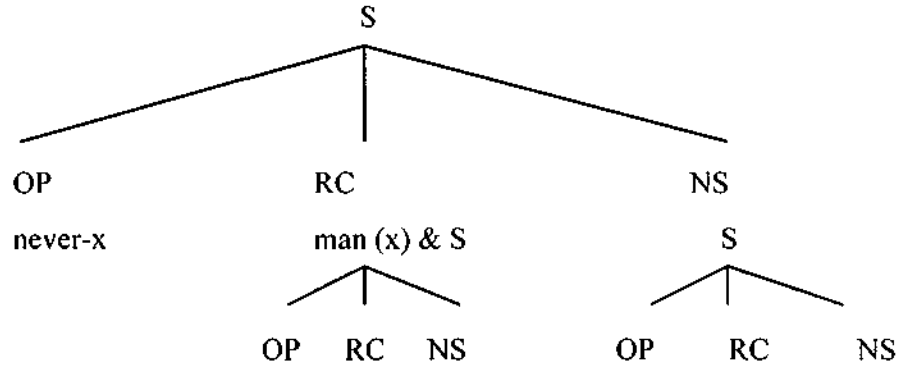


Since not every sentence is organized this simple (one classical quantifier, one easily identifiable focus on one constituent and the rest of the sentence) and also in order to somehow incorporate the Prague School theory of Communicative Dynamism, Partee proposes that, concerning sentence functional perspective, these tripartite structures are recursive. That means that the restrictive clause which contains the topic of the sentence may be further split into an operator, another restrictive clause and a nuclear scope, the same is valid for the matrix nuclear scope. Accordingly, the more complex sentence (14) is represented in (15)

(14) A man who always agrees with whoever he is talking to never tells only the truth.

⁵ Her notions of topic and focus are rather intuitive and lack concrete definitions. She writes: „...very informally, I take the core of the notion ‘topic’ to be roughly characterized by such expressions as ‘old’, ‘given’, ‘known’, ‘what the sentence is about’, ‘anchor’ (for the hearer). Equally roughly, the ‘comment’ is then the ‘new part’, or what is being said about the topic.“

(15)



always-y,t talk (x,y,t) agree (x,y,t) only-z tell (x,z) truth (z)

I will argue that not every sentence contains a quantificational statement, i.e. there are sentences where the notions of relative clause and nuclear scope should not be applied. (These non-quantificational sentences even represent the normal case.) However, what I agree with from Partee's proposal is the formalization of the idea that the 'old, anchoring', i.e. topic part, as well as the new part (focus) are not necessarily atomic, but that they again might be the input to some further informationally induced division.

1.4.2. A Formal Account of Topic - Comment Structures (Krifka (1991/92))

In a certain sense, Partee's idea of recursiveness is also found in Krifka (1991/92) where he develops a theory of topic - comment structures which comes close to what will be taken as semantic base for this rather syntactic thesis. There exist in the theory two different uses of the notion focus. Both refer to a related phenomenon. This fact complicates the discussion since it is very important to distinguish the one from the other. One notion of focus which mainly goes back to the Prague school and has been overtaken by Partee and Vallduví considers focus as the informative part of the sentence, i.e. what Partee describes as „the 'new' part, or what is being said about the topic“ and what Vallduví defines as I_S (information of the sentence). I_S is the propositional content (p_s) of a sentence that makes a contribution to the hearer's knowledge store (K_h). This use of the term focus will not be the one of this thesis. The grammatical phenomenon to which Partee and Vallduví refer as focus will be called (focus of the) comment in this work. The notion of focus will be used in the sense of Rooth (1985) and others. For him, focus is understood as the instantiation of one alternative out of a set of other pragmatically salient, potentially equal

possibilities. These alternatives constitute the P-set (or actually the C-set, cf. chapter 7). For instance, the sentence

(16) Marcus likes MEN

asserts that Marcus is a gay man. The alternatives of the C-set that are made salient and excluded at the same time by uttering this sentence are women, and if pederasm is not considered to be too farfetched, children. Thus in the sense of focus-as-exhaustiveness operator (Szabolcsi (1981)), focus is understood as *contrastive* focus. Focus in the above sense (comment) does not have to be contrastive⁶.

(17) Pavarotti found a mushroom near a stump.

In a very sophisticated semantic theory where text progression consists of elimination of possible words, this statement could be understood as elimination of all worlds in which Pavarotti did not find a mushroom near a stump. Thus any statement contrasts with its negation. I believe, however, that neutral assertions are not intended to express the non-truth of their negations. The fact that those worlds are excluded after uttering a sentence is just an automatic consequence. Contrastive focus constructions, however, do have the intention to eliminate alternatives. Here it is important to outline that Rooth talks about a pragmatically determined set of alternatives. Pragmatics thus tell us what may be considered a meaningful alternative. Thus, in the above example (16), a normally intelligent, adult person of most cultures nowadays draws the conclusion the sentence is about sexual preferences. This enables him/her to construct a set of alternative for which the focus is not true. These alternatives must be possible entities towards which one may be sexually attracted. The sentence is not a statement about anything Marcus might like. Only the pragmatically salient alternatives (sexual objects) are eliminated. One would not have the feeling of a contradiction if some sentences later the same person claims that Marcus likes gin, sunny wheather and tennis (also without a focus sensitive word like *also*, for example). The Pavarotti sentence on the other hand does not induce the generation of a P- or C-set. At least, I cannot think of any pragmatically meaningful contrastivization.

⁶ Rochemont (1986) also uses the notion focus. However, he is very careful with the differences and calls the one contrastive focus and the other one, which is named comment in this thesis: presentational focus. (Definitions in Rochemont 1986, ps. 64 - 67)

Another difference has to do with a phenomenon called focus projection. It is a well known fact that one and the same sentence may contribute more or less information to the conversation according to the context. Thus the sentence:

(18) Frank read a book about Italian cuisine

may be a felicitous answer to the following questions:

- (19) a. What did Frank read a book about?
b. What did Frank read?
c. What did Frank do?
d. What happened (in the mean time when I was gone)? / Why don't you go out anymore?

Depending on the question, the information that the (response) sentence carries varies. In case (18) is the answer to the first question (19a), it is least informative. Only the specification of the object is new. If it is the answer to the last question, the information is maximal. This is only possible with neutral sentences and can be represented as follows:

(20) [_F Frank [_F read [_F a book [_F about Italian cuisine]]]]

focus projection is not easily possible in constructions involving contrastive focus (cf. chapter 7, and chapter 4, section 4.5.3.).

Krifka (1991/92) uses the term focus in the alternative semantic sense. He argues that the simple focus-background splitting (where focus is understood in the Prague school sense) is not able to account for some puzzling cases. Sentence (21) can be an answer to (22) as well as to (23).

- (21) SUE KISSed John.
(22) Who did what to John?
(23) What happened to John?

As answer to (22), the sentence contains a multiple focus (Sue and kissed). This is an unproblematic case. As an answer to (23) however, the sentence raises a problem for

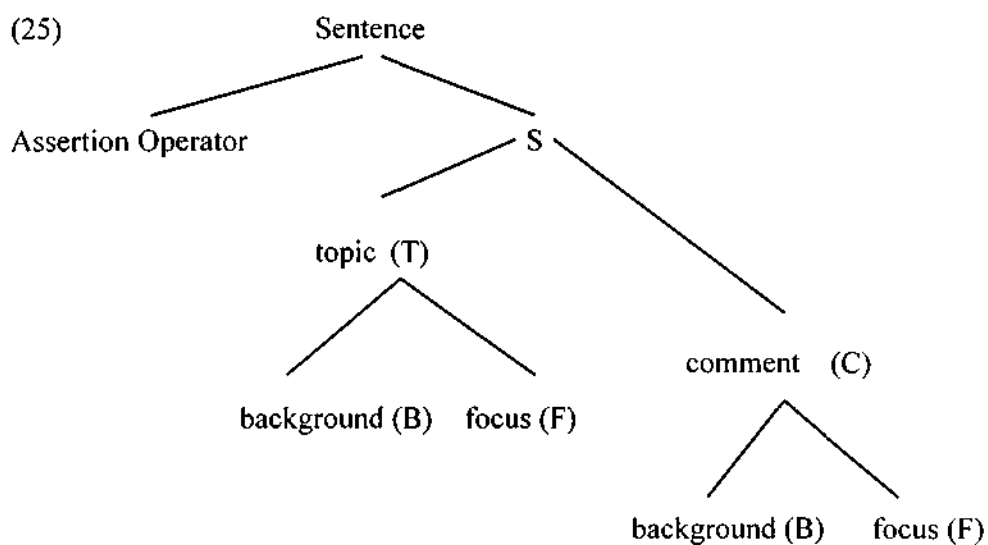
compositional semantics. *Sue* and *kissed* form no syntactic constituent at any level of representation. This makes it impossible to single out the focus in order to lambda abstract over it. Krifka therefore introduces one more splitting induced through information packaging: topic - comment structures. He analyses *John* as topic and *Sue kissed* as comment. As can be read off from his definitions below, the topic - comment analysis is not an alternative proposal to a background - focus splitting. According to his proposal, topic - comment is the prior split. This then may be / is the input for further focus - background splitting:

(24) (Krifka's (70) a-c)

- (a) ASSERT ($\langle \top \lambda X. \langle \alpha, \beta \rangle, \gamma \rangle$) maps a common ground⁷ c to a common ground c' , where $c' = c \cap [\lambda X[\alpha(\beta)](\gamma)]$. Felicity conditions:
- $c' \neq c$, $c' \neq \emptyset$, and there are salient Y , $Y \approx \beta$, $Y \neq \beta$ such that $\lambda X[\alpha(Y)]$ could have been asserted of γ ;
 - γ is a possible topic in c .
- (b) ASSERT ($\langle \top \lambda X. \alpha, \langle \beta, \gamma \rangle \rangle$) maps a common ground c to a common ground c' , where $c' = c \cap [\lambda X. \alpha(\beta(\gamma))]$. Felicity conditions:
- $c' \neq c$, $c' \neq \emptyset$
 - $\beta(\gamma)$ is a possible topic in c , and there are salient Y , $Y \approx \gamma$, $Y \neq \gamma$ such that $\beta(T)$ is a possible topic in c as well
- (c) ASSERT ($\langle \top \lambda X. \langle \alpha, \beta \rangle, \langle \gamma, \delta \rangle \rangle$) maps a common ground c to a common ground c' , where $c' = c \cap \lambda X. \alpha [(\beta(\gamma))]$. Felicity conditions:
- $c' \neq c$, $c' \neq \emptyset$, and there are salient $Y \approx \beta$, $Y \neq \beta$ such that $\lambda X[\alpha(Y)]$ could have been asserted of $\gamma(\delta)$;
 - $\gamma(\delta)$ is a possible topic in c , and there are salient Y , $Y \approx \delta$, $Y \neq \delta$ such that $\beta(Y)$ is a possible topic in C as well

The formulas state that the topic as well as the comment may have a focus and a background part. In (a), β which creates the P-set Y is the focus part of the comment; in (b), γ is the focus part of the topic and (c) covers a structure where β and δ induce P-sets for the comment and topic respectively. Thus, (c) gives rise to a complex structured meaning which can be structurally represented as (25) which resembles the Partee analysis very much.

⁷ Common ground should be understood here as the shared knowledge between speaker and hearer.



This allows for a very straightforward analysis of the following sentence:

(26) The OLD man came in GRAY pants.

as

(27) [The [old]_F man]_T [came in [gray]_F pants]_C.

This sentence implies that there must be at least one young man and a pair of pants which is not of gray color in the common ground of speaker and hearer. Such a case, which is not that marginal in communication, can by no means be captured in a simple binomial splitting theory. There are however less complicated constructions. The Pavarotti sentence above is much simpler. There are no alternatives to the topic, nor to the comment. This sentence therefore does not contain a (contrastive) focus, but counts as a neutral statement. It just splits into a simple topic and comment part without focus.

(28) [Pavarotti]_T [found a mushroom near a stump]_C

Jäger (1993) claims that the topic(s) as well as the comment contain a focus. For the theory he develops there, it is crucial that there always be alternatives around, in the topic as well as in the comment. This seems to me to be due to the model theoretic framework. In dynamic semantics,

the meaning of a sentence is an update, i.e. a function from contexts to contexts. (One kind of) context change may be seen as elimination of possible worlds. However, as I have already said, it seems to me that it is not the main task of a sentence to eliminate possible worlds, but to add information to the hearers knowledge store⁸. Thus I stick to Krifka's idea where topic and comment may have internal focus - background articulations, but need not. Krifka explicitly states: '...topic - comment structures are labeled pairs $\langle_T \alpha, \beta \rangle$, where α is the comment and β is the topic. Both α and β may be simple⁹, or they may contain focus - background structures.'

1.4.3. Two Immediate Precursors of the Theory Defended in this Thesis

1.4.3.1. Diesing's Mapping Hypothesis

1.4.3.1.1. Indefinites as Variables: Heim's Approach

In her thesis, Heim (1982) investigates the (non-) quantificational force of indefinites. Since Russell (1905), it was pretty uncontroversial among semanticists and language philosophers that indefinite NPs should be analyzed as existential quantifiers. Heim, however, discovers and discusses contexts in which indefinites do not seem to behave like existential quantifiers.

- (29) a. A contrabassist usually plays too loudly.
b. Most contrabassists play too loudly
- (30) a. If a violinist plays a solo, the audience often leaves the room.
b. In many situations in which a violonist plays a solo, the audience leaves the room.

The glosses show that the indefinites in the examples should not be analyzed as existential quantifiers. They seem to get their non-existential quantification from the context (quantificational adverbs, quantifiers that bind them unselectively, if clauses...). Heim then proposes that indefinites are not inherently quantified, but introduce variables into the logical representation. That means that indefinites don't have quantificational force of their own. They must receive this by association with some operator. The default case is *existential closure*. For illustration:

⁸ In Jäger (1995), the claim that topics must contain a focus has been given up.

⁹ Boldfaced italics added.

- (31) a. A singer found a mushroom.
 b. $\exists_{x,y}$ [singer (x) & mushroom (y) & x found y]

In (31 b), *a singer* and *a mushroom* are not understood as existential quantifiers themselves, but they introduce variables. These must be bound. If there is no other quantifier available, this binding job is done by an existential quantifier which is automatically inserted by prefixing the \exists symbol to the formula. This default operation which has got something of a deus-ex-machina device is called existential closure. One of the big advantages was that the Heim theory could explain the use of pronouns in the famous donkey sentences. One requirement on bound pronouns is/was that they be c-commanded by the operator they are linked to. This requirement is obviously not satisfied in sentences like

- (32) Every farmer who owns a donkey beats it.
 (33) If a farmer owns a donkey, he beats it.

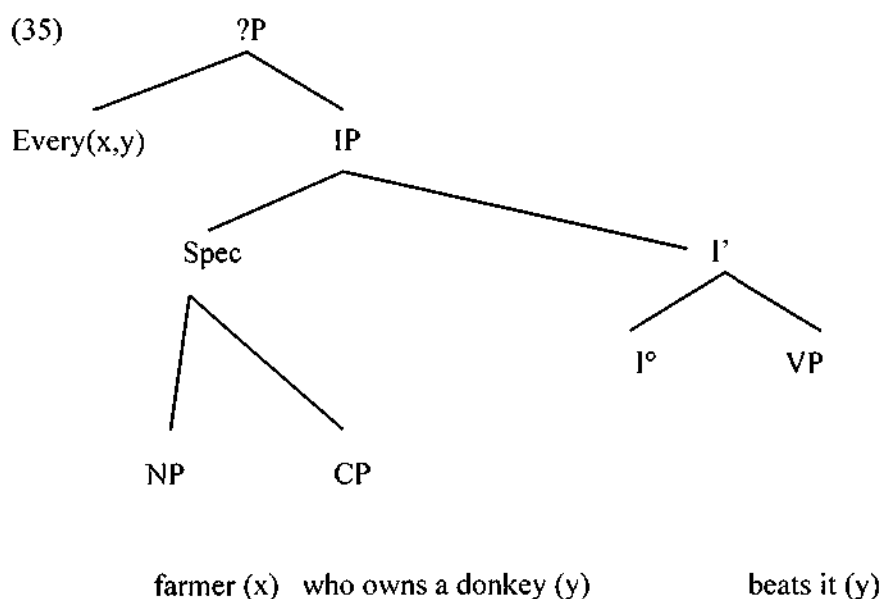
In no syntactic theory is there an analysis where the NP *a donkey* c-commands the pronoun *it* at any level. One proposal of Heim's thesis which has become very famous was the idea of unselective binding. As stated above, indefinites introduce variables which must be bound. This binding may be done by any appropriate quantifier. In the examples (32) and (33) *a donkey* gets universally quantified (together with *a farmer* and the situation). Thus, in both sentences there is a universal quantifier around which binds the farmers as well as the donkeys. The quantification is over farmer - donkey pairs, and thus we get the representation in (34)

- (34) $\forall_{x,y}$ [[farmer(x) & donkey(y) & owns(x,y)] \rightarrow beats(x,y)]¹⁰

In this logical representation, every variable is bound correctly. One may also think of a representation which is closer to the syntactic structure of the sentence. If we adopt some version of Quantifier Raising (QR) (May, (1985)), we just raise the quantifier *every* to a position where it c-commands everything. From there then, a link may be established between the indefinite object

¹⁰ In my way of presenting things it looks as if (32) and (33) have the very same meaning, the one represented in (34). This is not the case. (34) seems to be an adequate representation of (33) only. I am well aware of the proportion problem. However, in order not to confuse with reflections that are not important here, I treat them as the same for the moment.

a donkey (and also the subject) and the pronoun *it*. The *y* in *Every (x,y)* then c-commands the *y* in *beats (y)*.



In the two representations above, I have already made use of another important proposal which has become standard in linguistics: the tripartite structure of quantification.

1.4.3.1.2. Generalized Quantifiers

Quantification is the result of the presence of a Generalized Quantifier (GQ). The article by Barwise and Cooper (1981) was a milestone in the field of model theoretic semantics. Barwise and Cooper show that the universal and the existential quantifier of predicate logic are not sufficient for an analysis of quantifying expressions in Natural Language. They show that quantification in Natural Language is always restricted quantification. GQ denote families of sets of individuals. For example, the quantifier *most*. If applied to a noun it gives sets. For example, let's take the Girona Summer School (1994) as discourse universe and the following sentences as true in this world.

(36) Most students were syntacticians.

(37) Most students came from Europe.

(38) Most students went to the party.

The denotation of most students is different in every sentence. The set which is referred to in (36) contains only syntacticians. The set in (37) contains Margret, Ruben and Sylvia who came from England, the Netherlands and Germany, respectively. They, however, are phonologists and as such they are excluded from being a member of the first set. Thus the set of individuals the quantifier *most*+NP refers to differs with respect to the predicate it is being applied to. All possible sets, i.e. collections of individuals (which satisfy the definition given below) are the denotation of *most*. Barwise and Cooper analyze GQs as a two-place relation between two sets. These two sets are called the arguments of the GQ. In the examples above, the sets are given by the NP complement of the quantifier *most*, i.e. *students* on the one hand (set A); and by the VP predicate on the other (set B), i.e. the set of syntacticians, Europeans and people who went to the party. The semantics of *most* is that if both argument sets are intersected, the intersection $A \cap B$ must contain more members than there are members within the (sub-) set A-B:

$$(38) \text{ semantics of most: } \quad \| \text{most } N \| = \{ X \subseteq E^{11} : \| N \| \cap X > \| N \| - X \}$$

$$\text{or: } \quad \text{most}_E AB \text{ iff } |A \cap B| > |A - B|$$

That means that the set of students (in Girona) who were syntacticians must contain more members than the set of student who were not syntacticians (i.e. phonologists in the case of Girona). Now let us go back to the claim that quantification in Natural Language is always restricted quantification. If one tried to represent the meaning of Natural Language quantifiers like *most* with the tools from predicate logic, one would have two connectives for the arguments at one's disposal; namely & and -->. It can be shown that neither the one nor the other would bring the desired result:

(39) Most linguists are crazy.

(40) $\text{most}_x [\text{linguist}(x) \ \& \ \text{crazy}(x)]$

(41) $\text{most}_x [\text{linguist}(x) \ \text{-->} \ \text{crazy}(x)]$

It is very easy to show that (40) is a wrong formula for (39). One may imagine a discourse frame with 20 people. Five of them are linguists, and among them four are crazy. This scenario would be described by (39) intuitively correctly. According to (30), however, the sentence should be false,

¹¹ E = Discourse Universe.

since (30) says that most individuals are linguists (and crazy). Thus for (40) to be true we need more than 10 linguists. This is not what *most* means. Now, consider (41). If two linguists out of the five are crazy, the sentence is felt to be a false statement. According to (41), however, it should be true. The formula says that mostly, if some individual is a linguist, he or she is crazy. This statement is true for all the 15 non-linguists (+ the two indeed crazy linguists); thus the sentence should be true which is against the intuitions. The problem lies in the non-sensitivity of predicate logic to the object language. Natural language quantifiers however carry a presupposition. They presuppose that the A set be non-empty and that it defines the set of entities it is quantified over. That means more or less that there must be something accessible in the discourse over which it is possible to quantify. These elements of the A set thus restrict the quantification. They say what the quantification is about. Barwise and Cooper then propose the following notation which has gotten rid of & and -->.

$$(42) \quad \text{most}_x \quad [\text{linguist}(x)] \quad [\text{crazy}(x)]$$

Heim (1982) proposes a tripartite structure to account for constructions involving quantification. She divides the logical representation of a quantificational statement into:

- (43) (i) a non-selective quantifier
- (ii) a restrictive clause (RC) and
- (iii) a nuclear scope (NS)

The restrictive clause (RC) contains the set the quantifier quantifies over. This way Barwise and Cooper's requirement of restricted quantification is incorporated. For something to appear in the RC, the existence of instantiations it refers to in the model is presupposed. The nuclear scope (NS) is the domain of existential closure. Thus indefinites which introduce variables and have no proper quantificational force get bound by \exists (under their narrow scope reading).

(44) Every good linguist wrote a bad article.

| | | | |
|------|--------------------|---------------------|---|
| (45) | Every _x | [good linguist (x)] | $\exists y$ [bad article (y) & wrote (x,y)] |
| | | | |
| | quantifier | RC | NS |

This sentence is true, iff for all value assignments to the variable x that make the RC true, there is a value assignment to y that makes the NS true, thus for every linguist there should be (at least) one bad article the linguist wrote at some time.

1.4.3.1.3. The Mapping Hypothesis

Diesing in her thesis discusses differences in the interpretation of indefinites (Diesing 1992a,b). It is clear from the previous sections, the interpretation of an indefinite NP depends on whether the variable that the indefinite introduces gets bound by a GQ or by \exists . In the former case, the NP must sit in the RC and therefore be presuppositional. In the latter case, existential closure applies and the NP gets an existential interpretation, which is also called the weak reading. Many sentences are ambiguous with respect how the indefinites contained in them are to be interpreted. One case Diesing discusses is:

(46) Firemen are available.

This sentence is ambiguous in three ways. The following interpretations are possible:

(47) \exists_x [firemen (x) & available (x)]

(48) $\text{Gen}_{x,t}$ [fireman (x) & some time (t)] [x available at t]

(49) Gen_t [some time (t)] \exists_x [firemen (x) & x available at t]

(47) means that (at some point in time) there were some firemen available. This existential reading on the subject goes together with an episodic interpretation of the statement. (48) says that it is a general property of firemen that they are always available. This sentence is a generic statement about firemen and does not have an episodic reading. (49) means that at any time, there are firemen available. Thus bare plurals (in English) may have a generic reading (when appearing in the RC), or an existential reading (when appearing in the NS). By looking at German data, Diesing observes that some factors determine that only either the one or the other reading is available. Consider (50) and (51)

- (50) ...weil ja doch Kinder auf der Straße spielen
...since PRT children on the street play
'...since there are children playing in the street'
 \exists_x [child (x) & play in the street (x)]
- (51) ...weil Kinder ja doch auf der Straße spielen
...since children PRT on the street play
'...since (in general) children play in the street'
Gen_x [child (x)] [play in the street (x)]

A well known fact from Carlson (1977) is that one type of predicates only combines with the generic reading. This type he calls *individual level predicates*. In contrast to *stage level predicates* (the other type) they do not allow for episodic readings. Diesing shows that in German, individual level predicates do not provide the two ordering possibilities in (40) and (41). Only the order subject > PRT gives a grammatical output:

- (52) ...weil Skorpione ja doch giftig sind
...since scorpions PRT poisonous are
'... since scorpions are poisonous'
- (53) *? ...weil ja doch Skorpione giftig sind
since PRT scorpions poisonous are

Assuming that (i) sentential adverbials and particles mark the VP boundary and (ii) the subject VP internal hypothesis (Fukui and Speas (1986), Koopman and Sportiche (1988), Sportiche (1990)) which provides (at least) two subject positions, she claims that generically interpreted bare plural subjects occupy [Spec,IP] whereas existentially quantified ones are located in [Spec,VP]. This theory provides a nice syntax - semantics mapping. Since generics go into Heim's RC, and existential closure applies to the NC, Diesing proposes the Mapping Hypothesis (MH) which states:

- (54) Mapping Hypothesis:
Material from the VP is mapped into the nuclear scope
Material from the IP is mapped into the restrictive clause

(55) Ali bir piyano-yu kiralamak istiyor.

Ali one piano-ACC to rent want

‘Ali wants to rent a certain piano.’

(56) Ali bir piyano kiralamak istiyor.

‘Ali wants to rent a (non-specific) piano.’

In example (55), where the object bears overt accusative morphology, the piano must be interpreted referentially (therefore the gloss *a certain piano*). There must be an accessible piano in the discourse frame. Example (56) just states that Ali wishes to possess a piano, he doesn't care about a specific one and it might be that there are even no pianos available. In that case, one cannot speak of a referential use.

De Hoop classifies NPs as being either weak or strong. Strong basically means what Diesing characterizes as presuppositional. For some reason de Hoop rejects this deductive, more abstract characterization and gives a list of what is supposed to count as strong:

- referential
- partitive
- generic
- generic collective

De Hoop claims that when an NP has a strong reading, it must be semantically analyzed as a generalized quantifier. Since she uses a model-theoretic framework that has its roots in the semantic work of Montague, mainly Partee's Type-shifting theory (Partee (1987)), she assigns those NPs the $\langle\langle e,t \rangle, t \rangle$ status. Her hypothesis then is that there is a relation between strong and weak readings of NPs on the one hand and the type of Case assignment on the other. She argues for the existence of two types of structural Case, namely strong Case, which is assigned at S-structure, and weak Case, licensed at D-structure. De Hoop argues that strong Case can be viewed as type shifter. Objects bearing weak Case, which they get assigned at D-structure, are to be analyzed as existential expressions or predicate modifiers with the model theoretic status of e or $\langle\langle e,t \rangle, \langle e,t \rangle\rangle$, respectively. This is a weak point in her theory. As she correctly observes, there is no trivial one-to-one mapping between Case assignment and NP interpretation. It seems to be the case that weakly interpreted NPs never get assigned the so called strong Case. Purely existentially interpreted object NPs always bear the morphologically weak Case. However, strong NPs may show up with weak Case morphology sometimes. This is linked then to another

distinction. When an unambiguously strong NP (definite NP, or by *each* and similar quantifiers quantified expression) shows up with morphologically weak Case, the interpretation of the sentence must be atelic. Thus, the aspectual information overrides the weak-weak : strong-strong correlation. In order to save her generalization (number (100)):

(57) An object bears strong Case if and only if it has a strong reading

she is forced to say that strong NPs in atelic sentences are not really strong NPs. She lumps them together with weak NPs, denies their quantificational force and characterizes them as predicate modifiers. On the one hand, this is the right thing to do; on the other hand this weakens her generalization considerably. It leaves a subclaim which can be characterized as:

(58) Weak NPs must get assigned weak Case

NPs getting assigned strong Case must be semantically strong

This rest contains an undesirable fashion of generalizing over things. In the first part, semantic seems to tell what morphology should do; in the second part, morphology seems to determine semantics. Later I will develop a theory where the observations come out in a less stipulative manner.

1.5. Summary

In this chapter I presented the most influential theories about the encoding of sentence functional perspective. I have shown that a binominal partition of the sentence in an 'old part' and a part which contains the new information is not completely sufficient.

In the last sections of this chapter I have reviewed syntactic proposals about how the old - new distinction can be captured by reference to structural domains within the sentence. Since for these approaches (Diesing's Mapping Hypothesis and de Hoop's theory of Case) the interpretation of argument DPs plays an important role, this chapter also contains sections about the nature of quantification.

Chapter 2

The Structure of the German VP

2.1. Configurational and Non-configurational Languages and the Classification of German

It is a well known fact of linguistic typology that the world's languages differ with respect to word order variation. There are languages that are very liberal with the ordering of clausal constituents. Suppose there is a sentence with a verbal head, two complements, and an adjunct, then one has four major constituents (V, Arg1, Arg2, Adj). Under the relevant circumstances, these liberal languages allow for 4!, i.e. all possible 24 different orderings of V, Arg1, Arg2, Adj. Sometimes even more possibilities arise since in these languages very often exhibit a grammatical phenomenon called discontinuous constituents (Hale 1983, Russell and Reinholtz 1995). This allows for the possibility that one of the categories may split giving rise to an even greater number of linear word orderings. One term used to classify these languages is 'non-configurational', which means that the grammatical function of a category cannot be read off of its position within the sentence. A typical example that has been the object of investigation by generative linguists is Walpiri (cf. again Hale among others). But also less exotic languages allow for enormous freedom of occurrence among the sentence's major constituents, see a detailed description and analysis of Russian in Adamec (1966), and a more recent paper by Junghanns and Zybatow (1995).

On the other hand, there are languages which impose very strong restrictions on the ordering of sentential constituents. These languages are called configurational. A relatively well studied example is Chinese. Also English, certainly the best described natural language counts as a relative good example of this language type. But also the very interesting work of Bickerton (1981) shows that Creole languages, which are offsprings of languages of every possible typological type, are very strict in the ordering of their constituents.

German, as most languages, falls somewhere in between the two poles. There are a few demands on the linearization that must be fulfilled; among them is the verb second phenomenon which demands the second position be occupied by the finite verb, i.e. there can and must be only one constituent that precedes the verb in main clauses (German is a so-called V2 language). In subordinate sentences, relative and interrogative XPs, and complementizers must occupy the initial (or sometimes the second) position of the sentence while the finite verb is located at the end (only finite complement or adjunct sentences follow the inflected verb). The traditional typological partition of the German sentence looks like in (1) (taken and slightly modified from Haftka (1993) who bases it on work by Drach (1939) and Engel (1988))

(1)

| 'Vorfeld' (pre-field) | 'linke Satzklammer' | 'Mittelfeld' (middle-field) | 'rechte Satzklammer' | 'Nachfeld' (post-field) |
|--------------------------|---|--------------------------------|--|----------------------------|
| | C° = - finite Verb _{mcl} ¹ - complementizer | | - finite verb _{sbcl} - stranded verbal particles | |

(1) illustrates that the positions of the verb are well-defined and partition the German sentence is. Other constituent types are freer. That means that most adjuncts or arguments can appear in the pre-field position, or may occupy any position of the middle-field. Like in all other languages, there are restricting factors which determine where a phrase may or may not appear.

To say that German is a language somewhere in-between the non-configurational and configurational languages is not a satisfactory statement. Therefore one has formulated distinguishing criteria and tried to classify German accordingly. A very detailed analysis is to be found in Fanselow (1987, chapter 1). A large part of Fanselow's dissertation is devoted to the question of whether German has a VP or not. The answer Fanselow gives is yes. He furthermore shows that the existence of a VP in German cannot be learnt, and therefore concludes that all languages must have a VP. This shows that in some sense, all languages display a configurational property. This is very much in the spirit of this dissertation too. Similar to Büring (1993) I would like to show that there is no real free word order in German. The position of every element obeys constraints that must be satisfied. In my opinion, these constraints are either purely grammatical (verb movement, clitic and weak pronoun placement) or pragmatically determined (order of non-

¹ mcl = main clause, sbcl = subordinate clause

pronominal, non-verbal constituents)². This dissertation is mainly concerned with the investigation of the trigger for constituent positions.

2.2. Lexical and Functional Categories

I will base my assumptions about natural language structures on the idea that there are two types of categories which are stored in the mental lexicon and enter the computational system (cf. Introduction) in exactly the same way. This means that the lexicon feeds the grammar with entities that act as heads which project according to X-bar theory. The two types of categories comprise lexical categories on the one hand, and functional categories on the other. This division is not very controversial³. Therefore I will only give a short characterization here.

Lexical categories are those entities that are called content words in traditional grammars (see Haspelmath (1994) for a nice discussion). Lexical categories have some meaning of their own, i.e. they bear some descriptive content. As opposed to functional categories, lexical categories (may) have arguments. Relatively recent neurolinguistic research has shown that the grammatical theoretic concepts of verbal and nominal have a biological base (Damasio & Damasio 1992). If these notions are considered to be features that can be assigned the values + and -, one gets a matrix with four instantiations of possible combinations. These four combinations can be considered as a tentative feature based approach to characterize the four lexical categories.

(2)

| | | | | |
|---------|------|------|-----------|------------------------|
| nominal | + | - | + | - |
| verbal | - | + | + | - |
| | noun | verb | adjective | adverb/ preposition |

² It would be nice if one could reduce the nature of the constraints to one underlying source. As I have argued in the introductory chapter to this thesis, grammar and pragmatics could be considered as phenomena which need not be autonomous and completely distinct from each other. Thus, I think that a unitary explanation is possible. However, for the time being I don't see a reasonable solution.

³ At least according to Haspelmath (1994), the binary classification lexical vs. functional categories is considered to be standard within the generative framework. Non-generative, more functionally oriented approaches try to establish a more sophisticated categorization where the categories are located on a scale with increasing functional use (grammaticalization). I will ignore these approaches here.

Since Chomsky (1970), these four categories count as the lexical categories. One should bear in mind, however, that this view is not a very intuitive and therefore a rather less serious proposal. Nevertheless, I think it is an elegant and reasonable approach and any challenges that blame this approach for being too narrow minded come up with other proposals that complicate the matters in an inappropriate way (especially Zimmermann (1988)).

Another distinctive characteristic apart from independent meaning and the capacity of theta-role assignment is their property as an open class. Open classes refer to that part of the vocabulary of a language which is subject to permanent change in the sense of new-creation, formation, reactivation, and disappearing of items. Prototypical examples would be: *animal, blues, (to) sing, (to) give, intelligent, happy, because, inside*.

Functional categories are traditionally called auxiliary words or morphemes. As for the characterization of functional categories I will adopt the defining properties listed by Abney (1987, p. 64-65):

(3)

1. Functional elements constitute closed lexical classes.
2. Functional elements are generally phonologically and morphologically dependent. They are generally stressless, often clitics or affixes, and sometimes even phonologically null. (They do not have to be words.)
3. Functional elements permit only one complement, which is in general not an argument.
4. Functional elements are in general inseparable from their complement.
5. Functional elements lack 'descriptive content.'

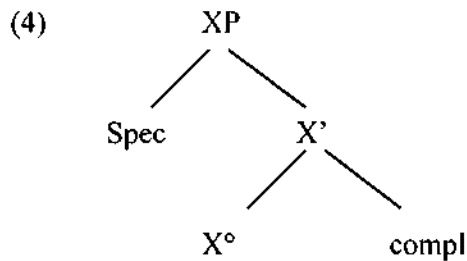
Prototypical elements are determiners, auxiliary verbs, complementizers, and also tense morphemes, agreement affixes (*the, a, would, are, that, if, -ed, -s*).

2.3. The Base Order - the Projection of Heads and Arguments

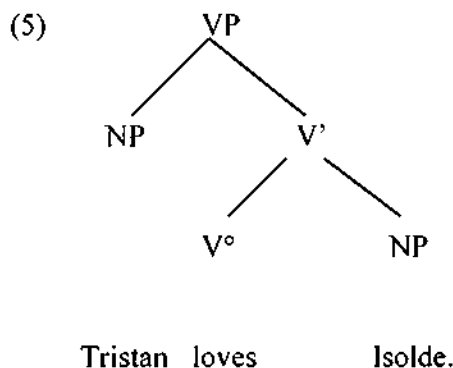
2.3.1. Some Assumptions about the Syntactic Encoding of Argument Structure - a Syntax for Lexical Decomposition Grammar

As in Grimshaw (1991), I will assume that lexical heads are the most deeply embedded heads within an extended projection. By some process similar to Chomsky's Generalized

Transformations (GT) (Chomsky (1992)), these heads, which are themselves X° elements, take a complement (internal argument) which must be a phrase of the category X' . By further application of GT, a new phrase can be added which closes the projection⁴. This phrase is called the specifier.



If we assume that lexical heads carry information about their categorial status, the lexical projection integrates into the structure of an appropriate functional category⁵. These categories are hierarchically ordered and the deepest functional head subcategorizes for the lexical projection. (5) illustrates how structure (4) can be filled with concrete linguistic material using an ordinary transitive verb. The verb takes the direct object, projects to V' , and then this complex combines with another NP, the subject, and gives VP. (This viewpoint incorporates the idea that the subject is base generated VP internally (Fukui and Speas 1986, Koopman and Sportiche 1991) - a theory which I consider well motivated.)

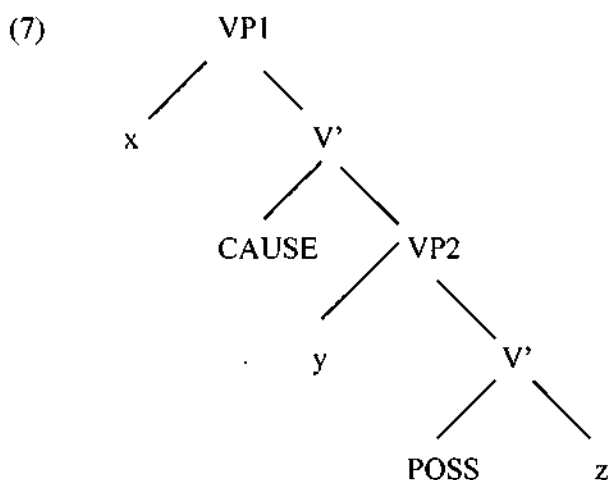


⁴ In Kayne's restriction on X-bar theory (Kayne (1993b)), a head together with its complement already forms a maximal projection. GT may adjoin one more XP to the head+complement complex. Thus, adjunction and specification fall together. I think that this idea is not unmotivated. However, for the sake of clarity I will use the more familiar, traditional X° , X' , X^{\max} notation.

⁵ Some researchers propose that lexical categories are not specified for a categorial class (for example Steinitz (1994)). This means that the lexical entry of an element does not say if the item is a noun or a verb. Under such an approach, only the functional structure above the lexical projection decides about the nature of the head's category. I think that this is even the right way. However, this issue is of no relevance here.

The matters become more complicated when we are dealing with verbs that take more than two arguments and / or when secondary predication is involved. Here I will adopt a theory which is based on the idea of binary branching (Kayne (1984)), on shell structures (Larson (1988)), on a syntactic treatment of lexical decomposition and the theory of ordered argument structure (Grimshaw (1990)). As for lexical heads, I will assume that they can be decomposed into semantic primitives consisting of universal predicates like CAUSE, POSSESSION, BECOME ... and lexeme specific atomic predicates. These primitives can be thought of as X° elements that are hierarchically ordered obeying certain selectional requirements and independently projecting specifiers and complements. For example, the verb *to give* could be decomposed into the basic predicates POSS and CAUSE with their arguments⁶. *to give* denotes an action where someone (x) causes that someone else (y) gets to possess something (z). The latter relation (the one between y and z) is tighter and, in some sense, this relation refers to a state which is the result of what x CAUSES. This lexical decomposition could be illustrated by a syntactic tree such as found in (7) for a sentence like (6):

(6) John(x) gives Mary(y) flowers(z).



⁶ In paragraph 2.8. I will show that POSS is actually a derived primitive. For our purposes here, however, it suffices to analyze it as an atomic predicate. Also, I am aware of the fact that there are several analyses of GIVE with respect to argument projection. Therefore, for example, Haider (1992) and Speas (1990) assign this verb different conceptual structures. All this should not matter here. In the following paragraphs I will try to show what argumental dependencies are involved.

This tree is nothing else than another notation which is given in Stiebels (1994)⁷.

$$(8) \quad \lambda z \lambda y \lambda x \lambda s \text{ CAUSE}(x, \text{BECOME}(\text{POSS}(y,z)))(s)$$

The verb *to give* can be understood as the lexical result of the incorporation of POSS (into BECOME) into CAUSE. The λ -prefix is a sort of placeholder for the arguments. *s* is a variable over the situation which one can ignore here. A slight difference is the presence of the additional predicate BECOME. It would be no problem to incorporate it by integrating into our structure one more verbal head. The only blemish this entails is the fact that BECOME counts as a one-place predicate which would not project a specifier. This is not bad however. The second possibility is that one could argue that BECOME licenses the Davidsonian argument. This argument is characteristic for verbs which refer to a process. Verbs denoting a state would not have BECOME as a lexical subpart. Thus, it could act as the argument which Kratzer (1989) makes responsible for the stage-level vs. individual-level predicate distinction.

If the approach outlined in the text above is adopted, it comes as a consequence that Haider's mechanism of theta-role discharge does not work for German and other head final languages (Haider 1992, 1993). He observes that the VP internal serialization of indirect object, direct object and PP is always IO > DO > PP. What differs is the position of the verb; some languages have it in front of the given arguments, some have it at the end. Since his 'Basic Branching Conjecture' states that all (basic) projections are right branching, there is no rightward head-to-head movement possible in his framework. Empty verbal heads are licensed in head initial languages only, and the verb which is base generated in the deepest verbal position must move up to link all the arguments ((9), much like in (7)). In languages like German, the head final verb licenses all arguments to its right by having them all in its government domain (6) (discharge along the projection line ←).

$$(9) \quad [V_i [IO [e_i [DO [e_i PP]]]]]$$

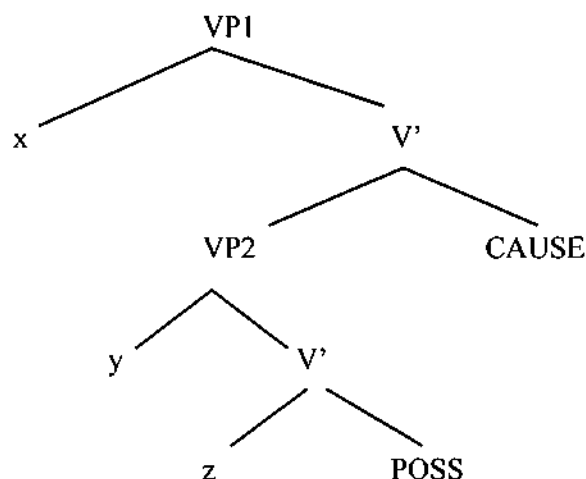
$$(10) \quad [IO [DO [PP V]]]$$

$$\leftarrow \leftarrow \leftarrow \leftarrow \leftarrow \lrcorner$$

⁷The example is, of course, not Stiebels' own invention. The notation in (5) is standard in lexical semantics. However, there is no classical, standard book that I could quote where these ideas about lexical composition are given within this notation. Therefore I chose one random dissertation using the relevant framework and looked into the introductory chapter where the basic theoretic background is laid down.

Thus, if we assume - contrary to Haider's proposal - that German projects arguments in the same way head initial languages do, we get a structure like in (7), but right headed:

- (11) (weil damals) viele Eltern(x) ihren Kindern(y) Süßigkeiten(z) schenk(ten)
 since then many parents their children sweets gave
 'since that time many parents used to give sweets to their children'



This is the first assumption. The second one is immediately based on it, namely it is concerned with the status of the arguments.

2.3.2. On Deriving an Argument Hierarchy

I propose that the predicates take a certain argument, and license a specific XP in their specifier. For example, CAUSE takes some projection of a state or process as its complement and licenses an agent in its specifier position. If it is assumed that the semantic primitives select each other in a certain order, and that they license specific arguments in their specifier position, it follows that the X-bar scheme projects a thematic hierarchy. This claim is much in the spirit of Grimshaw (1990). There she develops the idea of ordered argument structure. She argues that argument structure (AS) is not a collection of unordered thematic roles as had been assumed previously. Grimshaw claims that AS is an ordered representation over which relations of prominence are defined. That means that the arguments of a verb (or of lexical categories in general) obey some principle that orders them, i.e. establishes a hierarchy, and that principle is prominence. Knowing that there are

hypotheses of hierarchy that propose almost every permutation possible, she gives the following one with which I partly agree:

(12) (Agent (Experiencer (Goal / Source / Location (Theme))))

However, unlike in the theory sketched above where theta roles are connected to semantic primitives, in Grimshaw's theory AS contains no information about particular theta roles, but only information about the relative prominence of the arguments. She explicitly states that she assumes the goal to be more prominent than the theme. This, however, is a point of debate. In the list of hierarchies Speas (1990) gives, only 3 ½ of 8 hierarchy proposals locate the goal argument higher than the theme. However, Grimshaw provides several arguments for her ranking (for a detailed argumentation see her book (Grimshaw 1990), or Meinunger (1995b)). Very strong empirical support which Grimshaw does not consider comes from the word order facts in so-called non-configurational languages. In constructions that represent the unmarked word order - whatever notion of 'unmarked' is adopted - linguists characterize it as subject > indirect object > direct object. To mention only a few investigations covering typologically very different languages: Adamec (1966) for Russian, Mahajan (1990) for Hindi, Kural (1992) for Turkish, Joppen and Wunderlich (1994) for Basque, Megerdumian (1995) for Armenian.

2.4. What is the Basic Word Order (in German)?

It is not very clear what basic word order is supposed to mean, and consequently it is even less clear how it can be defined. Almost nobody challenges that the agent argument is located very high in the thematic hierarchy and thus stays furthest away from the deepest head position within the verbal phrase. Concerning the other arguments, and partly even adjuncts, no agreement can be found. One controversial question is the ranking of dative and accusative objects⁸. As for the basic orders it has been claimed that all possible rankings are attested (Höhle (1982), for a reprise cf. Haider (1992)). All possible rankings means: (I) dative is higher than accusative, (II) accusative is higher than dative, and neither ranks over the other or both are mutually exchangeable (III). It is claimed that the instantiation depends on the nature of the verb.

⁸ I am aware of the fact that the question of whether dative ranks over accusative is not identical to the question of whether goal ranks over theme. However, the questions are related.

(15) **class I**

- a. daß er seiner Frau_{DAT} sein Geld_{ACC} nicht gönnte (spreading)
 b. daß er sein Geld_{ACC} seiner Frau_{DAT} nicht gönnte (no spreading)

class II

- c. daß er seine Kinder_{ACC} ihrem Einfluß_{DAT} aussetzte (spreading)
 d. daß er ihrem Einfluß_{DAT} seine Kinder_{ACC} aussetzte (no spreading)

class III

- e. daß er seiner Frau_{DAT} sein Geld_{ACC} gegeben hat (spreading)
 f. daß er sein Geld_{ACC} seiner Frau_{DAT} gegeben hat (spreading)

(14) is uncontroversial and shows that nominative must precede accusative to make focus projection possible. This fact then is carried over to the spreading possibilities in the double object examples from (15). However, the data here are less clear. Nevertheless, I claim that the mistake lies somewhere else, namely in the misunderstanding of the relation between questions and focus projection in possible answers. It is simply not the case that an answer to a wh-question only consists of the open proposition delivered by the question plus the (exhaustive) instantiation of the open proposition. It is very well possible for the answer to contain more material, for example in order to facilitate storing of new information. What I mean is that the answer to a question of the sort ‘What happened?’/ ‘What’s the matter?’ need not necessarily be an all-new sentence. A structured proposition in form of a categorial statement can also be a possible answer. A sentence like ‘Aunt Lisa died’ may have different information packagings. It can be athetic statement, i.e. an all new sentence. In English, telicity of a one-argument clause is achieved by putting the main stress on the head of the argument. In that case the intonation pattern is:

(16) Aunt Lisa died.

Another possibility is the use of the term *aunt Lisa* as an expression for someone about who it is being asserted that she died. In that case, the expression *aunt Lisa* is (more) salient, and the stress goes on the verb. This is the intonation of a categorial statement.

(17) Aunt Lisa DIED.

Nevertheless, (17) is a possible answer to a what-happened-question. There is no necessary identity between the open proposition set by the question and the presupposed material in the answer. Otherwise, what-happened questions would only be allowed in situations where the speakers have no common ground at all, which is a very rare, if not even impossible case. As I will show later, this kind of equation leads to jumping to conclusions. It is true that presupposed material from the question cannot be used as the focus of the corresponding answer.

(18)

A: What happened to aunt Lisa?

B: *Aunt Lisa died.

However, this fact does not imply that everything contained in the answer which does not belong to the question must be focus or new information. Let me give another example:

(19)

A: (Why is Mary angry with Paul?) What did he do?

B: The day before yesterday, he slept with Marianne.

This dialog does not have the slightest flavor of oddness. The question asks for some action of Paul that causes Mary's anger. The answer to that is his sex with Marianne, encoded in the VP [_{VP} slept with Marianne]. For some reason, B decided to be a bit more explicit and gave the time of the action. The sentence initial position of the temporal adjunct, together with an intonation pattern that puts little weight on it, but more on *Marianne*, indicates that the temporal information encoded in 'the day before yesterday' is a (non contrastive) topic. Thus we have two constituents that are not in focus, but only one of them is delivered by the linguistic context, namely *Paul = he*. The other one, which contains a deictic expression, can still be easily accommodated. Thus, we see that it is not completely conclusive to consider question-answer pairs as a reliable diagnostics for focus projection. Given a question and a felicitous answer, one cannot claim that all the material which is contained in the answer which is missing in the question must be new information and hence in the range of focus projection. So, why this long discussion? (15 f.) claimed that focus projection is possible where accusative precedes dative. However, focus projection was understood there as question-answer felicity. Thus, (15 f.) is regarded as a possible answer to a question 'Was hat er gemacht?' (What did he do?). With the wrong theory about the

focus projection test outlined above, this then leads to the conclusion that every constituent (including the verb), but *er*, must be focus. This, however, is not the case. I shall claim that the accusative argument in this case must be discourse related and focus does not spread over it. I argue that the focus projection capacities of class I verbs are not different from class III verbs. And, therefore, the contrast between (15 b.) and (15 f.) seems to me to be spurious.

2.6. The Strict Word Order Hypothesis

Now, I want to show that there is a clear and more reliable test for showing that dative is ranked higher than accusative (for both class I and class III verbs). As I will show later, material that is being introduced into the discourse frame stays in its base position. Thus we have to examine the order in which new material organizes. Since DPs containing ordinary nouns are not conclusive, we have to look for something else. Ordinary DPs are not conclusive because even indefinite DPs can easily obtain a presuppositional reading. However, with unstressed indefinite articles they are almost perfect indicators of what we are looking for. I think the best way of showing the linear order of arguments is to use indefinite pronouns that cannot or can hardly have a presuppositional reading. Such elements are (unstressed) *jemand*, *niemand*, *etwas*, *nichts*, *einer* (somebody, nobody, something, nothing, a/one) and their phonologically reduced forms *'was*, *'ner*. When one constructs sentences with these pronouns, one sees that verbs of class I behave exactly as verbs of class III in that the dative object must precede the accusative one.

(20) class III

| | | | | | |
|-----------------------------|---|--------------|---|-----|--|
| | [| gezeigt |] | | |
| | | gegeben | | | |
| a. weil er jemandem (et)was | { | empfohlen | } | hat | |
| | | erklärt | | | |
| | [| geschickt... |] | | |

since he somebody_{DAT} something_(ACC) {shown, given, recommended, explained...} has

- | | | | | |
|------------------------------|---|--------------|---|---------------------------------|
| | { | gezeigt | } | |
| | | | | |
| | | gegeben | | |
| b. *weil er (et)was jemandem | { | empfohlen | } | hat |
| | | | | |
| | | erklärt | | |
| | | | | |
| | | geschickt... | } | (reverse order, i.e. ACC > DAT) |

The same is of course the case with class I verbs, which is already predicted by Höhle's theory.

(21) class I

- | | | | | |
|-----------------------------|---|-------------|---|-----|
| | | | | |
| | | abgewöhnt | | |
| | | | | |
| | | verweigert | | |
| a. weil er jemandem (et)was | { | beigebracht | } | hat |
| | | | | |
| | | zugetraut | | |
| | | | | |
| | | verübelt... | } | |

since he somebody_{DAT} something_(ACC) {weaned, denied, tough, blamed...} has

- | | | | | |
|------------------------------|---|-------------|---|---------------------------------|
| | | | | |
| | | abgewöhnt | | |
| | | | | |
| | | verweigert | | |
| b. *weil er (et)was jemandem | { | beigebracht | } | hat |
| | | | | |
| | | zugetraut | | |
| | | | | |
| | | verübelt... | } | (reverse order, i.e. ACC > DAT) |

As mentioned above, (unstressed) indefinite NPs behave similarly. However, things are more complicated here. The order ACC > DAT itself is not ungrammatical, and the unmarked stress always falls on the verb adjacent argument. In this sense (22/23) a. and (22/23) b. are equally good. What distinguishes (22/23) a. from (22/23) b. is that the former may serve for focus projection whereas the latter cannot. However, as I have argued, the focus spreading test is not appropriate. So I propose that (22/23) b. get starred when the intended reading is one where the indefinite objects are introduced into the discourse frame.

- (22) class III
- a. weil er einer Frau eine ROse geschenkt hat
since he a woman_{DAT} a rose_{ACC} given has
 - b. *weil er eine Rose einer FRAU geschenkt hat
- (23) class I
- a. weil er einem Freund ein LIED beigebracht hat
since he a friend_{DAT} a song_{ACC} taught has
 - b. *weil er ein Lied einem FREUND beigebracht hat

I hope to have shown that class I and class III are not different with respect to argument projection and that we therefore should not speak of two different classes.

Let us now turn to class II. If we apply our test to the verbs of this class, we will find out that the base order is ACC > DAT. However, I have to admit that the ordering test with indefinite pronouns does not work very well here.

- (24) class II
- a. weil ich auf der Party niemand(en) jemandem vorgestellt habe
since I at the party nobody_(ACC) somebody_{DAT} presented have
 - b. *^{/?}weil ich auf der Party niemandem jemand(en) vorgestellt habe

Yet, we may have one argument as a full DP. The claim is that the relevant indefinite pronouns must be in their base position. Thus it does no harm if the linearly following argument is a structured DP and the indefinite pronoun precedes it. The data become uncontroversial again.

- (25) a. weil er jemanden einer schweren Prüfung unterzog
since he somebody_{ACC} [a difficult exam]_{DAT} submitted
- b. *weil er einer schweren Prüfung jemanden unterzog
- (26) a. weil sie niemanden einer großen Gefahr aussetzen würde
since she nobody_{ACC} [a big danger]_{DAT} expose would
- b. *weil sie einer großen Gefahr niemanden aussetzen würde

Thus it seems that there are not three classes, but there may at least two: DAT > ACC and ACC > DAT. Nevertheless I would like to maintain the claim that DAT > ACC holds underlyingly. The

ACC > DAT order can be seen as an epiphenomenon similar to what is going on with the so-called ill-behaved experiencer verbs (for a discussion of this story see Grimshaw 1990 and Belletti and Rizzi 1988, Pesetsky 1990 and Meinunger 1995c).

2.7. Some Parallelisms with Experiencer Verb Constructions

Generally, arguments should be projected uniformly (UTAH: Baker (1988)) and according to Grimshaw's hierarchy (8). One class of experiencer verbs - the fear class (or Belletti and Rizzi's *temere* class (1988)) - is well-behaved. That means that the experiencer, located higher in the hierarchy, becomes the subject of the sentence; the theme, located deeper, becomes the object.

(27) Lohengrin fears Elsa's question.

(28) Artemis likes Kayne's theory.

However, there is the class of ill-behaved verbs - the *frighten* class (Belletti and Rizzi's *preoccupare* class)

(29) Alberich frightens the Nibelungs.

Here the experiencer appears as a postverbal object, and the theme occupies the subject position. Grimshaw however presents a way out of the dilemma. Her proposal is that there is not only one scale of hierarchy but more, at least two. She shows that the ill-behaved verbs have something to them which the other class lacks. There is a causative element involved such that (30) can be paraphrased by:

(30) Alberich causes the Nibelungs to experience fear.

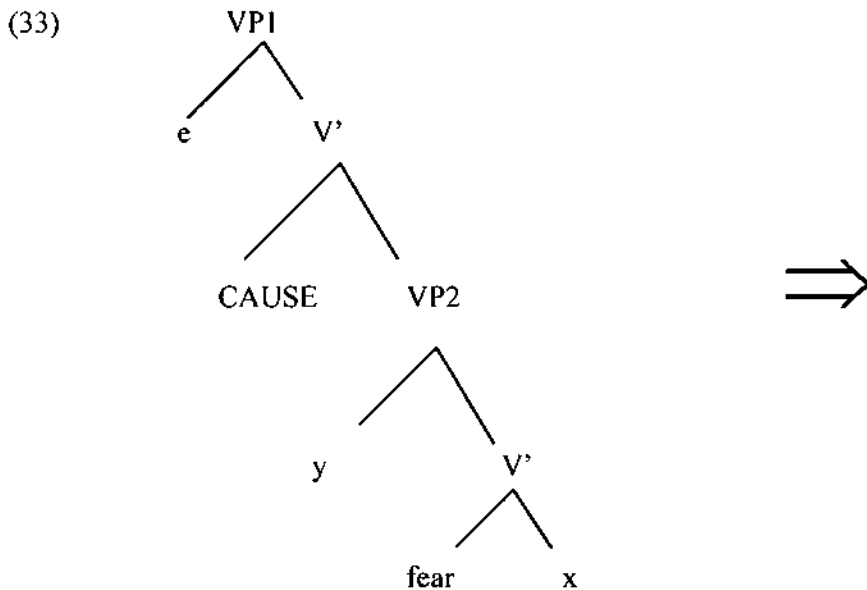
Then she states that the causal structure of a predicate also defines a hierarchy, just as the thematic structure does, a hierarchy in which the cause argument is most prominent:

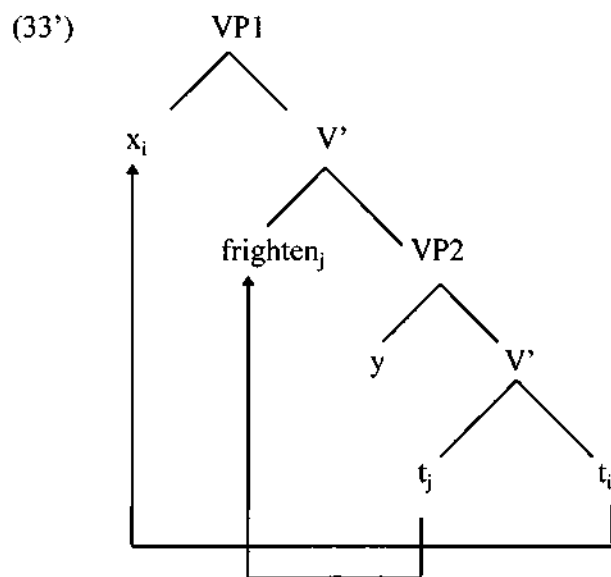
(31) (cause (...))

She claims that the causativity hierarchy overrides the other one(s) and imposes a structure where the causer is the most prominent argument. Another possible, and actually similar way of capturing the difference between the two classes is more along the lines of Pesetsky (1990). In his theory too, *frighten* is not equal in meaning to *fear* with the theta-roles in the reverse order. The difference lies in the additional causative component which the well-behaved class lacks, but the ill-behaved class exhibits. This can be represented in the following representation:

- (32) a. like /fear: $\lambda x \lambda y [x E y]$
 b. please/ frighten: $\lambda x \lambda y [y \text{ CAUSE } [x E y]]$

If this notation, taken from Haider (1992), is translated into a syntactic tree of the kind of (7), we get a specifier position where the agent is licensed in the topmost argument position. Instead of making the lambda prefix unselectively bind two variables, we can handle the difference syntactically by assuming movement (or another position dependency):





Thus, similarly, to ‘GIVE’ = CAUSE + POSS, one might consider ‘FRIGHTEN’ as CAUSE + ‘FEAR’.

2.8. The DAT > ACC > DAT / PP Asymmetry

Now, I would like to claim that this kind of argument (position) manipulation can be fruitfully carried over to the bitransitive verb asymmetry. It has been observed that (in German) there seems to exist a tendency that when the non-theme object of bitransitive verb is +animate or +human, it is realized as a dative object (34 a), (35a). On the other hand, when it is not animate or human, it is likely to be expressed in a directional PP (34 b), (35 b) (see Kaufmann (1993) among others). Another difference that Kaufmann overlooks or intentionally withholds is the fact that in the animate case the dative object appears preferably before the accusative object; in the inanimate case, the PP must appear after the accusative object.

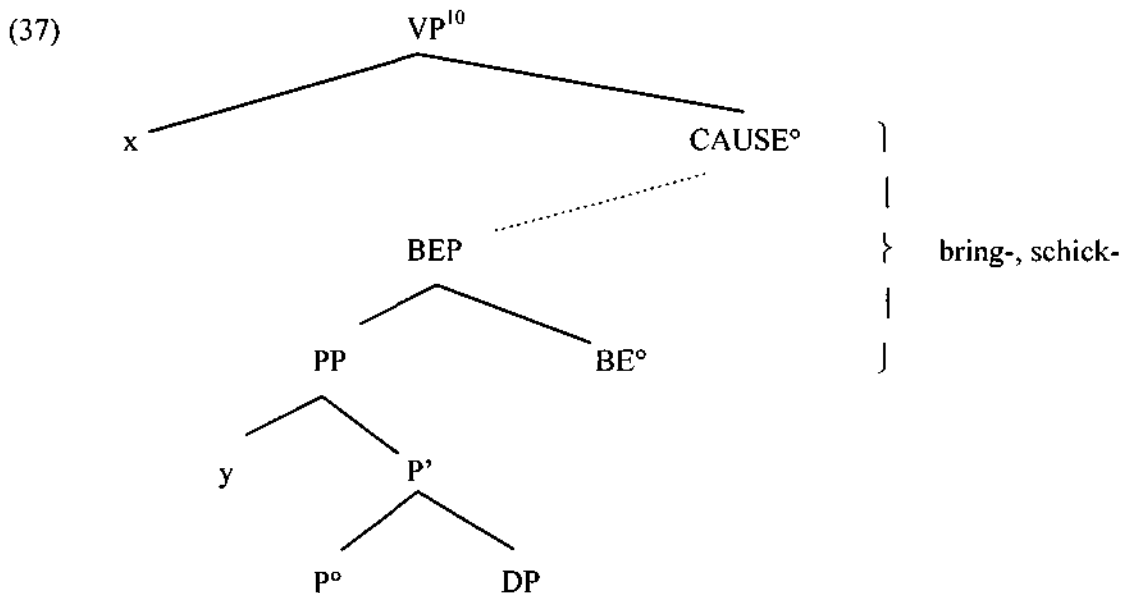
- (34) a. Sie schickte ihrer Tante ein BUCH.
 she sent [her aunt]_{DAT} [a book]_{ACC}
- b. Sie schickte das BUCH an die Bibliothek.
 she sent the book_{ACC} to the library
- (35) a. Sie brachte ihrem Vater einen KUCHen.
 she brought [her father]_{DAT} [a cake]_{ACC}

- b. Sie brachte einen KÜchen ins Büro.
 she brought a cake into+the office

I would like to claim that it is not primarily the interaction of animacy or humanness, but that the difference is mediated through a distinction concerning the interaction of the atomic predicates. In the beginning of this chapter, I assumed POSS(ESSION) to be an atomic predicate. Now, I will argue that it is of great advantage to analyze it as a derived one. Therefore, I have to assume a view of argument structure similar to that found in Speas (1990) and of have-be alternation much like in Kayne (1993a). My claim is that many bitransitive verbs either refer to a relation between a theme and the theme's location, or express a process (or a state) in which the dative argument possesses / comes to possess the theme. I furthermore claim that the former relation (location) is underlying and the latter (possession), which contains more information, is derived. As for the constructions with a locational (secondary) predication, I assume that the lexically decomposed structure looks like:

- (36) [x CAUSE [... BE [y [IN/ AT/ ON z]]]]

Thus for *bringen* (to bring) and *schicken* (to send) with a prepositional complement, we would have a tree structure like in (37).



¹⁰ For the shake of harmony I will assume that in German also the VP internal atomic predicates project head finally. This makes the trees appear somewhat less familiar. Nevertheless I think that this is not an insurmountable problem for the reader.

This is the representation for sentences like (34 b) and (35 b). Now comes Kayne's idea (which goes back to earlier work by traditional grammarians). For him *have* is derived from a preposition which has incorporated into *be*. Transferred into my theory of lexical head decomposition, this means something like the deepest locational P° incorporates into the primitive BE. This process results in the POSSESSION relation. Exactly as with the experiencer verbs, the head movement within the VP triggers the movement of an argument. In our case here, it is the former complement of the preposition which becomes the specifier of POSS. (The overt preposition disappears and a possession relationship comes across. See also Kayne.)¹¹

Semantically, this means that the 'former' locative argument becomes the possessor. Thus, my claim is that the possession relation is not a semantic primitive, but that it is a result of verb phrase internal changes. Thus:

¹¹ Interestingly there is another fact that could be used as additional evidence for the analysis. This fact is the relation between dative Case and possession. It is well known that there is no one-to-one correspondence between morphological Cases on the one hand and thematic roles on the other. However, it is as well known that both are more than only loosely related. At any case, in many languages that have morphological dative, this case is often assigned to the possessor in a process similar to the one discussed here. For example in Hungarian (discussed in Szabolcsi (1981) and re-presented in Kayne (1993)), the possessive construction consists of a copula (BE) and a single DP containing the possessor and the possessee. When the whole DP is definite, the possessor can remain in situ carrying nominative Case, but in other cases it must or can move to the left to some specifier position where it gets assigned dative Case. Something similar also happens in my non-standard German. A DP expressing some possessive relation may come in two variants:

(i) *der Garten von der Ingrid* having the structure [DP D° [NP N° [PP P° POSSESSOR]]]
 the garden of the Ingrid

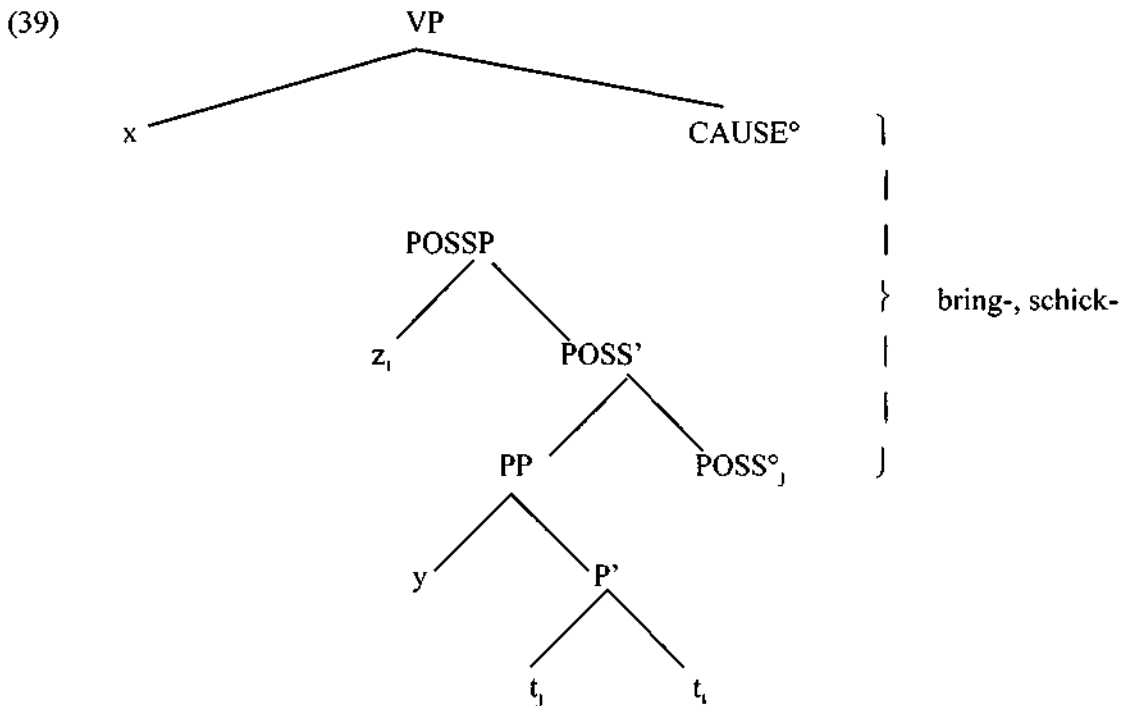
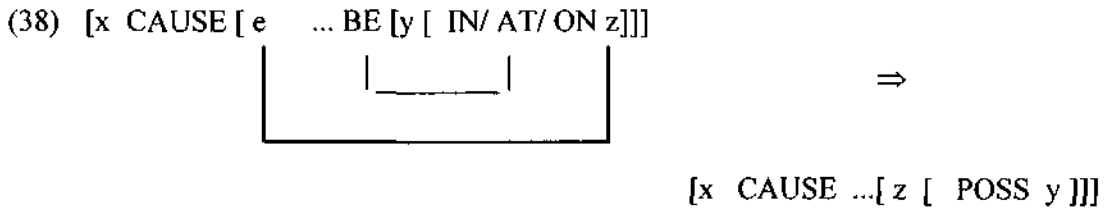
(i) somehow corresponds to the base variant in (36) involving a PP. The other, more natural, variant is (ii) where the possessor has been moved to some specifier position where it appears in dative Case. The D° element shows agreement with the phrase in the specifier position with respect to gender. Here, the dative's function is to mark the possession relation:

(ii) *meiner Mutter ihr Garten* having the structure [DP POSSESSOR_{DAT} [D° [NP N° t]]]
 my_{DAT} mother her garden

Also sentences that refer to possession relations make use of dative Case as possessor marker. In my variety of German, it is very common to express possession by a copula (BE) with two satellite DPs (I don't want to call them arguments). If the possessee is definite, it is likely to appear in nominative case. The possessor then carries dative Case:

(iii) *Dieser Garten ist meiner Mutter.*
 this garden_{NOM} is my mother_{DAT}

Thus, the link of POSS and a dative DP in its specifier seems to be motivated by an akin, but different construction across languages. (again see Kayne (1993a) and Benveniste (1966))



This analysis is corroborated by the following facts. The alluded tendency to dativize a +animate /+human DP is only an epiphenomenon. There is nothing strange about having an +animate/+human DP within a PP construction.

(40) weil ich ein BUCH zu meinem Vater gebracht habe
 since I a book to my father brought have

(41) weil ich das FAHRrad zu meiner Tante geschickt hatte
 since I the bicycle to my aunt sent had

However, the meaning is different from the corresponding DAT > ACC construction. (40) and (41) do not tell us anything about possession. (40), for example, expresses that I brought some book to my father's residence. My father needn't even know of the book. In (41), there is not the slightest hint that the aunt becomes the possessor. On the other hand, the corresponding DAT > ACC constructions make a POSS reading much more likely.

- (42) weil ich meinem Vater ein BUCH gebracht habe
since I my father a book brought have
- (43) weil ich meiner Tante das FAHRrad geschickt habe
since I my aunt the bicycle sent have

(42) strongly suggests that now my father owns the book. However, my claim is not that POSS necessarily expresses ownership. It merely means that someone is in the (perhaps temporary) possession of something. For example, (43) does not necessarily mean that the ownership of the bicycle changes from mine or someone else's to my aunt's. However, the sentence says that my aunt is somehow in conscious possession of the bike. This is not the case with the PP construction in (41). That sentence might describe a situation where I have sent a / my bike to my aunt's address in Paris. However, for the time being my aunt doesn't live there and I know that. The only reason for my sending action was that I want to go to Paris and did not want to take the bike with me in the train. Since I don't trust left-luggage offices, I wanted to pick up my bike at my aunt's place rather than at the station. In such a case, my aunt need not know anything about that. (43) cannot be used to describe such a situation.

This theory is also partly corroborated by the fact that the DAT > ACC vs. ACC > PP alternation is not freely allowed. It is not the case that to every DAT > ACC order there is a corresponding ACC > PP order. This possibility seems to me to be limited to the case with verbs where the non-accusative object can receive a locative reading. For verbs, where this is not possible, the ACC > PP construction sounds awkward.

| | | | |
|---|--------------|---|--------------------|
| | {gezeigt | } | |
| | empfohlen | | |
| (44a) ^{ok} weil ich es meiner Mutter | {erklärt | } | habe ¹² |
| | zugetraut | | |
| | {verübelt... | } | |

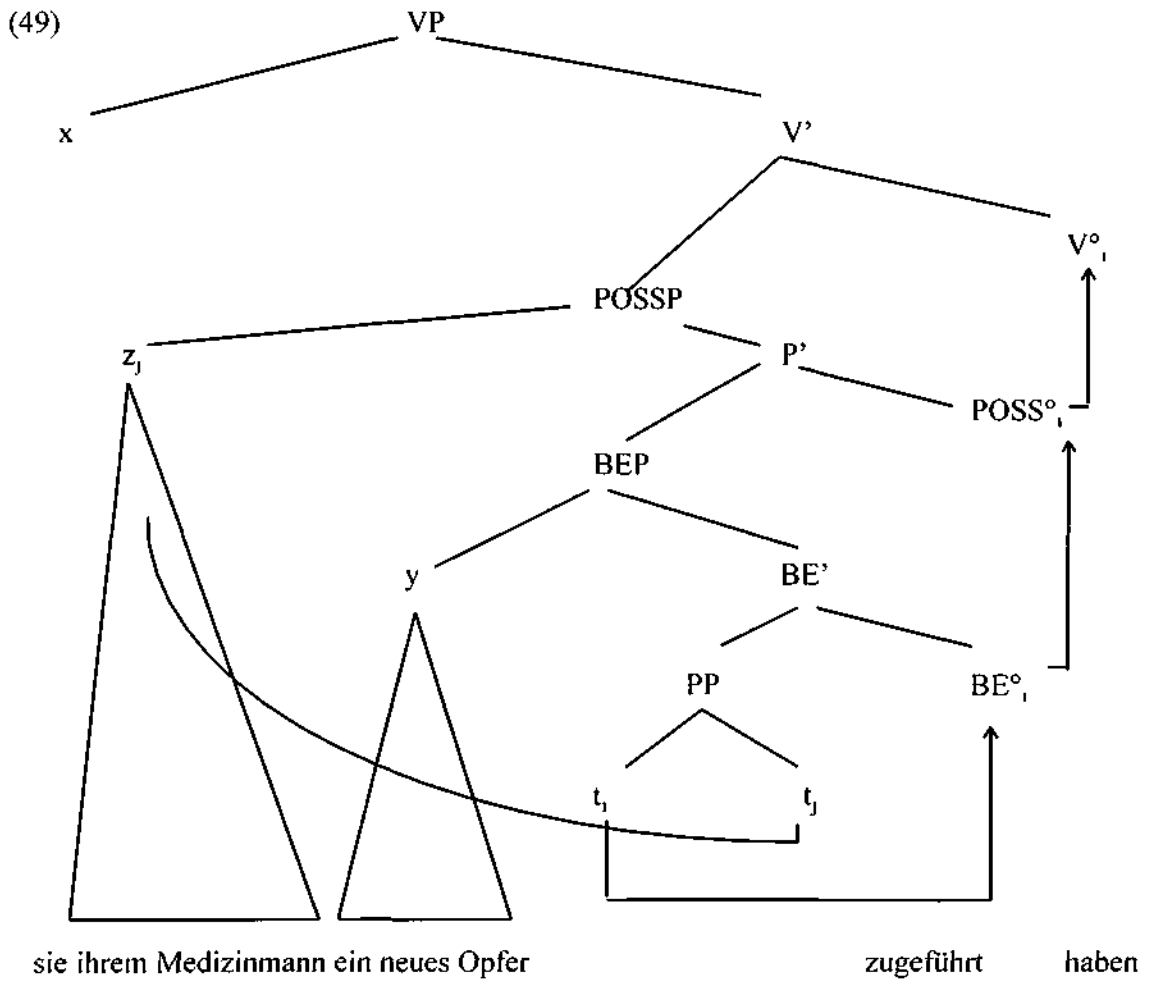
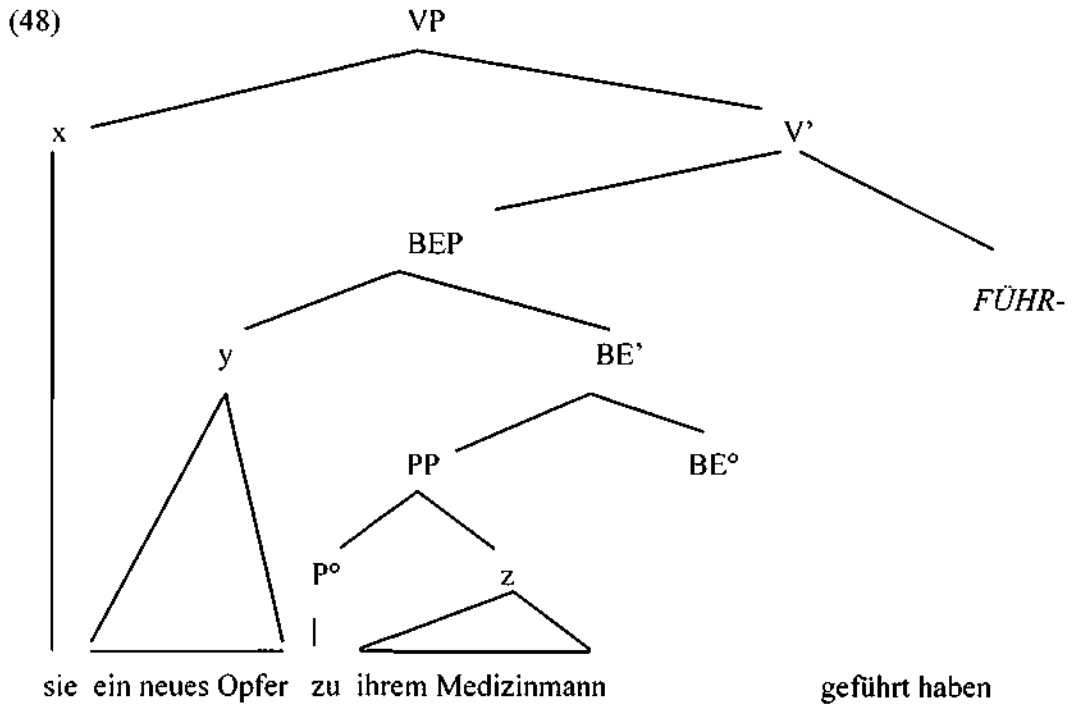
‘since I showed, recomanded, explained...it to my mother’

| | | | |
|---|--------------|---|------|
| | {gezeigt | } | |
| | empfohlen | | |
| (44b) *weil ich es <u>an</u> meine Mutter / <u>zu</u> meiner Mutter | {erklärt | } | habe |
| | zugetraut | | |
| | {verübelt... | } | |

Now the reader might wonder why I have spent so much effort on the DAT > ACC vs. ACC > PP alternation. The answer lies in the DAT > ACC vs. ACC > DAT problem which was alluded to above, but for which a solution has still not yet been given. The following discussion revives this problem.

Above, I have shown that there is no DAT > ACC vs. DAT > ACC & ACC > DAT distinction, i.e. class I and class III collapse. The long discussion about the DAT > ACC vs. ACC > PP distinction was intended to prepare for the next verb class collapse; namely, I shall claim that the ‘ill-behaved’ class II verbs are ‘hidden ACC > PP verbs. To put it in other words, the dative argument of ACC > DAT verbs (class II) is actually (the remnant of) a PP. The argumentation will not be very semantic. The only thing I want to mention is that also Müller (1993, p. 204, fn.3) admits that the dative arguments of verb II class verbs do not act as goals. I want to go further and say that the datives denote something local. Let us consider the verbs of class II. Haider (1992) gives the following examples:

¹² Now, my argumentation could be used against me. What I did was dealing with the opposition possession vs. location. Now, I am using the lack of a locational reading with the given verbs as an argument for the lack of the ACC > PP construction. So far, so good. However, if the matters were that simple, my narrow minded opposition predicts that with the given verbs, we only get a reading where POSS plays a role. This, however, is not the case. Here we do not get any (sub)relation which could be identified as POSSESSION. Thus, what I have to say is that my theory of location to possession change does not explain every DAT > ACC ordering. This, however, has never been my claim. What I claim is only that it covers a considerable part.



2.9. Short Summary

If all the ideas collected, composed and developed above are combined, we arrive at a not very complicated picture. The base structure of the German verb looks then:

(50) [_{VP} SU [IO [DO [PP verb]v]v]v]

This is the lexical projection which is a sort of input to further operations. As hinted at above, the lexical projection is the complement of a functional projection which itself is again the complement of some other functional projection. The next chapter will be dealing with some phenomena that trigger changes in word order with respect to the base order which is represented in (50).

Chapter 3

A Trigger for Scrambling

3.1. Scrambling and Scrambling Theories

Now I will come to what I called ‘further operations’ in the preceding chapter. As I have said, in principle any constituent -argument or adjunct- may appear in any position in the middle field.

- (1) a. daß die Frau der Nachbarin gestern den Hund gegeben hat
that the woman_{NOM} the neighbor_{femDAT} yesterday the dog_{ACC} given has
- b. daß die Frau der Nachbarin den Hund gestern gegeben hat
- c. daß die Frau den Hund gestern der Nachbarin gegeben hat
- d. daß der Nachbarin den Hund gestern die Frau gegeben hat
- e. daß die Frau gestern der Nachbarin den Hund gegeben hat
- f. daß gestern die Frau der Nachbarin den Hund gegeben hat
- g. daß der Nachbarin die Frau gestern den Hund gegeben hat
- h. daß der Nachbarin gestern die Frau den Hund gegeben hat
- i. daß gestern der Nachbarin die Frau den Hund gegeben hat
- j. daß die Frau den Hund der Nachbarin gestern gegeben hat
- k. daß der Nachbarin die Frau den Hund gestern gegeben hat
- l. daß der Nachbarin den Hund die Frau gestern gegeben hat
- m. daß den Hund die Frau der Nachbarin gestern gegeben hat
- n. daß den Hund der Nachbarin die Frau gestern gegeben hat
- o. daß die Frau gestern den Hund der Nachbarin gegeben hat
- p. daß den Hund die Frau gestern der Nachbarin gegeben hat
- q. daß den Hund gestern die Frau der Nachbarin gegeben hat

- r. daß gestern die Frau den Hund der Nachbarin gegeben hat
- s. daß gestern den Hund die Frau der Nachbarin gegeben hat
- t. daß der Nachbarin gestern den Hund die Frau gegeben hat
- u. daß den Hund gestern der Nachbarin die Frau gegeben hat
- v. daß gestern der Nachbarin den Hund die Frau gegeben hat
- w. daß gestern den Hund der Nachbarin die Frau gegeben hat
- x. daß den Hund der Nachbarin gestern die Frau gegeben hat

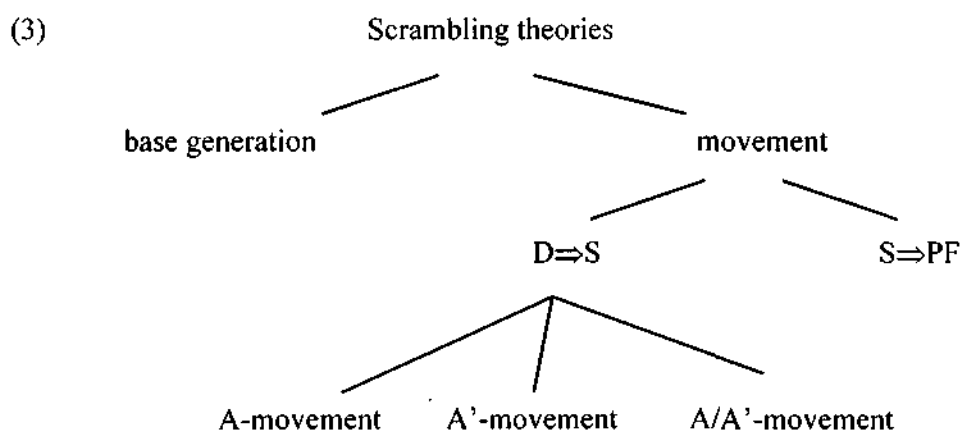
In (1) I gave all possible permutations of constituents that are possible in a subordinate sentence with a verb that takes three arguments and an adjunct. The paradigm illustrates the potential freedom. However, not always is it possible to arrange the constituents like that. And also, although the examples are all grammatical, some sound more acceptable than others. If one considers them out of a context, one might speak of a decreasing acceptability scale with example a. the most natural one, and x. the most bizarre one. However, I shall argue that one should not consider these sentences with the eye of a natural morpho-syntactician with a scale of markedness in mind. I will claim that every sentence has a linguistic and a non-linguistic context, and that according to that context the relevant sentence may sound appropriate. Another factor is the fact that (ordinary) writing cannot convey the intonational shape of the sentence. In (1) I gave a paradigm where the relevant constituents are all definite. In other examples, where there are indefinite expressions involved, and if intonation is encoded, we see already that moving constituents around can result in unacceptable structures.

- (2) a. weil der Chefdirigent niemals jemanden lobt
since the director never somebody praises
'since the never praises anybody'
- b. *weil jemanden niemals der Chefdirigent lobt¹

In this chapter I will shed some light on what is going on when the order of constituents in a sentence is different from the base order, which is lexically determined (chapter 2). This issue has been a central question in syntactic theory for a long time. A technical term for the derivation of a linearization of constituents which is different from the base order is 'scrambling'. Scrambling as

¹ If we were dealing with a direct object different from *jemanden*, we would have to make sure that it does not bear contrastive stress. Under the right intonational pattern, an indefinite DP could produce a grammatical output. However, elements like *jemand* cannot be stressed, and hence cannot save a sentence like (2b).

a linguistic term originates from Ross' dissertation (1967) where he proposed a universal scrambling rule to account for the derivation of different constituent linearizations. However, not every process that takes a constituent from its base position and moves it to some other place in the syntactic tree is called scrambling. For example, the movement of a *wh*-constituent to the sentence initial position is not referred to as scrambling, neither is the movement of some arbitrary constituent to the position immediately preceding the finite verb in German and other Germanic languages. These movement types are clear cases of A'-movement. Another instance of non-scrambling is the movement of an underlying object to the subject position (passive in English, subjects of unaccusative verbs) or the raising of a noun phrase into the subject position of a verb like to *seem*, *scheinen*, or an epistemic modal. These movement types are referred to as A-movement. Although, both types of movement have in common that they put a constituent into a position which is different from the one where it has been base generated, there are a lot of differences between A- and A'- movement. Since A- and A' movement are the classical movement operations, they did not really tolerate other movement types next to them. And hence, the derivation of the different word orders in the German middle field had to be either an instance of A- or A'-movement. In the literature one can find argumentations for both approaches to scrambling in German and in general. Hard-core proponents for an A'-approach to scrambling in German are Weibelhut (1984/85, 1989) and Müller (1993). Fanselow (1990), Moltmann (1991), de Hoop (1992) and others argue for an A-movement analysis. However, it was realized very quickly that things are more complicated since scrambling did not fit into either classification without problems. So that lately there are proposals on the market that scrambled phrases may act as A and A' binders simultaneously (Weibelhut 1992, Rosengren 1994). In order to avoid a classification at all it has also been proposed that scrambling does not belong to the core of grammar. Williams (1984) characterizes it as a stylistic rule and localizes it at some very marginal place between s-structure and PF. Other researchers argue against a movement analysis at all. For them, all occurring linearizations can be base-generated, leaving neither space, nor need for movement operations. That free constituent order is a base-structure phenomenon is argued for by Haider (1990 for example) and recently in a series of publications by Fanselow (1992, 1995). In the latter, which was a talk given at a conference in February this year, Fanselow even introduces the term 'anti-scrambling'. Thus the picture that emerges can be illustrated by a tree diagram, taken from Grewendorf and Sternefeld (1990, p.7) and slightly completed:



At first glance it looks as if only one of the devices can be the correct one. However, I will argue that not all rearrangement operations of constituents belong to the same movement type. Hence, the linearization process is not the result of a single sort of movement, and that each of the proposals is correct to some extent. Thus, if scrambling is understood as the generator of the possible linearizations it should not be analyzed as the instantiation of one single type of movement. Nevertheless, my claim will be that most movement operations that affect the base order and derive word order variations in the middle field are instantiations of A-movement.

3.2. A Survey of the Semantic Impact of Scrambling - Positions and Corresponding Interpretations

The type of movement, I will mainly be concerned with is illustrated in the examples (4) to (7). In the preceding chapter I have argued that all (verbal) arguments and only arguments are base generated inside the VP. This implies that material which is not subcategorized by the verbal head cannot be located within the VP (for a different, but not incompatible view see chapter 4, section 4.5.3.4.). Thus, adjuncts, particles and other non-argumental elements can be used as a good structural indicator for whether movement of one of the arguments has taken place or not. For the moment I will not be concerned with what the position of these non-argumental material is. It also seems that every linguist that uses the position test favors a different element which most likely is

of a different status and hence should occupy a different position². However, what matters is the relative position towards the shifted argument.

- (4) weil wahrscheinlich niemand gearbeitet hat
 since probably nobody worked has
- (5) weil der Chef wahrscheinlich noch gearbeitet hat
 since the boss probably still worked has
- (6) weil wir oft ein Lied singen mußten
 since we often a song sing must
- (7) weil wir ein Lied oft singen mußten
 since we a song often sing must

In (4) and (6), the arguments are most likely in their base position, which is [Spec,VP] and the sister to V^o, respectively. In (5) and (7), the arguments have been moved away from their base position. I will claim that in (5) the subject has moved to [Spec,AgrS], and that in (7) the object has moved to [Spec,AgrO]. (It has been proposed that [Spec,Agr] positions are A-positions where the Case of the arguments is checked (chapter 4, section 4.2. and Chomsky (1992)).)

It has been known for a long time that the different positions trigger different interpretations. Take the sentences in (6) and (7), for example. In (6) *ein Lied* gets a non-referential interpretation. Here, ‘non-referential’ is used in the sense of my Console paper from 1992, i.e. *ein Lied* does not refer to a specific song. The sentence merely says that often we were forced to be singing (one song or another). This sentence can hardly be followed by a sentence like ‘Wir haben das Lied gehaßt’ (We detested the song) where the definite DP is supposed to refer to the discourse referent introduced by *ein Lied* in (6), which is in the scope of a propositional adverbial. On the other hand, (7) has different interpretations. The most salient interpretation of (7) is that there is a specific song which we had to sing over and over again. Under this reading, the song may be picked up by a definite DP without any problems. Another possible interpretation of the string in

² For example, Diesing makes intensive use of the particle *ja doch*. This seems to me to be a bad choice since the intuitions with this element are rather shaky. Even Diesing herself must admit the position of *ja doch* is not completely fix and then starts to move the particle around. The Dutch linguists (de Hoop (1992), Neeleman (1994)) often use the temporal adverbial *gisteren* (= yesterday). This seems to me to be a better candidate. Still, there are some difficulties. If we take an approach to argument structure as developed by Kratzer (1989), *gisteren* could be considered an instantiation of the Davidsonian argument, and hence would belong to the verb’s argument frame. Since I want an indicator which should clearly be a VP external element, I do not choose *gestern* or another temporal adverbial. In Meinunger (1992) I used the negative element *nicht* (= not). Later I will show that the syntax raises problems with that option, too. I therefore will mainly use adverbs that act as operators such as quantificational *oft* (= often) or modal *wahrscheinlich* (= presumably, probably).

(7) is that there is a list of songs and one out of the list used to belong to our obligatory, constant repertoire. Also under this reading, it is very normal to pick up the song as a definite description in a following utterance.

In the following subsection I want to give a detailed and almost exhaustive description of DPs, their distribution and the corresponding readings.

The noun phrases I want to consider are first indefinite DPs, specifically noun phrases introduced by a singular indefinite article, bare plurals, singular mass nouns, and indefinite pronouns; secondly noun phrases with weak determiners; thirdly, definite full NPs and definite pronouns and last QPs, i.e. noun phrases introduced by a strong quantifier. In the following examples I will try to illustrate the pattern with direct objects. As I will show later, the picture that emerges is completely parallel with subjects and indirect objects.

3.2.1. Indefinites

- indefinite singular NPs

- (8) weil sie bestimmt schonmal eine Sinfonie gehört hat
since she surely already a symphony heard has

The reading of *eine Sinfonie* here is purely indefinite existential. Contrary to de Hoop (1992) I deny that simple unscrambled indefinite object are completely ambiguous between a weak and a strong reading. As I will show later, it is not impossible for an unscrambled indefinite to get a strong interpretation. This, however, is a marked option and requires special circumstances. If the indefinite is scrambled, the weak existential reading disappears.

- (9) weil sie eine Sinfonie bestimmt schonmal gehört hat

Here I agree with de Hoop and others who claim that indefinites with a weak interpretation cannot undergo scrambling. (9) is ambiguous nevertheless. Under one interpretation, the speaker wants to convey the information that (s)he knows about some symphony for which it is very likely that the other one has listened to it at some time. Under this reading, the speaker normally has a specific symphony in mind that (s)he could probably name it, let's say Beethoven's Ninth. Together with

de Hoop I want to call this reading the referential interpretation. The other reading (9) can have is somewhat less obvious. Under this interpretation which I shall call the partitive one, the sentence describes a situation where the speaker presupposes a set of symphonies out of which one is likely to be known by the subject of (9). One could argue that the two interpretations are not different from each other, but there are reasons to believe that they are not the same. Whereas under the referential reading, there must be a specific referent which should be known to the speaker, this need not be the case with the partitive interpretation. Thus, the latter only states that there must be such a symphony, no matter which one. This reading becomes clear when the indefinite is preceded by an element like *mindestens* (at least).

- (9') weil sie mindestens eine Sinfonie bestimmt schonmal gehört hat
 since she surely at least one symphony already heard has

There is yet another interpretation of scrambled indefinites. Since this reading is very hard to get with (9), I give another example here.

- (10) weil der Boss einen Familienvater wahrscheinlich nicht entläßt
 since the boss a familyfather probably not fires

The most natural interpretation for the indefinite in (10) is the reading where *einen Familienvater* is interpreted as generic. The meaning of the sentence can then be paraphrased with: if someone has to care for a family, the boss will probably not fire him. Here, the indefinite need not refer to a concrete person. Carlson (1977) proposes that generics refer to kinds, thus the sort of reference is more abstract.

So far, we have seen four different interpretations of indefinites. The weak existential reading is triggered in the base position. Outside the VP boundary, the indefinite DP can get a referential, a partitive or a generic reading³. In (9) to (10) I gave examples and discussed their most likely interpretation. However, the other readings are also obtainable, thus in (10) *einen Familienvater* can also be interpreted referentially or partitively. In German, this ambiguity is resolved by the intonational shape of the indefinite DP. The referential or partitive reading is triggered by stressing the indefinite article. Thus,

³ De Hoop (1992) also talks about a generic collective reading. It is not clear whether this reading should really be kept apart from the ordinary generic reading. Since this so-called generic collective reading is only possible with cardinal and other weak quantifiers different from the indefinite article is not of much interest here anyway.

(10') weil der Boss EInen Familienvater wahrscheinlich nicht entläßt⁴

triggers a reading where the object gets a specific (referential or partitive) interpretation. Under this intonational pattern the generic interpretation described above for (10) cannot arise. However, the correlation that a stressed indefinite determiner signals referential or partitive interpretation cannot be generalized to partitive or referential interpretation is only triggered when the determiner is stressed. There are cases where within the indefinite noun phrase the head noun is accented and a partitive interpretation arises nevertheless. Such a situation is given when a set (*junge Leute* (young people)) of individuals has been introduced into the preceding discourse and in the relevant sentence the head noun of indefinite DP refers to a subset (*Mädchen* (girls)) of the previously introduced (super) set.

(11) Vor dem Kino standen viele junge Leute.

in front the cinema stood many young people

(In front of the cinema there were many young people standing around.)

Ich sah,

I realized

wie der Türsteher ein MÄDchen immer wieder zurückschickte

how the door guard a girl ever again back sent

(that the door guard kept sending back a girl)

Given the context, the girl which has been scrambled over the quantificational adverbial must be understood as belonging to the group of young people. In this respect it is interpreted partitively, and still the head noun can be stressed. (Stressing the determiner is also possible and the interpretation is partitive. There is a slight difference, however. Under this option it must be the case then that there are more than one girl in the group and it is very likely that for them it is the case that they were not being sent back. This need not be the case for the stress pattern in (11)).

For the generic reading the article must be unaccented and the head noun gets stressed:

⁴ The use of capital letters as indicator for stress is not meant to be exhaustive, i.e. for (10') I do not claim that the capitalized syllables are the only ones that carry a pitch accent. For these constructions to be grammatical, there must be at least one more syllable in the sentence that carries a pitch accent as well. I will come back shortly to this issue later.

(12) weil der Boss einen FaMilienvater wahrscheinlich nicht entläßt.

The interpretation is

(12') Generally_x [father (x)] [it is probably not the case that the boss fires x]⁵

No other stress pattern is possible.

Let us now pass over to

- bare plurals.

Bare plurals are plural indefinites. Like English and unlike languages like French, German does not have overt plural indefinite articles. Subject bare plurals in German are described in detail in Diesing (1992). Here I only want to briefly represent the data and illustrate them with objects. As Diesing (1992, p. 107) observes: 'In the case of the VP-internal or unscrambled order, the most neutral interpretation of the indefinite object is the existential closure interpretation.'

(13) daß Stefan immer Bücher über Insekten liest
that Stefan always books about insects reads
'that Stefan always reads book about insects'

The semantic representation is:

(14) always_t [t is a time] $\exists x$ [x = a book about insects & Stefan reads x at t]

In the scrambled version, the reading is different. The bare plural must be interpreted as generic.

(15) daß Stefan Bücher über Insekten immer liest

The corresponding semantic representation is:

⁵ An additional interpretation would be *wahrscheinlich* (probably) having wider scope than in the formula in (12'). This is immaterial here, however.

(16) $\text{always}_{t,x}$ [t is a time & book about insects (x)] [Stefan reads x at t]

Diesing underlines this contrast with examples where the meanings of the verb strongly favors only one interpretation. Thus, she claims that verbs of creation do not allow for object scrambling because their semantics is such that the object is being created by the action which is described by the relevant verb (verbs of creation: *write, build, draw*). As a consequence, the existence of the object cannot be presupposed, and hence must be asserted. Assertion of existence is done by existential closure which according to the Mapping Hypothesis is within the VP (chapter 1, section 1.4.3.1.). Hence the contrast between (17) and (18)⁶.

(17) weil Brigitta immer Artikel über Scrambling schreibt

since Brigitta always articles about scrambling writes

(18) *weil Brigitta Artikel über Scrambling immer schreibt

The opposite case occurs with experiencer verbs. In Kratzer's theory of stage- and individual level predicates (1989), the former are distinct from the latter by having an additional spatio-temporal argument. Experiencer verbs must be analyzed as lacking this argument. Now the argumentation goes as follows. According to Milsark's (1974) prohibition on vacuous quantification, a quantificational element must always be associated with something that it quantifies over. Thus, in a sentence with a transitive experiencer verb and a quantificational adverb where the subject cannot be quantified over, one expects that an indefinite object must scramble. The reason is that there is no other element that could serve a target of the quantification, there is no (silent) spatio-temporal argument available. As a consequence, in such sentences accusative objects must be scrambled.

⁶ However, the unavailability of object scrambling with verbs of creation is only a half truth. If a manner adverbial is used to modify the verb, the verb loses its need of an object which must be being created.

(18') weil Brigitta Artikel über Scrambling immer in aller Eile schreibt.
since Brigitta articles about scrambling always in all hurry writes

Then the scrambled object gets a generic interpretation just as normal objects of verbs of using how Diesing calls the other class of transitive verbs. See also de Hoop's (1992) chapters 3.1.4 and 3.1.5.

- (19) weil ich eine Wagneroper immer mag
since I a Wagneropera always like
'since I always like a Wagner opera'
- (20) *weil ich immer eine Wagneroper mag

The only interpretation of the object (in the grammatical sentence) is a generic one.

- singular mass nouns

The next class is very similar to bare plurals: singular mass nouns. In almost every case, bare mass nouns stay in the base position.

- (21) a. weil er niemals Butter nimmt
because he never butter takes
b. weil sie immer Staub wischt
since she always wipes dust
'since she always does the dust'

Some researchers argue for an incorporation analysis in all cases of mass noun - verb adjacency. Although (21 b.) is a good candidate for an incorporation structure, I will deny that incorporation is an inevitable fate of verb adjacent mass nouns.

Scrambling with verbs that make it hard to get a reasonable alternative to satisfy de Hoops and de Swarts principle of contrastiveness (de Hoop and de Swart 1990) sounds odd. *to take* from (21 a) is such a 'poor verb'. And also *Staub wischen* is a unit where the verb leaves little space for contrastiveness.

- (22) a. ^{???}*weil er Butter immer nimmt
b. ^{???}*weil er Staub immer wischt

Yet, there are case where scrambling sounds quite acceptable to me.

- (23) weil er Tee schon immer gerne getrunken hat
since he tea already always gladly drunk has
'since he has always liked to drink tea'
- (24) weil er Staub immer auf seine Bestandteile untersucht
since he dust always of its components examines
'since he always analyses dust concerning its components'

Like bare plurals, scrambled mass nouns must then be interpreted generically.

Another subclass of singular determinerless nouns is found with verbs that are almost completely deprived of any own semantic content. Such examples are: *Hunger haben*, literally hunger have = 'be hungry'; *Freude haben* = have fun; *Feuer geben*, lit. fire give = 'have a light for someone', or 'to attack someone'; *Spaß machen*, lit. fun make = 'to be joking/kidding'; etc.

These verbs do not allow for their arguments to scramble.

- (25) *weil er Hunger immer hat
(26) *weil er Feuer wahrscheinlich gibt
(27) *weil er Spaß manchmal macht

- indefinite pronouns

The last class of indefinites I want to consider are the indefinite pronouns: *jemand* (someone/somebody), *niemand* (nobody), *einer* ((some)one), *keiner* (none), *etwas* (something), *nichts* (nothing). All of them are good in the base position:

- (28) a. weil ich wahrscheinlich jemanden treffen werde
b. weil ich wahrscheinlich niemanden treffen werde
c. weil ich wahrscheinlich einen bekomme
d. weil ich wahrscheinlich keinen bekomme
e. weil ich wahrscheinlich etwas essen werde
f. weil ich wahrscheinlich nichts essen werde

In all the examples an existential reading is possible. Under this reading the indefinites are all within the scope of *wahrscheinlich*, and in the cases with an implicit negation the existential operator has narrower scope than the negation. However, a - d also seem to allow for a wide scope interpretation. By wide scope I mean that in a., for example, *jemand* can refer to a specific individual and thus not be affected by the propositional adverb. Yet, it is not clear whether we are dealing here with a true case of specificity. If one embeds the sentence under the classical specificity test structure, the intuitions seem to disallow for a wide scope reading:

- (29) Peter bestreitet die Behauptung, daß Hans (wahrscheinlich) jemanden umgebracht hat
 Peter denies the claim that Hans (probably) somebody killed has

Here, *jemand* can hardly be forced to refer to a specific individual. Example (29) merely says that Peter denies the claim that Hans is probably a murderer. Thus, it could be argued that indefinite pronouns are never specific. This would be a strong claim which may account for the following observation⁷. Scrambling of the pronouns leads to ungrammaticality in most cases.

- (30) a'. *weil ich jemanden wahrscheinlich treffen werde
 b'. *weil ich niemanden wahrscheinlich treffen werde
 d'. *weil ich keinen wahrscheinlich bekomme
 e'. *weil ich etwas wahrscheinlich essen werde
 f'. *weil ich nichts wahrscheinlich essen werde

Scrambling of *einen* gives a grammatical result. In this case the pronoun must be stressed and some other element after it as well (bridge accent).

- (31) weil ich EInen wahrscheinlich beKOMme.

This string gets an interpretation where *EInen* has a partitive reading, thus it means that one out of a larger set I will get. Maybe, the referential interpretation is possible too. In any case, (31) excludes the purely existential interpretation.

⁷ If one would want to maintain this claim, one is in need of explaining the fact that *jemand* in (29 a) seems to be able to be interpreted specifically. One explanation could be that the wide-scope interpretation is a special case of the narrow-scope reading, namely when all the non-referential variable assignments happen to go to one unique element (see Reinhart (1982)). However, although the idea seems appealing, I am not claiming that indefinite pronouns like *jemand* can only be interpreted existentially.

3.2.2. Weak Noun Phrases

Weakly quantified noun phrases constitute the next class I want to consider here. Many linguists would not distinguish them from indefinites, and indeed there is no real semantic difference between them. If weakness is understood in the sense of Milsark (1974), indefinites are just one example. These weak noun phrases are defined as those which are allowed to occur within there-be sentences. And as one can see immediately, in this respect indefinites and weak noun phrases pattern the same:

- (32) There is { a boy }
 | somebody |
 are { several } girls in the park.
 | four men |
 | many women |
 | no elephants }

Strongly quantified expressions are not good within the scope of there.

- (33) * There is { everybody }
 | each man |
 are { most pigs } in the yard.
 | all teachers |
 | both sisters }

(For the semantic differences between weak and strong quantifiers see the discussion in de Hoop (1992) chapter 1 and the references quoted therein, also chapter 1 of this dissertation.)

The reason why I am distinguishing indefinites from weak quantifiers here is rather methodologically motivated than semantically. One reason is that indefinites are not marked as such in many languages. There are languages that (morpho-syntactically) do not distinguish between definite and indefinite DPs. (This is even true for the majority of the languages in this world). We also saw that there is no indefiniteness element for German and English plurals. However, on the other hand all languages use quantifying expressions such as *many, few, three*

and so on. The second difference is that simple indefinites have a reading which weak quantifiers lack, namely the generic one (putting de Hoop's examples of generic collectives aside). Also the referential reading is much harder to get, though it is not excluded.

Let us now come to the facts.

The most prominent reading on unscrambled weakly quantified noun phrases is the existential interpretation. At least in the case of German, I want to deny the full ambiguity of unscrambled weak DPs concerning the interpretation as existential or partitive which is claimed by de Hoop for Dutch.

- (34) weil sie immer vier Kühe besamen
 since they immer four cows inseminate

(34), according to my own and some informants' intuitions, cannot have a partitive reading, unless there is a bridge accent with one accent on the object and the other one on the verb. Thus, *vier Kühe*, may be interpreted partitively only under the stress pattern in (35) or (36).

- (35) weil sie immer VIER Kühe beSAmen(, der Rest wird vom Bullen direkt besprungen)
 (... the other ones are covered by the bull directly)
- (36) weil sie immer vier KÜhe beSAmen(, die Schafe und Ziegen werden...)⁸
 (...the sheep and goats are...)

Later I will argue that if a transitive verb carries a pitch accent, the direct object must have been scrambled. Thus, I will argue that if a partitive reading is forced, scrambling must have taken place. As a consequence, in (35) the object is not in its base position anymore. The fact that it does not occur before the quantificational adverb is due to scope reasons. There are also preadverbial variants.

- (37) weil sie VIER Kühe immer beSAmen.
 (38) weil sie VIER Kühe IMmer besamen.

⁸ However, for (36) to sound appropriate, we need a very farfetched situative context.

The contrast between (37) and (38) on the one hand, and (35) on the other is that in the former *VIER Kühe* have wide scope with respect to *immer*, in the latter this is not the case. The interpretational difference thus lies in the fact that in (37) and (38), it is always the same four cows out of a set of more that are always inseminated. In (35) some four non-specific cows out of a larger set are inseminated. In other words, the cows in (35), though partitive in the sense that they belong to a group of cows that contain more than four members, are not specific since for each time the insemination can be done to different groups consisting of four cows. This means that I would analyze de Hoop's cases of partitive reading in situ as string vacuous scrambling. Now, let us pass over to definites.

3.2.3. Definites

- full definite DPs

One of the most influential treatises on definiteness was and still is Heim's dissertation from 1982. There she develops her theory of File Change Semantics. One of the most famous constitutional parts of it is the Novelty-Familiarity-Condition (NFC). The NFC (Heim 1982, p. 370) says:

(39) For a formula ϕ to be felicitous w.r.t. a file F it is required for every NP in ϕ that

- (i) if NP_i is [-definite] then $i \notin \text{Dom}(F)$;
- (ii) if NP_i is [+definite], then
 - (a) $i \in \text{Dom}(F)$, and
 - (b) if NP_i is a formula, F entails NP_i

The NFC is a half formal felicity filter that basically says that (i) an indefinite noun phrase opens a new file card, i.e. introduces into the discourse frame a new referent and therefore must not have an antecedent in the preceding discourse. Clause (ii) expresses that a definite NP must refer to an individual that has already been introduced into the discourse frame before, thus it must be known to speaker and hearer from the preceding discourse.

Very similarly to the theory developed in this dissertation, Adger (1993) proposes that familiar argumental DPs be moved in the specifier positions of agreement heads. For him, exactly as for what Heim's NFC claims, definites must be familiar. Adger's formulation (Adger 1993, p. 87) of the idea says:

- (40) Suppose something is uttered under the reading represented by ϕ and the discourse preceding ϕ has resulted in a discourse structure F . F contains a set of DRs, U .
Then for every DP D in ϕ it must be the case that:
Novelty Clause: there is a DR associated with D
and
Familiarity Clause: If D is definite or in a spec-head relationship with Agr, then the associated with D is \subseteq a DR a DR in U .

If Adger is right, we would expect that definites must scramble. At first glance this seems to be correct. An unscrambled definite sounds very marked in its VP-internal position.

- (41) "weil Otto wahrscheinlich schon die Kühe gefüttert hat
since Otto probably already the cows fed has

The scrambled version gives a perfect sentence.

- (42) weil er die Kühe wahrscheinlich schon gefüttert hat

However, the facts are not this simple. In his paper on word order in the German middle field, Büring (1993) discusses one reading where (41) would sound appropriate. This is the case when the object gets a narrow focus interpretation and is (heavily) stressed⁹. Under this reading, the cows are contrasted with the other animals in the farm that Otto could possibly have fed, but probably hasn't yet. When a definite gets a narrow focus reading, it is very likely/ almost necessary to be familiar. This is already a challenge to Adger's theory which by its implications excludes familiar DPs in the base position. As a matter of fact, narrowly focused definites in base

⁹ I would deny that the object has to be heavily stressed. In most configurations where the object stays in a verb adjacent position it is very likely to get a pitch accent anyway (cf. chapter 4, section 4.4.3.2.). From there then focus may project. Normally, the stress pattern is not different with narrow focus with respect to larger focus spreading. For a different, but as far as the stress pattern is concerned, identical view see Jacobs (1992). Still, it is true that very heavy stress facilitates a narrow focus reading and this is it what Büring needs.

position are a very frequent phenomenon in German syntax¹⁰. (See also Lenerz' (1977) investigations of the DAT > ACC order. He observes that if both DPs, the direct and the indirect object are definite, the order ACC > DAT is only permitted if the DAT object gets a contrastive interpretation. Transferred into my theory from chapter 2 where the (true) dative objects are base generated higher than the accusative objects, this means that the accusative object has undergone scrambling whereas the dative still remains in its VP-internal position. There it gets the narrow focus interpretation.)

There are yet more objections to make. As it has been observed by Heim herself and many others after her, there seem to exist quite a lot of exceptions to the NFC. She refers to work by Hawkins (1978) who lists eight usage types of definites, only two of which obey the NFC. One counterexample are the so-called novel definites. Let us look at a German sentence exemplifying Hawkins' immediate situation use:

- (49) (Paß' jetzt endlich auf,) weil du sonst den FUSSgänger umfährst.
be-careful now finally Prt, since you otherwise the peDEStrian run-over
'Watch out, 'cause otherwise you're gonna knock out the pedestrian.'

(49) shows that the definite object has not been scrambled and the sentence is still grammatical. Moreover, *der Fußgänger* does not get the narrow focus reading which is predicted by Büring's claim. In the scrambled version (50) the object must be aware to speaker and listener and only the action of knocking him down is the new information that the sentence conveys.

- (50) (Paß' jetzt endlich auf,) weil du den Fußgänger sonst UMfährst.
be-careful now finally Prt, since you the pedestrian otherwise run-over

As indicated, not only does the position of the object change, but also the element which bears the main stress.

In his dissertation, Jäger (in progress) shows very nicely which definites do fall under Heim's NFC and which ones do not. He divides definite DPs into anaphoric definites on the one hand, and

¹⁰ A whole chapter of this thesis (chapter 7) will be concerned with movement of narrowly focused constituents. At first glance, this might seem contradictory to what I am claiming here since I argue that narrowly focused arguments do not move. However, focused constituents undergo covert A'-movement which is very different from scrambling into some middle field position.

(directly) referential ones on the other¹¹. Anaphoric ones are the DPs which refer to an entity which must have been introduced into the discourse before. Referential definites are those NPs which are novel in the discourse, but which can easily be perceived by speaker and hearer. They are called referential because they refer directly to an entity without being co-indexed with a DP from the preceding discourse and getting their referential interpretation via them. Jäger assumes that the meaning of the definite article is a uniqueness requirement, and that anaphoric and referential definites are distinct in the following way (Jäger 1995, p. 79).

(51) ...Both (anaphoric and referential definites, A.M.) carry a uniqueness condition. In the case of the anaphoric variant, this condition governs the mapping from the discourse markers to pegs, and in the case of the referential reading, it governs the interpretation of the peg in the model.

For someone who is not familiar with these notions from dynamic semantics, (51) says that anaphoric definites require that there be a single file card in the discourse frame (at the time of the utterance) to which the relevant definite DP can/must be linked. Referential definites require that there be only one such an entity at all, where at all means in the relevant model which, in the unmarked case, is the real world. According to Jäger, this is the reason why ordinary appellativa sound odd in the unscrambled position whereas DPs, referring to worldwide unique entities, may sound good. Jäger's examples are¹²:

(52) weil Peter das Buch wahrscheinlich gelesen hat.
since Peter the book presumably read has

¹¹ As usually, the terminology is a disturbing factor. In another work by Donnellan (1966), definites are divided into referential definites and attributive definites. In his work, referentiality means something else than in Jäger's work. Referential definites are noun phrases that refer to a concrete individual, whereas attributive definites have the so-called 'whoever-is-the-so-and-so' reading.

(i) Smith's murderer is insane.

In the attributive use, the speaker does/need not know who Smith's murderer is, (s)he only concludes about the insanity property from the brutal manner of the killing and the fact that Smith did not deserve this execution. In the referential reading, the murderer is a person at hand about whom it is said that (s)he is insane, maybe independently of the crime. This use of the term 'referential definite' is completely different from the Heim-Jäger use.

¹² Jäger's original sentences are V2 main clauses. In order to be consistent with my way of presenting the data I transform his examples into subordinate clauses. Since it is the position preceding or following the adverbial, this transformation does not matter for our purposes here.

- (53) ^{??} weil Peter wahrscheinlich das Buch gelesen hat.
(54) weil Peter die Bibel wahrscheinlich gelesen hat.
since Peter the Bible presumably read has
(55) weil Peter wahrscheinlich die Bibel gelesen hat.

I think that this contrast holds only partly. It might be true that proper names or other unique expressions like *die Sonne* (the sun), *der Papst* (the Pope), *der US Präsident* (the President of the United States) are relatively good base position occupants; however, since communication is always restricted to a certain context which is not the whole universe, definite ordinary appellativa in unscrambled position are very often as fine as name like expressions.

(56) context:

Warum ist deine Frau wieder nicht zum Gottesdienst gekommen?

Why has your wife repeatedly not gone to church service?

answer a:

weil sie wahrscheinlich wieder die Fenster geputzt hat

since she presumably again the windowa cleaned has

answer b:

weil sie wahrscheinlich den Hund ausgeführt hat

since she presumably the dog walked has

In (56) we see that an unscrambled definite does not only sound fine, the answers given in (56) are even obligatory with the definite in this position if neither the windows nor the dog was mentioned before. *Fenster* and *Hund* are clearly ordinary appellative expressions. What matters is that these expressions are not linked to any previously introduced discourse referent. As a consequence, the windows and/or the dog must be accessible to the hearer by his/her knowledge about the speaker's world and the hearer must know that there are specific windows belonging to the speaker and only one dog. If the speaker had two equally salient houses with windows and/or several dogs the sentences were not felicitous. Thus, Jäger's uniqueness requirement with respect to the model holds, but the contrast between name like expressions on the one hand and appellativa on the other is very subtle because pragmatics very often restricts the domain of a model to a very small one.

- definites in idioms

Another slightly different case of VP internal definites is idioms and related expressions. Here, the definite object and the verb form such a unit that they can hardly be separated. For these constructions, one could use de Hoop's terminology and speak of a 'part-of-the-predicate reading' for the strong object (although she invents this notion for other constructions). The sentences are much more neutral with the definite in its base position.

- (57) a. weil er wahrscheinlich wieder die Pferde scheu macht
 since he probably again the horses shy makes
 b. weil sie ihm wahrscheinlich wieder die Leviten gelesen hat
 since she him probably again the Levites read has
 c. weil er wahrscheinlich wieder die Katze aus dem Sack gelassen hat
 since he probably again the cat out the bag left has

Scrambling sounds odd and the idiomatic character looses. This becomes very clear in (58 c) where the interpretation strongly favors a literal meaning of the sentence, i.e. where a cat is involved indeed. The examples are not ungrammatical, but one has the feeling that here it is being played with language and that this playing obliterates the 'normal rules' of grammar.

- (58) a. ^{???}weil er die Pferde wahrscheinlich wieder scheu macht
 b. ^{???}weil sie ihm die Leviten wahrscheinlich wieder gelesen hat
 c. weil er die Katze wahrscheinlich wieder aus dem Sack gelassen hat (^{???} for the idiomatic reading, ok. for the literal one)

Marginally, but still worth mentioning is the fact that also in German definites may be interpreted as generic expressions. For this reading to be triggered, the definite DP has to be in the scrambled position.

- (59) weil der Bauer die Ratte schon immer gejagt hat
 since the farmer the rat already always hunted has
 'since the farmer has always been hunting the rat'

(59) is of course ambiguous between an ‘normal’ anaphoric reading and a generic one. And not only that, the sentence is four way ambiguous with each DP being able to get either the one or the other reading independently. If the generic reading is to be obtained in the base position, the noun phrase must be interpreted as being focused, i.e. the kind *rat* must be contrasted with other kinds for which the background does not hold.

- (60) weil der Bauer schon immer die Ratte gejagt hat (, und nicht die Maus)
‘since it is the rat the farmer has always been hunting (, and not the mouse)’

As stated above, definite DPs in scrambled position are the unmarked case. In this position, they signalize that the entity to which they refer is known to both speaker and hearer by previous introduction into the discourse frame.

- definite pronouns

Definite pronouns can only occur in the base position when they bear (heavy) stress and get a contrastive interpretation. These pronouns are called strong pronouns (see Cardinaletti and Starke 1993-94).

- (61) weil du wahrscheinlich nur IHN kennst(, SIE war noch nie hier)
since you presumably only HIM knows, SHE has never been here
‘since you probably know only him(, she’s never been here.)’
- (62) *weil du wahrscheinlich nur ihn KENNST.
- (63) weil ich schließlich DEN(da) genommen habe(, und nicht DEN)
since I finally THIS(here) taken have, and not THAT
‘since I finally took this one, and not that one.’
- (64) *weil ich schließlich den(da) geNOMmen habe

Non-stressed (weak) and phonologically reduced (clitic) pronouns are always higher than any VP related position.

- (65) weil ich ihn wahrscheinlich gestern noch nicht hätte erkennen können.
 since I him presumably yesterday still not had recognize could
 ‘since yesterday presumably, I could not yet have recognized him’

I will not commit myself to suggesting where non-strong pronouns move. In several respects they behave different from full DPs (for interesting proposals see the work of Cardinaletti and Starke). The only fact I wanted to show is that there can be no pronoun in a VP-internal position, unless it is narrowly focused. In this respect, pronouns are distinct from full definite DPs, where some non-narrow-focus readings in situ can be obtained. Semantically definite pronouns obey Heim’s Prominence Condition. The Prominence Condition is a stronger version of the NFC in so far as it does not leave room for adjustment mechanisms like accommodation or similar things. Pronouns must have a direct linguistic antecedent, or refer to a situationally present entity. In no sense can they be novel.

3.2.4. Strong Quantificational Noun Phrases

The last class of noun phrases I want to consider here are the so-called strong quantifiers, i.e. noun phrases that contain a quantifier like *every*, *each*, *most* in English (i.e. those noun phrases that are not allowed to occur in there-be sentences). These are the classical examples of Generalized Quantifiers. In their famous article about quantification, Barwise and Cooper (1981) proved that quantification in natural language is always restricted quantification, i.e. a quantificational statement can only be made about something which serves as the anchor for the quantification. In Heim’s theory of tripartite structures (also in Heim 1982) this anchor, also called the live-on property, is mapped into the restrictive clause of the quantifier. Thus, strong noun phrases seem to impose a presupposition requirement, i.e. strong determiners presuppose the existence of the set of entities the noun refers to (cf. chapter 1, section 1.4.3.1.2.). In this respect they resemble definites, which themselves are analyzed as strong noun phrases very often. If we consider all this and recall Diesing’s Mapping Hypothesis, here repeated as (66), we expect that strongly quantified noun phrases scramble always.

(66) Mapping Hypothesis:

Material from the VP is mapped into the nuclear scope

Material from the IP is mapped into the restrictive clause

As with definite DPs, scrambling of strongly quantified noun phrases is the unmarked case.

(67) weil er jedes Schaf wahrscheinlich schon einmal geschoren hat

since he every sheep presumably already once shorn has

'since presumably he already shored every sheep once'

(68) ^{???}weil er wahrscheinlich schon einmal jedes Schaf geschoren hat

In (67) we have a classical quantificational structure which can be formally paraphrased by:

(67') $\forall x$ [sheep (x)] P $\exists t$ [t a time & he shored x at t] (P = probability operator)

As indicated by the judgments in (68), the sentence is not really out and if one looks for another verb, the non-scrambling of a strong noun phrase sounds pretty acceptable. This is the case when the predicate can get a non-telic interpretation.

(69) weil er bestimmt schon mal jeden Studenten gelangweilt hat

since he certainly already once every student bored has

'since sometime he certainly bored every student'

(69) says that it is very likely that once there was a situation such that the professor was so boring that no student could take any interest anymore in his lecture. Thus, the sentence is not about every student in the first place, but about a situation in which every student was concerned. A rough formalization could look like:

(69') P [$\exists t$ [t = time & he bored every student at t]]

Scrambling of the object would create an interpretation parallel to (67'). (68) sounds so strange because one can hardly imagine that someone can shear all sheep at once. However, it is not completely impossible to get this reading. As is well known, German *alle*, exactly as English *all*

are different from *jeder, every*, respectively in many respects. One such a difference is that an ‘alle NP’ can get a plural collective reading very easily. Under this interpretation, *alle Schafe* (all sheep) has a reading very similar to *die Schafe* (the sheep) and the quantificational force of *alle* gets a ‘minor weight’. I will explain below what I mean by ‘minor weight’.

(70) weil er wahrscheinlich schon einmal alle Schafe geschoren hat

(70) -very similar to (69)- means that it is likely that there exists one situation where he came to shear all the sheep.

(70') P [$\exists t$ [t = time & he came at t & he shored all sheep at t]]

Here, telicity is not at issue. The man came one time just to do some shearing on each of the sheep. Under this interpretation (68) could also be considered to be (more or less) acceptable. (67) on the other hand says that there were many situations, most likely as many as sheep (\forall scopes over \exists) where he shored them such that the sheep were really shorn afterwards.

Another parallelism between definite DPs and the kind of strong noun phrases I am considering here is the behavior under narrow focus. We have seen that narrowly focused definite DPs remain in situ. The same applies to strong quantifiers.

(71) weil er wahrscheinlich die MEIsten Kühe kennt
 since he presumably the MOST cows knows
 ‘since he probably knows most (of the) cows’

(72) weil er immer JEde Kuh besamt
 since he always Every cow insaminates
 ‘since he always insaminates every cow’

When the strong determiner is stressed, scrambling gives a degraded result¹³.

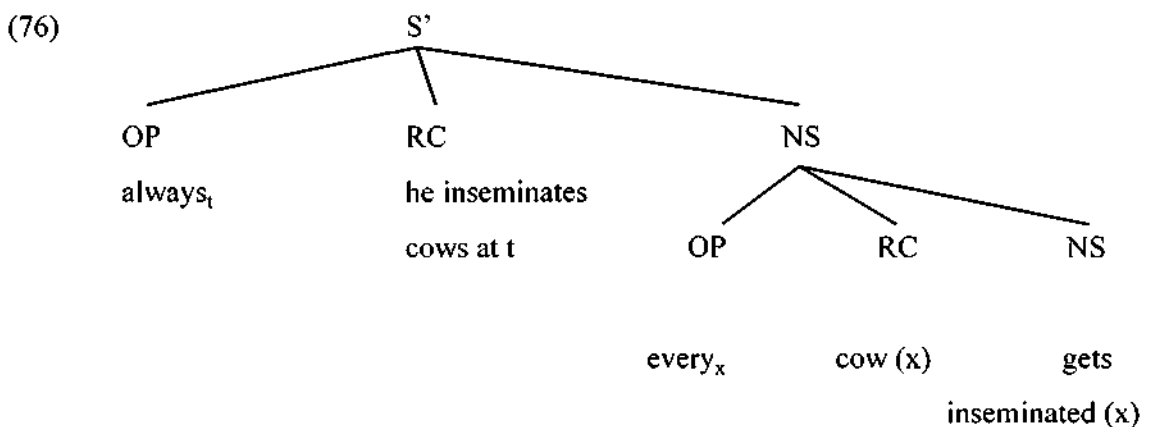
¹³ The degraded grammaticality holds only when the sequence following the stress on the determiner does not contain another pitch accent. Thus, a hat contour may save the grammaticality. In this case, however, the interpretation is a different one, and the focus on the determiner becomes a secondary one. Apart from that, (73) and (74) do not sound completely ungrammatical. This is so because (some) German (dialects) marginally allow(s) for overt focus movement.

- (73) "weil er die MEIsten Kühe wahrscheinlich kennt
 (74) "weil er JEde Kuh immer besamt

In the cases of (71) and (72), the interpretation is not as trivial as for the ordinary quantificational statement in (67). In these sentences, focusing creates a more complex structure. If we follow Partee (1991) (see also chapter 1) the focus-background structure of a sentence can be represented in Heim's theory of tripartite structure of quantification whereby the operator is a focus sensitive element, the background is mapped into the restrictive clause and the focus is mapped into the nuclear scope. This leaves us with two instantiations of quantification in a sentence like (72), namely

| | | | |
|------|---------------------|----------------------------------|---------------------------------------|
| (75) | operator | restrictive clause | nuclear scope |
| (i) | always _t | when he inseminates cows at t | he inseminates every exemplar at t |
| (ii) | every _x | cow (x) | gets inseminated (x) |

This double quantification does not pose a problem for Partee's theory since she allows for recursivity of quantificational structures. Thus, similarly, even a bit simpler as in her example (14/15) from Chapter 1, section 1.4.1., we get a representation as in (74):



What I want to show with this sentence is that the information packaging is more prominent than the universal quantification over cows. The quantification is only a subpart which is almost faded out. The sentence is not a quantificational statement about *every sheep* anymore. This is what I meant by 'minor weight'.

3.3. Overview:

(77)

| | VP external interpretation | VP internal interpretation |
|-----------------------------|--|---|
| singular indefinite article | - referential - partitive (- generic) | - mainly \exists |
| bare plurals | - generic | - mainly \exists |
| singular mass nouns | - ??/* (- generic, if at all) | - mainly \exists (incorporation) |
| indefinite pronouns | - * | - mainly \exists |
| weak determiners | - partitive - referential (- generic collective) | - mainly \exists |
| definite DPs | - mainly anaphoric | - mainly referential and/or - (if not so, atelic interpretation of the sentence, see below) - narrow focus - parts of idioms - generic |
| definite pronouns | - always | - only narrow focus |
| (strong) QPs | - quantificational statement | - narrow focus - quantification secondary - (atelic interpretation of the sentence, see below) |

The table is a summary of the whole preceding section and discussion of the data. The examples were always direct objects, but the same is the case with subject and indirect objects as well.

3.4. The Common Property of Scrambled Constituents: the [+Topic] Feature

It is now time to find a common property of all the occurrences in the one or the other column. The facts that are summarized in table have been known for some time, and hence it does not come as a surprise that there are several proposals on the market, which are very similar. First, there is Diesing's Mapping Hypothesis which claims that VP external material is mapped into the restrictive clause and base material is mapped into the nuclear scope. As pointed out by de Hoop (1992), the main problem the Mapping Hypothesis (MH) cannot account for is that as a matter of fact, under the relevant conditions, strong, i.e. quantificational noun phrases need not scramble. Another possible weakness is that the MH is primarily concerned with quantifiers. However, it is not clear whether all noun phrases that undergo scrambling should be analyzed as such¹⁴. For example, it has been argued (Partee 1987) that proper names need not (always) be quantificational, and yet they do scramble very often. The MH remains silent about them. De Hoop's proposal is not very different from Diesing's MH. One of the advantages is that de Hoop recognizes that strong DPs do not necessarily undergo scrambling. 'Strong DP' is here to be understood as a term for noun phrases which occur with a quantifier like *every* or *most*, which, however, do not act as true quantifiers, but as predicate modifiers. Under this reading, de Hoop tries to account for the atelicity reading which arises very often when the argument remains its base position.

A proposal which comes very close to mine is developed in Adger (1994) and in some sense also in Anagnostopoulou (1994). In (40), I gave Adger's formulation of the Novelty-Familiarity-Condition. His proposal boils down to identify agreement projections as hosts for familiar DPs. With some refinement, this idea will also be my proposal. My critique of Adger was mainly based on his assumption that definite DPs are always familiar. In this respect I want to stick more to Anagnostopoulou's analysis where she shows that novel definites do not trigger (object) agreement (which is one instantiation of activating AgrPs). Thus, as we have seen, definites may be anaphoric or novel, and only the anaphoric ones are familiar. Under this perspective it becomes

¹⁴ Although here I criticize the view that every scrambled noun phrase should be analyzed as a quantifier, this proposal will be adopted by me in chapter 6 on extraction.

reasonable again to link familiarity to AgrPs. However, all the proposals seem to me to suffer in one respect. They all ignore that narrow focus on a DP that otherwise should scramble, trigger clitic doubling or something along these lines blocks this behavior. I have shown that DPs can refer to discourse old entities or can still trigger quantificational (sub) structures and yet remain in their base position because this is the position where they get the narrow focus reading. For this reason, I want to adopt a proposal by Jäger (1995). Jäger argues for a syntactic feature [+Topic] which causes scrambling of DPs in German (p. 70, example (16)):

- (78) In German, full DPs bearing the feature [+Topic] scramble obligatorily while DPs lacking this feature remain in situ.

In chapter 1 I have presented Krifka's theory of topic - comment structures which uses the notion of topic in a sense in which I want to use it as well. Below I will give more examples that illustrate what this [+Topic] feature is about. However, one thing is clear: in a sentence with a single narrow focus, the focus feature cannot be assigned to a constituent that is supposed to act as a topic at the same time. According to Krifka's theory, it is true that a topic constituent may be complex in that it has its own focus-background articulation, however from all the cases from table (77) none is such that the sole focus is embedded in a topic constituent (only as 'secondary' focus in the partitive reading of indefinites or weak quantifiers). From example in (76), which is given in Partee's notation, one can see that the narrow focus is mapped in the nuclear scope, which in Krifka's notation almost corresponds to the comment. Thus, a DP which is mapped into the nuclear scope of a quantificational topic - comment structure cannot be a topic. This fact explains why all the DPs that according to the proposals listed above should trigger scrambling remain in situ.

3.4.1. What is a Possible Topic?

'Unfortunately, the term 'topic' has been used in the literature with a multiplicity of denotations. This has led to important misunderstandings.¹⁵' (Vallduví (1992) p. 30)

¹⁵ This section is supposed to exclude some of these alternative understandings. I am aware of the fact that I am using the term in a sense which is not the use of the majority of linguists. However, I think it is legitimate to use it under a certain meaning if this meaning is laid down explicitly. This is the aim of this section.

Almost everyone who has worked in the field of information structure, has made the same observation as Vallduví. The term topic has different uses and the intriguing thing is that the different uses are similar and therefore difficult to separate. Some authors are very concrete in defining what they mean by ‘topic’, others do not (see also chapter 1, section 1.2.). There is one use of the term however, that has become a sort of standard in syntax. Topics are sentence initial, thus topics occupy the first position in the clause. This is a reasonable (working) definition. However, this is not at all what I mean when I use the term ‘topic’. Thus, constituents that move to the preverbal position in German main clauses need not be topics in my sense, see examples (79), (80); and on the other hand scrambling which may apply to a number of constituents may identify a constituent as a topic which is closer to the end of the sentence than to the beginning (81).

(79) *Zucker* hat er keinen genommen.

sugar has he none taken

(As for sugar, he didn’t take any. or He didn’t take any sugar.)

(80) *Langsam* sollten wir die Party verlassen.

slowly should we the party quit

(It’s time to leave the party - I think.)

(81) weil die Sekretärin ihrem Chef *den Kaffee* sicher bald bringt

since the secretary her boss the coffee certainly soon brings

(since surely, the secretary will bring her boss the coffee soon)

Topics in my sense must be familiar. This requirement already excludes a topic interpretation of sentence initial manner adverbials (as well as other constituents that cannot refer at all). Furthermore, topics are commented on. This idea is formally expressed in Krifka’s formulas from chapter 1, section 1.4.2. A declarative statement consists of an assertion of something new which is being said about a topic, whereby ‘something new’ is a sloppy paraphrase for context enrichment ($c' \neq c$). As a consequence, topics act as an anchor in the conversation for the new information to be linked to the old one. As is clear from my adoption of Krifka’s theory, I do not understand focus as new information, but as a process that singles out a constituent and contrasts it with possible alternatives (i.e. the phenomenon of narrow focus). In my theory the new information comes within the comment. The comment thus is the range of the so-called focus projection. That means that -spoken in traditional terms- focus cannot spread over topics. Topics

must be outside the domain of focus projection. I will claim that the VP is the domain of the comment, and scrambling is necessary for topics in order to end up in a position which is outside the range of focus projection. (This implies that focus may not freely spread as high as possible, rather the domain of new information is fix and everything which is not new information must escape from this domain. This is a rather controversial claim, for some problems see below.)

3.4.2. Anaphoric DPs are not Automatically Topics

As Jäger (1995), I will also claim that [+Topic] is a syntactic feature which is assigned to constituents. This assignment is subject to certain restrictions (a topic must have an antecedent in the discourse frame). However, these restrictions still leave some freedom for the assignment. Contrary to Jäger, and all the other proposals discussed above, I will argue that topics must be familiar does not hold in the reverse formulation, i.e. familiar DPs must be topics and therefore scramble. Jäger states (p. 71, (17)):

- (82) Full definite DPs lacking the feature [+Topic] are interpreted referentially, while definites bearing this feature are interpreted anaphorically.

This statement excludes familiar definite DPs in unscrambled position. As we have already seen, narrowly focused DPs do not scramble. This is a fact that Jäger recognizes too. What he denies, however, is that there are VP internal definite DPs which refer to an entity which already have a file card and are not narrowly focused. Such DPs, according to his rule given here in (80), must introduce a create a new peg (file card). What Jäger and others (intentionally) overlook is the fact that there are some DPs that are not focused and do have an antecedent in the discourse, and nevertheless need not move. In these cases it depends on the speaker whether (s)he wants to use the DP as a topic or not. Consider (83):

- (83) context:

Es war so romantisch: die Sonne schien, der Hund lag in seiner Hütte, die Kühe grasten friedlich auf der Weide. Peter ging wohlgelaunt ins Haus. Aber als er wieder rauskam

- a. war auf einmal der HUND verschwunden
- b. war der Hund auf einmal verSHWUNDen

(context:

It was so romantic: the sun was shining, the dog was lying in his hut, the cows were gently grazing. Peter went into the house in a good mood. But when he came out again

- a'. the DOG had disappeared - all of a sudden.
- b'. all of a sudden the dog had disaPEARed.)

This time I did not give glosses. Later I will argue that what German does by scrambling plus intonation, English often does by intonation solely. I think the intuitions are the same. The context creates a file that in DRS box notation looks like¹⁶:

(84)

| w x Y z |
|-------------------------|
| sun (x) |
| shining (x) |
| dog (y) |
| lying in his hut (y) |
| cows (Y) |
| gently grazing (Y) |
| Peter (z) |
| went into the house (x) |

Then, in both alternatives continuations a and b, *der Hund* is understood as the individual introduced into the discourse before (box (84)). The interpretation is slightly different, although there is no difference in the truth conditions. The a/a'-examples mainly describe a new situation in which surprisingly the dog is gone. In the b/b'-examples, *der Hund/ the dog* are used as topics,

¹⁶ The DRS box is of course a simplified one. A more complex and adequate one should say something about the temporal setting, and also about discourse referents for the house, and in the German version *die Weide*. (Maybe, the whole DRS should be in the scope of a 'romantic operator'). However, what is important to me is that *der Hund/ the dog* which are picked up in the a/a' sentences already have an entry in the input box.

and the dog's disappearance is asserted. This is possible since there is an entry for the dog in the preceding DRS. The DP acts as an anchor, and then the new information follows. This new information consists in the fact that the dog is not there anymore. Thus, we see that under certain circumstances the speaker may choose between the one or the other information packaging. Scrambling only applies when the DP which refers to the relevant individual shall be used as a topic.

3.4.3. A Better Account for Atelicity than de Hoop's

With this in mind, we may also explain what de Hoop (1992) calls the part-of-the-predicate reading (cf. chapter 1, section 1.4.5.2.). She observed that in some languages the interpretation of objects depends on the morphological Case they bear¹⁷. Languages like Finnish or Greenlandic Eskimo have two different cases to mark the object (and also the subject). The rough correlation which lead de Hoop to the formulation of her Case correspondence corollary is that objects with a weak existential, indefinite interpretation get assigned the one Case; strong, i.e. definite or other presuppositional objects the other. Yet, there are those curious constructions where a strong object occurs in the Case which is normally reserved for weak noun phrases. These constructions excel by an atelic interpretation. Thus, '... weak Case on the object seems to be a matter of either weakness of the object or of irresultativity of the predicate' (de Hoop 1992, p. 92). De Hoop proposes that when the object receives weak Case, it is not interpreted as a true argument, but a predicate modifier. In other words, the object bearing weak Case is not a quantifier with scope over the predicate, but integrates into the meaning of a complex predicate, thus it gets a part-of-the-predicate reading. How can this be captured in theory advocated here? My claim is that topics do scramble whereas non-topics do not. Similarly as de Hoop, I will claim that non-topics bear a closer relation to the verb than topics. As suggested above non-topics stay in the base position where they are interpreted as a part of the comment, thus they are an integral part of the new information. For describing situations where some action is being performed to an argument that already has discourse referent, which however must be integrated in the action, scrambling leads to oddness.

¹⁷ This fact and its formal implementation will be discussed at length in the following chapter of this thesis too. The examples de Hoop discusses are to be found there as well.

(85) context:

Peter bekam zu seinem Geburtstag einen Fußball, einen Tennisschläger, eine Puppe und viele Süßigkeiten geschenkt. Eigentlich wollten ihn seine Eltern zum Sport animieren, waren dann aber enttäuscht,

- a. weil er den ganzen Abend die Puppe rumgezerzt hat
- b. ^{???}weil er die Puppe den ganzen Abend rumgezerzt hat

(context:

At his birthday Peter got a soccer ball, a tennis racket, a doll and many sweets. Actually his parents wanted to stimulate him to do some sport, but then they were disappointed because he was busy all evening with the doll

- a.' because he the whole evening the doll deal-with
- b.' ^{???}scrambled version)

Again, the context before the crucial sentence is construed in a way that the doll has an antecedent in the discourse¹⁸. Nevertheless, not only is scrambling not necessary, it even leads to oddness. The information is such that Peter's playing with the doll causes his parents' anger, rather than that it should be understood as a statement about Peter and the doll. As de Hoop's correlation predicts, the sentence with the definite in situ gets an atelic interpretation. In my concrete example, this interpretation might also be forced by the adverbial 'den ganzen Abend' (the whole evening). However, the atelicity has also been observed in other constructions involving no durative adverbials. Thus, what should be the reason for de Hoop's correlation? I think a nice proposal is to be found in Jäger (1993). Since Jäger makes different assumptions about the semantics of topics which are distinct from the proposal here in a crucial way, I have to carry out some changes.

Unlike English Present Perfect, German 'Perfekt' is ambiguous between a perfective or imperfective interpretation. This ambiguity, however, may often be dissolved by scrambling or stress pattern, witness the contrast between (86) and (87).

- (86) weil ich oft die Bibel gelesen habe
since I often the Bible read have
'since I were often reading in the Bible' (imperfective interpretation)

¹⁸ (85) is one more example where Jäger's claim can shown to be too strong.

- (87) weil ich die Bibel oft gelesen habe
 since I the Bible often read have
 ‘since I read the Bible through many times’ (perfective interpretation)

The argumentation goes as follows. A sentence like (88) with *die Bibel* in base position is ambiguous¹⁹.

- (88) weil ich doch die Bibel gelesen habe
 since I prt the Bible read have

(88) could be a novice’s answer a the abbot’s question ‘Why didn’t you go to church service yesterday?’. In this case, the unmarked atelic reading arises. The novice basically says: well, every day we have to do some religious practices, but not all of them, and instead of going to church service I decided to read in the Bible. The same sentence could also be an answer to an abbot’s question to a young man who wants to join the order ‘Why do you think we should include you in our order?’. In this situation the sentence is rather interpreted telically. The young man informs about his advantages which qualify him as someone who knows the Bible. Thus, the (a)telicity of the sentence is a result of the context. Through the questions it comes clear, what the actual information of the answer sentence is. For the first interpretation, the reference time counts as a topic. The questions sets the temporal context to a specific reference time, namely yesterday. If we assume with Kratzer (1989) that READ is three place predicate (agent, theme, Davidsonian argument), we get a representation:

- (89) $\exists x$ [I= (x) = agent & = topic
 $\exists t$ [yesterday (t) = Davidsonian argument & = topic
 read (x, the Bible at t)]] = comment

Under this representation, the time counts as a topic. Our ontology about time is such that time is a linear, two-dimensional, infinite continuum. The setting of a concrete reference point (or period) then provides alternative times, namely all time points outside the reference time on the time axis,

¹⁹ I will ignore here the additional interpretations that arise if narrow focusing of the object is intended. Here, only the telic and the atelic interpretation are at issue.

and for all those time points it is not clear (even very unlikely) whether the comment holds. As a consequence, we must infer:

(90) (89) & $\exists t' [t' \neq \text{yesterday}] \& \sim [\text{read} (I, \text{the Bible at } t')]$

Thus as a consequence we get time points when the comment does hold (89) and we get time points when the comment does not hold (second conjunct of (90)). This triggers the atelic reading. In the context of the other question no reference time is given. Thus, the answer cannot use any temporal information as topic. The Davidsonian argument has to be introduced in within the comment. This then cannot lead to the inference of time points where the comment does not hold. The sentence must be interpreted in its most informative reading (Gricean maxim of quantity) and therefore gets a telic interpretation. This reading is more marked, however.

A sentence must be informative. In the normal case, the new information comes within the comment. Topics are old information. Hence when one has a restricted set of constituents, the more topics there are, the more difficult is it for the comment to assert a reasonable relation between them. It is clear: when there is only one topic - let's say the subject - almost anything can be predicated about it. When there is a topic subject and a topic object, only verbs that are at least two-place predicates can be mapped into the comment. With only one topic subject no restrictions on the subcategorization are imposed. Apart from this requirement on the valence of the verb, also selectional restrictions will play an important role and narrow down the possible assertions to an important extent.

(91) weil ich die Bibel doch geLEsen habe
since I the Bible prt read have

With *die Bibel* as topic, two possibilities arise. Either the referential time is also a topic, then only the reading relation would convey the new information. This, however, is a very marked possibility since it is very difficult to accommodate a context where there are other predicates different from *read* which could be equally well attributed to the triple $\langle I, \text{the Bible, referential time} \rangle$. Such a situation could only arise through a question like 'Hast du die Bibel letztes Jahr geLEsen oder auswendig gelernt?' (Did you READ the Bible last year, or did you learn it by heart?, thus narrow focus on the predicate) Under this reading an atelic interpretation could emerge. However, the more natural interpretation is the one where the referential time gets

included in the assertion of the comment. Only *ich* and *die Bibel* are topics, and the state of ‘having read at t’ is at issue. Since reading is the unmarked relation between a person and the Bible, the reference time is the actual new information. Under this interpretation, the reference time cannot be a topic, and hence it cannot induce alternative times under which the comment does not hold for the topics. Under the maxim of quantity, this again delivers the telic reading. The attentive reader will have noticed that under the theory developed here it is not necessary that the argument which triggers the imperfective reading be the (weak) object. What is needed is as much as possible material within the VP such that the reference time will not have to rescue the informativity requirement. In the unmarked case, the argument which is more flexible with respect to the topic - non-topic status is the object. However, we may construct scenarios where the object is discourse-linked and the subject’s position decides on the (a)telicity of the sentence.

(92) context: in einer Bibliothek:

A: Warum war das Buch vorige Woche wieder nicht zu haben?

B: weil es da schon die LingulStikstudenten gelesen haben
 since it there already the students-of-lingulStics read have

(context: in a library:

A: Why was the book last week again not available?

B: since then the students of linguistic were already reading it)

Again, the sentence is ambiguous between the reading I am interested in and the other reading where *die Linguistikstudenten* is narrowly focused. The atelic reading can be paraphrased by: as for the book, last week: it was in the process of being read by the students of linguistics then. Thus one can see that the argumental status does not matter for the aspectual interpretation of a sentence. In a version where both the subject and the object are scrambled, the telic reading is much more likely (compare (87)). Thus, we see that telicity is only an epiphenomenon. The trigger for it is often the position (or the Case) of the object, but this need not be so. Example (92) shows one more time that there can be established no direct link between (an) Aspect (phrase) and object agreement / interpretation along the lines of Borer (1994) and others (see also chapter 4, section 4.3.2.)

3.5. Intermediate Summary

To shortly summarize: the sentence can be divided into topic(s) and comment (see also below, chapter 4). The comment usually contains the new information. In case of many topics it is likely that not the (pure) predicate is the most informative part, but the temporal setting. If the temporal setting is done within the comment, the reference time cannot be a topic. When the reference time is not a temporally marked period / time point, no alternative situation can be made salient where the comment does possibly not hold. As a consequence the sentence gets a telic interpretation. On the other hand, when the object (or some other argument) stays inside the VP, it is much less necessary for the Davidsonian argument to be introduced as new information. The reference time can act as a topic very easily, and as such it triggers the atelicity in the way described above. Thus, de Hoop's observation that strong noun phrases inside the VP (bearing weak Case) trigger an imperfective reading of the sentence can be given a deeper explanation, although the event semantics combined with the impact of information structure tells that the correlation holds only preferably, i.e. one can force other readings by farfetched contexts. We have also seen that there is no (important) difference between anaphoric and referential definites. The preferable atelic interpretation arises independently as long as the definite stays VP internal.

Almost the whole preceding part of this chapter was concerned with direct objects. I have shown that the two alternative positions of object DPs are linked to specific readings. The VP external position marks the object as a topic, the VP internal position marks it as a part of the comment. At several places I have also mentioned that this dichotomy is the same with the other arguments too (subjects (see the important work by Diesing (1992 a, b)) and indirect objects). Taking all this as a matter of fact, we have an explanation for many cases from (1). For example, we can explain (1c):

- (1) c. daß die Frau den Hund gestern der Nachbarin gegeben hat

Here, *die Frau* and *den Hund* act as topics, *gestern* marks the VP boundary. The argument *der Nachbarin* does not get a topic interpretation, hence it gets a narrow focus or referential interpretation (in the sense described above) or the imperfectivity of the giving-to-the-neighbor-action is stressed. We can also account for (2b).

- (2) b. *weil jemanden niemals der Chefdirigent lobt

From table (80) we know that indefinite pronouns like *jemand* cannot scramble. However, if the general base order of arguments is subject > (indirect) object and furthermore adjuncts or Davidsonian arguments are base generated higher than theme arguments, the accusative object must have scrambled in (2b), hence the ungrammaticality. The proposal also accounts very nicely for the following three sentences (taken from Buring 1994 and Müller 1993)

- (93) weil dem Patienten niemand helfen kann
 since the patient noone help can
 (since nobody is able to help the patient)
- (94) weil den Hund ein Auto überfahren hat
 since the dog a car knocked-down has
 (since the dog got knocked down by a car)
- (95) daß Ellen die Gerüchte über Ina keiner geglaubt hat
 that Ellen the rumors about Ina noone believed has
 (that noone believed Ellen's rumors about Ina)

In (93) we have an indefinite subject pronoun which cannot scramble. The internal argument, however, through its definite shape is very likely to act as a topic, furthermore the epistemic modal *kann* which combines with the negative subject renders the comment a sort of individual level predicate. Individual level predicates need a strong argument, in this case the internal one of *helfen*. Thus, the sentence comes out as a very natural statement. (94) pictures a similar situation. When there are two arguments, one of which is definite and the other one indefinite, it is more likely that the former is to be interpreted as anaphoric, i.e. as a topic, and the latter as belonging to the new information regardless of the relevant thematic role. Such sentences are pretty unmarked in German; as the translation into English suggests, this language would prefer a passivization strategy. (95) gets a classical scrambling analysis in Müller (1993). The subject must occupy [Spec,IP], i.e. it finds itself outside the VP. Then scrambling applies to internal arguments by adjoining them to IP; in the case of (93) we have iterative adjunction to IP. Within the account developed here, the two definite objects raise to their relevant (see below) VP external position, whereas the indefinite pronoun remains in its base position.

3.6. Agreement Phrases as Topic Hosts

Now I would like to address the question what happens when a sentence contains more than one topic, i.e. how the topics organize linearly. Here I will be concerned with full DPs only.

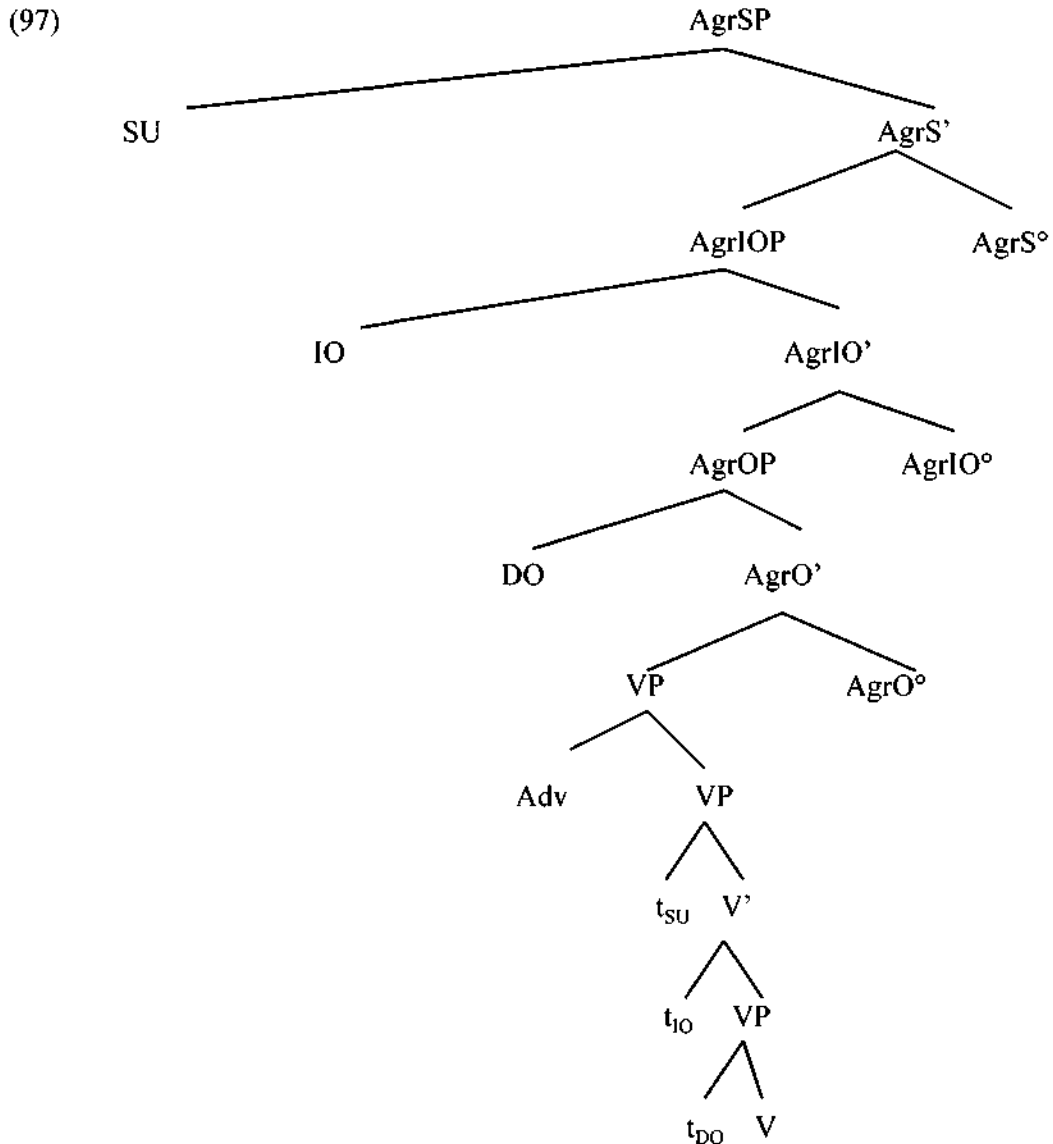
As a matter of fact, in the unmarked case the order of the arguments outside the VP parallels the VP internal order (again Lenerz 1977), i.e. subject > indirect object > direct object.

- (96) daß die Firma Müller meinem Onkel diese Möbel erst gestern zugestellt hat²⁰
that the firm Müller_{NOM} my uncle_{DAT} this furniture_{ACC} only yesterday delivered has
'that Müller delivered this furniture to my uncle only yesterday'

As I have shown in (1), this is not the only order possible and later I will try to give an account for the other orderings. However, (96) gives the neutral serialization in German, and as a matter of fact this order is the only one with very few exceptions in languages like Dutch and/or West Flemish. For this reason, it has been proposed that the VP internal arguments raise to specifier positions of the functional heads AgrS, AgrIO, AgrO (Moltmann 1991, Schmidt 1994, Meinunger 1995b)²¹. These functional heads are ordered in such a way that AgrS is higher than AgrIO, and AgrIO is higher than AgrO. I will be conservative and assume that the Infl node, which in the new terminology is AgrS and possibly T, is head final. For reasons of harmony this suggests that all the functional verbal projections except C should be head final. The tree for (96) then looks as in (97):

²⁰ Example taken from Haeberli (1994) p. 26.

²¹ The sudden introduction of agreement projections might seem a bit too abrupt here. In the following chapter(s) I will discuss the issue of agreement projections and show that the assumption that agreement morphemes (overt or abstract) play an important role in the syntax of information packaging is a reasonable hypothesis.



daß die Firma Müller meinem Onkel diese Möbel erst gestern zugestellt hat

3.7. Summary

In this chapter I first presented scrambling as a rule which reorders argument and adjunct constituents in the German ‘middle field’. Then I gave a survey of scrambling theories. I showed that every possible analysis which is available in the grammatical framework has been proposed. The main part, however, is concerned with an extensive discussion of the interpretative

differences between scrambled constituents and their base position counterparts. Table (77) contains an almost exhaustive picture over their readings.

Based on the facts I then proposed that it is a semantic feature that all scrambled phrases have in common: [+ Topic]. For a phrase to act as a topic it must be discourse-linked, i.e. contextually salient. I have furthermore shown that discourse-linking is not enough though. For a phrase to act as a topic the speaker must intent to use it as such. If a constituent that refers to an entity which already has a file card, nevertheless it need not necessarily scramble. If it gets interpretationally and intonationally integrated into the predicate, it may well remain in-situ. One such case is provided by atelic sentences. In one section I intensively discussed de Hoop's observation that strong, presuppositional object DPs which are not scrambled trigger an atelic interpretation of the sentence. I show that the position of the object is only an epiphenomenon and does not give rise to the interpretational differences itself. Thus, de Hoop's generalization turns out as a half-true rather superficial observation.

At the end of the chapter I proposed that - in minimalist terms - the [+ Topic] feature is overtly checked in specifier positions of agreement nodes. For more motivation of this claim I refer the reader to the next chapter.

Chapter 4

Agr Nodes as Topic Hosts

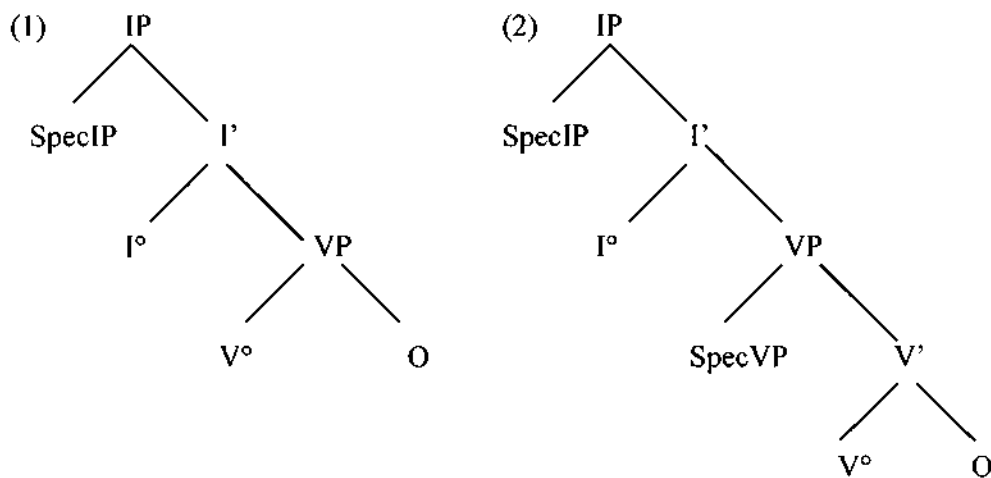
4.1. The Proposal

The purpose of this chapter is to further develop the idea elaborated in the preceding chapter and to demonstrate where topic arguments may be positioned in the structure of a sentence. The proposal will not come as a surprise since it has been alluded at several occasions before. The claim is that the position where an argument DP which carries a [+Topic] feature moves is the specifier position of an agreement projection ([Spec,Agr]). The proposal is based on the fact that topical arguments trigger very different phenomena in the world's languages. In chapter 5 I will discuss a number of these grammatical phenomena and show that they can all be related to the possible impacts of agreement projections. One of the main concerns which does not seem to be obvious at first glance is the relationship between verbal agreement and Case. Since, however, this correlation is crucial for the theory developed here, I will give a short overview over the work which has led to the conclusion that agreement and Case assignment or checking might be considered as two sites of the same phenomenon.

4.2. On the Relationship Between Case and Verbal Agreement

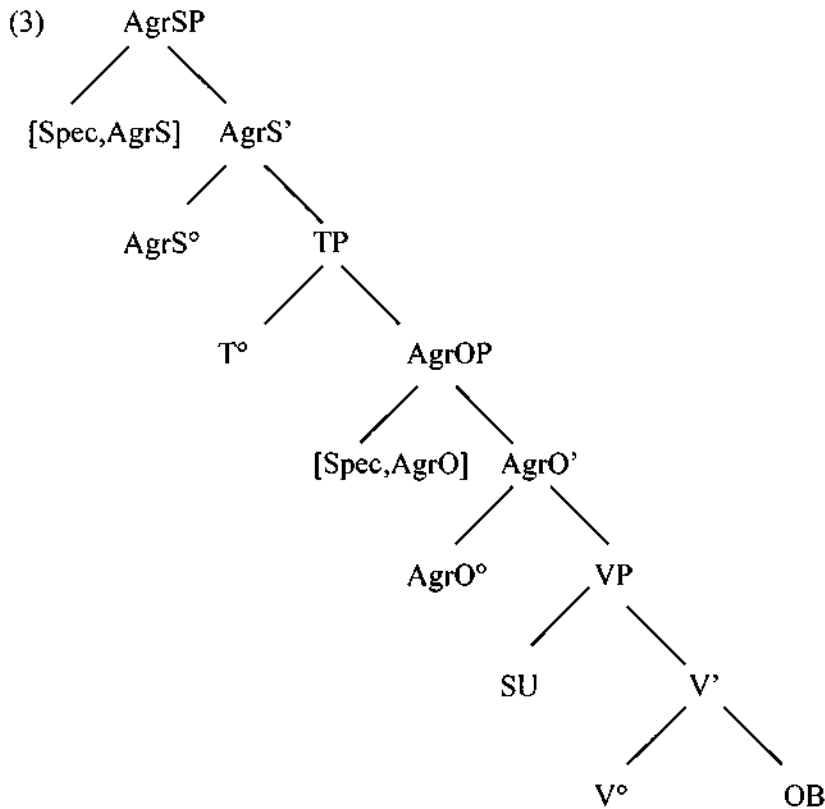
Beginning in the mid-eighties, it has been proposed by several authors (Fukui and Speas (1986), Kuroda (1986), Koopman and Sportiche (1988), Sportiche (1990)) that the subject should be base generated VP internally and then start from this position which presumably is [Spec,VP] and raise

to the specifier position of some INFL like projection. The most convincing theoretic argument for such an analysis is theta-theory, insofar as under the VP internal subject hypothesis (VPISH) the subject starts in a position that is within the projection of the verb from which it gets a theta-role, though the external one. The most compelling empirical argument comes from languages that seem to provide more than one, usually two positions the subject may occupy. These two positions then are the derived position, something like the traditional [Spec,IP] on the one hand, and the base position [Spec,VP] on the other. Thus, the version in (1) is replaced by the more flexible one in (2):



This proposal also had the desirable consequence of assigning unitary structures to both lexical and functional projections (despite the favored x-bar asymmetry proposed in Fukui and Speas 1986). Before the VPISH, there was no agreement whether VP should have a specifier position at all, nor were there reasonable proposals for what could be the specifier of VP.

The next standardization that is relevant for our purposes is the unitary treatment of Case assignment. To my knowledge, one of the first to propose that Case assignment to the object works parallel to Case assignment to the subject was Sportiche (1990) with his Strong Correlation Hypothesis (SCH). It says that structural Case is generally assigned in a spec-head configuration of an argument NP with an agreement morpheme. Whereas formerly, nominative Case used to be assigned to the subject that was base generated under [Spec,INFL] (or had raised there in raising constructions) in a spec-head configuration with the inflectional element in INFL°, and accusative used to be assigned by the verb under c-command, structural Case is now being uniformly assigned (or checked) in a spec-head configuration between an Agr° head and an NP. Combining everything said so far, we get a tree that could be taken from Chomsky's Minimalist paper (1992):



Within my thesis I will defend the assumption that (one manifestation of structural) Case and verbal agreement are basically two sites of the same phenomenon. I will argue that Case assignment or checking on the one hand and triggering of agreement on the verb on the other are mediated through the movement of an argument to the specifier position of the relevant agreement head. This, how it stands here, is of course not a revolutionary discovery. What is less clear are the questions (i) whether every Case checking has to be done in a spec-head relationship and (ii) in how far grammatical tense (and aspect) is involved in Case assignment. My answers will be that only a certain semantically defined class of argument NPs undergo movement to the specifier position of an agreement projection, namely arguments carrying the feature [+Topic], while others do not. Thus I claim that not every noun phrase has to move to some [Spec, Agr] position to get its Case checked. There is at least one other way for NPs to circumvent the case filter, i.e. to get case without moving to any position. Here I agree with de Hoop (1992) who claims that DPs in situ do not remain caseless. This view is not compatible with the Case checking theory of the Minimalist framework. I do not claim that DPs enter the computational system fully inflected, i.e. bearing a Case feature which must be checked off. My claim is that arguments bear the Case which is

assigned or checked in the relevant position, that means VP external arguments get strong Case in [Spec,Agr], VP internal arguments appear in weak Case. In most cases there is no morphological difference between VP external and VP internal arguments bearing the same theta-role; there are cases, however, where this can be observed (chapter 5). The second question raised some lines above is about the role of tense and Case. Contrary to the claim in the minimalist paper, I will defend the assumption that there is no (direct) relationship between tense and nominative case, nor between V or Asp and accusative Case.

4.3. The There-are-No-Agreement-Projections Hypothesis

Within one sub-framework of the Principle & Parameter Approach or even within one trend of the Minimalist Program, there is the idea that functional categories must have semantic content. Researchers that defend such a viewpoint, including myself, allow only for functional categories that bring some semantic contribution with them. A more radical standpoint even is to require that functional categories within the extended projection of the lexical head they are associated with contribute some semantic specification or modification only to that head. This means, for example, that the tense node, licensed by a T° element, is regarded as a functional category in the extended projection of a verb since it specifies the temporal location of the state or the event denoted by the verb. However, since agreement between an argument and a morpheme on the verb does not seem to semantically affect the interpretation of the verb, agreement is not considered to project its own functional projection. Since Chomsky associates nominative assignment with tense, several researchers propose that this category is the only one that is involved in case checking for the subject. Laka (1994) (Abstract for the Utrecht Case workshop, lecture notes GISSL) and Borer (1994), for instance, claim that tense is the case assigning head responsible for nominative case (or in Laka's case even more generally for the uppermost structural case which is Ergative in Ergative-Absolutive languages) and consequently even call it Tense Case. The head which is responsible for case assignment to the object in both analyses is aspect. Aspect, of course, conveys semantically important information. In their analyses, the fact that agreement shows up is nothing but a phenomenon automatically triggered whenever some maximal projection (argument NPs) and a verbal head enter a spec-head relation. There seems to be even more evidence for the fact the subjects are related to tense and objects to aspect.

4.3.1. Tense and Nominative

Kratzer (1988) shows that the tense information on the verb does not only locate the denotation of a sentence with respect to time, but that it may also inform about the existence of a subject in the sentence if there is no Davidsonian argument to be discharged. So Kratzer claims that the sentence

(4) Harry was French

is ambiguous. This sentence can be felicitously uttered in order to describe the fact that some Harry used to have the French citizenship before he gave it up to become American, which he is at the time the sentence is being uttered. Under such an interpretation 'being French' is a stage level predicate, i.e. it just describes a temporary property of its bearer. Under the other interpretation ('being French' as individual level predicate) where there is no Davidsonian argument the predication of past, i.e. the information of that something is located in the past, within Kratzer's theory, goes onto the next available theta role which is born by Harry. This gives a representation:

(5) [before now (Harry₃)] & [French (he₃)]

Here the temporal information does not go to the Davidsonian argument locating the proposition in the past, but rather to the individual denoted by the subject. The sentence says that Harry is to be located in the past, i.e. he does not live anymore when the sentence is uttered (under the relevant meaning). A similar connection between tense and subject interpretation can be observed with four other sentences Kratzer gives. Let's imagine that aunt Theresa is almost a perfect clone of grandmother Julie. Grandmother Julie died five years ago. Aunt Theresa, however, still enjoys life. Then only the (b) and (c) sentences are true, (a) and (d) are not.

- (6) a. Aunt Theresa resembled grandmother Julie.
b. Grandmother Julie resembled aunt Theresa.
c. Aunt Theresa resembles grandmother Julie.
d. Grandmother Julie resembles aunt Theresa.

We see clearly that past tense goes together with a former entity with respect to this world and that present tense is appropriate only if the subject is a fellow in this world now. This shows that there is some connection between tense and the subject indeed. The object, on the other hand does not seem to play any role here.

Another very hard-core proponent for the inseparability of tense and agreement is di Domenico (1994) with her Denotation Principle. She claims that there is one and only one verbal element per sentence which is specified for tense, and that there is also one and only one verbal element which carries specification for Person. For her, person is the crucial feature in order to make a phrase (clausal or nominal) referential. She does not argue for a collapsing of AgrS (which for her is the host of the person feature) with tense, her analysis however points in the direction of unifying tense and person (= agreement).

4.3.2. Aspect and Accusative

Now, let's see whether there is also some semantically justifiable relationship between objects and aspect. As a matter of fact, there is a very tight one. In the PLUG(+) framework, Verkuyl (1992) proposes a compositional semantics for the computation of aspectuality. Here the nature of the object plays the key role for whether a sentence gets a telic (bound, perfective) or atelic (unbound, imperfective) interpretation. Verkuyl assigns to NPs a specification of quantity. NPs are distinguished according to whether they are determined or not, i.e. whether they refer to a concrete, definite set (of things) or not. The former objects are classified as [+SQA] (+specified quantity of A) and are represented by NPs (or better DPs) like *the house*, *four glasses of wine*, *a nice girl*; the latter as [-SQA] (-specified quantity of A). Those are represented by mass nouns or bare plurals (in English), i.e. by NPs like *sandwiches*, *milk*, *poison* and in contrary to the [+SQA] do not give rise to accomplishment, i.e. telic sentences. For illustration: telic predications are not very felicitous with adverbials expressing duration, but they are fine with delimiting adverbials and particles; atelic predications, on the other hand, behave the opposite way. They are fine with durational adverbials and become ungrammatical if combined with perfective adverbials and particles.

- (7) They destroyed the house ^{??}for one hour. /^{ok}in one hour.
- (8) I drank the wine up.

- (9) The destroyed houses^{ok} for many hours. /*in many hours.
 (10) *I drank wine up.

Thus, object interpretation affects the aspectual information of the sentence. This correlation seems to be confirmed by cross-linguistic data. I do not want to go into detail about object interpretation, aspect, Case and agreement here, since this will be the topic of a whole chapter of this thesis (chapter 5). I only want to briefly give some data here that is intended to show the relationship. In Finnish, the direct object may bear either partitive or accusative Case. If the Case is partitive, the object gets either an existential interpretation, or if it gets a strong reading, the sentence must be interpreted as an imperfective statement.

- (11) Anne rakensi taloa
 Anne built house_{PRT}
 ‘Anne built a house.’ ‘Anne was building a/the house.’

If the Case is accusative, the sentence gets a telic reading and the interpretation for the object is necessarily specific (=strong).

- (12) Anne rakensi talon
 Anne built house_{ACC}
 ‘Anne built / (has built) the / a (specific) house.’

Borer (1994) claims that accusative (strong Case) is assigned by the Asp head responsible for telicity.

- (13) Borer’s Generalization:
 a. ASP_E is realized (= telic) iff an object bears strong Case (= Acc)
 b. If an object bears strong Case (= Acc) then it is interpreted as having a strong reading.

This generalization contains a two way conditional. It says that if the object gets strong Case, a telic interpretation is introduced; it also says that if a sentence with a transitive verb is a telic statement, the object necessarily gets a strong interpretation.

Similar observations have been made by Ramchand (1993). She shows that there are two object positions in Scottish Gaelic. In periphrastic tenses, one can see that the one case (accusative¹) is associated with the pre(main-) verbal position, whereas the other one (genitive) is linked to the post verbal position. Furthermore, there is a difference in the aspectual interpretation of the sentences. Preverbal object position and accusative Case force a telic reading, postverbal placement of the object which goes together with genitive Case trigger an atelic reading.

(14) Bha Calum air a'chorab a gherradh.

be-past Calum perfect particle the tree-Dir obj-agr cut

'Calum had cut the tree.'

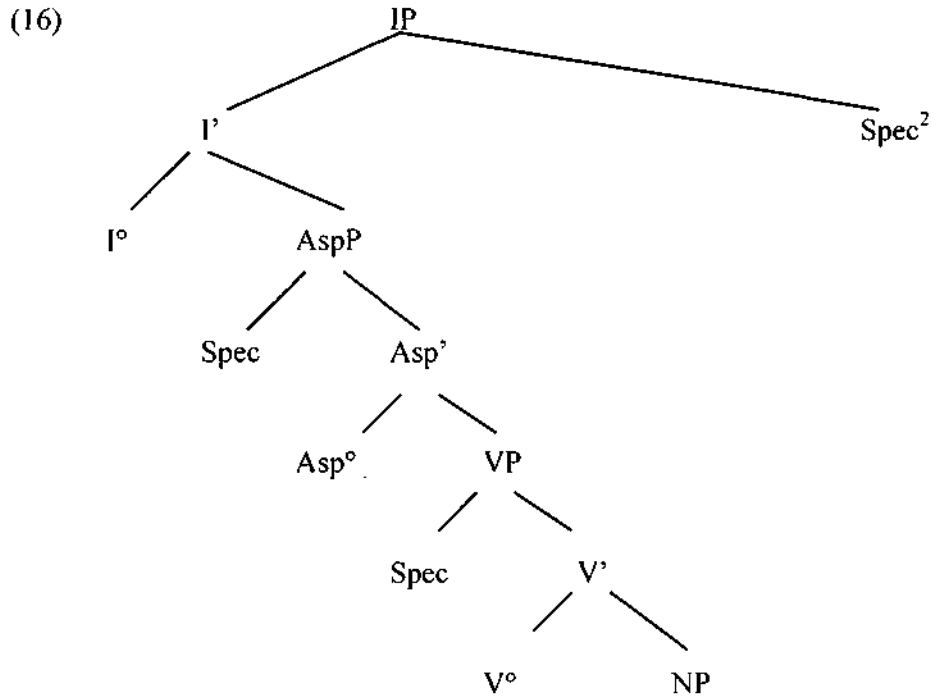
(15) Bha Calum a'gearradh chraobhan.

be-past Calum imp particle cut trees-Gen

'Calum was cutting trees.'

Ramchand therefore proposes that also in Scottish Gaelic Asp is involved in Case assignment to the object, but as a governor (there is no spec-head relation involved). She captures the positional and Case difference by proposing that the object occupies either the complement or the specifier position of the verb phrase. In its base position, the object gets Case from the verb (16 a), in the derived one Asp assigns Case under government (16 b):

¹ Since there is no morphological difference between nominative and accusative in Scottish Gaelic, both Cases are subsumed under the same name (direct Case) and as such they are opposed to genitive and Dative. What matters for our purposes is the direct - genitive difference. That I say 'accusative' instead of direct Case is due to a better transferability to grammars of other languages.



- a. bha Calum air a'chorab agherradh
 b. bha Calum ag gerradh chraobhan

4.3.3. For the Independence of Agr Heads

If tense were the relevant head for Case assignment we would expect that there exist no nominative subjects in tenseless sentences. However there is counter-evidence. In European Portuguese, there exists a verbal form which is called personal or inflected infinitive (Raposo (1987)). Its use is similar to ordinary infinitive verb forms in most other languages, i.e. these constructions never occur as matrix sentences, nor do they allow for a (finite) complementizer. Morphologically, the inflected infinitive is marked for agreement with the subject, but not (!) for tense distinctions. The form is achieved by adding to the verb stem + the infinitive morpheme + the relevant agreement suffix.

² The tree is copied from Ramchand (1993) p. 104/105. She places the specifier of IP to the right of I' throughout her whole dissertation. I could not find any reason for this structural device. As I will argue later, there is nothing I have against specifiers on the right. Ramchand's Gaelic trees remain a mystery to me, however. I would have liked to find a reasonable argument in her thesis.

| (17) | Singular | Plural |
|------|-------------|---------------|
| 1 | eu comer+_ | nós comer+mos |
| 2 | tu comer+es | vós comer+des |
| 3 | ele comer+_ | eles comer+em |

‘I/you sg./he/we/you pl./they to eat+Agr’

The occurrence of sentences with an inflected infinitive form is not free. The restrictions, however, do not play any role in the line of reasoning. Now, what is crucial here is that these inflected forms (must³) have a nominative subject.

(18) Serà difícil [eles aprovarem a proposta].

It will be difficult they to-approve-Agr the proposal

‘For them to approve the proposal will be difficult.’

That shows that the tenseless sentence remains capable of licensing nominative Case. The most reasonable thing to assume is that the Case assigner (or checker) is agreement. Case is licensed without tense. The same argumentation with somewhat less convincing force is Case licensing in some non-indicative constructions. In (contemporary, spoken) French, for example, complement sentences of volitional predicates have to occur in subjunctive mood. There again, one cannot see any tense information, neither semantically nor morphologically. The interpretation of the subordinate sentence depends on the matrix tense. Nevertheless, the subjunctive forms are inflected for number and person, i.e. show up with agreement morphology and consequently license nominative Case. Since French is not a pro-drop language, a phonetically realized subject is obligatory.

(19) J’insiste que vous veniez.

‘I insiste that you come.’

(= present tense)

(20) J’ai insisté que vous veniez.

‘I insisted that you (would) come.’

(= past tense)

³ The obligatoriness is of course difficult to show since European Portuguese is a pro-drop language. Thus the sentence need not contain a phonologically spelled out subject. However, the fact that nominative subjects are possible at all is enough to show that tense does not play the role it is supposed to play.

(21) *J'insisterai / Je vais insister que vous veniez.*

'I will insist that you come.'

(= future tense)

A theory that links Case assignment to tense cannot explain the licensing of nominative without stipulation.⁴

Now, let us pass over to objects and aspect. Borer's generalization above implicates that objects with weak interpretation trigger atelic readings. For her theory to work it is necessary that assignment of strong object Case (= accusative) and perfective interpretation are two inseparable phenomena with one and the same source, namely the involvement of the projection of a perfective aspectual head. Her statement disallows for telic sentences where the object gets a weak interpretation. This, however, does not hold. Although it seems to be the case that objects that get assigned strong Case (may) delimit an action, it is not necessarily the case that weak objects make a telic reading impossible. If AgrO and Asp_E are the same head and are as such responsible for strong Case assignment exclusively, we should not expect both weak objects and perfective aspect to occur together. Weak objects should never show up in telic sentences. This is not the case. Russian and Modern Greek are languages that mark aspect morphologically. In both languages, perfective aspect is completely fine with weak objects. Even mass nouns that according to Borer incorporate into the verb and consequently cannot move to [Spec,Asp_E] are possible in telic sentences, i.e. even [-SQA] as 'weakest' objects do not exclude perfective statements:

Russian:

(22) *On vypil vodki i op'yanyal.*

he perf-drink vodk_{part} and got-drunk

'He drank vodka and got drunk.'

⁴ Apart from that there are facts which show that Kratzer's observation discussed in 4.3.1. about the temporal setting with respect to the subject is not limited to VP external subjects exclusively. In sentences of experiencer and related predicates the verb must show up in past tense as well if the object does not exist anymore. In other words, exactly as in (5) and (6), an entity which existed in our world, but is not alive anymore, requires that the verb carry past tense morphology. If Harry is dead, only the a examples are felicitous, no matter that I still exist and have some psychological attitude towards him:

(i) I knew Harry.
I loved Harry.

(ii) I know Harry.
I love Harry.

Thus, there is no event-semantically necessary link between Tense and subject or nominative Case.

- (23) Ona prinesla khleba i kolbasy.
she perf-brought bread_{part} and sausage_{part}.
'She brought bread and sausages.'

Greek:

- (24) Ekop-s-e psomi.
cut-perf-3sg bread
'He/she cut bread.'

Each of these sentences describes an event in the past which has come to a result, i.e. without any doubt they are telic statements. Nevertheless, the objects are not assigned strong Case. The Russian examples illustrate that very clearly: partitive Case and perfective aspect are not incompatible. The question is: Why should that be so? The sentences describe a situation where some action which was done to some unspecified quantity has come to an endpoint. This state of affairs should be expressible and as the examples show, it is.

Apart from that I have shown in chapter 3, section 3.4.3. that the correlation strong object : telic interpretation is only the result of a tendency. There I have shown that it is the location of the Davidsonian argument which triggers the perfective/imperfective distinction. The alternation object and reference time inside or outside the VP respectively is only one, though the most likely option. I have shown that there is no direct link between (a)telicity and object interpretation at all.

4.4. Agr Projections as Topic Hosts

4.4.1. The Semantics of Agr

At the beginning of this chapter I mentioned the viewpoint according to which functional categories should bear semantic content in order to be licensed. This seems to me to be a reasonable claim. However, I think the attempt to eliminate agreement projections because they do not convey any substantial meaning is not the right way (especially Chomsky (1995), chapter 4, section 10.1. 'The Status of AGR'). In the contrary, I am convinced that those researchers are on the right track who are looking for a semantics of Agr. To this group belong Runner (1993), in a certain sense Anagnostopoulou (1994), and as a very militant promoter Adger (1993, 1994). My proposal is very close to Adger's. I argue that agreement projections are the hosts of topic

arguments, and as I have shown the [+Topic] feature has got an indisputable semantic base. In a certain sense this feature is similar to the features [+Focus] or [+wh] which also unquestionably convey semantic information. A crucial difference, however, is the A-status. In this respect the movement of an argument out of its base position to [Spec,Agr] is more similar to passivization or other raising operations. And indeed, the functional trigger of the latter operations is often information packaging. The system internal trigger is the lack of Case. Here we see the similarities very clearly, and therefore I would like to claim that passivization and topic movement in the sense of this dissertation are related operations.

On the other hand, we have seen that movement out of the VP makes the arguments act as generalized quantifiers (or gives the input for the syntax of quantification) and renders the sentence a quantificational statement. And so it comes that Hornstein (1994), for example, equates movement from the base position to [Spec,Agr] with Quantifier Raising (QR) in the sense of May (1985). I would not like going that far because QR -as far as it exists at all- is likely to be A'-movement. However, topic movement definitely feeds the creation of quantificational structures. My interpretation is that topic movement puts the material into [Spec,Agr] positions which then gets mapped into the restrictor. This part is of type A. The link to the quantifier is one step more, and this last step involves an A'-position. Thus, one can see that movement to an agreement projection is anything but semantically vacuous. The latter sentences also bring some evidence for why scrambling shows properties of both A- and A'-movement.

4.4.2. A Parallel Case: Catalan

4.4.2.1. The Status of Clitic-doubling and the Structure of the Catalan VP

In section 1 of this chapter, I alluded to my belief that agreement projections are the host for topical DPs emerges from the fact that many grammatical phenomena from various languages that are triggered by topical arguments can be related to the involvement of such projections in a fruitful way. In chapter 5 I will present a number of these phenomena and give some analysis. In this section I will consider one language in more detail which behaves very much like German, but uses a completely different strategy to characterize topics. The language is Catalan, the device is clitic-doubling. Clitic-doubling has been an intriguing phenomenon for a long time, the problem being that a sentence seems to be grammatical although there are two arguments within a clause bearing the same theta-role.

(25) Spanish:

La_i oían [a la niña]_i
her_{ACC} listened-to-3pl a the girl_{ACC}
'They listened to the girl.'

Many attempts have been made to solve the problem. One of the most influential ones was to declare the full DP an adjoined, sentence external element. The doubled DP was said to occupy some dislocated position (for a detailed discussion on clitic-doubling see Anagnostopoulou (1994)).

Thus clitic-doubling constructions were analyzed parallel to left dislocation operations such as Contrastive Left Dislocation (26) or Hanging Topic Left Dislocation (27) (German examples modeled after Dutch ones from van Haften, Smits and Vat 1983).

(26) Die Franziska, die wollte ich heiraten.

the Franziska that-one wanted I marry
Franziska - I wanted to marry her.

(27) Die Franziska - ich wollte sie schon immer heiraten.

the Franziska - I wanted her already always marry
'O Franziska - I have always wanted to marry her.'

It has been shown, however, that in the relevant languages the doubled DP is an integral part of the sentence as is the clitic. For this reason, the best analysis to account for clitic-doubling constructions as in (25) seems to me to be a proposal which goes back to Borer (1983). In her approach, clitics are not full constituents, nor do they occupy a syntactically independent position, but are affixed to the verbal head in order to express agreement features. This analysis has been adopted and further developed by Suñer (1988), Sportiche (1992), Mahajan (1990, 1991), Anagnostopoulou (1994) and others. Under such an approach, for example, the co-occurrence of an accusative clitic and a full direct object DP is not different from a construction with a nominative subject and subject agreement on the verb. Within a theory that takes trees as the one in (3) as structural skeleton for sentences, a very harmonic picture arises.

Now, after having argued for a proposal that analyses doubling clitics as agreement markers, we should test the predictions of the theory of this thesis, i.e. agreement projections become active

when the related arguments have the status of a topic. First, let us figure out what the base order is in Catalan. In contrast to German, indirect objects follow direct objects. (28) is a sentence where the key as well as the carpenter are introduced into the discourse.

- (28) Donem la clau al fuster.
give-1pl the key to-the carpenter
'We give the key to the carpenter.'

The reverse of the arguments leads to ungrammaticality.

- (29) *Donem al fuster la clau.

The same holds for the order concerning subjects and objects. In all-new sentences, the word order is verb (> object) > subject. For this reason it has been proposed by many authors (Bonet 1990, Solà 1992) that Catalan (and many other Romance languages as well) should be analyzed as VOS.

- (30) [_F Ha trucat l'amo.]⁵
has called the boss
'The BOSS has called.'
- (31) [_F Ha parat la taula la Coia.]
has set the table the Coia
'COia 's set the TABLE.'

It has been argued that in case of inverted subjects -how the constructions in (30) and (31) are called- the subject gets a narrow focus interpretation (Bonet 1990, and also Samek-Lodovici (1994) for Italian). This is one interpretation indeed. However, if it were the only one, Vallduví's bracketing would not reflect the right information packaging. In order to show that the given wide focus reading is not only possible, but even preferred, Vallduví provides contexts where a narrow focus reading would be pragmatically inappropriate.

⁵ The notation [_F...] is taken from Vallduví (1992), as most examples are. It is supposed to indicate the range of focus projection, i.e. the extent of the new information. See also footnote 15.

- (32) Si aprov'ès la proposta la Generalitat, podriem tirar envant.
if would-approve-3sg the proposal the government, could-1.pl pull ahead
'If the Generalitat approved the proposal, we could go ahead.'

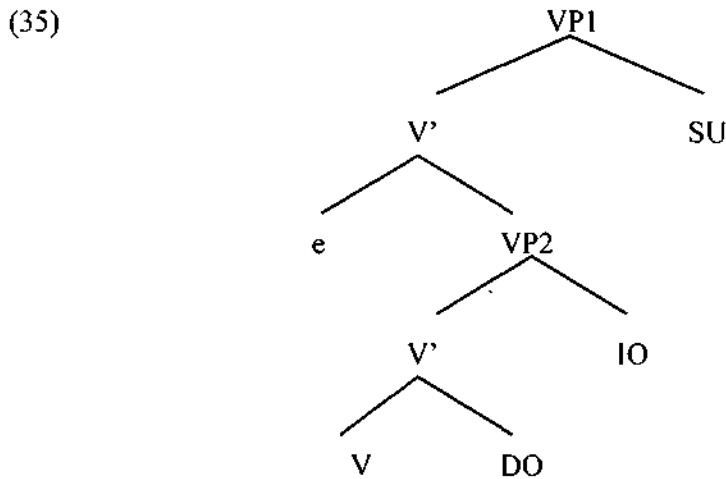
According to an analysis where the postverbal subject necessarily induces a narrow focus reading, (32) should convey the information that there are reasonable alternatives to *la Generalitat* that possibly could approve the proposal, but do not (either). This interpretation, however, is not intended, since *la Generalitat* is the name of the Catalan government and with respect to the approval of the relevant kind of proposals, there are no alternatives to it. Hence, the subordinate clause in (32) cannot be a statement with narrow focus on the subject. Furthermore, whereas the order object > subject is the appropriate one (33a), (34a); the reverse order leads to ungrammaticality (33b), (34b). Example (34) is exactly parallel to our samples in chapter 2 where I exploited the linearization of inherently existentially interpreted indefinite pronouns.

- (33) a. Ahir [_F va rentar la roba el Pere].
yesterday 3sg-past wash the clothes the Pere
'Yesterday, Pere washed the clothes.'
b. * Ahir [_F va rentar el Pere la roba].
- (34) a. Si vol res ningú, (em truqueu.)
if want-3sg something somebody, me call
'If anybody needs anything, give me a call.'
b. * Si vol ningú res, (em truqueu.)⁶

Thus if one combines the two orders (i) verb > direct object > indirect object and (ii) verb > object > subject, by transitivity one gets: verb > direct object > indirect object > subject. If we adopt the reasonable assumption that all-new sentences reveal the base order and combine it with other

⁶ (33) and (34) are good candidates to show that VOS structures cannot be derived from SVO by head movement of the verb and object raising both to the left. Such analyses (Ordoñez 1994 for Spanish and Alexiadou 1994 for Greek) assume that these movements take place in order to background the verb and the object and to put emphasis on the subject. I cannot tell for these languages; for Catalan, however, this does not hold. The bracketing from (33) and the obligatory weak existential interpretation of both arguments in (34), i.e. their completely equal status make impossible an explanation along the lines of the quoted analyses. On the other hand, if verb movement and object movement are assumed nevertheless, there should be given a plausible trigger for these movements plus an explanation why the subjects remains in its base position. I cannot think of a reasonable proposal.

motivated assumptions: hierarchical ordering of arguments (see chapter 2) and binary branching (Kayne 1984), we get a structure for Catalan that exactly mirrors the structure for German.



(35) is the mirror image of (44) in chapter 2. The bracket notation is:

(36) [_{VP}[_V[_V DO] IO] SU]

(36) is in clear contrast with the possible and impossible bracketing devices 1 - 5 from Haider (1992, 1994b). There, he argues that ‘the VP-internal basic serialization patterns of non-verbal elements (i.e. arguments, A. M.) are cross-grammatically invariant’ (p.1), namely IO > DO (>PP). One could argue that Haider’s observation remains valid nevertheless since in Catalan (as in Romance in general) the indirect object is realized in a constituent that is preceded by an element which can be analyzed / simultaneously acts as a directional preposition. However, there are proposals (Meinunger 1992, Starke 1993 among others) that analyze these empty prepositions as pure Case markers not considerably different from morphologically inseparable Case suffixes⁷. Under such an approach the Romance indirect objects are not different from those in German. The decisive point, however, seems to me to be the location of discourse-new (and narrowly focused) subjects. Haider neglects subjects consequently, and furthermore, in the Germanic languages, with which he is mainly concerned, they would not destroy the picture since there they occupy the left most argument position within the clause anyway. However, if the VP internal hypothesis of subjects is adopted, one has to identify the subject’s VP internal position in Romance. According

⁷ Romance datives introduced by the empty preposition *a/à* are (slightly) different from English dative complements preceded by *to*.

to the criteria which I use within this thesis, and which moreover are not very different from Haider's own criteria, the subject must be base generated to the right of the verb and the other deeper ranking internal arguments. This invalidates Haider's theory. And, of course, it is even less compatible with Kayne's antisymmetry theory (1993b) which is even more radical than Haider's proposal.

4.4.2.2. Striking Similarities Between Clitic-Doubling and Scrambling

In the preceding paragraph I have tried to show what a possible VP internal argument ordering might look like. Thereby I used as a main device the linearization of arguments within 'all new sentences', exactly as for German in chapter 2⁸. Now I want to show what is going on when one of the arguments acts as a topic⁹.

When an argument does not belong to the new information, but rather acts as some sort of anchor in the conversation, it gets moved away from its base position (see footnote 8 below and chapter 1, section 3). 'When such a detachment takes place, ... a clitic pronominal, which is bound by the detached phrase, appears with V.' (Vallduví 1992 p. 81)

- (37) L'amo [_F odia el BRÒQUIL.] = object is part of the comment
the boss hates the broccoli.
'The boss hates broccoli.'
- (38) L'amo [_F L'ODDIA,] el bròquil. = object outside
the boss it-hates the broccoli
'The boss HATES broccoli.'

⁸ As in German (as noticed by Haider 1992), it seems to me that also in Catalan anaphoric binding cannot be considered as a good test for finding out what the base order is. The same holds for binding of pronominal variables. For the latter it is always necessary in Catalan that the binding quantifier linearly precedes the bound pronoun. This might be linked to the fact that quantificational statements involve an A' dependency, which in turn involves more complex structures than just the result of a simple movement to [Spec,Agr] (see preceding section).

Therefore I will carry on the ordering test in 'all-new-sentences'.

⁹ It should be noticed that my notion of 'topic' is different from Vallduví's use of the term 'link' which is inspired by the notion of 'topic' (Vallduví 1992). This becomes very important here since the data I am basing my analysis on are mainly taken from Vallduví's dissertation. In chapter 1, section 3, I gave a brief overview over Vallduví's trinomial articulation of information packaging. What matters here is the fact, that Vallduví's links and tail elements refer to discourse-old material that act as discourse anchors in order to facilitate the storage of the new information represented within Vallduví's 'focus', here to be understood as 'comment'. Thus links as well as tail elements can be covered by the term 'topic' in the way I am using it.

For the construction in (38) it could still be argued that the object remains in its base position (this is what Anagnostopoulou (1994) claims for similar construction in Greek). Linearly there is no difference between (37) and (38). However, there are reasons to believe that movement to the right has taken place. The data becomes clearer when double object constructions are considered. In (28) and (29) I have argued that in Catalan, VP internal accusative objects precede VP internal dative arguments. (39) is one more example.

- (39) No he donat encara les notes_{DO} als alumnes_{IO}.
 not have-1sg given yet the marks to-the students
 'I haven't given the marks to the students yet.'

In case the direct object gets a topic interpretation, the new information consists of 'x giving y to the students'. (40) shows that then the dative argument precedes the accusative one. If (39) is considered the base structure, then (40) is derived from it. This can only have happened by rightward movement of the accusative argument.

- (40) No les_j he donat encara t_j als alumnes, les notes_j.
 not cl_{DO} have given yet to-the students the notes

Clitic-doubling is incompatible with the full DP in the base position.

- (40) *No les_j he donat encara les notes_j als alumnes.

A second argument for rightward movement (which is an argument for the base order represented in (35)/(36) at the same time) is the placement possibilities for particles. Given our assumptions about lexical projections, particles like *oi* (right) or *xec* (man) cannot appear VP internally. However, they may occur between the verb and its arguments if these are clitic doubled. If doubling is triggered by argument raising to a VP external position, there is an explanation for the following data (see Vallduví 1992, p. 84).

- (41) a. Fica (*xec) el ganivet (*xec) al calaix, xec!
 put (man) the knife in-the drawer, man
 'Put the knife in the drawer, man!'

- b. *Ficarem (*oi) el ganivet (*oi) al calaix, oi?*
'We'll put the knife in the drawer, right?'
- c. *Fica'l, t_i al calaix, xec, el ganivet_i, xec!*
- d. *El, ficarem t_i al calaix, oi, el ganivet_i (oi)?*

The same argumentation holds for the location of adjuncts. Non-subcategorized material cannot be inserted inside the VP, hence adjuncts appear VP externally¹⁰. Again, if the arguments are located to the left of the adjunct, co-occurrence of a clitic and a full DP is excluded. It is obligatory, however, when the argument has been moved past the non-argumental material.

- (42) a. *(*La_i) va trencar la vidriola, l'any passat.*
cl_{DO} past-break-3s the piggybank the-year past
'She broke her piggybank open last year.'
- b. **Va trencar l'any passat la vidriola.*
 - c. *La_i (*Ø) va trencar t_i l'any passat, la vidriola,*

All these facts are very similar to German scrambling¹¹. The same elements (particles and adjuncts) as well as unmarked versus marked order of arguments has been used to show that scrambling, i.e. movement away from the base position, has taken place.

Also, as in German, any order of clitic doubled (or scrambled, respectively) arguments is possible (for German see chapter 3, example 1):

- (43) a. *Encara no els, les_j he DONAT t_i t_j, les notes_j als alumnes,*
 b. *Encara no els, les_j he DONAT t_i t_j, als alumnes, les notes,*
 c. *Les notes_j encara no els, les_j he DONAT t_i t_j, als alumnes_i,*
 d. *Als alumnes_i encara no els, les_j he DONAT t_i t_j, les notes_j,*
 e. *Les notes_j als alumnes, encara no els, les_j he DONAT t_i t_j.*
 f. *Als alumnes, les notes, encara no els, les_j he DONAT t_i t_j.*

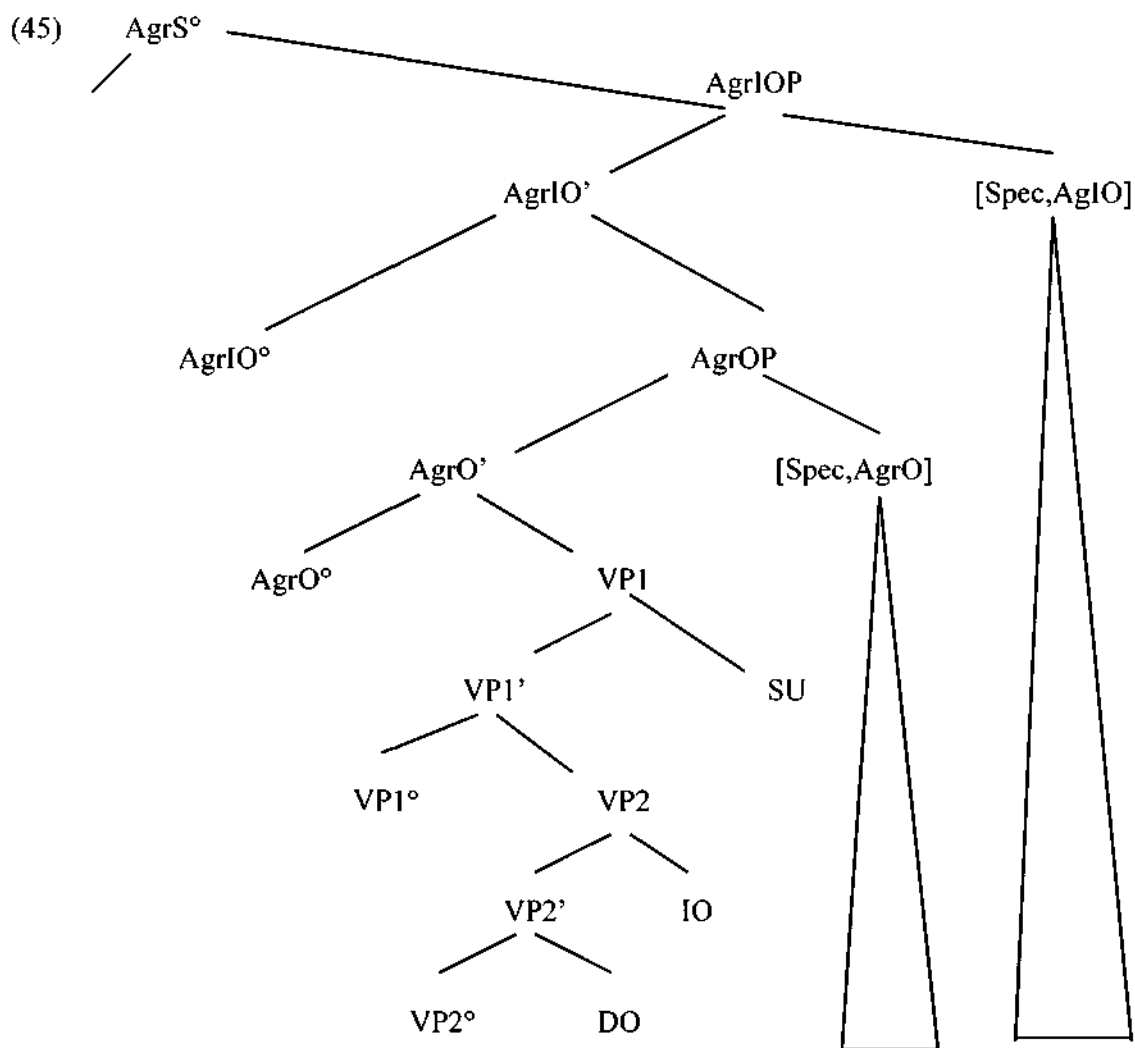
¹⁰ I am aware of the fact that the argumentation here is not compatible with the Larsonian view (Larson 1988). Yet, I follow Vallduvi here since the findings in Catalan are exactly parallel to the German facts.

¹¹ One more piece of evidence comes from phonology. It seems that VP internal material bears the unmarked phonological stress in sentences without narrow focusing (Cinque 1993, Abraham 1993 a, b; also implicitly Vallduvi 1992). If this is adopted, it follows that arguments occurring after the main stress of the sentence are moved out of the VP. Interestingly, these post-main-stress constituents trigger clitic-doubling. Since I have not yet written anything about stress pattern, I present this argument only here in a footnote. This has also to do with the fact that I do not think that unmarked stress blindly goes to the deepest embedded element.

However, taking (39) as the ‘corresponding all new sentence’, (43a) is the ‘most natural’ sentence with the two objects acting as topics. Also (44) shows that simple topicalization in Catalan leads to an output where the derived order of the subjects parallels the VP internal one, namely DO > IO.

- (44) Els pagesos [_F ja l_i’ hi_j van ENVIAR t_i t_j], el bròquil_i, a l’amo_j.
 ‘The farmers [_F already SENT] the broccoli to the boss.’

This again points in the direction that also in the VP external area (which corresponds to the German middle field) Catalan is the mirror image of German. (Verbal heads are on the left, specifiers on the right.) Thus (44)¹² could get assigned the following structure:

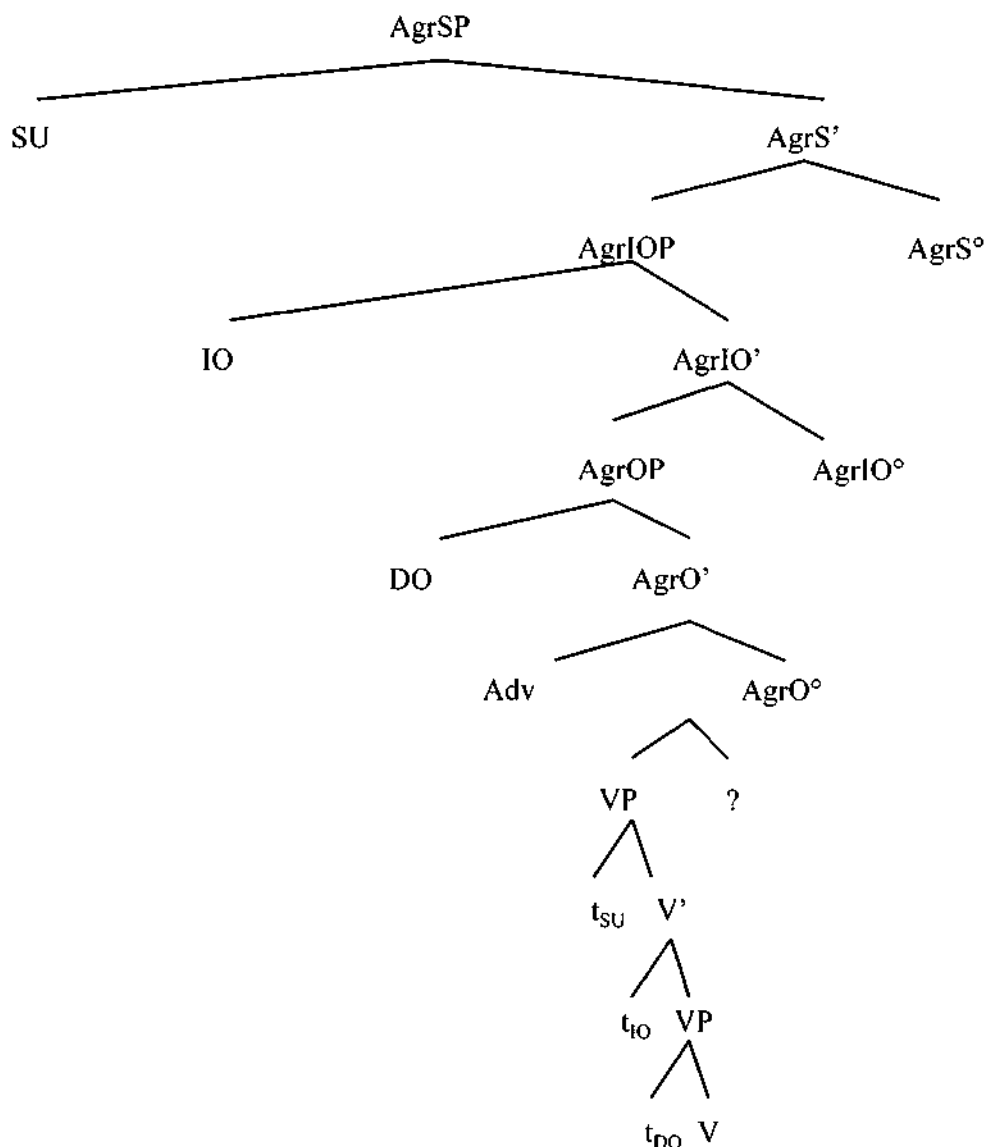


¹² Actually (44) minus the overt subject. (45) presents a grammatical sentence nevertheless, since Catalan is pro-drop.

$[l_i' hi_j van ENVIAR]_k$ t_k t_i t_j (t_{SU}) el bròquil_i, a l'amo_i.

The corresponding German sentence would look like in (46). The prosodic indicator is also stress on the verb, the linear one is the position of the German word *schon* (Catalan *ja*).

(46) weil



die Bauern_{NOM}, dem Chef_{DAT} den Broccoli_{ACC} schon t_i t_j t_k t_i geSCHICKT_T haben
 the farmers_{NOM} the boss_{DAT} the broccoli_{ACC} already SENT have

Thus, we see that clitic-doubling in Catalan and scrambling in German are related phenomena. In a last comparison I want to show once more that the pertinent feature for the activation of an Agr

node is indeed the topic status of an argument and not some specificity, definiteness, or prominence feature. To recall: prominence is the ‘strongest’ form of discourse-linking. Whereas specific and definite DPs may be licensed by accommodation mechanisms and the like, prominent DPs must have a (unique, unambiguous) linguistic antecedent. The classical case of prominent DPs are pronouns. In her dissertation, Anagnostopoulou (1994) argues that clitic doubled direct objects in Greek are another related case. Her claim is very similar to Jäger’s (1994) and Adger’s (1993). They all claim that discourse-linked arguments trigger clitic-doubling or scrambling, respectively (Chapter 3, section 3.4.). Here I want to give one more example showing that discourse-linking is not a blind trigger for the activation of an agreement projection. Also in Catalan, direct object DPs referring to discourse-old entities need not trigger clitic-doubling if the object is not meant to be a topic. Exactly as in German, when scrambling of familiar DPs is blocked (47 b), clitic-doubling is blocked as well (48).

(47) context:

A: Samstag abend hat Peter ‘ne Party geschmissen. Da hat er natürlich auch wieder seine ganzen Lieblingsfrauen eingeladen:

- seine neue Nachbarin
- die Friseurin aus Leipzig
- die Medizinstudentin und
- die CDU-Wählerin.

Die die Friseurin ist sein großer Schwarm, die will aber gar nichts von ihm wissen, dafür die aber CDU Frau um so mehr. Die scheint aber wiederum nur so ein Notbehelf zu sein, so eine Art Eisen im Feuer, wenn er bei der anderen nicht ankommt.

B: Weißt du eigentlich, daß sich die CDU Frau am nächsten Tag bei mir ausgeheult hat? rat’ mal warum?

- A: a.: Na, weil der Peter wahrscheinlich den ganzen Abend die Friseurin angemacht hat, und sich weder um die anderen Gäste, noch um die Leute vom Partyservice kümmern wollte.
- b.: *^m Na, weil der Peter die Friseurin wahrscheinlich den ganzen Abend angemacht hat, und sich weder um die anderen Gäste, noch um die Leute vom Partyservice kümmern wollte.

(context:

A: Saturday night, Peter threw a party. All the women he is crazy about he had invited, of course:

- his new neighbor
- the hairdresser from Leipzig
- the medicine student, and
- the CDU voter

The hairdresser is his great heartthrob. However, she's not interested in him at all, but the CDU woman is. The CDU woman, in turn, seems to be nothing more than a stopgap, a sort of one more iron in the fire, if he doesn't go down well with the other one.

B: Actually, do you know that the next day the CDU woman came to me and had a good cry on my shoulder? And now guess why?

A: literal.:

well because the Peter (b. *the hairdresser) probably the whole evening (a. ^{ok}the hairdresser) up-chat has, and himself neither about the other guests, nor about the people from-the party-service care wanted
'Well, probably because Peter was trying to get off with the hairdresser all night and didn't want to care about the other guests, nor about the people from the party service.')

(48) (same context...)

doncs perquè el Pere probablement (*I') ha persuguit la perruquera tota la nit

well because the Peter probably (*clitic) has up-chat the hairdresser all the night

i no volia ocupar-se ni dels altres convidats ni de la gent del Partyservice

not wanted occupy-se nor of-the other guests nor of the people of-the party service

Again, the input context for the relevant sentence is such that it contains the discourse referent which in the relevant sentence is used as the direct object. Although the DP is familiar then, neither scrambling nor clitic-doubling is good. The reason is that *die Friseur*, *la perruquera*, respectively, both go in the comment about the topic *Peter*, *Pere*, respectively. Together with the verb the object forms a unit which moreover is in the scope of the adverbial *wahrscheinlich*, *probablement*. The object is not a topic, hence the [+Topic] is not assigned and no movement takes place.

To recapitulate: I have shown that with Catalan we have a language that reproduces the crucial effects of German scrambling by a different strategy: clitic-doubling. The theory of functional projections enables us to unify both grammatical devices under a more abstract one. This more abstract phenomenon is the activation of agreement projections. In German silent morphemes (except subject agreement) project specifiers where topical NPs move, in Catalan these morphemes are virtually present, they appear as clitics on the verbal root and can be analyzed as the spell-out of Agr^o-elements. Moreover, movement into the specifier positions of Agr^o takes place as well.

4.4.3. Some Remarks on the Computation of Focus

The headline is many ways ambiguous and furthermore makes use of the term 'focus' which is not in agreement with the usual use of the term within this dissertation. Nevertheless, in the following it will become clear why I have chosen this section title. Within the tradition of generative grammar, there has been no final answer to the question what part of the sentence brings the relevant, new information. There are two main approaches, which are reviewed in detail in Winkler (1994). Here I will give a very brief presentation of these two trends. In the end I agree with Winkler, who states:

Winkler 1994, pp. 197 - 198

‘...I claim that ultimately it is irrelevant which model is employed because the same set of rules, if generalized, determine the widest possible focus reading... As long as syntactic focus theory is a conceptual enterprise, both the top-down and the bottom-up models must be utilized in order to test their variability.’

The quoted text already names the two approaches: top-down and bottom-up¹³. I will begin with the latter.

4.4.3.1. Selkirk’s Theory of Focus Projection

The bottom-up theory goes back to Selkirk’s focus projection approach (Selkirk 1984). Within this theory, assignment of pitch accent, which is important for the phonetic-phonological interpretation, applies first - that means that a word (or better its prominent syllable) gets assigned a tonal feature. Then the Basic Focus Rule can apply. This rule says that a constituent to which a pitch accent was assigned should be interpreted as focus. Focus here means new information. Thus the mapping goes from the phonetic side to the site of meaning. The bottom-up character, however, is encoded in the Phrasal Focus Rule. After an element is provided with the focus feature (by the Basic Focus Rule) (49) applies:

- (49) Focus projection:
- a. F-marking of the head of a phrase licenses F-marking of the whole phrase
 - b. F-marking of the internal argument of a head licenses the F-marking of the head

This rule accounts for the following ambiguities.

- (55) a. weil Drewermann nicht nur [_F[_F Bücher [_F über [_F die [_F Kirche]]]] schreibt].
b. ‘because Drewerman doesn’t only [_F write [_F books [_F about [_F the church]]]].’

¹³ A very interesting account to capture the ambiguity of neutral stress sentences which is neither a bottom-up nor a true top-down mechanism, but which presents a serious alternative is to be found in Jacobs (1991/92, 1992)

The new information of these sentences depends on the context. (for example, questions; see chapter 7 for a more detailed discussion) As indicated by the bracketing, the new information may be only the small DP *die Kirche* (the church), the whole VP, or intermediate projections. The computation starts from the word, to which the focus feature is assigned. *Kirche* as such is an N° , i.e. a head. (49 a) ensures that focus is projected to DP which in this case is *die Kirche*. The DP being the argument of the preposition *über* ‘about’ licenses focus projection to P° (=about) (=49 b). ‘about’ as a head licenses focus projection again, namely to PP. This process goes on until the whole VP ‘*Bücher über die Kirche schreibt*’ is assigned [F], it may, however, stop at any intermediate constituent, giving the appropriate answer. Thus, in this bottom-up approach, the feature [F] climbs up in the syntactic tree. As for the validity of this approach, I will tentatively assume that the bottom-up mechanism is correct for narrow focus constructions. For more on this issue, see chapter 7.

4.4.3.2. Cinque’s ‘Null Theory’, its Problems and Possible Applications

Now, I want to show how a top-down account works. According to Winkler (1994), the top-down approach is the traditional one. However, a very influential article, which has appeared relatively recently, is Cinque’s ‘Null Theory’ (1993). Unlike in the bottom-up theory, the element which gets assigned the phonological stress is not known. The mechanism is such that there is an input structure, and a special algorithm computes where the stress falls. In Cinque’s theory, which has been criticized for its trivialization, takes the syntactic structure of a grammatical string as direct input for the stress computation. In our case:

(56) weil Drewermann [_{XP} nicht nur [_{VP}[_{DP} Bücher [_{PP} über [_{DP} die [_{NP}[_{N^o} Kirche]]]]] schreibt]].

Now, the structurally deepest element is looked for. The most embedded element is the one with most brackets around it, thus [_{N^o} Kirche]. Then Cinque develops a technique which is based on a cyclic mechanism proposed by Halle and Vergnaud (1987). According to that mechanism the brackets are eliminated step by step. With each bracket erasure, the deep most element gets a star. Consequently, the deepest element of the whole structure gets the most stars¹⁴. Most stars

¹⁴ The advantage of Cinque’s theory compared to Halle and Vergnaud’s account is the fact that Cinque does not have to make use of (a version of) the Nuclear Stress Rule (Chomsky and Halle 1968), which assigns stress always to the right. Cinque’s proposal makes use only of the depth of embedding. This allows him to account for

means heaviest stress. (For the details see Cinque 1993, or Reinhart 1995). Thus, although the bracket elimination process is a bottom-up mechanism, the whole machinery is a top-down approach since the input for the stress computation is the whole syntactic tree of the sentence (or the relevant constituent).

When scrambling has taken place, the object is not in its base position anymore, but (at least) in [Spec, AgrO] which is higher than XP in (56).

(57) weil Drewermann [_{DP} Bücher [_{PP} über [_{DP} die [_{NP} [_{N°} Kirche]]]]] [_{XP} nicht nur [_{VP} schreibt]].

In (57) the (complement of the) object cannot be the deepest constituent anymore. Thus, according to Cinque's theory, *die Kirche* should not receive the main stress (58). This prediction is born out. The stress goes either to the quantifying particle (59) or to the verb (60).

(58) *weil Drewermann Bücher über die KIRche nicht nur schreibt.

(59) weil Drewermann Bücher über die Kirche nicht NUR schreibt.

(60) weil Drewermann Bücher über die Kirche nicht nur SCHREIBT.

4.4.3.3. The 'Null Hypothesis' and its Impact for String Vacuous Scrambling

With this at our disposal, we also have a nice account for string vacuous scrambling. In chapter 3 I used the object position with respect to adverbials or other non-subcategorized material as indicator for movement away from the base position. Now, we have another test which is as good as the position test. In cases where the deepest argument does not receive the main stress, it is likely for scrambling to have been taken place. Cinque gives the following examples, originally found in Kiparsky (1966)¹⁵:

(61) weil der Arzt einen PatIENten untersuchen wird.

since the doctor a patient examine will

'since the doctor will examine a patient'

the differences in (55a) and (55b); i.e. the stress pattern in OV and VO languages in a straightforward manner, **almost** free of stipulations. Here I emphasize *almost* because also Cinque must assume that bracketing on the non-recursive side is invisible for stress computation. Thus the algorithm does not work completely blindly.

¹⁵ ...and again transferred into a subordinate clause structure, which does not change anything for our purposes.

- (62) weil der Arzt den Patienten unterSUCHen wird.
since the doctor the patient examine will
'since the doctor will examine the patient'

In chapter 3 I have argued at length that the simple mapping indefinite arguments stay inside the VP, definite arguments scramble, does not hold. However, the prototypical use of an indefinite is the introduction of a new file card, and the prototypical use of a definite is the picking up of an old one and using it as an anchor in the conversation. This is also the intended reading in (61) and (62). We can easily find examples, where a definite DP gets stressed (63), and an indefinite does not (64).

- (63) context: Warum ist Peter nicht hier?
Why is Peter not here?
weil er die SCHWEIne füttert
because he the pigs feeds
'because he is feeding the pigs'
- (64) context: Warum hast du den Rollo so doll geschlagen?
Why did you hit Rollo so rudely?
weil man einen jungen Hund ZÜCHTigen muß
because one a young dog punish must
because young dogs have to be punished

The reason for the stress pattern thus is not (in)definiteness, but (non-)topichood. The definite in (63) is a referential one, in the sense of chapter 3, section 3.2.3.; the indefinite in (64) gets a generic interpretation. Thus, the Cinque's 'Null Theory of stress' gives us a nice account for scrambling despite the lack of positional indicators.

[A caveat, which is too large for a footnote:

Certainly, sentences do not only have one intonational center. In most cases, there are more than one pitch accent within a sentence. One example would be the bridge accent that occurs in complex contrastive statements. Recall an example from the previous chapter:

- (65) weil sie VIER Kühe immer beSAmen(, der Rest wird vom Bullen direkt besprungen)
since they four cows always inseminate
since they always inseminate four cows(... the other ones are covered by the bull directly)

These cases, however, are instantiations of narrow focus, for which my claim is that the ‘Null Theory’ cannot properly account. I would rather analyze them as a combination of Selkirk’s Basic Focus Rule and Krifka’s topic : comment articulation. The two elements, which enter a comparison with alternatives (*VIER* and *beSAmen*) are assigned a [Focus] feature. *VIER* is interpreted as the focus of the/a topic, *beSAmen* as the focus of the comment.

- (66) [_{IP} [_{TOPIC1} sie] [_{TOPIC2} [_F VIER] Kühe] [_{VP=COMMENT} [_F beSAmen]]]

end of the caveat]

I will assume that a ‘Null Theory’ like approach is responsible for stress computation in non-narrow focus structures, i.e. I will assume that in normal topic : comment structures the main accent is assigned to the deepest element. I am forced to the adaptation of a top-down approach for the following reason. My claim is that the VP is mapped into the comment (topics must leave the VP). Through this equation (VP = location of the new information), I fix the range of discourse enlarging potential to a special syntactic constituent. Focus projection in the sense of Selkirk (1984) is unrestricted. It may project the focus feature as high as possible in the tree¹⁶. This is not compatible with the mapping I am proposing. Thus I choose the top-down model for sentences without narrow focusing. Yet, there are some problems with Cinque’s account that I do not want to withhold.

4.4.3.4. Problems and Speculations

Problem I:

It has been known for a long time that in (direct) object > PP configurations, where both arguments occupy their base position, the unmarked stress goes on the object (if this is not a topic)

¹⁶ One could restrict the largest possible focus projection to VP. This, however, is a stipulation which the top-down account proposed here need not make.

and not on the (noun phrase within the) PP. Within an approach where arguments are ordered hierarchically, this would be a clear counterargument to Cinque's theory.

- (67) weil er gerade [_F MILCH in einen Eimer gießt]¹⁷
since he just milk into a bucket pours
because right now he's pouring milk into a bucket
- (68) *weil er gerade [_F Milch in einen Eimer gießt]

The stress pattern in (68) is only acceptable with the bracketing in (69), i.e. with narrow focus on the PP.

- (69) weil er gerade [_C Milch [_F in einen [_F Eimer]] gießt]

However, all possible tests ((anaphoric) binding, neutral word order etc.) prove that the direct object c-commands the PP, thus is located structurally higher than the PP. For a possible solution see Appendix 2).

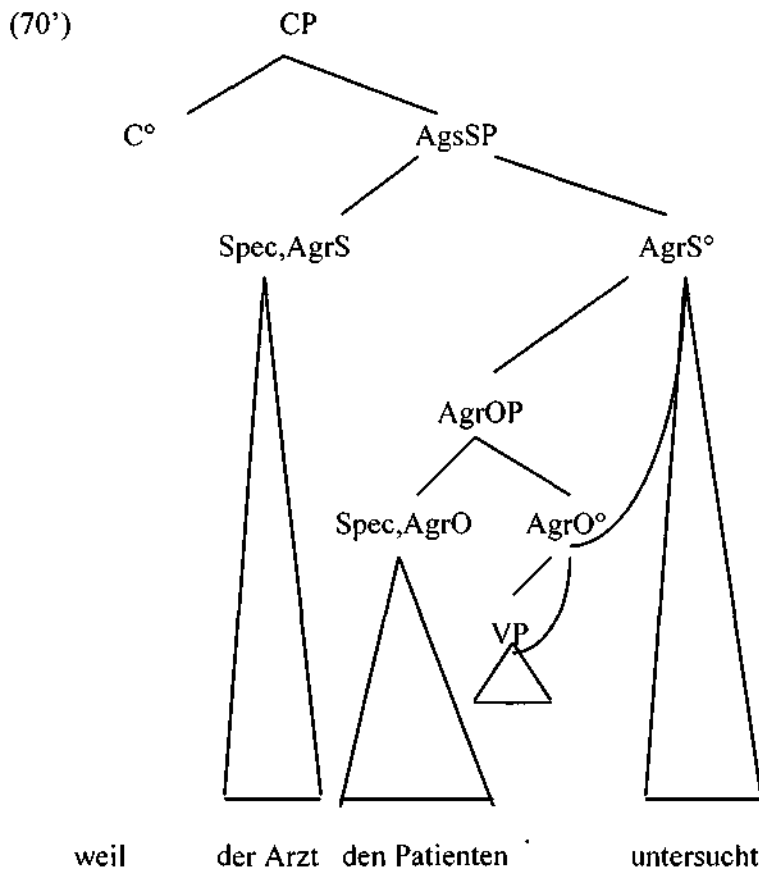
Problem II: The problem comes across in a sentence with a transitive verb, where both the subject and the object get de-stressed because of their (simple¹⁸) topic status, and the verb which appears in a simple tensed form is the only element which carries the new information which should not be understood as contrastive.

- (70) weil der Arzt den Patienten unterSUCHT.
because the doctor examines the patient
'because the doctor eXAmines the patient'

Within the theory presented here, the tree for (70) looks as in (70'):

¹⁷ Following common practice, and following the practice at different places within this dissertation I put F in order to mark the range of the new information. Actually, I should use C for comment since the bracketed string corresponds to the VP.

¹⁸ 'Simple' topic is supposed to mean that the topic does not have a complex focus : background structure.



Thus, if one assumes verb movement in German subordinate clauses, in simple tenses, the verb raises to AgrS° (or I°). This target of verb movement is a position which is definitely higher in the structure than [Spec,AgrO]. Thus, we get in conflict with Cinque's 'Null Hypothesis' according to which for a tree like in (71'), the object should be the phonologically most prominent constituent. Analyses that deny verb movement in German subordinate clauses (Haider, almost all references; Höhle 1991) would not face problems with the theory¹⁹. However, for these latter analyses, the problem arises only delayed. In main clauses, almost everybody assumes that the verb occupies the C° position, which is definitely higher than all other positions following the verb linearly. Still, the stress pattern does not change. The main accent remains on the verb, which cannot be deeper than the object.

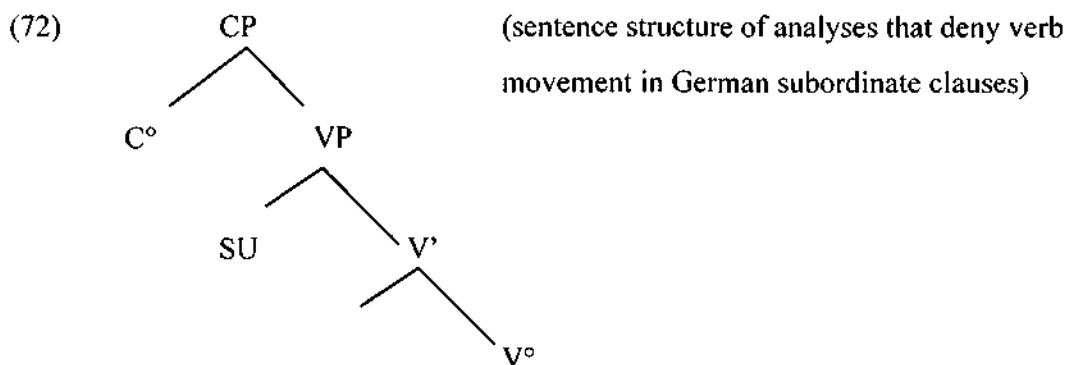
- (71) Der Arzt unterSUCHT den Patienten (gerade).
 the doctor examines the patient (now)
 'The doctor is examining the patient (right now).'

¹⁹ However, there is only no problem if they assume that the object is not in its base position anymore. If neither verb nor object raising is assumed the configuration is such that the object is structurally deeper embedded and hence gets the greater phonological prominence.

(71') [_{CP/IP} der Arzt [_{C°/I'} [_{C°/I'} untersucht] [den Patienten] ...]]

A possible interpretation of these facts could be the following structure. The syntax of German is such that some C position must be filled, i.e. either C° or [Spec;CP] in embedded questions, for example. In main clauses, the verb has to raise to C°. However, the verb is the element which brings the new information. Since all the arguments are topics, the verb is the only comment part. Since the location of the comment is VP, that means that the verb has to be reconstructed to its base position. The indicator or trigger for reconstruction is the stress pattern. Thus, at some level of representation (presumably LF), the verb carrying the greatest phonological prominence is indeed the deepest constituent²⁰.

Problem IIa: Moreover, one more difficulty arises for the latter analyses according to which the verb does not move. It is a well known fact that in all-new sentences consisting of a verb and a single argument the latter gets the pitch accent no matter whether the argument is an (underlying) object or a (true) subject. Subjects always c-command the (trace of the) verb, hence it comes as a surprise that subjects carries the accent while the verb does not (73) / (74).



(73) (weil) [_F der CHEF angerufen hat]
 (because) the boss called has
 '(because) the BOSS called'

²⁰ This idea seems to me to be a reasonable proposal. As I have alluded at the beginning of this dissertation, there seems to be a sort of job sharing between the linear and the prosodic site of language. The facts point in the following direction. In configurational languages, the constituent order is relatively fix. Yet, the better use of intonational means enables these languages to encode the topic : comment and/or focus : background articulations to an important extent by prosody. See, for example, the theory of deaccenting and deletion developed by Tancredi (1992) for English, and the whole work by Vallduví. The picture that emerges is: deaccented material goes into the presupposition (topics), accentuated material is discourse-new (focus, comment). This way the old: new mapping does not need so much movement. The German problem (Problem II) is puzzling in so far that the V2 parameter is a very strong configurational requirement. Reconstruction into a different position (for interpretational purposes) can only be triggered by intonation.

(74) *(weil) [_F der Chef ANgerufen hat]

(75) (weil) der Chef [_F ANgerufen hat]

However, since I do assume verb movement, these facts do not argue against the theory; and the incompatibility with Cinque's 'Null Theory' should rather be considered as an argument against theories that promote a verb-in-situ analysis.

Problem III

My analysis of Catalan suggests that the VP is left-recursive in that language, i.e. the structure is (36), here repeated as (76):

(76) [_{VP}[_V[_V DO] IO] SU]

According to the 'Null Theory' one would expect that -given a sentence with a DO and an IO, both in the base position- the accent should fall on the DO. This, however, is not the case:

(77) [_F Donem la clau al FUSTER].
give-1pl the key to-the carpenter
'We give the key to the carpenter.'

(78) *_F Donem la CLAU al fuster].

The same problem arises in transitive sentences with object and subject in situ. The main accent does not fall on deeper object, but on the subject.

(79) [_F Pararà la taula la COIA].
set-fut-3pl the table the Coia
'Coia will set the table.'

(80) *_F Pararà la TAULA la Coia].

I note this stress pattern as a big problem for the theory developed here. I must admit that I do not have a satisfactory explanation for these facts. My speculations are that there seems to be a principle on work which is close to a phonological operation called Final Strengthenig (FS). FS has been proposed by Uhmman (1991) for German in order to account for the fact that when there

are two (or more) elements which according to the stress computation are equal in accentuation weight, the last one, i.e. the rightmost designated syllable gets an extra beat (see also Jacobs 1992).

(81) FS

For any grid R corresponding to an intonational phrase:

One further '*' is added to the last of the highest columns of R.

Certainly, the FS cannot be integrated into the 'Null Hypothesis' without any problems. However, there seems to me to be something going on along these lines. The object and the subject are both intonational phrases themselves. The level where some FS like operation is required must be the VP. Thus, when there are two adjacent arguments in situ, the right one gets an extra accent. This purely phonological rule then blurs the one-to-one syntax phonology mapping to some degree.

Thus, despite all the problems I claim that a top-down approach much like Cinque's 'Null Theory' does hold for the computation of accent placement. Furthermore, I believe I have given some ideas how the one or the other problem could be solved.

4.5. The Mapping

Summarizing the ideas developed so far, the picture that arises can be illustrated in by the following mapping (which I have originally proposed in my ConSOLE talk from 1992):

| | | | |
|------|------------------|--|----------|
| (82) | [CP...[AgrPs... | | [VP...]] |
| | topic(s) | | comment |

Within the terminology used in Adger (1993), this mapping is a global one. 'Global' means that the interpretation of a constituent depends on its position inside or outside the VP. The alternative to the global mapping is the local mapping. For the latter, it is not only the VP internality vs. externalality of an argument which triggers the relevant reading, but its concrete position in the tree. Thus, the topic reading does not arise automatically on a VP external argument, but is linked to an agreement position. This is more correct since indeed a lot of constructions involve VP

external arguments which get a non-topic interpretation nevertheless. For example, main clause initial arguments, i.e. preverbal constituents in German, may get a weak reading (83), or serve for focus projection (84). However, the position they occupy is undoubtedly [Spec,CP], clearly a VP external one.

- (83) Viele Freunde hat er wahrscheinlich nicht.
many friends has he probably not
Probably, he doesn't have many friends.

Viele Freunde here is interpreted in the scope of *wahrscheinlich nicht*, i.e. as if it occurred in the base position.

- (84) [_F GERhard ist gekommen].
Gerhard is come
'GERhard 's come'.

Also here, the subject behaves as were it still in its base position.

Adger's examples against the global mapping come from Catalan constructions where weak, unfamiliar objects occur in a VP external position.

- (85) En aquesta facultat, [uns quants alumnes], deus haver seduit t, amb els teus encants.
in this faculty, a number students must-2.sg have seduced with the your charms
'In this faculty, you must have seduced several students with your charms.'

I confess that the local mapping therefore should be considered the superior one. However, movement to [Spec,CP] is A'-movement. Furthermore, Vallduví (1992) argues that the constituent '*uns quants alumnes*' occupies an A'-position as well. Since it is generally assumed that A'-movement displays reconstruction effects whereas A-movement does not, the extensive discussion about the validity of the one or other approach turns out as not so crucial.

4.6. Problems with Adjuncts

An issue with respect to (82) which is much more important is the question of adjuncts. If nothing more is said, it might seem that only subcategorized material can be mapped into the comment. That would mean that non-subcategorized material is not able to enrich the discourse. This is clearly not the case. New information in the discourse can be added by arguments, verbs, as well as by adjuncts. This is in contrast with Selkirk who claims that (focus on) adjuncts do(es) not ‘contribute to the old/new information content of the utterance’ (Selkirk 1984, p. 231). I rather agree with Winkler (1994) who shows that adjuncts may contribute new information, but that the intonational pattern is different than with arguments. She refers to Gussenhoven (1983) and presents the following facts. While arguments are able to serve for focus projection, adjuncts are not. That means that in a construction involving an adjunct, focus on the adjunct does not license focus spreading over the whole VP. The focus is restricted to the adjunct, which represents the new information:

- (86) weil er (*[_F] [_F im [_F ZELT]]) geraucht hat(*)
 since he in-the tent smoked has
 ‘since he smoked in the TENT’

If ‘focus projection’ is intended, i.e. if the comment is to contain the adjunct as well as the verb, the verbal root needs an extra pitch accent.

- (87) weil er [_F im ZELT geRAUCHT] hat
 ‘since he SMOKed in the TENT’

This fact, however, is not the only instantiation of more than one pitches within the comment. A similar case arises with two (or more) VP internal arguments. Then also the thematically and structurally higher argument forms its own independent intonational phrase and carries a pitch accent.

- (88) weil gestern [_{VP(F)} [viele KINder] [_V BALL spielen]] wollten
 since yesterday many kids ball play wanted
 ‘since yesterday many kids wanted to play ball’

Thus, bridge accent is not necessarily an indicator for scrambling (as claimed in Jäger 1993) and as it might seem from the discussion in section 4.4.3.1.

I will claim that the intonational pattern with adjuncts as observed by Gussenhoven (1983) and adopted for German by Winkler (1994) is a result of the following factors. The adjunct occupies a VP adjoined position (see below). The verb raises out of the VP. (The finite verb to the right headed AgrS° in subordinate clauses or to C° in main clauses, infinite forms to some functional head between the VP and AgrSP). This causes the adjunct to be the deep most constituent. Consequently it gets the main stress. In the cases where the verb is supposed to belong to the range of focus projection, it must be reconstructed into the base position. This reconstruction is again signaled by stress on the verb. Thus, the observed intonational pattern is another instantiation of problem II from section 4.4.3.4. In a certain sense, the direct mapping of the virtual configurational structure is overridden or modified by prosodic means.

As hinted above, my claim is that adjuncts which bring along new information are VP adjoined. This claim is motivated by the fact that discourse-new adjuncts are located very close to the verb, i.e. they must occupy a relatively deep position in the tree. Topical arguments (anaphoric definites (89), generic bare plurals (90)) and VP boundary particles are located to the right of adjunct and verb.

- (89) weil sie den Rock (doch) [wegen der HITze] angezogen hat
since she the skirt (prt) because-of the heat dressed has
'since she put the skirt because of the heat'
- (90) weil sie Schweine (doch) [im HOF] schlachten
since they pigs (prt) in+the yard slaughter²¹
'since they slaughter pigs in the yard'

There is a whole theory about adjunction. Chomsky (1986) and May (1985) argue that adjunction creates a hybrid status for the adjoined phrase. They are both concerned especially with the VP as adjunction site. Elements that adjoin to the VP are neither inside nor outside the lexical projection.

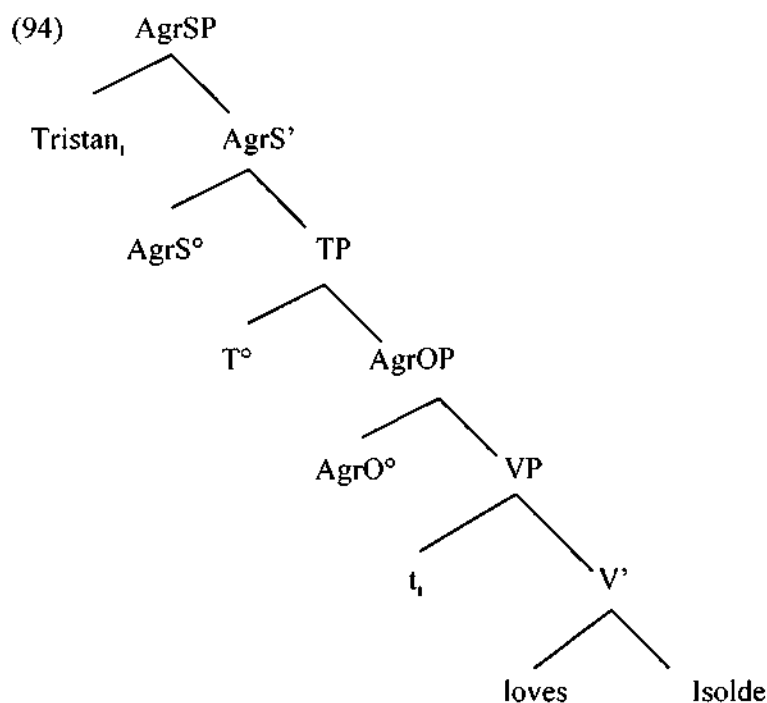
²¹ (90) might be considered a further confirmation of the claim that the adjunct belongs to the VP. With only 'im HOF' as focus, the sentence has the following interpretation:

- (i) Gen_x [pig (x) & they slaughter (x)] [(they slaughter (x)) in the yard]

Thus, the pig-slaughtering is mapped into the restrictor, and the location, i.e. *im HOF*, is mapped into the nucleus. Within Diesing's theory (see chapter 1, section 1.4.3.1.) that means that *im HOF* is (within) the VP.

I argued that specifier positions of agreement projections are A-positions. Thus, according to RM (1) should be an illegitimate structure. Nevertheless, (1) is a perfect sentence. This problem, i.e. the crossing of arguments by moving to their Case position, has been noticed since AgrO was generally assumed as the projection where direct objects move. Several proposals have been made to account for the possibility of nested A-dependencies.

Chomsky (1992) develops his theory of *Equidistance* in order to give a solution to the problem. His proposal is based on a derivational view of structure creation. To see how Chomsky's theory works, let's start with an unproblematic case. For English, Chomsky assumes that the only thing that moves in overt syntax is the subject. With the further assumption that specifier positions are not necessarily projected, but only created when needed²², the VP internal subject may (and must) raise to [Spec,AgrS] without crossing any intervening element, and thus the Spell-out representation in (94) is well formed:



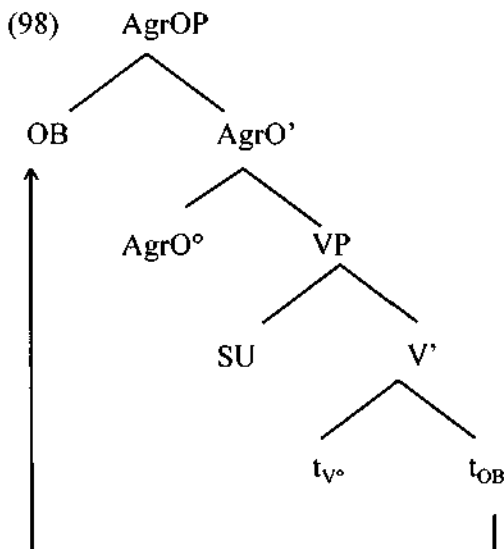
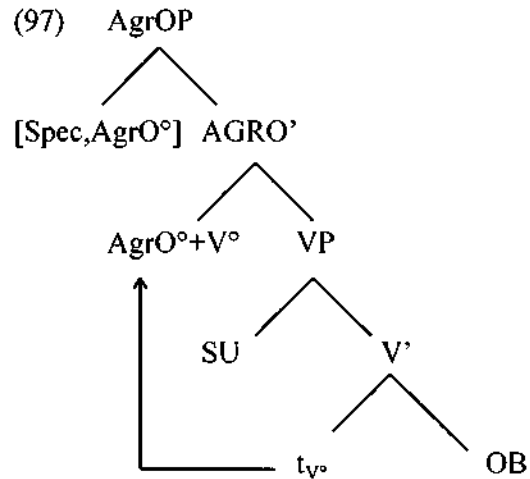
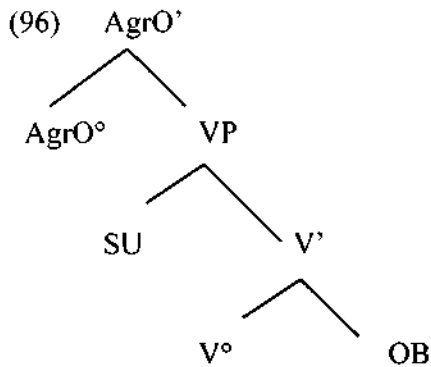
The RM violation only arises when also the object moves. Well, Chomsky's clever trick is the following. The verb has to move as well. At LF, at the latest, English verbs also have to have raised and adjoined to AgrS° (or possibly C°). The verb raises through head-to-head movement. That means the verb starts in its base position and adjoins to AgrO° (step (96) to (97)). This move creates the chain $C = \{V + \text{AgrO}^\circ, t_{\text{verb}}\}$ with the head in AgrO° and the foot as the trace heading

²² 'Needed' means 'present by virtue of being filled or targeted for movement within the derivation.'

the VP projection. This move enlarges the so-called minimal domain of the verb(al element). The minimal domain of V° is every node contained in VP, not including V itself, thus (SU, OB). When V° adjoins to AgrO° , the resulting head $V+\text{AgrO}^\circ$ has a minimal domain with one more member, namely $[\text{Spec}, \text{AgrO}^\circ]$. Now, Chomsky introduces the following definition:

- (95) If α, β are in the same minimal domain and c-command Γ , they are equidistant from Γ .

For our example in (5), that means that $[\text{Spec}, \text{AgrO}^\circ]$ and SU are equidistant from OB. Thus the object may leave its base position and raise to $[\text{Spec}, \text{AgrO}^\circ]$. The subject trace does not count as an intervener as it is not closer, but exactly as close as $[\text{Spec}, \text{AgrO}^\circ]$ with respect to the object trace. Thus for this moment in the derivation, the output does not violate RM (98).



Consider that under such an analysis, overt movement of the object should be prohibited if no overt verb raising had taken place before. Only the moved verb makes the two relevant positions equidistant. This seems to be confirmed by the behavior of Scandinavian object shift. Since the Scandinavian languages are V2, the verb raises to the highest functional head (C°) in root clauses. Assuming HMC, this implies that the first steps in the derivation above must have been as described in the preceding paragraph. Thus in V2 sentences, object shift is allowed:

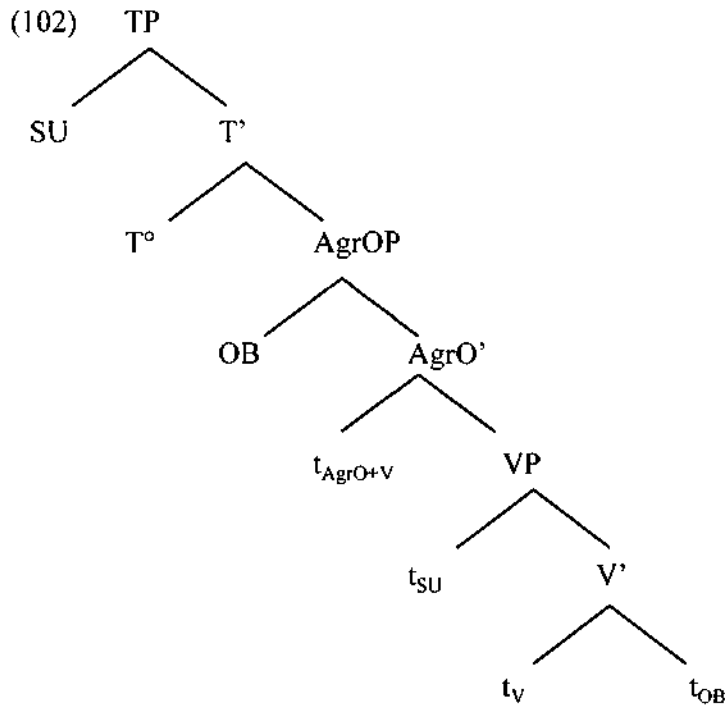
- (99) Peter læste den, ikke t_i .
Peter read-past it, not t_i .
'Peter didn't read it.'

In embedded sentences the verb does not move. Its position relative to the negation adverb indicates that no verb movement has taken place (100). In that case then, object movement is also impossible (101).

- (100) at Peter ikke læste den
that Peter not read it
'that Peter didn't read it'
(101) *at Peter den, ikke læste t_i
that Peter it not read

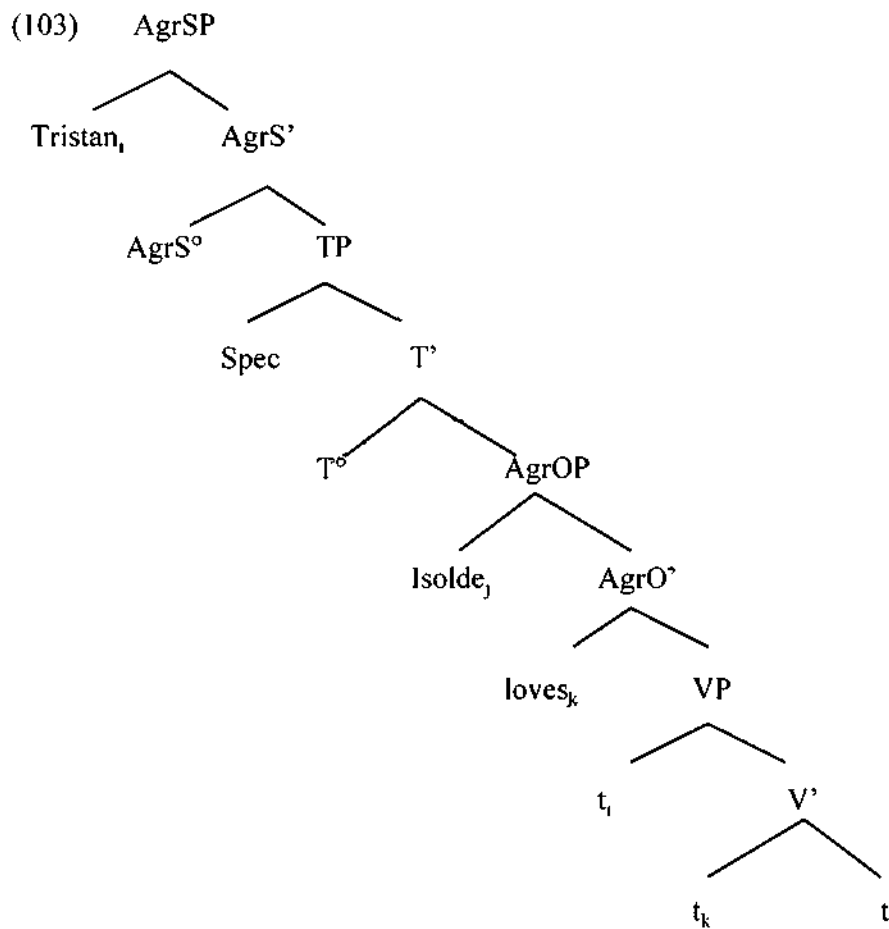
The equidistance idea is reminiscent of Baker's (1988) Government Transparency Corollary (GTC). However, as Jonas and Bobaljik (1993) observe, the equidistance concept is not transitive as GTC is. That means that further movement of the $V^o + \text{AgrO}^\circ$ complex does not render more positions equidistant. In a system of the order of functional categories Chomsky assumes, TP is the next higher functional layer above AgrOP. Thus obeying HMC, the $V^o + \text{AgrO}^\circ$ complex adjoins to T° . This step, however, does not render [Spec,TP] and [Spec,VP] equidistant. The head chain $C = \{[T[\text{AgrO}^\wedge V]], [\text{AgrO}^\wedge V]\}$ is different from the very bottom chain $C' = \{[\text{AgrO}^\wedge V], V\}$. There is no chain for which more than two specifier positions are equidistant. What the further additional movement does is to render [Spec,TP] and [Spec,AgrO] equidistant. And this is what Chomsky needs. As soon as these positions both count as equidistant to VP and everything it

contains, the subject is allowed to move from its original position without causing a RM violation, at least for the Scandinavian structure in (99).



This way, the Danish sentence in (99) comes out as grammatical.

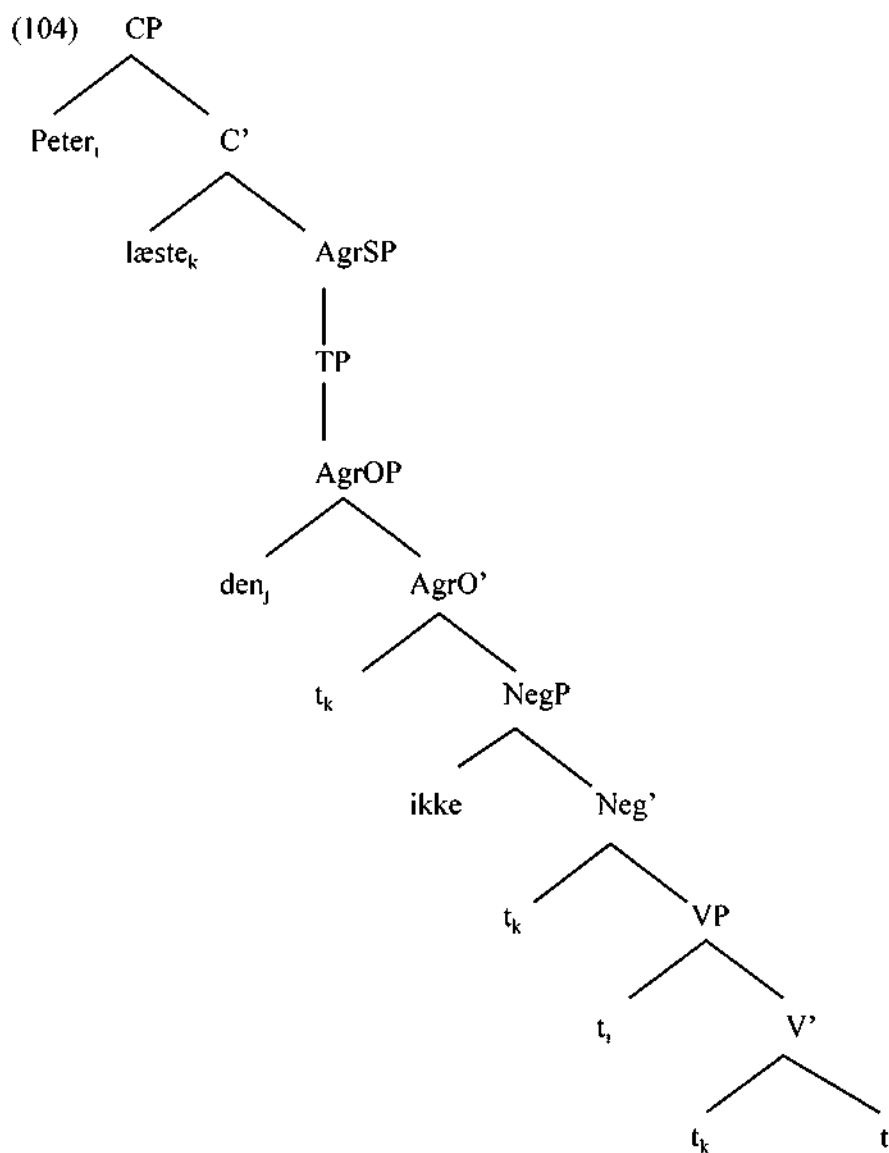
Now, if we do not ask further, we could be satisfied with what Chomsky has proposed. However, a closer look reveals some problems. Let us go back to the English example in (95). This is the spell-out or pre-spell-out structure. However, the derivation continues to obtain the final representation where every XP and X° is in its designated position, i.e. the verb under AgrS° (or even C°) and the object in [Spec,AgrO]. The derivation should go like this: V° raises to AgrO°. That move renders [Spec,AgrO] and [Spec,VP] equidistant. This provides the chance for the object to move to [Spec,AgrO], as described above, no RM violation is triggered since [Spec,VP] does not count as an intervener. However, at this point in the derivation we get a RM violation.



Only [Spec,AgrO] and [Spec,VP] are equidistant with respect to what VP contains. That means that now the object in [Spec,AgrO] is an intervener. It interrupts the chain $C = \{\text{Tristan}, t_i\}$. Since the subject is already in [Spec,AgrS] in English, the equidistance relation between the subject position [Spec,AgrT] and the object in [Spec,AgrO] can never be obtained. I do not see any reasonable solution to the problem. I just see stipulations. The other thing is that the equidistance story crucially depends on a purely derivational view of structure generation. Under a representational perspective or a combination of derivation and representation the theory does not work at all. I think we should eliminate the equidistance story and think of a better explanation. Nevertheless, before I will try to do that I will show some empirical problems with the equidistance explanation.

One point that is also important for Chomsky's idea is that for his explanation to work it is crucial that VP is selected by AgrO. Only this configuration permits such a local relationship of a subject and a object position that these are potentially equidistant. If something else than AgrO

(immediately) selects VP, this head would be the first target of the verb. Then its specifier would be equidistant with the subject, however without any advantage for the object. Then, there would be no way for it to raise out of its base position. Is there such a configuration? The most recent treatments of negation in syntax propose that negation follows X-bar syntax and projects according to it. Thus, negation is a head with a complement and a specifier that shares the negative property of the head (cf. Haegeman 1992). The structure of negation is universal, languages differ in how they make use of it. There are languages that have a negative head (Italian, Russian); in those languages this head behaves like a verbal affix and cliticizes onto the verb. Then there are languages that have a morpho-phonological spell-out of both the negative head and the specifier. French is such a case. And finally, there are languages that only use a negative adverb to be base generated in [Spec,Neg]. Such languages are represented by German and Scandinavian for example. Nevertheless, there is a phonologically empty head, that hosts and licenses the specifier position of *nicht*, *net*, *niet*, *ikke*, *inte*, *ekki* and the like. If we incorporate negation into the syntactic tree for the representation of (99), we get the following tree:



There we cannot get an equidistance creating structure where [Spec,AgrO] and [Spec,VP] have the same distance from the object.²³

We face the same problem in the analysis for German. Nowadays there co-occur two proposals for German sentence structure. The more traditional one, which I adopt in this thesis, deals with head final structures. Except for the order {complement > head} for the verb and all functional heads (but C°), we get the same representation as in the Danish example in (104). The object has

²³ The problem becomes even more relevant if one adopts Kayne's (1993) X-bar theory. Kayne proposes that there is no adjunction anymore. A maximal phrase either has to be a complement or a specifier. Within this framework adverbials are licensed in specifier positions of functional heads (see also Alexiadou (1994)). Thus any adverb type that precedes the VP creates this equidistance blocking structure, like negation in example (104). Object shift always crosses those adverbs (formerly analyzed as VP adjoined) and should then introduce a RM violation. Interestingly, the evidence that is always given to show that object shift has taken place is adverb positioning.

scrambled (shifted) and negation intervenes. This should cause the same RM violation as in Scandinavian.

(105) Peter las das Buch nicht.

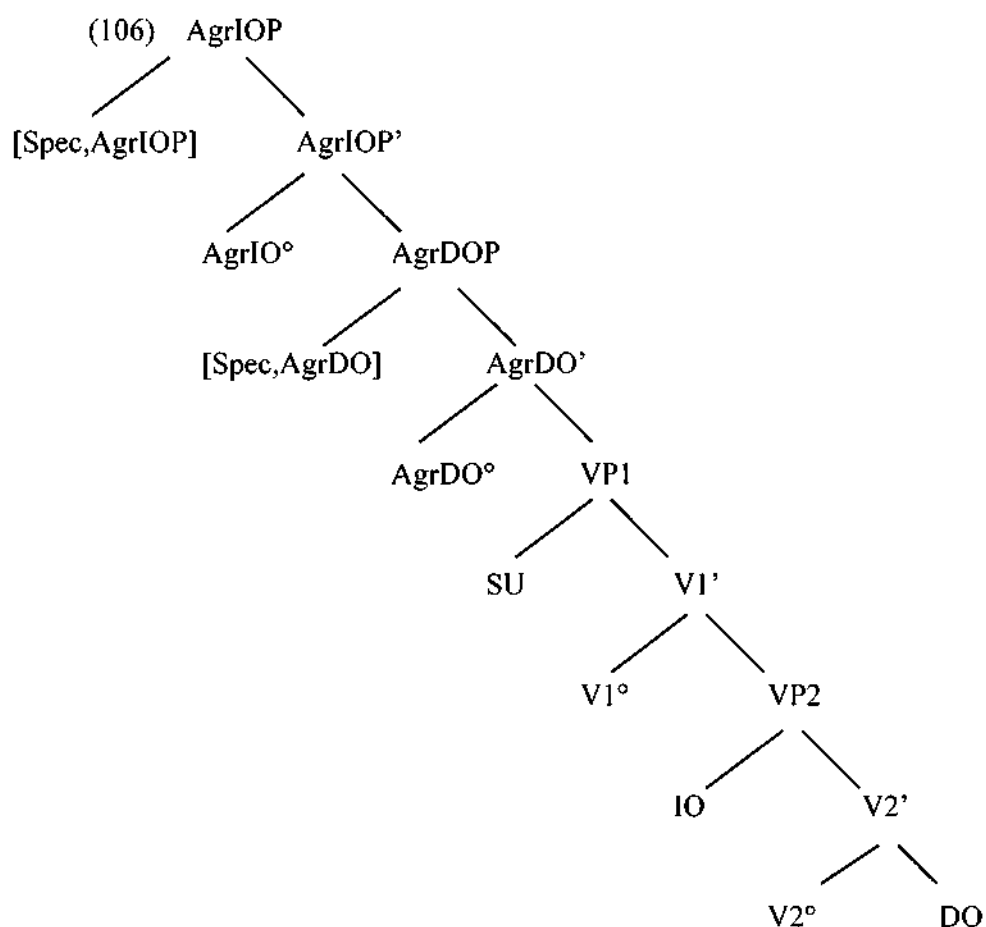
Peter read the book not.

‘Peter didn’t read the book.’

If we choose the other version and analyze German as SVO language, as it is fashionable now, we get into even more trouble. The analysis of Dutch in Zwart (1993), following the main idea of Kayne (1993b), proposes that the Germanic pattern is {head > complement} throughout. In such analyses the verb occupies two positions. Either it raises and adjoins to C°, or it stays in its base position, i.e. exactly as in Scandinavian. The first case is triggered in V2 contexts, i.e. main clauses; the latter one in embedded sentences (Jan-Wouter Zwart p.c.). To account for the linear order of {object > verb} he is forced to say that, while the verb remains in situ, the object moves to [Spec,AgrO]. This is exactly what the equidistance story wants to rule out. Movement to [Spec,AgrO] is only possible when the verb has moved as well.

A more general problem is raised when we consider double object constructions with indirect objects. There is no consensus currently on whether dative should be analyzed as a structural Case. Nevertheless, it is claimed more and more often that dative should be regarded as such (Moltmann 1991, Schmidt 1994b and references quoted therein). A list of arguments in favor of a structural Case analysis for dative can be found in Meinunger (1995b).

If one implements dative as structural Case into the minimalist framework, one can see again that Chomsky’s trick is untenable. By combining X-bar theory, Larsonian structure and a thematic hierarchy where goal is higher than theme (chapter 2) we get a VP like that in (106). Thus the lowest Agr head should be associated with the lowest object, i.e. AgrDO should select VP and should itself be selected by AgrIO. (I skip here other possibly intervening functional categories.)



V2° raises to V1° in order to link all arguments together. Within the equidistance theory this move would render SU and IO equidistant from DO. However, there is no position the object could move to. The next available one is its designated position [Spec,AgrDO], which, nevertheless, is too far away. The first step has already shown that the equidistance theory doesn't work here either. The problems multiply as the derivation continues.

Other proposals that recognize argument crossing as a possible problem for RM and try to give an account for the phenomenon are Ferguson and Groat's 'visibility condition' (1994) or Haegeman's 'relation preservation condition on A-chains' (Haegeman 1993). These accounts boil down to directly relating agreement specifiers to VP internal positions (for example [Spec,VP] to [Spec,AgrS]). I claim that this is not very explanatory since it stipulates that phrases are inserted in the base position with the instruction where they have to move. I think that, firstly, this is not the case (cf. passive and other raising operations, case alternations partitive : nominative : accusative) and, secondly, we should look for a true explanation where the

observations can be accounted for in a less stipulative manner, i.e. we should look for a principle which derives the order in an independent fashion. This I will try in the next few paragraphs.

My proposal to account for the A-movement crossing will make use of the spirit of Rizzi's theory of 'relativized minimality' (= RM, Rizzi 1990) plus some refinements of it. Rizzi shows that movement of any sort (A-, A' and head movement) obeys the same constraint: movement to a position X cannot cross a position of the same type. This theory is a representational one, in that an out-put structure is ruled out if there is an intervening element between the moved element and its trace, with both the moved and the intervening element being of the same type. This explains the unacceptability of the following sentences.

(107) *Why do you wonder [who left t]

(108) *John seems that it is unlikely [t to win]]

(107) is ruled out because *who* is in an A'-position and intervenes between *why* which also occupies an A'-position, and its trace, and thus blindly binds it. In (108) both *John* and *it* are in A-positions. *it* is closer to the trace of *John*, binds it and thus causes the RM violation. To summarize: what is crucial for the further argumentation is that A'-movement and A-movement are restricted in the same way. For this reason, Rizzi gives a formulation that does not make reference to a special type of position.

(109) Relativized Minimality (p.7):

X α -governs Y if there is no Z such that

(i) Z is a typical potential α -governor for Y

(ii) Z c-commands Y and does not c-command X

Rizzi was well aware of the fact that this formulation was too restrictive. In some cases, an element of the same type may intervene without inducing an ungrammatical structure. Compare (107) with (110):

(110) ⁽⁹⁾Which paper do you wonder who reviewed t ?

Although *who* in an A'-position intervenes, *which paper* - also in an A'-position, but further away - remains capable of binding and thus identifying its trace. Rizzi stipulates that referential

expressions are not subject to RM, they carry a referential index that renders them able to identify their trace from anywhere. For Rizzi, a referential index is linked to a referential theta-role. He modifies the classical argument/adjunct distinction and proposes that theta-roles like agent or patient make phrases referential whereas roles like manner do not. This way he explains the contrast between (111) and (112).

(111) Which linguist do you wonder whether I like t_i ?

(112) *How do you wonder whether Artemis behaves t_i ?

Thus, though the manner phrase is theta-marked by the embedded verb in (112), i.e. argumental, it cannot be extracted from a weak island since it lacks a referential theta-role.

However, Rizzi's RM is still too rigid to explain all data. Within his theory of referential indices, only arguments can bear a referential index, since only arguments are linked to certain thematic roles. Nevertheless, extraction of adjuncts out of weak islands is possible. Normally, adjuncts do not extract (113a), (114a), however, if the context allows for a discourse linked interpretation, even an adjunct can be extracted without causing (sharp) ungrammaticality (113b), (114b).

(113) a. *Why_i do you wonder [if they can fire you t_i]

b. For which of these reasons_i do you wonder [if they can fire you t_i]

(114) a. *How_i were you not able to solve the problem t_i

b. Our boss said that one could solve this problem with every computer here in this room. Now you are saying this is not true. So tell me:)

[With which of the computers here]_i were you not able to solve the problem t_i ?

On the other hand, if certain interpretations of arguments are forced, extraction of complements becomes ungrammatical:

(115) *How much wine_i did you not poison t_i ?

(116) *Who the hell_i do you regret that our aunt saw t_i ?

This data shows that Rizzi's proposal is not completely correct. (113b) and (114b) should be ungrammatical, as the extractees do not get assigned a (referential) theta-role by the verb. On the

other hand, if bearing a 'referential' theta-role like patient would make a phrase referential, it is unclear what explains the binding failure of the extractees in (115) and (116).

One of the most promising theories that tries to explain extraction facts that has been recently elaborated is to be found in Szabolcsi and Zwarts (1991, 1993). Their idea is that phrases that (are supposed to) take scope are associated with Boolean operations. Then, when a *wh*-phrase (i.e. a potential scope taker) scopes over some intervening other scopal element, all relevant operations that are associated with the *wh*-phrase must also be associable with the intervening scopal element. If this condition is not met, the *wh*-phrase cannot scope over the intervener. That means, either that sentences become ungrammatical, or that only a subset of potentially possible scope readings is available. In other words: in order for a scopal element SE1 to take scope over SE2, SE1 must allow for at least all the operations under which the domain of SE2 is closed as well. That means, the possible operations of an element with narrower scope must be a subset of the operations associated with the element which is supposed to take wider scope (see also chapter 7 for a more detailed discussion). This idea allows them to account for the data Rizzi or Cinque's theories cannot explain. *Wh*-phrases that contain the element *which* are good extractees because these phrases refer to concrete individuals. Individuals are collected into unordered sets and all Boolean operations can be performed, thus, no element could possibly intervene. Hence, *which*-phrases are good extractees no matter whether the constituent is an argument (110), (112), or an adjunct (113b), (114b). Amount phrases, for example, exhibit the structure of a join semi lattice. This partial order is not closed under the complement operation. Since negation is a semantic operation that requires complementation, *wh*-amount phrases cannot scope over negation, again the argumental status does not matter (example 115).

Thus what we get is what Szabolcsi and Zwarts call a true relativized minimality effect. An operator that is associated with more operations may have wider scope; on the other hand: the less operations a scopal element is associated with the less are the chances to get wide scope. This restriction creates a hierarchy among scope takers.

A parallel extension can be made with respect to A-dependencies. In chapter 2 I have argued that arguments are ordered according to the selectional properties of atomic predicates into which the meaning of lexical categories, in our case of verbs, can be decomposed. The resulting argument structure then is a hierarchy of constituents. I am in full agreement with Grimshaw (1990) who argues that argument structure is not a collection of unordered thematic roles, but that argument structure is an ordered representation that reflects a prominence hierarchy. She argues that

arguments that are higher ranked in the hierarchy are more prominent. Thus, for example, a subject is more prominent than an ordinary object. In cases of conflict, the prominence hierarchy (re)orders arguments such that the out-put posits the more prominent argument into a place higher in the argument structure than in the original hierarchy. Thus, VP internal argument dependencies are determined by a hierarchy of prominence.

It is not a revolutionary step to propose that also A-movement out of the VP is triggered by the prominence hierarchy too. A well studied phenomenon is passive. In passive constructions, the original object becomes the subject. The functional reason is the greater prominence of the object with respect to the subject. The subject, which in the unmarked case is more prominent, gets suppressed or it merely surfaces as a PP at some marginal position in the sentence. As I have argued at several places in this dissertation, movement of an argument from its base position to a VP external [Spec,Agr] position is not (very) different from passive; neither purely grammatically (need of case), nor functionally (prominence). As a matter of fact, topics are more prominent than non-topics. Thus, when an object is a topic it is more prominent than the subject if this is not a topic. This is the case in the examples from the end of chapter 3, here repeated as (117) and (118).

(117) weil dem Patienten niemand helfen kann

since the patient no-one help can

‘since nobody is able to help the patient’

(118) daß Ellen die Gerüchte über Ina keiner geglaubt hat

that Ellen the rumors about Ina no-one believed has

‘that no one believed Ellen’s rumors about Ina’

When all arguments are topics and as such equally prominent it is again the argumental prominence that triggers the same linearization as within the VP. Thus, we have an explanation for the ordering of the agreement phrases. AgrS hosts an argument that is more prominent than AgrIO, and AgrIO in turn hosts a topical argument that is higher than the constituent in AgrO. This explains the ordering in (119), which is copied from chapter 3, example (94)

(119) daß die Firma Müller meinem Onkel diese Möbel erst gestern zugestellt hat

that the firm Müller_{NOM} my uncle_{DAT} this furniture_{ACC} only yesterday delivered has

‘that Müller delivered this furniture to my uncle only yesterday’

Thus, the VP external hierarchy must be the same as the internal one because the trigger for the order of the arguments is the same, namely prominence. This way the crossing of arguments comes as a automatic consequence. Exactly as with A'-movement, crossing is not necessarily impossible. What matters is that the hierarchy be preserved. In the case of A' dependencies the hierarchy is established by the number and sort of Boolean operations that allow the quantificational element with the higher number of associated operations to take scope over the quantifier which is associated with the poorer algebraic structure. In the case of A-movement, the hierarchy is pinned down by the relative prominence, i.e. salience. Arguments with a greater prominence may move over arguments which are less salient in the utterance. Hence, Rizzi's RM should be reformulated as a constraint on hierarchy preserving. Since head movement is not considered a new formulation of RM could sound as follows:

(120) Hierarchy Preserving Constraint:

Some constituent C1 of type X may be moved over some other constituent C2 of the same type, iff C1 is higher in the relevant hierarchy than C2.

(with X = A or A')

This principle gives us a nice account to explain table 1 from chapter 3 or the Catalan paradigm in (43) of this chapter. So far we have only dealt with the VP internal and the 'unmarked' VP external order, the latter being parallel to the former. However, as both paradigms suggest, outside the VP it seems to be possible to find every order possible. The reason for this is simply prominence again. If the speaker linearizes the VP external arguments in an order that diverges from the ordering of the agreement nodes, (s)he does so because (s)he wants to stress that, for example, the topical direct object is of greater prominence than the indirect one although the latter is topical too²⁴.

²⁴ This sort of reordering of topical arguments is not possible in languages like Dutch or Italian. In these languages, the linearization of the arguments is much more fix.

- (i) Dutch
^{ok}dat Jan Marie de boeken niet geeft
 that Jan Marie the book not gives
- (ii) * dat Jan de boeken Marie niet geeft
- (iii) Italian
^{ok}Maria ha dato il libro a Piero
 Maria has given to Piero the book
- (iv) * Ha dato Maria il libro a Piero

- (121) Les notes_j encara no els_i les_j he donat t_i t_j, als alumnes_i
the degrees yet not them-them-have given to-the students
'I haven't given the grades to the students yet.'
- (122) daß die Frau den Hund der Nachbarin gestern gegeben hat
that the woman the dog the neighbor yesterday given has
'that the woman gave the dog to the neighbor yesterday'

For these linearizations to be established one more movement step is necessary. This step takes the argument in its [Spec,Agr] position and moves it away from there. I will not commit myself to saying what the target position is. It seems to me, however, that this position is most likely not an A-position, but an A-bar (A') position. This gives us the explanation for the hybrid character of scrambling. Movement to a [Spec,Agr] position, which is an A-position, may be followed by a non-A-movement. The result is that some A' effect might be triggered.

4.8. Summary

In this chapter I put forth the idea that arguments carrying the feature [+ Topic] move to specifier positions of agreement projections. First I tried to falsify approaches that aim at explaining Case assignment without making use of agreement projections. I showed that the so-called contentful functional projections T° and Asp° cannot be solely responsible for Case assignment to argument DPs. I argued for the Case assigning capacity of agreement projections by providing examples where nominative DPs are licensed only by the presence of AgrS (inflected infinitives in European Portuguese) and under absence of any tense information.

I then compare clitic-doubling in Catalan with German scrambling. Since both phenomena are the result of the same information packaging strategy it would be of advantage to reduce them to a

The reason for this is that in these languages the order of the arguments is the only tool to identify the argument's thematic role. In German, we have overt Case morphology that unambiguously tells the theta-role, in Catalan it is the clitics (Agr° heads) that identify the argumental status of the full DPs. Interestingly also in Italian, when clitics do appear, the ungrammatical order from (iv) might be turned into an acceptable utterance.

- (v) Glielo ha dato Maria, a Piero, il libro

However, in case linearization is the only device to identify the thematic role, communicative dynamism must resort to prosody.

single underlying grammatical operation. My proposal is to analyze both as an activation of the AgrO projection. German moves the object to its specifier, Catalan (additionally) realizes the AgrO° morpheme overtly.

At the end of the chapter I investigate the phonological changes that come along with the movement of constituents. I propose that Selkirk's bottom-up approach of focus projection applies to constructions involving narrow focus, while Cinque's 'Null Theory', a top-down approach, regulates the stress pattern in neutral assertions.

The result of the chapter is summarized in the mapping from (92), here repeated as (123)

| | | | |
|-------|------------------|--|--|
| (123) | [CP...[AgrPs... | | [VP ([discourse-new adjuncts]) [VP...]] |
| | topic(s) | | comment |

In the end some speculations are to be found concerning the ordering of AgrPs and scrambled constituents. Showing that Chomsky's theory of *Equidistance* cannot be maintained for both theoretical and empirical reasons. I develop another principle which accounts for the multiple crossing of A-movement (carrying also over A'-dependencies): the Hierarchy Preserving Constraint.

Reconsidering the syntax : phonology mapping discussed in section 4.4.3., the following appendix tries to give a solution to the problem that the 'Null Hypothesis' faces with respect to negation and PP complements.

Appendix: Accounts for Apparently Exceptional Stress Pattern

This appendix is a very speculative enterprise. It contains a proposal that tries to solve two problems which arise within the analysis of German that I propose. At first glance it seems that these two problems are independent from one another since the constructions that turn out to be a problem for my analysis of scrambling appear to be different. Nevertheless, I think that there is something the constructions have in common. The two constructions are represented in (31) and (32).

- (31) daß ich viele Bücher nicht gelesen habe
that I many books not read have
- (32) weil er gerade Milch in einen Eimer gießt
since he now milk in a bucket pours
'since he's pouring some milk into a bucket'

(31) is interesting in the reading where *viele Bücher* gets a purely existential interpretation. This is the case in the following context:

- (33) A: Also du... du hast 'Krieg und Frieden' nicht gelesen, du hast von
'Die Buddenbrooks' noch nichts gehört, du weißt nichts von
'Madame Bovary'. Und du willst Literatur studiert haben? Das kann
doch nicht sein! Was sagst du denn selbst dazu?
- B: Ja, ja, ich geb' ja zu, daß ich viele Bücher nicht gelesen habe.

(A: Well, you haven't read 'War and Peace', you never heard anything about 'The Buddenbrooks' and you don't know anything about 'Madame Bovary'. And you claim to have studied Literature. That's impossible! What do you think yourself about that?

B: Okay, okay, I have to admit that there are lots of books that I haven't read.)

As the translation into English suggests, what B says is that there are many books such that (s)he hasn't read them. Although the books are outside the scope of negation, the reading of *viele Bücher* is purely existential and by no means presuppositional. If one assumes that *nicht* sits in

NegP and that NegP is a functional projection somewhere above the VP (Haegeman 1992, Büring 1993), we get in trouble with Diesing's Mapping Hypothesis (MH) or also with my mapping proposed in (82). According to these proposals, an indefinite in the middle field must not get a purely existential, non-presuppositional reading. This, however, is exactly the interpretation for the object in (31) within the context in (33).

The string from (31) itself is ambiguous however. The intonational pattern tells us how the sentence must be interpreted. For the interpretation I am interested in, there is only one pitch in the sentence (34). The reading which is predicted by the combination of the MH and position of NegP is also a possible interpretation. For this reading to obtain there must be two pitch accents, resulting in a hat contour (35), (36).

- (34) daß ich VIEle Bücher nicht gelesen habe
- (35) daß ich VIEle Bücher NICHT gelesen habe
- (36) daß ich VIEle Bücher nicht geLEsen habe


What I want to argue now is that (34), on the one hand, and (35), (36) on the other, do not only exhibit different intonational patterns, but are also linked to different structural representations. In (35) and (36) where the object does get a presuppositional reading, it has been moved to [Spec,AgrO]. Since a topic and the comment may have their own focus : background articulations, the bridge accent is easily explained. The contrasted elements get accentuated. One accent goes to an element within the topical object, another to some element within the comment (VP). A felicitous continuation confirms this.

- (37) (35) + ...wogegen ich die ANderen (Bücher) sehr WOHL gelesen habe
whereas I the Others (books) very WELL read have
'whereas I did read (the) Other (books)'
- (38) (36) + ...sondern nur EINige (Bücher) EINgeräumt habe
but only SOME (book) FILEd have
'but I only FILEd a SOME of them.'

Here also the contrastees get a presuppositional reading.

I will argue that the structure for (34) is different. My speculative proposal is that in cases like (34), where there is only one pitch accent, *nicht* is not an independent element which is located in

some VP external position, but it is a Neg^o element which is incorporated into the verb. Thus, I claim that in such cases the syntax of the German negation might be considered not different from what is going on in Italian or Russian where there is only a negative head (of status X^o) that cliticizes onto a verbal element. This analysis is reinforced by the fact that in these constructions one finds a strict adjacency between *nicht* and the verb^{1,2}. Thus, since I assume that in German all verbal functional projection (but C) are head final, the derivation for (34) looks like:

- (39) [CP daß [AgrSP ich [NegP [VP [VIEle Bücher] t_i] nicht=neg^o+gelesen_i] habe]]
- 

I do not deny that *nicht* can also be analyzed the specifier of NegP. For instance, the stressed version in (35) is certainly to be analyzed as a specifier. At first glance this might seem schizophrenic. However, there are languages where the hybrid character of the negative morpheme is more evident. In English, the reduced form of the negation behaves clitic like and moves together with the auxiliary, whereas the neutral or stressed negation shows a maximal-projection-like behavior³:

- (40) Why didn't_i you t_i come to the party?

- (41) a. Why did you not come to the party?
b. Why did you NOT come to the party?

In light of such an analysis two things follow. First, as the bracketing in (39) suggests, the object need not be analyzed as scrambled. It remains in its base position and there it gets its existential interpretation. Second, Cinque's 'Null Hypothesis' can be adopted without any problem. The stress falls on the element which is the deepest - the object. Period. No stipulations must be made.

¹ What also points into the direction that *nicht* is not a prototypical maximal projection is the fact that it is not 'vorfeldfähig'. That means *nicht* cannot occupy the [Spec,CP] position. This, however, is a classical test for constituency, i.e. a test for whether something is a maximal projection or not. Scandinavian negative elements corresponding to German *nicht* may appear in CP:

- | | |
|---|---|
| (i) Swedish: okInte kan jag göra det. not can I do that | (ii) German: *Nicht kann ich das tun. 'I cannot do that.' |
|---|---|

² This analysis might fruitfully be applied for the description of negative concord constructions in Bavarian and other southern German dialects.

³ See also Chomsky's playing with the hybrid character of elements that exhibit properties of X^o categories as well as those of maximal projections (Chomsky 1994).

(I was even thinking of quoting the ‘Null Theory’ as an argument for my analysis. Thus, the object carries the main stress, hence it must be the deepest constituent, hence it can not be scrambled. However, whether I take the ‘Null Theory’ as a piece of evidence, or whether I show that the results of my proposal are compatible with it, neither approach should matter. What is important is that both combine in a harmonic way and reinforce each other.)

This analysis then also accounts for constructions where constituents linearly preceding the negation may serve as focus exponent for further focus projection. In that case, the configuration is the same as in (39). The object which is the only element that gets a pitch accent does so because it stays in its base position, which is the deepest in the tree:

- (42) A: Warum warst du so überzeugt, daß diese Versicherung die besten
Konditionen bietet?
‘Why were you so sure that this insurance was the best?’
B: ...weil ich das [_{VP} [_{OB} KLEINGedruckte _{+F}] nicht gelesen hatte _{+F}]
...because I the small print not read had
‘because I had not read the small print’

A top-down as well as a bottom-up approach would not be able to account for the prosodic structure if *das Kleingedruckte* were not in its base position anymore. Selkirk’s theory of focus projection (Selkirk 1984) could not derive the F spreading from a position which is not the sister node to the verb. Cinque’s ‘Null Hypothesis’ would predict that *nicht* should get stressed since [Spec,Neg] is deeper embedded than the VP external position of a scrambled object. The bracketing in (39) seems to me to account for the prosodic and semantic facts in a straightforward manner.

The second problem I mentioned is the intonational shape of constructions involving direct objects together with directional PPs (32). As I have shown in chapter 2, the neutral order is object > PP. All tests confirm that the PP is c-commanded, hence structurally deeper than the preceding object. Yet, with both arguments being discourse new, i.e. fully rhematic, the accent falls on the object. In other words, focus projection is only possible when the main pitch accent is assigned to the direct object.

- (43) weil er gerade [_{VP} MILCH in einen Eimer gießt _{+F}]

- (44) *weil er gerade [_{VP} Milch in einen Eimer gießt _{+F}]
 (45) weil er gerade [_{VP} Milch [_{PP} in einen Eimer _{+F}] gießt]

Again, Cinque's 'Null Hypothesis' cannot account for these facts. It rather seems to be falsified by them. This problem has been known for quite some time (Grundzüge einer deutschen Grammatik 1981) and no satisfactory solution has been given so far. I will argue that also in this case incorporation plays an important role. This time, however, incorporation takes place at a more abstract level. The idea is that the directional argument (the PP) forms a new, complex predicate together with the verb. Thus, the PP loses its independent argumental status and becomes an integral part of the complex predicate. This loss of independence is confirmed by the fact that in quantificational structures an indefinite inside a directional PP does not provide a free variable that can be get bound by a VP external quantifier. In the presence of a quantificational element it is rather the event variable λe of the predicate that gets quantified over. The following examples are meant to illustrate what is going on.

- (46) ...weil wir jedes Jahr zweimal ein Schwein schlachten
 ...because we every year twice a pig slaughter
 'because twice a year we slaughter a pig'
 (47) ...weil wir jedes Jahr zweimal zu einem Wallfahrtsort pilgern
 ...because we every year twice to a place-of-pilgrimage go
 'because twice a year we go on a pilgrimage'

In (46) the indefinite is a direct object in its base position. It introduces a free variable that looks for a binder. The quantifying binder in our case is the adverbial *zweimal* (twice). Thus, in a theory of unselective binding (46) could be paraphrased by 'weil wir jedes Jahr zwei Schweine schlachten' (...because every year we slaughter two pigs). (47) is different insofar as that we are not necessarily dealing with two different places (of pilgrimage). Even if there is only one place to which the speaker goes twice, the sentence remains true. Under this reading the place need not be specific either. In (46) this is not possible. The target of quantification is the pigs, and hence the speaker must mean two different pigs. The reason why (47) is different lies in the fact that quantification is not over places or directions, but over pilgrimage events. Thus, if sometimes the pilgrimage goes to the same place in one year or another, this does not effect the appropriateness of (47). The truth conditions are only such that there must be two pilgrimage events for each year.

The morpho-syntactic evidence come from particle verbs. In case the PP argument is not a full-fledged prepositional phrase, but an intransitive preposition, this element obligatorily incorporates into the verbal root (see also the discussion about the DAT > ACC, ACC >PP alternation in chapter 2).

(48) weil sie ein neues Opfer [_{PP} zu ihrem Mediziner] _geführt haben

since they a new victim_{ACC} to their wizard _lead have

(49) weil sie ihrem Mediziner ein neues Opfer zugeführt haben

since they [their wizard]_{DAT} a new victim_{ACC} tolead have

In chapter 2 I have shown that and how the preposition incorporates into the verb. Whether the incorporation is performed by a prototypical head-to-head movement (49) or in the more abstract sense (discussion to derive the semantics of (47)), the result is such that we have a more complex verb which takes a direct object to its left. This argument can be considered the deepest constituent in these constructions. Thus, the stress pattern is accounted for.

To summarize: the problematic cases which I presented at the beginning of this appendix may be given an analysis according to which the apparent problem disappears. In both cases incorporation of the element which stays in-between the direct object and the verb into the verb creates a structure where the object must be analyzed as the constituent which occupies the deepest position. The stress pattern and the interpretational possibilities follow straightforwardly.

(31') daß ich [_{VP} VIEle Bücher t_i] [nicht gelesen_t habe]

(32') weil er gerade [_{VP} [_{V'} [MILCH] [_{V°} in einen Eimer gießt]]]

Chapter 5

The Typological Chapter

This chapter presents a vast amount of data from typologically more or less unrelated languages. This data is intended to give cross-linguistic evidence for the claim of this thesis, namely for the proposal that a topical constituent bears a link to an agreement projection. As the preceding chapters, also this one focuses on objects. Thus we should look at all those possible grammatical phenomena the AgrO projection could possibly trigger. The first difference to be expected is one in Case morphology. If we adopt -with slight modifications- de Hoop's theory of weak and strong Case, we assume that there are two different ways of Case assignment to direct object NPs. This should imply that (some) languages mark their objects with morphologically different Cases; one assigned or checked in the DP's base position, the other one in [Spec,AgrO]. Languages that show a difference in the morphological Case marking the direct objects bear depending on their interpretation are Finnish, Turkish, Russian, Old High German, and Scottish Gaelic.

A further difference that is to be expected has to do with overt object agreement on the verb. If my proposal is correct that Agr projections are the host of topical arguments, we would expect that languages that display object agreement do so only in case of topical objects. Languages that confirm the pattern that verbal agreement is triggered only with specific objects are Hindi, Hungarian, (Porteño) Spanish, Romanian, French and Swahili. A detailed analysis is already given in chapter 4 (for Catalan).

The third difference that an AgrO projection may induce is word order. If the structure of a language is known, i.e. if the linear order of specifier, head, complement of lexical and functional categories is more or less clear, then it is possible to construe configurations where the object must be in a derived or in its base position. Again we expect the topic - comment difference in the interpretation of the object to be linked to different positions in the string. One famous example of

word order distinction for object interpretation has already been discussed: scrambling in German (chapter 3). Here also belong languages like Turkish and West Greenlandic.

A fourth difference which I will shortly address at the end are expletive constructions.

5.1. Morphologically Different Cases for the Direct Object

Finnish:

One language that nicely illustrates the object interpretation by the use of different Case endings is Finnish. Direct objects show up either with accusative or with partitive Case. Finnish lacks a determiner system which provides D° elements that inform about the (in-) definiteness of nouns. Some information about the discourse linking of the object, however, is provided by the Case morphology. Example (1) shows that the usual translation of a sentence with the Finnish object in accusative Case puts a definite DP in a language which displays definite determiners. Example (2) shows that the unmarked interpretation of a direct object in partitive Case is indefinite¹.

- (1) Hän pani kirjat pöydälle.
he put books-ACC on the table
'He put the books on the table.'
- (2) Hän pani kirjoja pöydälle.
he put books-PART on the table
'He put (some) books on the table.'

This is the picture that presents itself according to Belletti's analysis (Belletti 1988). There she claims that partitive Case is only compatible with an indefinite interpretation. That is not true, however. De Hoop (1992) cites Karlsson (1985) where the alternation between accusative and partitive is attributed to more semantic distinctions than just to (in-)definiteness. One more distinction involved in Case assignment is aspect. An irresultative reading of the sentence allows for a definite interpretation of the object although this carries partitive Case. Thus (3) is ambiguous with respect to the interpretation of the object.

¹ I have argued at length that (in) definiteness is not the crucial factor for (non)topichood. However, the prototypical topic is definite, the prototypical new discourse referent is indefinite. This notion of markedness underlies the argumentation here. In chapter 2 I have shown that the data in Finnish are more complex and provided an analysis for the interaction of (in)definiteness and (a)telicity.

- (3) Anne rakensi taloa.
 Anne built house-PART
 ‘Anne was building a house.’ or ‘Anna was building the house.’

The same applies in the case of inherently strongly quantified objects. *Kaikki* means ‘all’ and should semantically be interpreted as a generalized quantifier. As such a *kaikki* NP should bear strong Case (the Case for strong NPs) which it does not necessarily. Partitive case is possible, which then forces an atelic reading.

- (4) Presidentti ampui kaikkia lintuja.
 president shot all-PART bird-PART
 ‘The president was shooting at all (the) birds.’

De Hoop herself brought this apparent counterexample to her theory. She then proposes that Case acts a type shifter which renders the object a predicate modifier. As such it does not count as a GQ any longer. This, however, does not look very convincing within her Case - NP reading correspondency proposal. Within the theory proposed here, the object just belongs to the comment. The sentence is a statement about the president in the first place. The birds are not a topic. The sentence describes a situation in which the president is shooting in the direction where (all) the birds are. It is not intended to say that between the president and each of the birds there is a relation which is characterized by the former shooting the latter to death. Such a resultative reading is only possible with accusative. Thus, Finnish definite or strong objects carry partitive Case under similar circumstances when we find those DPs in unscrambled position in German (see chapter 3, section 3.4.3.).

Russian:

Russian delivers a similar picture. Direct objects may show two different Cases with each linked to a special reading². The two Cases are accusative and genitive. Some verbs, especially verbs of

² Here a very important remark must be made. Partitive Case in Russian and Finnish is not restricted to objects. It may as well alternate with nominative Case for subjects. This confirms that the distinction has to do with structural versus oblique case.

Finnish: Pihalla leikkii lapsia. or somewhat more marked, but ok.: Lapsia leikkii pihalla.
 yard-ADE play-3.Sg child-PL-PAR
 ‘There are children playing in the yard.’

desire, aim, request allow for both Cases. When the object bears accusative, the object is interpreted 'outside the scope of the action expressed by the verb. The genitive expresses an indefinite NP, corresponding to the type of existential quantification ...' (see Neidle (1988))

- (5) On zhde:t pis'mo.
he waits letter-ACC
'He is waiting for the letter.' or 'He is waiting for some (specific) letter.'
- (6) On zhde:t pis'ma.
he waits letter-GEN
'He is waiting for a letter.' (with the interpretation: He would like to find
some mail in his post box.)

Russian: Otveta iz polka ne prishlo.
answer-GEN from regiment neg came-sg.ntr.
'No answer arrived from the regiment.'

It could be argued that *priti* (infinitive form of *prishlo*: to come/ to arrive) is unaccusative, and therefore not a good example. Like in Finnish, however, also unergatives make the distinction for the subject.

- (i) Na ètom zavode rabotajet mnogo zhenshchin.
in this factory works much women-GEN
'In this factory there are many woman working.'
Mnogiye zhenshchiny iz nashego tsekha poseshchajut vecherniye kursy.
many-NOM women-NOM from our workshop visit evening lectures.
'Many of the women of our workshop are taking evening courses.'

This alternation is not possible in oblique Case contexts. An oblique Case must be assigned leaving no possibility for alternation. The intended readings then must be disambiguated through paraphrases.

Otets interesuyetsya mnogimi vidami sporta.
father intrests-self many-INSTR kinds-INSTR sport
'(My) father is interested in many sports.' (existential reading available)
*Otets interesuyetsya mnogo vidov sporta.
father intrests-self much kinds-GEN sport

What these data show is that Case alternations are only possible with structural Cases.

A similar case is the Case of mass nouns. Here the alternations are not that immediately linked to the intentionality flavor of the verb. Accusative gives the object a discourse-linked, referential reading, whereas (the so-called partitive) genitive³ triggers an indefinite existential reading.

- | | | | | |
|-----|----|---|----|--|
| (6) | a. | Prinesi chai! Bring tea-ACC 'Bring the tea!' | b. | Ja s'el khleb. I ate bread-ACC 'I ate the bread (up).' |
| (7) | a. | Prinesi chaju! ⁴ Bring tea-GEN _{part} 'Bring some tea!' | b. | Ja s'el khleba. I ate bread-GEN 'I ate some bread.' |

The use of accusative presupposes the existence of the object bearing it. This is not the case with genitive case. The claim that accusative (assigned to the NP in [Spec,AgrO]) is the topic object Case and genitive (assigned in situ) goes to non-topics is a formalization of a statement from Borrás and Christian:

As a general principle, the accusative Case is used when the object in question is known to both speaker and hearer, or reader and writer, i.e. when it has already been talked about or referred to before.

This is also reflected in the Case pattern of Russian quantified expressions. As said before several times there is a systematic ambiguity with weak quantifiers. They can be interpreted either existentially when caught by existential closure in the NS, or specifically (i.e. presuppositional) when they end up in the RC at the LF level. Most weak quantifiers in Russian are not really ambiguous. They signalize morphologically whether they should be interpreted specifically or existentially. In the former case, they have an adjectival form, bear accusative morphology and

³ Partitive genitive is a special morphological form that co-occurs with the normal genitive. Only a few nouns make this distinction like 'tea':

| | |
|-------|--|
| chaju | Partitive genitive |
| tea-u | |
| chaja | (= roditel'nyi podezh, i.e.) 'normal' genitive |

Partitive genitive is what corresponds to partitive Case in Finnish. It occurs only in object (and very rarely in subject) position and is the alternate to accusative Case. What I call 'normal' genitive is the form which must be used in constructions where the genitive has an attributive or possessive use like in:

| | |
|---------------|----------------------------|
| zapakh chaja | |
| smell tea-GEN | ('the smell of (the) tea') |

⁴ The examples from 7 also show that partitive Case and perfective aspect are compatible (see the discussion in chapter 4, section 4.4.).

combine with a NP that has to carry this case as well. The latter, i.e. existentially interpreted quantifiers, do not bear any Case. They look like adverb(ial)s and require their NP complement to carry genitive Case. Thus in Russian we have

(8)

| strong forms | weak forms: | meaning: |
|--------------------------|--------------------------|-------------------|
| with accusative endings: | | |
| <i>mnogie</i> | <i>mnogo</i> | many |
| <i>nemnogie</i> | <i>nemnogo</i> | not many or few |
| <i>nekotorye</i> | | some (of) |
| (<i>neskol'kie</i>) | <i>neskol'ko</i> | some |
| | <i>malo</i> | few |
| | <i>dva, tri, vos'em'</i> | two, three, eight |

(9) V otdele gotovogo plat'ya Natasha pomerila mnogo yubok.

in clothing department Natasha tried-on many skirts-PLUR.GEN
 'In the clothing department Natasha tried on many skirts.'

(10) Segodnya v magazine lezhit 30 jubok. Natasha pomerila *mnogie*.

today in shop lay 30 skirts. Natasha tried on many-ACC

'Today, there are 30 skirts in the shop. Natasha tried on many of them.'

(11) Segodnya v magazine lezhit 30 jubok. *Natasha pomerila *mnogo*.

many_{weak}

In (9) we have a sentence that introduces skirts into the discourse universe. Genitive Case provides the correct existential reading. In (10) we have a context. The first sentence is an existential statement about 30 skirts. In the following sentence it is referred to a subset of them. As the translation reflects, the reading of the object is partitive, i.e. *mnogie* is specific, it acts as a topic⁵ about which something is being said, namely that Natasha tried them on. The use of the weak form leads to oddness, see (11). There *mnogo* creates a new file card without specifying anything about it. No relation to the previous sentence is triggered. A corresponding English text would be something like.

⁵ To be very correct, it is the focus of the object being a topic. (cf. Krifka's proposal (chapter 1, section 1.4.2.))

- (12) *Today in GUM they got 30 new skirts. Natasha tried on much.

In order to make the sentences a text, i.e. to make them a coherent statement, one element in the sentence should bear some relation to an element from the previous sentence. Much and *mnogo* are not able to do that. *Mnogo* is linked to existential closure, i.e. file card creating, thus the infelicity in (11).

Strong quantifiers never have two forms. They show accusative case together with the NP.

- (11) Natasha reshila kazhduyu problemu.
 Natasha solved every-ACC problem-ACC
 ‘Natasha solved every problem.’
- (12) *Natasha reshila kazhdoi problemy.
 Natasha solved every-GEN problem-GEN

A clear context where the Case alternation plays a role is negation. Traditional grammars claim that in the context of negation, accusative marking gets the object outside the scope of the negative operator, i.e. a object bearing accusative morphology is not affected by negation. Thus a bare object in accusative forces a definite interpretation when under negation:

- (13) Pavel’ ne vidit korovu.
 Paul neg sees cow-ACC
 ‘Paul doesn’t see the cow.’

Genitive leaves the sentence ambiguous. The default interpretation, however, is the one where there is no cow in the discourse universe.

- (14) Pavel’ ne vidit korovy.
 Paul neg sees cow-GEN.
 ‘Paul doesn’t see a/any cow.’ (but also: ‘Paul doesn’t see the cow.’)

The Academy Grammar (Russkaja Grammatika, 1980, 2nd vol.) gives a nice example for the theory. When in a transitive sentence the negated verb is contrasted to another verb, the object is required to appear in accusative. This follows from the fact that the rest is background and

contains⁶ topics and tail elements in Vallduví's terms. Thus the object should be outside the VP and consequently bear accusative:

- (15) On ne prosMAtrivaet stat'yu /*stat'i , a tchitaet.
he neg looks over article-ACC /* -GEN, but reads
'He doesn't look over the article, but reads it.'

Turkish:

In her article on specificity, Enç (1991) shows that a similar Case pattern is observed in Turkish. In that language, objects may or may not be marked with the accusative Case marker suffix *-(y)i*. Enç shows furthermore that the difference in Case is linked to a difference in interpretation, namely specificity vs. non-specificity of the object. Using some DRT version as starting point, she develops a theory of specificity which refines the Familiarity Condition of Heim (1982) (chapter 3, section 3.2.3.). Enç proposes that all NPs carry a pair of indices, the first of which represents the referent of the NP. The indices in turn have to bear a definiteness feature. The first index determines the definiteness of the NP. The definiteness feature of the second index determines whether the NP may be interpreted as specific.

- (16) Every $[_{NP}\alpha]_{\langle I, J \rangle}$ is interpreted as $\alpha(x_i)$ and
 $x_i \subseteq x_j$ if $NP_{\langle I, J \rangle}$ is plural,
 $\{x_i\} \subseteq x_j$ if $NP_{\langle I, J \rangle}$ is singular.

Enç defines an NP as specific if the second index is definite. Specificity thus is a weaker notion than definiteness which requires both indices to be definite. The definition, however, captures the intuitive notion of discourse linking. She shows then that accusative Case acts as 'discourse-linker'. Consider the following context:

⁶ The argumentation is not quite fair. It is possible to have narrow focus on the verb or another constituent within the VP allowing for an existentially quantified direct object nevertheless, namely within the background of the comment (This kind of constructions is discussed in detail in Büring (1994)). Thus, it should be possible to construe the 'article' within the range of existential closure, i.e. VP internally, and consequently genitive Case assignment should be possible. However, the but-sentence which follows shows object drop. This is only possible in case of topichood of the object (= topic drop). This unambiguously shows that only the verb is the relevant information constituting the comment, the arguments (must) act as topics in the Academy Grammar example, and hence must be assigned the VP external case: accusative.

- (17) Odam-a birkaç çocuk girdi.
 my-room-DAT several child entered
 ‘Several children entered my room.’

This sentence can be followed by a transitive sentence with the object bearing accusative Case (18) or not (19).

- (18) İki kız-ı tanıyordum.
 two girl-ACC I-knew
 ‘I knew two girls.’
- (19) İki kız tanıyordum.
 two girl I-knew
 ‘I knew two girls.’

In (18) the girls are interpreted as included in the set of children introduced in the preceding sentence. Accusative which acts as specificity marker demands that the second index of *iki kız-ı* be definite, i.e. familiar. Thus *iki kız-ı* must be linked to something familiar which in the given context can only be provided by *birkaç çocuk* (i.e. several children). In (19) the absence of accusative signals weak Case, or non-topichood of the NP. Therefore the object must be existentially closed, and *iki kız* introduces two new girls into the discourse.

This Case pattern in Turkish also disambiguates the reading of indefinites in intensional contexts. If the object is marked with the accusative Case marker, the NP must be interpreted as referential. The absence of Case marking forces a non-referential reading and there is no longer a presupposition of existence on the object. Thus in (21) any piano could satisfy Ali’s wish and it might well be that in the relevant world there is even no piano.

- (20) Ali bir piyano-yu kiralamak istiyor.
 Ali one piano-ACC to rent want
 ‘Ali wants to rent a certain piano.’
- (21) Ali bir piyano kiralamak istiyor. (without the accusative morpheme)
 ‘Ali wants to rent a (non-specific) piano.’

Strong quantifiers which presuppose a certain referentiality of the NPs in their first argument (i.e. require the non-emptiness of the set they refer to) should force the noun to be Case marked for accusative under the proposal developed in this article. This prediction is correct:

- (22) Ali her kitab-ı okudu.
Ali every book-ACC read.
- (23) *Ali her kitab okudu.
(both: Ali read every book.)

Old High German:

Also earlier stages of German show a difference in Case marking for objects (see work by Abraham 1994 and Philippi 1994). The Case difference again goes together with the by now familiar interpretational differences (the discourse function of the object, the meaning of the verb, the aspectual properties of the sentence and so on.) In Old High German, verbs like *drigkan* 'to drink', *neman* 'to take', *geban* 'to give'... may have their objects in genitive or accusative Case. Genitive triggers the partitive, weak reading (24), (25); accusative a referential one (26) (the data stems from Philippi 1994 who takes them over from Donhauser 1990).

- (24) kebet uns iuwares oles
give us yours oil-ACC
'Give us of your oil!'
- (25) skancta sinan fianton bitteres lides
poured his enemies bitter drink-GEN
'He gave a bitter drink to his enemies.'
- (26) thaz heri tho gisaz, thaz brot gisegotaz az
the army the set-down, the bread-ACC blessed-ACC ate
'the army set down (and) ate the blessed bread'

Abraham proposes a 'Conditional Typological Cross-categorical Alignment Corollary :

'The universal is assumed to hold on a specific condition: If a language realizes distinctly the genitive and the accusative Cases and if, further,

either Case marks distinctly aspectual properties, it will observe further corollaries sketched in (43) below.

| | discourse function |
|---------|---|
| GEN-obj | Rhema according to [-def] |
| ACC-obj | Thema since [+def] Rhema for [-def]'' |

Thus, also here one finds evidence for the claim of this thesis. However, one should note that although I agree with Abraham with respect to the theme-rheme interpretation of the object, I have argued that the aspectual properties are only an epiphenomenon and that the correlation with the object interpretation is only a tendency (chapter 3, section 3.4.3.).

Scottish Gaelic:

Ramchand (1993) claims that the Case pattern in Scottish Gaelic parallels the use of accusative and partitive in Finnish. The two Cases in Scottish Gaelic are direct Case which corresponds to strong Case and genitive which corresponds to weak Case:

- (27) Bha Calum a'gearradh craobhan.
Be-past Calum *ag* cut trees-GEN
'Calum was cutting trees.'
- (28) Gheàrr Calum craobhan.
Cut-past Calum trees-DIR
'Calum cut some particular trees.'

A nice fact about Scottish Gaelic is that it overtly marks definiteness. Definiteness is compatible with genitive Case. The object then gets a part-of-the-predicate - in other words - belonging-to-the-comment reading. Again an example that definites (29) and strongly quantified expressions (30) are not necessarily topics.

- (29) Tha Calum a'gearradh na croibhe.
be-pres Calum ag cut the tree-GEN
'Calum is cutting/ cuts at the tree.'
- (30) Tha Calum a'gearradh gach uile chraobh.
be-pres Calum ag cut every tree-GEN
'Calum is cutting at every tree.'

Another nice correlation is the position of the object. Scottish Gaelic is a VSO language. Thus in simple tenses it is not easy to decide where the verb is. In periphrastic tenses, only the auxiliary moves to the sentence initial position. The main verb stays lower down. In that case, the object may follow or precede the verb. Since Scottish Gaelic seems to be an ordinary language, i.e. linear specifier > head > complement order, we expect the preverbal position to be linked to direct Case, and the postverbal one to genitive Case. This prediction is born out.

- (31) Bha Calum air am balach a fhaicinn.
be-past Calum Part_{PERF} the boy-DIR AgrO see
'Calum had seen the boy.'
- (32) Bha Calum a'faicinn a'bhalaich.
be-past Calum Part_{IMPERF} see boy-GEN

Additional evidence for the proposal comes from the fact that in the case where the object is preposed to [Spec,AgrO] an element *a* appears on the verb. Ramchand as well as Adger (1993) analyze this *a* as agreement marker.

5.2. Object Agreement and Topichood

Hindi:

Looking at his mother tongue Hindi, Mahajan ((1990), (1991)) develops a theory of scrambling, Case assignment and specificity which is very similar to the one presented in this thesis. He argues that (in Hindi) all arguments are base generated inside the VP. Arguments that do not get Case marked by the verb in their base position have to undergo scrambling. This movement is A-movement and leads to an agreement projection. The reading of the argument in the derived

position is necessarily specific. The pattern looks like the following: in non-perfective tenses the verb agrees with the subject (34), never with the object. In perfective tenses and with psych verbs, the verb agrees with the object (33).

- (33) siita-ne laRkaa dekhaa (object agreement)
 Sita-ERG boy_{masc} saw-masc
 ‘Sita saw the boy.’ or ‘Sita saw a specific boy.’
- (34) siitaa laRkaa dekh rahii hE (no object agreement)
 Sita boy_{masc} see-prog-be-fem
 ‘Sita is looking for a (some) boy (or other).’

Since Hindi is strictly head final, these examples do not show that also object movement has taken place. However, there are arguments that this must have been so. Binding of anaphoric elements must be from an A-position. If one adopts some version of UTAH and a thematic hierarchy where goals are higher than themes plus the claim that in Hindi specifiers (as well as complements) are to the left of their heads, a direct object that linearly precedes an indirect one must have moved to this position. The fact that it can bind an anaphor in the indirect object implies that the status of the targeted position [Spec,AgrO] must be an A-position⁷.

- (35) *siita ne apne, pitaa-ko kOn, saa baccaa dikhaayaa⁸
 Sita-erg self’s father (IO) which child_{masc} (DO) show perf-masc
 ‘Which child did Sita show to self’s father?’
- (37) ^(?)siita ne kOn, saa baccaa apne, pitaa-ko dikhaayaa
 Sita-erg which child_{masc} (DO) self’s father (IO) show perf-masc

He brings further arguments like weak crossover constructions and adverbial interpretations. I do not want to present those data here and refer the reader to Mahajan’s work.

⁷ Here I am only recapitulating Mahajan’s theory about Hindi. Since the German facts are different I did not use these binding tests to argue for the A-movement analysis of Germanic scrambling.

⁸ Like almost all head final languages, Hindi does not have overt wh-movement. The which-phrase should therefore not be analyzed as having undergone A’-movement.

(Porteño) Spanish:

In Suñer (1988), she argues that -at least in Porteño Spanish- pronominal clitics should be analyzed as agreement morphemes. With this claim she can nicely account for clitic doubling constructions. Under such an analysis, clitics are just seen as agreement morphemes that do not have a referential or argumental status of their own. They are at most able to identify one. Thus one has no longer to develop a strange theory of interaction between Case absorption, theta and Case positions (Jaeggli 1981, Kayne 1975). In Porteño Spanish clitics double definite and specific indefinite object NPs, in my terms: topic NPs trigger agreement. Suñer claims: ‘The pertinent feature for doubling is [+specific]’:

- (38) *(La) oían a Paca / a la niña / a la gata
her listened Paca / the girl / the cat
(They listened to Paca / the girl / the cat.)
- (39) Diariamente, *(la) escuchara a una mujer que cantaba tangos
daily, 3sg.f listened a woman who sang tangos
‘Daily, they listened to a woman who sang tangos.’

Direct objects that get a non-specific interpretation cannot trigger clitic doubling, i.e. agreement.

- (40) No (*lo) oyeron a ningún ladrón.
not clitic they-heard a any thief
‘They didn’t hear any thieves.’
- (41) (*La) buscaban a alguien que los ayudara.
clitic they-looked-for a someone who them-help
‘They were looking for someone who could help them.’
- (42) (*Lo) albarán al niño que termine primero.
clitic they-will-praise the boy who finish first
‘The will praise the boy who finishes first.’

(42) is again an example of a definite not being a topic. The relative clause informs about the non-familiarity of the boy, thus the object cannot act as a topic and trigger agreement.

French:

Evidence comes also from French. Here we find object agreement on the past participle when certain NPs have moved to the left of it (by *wh*-movement in questions and relatives or by cliticization). Objects on the right, which I assume to be in their base position, never trigger agreement.

- (43) *Quelles maisons a-t-il construites ?*
 which houses has-he built-AGR
 ‘Which houses has he built?’
- (44) *Il a construit /*es ces maisons-là.*
 he has built /*AGR these houses over there.
 ‘He build these houses over there.’

However, the triggered agreement forces a discourse linked reading (in the sense of Pesetsky (1987)) of the moved NP. *Quelles maisons* (which houses) forces a reading where the speaker has specific houses in mind (referential reading). A *combien*- (how much/how many) question that only asks for a number does not trigger agreement (see Obenauer (1992)).

- (45) *Combien de chaises as-tu repeint_ ?*
 How many of chairs have-you repainted

Object agreement is also possible, but then the question asks for specific chairs out of a previously introduced set of chairs. If one asks for an object which cannot or can hardly be referential for pragmatic reasons, agreement is impossible.

- (46) *Combien d’essence as-tu mis(*e) dans le réservoir?*
 How much of gasoline have-you put(*AGR) in the tank

On the other hand, when we embed the *combien*-object in a weak island, it can escape only when it is interpreted referentially, i.e. carries a referential index. (see Rizzi (1990), Pesetsky (1987), Szabolcsi and Zwarts (1991, 1993)) Then - at least in the relevant register of French I am referring to - agreement becomes obligatory.

- (47) Combien de chaises n'as-tu pas repeintes /*repeint_?
How many of chairs NEG-have-you NEG repainted AGR/*without AGR

Speakers who have uttered this question expect an answer like:

Among all the chairs here in this room there are only three I have not repainted, namely:
this one, this one, and that one.

Thus the presence of agreement makes the object referential.

Hungarian:

Hungarian is another language which displays some support for the theory developed in this thesis. In this language, transitive verbs possess two different conjugations: traditional grammars call them the subjective and the objective conjugation. The subjective conjugation is used when the verb has an intransitive meaning like as in (48), or when a specific direct object is not intended, i.e. the object is not specific (49). On the other hand, the objective conjugation is used when the object is referential (50).

- (48) Látok.
('I see.' = I am not blind. or I can see.)
- (49) Látok embereket.
'I see people.'
- (50) Látom barátomat. (object agreement)
'I see my friend.'

Radó (1993) analyzes the agreement marker as an indicator of definiteness. Although she analyses the agreement morpheme as AgrO element, she claims that the definiteness morpheme is rather a morphological reflex than linked to a specific interpretation. However, in the examples she gives where the definiteness marker appears, one finds NPs that are not definite in the classical sense. Look at her examples (d) and (e). Whereas one could still argue that in the indefinite NP in (d) the definiteness feature is inherited from the definite possessor, such an argument does not hold for the quantified expressions in (e). There, we clearly have to deal with strong quantifiers which

should be analyzed as discourse-linked, but not as definite. Radó lists the following NPs as triggers for the objective conjugation:

- (51) ((40) in Radó's article)
- the verb bears an agreement morpheme if its accusative object is
- a. a 3rd person pronoun
 Pista lát-ja őöt /öökét.
 Pista sees-Def him/her /them
 - b. a proper name
 Pista lát-ja Katit.
 Pista sees-Def K.-Acc
 - c. an NP with a definite article
 Pista lát-ja a lányt.
 Pista sees-Def the girl-Acc
 - d. a possessiv NP
 Pista lát-ja egy barát-ját.
 Pista sees-Def a friend-3poss-Sg-Acc
 - e. an NP with certain quantifiers (forms with 'which' or the superlative ending)
 Pista lát-ja valamelyik / mindegyik lányt.
 Pista sees-Def some (specific) / each girl-Acc
 - f. a reflexive
 Pista lát-ja magát.
 Pista sees-Def self-3Sg-Acc

Bantu:

The last languages I want to have a look at are Bantu languages (see Givón (19??)). Their object agreement plays an important role for object interpretation. In Swahili, there are object agreement markers that have developed from pronoun and demonstrative forms. Look at the examples (52) and (54). *ki* and *vi* are part of the noun. In (53) and (55) they are part of the verbal complex and act as agreement markers. Here they act very much like the clitic elements in Portenño Spanish. They are able to identify an object which can be analyzed as *pro*.

- (52) ni-li-vunja kikopo
'I broke a cup.'
- (53) ni-li-ki-vunja _
'I broke it.'
- (54) ni-li-vunja vikopo
'I broke some cups.'
- (55) ni-li-vi-junja _
'I broke them.'

In (52) and (54) *a cup* and *some cups*, respectively act as part of the comment. They are being introduced into the discourse. The sentences that take the objects as topics look like:

- (56) kikopo, ni-li-ki-vunja (object preposing with agreement!)
'The cup, I broke it.' or 'I BROKE the cup.'
- (57) vikopo, ni-li-vi-vunja
'The cups, I broke them.' or 'I BROKE the cups.'

Another clear contrast is observed in Luganda. Similarly as in Russian, negation helps to see it more clearly. In cases where the object is not referential, i.e. there is no entity in the discourse frame that could be referred to, no object marker (agreement) shows up on the verb (58). In case, the object acts as a topic and the negation affects only the verbal action, the object marker (OM) is present and also the determiner form of the object noun and its position in the tree is different (59).

- (58) ta-ya-laba mu-sajja
see man
'He didn't see any man.'
- (59) omu-sajja, ta-ya-mu-laba
man OM-see
'He didn't see the man.'

5.3. Word Order, There-be Effects and Deaccenting

In the introductory lines to this chapter I have given a list of morpho-syntactic phenomena which might distinguish an argument in its base position from the same argument having moved to the specifier position of an agreement projection. I mentioned the three obvious differences: Case realization, overt agreement vs. its lack, and thirdly different positions. 5.3. now is dedicated to the third difference. However, since there is a whole chapter on this (Chapter 3) I will not present more analyses for more languages. Here it suffices to just mention a couple of other languages where the argument position is decisive for the interpretation. One example is Scottish Gaelic (cf. chapter 4, section 4.3.2.). Other relatively well studied scrambling languages are Dutch, Japanese and Turkish or West Greenlandic.

I rather want to be a bit more explicit with a construction which seems to be typical to subjects although this is not very much in the spirit of this chapter. Many languages exhibit a construction which has become known as ‘*there-be* constructions’ or ‘existential sentences’ (cf. Reuland, E. & A. ter Meulen 1987). These constructions consist of an expletive and an associated noun phrase mostly accompanied with a predicate. Very often this expletive is (homophonous with) a locational proform meaning *there*, sometimes the expletive is (homophonous with) the neuter or masculine singular pronoun.

For English, the traditional and best analysis is that the pronoun occupies the canonical subject position which is VP (or XP) external and the associate find itself inside the VP, a small clause, or some other lexical projection. Under my approach, the external position is of course [Spec,AgrS].

(60) There is a man in the garden.

(60') [_{AgrSP} There [_{AgrS'} is [_{SC=PP} a man in the garden]]]

These construction have a correlate where the SC internal subject appears in the position of *there*, and the expletive itself disappears:

(61) A man is in the garden.

These constructions can be analyzed as derived from (60) by moving the internal subject to [Spec,AgrS] by leaving a trace in the base position.

(61) [_{AgrSP} A man_i [_{AgrS} is [_{SC=PP} t_i in the garden.]

I will argue that this derivation is not so different from scrambling. The crucial difference is that (61) remains ambiguous with respect to the interpretation of the subject. However, the phrases that are allowed to occur in the base position, i.e. that are allowed to occur in the *there-be* construction are most telling. As far as quantifiers are concerned, only weakly quantified noun phrases are permitted. Strong, presuppositional quantifiers are excluded (cf. (32), (33) chapter 3). Indefinites may occur without any problem. Definites may not. For this reason the felicity condition for *there-be* constructions was called the definiteness effect. However, this condition is not completely correct. Some linguists discovered contexts where a definite or a proper name in the scope of *there is* is grammatical (for example Woisetschläger 1983)

- (62) a. There was the smell of pot all over the apartment.
b. There was the biggest car I had ever seen.
c. No one can solve this problem. Would you know anyone?
Well, there's Chomsky.

In (62b) we have a superlative, in (62c) there is a name which refers to a single individual. These are examples where the definite gets the so-called referential interpretation. In the relevant contexts, the definite expressions are rather novel and as such they do not act as topics. This can be proven by additional tests (extraction, for example, cf. chapter 6). Thus the definiteness restriction is not a real definiteness restriction. Also the name specificity condition which had been given to the phenomenon later is not completely correct. It should rather be called the topic condition.

Another, rather indirect consequence of AgrO is deaccenting. How this works for objects has been shown in chapter 4, section 4.5.3.1. (Cinque's 'Null Hypothesis'). In sentences with ordinary transitive verbs, the direct object is the deepest embedded constituent. According to the 'Null Theory', under normal conditions, it gets the main stress. When the object has scrambled, it is not the deepest constituent anymore. In that case, either a deeper adjunct, or if there is none, the verb gets the main stress. This strategy seems to have been grammaticalized and accentuation has become a general device to mark new information. Even material which is virtually structurally higher gets reconstructed if it is accentuated. On the other hand, deaccenting is a device to mark

topicality. Vallduví (1992) has shown that Catalan clitic doubling, which is analyzed a manifestation of topichood of the doubled phrase, is reflected in English (only) by prosodic means. The topical constituents get deaccented whereas the verb carries the main accent.

(64) L'amo [_F l'ODDIA,] el bròquil.

the boss it-hates the broccoli

(65) corresponding English sentence:

'The boss HATES broccoli.'

Tancredi (1992) observes the same. 'In general, deaccenting of an element is possible only if that element is salient in the discourse context' (Tancredi 1992, p.2). He develops a theory of the appropriateness of (de)accenting and mainly confirms Vallduví's and Cinque's proposals. His notation of the old : new articulation of a sentence like (65) would look like (65')

(65') *The boss HATES broccoli.*

5.4. Summary and Problems

The main claim of this thesis is that topical argumental constituents trigger the activation of VP external agreement projections. This chapter presents the three most obvious grammatical phenomena that an AgrO projection can bring along. All three phenomena (Case differences for direct objects, the occurrence of agreement morphemes and positional differences) are instantiated and confirm the predicted interpretational differences. The data are taken from typologically very different languages: (i) genetically: Indoeuropean, Finno-Ugric, Altaic, Bantu; (ii) with respect to the classical morphological division: inflecting, agglutinating and mainly isolating languages; and (iii) with respect to Case realization: nominative-accusative languages and absolutive-ergative languages(, and also historically: living and extinct languages).

Here at the end of this chapter I will only mention a couple of facts which cannot easily be explained within the theory developed here in this thesis. I will only list them without giving a possible solution. One of the major problems is the behavior of agreement. In German, for

example, the verb always agrees with the subject, no matter whether the subject occupies its base position or [Spec,AgrS]. A similar case is the agreement behavior in several other languages.

Laka (1993) shows that in Basque verbal agreement on the verb is triggered by all arguments irrespectively of any semantics. Thus, all arguments with the relevant morphological form are doubled by agreement morphemes on the verb independently of their topical status.

The same is true of Catalan or Spanish indirect objects. A dative argument must be doubled even if it gets a non-specific interpretation. In Greek, the indirect object also triggers verbal agreement (genitive) irrespectively of its interpretation. (For more problems with respect to the equation clitic doubling = scrambling = movement to [Spec,Agr] see Anagnostopoulou 1994.) Furthermore, there seems to exist an additional factor which plays an important role for doubling, namely animacy of the doubled phrase. A theory that only refers to semantic notions as specificity, definiteness, topicality cannot fully explain the Romance and other data.

It has been argued that object shift in Icelandic and Scandinavian may be analyzed as raising of the direct object to [Spec,AgrO] (Bobaljik and Jonas 1993 and references quoted therein). The difference is that while Icelandic allows for full definite topical noun phrases to undergo object shift, this move from inside the VP to a VP external position is restricted to pronouns in Mainland Scandinavian. Thus, in Scandinavian it is only a subclass of the elements that undergo object raising. Icelandic in turn object-raises a subclass of the phrases that undergo scrambling, since scrambling applies to definites as well as to topical indefinites. The latter are excluded from object shift in Icelandic.

The only hint I want to make in face of this problematic data is an idea that I have elaborated in more detail in Meinunger (1993). It seems to me that certain morphological features with more or less semantic content are responsible for movement and interpretation. There seems to exist a hierarchy of referentiality (Givón 1976) or a 'definiteness hierarchy' (Diesing and Jelinek 1993) that somehow governs the distribution of agreement and argument movement. (For a minimalist approach that deals with strength and weakness of morphological features from a salience hierarchy cf. Meinunger 1993).

Thus, in some languages the one-to-one mapping is blurred by the fact that some morphological requirements must be met before doubling or scrambling may take place. The last resort to save the intended interpretation then is intonation.

Chapter 6

Notes on Extraction

This chapter deals with several, very different types of extraction like *wh*-extraction, topic movement out of noun phrases and relative clause extraposition. It will be argued that these different types of movement which are triggered by rules of various kinds are similar in one important respect. It will be argued that they are all restricted by one constraint, namely the blocking effect of topics, stated here as the Generalized Specificity Condition. I shall develop the idea that topic phrases in the sense of chapter 3 are weak islands. This characterization can be viewed as a generalization over a number of hitherto unrelated conditions on movement.

First I will show which constructions are best explained if the relatedness of two XPs is analyzed as a result of movement of one of the two to some other position. The discussion of whether relative clause extraposition (in German) is an instance of move_α or not will also be dealt with. Then I will discuss some phenomena (*was-für* split, quantifier split, and *wh*-extraction) which show that if the extractee is separated from its base position by a topic NP, i.e. if the movement is out of a scrambled phrase, this derivation leads to ungrammaticality. A closer look at the data reveals that individuals may escape topic NPs, but non-individuals may not. This observation leads to the claim hinted above that topic NPs are weak islands.

In a further subchapter, this finding is paralleled with the behavior of factive predicates, which turn out to be of the same category (= topics).

The subchapter dealing with relative clause extraposition tries to outline the similarities between this type of movement with leftward extraction. It is shown that NPs in the base position allow for extraction of both appositive and restrictive relative clauses. Scrambled phrases only allow for extraction of restrictive relative clauses. With some assumptions of a more or less stipulative character - restrictive clauses are referential sisters of the noun head to which they belong, while

appositives are not - this observation gives a nice confirmation of this chapter's proposal: the Generalized Specificity Condition.

6.1. An Account for XP-Displacement and the Case of Relative Clause Extraposition

Whatever syntactic model one assumes, one has to deal with the fact that constituents appear in positions where they have to be for some reason and nevertheless bear a relation to some other position. Consider the cases in (1) and (2):

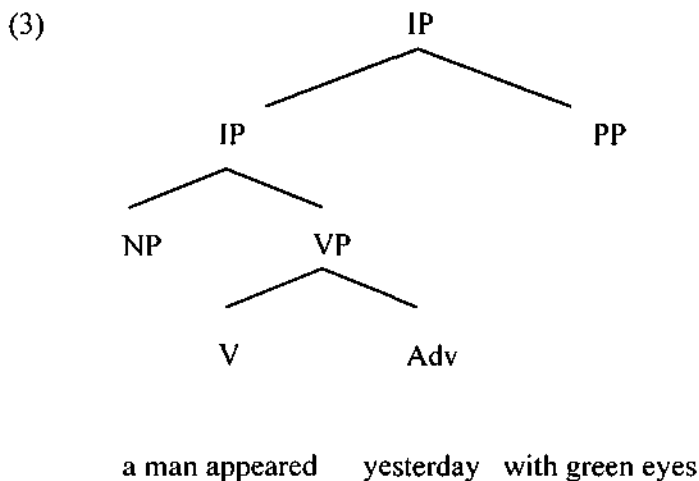
- (1) [Über welchen Komponisten] würdest du gerne einen Artikel _ schreiben?
'Which composer would you like to write an article about _?'
- (2) Ich habe ihm gestern ein Buch _ gegeben, [das er unbedingt braucht].
'I gave a book _ to him yesterday that he absolutely needs.'

In (1) we have an example where the argument of the noun *Artikel* occupies the sentence initial position, in (2) the relative clause (henceforth RC in this chapter) which modifies the object NP *Buch* is separated from it by a verb. In the syntactic framework I am adopting, these dependencies are accounted for by movement operations which take the constituent that has been base generated in a local relationship to the phrase it depends on and move it to the position in which it appears on the surface.

Such a movement account is commonly agreed upon as far as the wh-construction in (1) is concerned. Relative clause extraposition (as in (2)) - or CP extraposition in general - is a much more intriguing phenomenon, and even the name is already misleading. Many linguists working within the GB framework and successive developments analyze the phenomenon of discontinuous noun phrases with relative clauses or other modifiers on the very right of a sentence as a base generation construction. One tradition tries to grasp the relation between the innersentential noun phrase and the peripheral constituents by pragmatic interpretation principles (Koster (1978), Haegeman (1988), Fabb (1989)).

Another tradition seeks to establish a government relation between the peripheral base generated elements and the innersentential noun phrases. This approach goes back to work of Guéron (1978), (1980). Guéron and May (1984) formulate a predecessor of the Complement Principle. This principle is supposed to link the NP to its dependent clause or PP through a government

relation. This is derived by different adjunction sites of the relative clauses and PPs. For example, a subject NP has a CP which is (right-)adjoined to IP in its government domain, thus the NP in SpecIP can be linked to the clause. Rochement and Culicover (1990) use this idea, give a slight modification of the Complement Principle and propose that the government relation is sufficient to establish a link between the 'head NP' and its associated sentence. No movement is necessary.



For an adaptation to German see Wiltschko (1993).

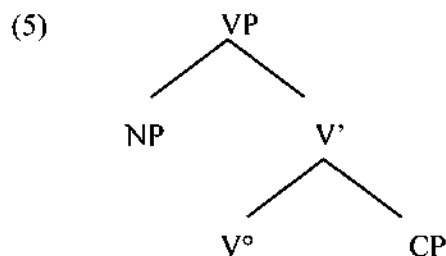
A related problem is the extraposition of complement sentences, be it CPs which are complements of the verb directly, or of an argument noun (phrase). Recent developments of X-bar theory force an analysis where the leftmost constituent is the most embedded one. The most influential theory is the Linear Correspondence Axiom (LCA) by Kayne (1993). Whereas this theory nicely explains the VO order for the sequence verb > sentential objects in so called OV languages like German and Dutch, it faces problems for the order object > verb > relative clause (see Zwart (1992, 1993)). In order to derive a sentence like (4), at least two movement operations are necessary.

- (4) Er hat die Behauptung _ aufgestellt, daß OV Sprachen kopfinitial sind.
 he has the claim _ made that OV languages head initial are
 'He made the claim that OV languages are head initial.'

The base order is verb > object, the order within the object phrase is noun > complement sentence. Thus in order to get the linearization in (4), one first has to move the complement sentence to some specifier position c-commanded by the verb and excluded by the object DP (movement step

I), then the stranded object DP moves to some [Spec,Agr] position, presumably [Spec,AgrO] (movement step II). The verb remains immobile in its base position. This is of course a logically possible derivation, the question is only how these movement steps can be motivated and how it is compatible with economy. (Even more complicated and far more diverging from traditional assumptions is the LCA analysis (head raising) of RC constructions (Kayne 1994, chapter 8). Here I will not adopt such an analysis.)

A similar proposal has been made by Haider (1992, 1993). He claims that NP complements and CP complements as well as CPs that are linked to NP complements originate in different positions with respect to the verb. This proposal may do without movement at all; and the order object DP > verb > (object) CP is no problem anymore. The tree looks as in (5):



die Behauptung aufgestellt, daß ...

For critique on the LCA proposals see Büring and Hartmann (1994). Another paper defending a base generation approach which should at least be mentioned is Wilder (1995). He proposes an analysis of apparently right dislocated phrases in terms of leftward movement and backward deletion. (For a similar proposal see Koster (1995)).

In the following, I will adopt a theory that assumes base generation of CP complements in the same position as DP arguments, that is to the left of the (base position of the) verb in OV languages like German. Furthermore I will assume that extraposition is a movement rule that applies to CPs (and less regularly to other heavy material), and that this derivation requires reconstruction, see Büring and Hartmann (1994) again (also Brosziewski (1994)). As for the trigger for extraposition, I think that Truckenbrodt (1995) is on the right track. The Büring-Hartmann generalization in (6), their (67), which is purely syntactic seems not to make the correct predictions.

- (6) Finite sentences may not be governed by V° or I°.

This principle rules out finite sentences in the middle field. This seems to me to be too a strong claim, which furthermore is not motivated and does not hold in most languages. As a matter of fact, in VO languages, the order verb > complement sentence, which is a classical government constellation, is the most natural order¹. Furthermore, Broszewski (1994) shows that also in German some verbs make the order CP > verb not sound too bad².

- (7) (weil) Peter [daß Maria krank ist] bedauert
 since Peter that Mary sick is regrets
- (8) Caecilia wird [daß sie Kraniche vergiften wollte] leugnen
 Caecilia shall that she cranes poison wanted deny

He does not classify these verbs. A short glance at his other examples allows for the conclusion that we are dealing with the class of factive verbs (see chapter 5.2.).³ Instead I will assume with Truckenbrodt (1995) that the trigger is a phonological one. I will not go into the details of his argumentation. Here it should be sufficient to say that the phonology of German type languages disfavors recursiveness of intonational phrases. Non-recursivity is defined in Selkirk (1995):

- (9) $*((\dots(\dots)_\alpha \dots)_\alpha)$ where α is a prosodic category, whereby... = phonetically overt material

¹ The funny thing is that the Buring-Hartmann generalization is almost the exact opposite of the Complement Principle which tries to achieve a government relationship between the I° and V° projections on the one hand and the 'extraposed' elements on the other.

² Non-extraposed RCs sound even better. In case of light (i.e. short) RCs, the non-extraposed variant (i) is only marginally more marked than the extraposed counterpart (ii):

- (i) weil Peter den Film, den du sehen willst, schon kennt
 'since Peter already knows the movie you want to see'
- (ii) weil Peter den Film schon kennt, den du sehen willst

³ However, I doubt that it is the semantic nature of the verbs that make the order CP > verb more acceptable. Factive verbs have (sentential) arguments which are topics in the normal case. I claim that it is the topic status of the CP that renders the linearization more acceptable. This is confirmed by Broszewski's own judgments. See his (3-10):

- a. ?? weil Peter wahrscheinlich [daß/seit wann/ ob Maria krank ist] weiß
 b. weil Peter [daß/seit wann/ ob Maria krank ist] wahrscheinlich weiß

As we have seen at length, positions before the sentential argument are topic positions. The (3-10) examples illustrate the claim nicely.

Another explanation would be provided by the theory that complement sentences of factive verbs are actually nominal (Kiparsky & Kiparsky (1971), Müller (1993)).

Since sentences (and very heavy PPs) are mapped onto intonational phrases which are the relevant prosodic category, sentences in the middle field are highly marked and extraposition creates a (more) well-formed structure like in (10):

$$(10) (\dots)_\alpha (\dots)_\alpha$$

Truckenbrodt gives the following rule:

$$(\dots YP \dots)_\alpha \Rightarrow (\dots t_i \dots)_\alpha (YP_i)_\alpha, \quad \text{whereby } \alpha \text{ is a maximal prosodic category } (\emptyset, I)$$

DP arguments are mapped onto phonological phrases. Phonological phrases are lower in the prosodic hierarchy than intonational phrases, i.e. they do not count as a maximal prosodic category for (9) to apply. Thus Truckenbrodt's rule does not apply. Since his crucial point is formulated in terms of optimality theory, it doesn't come as a surprise that extraposition, when allowed, obeys preferences, but is not subject to strict grammaticality constraints. Thus, it leaves some space for optionality and thus accounts for the non-necessity of relative clause extraposition.

A semantic 'trigger' for relative clause extraposition is to be found in Ziv and Cole (1974). Their claim is that the function of extraposed phrases is different from unmoved ones in so far as that extraposed sentences have an assertive character, whereas in situ phrases merely serve to modify their 'head NP'.

6.2. The Generalized Specificity Condition

In the following I will show that, at least in German, extraposition behaves as a regular movement operation. I will provide evidence that it is not distinct from leftward movement in the relevant respects. This is the reason why I spent so much space on the controversial discussion of the placement of relative and complement clauses on the right sentential periphery. My claim will be:

Generalized Specificity Condition: *topics are islands.*

This generalization allows an account for a broad range of data which were covered more or less adequately by a set of relatively unrelated principles such as the specificity condition, Guéron's name constraint, subject and factive islandhood. The phenomena I will consider are was-für split (and other split constructions), complement extraction out of argument phrases (NPs, PPs and partly CPs) and relative clause extraposition.

6.2.1. Was-für and Wieviel Split

Was-für split (and its related constructions in other Germanic languages) is a phenomenon that was brought to the attention of generative linguists by den Besten in 1985. A was-für NP (or DP) can be considered an ordinary NP with a wh-feature morphologically represented by the wh morpheme 'was'. Under normal circumstances a 'was-für NP'⁴ behaves like a wh-word (wen (who_{acc})) or a wh-constituent (welchen Jungen (which_{acc} boy)) in that it is moved to SpecCP in questions.

- (11) Wen_i hast du t_i gesehen?
- (12) [Welchen Jungen]_i hast du t_i gesehen?
- (13) [Was für einen Jungen]_i hast du t_i gesehen?

Interestingly, and that is what the phenomenon of was-für split consists of, it is possible to base generate the argument in its base position and to only move the 'was' part.

- (14) Was_i hast du t_i für einen Jungen gesehen?

This possibility is restricted. It is claimed that was-für split is restricted to direct objects, like in (14). It is furthermore supposed to be grammatical with subjects of unaccusative verbs (which are base generated as sisters of V^o), example (15), and ungrammatical with all other arguments like dative complements (17) or subjects (16), examples taken from Müller (1993).

⁴ I use the term 'was-für NP' very informally. For my concerns, it does not matter whether the constituent is an NP, a DP or a PP (as analyzed by Müller (1993)).

- (15) Was, sind denn da heute t_i für Gäste gekommen?
was are prt expl today für guests come/arrived
- (16) *Was, haben t_i für Leute dem Fritz Briefe geschickt?
was have für Leute_{nom} the_{dat} Fritz letters sent
- (17) *Was, hat der Fritz t_i für Leuten Briefe geschickt?
was has the_{nom} Fritz für people_{dat} letters sent

I will show that this is not correct and that a more adequate generalization can be given.

First, contrary to what den Besten and Müller claim, was-für split sounds very natural with subjects of unergative verbs when the stranded part stays in its base position where its belonging to the comment is guaranteed.

- (18) Was, haben dieses Buch denn [t_i für Leute] gelesen.
was have this book prt für people read

The sentence is construed in a way that the object is a topic, it has therefore moved to [Spec,AgrO] across the VP internal subject and the particle. Belonging to the comment, the subject stays in situ and allows for extraction. Example (16) is deviant because the extraction of 'was' is from a scrambled position. The use of a proper name as dative argument renders it likely that the indirect object must be in a position outside VP. Since the subject NP precedes it, it also must have moved from its base position. As suggested in chapter 3, this position is linked to a topic reading. Thus, the conclusion is that it is the topic status which forbids extraction rather than the subject status.⁵ With slight changes in the linear word order, Müller's bad example can be turned into a good one. (19) sounds fine to me.

⁵ Fanselow (1995) brings two sentences which could be considered serious counterexamples to the claim developed here. I am trying to show that scrambled XPs are blocking entities, not allowing for extraction out of them. However, consider the grammatical examples:

- a. was-für split (originally from Haider (1992))
was hätte denn damals _ für Aufsätze selbst der Hans nicht zu _ rezensieren vermocht?
- b. R-proform extraction
worüber hätte [einen solchen Schmähartikel t_i] selbst der Peter nicht aus Wut _ verfassen können?

In these cases, I would like to claim, we are not dealing with the kind of scrambling which I analyze as movement to [Spec,Agr]. I claim that in a. and b. the object has been moved to some focus position, i.e. '[für Aufsätze]' and '[einen solchen Schmähartikel t_i]' occupy some A' position from which they are reconstructed in the base position from where extraction is allowed. For a more technical solution to this problem (anti-freezing)

- (19) Was_i haben dem Fritz t_i für Leute Briefe geschickt?
 was have the Fritz für people letters sent

The same holds for indirect objects. I challenge that (17) is bad. However, let me give a clearer example where one can see that the indirect object is most likely in its base position.

- (20) Was_i hat sie's denn [t_i für Leuten] empfohlen?
 was has she+it ptc für people_{dat} recommended

Also a verb that takes a dative complement without subcategorizing for an accusative complement allows for *was-für* split. (21) sounds as good as any direct object construction like (14).

- (21) Was_i hast du denn [t_i für Leuten] geholfen?
 was have you ptc für people_{dat} helped

As expected, topic datives do not allow for *was* extraction.

- (22) *Was_i haben [t_i für Leuten] gestern Verlagsangestellte Bücher geschickt?
 was have für people_{dat} yesterday edition employees books sent

Only to make the picture complete, *was-für* split with scrambled direct objects is also bad. There is a clear contrast between (23) and the scrambled counterpart (24).

- (23) Was_i hast du damals [t_i für Bücher] gelesen?
 was have you that time für books read
 (24) ??Was_i hast du [t_i für Bücher] damals gelesen?
 was have you für books that time read

see below and Müller (1994). I think the fact that these sentences need a lot of intonational contour makes it probable that we are dealing with focus movement, which is distinct from ordinary movement to [Spec, Agr].

The same pattern can be observed with a construction in my dialect, which, in analogy, I would like to call 'wieviel split' (East Franconian, variety of Themar and surroundings). 'Wieviel split' is almost an analogue phenomenon to French 'combien' extraction (see Obenauer (1984), Rizzi (1990) and de Swart (1992)). It obeys the same semantic restrictions, which, for the moment, do not matter. (However, see chapter 7.)

In my dialect, if the question is for the number of pigs, it is equally good to ask:

(25) [Wieviel Schweine], habt ihr denn dieses Jahr t, geschlachtet?⁶

how many pigs have youpl ptc this year slaughtered

(26) Wieviel, habt ihr denn dieses Jahr [t, Schweine] geschlachtet?

how many have youpl ptc this year pigs slaughtered

Again, any unscrambled arguments allow for 'wieviel split', scrambled ones do not.

subjects

(27) Wieviel, haben das Ding denn [t, Leute] unterschrieben?

how many have the thing ptc people signed

(28) *Wieviel, haben t, Leute das Ding denn unterschrieben?

indirect objects

(29) ^(?)Wieviel, hast du's denn schon [t, Leuten] gezeigt?

how many have you+it ptc already people shown

(30) *Wieviel, hast du's [t, Leuten] denn gestern schon gezeigt?

how many have you+it people ptc yesterday already shown

direct objects

(31) Wieviel, habt ihr denn dieses Jahr [t, Schweine] geschlachtet?

how many have youpl ptc this year pigs slaughtered

(32) ^{??*}Wieviel, habt ihr [t, Schweine] denn dieses Jahr geschlachtet?

how many have youpl pigs ptc this year slaughtered

⁶ In order not to complicate matters, I use standard German as a kind of meta language. A more precise representation would look something like:

(25') Wievil Säü hobt'r denn häür g(e)schlocht?

(31') Wievil hobt'r denn häür Säü g(e)schlocht?

6.2.2. Quantifier Split

There is a construction in German that is very similar to the two split phenomena investigated in the preceding section, yet there are some differences. This construction (quantifier split) consists of a bare, or indefinite noun (phrase) in SpecCP and an associate quantifier element lower down in the tree.

- (33) *Tomaten* haben wir *keine* gekauft.
 tomatoes have we none bought.
 ‘As for tomatoes, we didn’t buy any.’

It is not clear whether in these constructions movement is involved or not (for the discussion of this problem see van Riemsdijk (1978)). For the sake of argument, let us assume that we are dealing with an instance of move α here. It turns out that we are faced with the same pattern in grammaticality as with ‘was-für’ and ‘wieviel’ split, i.e. movement out of an argument phrase is not restricted to the direct object position. What matters is that the constituent from which it is being extracted be in its base position. This fact is independently corroborated if the Mapping Hypothesis is adopted: quantifier split is only possible from weakly quantified NPs which get existentially bound within the VP.

- (34) subject
 Frauen, haben da immer nur wenige t_i gearbeitet.
 women have there always only few_{nom} worked.
- (35) indirect object
 Frauen, hat er schon vielen t_i das Gesicht gelifted⁷.
 women has he already many_{dat} the face lifted
- (36) direct object
 Frauen, hat er schon so einige t_i unglücklich gemacht.
 women has he already quite some unhappy made

Quantifier split from scrambled NPs sounds odd:

⁷ Here, we even get extraction out of a possibly non-subcategorized, i.e. free dative (!) (cf. for challenges see Vogel and Steinbach 1995)

- (37) *Frauen_i haben [wenige t_i]_j immer t_j gearbeitet.
(38) *Frauen_i hat er [vielen t_i]_j schon oft t_j das Gesicht gelifted.
(39) *Frauen_i hat er so [einige t_i]_j schon immer t_j unglücklich gemacht.

6.2.3. Wh-Extraction

Exactly as with was-für split, it is claimed that extraction of wh-constituents out of argument NPs is restricted to direct objects in base position.

- (40) Worüber_i hat er [ein Buch t_i]_j verfaßt?
about what has he a book written
(41) [Über welches Thema]_i ist noch nie [ein Buch t_i]_j verfaßt worden?
about which topic is yet never a book written pass_{aux}
(42) [Über welches Thema]_i ist noch nie [ein Buch t_i]_j erschienen?
about which topic is yet never a book appeared

Müller cites data that are supposed to show that wh-extraction out of subjects (43) and datives (44) leads to ungrammaticality (p. 219):

- (43) *[Über wen]_i hat [ein Buch t_i]_j den Fritz beeindruckt?
about whom has a book the Fritz impressed
(44) *[Über wen]_i hat der Verleger [einem Buch t_i]_j keine Chance gegeben?
about whom has the editor a book no chance given

Again, I challenge his judgments. At least (44) is a perfect sentence for me. The following data shows that wh-extraction out of subjects and dative arguments may give a well-formed out-put.

- (45) [Von welchen Firmen]_i haben den Vertrag nun doch [einige Chefs t_i]_j unterschrieben?
of which companies have the contract ptc ptc some bosses signed
(46) ^(?)[Von was für Firmen]_i hat er diese Rechner [einigen Chefs t_i]_j angeboten?
of 'was für' companies has he these computers some_{dai} bosses offered

6.2.4. Extraction from PP

As observed by van Riemsdijk (1978), German and Dutch exhibit a sort of preposition stranding, better called ‘post position stranding’. For this phenomenon to be possible, the extracted element must occur as a so-called R-pronoun to the left of the preposition.

- (47) Ich habe noch nicht [_{PP} von [_{DP} diesen Vorfall]] gehört.
 I have yet nothing about this incident heard
- (48) *[Diesen Vorfall]_i habe ich noch nicht von t_i gehört.
- (49) Ich habe noch nicht davon gehört. (R-pronoun)
- (50) Da_i habe ich noch nicht t_i von gehört.
- (51) Du hast da_i noch nicht t_i von gehört?
- (52) Wo_i hast Du noch nicht t_i von gehört?

As shown by Müller, this stranding is only possible when the PP occurs in its base position (50) vs. (53).

- (53) *Da_i habe ich [t_i von]_j noch nicht t_j gehört.

Thus, when the PP is outside VP, i.e. in a topic position, extraction leads to ungrammaticality⁸. There is yet another constellation where the PP is outside the VP and extraction is still possible. This has also been observed by Müller (1994). In this case, the PP is situated to the right of the verb, thus it is presumably extraposed. Since this sort of extraposition involves reconstruction into the base position, the acceptability of (54) does not come as a surprise.

- (54) Da_i habe ich noch nicht t_j von gehört [t_i von]_j.

⁸ It seems that this fact is parallel to extraction possibilities in English. Base position PPs allow for extraction, extraposed ones don't:

- (a) Who_i did you read a book by t_i last summer?
 (b) *Who_i did you read a book last summer by t_i?

For further similarities and the validity of the generalized specificity condition in English, see appendix.

6.2.5. The Weakness of Topic Islands

The aim of the preceding three paragraphs was to show that extraction is not restricted to the direct object position. My goal was to provide evidence that arguments in their base position allow for extraposition no matter what their Θ -role, case, or argumental status is. Now I will go on and show that whereas VP internal arguments freely allow for extraction, topic arguments are selective with respect to the semantics of the extraposed element.

A closer look at the data shows that scrambled arguments are not always islands for movement out of them. In the following context the object ('die Rezensionen von diesen Artikeln') is already used as a topic, as indicated by its position relative to the sentence adverbial and the double definiteness. In the question that follows, wh-extraction out of the scrambled object sounds pretty good.

context:

Er hätte sich darum kümmern sollen, und trotzdem hat er die Rezensionen von diesen Artikeln wahrscheinlich gar nicht gelesen.

(He should have taken care of it, but nonetheless, he probably didn't read the reviews of these articles.)

- (55) [Von welchen Artikeln]_i, meinst du, hat er [die Rezensionen t_j]_i
of which articles think you has he the reviews
wahrscheinlich gar nicht t_j gelesen.
probably at all not read

As expected, this is the case with subjects and indirect objects as well. If the extracted phrases are discourse-linked enough they may be moved out of the scrambled arguments.

subjects

(Two assistants of a travel agency talking about well-selling trips)

- (56) [In welche Städte]_i, haben sich [die Reisen t_j]_i letztes Jahr t_j besonders gelohnt?
in which cities have refl the trips last year especially be worth

indirect objects

(A janitor having a list in front of him where all apartments he has to care of are listed, whereby those apartments where he installed new lockers have a check mark. He reports to the owner of the house:)

(57)[Von diesen Wohnungen]_i, habe ich [den Türen t_j] gestern t_j neue Schlösser eingebaut.
of these apartments have I the doors_{dat} yesterday new lockers installed

This data is in contrast with the splitting paradigms of the subchapters 1 and 2 where extraction out of scrambled arguments was bad. These facts can be explained if one assumes two things: first, a theory of scope taking as proposed in Szabolcsi and Zwarts (1993), and second that topics are weak islands. ‘Was-für’ and ‘wieviel’ questions are ambiguous. The former have a specific, discourse-linked individual reading, which is almost synonymous with a ‘which question’, and in addition a property reading. The property reading -which is the prominent one- does not ask about discrete individuals, but about some property the questioned phrase might have. Under this reading ‘was für’ could be translated into English, ‘what kind of...’, ‘what sort of...’. A similar ambiguity arises with ‘wieviel’ questions. According to Dobrovie-Sorin (1992) and Szabolcsi and Zwarts (1993), such questions may have (at least) two readings: an amount reading, and an individual reading⁹. The interesting fact is that in the splitting constructions the individual reading disappears. For a ‘was-für NP’ and a ‘wieviel NP’ to escape a weak island, the phrase must not be discontinuous. This is due to the fact that only individuals may escape weak islands.

(58) [Was für Bücher]_i, hast du t_j gelesen?

(59) Was_i, hast du [t_j für Bücher] gelesen?

(60) [Was für Bücher]_i, hast du nicht t_j gelesen?¹⁰

(61) *Was_i, hast du nicht [t_j für Bücher] gelesen?

(62) [Wieviel Bücher]_i, hast du t_j gelesen?

(63) Wieviel_i, hast du [t_j Bücher] gelesen?

⁹ Actually, how-many-questions are three way ambiguous. The individual reading can be divided again into a discourse linked individual reading, and a non-discourse linked individual reading. For the present purposes, this is not relevant though.

¹⁰ I use negation as a weak island here.

(64) [Wieviel Bücher]_i hast du nicht t_i gelesen?

(65) *Wieviel_i hast du nicht t_i Bücher gelesen?

As a consequence, the data are accounted for. If the claim that topics are weak islands is correct, we now have an explanation for the different extraction possibilities. The data from section 1 and 2 involve splitting examples where an individual reading is impossible. Hence, when the 'was' or 'wieviel' part has been extracted out of a topic argument, ungrammaticality arises. On the other hand, in the examples (55) - (57), the extractees are discourse linked individuals, thus no island violation arises. This observation can be stated as a slight modification of (11):

Generalized Specificity Condition (revised version):

topics are weak islands

6.3. Factive Islands

Since Kiparsky and Kiparsky (1971) factive verbs are known to be different from other predicates with respect to extraction properties (among other differences). Within the theory of Relativized Minimality (Rizzi (1990), Cinque (1990)), factive predicates are listed as one standard case of weak island creators. Whereas arguments as well as adjuncts can be extracted from complements of nonfactive verbs like *to think*, *to claim*, factive verbs like *to regret*, *to accept*, while allowing for extraction of arguments (68), block extraction of wh-adjuncts (69).

(66) Who_i do you believe John saw t_i?

(67) Why_i do you believe John left t_i?

(68) Which dog_i do you regret that John bought t_i?

(69) *Why_i do you regret John left t_i?

These facts hold more or less cross-linguistically.

More recent research has shown that the adjunct/argument asymmetry with factive predicates is only roughly correct. First, Szabolcsi and Zwarts (1993) show that the distinction is not between adjuncts and arguments, but between extractees which get an individual versus extractees that get a non-individual reading. The argumental status alone does not qualify a phrase to be extractable.

(70) **[How much wine]_i do you regret that Marcus poisoned t_i ?*

Here, the theme status of the argument of 'to poison' is not enough to identify the trace, as it would be predicted by Rizzi's classification of referential vs. non-referential theta-roles (Rizzi (1990)).

Second, Hegarty (1992) points out that the empirically correct distinction should be made between Cattell's (1978) response stance and non-stance verbs on the one hand, as opposed to volunteered stance verbs on the other, rather than between factives and non-factives. He provides examples where factive predicates do not block (adjunct) extraction (71), and non-factive predicates that create islands for extraction (72). (see also the work of Varlokosta (1994) p. 59 - 61)

(71) *How_i did you find out [that John altered the records t_i] ?*

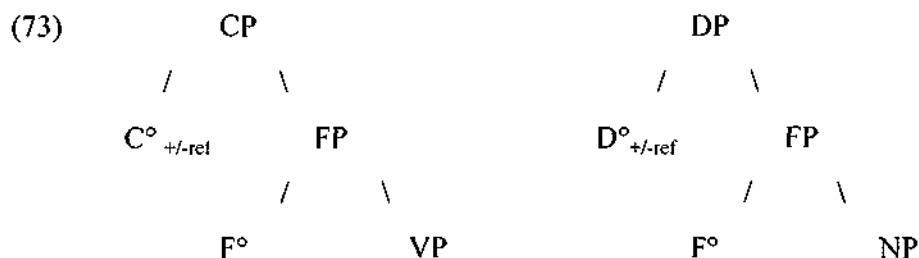
(- By hacking into the computer system.)

(72) **Why_i do they agree [that John destroyed the building t_i] ?*

(- To collect the insurance.)

Hegarty furthermore proposes that islandhood correlates with the property of F(amiliarity), whereby his definition of familiarity comes close to what I call topichood. For Hegarty, familiarity is satisfied under the following circumstances. Either, the content of the familiar complement has been introduced in the discourse frame (has a file card in Heim's (1981) terms) or is easily inferable for the listener (accommodation). Or, and that is a weaker form of 'familiarity', the speaker assumes the listener to be capable of recognizing the content of the complement as factual or as a point at issue within the discussion. He proposes that F(amiliarity) be realized as a syntactic feature on the complementizer which renders the C° element a 'semantic' complementizer. Using Higginbotham's event semantics (1985), Hegarty assumes that 'semantic' complementizers bind the event role of the predicate. Thus, he assimilates the function of complementizers of response stance and non-stance complements to the function of definite determiners which discharge the referential role of a nominal expression. This idea brings along a nice twofold parallelism. First, it underlines the similarity between nominal and verbal extended

projections (Grimshaw (1990)) in that the topmost functional projections, the D- and the C-level respectively, carry information about the referential status of the phrase.



Second, it assimilates indefinites (noun phrases) and volunteered stance complements (sentences) in that they are open expressions which introduce a variable that must be bound from outside the projection. For nominal expressions, this binding is done through Heim's rule of existential closure. Adopting Diesing's theory of the Mapping Hypothesis (1990), and chapter 2.1.2.1. of this thesis, existential closure comes from an \exists operator adjoined to VP.

- (74) Every good linguist [_{VP} wrote a bad article].
 \forall_x [good linguist (x)] \exists_y [_{VP} bad article (y) \wedge wrote (x, y)]

For sentential complements, Hegarty proposes that the event role of volunteered stance predicates percolates up in the tree into the matrix clause and is discharged there.

- (75) Peter and Jane believe that John visited Mary
- (76) ...believe [that [John [I° [_{VP} visit Mary, e]]]]
 ...<e> CP<e> IP<e> I'<e> VP<e>

However, the picture is not that simple. As shown at many places in this dissertation, the weak, existential reading is not the only one indefinite NPs can have. There is a certain ambiguity with weak NPs. In German, if the indefinite argument is in its base position, - in the normal case - it gets caught by existential closure and receives a weak interpretation. If it is scrambled, the strong presuppositional reading arises. These differences cooccur with a phonological difference (see also the detailed discussion in chapter 2). In the base position variant, the object gets primary stress.

(77) Ich habe gestern eine ZEITSchrift gelesen.

I have yesterday a journal read.

'I read a JOURnal yesterday.'

When the indefinite object is scrambled and it gets the partitive reading, two pitch accents occur whereby one falls on the weak determiner, the other one on the verb (hat contour).

(78) Ich habe [EIne Zeitschrift]_i gestern t_i geLEsen.

I have a journal yesterday read

(something like: ONE (of the) journal(s), I READ yeaterday/ DID read yesterday.)

When the object is definite and used as non-contrastive topic, it gets deaccented, and only the verb is stressed.

(79) Ich hab' die Zeitschrift (gestern) geLEsen.

The same is true for complements of volunteered stance predicates. They too may be weak (= assertive) or strong, i.e. 'presuppositional'. In some languages, this ambiguity is resolved very clearly by the use of a special complementizer (Navajo, see chapter 7, and Drubig (1994)). In German, it is again the intonational pattern that shows us how the complement sentence is to be interpreted. If the complement sentence carries new information, i.e. belongs to or is the comment, the main stress goes to the focus projective element in the complement sentence.

(80) Ich glaube, daß PEter gekommen ist.

I believe that Peter come is

(80) is a natural answer to a question like 'Was glaubst du?' ('What do you believe?')

If the content of the complement clause is presupposed, the complement sentence can/ must be used as a topic. The new information of the sentence then is that the relation between the speaker and the fact (!) that Peter came is a relation of belief. In that case, the main stress goes on the matrix verb.

(81) Ich GLAUbe, daß Peter gekommen ist.

(81) as answer to 'Was glaubst du?' is infelicitous. For (81) to be felicitous, one needs a context where, for instance, A tries to convince B that Peter has arrived. B, however, does not have any doubts about the truth of the fact of Peter's arrival. In order to get A to stop persuading her about something she already takes for granted, B might utter (81). (The same holds for English.)

Thus, what we can conclude from the preceding discussion is that complements of volunteered stance predicates pattern together with indefinites; and complements of response stance and non-stance verbs behave like definites¹¹. Since indefinites and complements of volunteered stance predicates are prototypically new information, i.e. comment elements, extraction out of them is easily possible. Factive complements, or more correctly sentential complements exhibiting Hegarty's F(amiliarity) complementizer are to be analyzed as topics. Topics are transparent for operator - variable dependencies of individual expressions (55) -(57) on the one hand, on the other hand, however, they are blocking categories for non-individual linkage. Thus the Generalized Specificity Condition generalizes over the factive island constraint and the (traditional) specificity condition.

6.4. Relative Clause Extrapolation

6.4.1. Relative Clause Extrapolation and the Validity of Ross' Right Roof Constraint

As already discussed in the introductory part of this chapter, I will defend an analysis of rightward movement of relative clauses. The claim is that rightward movement is not (very) different from leftward movement. This is in clear contrast with a statement taken from Buring and Hartmann (1994) p.1.:

'Extrapolation seems to contradict many of the well-established principles of generative grammar: While A'-movement to the left is unbound(ed), extrapolation is strictly local. Only leftward movement must respect NP-islands - extrapolation may violate them.'

¹¹ As shown at many other occasions, definites exhibit an ambiguity as well. They may belong to the comment as well as they may be a topic. According to the respective status they act as islands or don't, and regulate the stress pattern of the sentence. I will not complicate the matters and therefore won't go further into the detail here.

First, I will try to challenge the first alleged difference and show that there are also some cases of unbounded rightward movement. The observation that movement to the right has to adjoin the moved constituent to the first maximal projection possible is due to Ross (1967). The so-called ‘right roof constraint’ was formulated to account for the contrast In (82) vs (83).

- (82) Peter read [a book t_i] last night [which was written in French],
 (83) *Peter said [that he will look for [someone t_i]] yesterday] [who speaks French],

This minimal pair shows that a constituent - when moved to the right - cannot be extracted out of a position and then adjoin outside the next higher projection. The traditional analysis for (82) adjoins the relative clause to VP which is the phrase immediately dominating the object NP. Thus the right roof constraint is not violated. (83) is construed in such a way that the relative clause must be linked to a position which is separated from it by several projections: subordinate VP, subordinate CP and matrix VP, hence the ungrammaticality.

The validity of Ross’ constraint for German CP extraposition has never been challenged. Furthermore, Wiltschko (1993) dedicates a whole chapter of her paper to confirm it.

In order to show that the right roof constraint does not hold, we have to look for examples where an embedded sentence is undoubtedly extracted out of its base position and moved to the periphery of the matrix sentence to which it does not bear any relationship. A candidate that comes to mind first is exemplified in (84).

- (84) ... weil [er [t_i wissen] wollte] [was du ihr gesagt hast],
 since he know wanted what you her said have
 ‘...since he wanted to know what you (had) told her’

Here the complement sentence of *wissen* is separated from its theta-licenser and adjoined to the matrix sentence whose lexical head is the verb *wollen*. For most linguists this is not a convincing example however. It is not convincing because there are many proposals to consider *wissen wollen* a verbal complex (Bierwisch (1990)). Thus (84) is analyzed to be a monoclausal structure and extraposition does not cross any clausal boundaries. However, not always is it possible to argue that all verbal morphemes represent one cluster with a V° status heading a single CP. In a construction with two adverbials of the same semantic class with logically incompatible interpretation, a biclausal structure must be assumed.

(85) weil er damals (noch) [das Buch [heute in einer Woche] abliefern] wollte

since he that time (still) the book today in a week hand in wanted
 '...since that time he wanted to hand in the book a week from now'

Since we have two time adverbials that are not compatible we have to assume two separate domains where they are located. *abliefern wollen* cannot be analyzed as one verb. The 'wanting event' refers to a state of affairs in the past, the 'handing-in-action' is situated in the future. Let us assume with Alexiadou (1994) that temporal adverbials are licensed in the specifier position of TP and that there is only one projection for the event time in the sentence (see also Giorgi 1994). Since TP and CP are closely related, we have to deal with two CPs here. This is the exactly the configuration we need in order to see whether we can extract from the embedded sentence or not. It turns out that a relative clause on the right periphery can be linked to an argument within the embedded sentence.

(86)

weil er damals [das Buch t_i [heute in einer Woche] abliefern] wollte, [auf das alle gewartet haben],

This sentence has the structure: [CP [CP [NP t_i ...]] CP_i]

which is disallowed by the right roof constraint.

There are yet more exceptions to the constraint. It is possible to construe complex sentences where a finite complement clause occurs within the middle field of the matrix sentence, and a constituent which belongs to the embedded clause is situated on the right periphery, i.e. to the right of the matrix verb. In that case, it is not possible any longer to claim that complex verb formation or restructuring give rise to a monoclausal construction. As shown in section 6.1., complement sentences that are topics are not so bad when they stay somewhere in the middle field. Though certainly more marked than its extraposed counterpart, (87) is fully grammatical.

(87) Peter hat, daß er uns den Computer schenkt, fest versprochen.

Peter has that he us_{dat} the compute gives firmly promised

'Peter can't go back on his promise that he will give us the computer as a present.'

Extraction out of the embedded CP makes the sentence even more marked. The whole sentence remains grammatical nevertheless.

- (88) Peter hat, [daß er uns denjenigen Computer t_i schenkt,] fest versprochen, [den er
Peter has that he us the+one compute gives firmly promised that he
nicht mehr braucht];
not anymore needs

A similar example is:

- (89) weil er schon gestern, daß er eine [Behauptung t_i] aufstellen muß, bedauerte,
since he already yesterday that he a claim up-put must regretted
[die Maria in Schwierigkeiten bringen wird.];
that Mary into troubles bring shall

Thus, we see that the right roof constraint is not that strong a filter as has been claimed since Ross formulated it. At least in some German constructions there seem to exist some counterexamples¹².

6.4.2. Rightward Movement, Islandhood and the Generalized Specificity Condition

6.4.2.1. The Syntax of Restrictive Versus Appositive Relative Clauses

The second and stronger alleged difference between rightward and leftward movement is that while island constraints are at work to restrict movement to the left, they are not effective in restricting movement to the right. The aim of this subchapter is to explode this claim, i.e. to show that rightward movement does obey island constraints. I will show that there is a hitherto undiscussed difference with respect to whether the extraposed clause is a restrictive or an appositive one. Since the distinction between these two types of relative clauses (henceforth RC) is crucial for the argumentation, I have to make some assumptions about their syntax which in several respects might seem stipulative. However, there is a lot of literature I can base my

¹² For doubts about the validity of the right roof constraint in English constructions see appendix to this chapter.

proposal on (see below). The semantic difference between restrictive and appositive RCs can be illustrated by a minimal pair¹³:

- (90) The swans, which are white, are in that part of the lake.¹⁴
(91) The swans which are white are in that part of the lake.

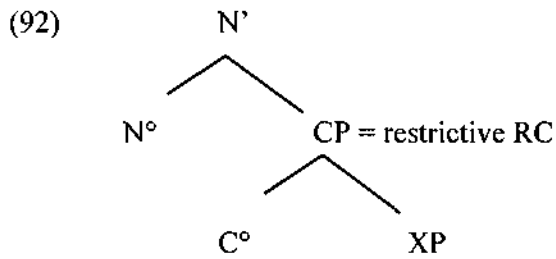
The use of an appositive RC as in (90) implies that all swans under discussion, i.e. all swans that are swimming on the lake, are white. This is not the case for (91). The use of a restrictive RC singles out a subset of the set which is denoted by the noun without any restriction, in the case of (91) all swans, which may possibly contain gray and black members as well. The semantic difference of restrictive RCs on the one hand, and appositive clauses on the other, has been translated into syntax by assigning to the relevant clause type a different position in the structural representation. All analyses that put restrictive and appositive RCs in different syntactic positions choose a position that is lower in the tree for restrictive RCs, and a position that is higher for appositive ones (Ziv and Cole (1974), Emonds (1979), Kaisse (1981), Haegeman (1988), Fabb (1989)). Since all relevant proposals were made at different stages of the theory with respect to the analysis of the internal structure of the NP and X-bar theory in general, I will not list all the proposed configurations. What I will adopt from the work quoted above are two main aspects; first: the base position of a restrictive RC is the sister of the noun which it restricts - the appositive is not, and second: the restrictive RC carries a referential index which is identical to the one the restricted noun carries.

Let us start with the proof of the first claim which argues for the following structure:

¹³ The examples, as well as a lot of the following argumentation are deeply inspired by the article of Fabb (1989).

¹⁴ Since I follow Fabb (1989) in his argumentation, I will keep to English examples. Furthermore, there is one nice thing about English punctuation that makes this language superior to German when a distinction between restrictive and appositive relative clauses is intended. English punctuation disambiguates relative clauses by prescribing the use of commas when a sentence is supposed to function as non-restricting information, whereas there is no comma if a restricting reading is intended. German orthography blurs the distinction by prescribing a comma in both cases. Thus, in all the following examples, no ambiguity arises. Appositive sentences are separated by a comma; restrictive ones are not.

Nevertheless, since the syntax of German relative clauses is similar, and the semantics should always be the same anyway, I will assume that the structural position of relative and appositive sentences does not vary from one language to the other.



There is one serious objection to such an analysis, namely theta-theory. According to standard assumptions only true arguments combine with lexical heads X° and project to X' . Under the same assumptions, relative clauses are not considered to be arguments. However, the following facts suggest that the noun c-commands the RC, thus (92) is a reasonable analysis.

1. If the restricted noun is a wh-word, the restrictive RC must be pied piped when the operator moves to [Spec,CP] (94). Stranding results in ungrammaticality (95) (Fabb (1989) p.70).

(93) You liked the [man [that you met]] the best.

(94) [Who [that you met]] did you like best?

(95) *Who did you like _ that you met best?

This is a result of the requirement that only full XPs may be moved. If the wh-word itself were already a maximal projection, it should be able of moving to [Spec,CP] alone, leaving the RC behind. As (95) shows, this is not possible. However, if one deals with an appositive RC, the relative clause cannot be pied piped (98). It must remain behind (97).

(96) We taught the boys, some of whom were deaf, French.

(97) Who did we teach _, some of whom were deaf, French?

(98) *Who, some of whom were deaf, did we teach French?

This shows that the non-restrictive RCs may, or must be adjoined higher.

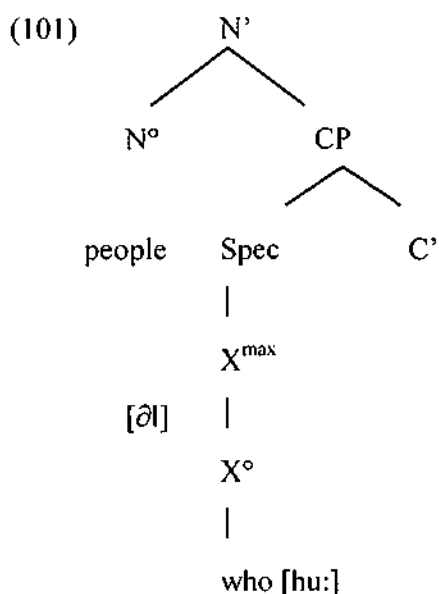
2. Kaisse (1981) observes that only in restrictive RCs can the relative pronoun phonologically cliticize to preceding material.

(99) the people who'll [hðl] be here tomorrow

(100) *John, who'll [hðl] be here tomorrow

Here, 'who' within its phonological environment behaves as in cases where it comes undoubtedly from a complement sentence. This leads Kaisse to the formulation of her 'Head Condition' saying: '*who* may cliticize to the X^{\max} whose complement it introduces.'

In modern theories that explain phonological cliticization as syntactically describable in terms of head-to-head-movement (incorporation) resulting in adjunction complexes of heads, (99) needs a configuration where 'who', before it becomes cliticized, is c-commanded by 'people', otherwise a basic rule of movement is violated.



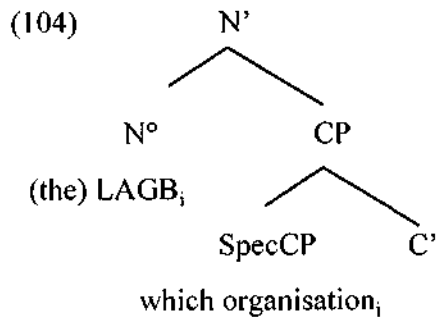
If 'people' is in its base position, and it has never been claimed that there is head movement going on inside English DPs, a CP from which movement takes place that targets the N° 'people' must be c-commanded by the head noun. Hence (101) must be the correct structure. On the other hand, (100) has a different structure, disallowing cliticization.

3. The last argument for the structure in (92) is the following. Whereas an appositive RC can have a full, ordinary DP as relative operator (102), restrictive RCs cannot (103).

(102) The LAGB, which organisation meets tomorrow, is based here.

(103) *The LAGB which organisation meets tomorrow is based here.

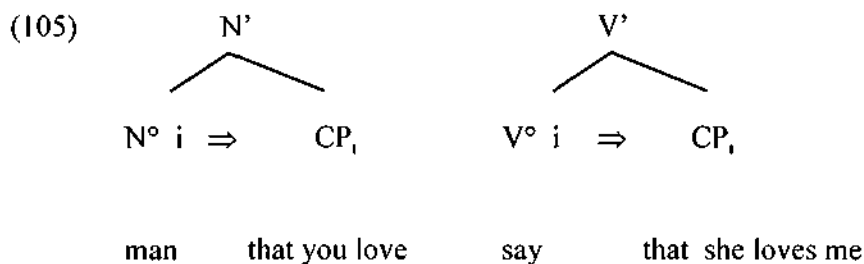
The explanation goes as follows. Contrary to a relative pronoun, or an empty operator which must be bound by a licenser outside its clause, a full relative DP counts as an independent referential expression with its own referential index. (103) is ungrammatical because it is a clear case of a violation of Principle C of the Binding Theory. If structure (92) is adopted, we get (104) which is an illicit configuration:



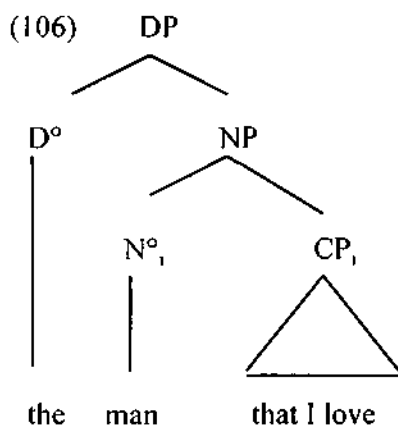
(102) is good because the RC is much higher, i.e. possibly even higher than the D°.

1 to 3 is only a selection of arguments for the position of RCs. For more arguments see Fabb (1989).

Now, once (92) is adopted as a structure for restrictive RCs, one still has to argue for the second assumption which is that the noun and the RC share the same referential index. This is not so uncontroversial if one assumes that lexical heads assign (referential) indices to their sisters and, maybe, specifiers. This is a core assumption of the theory of 'Relativized Minimality', Rizzi (1990). There lexical heads provide their arguments with indices which can be referential or not. In case the index is a referential one, the argument is said to carry a referential theta-role and counts as a true participant in the event. If the argument does not refer to a participant in the event, it is considered to be a quasi-argument or a non-referential expression. The former, which carry a referential index, can be extracted out of weak islands since the index satisfies the identification requirement. The latter cannot be moved out of islands. Thus, what is important here is that lexical heads assign indices to the phrases which they combine with. As a consequence, a noun which is identified by a restrictive RC assigns a referential index to it in the same way as, for example, a verb of saying marks its sentential complement with an argumental index, since in both cases we are dealing with sister CPs of lexical heads.



The second motivation that the head noun shares a referential index with the restrictive RC comes again from Fabb who uses an idea by Williams (1980). The idea is that what a restrictive RC does is that it acts as a predicate to the noun it modifies. „I take the modification relation between RR (A.M.: restrictive RC) and host to be one of predication, with the C'' (the relative clause) predicated of ... the noun. Williams (1980) suggests that predication involves co-indexing between the subject and the predicate, which must minimally c-command, i.e. must be sisters.“ Thus the configuration of a noun with a restrictive RC looks as in (106):



This co-indexing, which plays an important role in Fabb’s theory for completely different reasons, will be of relevance for my proposal too.

Although I have argued elsewhere in this dissertation that I prefer the account of scope taking developed by Szabolcsi and Zwart ((1990), (1993)) to the theory of Relativized Minimality in the sense of Rizzi (1990) and Cinque (1990), for the moment I will use the latter theory to account for the different behavior of restrictive and appositive RCs with respect to extraction. Since both accounts are very similar with respect to the broader range of data they explain, the marginal data, which play an important role for the general decision of which theory is ultimately preferable to the other, does not matter here. The idea is that if topics are weak islands whereas comment internal phrases are not, VP internal arguments should freely allow for extraction of restrictive as

well as appositive RCs. Topic phrases, i.e. scrambled XPs, are claimed to be weak islands. Thus, appositive sentences should not be able to escape them. Nothing may identify their trace. Restrictive RCs on the other hand should be allowed to move out of scrambled NPs because they carry a referential index. This index identifies their trace exactly as in *wh*-extraction of referential arguments out of well known weak islands like factive complements or *wh*-islands. Given all these assumptions, the prediction is born out as will be shown on the next few pages.

6.4.2.2. The Extraction Behavior of Restrictive and Appositive Relative Clauses in German

First, as I did with *wh*-extraction in section 6.2.1 and 6.2.3., I will show that extraction of RCs is not restricted to internal arguments. RCs can be extracted out of any kind of argumental or even non-argumental noun phrase.

(107) subject

weil eine Frau gehustet hat, die mit einem Porsche kam.

‘since a woman coughed who came with a Porsche’

(108) indirect object

weil er den Brief einer Frau geschickt hat, die mit einem Porsche kam

‘since he sent the letter to a woman who came with a Porsche’

(109) direct object

weil er eine Frau kennengelernt hat, die einen Porsche fährt

‘since he met a women who drives a Porsche’

(110) prepositional complements

weil er auf eine Frau gewartet hat, die einen Porsche fährt

‘since he was waiting for a woman who drives a Porsche’

Now I will go on to show that there is a difference with respect to the status of the extraposed RC. As described above, XPs that stay in their base position which is VP internal do not block extraction. (111) and (112) are examples where the extraposed RC acts as a restrictor of the noun from which it has been moved away¹⁵. (113), (114) and (115) are clear cases of extraposition of an appositive RC. In all cases, i.e. (111) - (115), I tried to put some adverbial phrase into the

¹⁵ Given the right context, an appositive reading is possible too. This is a very marginal possibility, however.

matrix sentence in order to show that the phrase from which extraction takes place is most likely in its base position. All examples are well-formed.

Restrictive RCs

(111) weil sie wahrscheinlich nur Autos t_i kaufen, [die in Deutschland hergestellt werden],

‘since they probably buy only cars that are made in Germany’

(112) weil sie aus Versehen ein Schwein t_i geschlachtet haben, [das für die Zucht bestimmt war],

‘since they slaughtered a pig by mistake which was designated for breeding’

Appositive RCs

(113) weil sie von Anfang an immer wieder Kohl t_i kritisiert hat, [der bekanntlich Bundeskanzler ist],

‘because from the beginning she kept criticising Kohl, who -as everybody knows- is the Federal Chancellor.’

(114) weil sie für Ronald Reagan t_i gestimmt haben, [der US Präsident war],

‘because they voted for Ronald Reagan, who was President of the United States’

(115) weil sie seit ihrer Kindheit Papst Johannes Paul II t_i verehrt, [der aus Polen stammt],

‘because since her childhood she adores Pope Johannes Paul II, who was born in Poland’

The contrast arises if the extraposition takes place from a scrambled position. Restrictive RCs remain extractable. Extraposition of an appositive RC leads to ungrammaticality.

(116) (Gebildete Menschen üben eine große Faszination auf ihn aus. Ich weiß,)¹⁶

daß er [jene Menschen t_i], schon seit seiner Kindheit t_j verehrt, [die mehr als drei Fremdsprachen sprechen],

‘that since his childhood he adores those people who speak more than three foreign languages’

¹⁶ In (116) and (117) I give a context. This context assures that the XP from which extraposition takes place gets a topic interpretation in the test clause, and hence must be scrambled there.

- (117) (Der Heilige Vater in Rom ist sein Ein und Alles. Ich weiß,
*daß er Papst [Johannes Paul II t_i] schon seit seiner Kindheit t_j verehrt, [der mehr
als drei Fremdsprachen beherrscht.],
'that since his childhood he adores Pope Johannes Paul II, who knows more than
three foreign languages'

Witness also the contrast between (113) and (118), and (114) and (119).

- (118) *[/]weil sie [Kohl t_i] von Anfang an immer wieder t_j kritisiert hat, [der bekanntlich
Bundeskanzler ist],
(119) *weil sie für [Ronald Reagan t_i] nur im Notfall t_j stimmen würden, [der US
Präsident war],

Other interesting contrasts are presented in (120) to (124). In the first pair (120)/(121), the matrix sentence is the same. (120) is good because the RC is understood as a restricting modifier of the scrambled subject. (121) is out because the RC cannot be understood as restrictive. In the second pair (123)/(124), the RC is the same. (123) is out because the RC must get an appositive interpretation. (124) is good since the use of an article which bears stress signals the presence of a focus. Focus is associated with alternatives (chapter 7). The extraposed RC instantiates the proper alternative and negates the others (all contextual present Sergejs who were not born in Odessa). Thus the RC is restrictive.

- (120) In Indien werden [Kühe t_i] nie t_j geschlachtet, [die bei ihrer Geburt geweiht
wurden.],
'In India, cows that were blessed at their birth will never be slaughtered.'

(122) *In Indien werden [Kühe t_i], nie t_j geschlachtet, [die Wiederkäuer sind.],¹⁷

‘In India, cows, which are ruminants, are never slaughtered.’

(123) *Sie hat [Sergej t_i], von Anfang an t_j geliebt, [der in Odessa geboren wurde],

‘She has been loving Sergej, who was born in Odessa, from the very beginning.’

(124) Sie hat [DEN Sergej t_i], von Anfang an t_j geliebt, [der in Odessa geboren wurde],

Thus, if one assumes that restrictive RCs are subject to the indexing mechanism described above and assuming further that the theory of Relativized Minimality is on the right track, the difference in the extraction behavior between restrictive and appositive RCs can be explained if scrambled XPs are considered to have the same blocking status as complements of factive predicates, wh-constructions, modal whether-clauses or constructions involving negation. In other words, the data seem to parallel well known facts about extraction and hence support the claim that topics are weak islands. This conclusion eliminates the second and last difference between leftward and rightward movement. The data undoubtedly prove that rightward movement shows island effects too.

¹⁷ The following might be of some interest. Since to my knowledge, the data I am presenting in this chapter have never caught anybody’s interest, I could not find any judgments in the literature. So I was left with my own intuitions. Since I know that my judgments are very liberal, and apart from that, they always left me after I had thought about them for a couple of minutes, I made a list with 20 test sentences and gave it to people to judge the grammaticality of the examples. It turned out that people who did not know that cows are ruminants by biological necessity accepted (122). Since their ignorance of this zoological fact made it possible for the RC to act as a restrictor, there was nothing wrong with (122) for them. In this place I want to thank these people who did not care about their intellectual reputation and freely admitted this lack of basic biological knowledge.

6.4.2.3. Intermediate Summary

| Sort of Extraction from/ out of | was-für split | wieviel split | quantifier split | extraction of referential / individual wh-phrases | extraction of restrictive RCs | extraction of appositive RCs |
|--|---------------|---------------|---------------------|--|-------------------------------------|------------------------------------|
| us DO ¹⁸ | ok | ok | ok | ok | ok | ok |
| us IO | ok | ok | ok | ok | ok | ok |
| us SU | ok | ok | ok | ok | ok | ok |
| s DO | * | * | * | ok | ok | * |
| s IO | * | * | * | ok | ok | * |
| s SU | * | * | * | ok | ok | * |
| factive complement | * | * | * | ok | ok | ∅ |
| negation island | * | * | * | ok | ok | ∅ |

As one can read off this table, scrambled NPs pattern together with factive and negative islands independently of their argumental status. Additionally, there is one more construction where selectional behavior of extraction can be observed: RC extraposition. This should be enough evidence for the Revised Generalized Specificity Condition, which claims that topics are weak islands.

6.5. Speculations on an Explanation for the Generalized Specificity Condition

6.5.1. Syntactic Explanations

In the previous subchapters I have tried to show that topics are weak islands. I think that this statement constitutes already some progress since it generalizes over several loosely or non-related types of weak islands. However, it would be even nicer to have an idea about why this

¹⁸ 'us' stands for 'unscrambled', 's' stands for 'scrambled'.

should be so, i.e. why topics can act as blocking elements for movement. This chapter will be concerned with a possible explanation.

The first idea that comes to mind is a syntactic approach that forbids extraction out of moved material. As has been show in this thesis, it is reasonable to assume that topic phrases undergo movement (scrambling) whereas comment XPs remain in situ. Thus topics are distinct from non-topics in that the former have moved and the latter have not. This fact gives a welcome input for a rule like Ross' 'Frozen Structure Constraint' (1967). This rule is called so because the movement has a freezing effect on the moved phrase. After raising, no extraction out of the phrase is possible anymore. Müller (1994) illustrates this in the following way, which is a bit more abstract than Ross' original formulation:

- (125) a. ... α_1 ... [β ... t_1 ...]₂
b. *... α_1 ... [β ... t_1 ...]₂ ... t_2

He furthermore gives a non-formal description:

(126) (his (12))

Freezing:

At S-structure, a trace t may not be included in a moved XP (i.e., an XP that binds a trace) if the antecedent of t is excluded by XP.

At first glance, this syntactic generalization seems to be a good candidate for an explanation. It is argued in this dissertation that topics are in a derived position, i.e. they have undergone movement. According to the Frozen Structure Constraint, they constitute a syntactic category from which extraction cannot take place. On the other hand, non-topics do not scramble. They stay in their base position. Nothing renders them frozen constituents there, hence extraction is not prohibited¹⁹.

There is one drawback with this explanation, however. As I have shown, topics are not strong islands. The table on page 31, which summarizes the data from section 1.1. to ??, shows that some XPs (referential/individual expressions) may be moved out of topics. On the other hand, the

¹⁹ Another very similar proposal is Huang's (1982) 'Condition on Extraction Domains' (CED). This constraint also prohibits extraction out of moved constituents. However, the CED is as restrictive as the Frozen Structure Constraint in that extraction is generally blocked from positions which are not properly governed (L-marked in Barrier terms). As I have show, this prediction of unselectivity does not hold, hence it is to be rejected for the same reasons as the Frozen Structure Constraint.

formulations of the Frozen Structure Constraint prohibit any extraction out of moved material. In order to save the general idea, one could try to exploit some theory of ‘anti-freezing’ (Müller (1994), Collins (1994)). However, unlike the data Müller considers, I think a purely syntactic account cannot deal with the facts in the case I am concerned with because the structure itself is the same. Thus, although the freezing constraint looked promising at the first glance, I don’t think it can be used for a more insightful explanation of the generalized specificity condition.

6.5.2. A Semantic Proposal

The second explanation which I will suggest is provided by the theory of Szabolcsi and Zwarts ((1991), (1993)). For a more detailed presentation of this theory see chapter 7. Nonetheless, I will give a short summary of what is necessary for the argumentation here. For Szabolcsi and Zwarts, island escaping is a question of scope taking. Scope is a property of quantificational elements. In a sentence with more than one quantifier, more than one scopal interpretation may be possible. However, the number of different scopal interpretations of a sentence does not (always) equal the number of all possible permutations of the scope of all quantifiers within it. Some operators are unable of taking scope over some others. Szabolcsi and Zwarts propose that all scopal elements SE are associated with Boolean operations (negation with taking complements, for example).

(127)

Szabolcsi and Zwarts 1993, p. 236:

Each scopal element SE is associated with certain Boolean operations. For a *wh*-phrase to take scope over some SE means that the operations associated with SE need to be performed in the *wh*-phrase’s denotation domain. If the *wh*-phrase denotes in a domain for which the requisite operation is not defined, it cannot scope over SE.

In other words, in order for a scopal element SE1 to take scope over SE2, SE1 must allow for at least all the operations under which the domain of SE2 is closed as well. That means, the possible operations of an element with narrower scope must be a subset of the operations associated with the element which is supposed to take wider scope. Wh-phrases that range over individuals (Pesetzky’s (1987) well known ‘heavily discourse-linked’ ‘*which X*’ examples) are successful

wide scope takers because they range over individuals, and individuals are collected into sets without entering into any ordering relation. Consequently, all Boolean operations are defined in their domain. Manner adverbials, amount phrases (*how*, *how much* and the like) are associated with partial orders which are not defined for all Boolean operations, hence the restrictions for movement.

The scopal elements whose interaction plays a role in our case are the topic XPs on the one hand, and the relevant extractees on the other.

In this paragraph I want to justify the claim that topic XPs can be analyzed as scopal elements with a relatively high number of Boolean operations which can be performed in their domain. Let me briefly repeat which XPs act as topics, and hence, have to scramble. As I have argued in chapter 3, strong quantifiers, whenever they act as such, have to leave the VP. Similar to Hornstein (1994) I assume that quantification resulting from nominal QPs results from movement of these strongly quantified DPs (QPs) to [Spec,Agr] as one important step in the derivation of the quantificational structure. From there, they can c-command the relevant entities they have scope over. As a consequence, it seems very natural to analyze these quantificational topics as scopal elements out of which further extraction is restricted. This covers XPs of the form: *jeder Student* (every student), *die meisten Schweine* (most pigs), *VIER Linguisten* (FOUR linguists), *zwei von den Opern* (two of the operas) and the like. Thus one sort of prototypical topics seem to be expressions which are uncontroversially analyzed as scopal elements.

A second class of topics are NPs that do not act as quantifiers in the first place. Here, I think of unstressed proper names and definite descriptions. It is not obvious that they should be analyzed as scopal elements. One way out of this would be the adaptation of the classical Montagovian approach where all NPs regardless of their meaning are analyzed as generalized quantifiers (type $\langle e, t \rangle, \langle t \rangle$) (Montague (1974)). Under such a perspective, also these NPs could get the status of a scopal element. However, this uniform treatment of NP's as generalized quantifiers has been criticized and modified by many authors (especially Partee (1987) and references quoted therein). Also, a uniform treatment would blur the difference between topics and non-topics. We would like to have a theory that distinguishes them with respect to the quantifier status. Such a theory exists: de Hoop's theory of strong and weak Case (de Hoop (1992) see chapter 2.1.2.2. of this thesis). Similar to the theory put forth in this dissertation, De Hoop's claim is that an NP in the base position gets assigned weak Case. Weak Case is associated with a weak, i.e. existential reading. According to de Hoop, weak NPs are of type e or $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$. NPs that have

undergone scrambling (in Dutch) are assigned strong Case. Strong Case is associated with a quantificational reading. Thus, only NPs with strong Case are interpreted as generalized quantifiers with type $\langle e, t \rangle, t \rangle$. Under such a type shifting approach (Partee (1987)), we get the welcome distinction between VP internal and scrambled constituents. All topics are quantifiers. As a consequence, also the somewhat problematic cases (scrambled proper names and definite DPs) must be analyzed as generalized quantifiers. This pertains to expressions like *Mary, the US president, Luciano Pavarotti, the gun, those animals*. Most likely, these noun phrases denote in the domain of individuals.

Now, if we recall that the elements which take narrower scope are associated with a subset of the Boolean operations under which the wide scope taker is closed, it becomes clear that only individual expressions can escape topics. In this case, we have a configuration where wide and narrow scope taker denote in the same domain, namely into unordered individuals. This is possible since the term subset does not exclude that a set contains itself (contrary to the term *proper* subset). This way we get a legitimate ‘crossing configuration’. Quantifiers that denote into unordered sets of individuals should be mutually extractable from each other since they are defined for all operations. On the other hand, quantifiers that denote into partially ordered domains which are not defined for some Boolean operation cannot scope out of topics. This explains the impossibility of *was-für*, *wieviel*, and quantifier split with respect to scrambled XPs.²⁰

6.6. A Short Summary

As a short summary: it seems that the idea that topics are generalized quantifiers can be used to account for the fact that scrambled constituents become weak islands for extraction. XPs in base position are not interested in scope taking. Hence no conflict arises when movement out of them takes place.

The main proposal of this chapter is the generalized specificity constraint. It states that constituents that act as topics in the sense of this thesis become islands for extraction. Since the

²⁰ It is not yet clear to me how this explanation can be used to account for the RC data. Whereas I think that the quantificational status is obvious with respect to *wh*-extraction and not unreasonable, though less evident with Topic preposing (quantifier split), it remains mysterious to me why RC extraposition should be restricted by the semantics of scope.

data I quote shows that some phrases may escape them, and that these constituents are the classical robust extractees (discourse-linked, referential, individual phrases) I formulated the constraint on extraction as follows:

Generalized Specificity Condition (revised version): topics are weak islands.

Appendix: Some evidence from English

(i) The advantages of the Generalized Specificity Condition

It has been observed by Fiengo and Higginbotham (1981) that in English *wh*-extraction out of ordinary indefinites is allowed (128), extraction out of definite and specific NPs is prohibited (129), (130).

(128) Who_i did you see a good picture of t_i ?

(129) *Who_i did you see the good picture of t_i ?

(130) *Who_i did Mary make many of the movies about t_i ?

This contrast has led to the formulation of the (simple) ‘specificity condition’. Thus, the trigger for the ungrammaticality in extraction constructions is not definiteness, but specificity, a weaker notion (cf. Enç 1990). Thus, the acknowledgment of the blocking effect triggered by specific indefinites was already a progress. However, the facts turned out to be more complicated. Not only do some indefinites, namely the specific ones, block extraction; there seem to be definites that allow for *wh*-extraction. Fiengo (1986) discovered that superlatives do not prohibit movement out of them:

(131) Who_i did you see [the best picture of t_i] ?

Hence, the simple specificity condition is not the cleverest solution either. Fiengo then proposes that the definites that allow for extraction are analyzed best as novel definites in the Heimian sense (cf. chapter 3). This comes close to my proposal. As a matter of fact, superlatives refer to an extreme individual in the model. There is always only one biggest, one smallest, one most intelligent... thing, person... Thus, superlatives can be used as referential definites in the sense of chapter 3, section 3.4. very easily. That means that in case they are not topics, they do not block extraction. Interestingly, superlatives also appear in positions where normally definites are excluded, in *there-be* sentences (cf. chapter 5). Also there, they get a non-topic reading. Considering these facts, the generalized specificity condition seems to be more adequate and therefore a step further ahead in the right direction²¹.

²¹ Nevertheless, whereas the generalized specificity condition seems to be sufficient to explain the German data, it is not for English. In English, subjects are always islands. (Only SC internal subjects in *there-be* constructions allow for extraction.) VP external subjects do not allow for extraction, no matter what interpretation they get.

(ii) Possible evidence against the right roof constraint

Sag (1976) argues that ‘Antecedent Contained Deletions’ (ACDs) require that certain structural conditions must be met at LF. One very important constraint on VP deletion is that the missing verb, or the placeholder form *do* is neither c-commanded by nor c-commands its antecedent (see also Adger 1993).

(132) Johannes saw some movies and Axel did too.

The VP of the first conjunct does not c-command the *did (too)* in the second. In ACD constructions, however, this constraint does not appear to hold.

(133) Johannes saw every movie that Axel did.

In (133) the matrix verb c-commands the deletion site, i.e. *did*. Moreover, the idea of copying the antecedent VP into the deletion site creates the problem of infinite regress:

(133) Johannes saw [_{DP} every movie that Axel [_{VP} e]]

(134) Johannes saw [_{DP} every movie that Axel [_{VP} saw every movie that Axel [_{VP} saw every movie that Axel [_{VP} saw every movie that Axel...]]]]

One way to get out of this problem is to assume that the object moves out of the VP at some level of representation. Whatever movement device is adopted (QR in May 1985, object raising to [Spec,AgrO] in Runner 1993, Adger 1993, Hornstein 1994²²), the resulting structure is such that copying the matrix VP into the deletion site does not pose any problem any longer.

(135) [every movie that Axel [_{VP} saw t_i]], [_{IP} Johannes saw t_i] or

(135') Johannes [_{AgrOP} [every movie that Axel [_{VP} saw t_i]],] saw t_i

Also subjects that according to some version of the Mapping Hypothesis are reconstructed into the base position and do definitely not act as topics make movement out of them impossible. I do not have an explanation for this.

²² I favor the latter proposal of course. Thus, the data involving antecedent contained deletion point into the direction that also in English there are reasons to believe that movement versus non-movement distinguishes between topics and non-topics. ACD effects are only observed with strongly quantified (and definite) DPs. Thus, ACD with weak determiners automatically triggers the strong presuppositional reading.

What is crucial for our purposes is the fact that the c-command requirement is not eliminated. (135) and (135') are both structures where the two VPs do not stand in any c-command relation, i.e. neither does the matrix VP c-command the deletion site, nor does the VP copy in the object DP c-command the antecedent VP. Thus the original constraint about the prohibition of c-command still holds.

Moreover, the constraint seems to be confirmed by one puzzling construction discussed in Tiedmann (1995).

(136) ^(?) John believed everyone was a genius that you did.

This sentence is almost perfect. At least, it is in sharp contrast with the relative clause in its base position modifying *everyone*.

(137) * John [believed [[everyone [that you did]] was a genius]].

This fact is accounted for by Sag's condition on deletion. In (137) the deletion site is in the c-command domain of the matrix verb. (136) is ok because extraposition of the relative has taken place. According to Sag's constraint, the relative clause must not be deeper than the matrix verb. Thus the closest possible landing site is an adjoined position to the matrix verb phrase (if an analysis is adopted where also in English the verb (and the object) moves overtly, adjunction must be assumed to take place even higher (Johnson 1991, Hornstein 1994, Solà 1994).

(138) John [_{VP} believed ([_{CP}] [_{IP} [_{QP} everyone t_i] was a genius]](]) [that you did]_i

Only a bracketing as the one in (138) ensures that the extraposed clause is outside the c-command domain of the matrix verb. According to the right roof constraint, the bracketing should not be the structural representation of a grammatical structure since there are three or four nodes between the trace and its antecedent. (136) or (138) are almost perfect, however. Hence, one possible conclusion might be to abandon the right roof constraint.

In his classes (Lasnik, Berlin lectures at FAS 1995) and in p.c., Lasnik suggested that the ungrammaticality of the famous right roof violations might actually be garden path effects. And indeed, some sentences pronounced with appropriate intonation and placed in a certain linguistic

context do not sound so bad if one knows what they are supposed to mean. So some willing native speaker of English judged the following example as not so bad²³:

(139) Peter did NOT appreciate that Mary will defend her claim YESTerday
that John could be the thief,
(but toDAY, he is quite happy that she will DO so.)

(139) is a clear violation of the right roof constraint. *Yesterday* is an adverbial which can only modify the matrix clause. The semantics of it makes it incompatible with future tense. '*that John could be the thief*' is the complement of *claim*, the subordinate object. Thus, the complement sentence of the subordinate object is adjoined higher than the matrix VP.

(140) Peter did NOT [appreciate [that Mary will [defend [her claim t_i]]] YESTerday]
[that John could be the thief], ...

This is a clear violation of Ross' constraint. The difficulty with these sentences is that one has to look for an example where a matrix adverbial occurs after a subordinate clause. This structure (already without a continuation) is natural only when the adverbial is emphasized. On the other hand, extraposed clauses also tend to be focused, i.e. they bring new information. That means that the crucial examples exhibit a multifocal structure. Thus, these sentences are also semantically hard to parse. No wonder that a sort of garden path effect comes across.

²³ For many, however, the sentence is out. Nevertheless, the fact that some accept it should be enough to demonstrate that the right roof constraint is not that a robust filter on rightward movement. Also the German examples from (88) and (89) are not acceptable to every native speaker.

Chapter 7

Focus Relations and Weak Islands - A Case of Discourse Dependent A'-Movement

At first glance this chapter seems a bit outstanding. While the preceding chapters were mainly concerned with overt A-movement, this part of the dissertation deals with more or less covert A'-movement. Nevertheless, it falls within the general topic of discourse dependent movement dependencies. It should be regarded as a complementation of the theory developed up to now. I have argued that topical arguments undergo A-movement to the specifier position of an agreement projection. This movement divides the sentence into the topical part and the comment part. The movement I am concerned with in this chapter is linked to the other discourse articulation, namely focus : background. Thus, whereas in the preceding chapters 'presentational focus', comment, or rheme were the object of investigation, this chapter will consider some issues with respect to narrow, or 'contrastive' focus¹.

In this chapter using the idea that it is *focus phrases* (FocPs) instead of purely intonationally identified *foci* that determine the set of alternatives which constitute the C-set (Drubig (1993, 1994), Rooth (1992)), I develop a mechanism that identifies focus phrases as constituents that are contrasted with pragmatically 'reasonable' alternatives. It is argued that these focus phrases undergo movement which is restricted by all known movement constraints. However, there seem to be differences such that whereas weak islands are generally selective with respect to the

¹ This chapter is a more detailed version of Meinunger 1995a and 1995d, and as such very similar to Meinunger 1995d.

A further argument for the coherence of the whole dissertation is the fact that I consider it as a work which tries to use Szabolcsi and Zwarts' theory of scope taking (Szabolcsi and Zwarts 1991, 1993) as a sort of theoretical framework and stipulative background. This theory has been (ab)used as a A'-pattern to explain A-crossing (Appendix II to chapter 4), as an explanation for the weak-island status of topics (6.5.2.) and is now going to be exploited to account for the (im)possibility of focus dependencies.

semantics of possible extractees, they seem to be unselectively strong for focus dependencies. These apparent differences, i.e. the seeming strength of weak islands, are explained by extending the algebraico-semantic approach of scope taking (Szabolcsi / Zwarts 1991, 1993) to constructions involving focus operators and their associated phrases. I will show that the algebraic structure of focus phrases is such that they may generally not scope outside weak islands.

Apart from various examples from 'exotic' languages, which illustrate the relevant point more clearly, I will use English as the language of investigation. As I am convinced that in their underlying structures languages do not differ, the results developed in this chapter are supposed to be universal.

7.1. Introduction - The Relevance of Focus Phrases

Drubig (1993, 1994) shows convincingly that focus is a grammatical phenomenon that plays an important role in the syntax of sentences. He quotes semanticists like Rooth (1985) and Kratzer (1991) as well as syntacticians like Bayer (1990) who claim that focus configurations consist of a focus licensing operator such as *even*, *only*, negation or the phonetically empty assertive operator (Jacobs (1984)) which has to c-command some focused element at some syntactic level of representation. No more syntax is involved. This claim is a consequence of the apparent fact that there are no (further) syntactic constraints like locality requirements, island effects at work. Focus assignment seems to be a free choice process that does not care about the distance between the focus licensing operator and the associated focused element. It seems that, contrary to wh-extraction, island creating operators intervening between the operator and the focus do not interfere, i.e. they do not lead to ungrammaticality. For the sake of clarity I want to call the stressed element the '*contrastive element*' (CE), since CE is the part which tells where the source for the alternatives lies, i.e. it provides the clue to the elements to which contrastivization applies.

- (1) Sam even saw the man who was wearing the [_F RED] hat
- (2) They only investigated the question whether you know the woman who chaired
[_F the ZOning Board]

In both examples, the operator and its associated CE element are separated by a wh-word. Within an account of Relativized Minimality (Rizzi 1990, among others), these wh-words count as

interveners which break the intended (government) relation and thus cause ungrammaticality in the case of wh-movement:

- (3) *What_i did Sam see the man who was wearing t_i ?
- (4) *What did they investigate the question whether...

Since these violations do not occur in the focus constructions above, the relation should not be considered a syntactic relationship of dependency. Thus the rule of (LF-) movement of focused constituents, originally proposed in Chomsky (1977), does not apply.

Drubig's merit consists in showing that syntactic locality constraints are at work, nevertheless. (For more empirical evidence see also Schaffar 1994). Drubig draws attention to the fact is that one should distinguish between the actual semantic focus which is usually identified by intonational means (i.e. a CE) and a focus phrase. Based on a UG minded perspective, he points out that a vast amount of languages exhibit overt focus movement. He then recalls that it is commonly assumed that languages differ with respect to whether they display overt wh-movement or not. Those that do not are nevertheless assumed to move their question words at LF since they too exhibit island constraints. If languages are supposed not to (considerably) differ at LF and given that many languages move focused constituents overtly, languages that mark focus primarily by accent should display focus movement as well. He then looks at Hungarian, a language with overt focus movement. In Hungarian, a focused constituent must be moved to the position immediately preceding the finite verb. If one translates (5) into Hungarian, one can clearly see that the moved constituent is not just the small bit which provides the alternatives, i.e. *red* but a larger phrase:

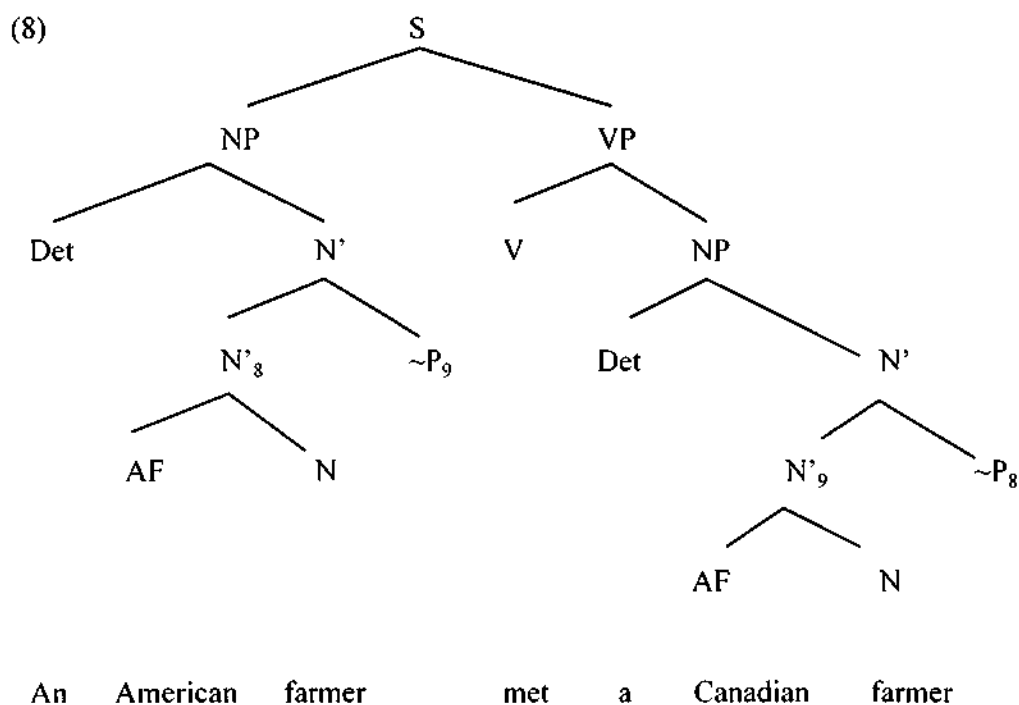
- (5) He only invited [_F ex-convicts with [RED] shirts.]
- (6) Ö [csak [_F Plros] inges volt foglyokat] hivolt meg.
he only red shirt-with ex-convict-Acc invited Perf.

Drubig calls this larger constituent focus phrase, and he shows that it is this focus phrase which undergoes movement, i.e. LF movement in languages like English as well. Thus, CE and focus phrase are not the same. The only requirement is that the focus phrase contain a (element of) contrastive focus (CE). Focus phrases should be understood as that part of a sentence referring to

a linguistic object which is being contrasted with pragmatically possible alternatives. Thus for the example above the on *red* delivers the alternatives which, however, are not just colors, but ex-convicts in x-colored shirts⁷. Thus, the CE only signals where the source for alternatives lies; however, what defines the entities that form the alternative set is determined syntactically. Rooth (1992), too, notes that there is a difference between the actual piece of focus and the part where ‘focus is interpreted’. However, he is not concrete in laying down what determines the contrasting part. For him contexts like question - answer pairs or constructions involving overt contrasting of constituents help to identify at which syntactic level focus should be interpreted. Thus, in his ‘farmer example’, he states that whereas the phonological stress is on the adjectives, focus is interpreted on the N’ level.

(7) An [[AMERICAN] farmer] met a [[CANADIAN] farmer]

He then invents an operator \sim which is adjoined to the phrase which is supposed to act as focus (CE). Thus the operator’s sister is one argument of the operator. The other argument is a variable ranging over the alternatives which by his ‘Focus Interpretation Principle’ must be of the same syntactic and semantic type. This way he gets the tree in (8), (his (28))



⁷ Or, maybe, just ex-convicts in shirts with some restricting property. (See also footnote 7)

7.2. Focus Relations and Weak Islands

However, the introduction of the operator itself does not tell very much about the rules of its placement. Drubig, on the other hand, provides some constraints in determining the (possible) focus phrase. His theory centers around the idea that the constituent containing the CE must not induce locality violations when moving. This is confirmed by the syntax and the pragmatic felicity conditions of but-phrases. But-phrases act as ellipses and spell out the pure intended alternatives.

- (9) John doesn't love [_F his WIFE], but his DAUGHTer

Without the but phrase, the English sentence gives rise to ambiguity³. Hungarian with its overt focus position is rather clear in determining in what constituent counts as focus⁴:

- (10) Nem [a FELESÉGÉT] szereti, hanem a LANYAT.
 not the wife-his-acc loves-he but the daughter-his-acc

Now look at the following sentences:

- (11) He didn't investigate the man who invited the ex-convict with the RED shirt, but
- a. *the BLUE shirt
 - b. *with the BLUE shirt
 - c. *the ex-convict with the BLUE shirt
 - d. the man who invited the ex-convict with the BLUE shirt

³ The ambiguity consists in the narrow focus reading on 'daughter' on the one hand, and on the also possible interpretation where the whole VP, i.e. 'loves his daughter' is understood as focus contrasting with other predicates. (However, I must admit that there is hardly any context where contrasting stative predicates sounds fine.)

⁴ For a different view, i.e. the possibility of focus projection from the accentuated preverbal object over the (whole) VP, see Komlósy (1986).

Thus, the focus phrase (the constituent which is supposed to move) is a very large one, and what is crucial is that the *but* phrase identifies a constituent that does not cross any interveners when moving. Hungarian again shows the movement overtly. The relative clause remains on / moves to the right. The reason might be heaviness. Whatsoever, the important thing is the movement of the object NP of the main verb.

- (11) Nem aszt a férfit vizsgálták meg, aki a Pirosinges
not that the man-acc investigated-they perf who the red shirt-with
volt foglyot hívta meg, hanem
ex convict invited-he perf, but
- a. *a KÉKing
the BLUE-shirt
- b. *a KÉKingeset
the BLUE-shirt-with
- c. *a KÉKinges volt foglyot
the BLUE-shirt-with ex convict-acc
- d. azt a férfit aki KÉKinges volt foglyot hívta meg
that the man who BLUE-shirt-with ex-convict-acc invited-he perf

This data unambiguously shows that association with focus links focus sensitive operators with focus phrases which contain a focus (CE), but which are not necessarily the focus itself. Furthermore, they show that this link is constrained by locality restrictions. The examples given above mainly show that focus and overt *wh*-movement pattern alike with respect to complex NPs. A parallel case which is a relativized minimality violation as well is the behavior within classical *wh*-islands.

- (12) *What does John wonder who [t saw t]

If association with focus obeys the same constraints, a focus sensitive operator should not be able to bind a focus phrase across an intervening (*wh*-)operator either. This prediction is correct.

- (13) John doesn't wonder who saw MARY, but

- a. ^{??}JANE
- b. ^{ok}who saw JANE

In (13), negation acts as the focus sensitive operator. As the example shows, *Jane* cannot be associated with it. The intervening *who* blocks the relation. The only candidate is the whole object sentence. The same holds for (14) and (15)

(14) *How did John tell you [when to fix the car t]

(15) John didn't tell you when to fix the car SLOWly, but

- a. ^{??}QUICKly
- b. ^{ok}when to fix it QUICKly

Thus, the candidate for the focus phrase must be a constituent that is not separated from the operator by an intervening A-bar specifier.

A further syntactic constraint⁵ Drubig introduces in order to show that syntactic requirements must be met in association with focus is the so-called specificity condition (Fiengo and Higginbotham (1981)). As (16), (17), (18) show, specific NPs constitute barriers for movement:

(16) Who did you see [a picture of t]

(17) Who did you see [(some) pictures of t]

(18) *Who did you see [the / those pictures of t]

In a parallel fashion, narrow focus on complements of definite objects is impossible:

(19) ^{ok}They didn't look at pictures of BOYS, but of GIRLS

(20) *They didn't look at those pictures of BOYS, but of GIRLS

⁵ In my opinion, the so-called specificity condition is not a pure syntactic constraint (cf. chapter 6). Nevertheless, it has to do with positions in the tree which gives it a syntactic flavor. What matters in the line of argumentation, however, is the parallelism with *wh*-movement.

focus operators may appear in two positions; they may either be adjacent to the constituent they are associated with, or they may occupy the position in which they indicate their scope. Volunteered stance predicates give rise to different readings. (26) is ambiguous with the two disambiguated interpretations in (27) and (28).

(26) John believes that he invited only MARY.

(27) John believes that he only invited MARY.

(28) John only believes that he invited MARY.

Factive verbs do not allow to create the scope of a focus operator *in situ* outside the embedded sentence. Thus (29) is not ambiguous, it can mean only (30), but not (31).

(29) Frank knows that he invited only Johannes.

= (30) Frank knows that he only invited Johannes.

≠ (31) Frank only knows that he invited Johannes.

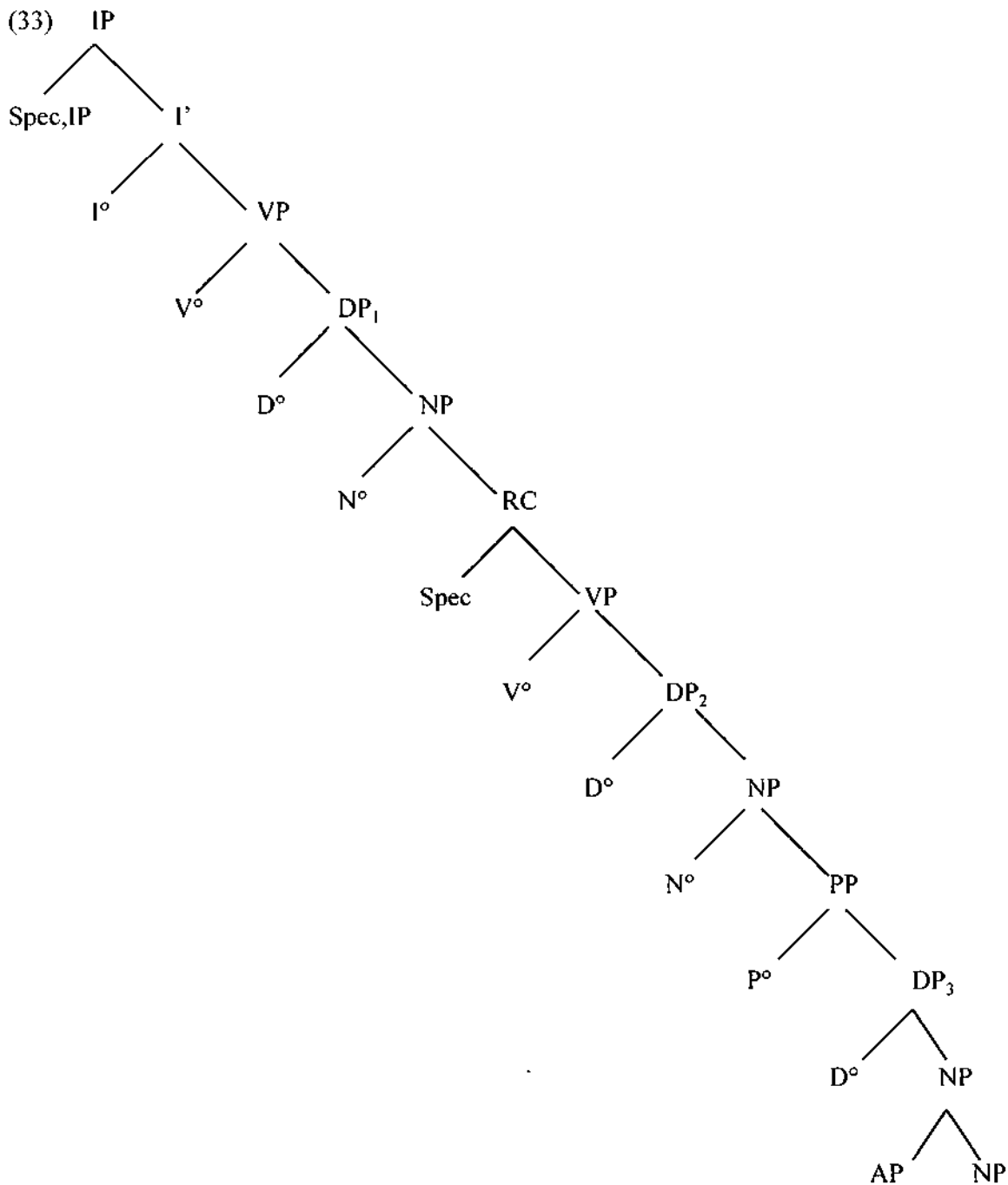
Summing up, (narrow) focus is embedded within a focus phrase. This constituent is more or less easily detectable. Many languages unambiguously identify it by a certain syntactic position. In other languages, context is needed to outline the focus phrase. One device to identify the focus phrase is to give alternatives in ellipsis form. These alternatives are of the same constituent type as the focus phrase. This means that focus phrases must undergo movement. This movement parallels *wh*-movement and is restricted by the same constraints.

7.3. How to Identify the Focus Phrase? i.e. Where to Adjoin ~ ?

Let us now develop a theory in what relation CE and focus phrases stand with respect to each other, i.e. what constituents may be focus phrases and what constituents may not. One requirement has already been mentioned: focus phrases must contain a narrow focus (CE). However, by far not every constituent which contains a focus is a focus phrase. Look again at the *ex-convict* example from (11), repeated here as (32):

(32) He didn't investigate the man who invited the ex-convict with the RED shirt

Already a syntactic analysis that takes into account only overt material tells us that there are at least 11 constituents which contain the focus [RED].



[He [didn't [investigate [the [man [who [invited [the [ex-convict] [with [the [RED] shirt]]]]]]]]]]]]]]]]]]

1 2 3 4 5 6 7 8 9 10 11

However, we know that only one of them is the focus phrase, namely DP_i . If one adopts Drubig's defense of focus movement as an LF rule, originally proposed in Chomsky (1977), one has to assume that the relevant constituent moves to its designated position. Thus focus movement takes a constituent - the focus phrase - and moves it to a scope position, yielding a configuration:

(33) ...[focus phrase]_i ...[$x_p \dots t_i \dots$]

My claim is that

(34) the focus phrase is the minimal constituent containing the CE that when moving to its associate operator (i.e. its LF scope position) does not violate a movement constraint.

Much has been written about movement constraints. Since movements leave traces, most movement constraints are constraints on the licensing of traces. One of the most elegant theories about licensing of empty categories (thus also traces) is to be found in Rizzi's book 'Relativized Minimality' (1990). According to Rizzi, empty categories require both formal licensing and identification. Identification of traces is done through co-indexation with the moved constituent. Formal licensing is done under proper government. The exact notion of proper government is not crucial for our line of reasoning, it means something like traces must be L-marked in the sense of 'Barriers', (Chomsky (1986)). Further constraints that restrict movement are subjacency, the specificity condition (Fiengo and Higginbotham(1981)) and so on. I do not want to use any of these constraints to justify my claim. I only want to show that the minimal constituent that does not trigger a movement constraint violation is indeed the one which identifies the alternative set of propositions obtainable from a structure containing a focused element. Like Drubig, I will make use of the parallelism with the much better studied and more evident wh-extraction.

Let us assume that sentence (32) is a deep structure like sentence for a question where the wh-word corresponds to the focus *red*. If we then try to extract the wh-word we have several possibilities. Let us go through all reasonable candidates one by one in a bottom-up fashion, beginning with the narrowest focus, i.e. the accentuated word itself.⁶

⁶ A very similar proposal has been made by Tancredi (1992) for (slightly) different purposes.

- (35) *What shirt did they investigate the man who invited the ex-convict with t ?^{7 8}
(36) *What did they investigate the man who invited the ex-convict with t ?
(37) *Who did they investigate the man who invited t ?
(38) *What did they investigate the man who did t ?
(39) Which man / Who did they investigate t ?
(40) What did they do t ?
(41) What happened t ?

The questions are construed as asking for constituents containing the actual *wh*-word. In systematically making the constituent larger and larger, one arrives at a grammatical output at some stage. The first grammatical output (= (39)) gives us the focus phrase. (34) claims that that must be the object of the matrix verb. (40), (41) are grammatical as well. (34), however, excludes these possibilities, since both are not the minimal constituent possible. In an abstract sense, the *wh*-phrase in (40) properly includes the *wh*-phrase in (39). Thus (34) accounts for the oddness of (42) and (43).

- (42) ??*He didn't investigate the man who invited the ex-convict with the RED shirt,
but, he thought that we should do that.
(43) ??*He didn't investigate the man who invited the ex-convict with the RED shirt,
but, aunt Christa dropped the delf China set when see saw the dog.

Thus the felicity conditions for focused constituents are (also) syntactically determined. The semantic type of the focus domain which determines the set of intended alternatives with pragmatic appropriateness is constrained by formal principles of syntax (movement constraints, minimality).

⁷ *What* is supposed to vary over possible properties of the/a shirt. Colors are the most likely candidates; a possible alternative, however, would also be 'short-sleeved' and the like, see also fn. 2.

⁸ Although the example is ungrammatical anyway, I assume that preposition stranding with the XP containing *shirt* is the right thing to try.

7.4. Apparent Counterexamples and the Interaction with Focus Projection

There seems to be counterevidence to the above claim. The examples below (taken from Drubig) show that the focus phrase which must be of the same syntactic type as the tag constituent may be larger than just the minimal constituent. All but-phrases sound equally fine.

- (44) John { doesn't } write books about syntax
 { doesn't only }
 a. { but } about phonology
 { but (also) }
 b. { but } papers on phonology
 { but (also) }
 c. { but (he) } studies uncommonly taught languages
 { but (he also) }

Here we see that the focus phrase may extend from the minimal one [about phonology] to the whole IP. Here, however, we are dealing with a phenomenon different from the computation procedure of figuring out which constituent the focus phrase is. This procedure (rule (34)) looks for the focus piece and then climbs up the tree step by step until it arrives at one such that if this one raises to its designated focus position it does not trigger movement violations. The steps in a. to c. above are meant to enlarge the constituent step by step as well. This procedure, however, is very different from the focus phrase computation. Since the sentences are construed in a canonical form and with the most prominent accent on the most embedded constituent, we are dealing with pure foci. The theory of focus projection (Selkirk (1984); Jacobs (1992), also chapter 4, section 4.5.3.) ensures that

...(doesn't) write books about PHONOLOGY

is at least three way ambiguous, the ambiguity being computable from the syntactic structure:

[write [books [about (())PHONOLOGY()]]]

1 2 3

The principles of integrating foci into complex foci (focus projection) are (see also chapter 4):

(45) Focus projection:

- a. F-marking of the head of a phrase licenses F-marking of the whole phrase
- b. F-marking of the internal argument⁹ of a head licenses the F-marking of the head

phonology as such is an N^o, i.e. a head. a.) ensures that focus is projected to NP which in this case is phonetically not distinct from its head. The NP being the argument of the preposition 'about' licenses focus projection to P^o (=about) (= b.)). *about* as a head licenses focus projection again, namely to PP. Since in the string '*write books about PHONOLOGY*', *phonology* is the (internal) argument of *about*, '*about phonology*' is the argument of *book* and so on, focus can be projected to the largest constituent possible. The crucial thing hereby is that we have an instance of pure focus. In these constructions focus and focus phrase collapse, i.e. they are the same. This is why the computation of the focus phrase goes vacuously. The rule in (34) is something that takes the focus as input and delivers an output which is usually different. In the case of pure focus projection, focus and focus phrase are trivially the same. This is the reason for the apparent unexpectedness of (44). (34) remains valid. Focus projection delivers the possible foci. Since they are identical with the focus phrase they are all what moves. The extend of the constituent which counts as focus phrase is thus freely choosable by the speaker. That means that any focus, from the smallest one to the largest one possible, may be the constituent which by its structural shape delivers the alternatives. Notice that these constituents are always minimal in the sense of rule (34).

⁹ For a more flexible and empirically adequate theory where also subjects (external arguments) may project focus see Jacobs (1992).

7.5. The Unexpectedness of Unselectivity with Focus Constructions

7.5.1. Rejecting Relativized Minimality

Drubig observes that factive predicate constructions show one important difference between wh-extraction and association with focus, though. Whereas there is a selectivity effect in case of wh-extraction, there is no argument/adjunct asymmetry with focus constructions. As stated above, factive verbs create weak islands. Weak islands are called so, because they are selective with respect to potential extractees. Referential arguments can be extracted (46), non-referential phrases (whether argument or adjunct) cannot (47). (Strong islands do not permit any extraction.)

- (46) Who_i do you know that Mary saw t_i
 (47) *How_i do you know [that he behaved t_i]
 *Why_i do you know [that Alfred divorced his wife t_i]

Factive predicates seem not to be weak (i.e. selective) with respect to focus relations. Drubig provides (apparent) counterexamples. He reviews two theories of Relativized Minimality (RM) and tries to show that neither can account for the effects in (24), repeated here for convenience:

- (48) He doesn't believe that they invited his Wife, but
 a. his DAUGHTer
 b. that they telephoned his daughter
 (49) He doesn't know that they invited his Wife, but
 a. *Jane
 b. that he loves Jane

(49) shows that the negation in the matrix clause cannot be associated with the object of the embedded sentence across the intervening factive predicate. According to a syntactic theory which assumes focus movement and an RM account along the lines of Rizzi (1990) and Cinque (1990) (49 a.) should be grammatical. In such a theory, referential wh-phrases are able to bind their traces across weak interveners. 'Being referential' in the sense of Rizzi and Cinque means:

- bearing a referential theta role like Agent, Theme, Experiencer...
- being discourse-linked in the sense of Pesetsky (1987)

The narrowly focused object *Jane* in (49) fulfills these requirements; it acts as Theme argument of the verb *to invite* and it is discourse linked (qua proper name one should assume that there is a discourse referent available in the frame; later I will claim that narrowly focused elements are always salient in the discourse, a notion which comes close to discourse linking). Therefore an RM violation is unexpected.

The second RM account which Drubig calls incapable of explaining the data is the algebraico-semantic theory for scope taking developed by Szabolcsi and Zwarts (1991, 1993). Since I will defend this account and show that this theory is predestined for delivering a satisfactory analysis, I will not outline it here in detail. A superficial look at the theory, however, might suggest that the algebraico-semantic account fails to explain Drubig's data as well. Szabolcsi and Zwarts' theory has a theoretically different, but practically similar typology of island escapers. For them, island escaping is a question of scope taking. Scope takers are associated with Boolean operations. If some scopal element A is supposed to take scope over some other element B, A must be associated with a superset of the Boolean operations B is associated with. Since wh-phrases that range over unordered individuals, for whose domain all Boolean operations are defined, they can be freely extracted. Thus, phrases that refer to concrete, i.e. discrete, individuals are successful scopetakers since they can be linked to their traces inside weak islands without problems. This definition of good extractee is very different from the Rizzi / Cinque characterization. However, since discourse linked phrases happen to be individuals in the unmarked case and vice versa, both theories cover roughly the same data.¹⁰ In our case, however, it seems that the algebraico-semantic account fails as well. 'Jane' as proper name is a prototypical individual per se. Yet, the intended association with the focus licensing operator is not possible.

These observations lead Drubig to look for an explanation of the unexpected asymmetry elsewhere. The theory he comes up with makes use of the idea that complementizers act as interveners when they have semantic content and that they do not trigger island effects when they

¹⁰ There are different predictions, however. It is precisely these differences that make me believe in the Szabolcsi / Zwarts theory. For a more detailed analysis see the quoted work and further below.

have no semantic impact and hence are deleted at LF¹¹. He states that semantic complementizers bind focus and hence act as interveners between the focus phrase and the operator the focus phrase is supposed to be associated with. He tries to show that complementizers may indeed be sensitive to focus phenomena. That makes them selective with respect to ordinary wh-extraction which allows for extraction of referential arguments as opposed to focus operator - focus phrase constructions where there is no argument / adjunct asymmetry.

7.5.2. Critique of Drubig's Critique

In order to underline his claim he brings data from Navajo. This language is opportune insofar as that it has focus markers which unambiguously identify the focus phrase and additionally have different complementizers for referential (i.e. response stance and non-stance) and neutral (semantically vacuous) sentential complements. His argumentation goes as follows: complex sentences with a focus sensitive operator within the matrix clause which is linked to a narrow focus within the embedded clause which is a projection of a semantic complementizer should be ungrammatical. This prediction is correct. Propositional predicates are always ambiguous; in Navajo, however, the intended reading is unambiguously identified through the use of the corresponding complementizer: 'ígíí' is the semantic one, 'go' the one without meaningful content. In the 'go' example (50), the negative operator can be linked to a narrowly focused element in the embedded clause.

- (50) Jáan chidí hanii yiyilcho'go yinishdlá
 John CAR_{negFOC} wrecked-COMP believe-I
 'I don't believe that John wrecked the CAR.'
 'It is not the CAR that I believe that John wrecked.'

This linking is impossible with an ígíí-complement. Here the whole sentence must be the focus phrase, and the object of 'believe' gets a 'factive' reading:

¹¹ For this claim he uses the already mentioned difference between response stance and non-stance verbs on the one hand and propositional or volunteered predicates on the other. According to Hegarty, the former select a CP with a semantic complementizer which discharges the event argument role of the embedded predicate. The latter select a predicate whose event argument may be / is discharged within the matrix sentence. The complementizer, which is not even obligatory at the s-structure level, is completely deleted at LF. Such an element, i.e. a deleted complementizer can of course not be an intervener.

- (51) Jáan chidí ga' yiyilcho'ígíí yinishdlá
 John CARFOC wrecked-COMP believe-I
 'I believe [_F that John wrecked the CAR]', i.e.
 believe' is interpreted as 'accept as true'

Since (51) is potentially ambiguous, one reading is grammatical. If one constructs examples where a narrow focus in the embedded sentence must be associated with an operator from the matrix clause, the sentences become ungrammatical. Thus, if the subject is focused, no focus projection is possible, and the sentence comes out as ungrammatical (52). Similarly in the case where a yes-no question operator is linked to a constituent within the embedded sentence (53).

- (52) *Jáan hanií chidí yiyilcho'ígíí yinishdlá
 John negFOC car wrecked-COMP believe-I
 intended reading 'I don't believe the [_F JOHN] wrecked the car.'
 with 'believe' having the factive reading
- (53) *Jáan chidíísh yiyilcho'ígíí yinishdlá
 John CARintFOC wrecked-COMP believe-you
 intended reading 'Do you believe that what John wrecked was/is the CAR?'
 with 'believe' having the factive reading

This leads Drubig to the conclusion that it is the complementizer which is associated with focus and therefore acts as intervener for any sort of focus linking, irrespective of argumental or referential status. This, however, is not the case. LF extraction even of wh-arguments is ill-formed. Hence declaring complementizers as focus binders cannot be carried over to explain cases like (54), (55)¹².

- (54) *Kii haa-sh néelnáán' atsiN' yiyíllhchoN' - ígíí yínínií ?
 Kee how-Q amount meat ruined-REL-COMP you-heard-about
 'You heard/learned about Keen ruining how much meat?'

¹² Thanks to Peggy Speas, Ken Hale and his Navajo native speakers Paul and Linda Platero for their help with the data.

- (55) *Kii haa-sh nIzahjiN' chidí bilh niilwod-igíí nilh bééhózin ?
 Kee how-Q far car with-him ran-REL-COMP w.you known
 'Up to how far do you know that Keen drove the car.'

Drubig explicitly refuses both RM theories, claiming that both predict an incorrect argument / adjunct asymmetry. The algebraico-semantic account, however, has been developed in order to cover data that show that the classical argument / adjunct asymmetries are rather an epiphenomenon and actually not real. Szabolcsi and Zwarts show that arguments which get specific semantic readings lose the ability of getting extracted. Thus, if the objects of *to poison*, which are most likely patients, or the ones of *to love*, which are experiencers, get an individual reading, nothing prevents extraction.

- (56) Which dog_i do you regret having poisoned t_i ?
 (57) Welche Frau_i glaubst du nicht, daß Frank t_i lieben könnte ? (German)
 Which woman believe you not that Frank love could
 'Which woman don't you believe that Frank could love?'

This is in agreement with the Rizzi / Cinque RM theory where patient and experiencer theta-roles carry a referential index. There are, however, readings where the objects may not be extracted any longer. If the internal argument of the embedded verb gets an amount reading like in (58) or a property reading (59)¹³, the questions become ungrammatical.

- (58) *How much wine_i do you regret that he poisoned t_i ?
 (59) *Was_i weißt du, daß er t_i für Opern liebt ?
 'Was' know you that he 'für' operas loves
 'What (sort of) operas do you know that he loves?'

¹³ I use German here in order to show what is going on with the so-called was-für split (intensively discussed in chapter 6, section 6.2.1.). Was-für split is a construction where only the word 'was' is extracted out of a larger constituent. These questions ask for a property of the argument. The wh-word definitely does not range over individuals. Was-für split is sensitive to weak islands: as opposed to (59) we have a factive verb, the corresponding construction with a propositional verb is fully grammatical:

- (59') Was_i glaubst du, daß er t_i für Opern liebt ?
 'Was' believe you that he 'für' operas loves
 'What (sort of) operas do you think he loves?'
 Was_i glaubst du, liebt er t_i für Opern ?
 'Was' believe you loves he 'für' operas (same meaning)

On the Szabolcsi/Zwarts account, these constructions are correctly ruled out. Drubig is not really concerned with these examples. However, they show that his assumption that only focus operator - focus phrase constructions are blocked by an intervening factive island cannot be true. The examples I gave involve prototypical wh-movement constructions.

7.5.3. The General Strength of Weak Islands for Focus Movement

Drubig seems to overlook the fact that the (apparent) asymmetry between wh-movement and focus constructions is not particular to weak islands that result from response stance and non-stance predicates, i.e. those with a semantic complementizer. The same 'asymmetry' occurs with all other weak islands.

1.) wh-islands:

- (60) *What_i are you wondering [who saw t_i]
(61) *How_i are you wondering [who behaved t_i]

are in contrast with the not perfect, but definitely better:

- (62) "Which man_i are you wondering [who saw t_i]"¹⁴

Some languages do not have any flavor of oddness at all if the extracted constituent is ranging over individuals:

- (63) Melyik embert, találgattad, [hogy ki látta t_i] ? (Hungarian)
which man-Acc guessed-you that who saw
'Which man were you wondering who saw?'

¹⁴ A nice example of crossing of a wh-phrase by another one is to be found in Pesetsky (1987):

- (i) Which book_i did you persuade which man to read t_i ?

Since this example does not have the shape of the other examples in the line of argumentation, I put it only in this footnote.

(13) here repeated as (64) shows that a narrow focus in an embedded sentence cannot be linked to an operator in the matrix clause if they are separated by a *wh*-word. Again, the referential and/or argumental status of 'Mary' seems not to matter.

- (64) John doesn't wonder who saw MARY, but
- ^{??}JANE
- who saw Jane

2. specificity islands:

(19) and (20) showed that focus operators cannot bind into definite phrases. Let us choose a slightly different examples here.

- (65) ^{ok}They didn't look at pictures of MARY, but of SaMIR.
(66) ^{?/*}They didn't look at those pictures of MARY, but of SaMIR.

(67) shows that a discourse-linked *wh*-phrase may be moved out of a definite NP.

- (67) [?]Which book_i did you insult the author of t_i ?

3. complex constructions

- (68) He didn't investigate the man who invited the ex-convict with the RED shirt, but
- *the BLUE shirt
 - *with the BLUE shirt
 - *the ex-convict with the BLUE shirt
 - the man who invited the ex-convict with the BLUE shirt

(68) -originally (11)- was supposed to show that the focus phrase, i.e. the constituent to be moved, must not be smaller than d. The parallelism with *wh*-constructions was demonstrated in (35)-(41). Nevertheless, all possible blocking elements (definiteness of dominating projections, *wh*-words)

may be crossed if the extractee is discourse linked enough. Let me give a Japanese example due to Pesetsky (1987):

(69) (context:

IBM-to, Apple-to, Fuzituu-to, Matusita-no nakade...)

‘among IBM, Apple, Fujitsu, and Panasonic (National)...’)

question:

Mary-wa [NP [CP John-ni *dono konpuyyutaa-o* ageta] hito-ni atta-no?

‘Which computer did Mary meet the man who gave to John?’

(a possible) answer:

IBM-no konpuyyutaa desu

IBM-Gen computer Cop

‘It’s the IBM computer.’

Thus all listed environments that show that focus operator - focus phrase constructions obey the same constraints as *wh*-movement (which was supposed to show that they are the same) seem to also show the asymmetry Drubig imputed solely to factive constructions. The link

(70) ...[focus phrase]_i ...[XP...t_i...]

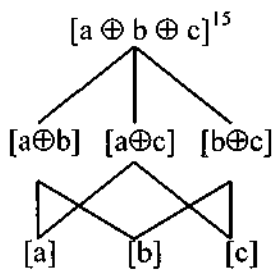
or the overt movement in languages like Hungarian is impossible, if the operator and the (trace of the) focus phrase are separated by any(!) weak island. Neither familiarity (discourse linking) nor choosing an undoubtedly individual expression makes the sentence any better. We should therefore look for another explanation and not contribute this fact to the syntactico-semantic nature of complementizers. This will be done in the following sections.

7.6. The Algebraico-Semantic Account of Scope Taking

7.6.1. Szabolcsi / Zwarts (1990, 1993)

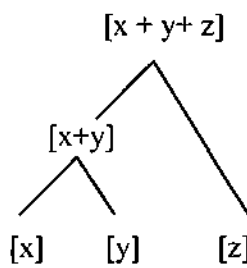
In this section I want to shortly summarize Szabolcsi and Zwarts' account of island sensitivity. Unsatisfied with the predictions of the syntactic theory of RM (Rizzi 1990, Cinque 1990), Szabolcsi and Zwarts develop a semantic account of operator interaction. They assume that operators have scope. In a sentence with more than one quantifier, more than one scopal interpretation may be possible. However, the number of different scopal interpretations of a sentence does not (always) equal the number of all possible permutations of the scope of all quantifiers within it. Some operators are unable of taking scope over some others. Szabolcsi and Zwarts propose that all scopal elements SE are associated with Boolean operations (negation with taking complements, for example). 'When a wh-phrase scopes over some SE, the operations associated with that SE are performed in its denotation domain. The requisite operations may or may not be available in a domain, however.' (Szabolcsi and Zwarts 1993, p. 235) Wh-phrases that range over individuals are successful wide scope takers for individuals and are collected into a set without entering into any ordering relation. Consequently, all Boolean operations are defined in their domain. They further discuss manner, amount and number interpretation and propose that these exhibit a certain partial ordering. A partial ordering is a reflexive, transitive, and antisymmetric relation. A pragmatically relevant partial ordering is inclusion. The structures they assign to sensitive SEs are:

(71 a) Free join Semilattice



masses, collectives, manners

(71 b) Join Semilattice



amounts

(71 c) Chain



numbers

¹⁵ ⊕ stands for sum formation.

All these partially ordered sets lack at least one operation, namely complementation. Negation (as well as other operations) should therefore be an island out of which manners, amounts and numbers are unable to scope. To sum up: in order for a scopal element SE1 to take scope over SE2, SE1 must allow for at least all the operations under which the domain of SE2 is closed as well. That means, the possible operations of an element with narrower scope must be a subset of the operations associated with the element which is supposed to take wider scope.

7.6.2. Focus and Partial Ordering

I will argue that generally focus phrases can not be linked to licensing operators across weak islands because focus is has to do with scalar implicature, and a scale is a partial order. In an alternative semantic theory, a sentence containing a narrow focus is splitted into a background part and a focus part (Rooth 1992). The background of a sentence is obtainable from the ordinary semantic value of the sentence by making a substitution in the position of the focus (phrase). Thus the background of

(72) Elisa prefers [_F ROME]

is something like 'Elisa prefers x'; In Rooth's notation:

(73) $\| \text{Elisa prefers } [\sub{F} \text{ Rome}] \| ^f = \{ \text{prefer}(\text{Elisa}, x) \mid x \in E \}$

with x = any individual in the model

The background is the set of possible alternative propositions from which the ordinary semantic value is drawn. The role of the FocP or the semantic focus is to eliminate all the other possible alternatives.

However, Rooth (1992) points out that the blind mechanism of computing the focus semantic value of a sentence does not quite capture the actual intuitions when focusing something, and in some cases even gives the wrong truth conditions. The example to show his claim is sentence (74) with a predicate in focus

(74) Mary only [_F READ] The Recognitions.

The blind mechanism delivers the set of all possible properties based on all sorts of choices for R in (75):

(75) $\{\lambda x [R(x,c)] \mid R : E \times E \rightarrow \text{propositions}\}$

(75) gives any imaginable relation between Mary and ‘The Recognitions’, and hence focusing the verb would rule out many of the properties that trivially hold between Mary and ‘The Recognitions.’ In order to prevent that, Rooth proposes that the set of alternatives be subject to pragmatic constraints and that the possible alternatives should be reasonable, and constitute a very restricted set: the Context set, which contains only the relevant alternatives, in case of (74), it gives only two members, namely ‘reading (The Recognitions)’ and ‘understanding (The Recognitions)’. This C-set forms a very small subset of the focus semantic value, see (76 c).

- (76) a. [Mary only VP]
 b. $\forall P [P \in C \ \& \ P(m) \rightarrow P = VP]$
 c. Focus-determined constrained: $C \subseteq \|\text{VP}\|^f$

Exactly as Rooth, I will claim as well that this C-set forms a partial order.

Since Rooth’s examples are so evident I take them over and present them here for illustration¹⁶. Let’s assume that Thomas, Markus and I took an exam. Afterwards, Frank asks how it went. One possible answer could be:

(77) Well, I [PASSed]_F.

Under unmarked circumstances, this answer must lead Frank to conclude that I did not better than passing, i.e. I just escaped failing it. Because of the validity of the Gricean quantity implicature, only this information can be drawn. It gives the feeling that I certainly did not ace the exam. Since

¹⁶ What I take over from Rooth is his line of argumentation and the structure of the examples. I do not dare to use the same names for I assume that the ones in his article are referring to real persons. So I replaced them by names of people I know.

acing implies passing, but not vice versa, the set of propositions (which constitute the alternative set) may be ordered by entailment, thus giving rise to a partially ordered set of propositions:

(78) I aced. → I passed.

The set of alternatives is:

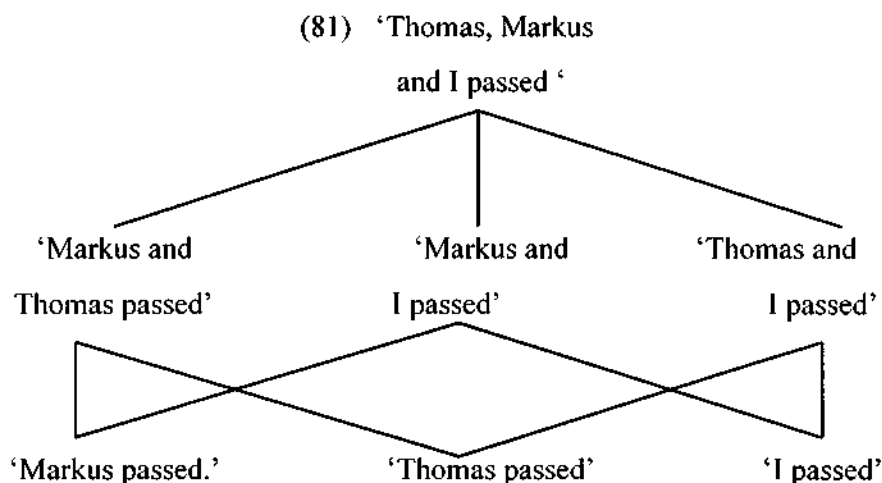
(79) {*ace*(I), *pass*(I)} (= C)

The ordering relation is entailment, i.e. inclusion. This gives rise to a scale. The maxim of quantity suggests a mechanism that ensures that asserting an element of C implies the negation of any higher element from the scale. Accordingly, *I [PASSed]_F* implies the negation of *I ACed*.

Another answer to Frank's question might be:

(80) Well, [*I*]_F passed.

The partially ordered set for this answer is¹⁷:



¹⁷ Here it could be argued that the bottom elements, i.e. *Markus passed*, *Thomas passed*, and *I passed* all imply 'somebody passed'. In that case, we would have a supremum and hence a Boolean algebra with all operations defined within it. However, when something is narrowly focused, it is compared to alternatives of the same type, everything below that level does not matter for the computation. This is also a consequence of the fact that the speaker focuses on the maximal information (s)he can give. In other words, that what the alternatives have in common is not relevant. They themselves must all constitute minimal elements in the lattice.

If groups formed by sum operation are included and it is assumed that the property of a predicate like *to pass* is true of a group *g* iff *to pass* is true of the atomic parts of *g*, the set *C* can be represented as in (82)

$$(82) \quad \left\{ \begin{array}{l} \text{pass}(m), \text{pass}(t), \text{pass}(i) \\ \text{pass}(m \oplus t), \text{pass}(m \oplus i), \text{pass}(t \oplus i) \\ \text{pass}(m \oplus t \oplus i), \end{array} \right\}$$

Again the maxim of quantity -qua negation of elements situated higher in the scale- gives the intended result. The argumentation goes as follows: in the partial order (81), **pass(i)** implies the negation of **pass(t⊕i)**; **pass(t⊕i)** is false if either **pass(t)**, or **pass(i)** is false. Thus, since **pass(i)** is true and **pass(t⊕i)** is false, **pass(t)** must be false, too. The same procedure rules out **pass(m)**.

The lattice in (81) contains all possible answers with respect to who passed. Focus on the constituent *[I]* eliminates all the other nodes in the lattice. The attentive reader will have noticed that (81) is a free choice semilattice, and as such structurally identical to (71 a). If one assumes that focus is computed in the scope position which is there where the focus licenser is located, one expects that regardless of the argumental status of the focused constituent focus dependencies should generally be sensitive to intervening weak islands.

In a LF theory that assumes some mechanism of copy and deletion, the abstract structure of a narrow focus construction could be symbolized by the following dependency.

$$(83) \quad [{}_{FP} C - \text{set}]_i \dots [{}_{XP} \dots [\text{concrete focus semantic value}]_i \dots]$$

Given the algebraic structure of FP this dependency may not be broken by a weak island.

7.7. Summary

In this chapter I develop further the idea that it is focus phrases that undergo A'-movement or association with a focus-sensitive operator and not purely intonationally marked elements. I provide a mechanism which takes the intonational focus, the CE, as input and delivers as output the constituent which must enter into a relationship with a focus-licensing operator. This phrase is Drubig's focus phrase. I then show that this link must be sensitive to weak islands. Arguing

against Drubig's theory of focus binding by factive complementizers I show that not only factive predicates block the relation between a focus sensitive operator and a focus phrase (or focus phrase, ...t;...), but that all known weak islands interrupt the link focus-sensitive operator and focus phrase independently of the associate's referential nature, which seems to be a problem for a theory of Relativized Minimality. I attribute this general impossibility of focus-licensing to the algebraic structure of the C-set which is a lattice structure containing the actual semantic value the focus phrase refers to and all reasonable alternatives to it. Assuming a theory of scope-taking which considers the algebraic properties of operators I show that focus phrases are associated with the structure of a free choice semi-lattice, a structure which lacks the relevant Boolean operations that are necessary for a phrase that is supposed to take scope over a weak island. This explains the general strength of ordinary weak islands with respect to focus constructions regardless of the argumental or referential status of the extractee.

Chapter 8

Conclusions

This dissertation basically has four major conclusions.

The first one is elaborated in chapter 2. There I have argued that arguments that refer to discourse-new entities remain in their VP internal base positions. Within the VP, the arguments are projected according to a universal hierarchy of thematic roles. I have shown that the claim that German displays several base orders (DAT > ACC, ACC > DAT, ACC < / > DAT) cannot be maintained. The conclusion that there are different base-orders is the result of a misunderstanding of focus projection on the one hand, and the overlooking of some semantic facts with the DAT > ACC, ACC > PP alternation on the other. A closer look at the facts reveals that true dative objects generally precede and therefore c-command accusative arguments. There are no verbs which allow for both orders simultaneously. If dative objects appear to be closer to the verb than accusatives, the datives at issue are no true datives, but hidden PPs. The semantic proof comes from a lexical decomposition of the meaning. Higher ranked datives denote goal arguments, deeper ranked ones, which are actually PPs, denote locations or directions. The syntactic evidence comes from the morphological shape of the relevant class of verbs. All verbs that project an ACC > DAT VP, are particle verbs that consist of a verbal root and a prefixed (locational) preposition. I argue that this word-internal structure is the result of the incorporation of the preposition leaving the former prepositional complement surface as a(n apparent) dative argument. The conclusion of these observations is a VP which parallels a familiar hierarchy proposed by many linguists for many languages:

- (1) [_{VP} SU [IO [DO [PP verb (Jv)v]v]]]

The second main proposal concerns the trigger for scrambling, or more generally, one further proposal of this thesis is a new discourse : syntax mapping. In chapter 3 I give a detailed presentation of the semantic differences between scrambled arguments and their unscrambled counterparts. I propose that the common property of the scrambled constituents which the unscrambled ones lack is the discourse anchoring character of the former. I argue that the scrambled arguments act as constituents about which something is asserted. The feature that characterizes them as anchors in the conversation is [+Topic] (cf. also Jäger 1995). This feature is checked in the specifier position of agreement projections. Comparison of many typologically different languages supports this claim because [+Topic] arguments co-occur with grammatical phenomena related to scrambling (Case differences, agreement facts, position change), which can be easily explained by the presence of agreement phrases. Attempts to link these phenomena to other triggers are untenable or less elegant. The formal representation of the proposal looks as follows:

- | | | | |
|-----|------------------|--|--|
| (2) | [CP...[AgrPs... | | [VP ([discourse new adjuncts]) [VP...]] |
| | topic(s) | | comment |

The third main contribution is developed in chapter 6. There I propose a constraint which I call the Generalized Specificity Condition. I first show that many subject-object asymmetries with respect to extraction are actually topic / non-topic asymmetries. It turns out that the right generalization is that VP internal arguments allow for extraction, while VP external act as islands. The argumental status (subject, object,...) does not matter. I furthermore proposed that factive sentences block extraction because, from a discourse-theoretic point of view, they act as topics. Since neither topical nominal arguments nor factive complement sentences are completely impermeable, but allow for extraction of individual (and discourse-linked) constituents, I classify topics as weak islands. The Generalized Specificity Constraint, here repeated as (3), may be viewed as a generalization over quite a number of hitherto unrelated conditions on movement (such as the original Specificity Condition (Fiengo and Higginbotham 1981), Guéron's name constraint (Guéron 1978, 1980), the Frozen Structure Constraint (Ross 1967), the islandhood of factive predicates (Kiparsky and Kiparsky 1971, Rizzi 1990, Cinque 1990) etc.)

- (3) Generalized Specificity Condition: Topics are weak islands.

Chapter 4 furthermore offers some speculations on the reason for this constraint and provides evidence for the claim that leftward raising as well as movement to the right obey the same constraints, which is one more generalization of that part of the dissertation.

The last important contribution of this thesis is the theory of focus dependencies presented in chapter 7. There I investigate the so-called focus phrase, i.e. the constituent that is decisive for the determination of the relevant alternatives in a comprehensive theory of focus. Following the work of Drubig (1993, 1994) I propose a mechanism for the identification of the focus phrase as the minimal constituent that can be moved to its scopal position without violation of movement restrictions. As for the general strength of usually weak islands, I show that focus is associated with a partial order lacking the relevant Boolean operations that a constituent scoping out of a weak island must be associable with. Since narrow focus of a referential expression is associated with a lattice structure which is also the algebraic structure of mass terms or manner adverbials, association with focus across a weak island is predicted to be as bad as *wh*-movement of manner adjuncts (*how*) out of weak islands. The referential or discourse-linked status of the focused phrase does not matter because the scopal position, where focus is computed, is associated with the partially ordered context-set, i.e. the structure containing all relevant alternatives. The formalized result of the last chapter looks like:

$$(4) \quad *[\text{focus licensing operator}]_i / [\text{LF position of FocP}]_j \dots \left[\text{weak island} \dots t_i \dots \right]$$

The general goal of this dissertation is to investigate how syntax deals with the information imposed by the structure of discourse. It tries to show how the speaker's intents to present his/her information are encoded in the syntactic structure of sentences, whereby 'syntactic' is used in its broader sense which covers over 'syntactic' in the narrower sense, morphological, phonological and so forth. It contains the proposal that constituents have to occupy / to be associated with specific structural positions according to their informational task.

I hope to have shed at least a little light on this issue.

The End.

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Zusammenfassung in Deutsch

Die vorliegende Dissertation beschäftigt sich mit der Syntax der Informationsstrukturierung. Es wird untersucht, wie sich die Struktur eines Diskurses auf die Syntax der neu zu formulierenden Sätze auswirkt. Dabei schlage ich vor, daß die Syntax für bestimmte diskursabhängige Gebrauchsarten von Konstituenten bestimmte Positionen in der strukturellen Repräsentation eines Satzes bereitstellt. Diese Positionen werden durch lexikalische und funktionale Kategorien lizenziert. Entsprechend ihrem Status im Diskurs muß eine Konstituente entweder mit einer derivierten, von einer funktionalen Kategorie lizenzierten Projektion assoziiert sein, oder sie befindet sich in ihrer basisgenerierten, von einer lexikalischen Kategorie (hauptsächlich Verb) determinierten Position. Entsprechend diesem Vorschlag, der im folgenden etwas ausführlicher dargestellt wird, trägt die Dissertation den Titel 'Discourse Dependent DP (De-) Placement'¹ (etwa: Diskursabhängige DP-Plazierung).

Im ersten Kapitel stelle ich einige einflußreiche Theorien der funktionalen Satzperspektive vor. Ich schließe mich dann Vorschlägen an, die eine einfache Zweiteilung eines Satzes in einen diskursgebundenen Teil einerseits und einen neuen, informativen Teil andererseits als zu wenig flexibel ablehnen und differenziertere Einteilungen vorschlagen (Krifka² 1991/92, Vallduví 1992). Am Ende des ersten Kapitels werden zwei relativ neue Theorien vorgestellt (Diesings 'Mapping Hypothesis' (Diesing 1992) und de Hoops Kasustheorie (de Hoop 1992), die Ideen darüber liefern, wie Diskursabhängigkeiten in der Syntax abgebildet werden.

Im zweiten Kapitel wird die Struktur, besonders die Anordnung der Argumente innerhalb der deutschen Verbalphrase untersucht. Ich argumentiere dafür, daß es im Deutschen keine unterschiedlichen Argumentanordnungen gibt, wie von Höhle (1982) und Haider (1992) behauptet wird. Das scheinbare Durcheinander kann damit erklärt werden, daß bei Verben, die die markierte Serialisierung Akkusativ vor Dativ präferieren, im Vergleich zu Dativ-vor-Akkusativ-Verben eine lexikalisch unterschiedliche Struktur vorliegt. Ich argumentiere dafür, daß das hierarchisch tiefste Argument eine direktionale oder lokale Angabe ist. Dieses Argument befindet sich bei vielen Verben im unmittelbaren C-Kommandobereich des lexikalischen Primitivums 'BE'. Bei bitransitiven Verben, die ein 'GOAL' Argument projizieren, ergibt sich die Dativ-vor-Akkusativ Konstellation durch Inkorporation der lokalen Präposition in das Bedeutungsatom

¹ Die Wahl des Titels (jedenfalls seine alliterierende Form) ist auch nicht ganz unbeeinflußt von der Reimtechnik meines Lieblingskomponisten. Der Versuch, einen Stabreim zu wählen, ist eine Reverenz an Richard Wagner.

² Ich zitiere mit den Autoren und Jahreszahlen aus den Literaturangaben ('References') dieser Dissertation.

‘BE’. Der dadurch entstandene neue verbale Kopf ist ein deriviertes ‘HAVE’ oder ‘POSS’, das in seiner Spezifiziererposition ein ‘GOAL-’ oder ‘POSS-’ Argument lizenziert. Dieser Vorschlag ist eine Übertragung der Kayneschen Analyse (Kayne 1993a) von ‘have’ als Derivat der Inkorporation einer Präposition in ‘be’ auf den intralexikalischen Bereich.

$$[x \text{ CAUSE } [e \dots \text{ BE } [y [\text{ IN/ AT/ ON } z]]]] \Rightarrow [x \text{ CAUSE } \dots [z_{\text{GOAL}} [\text{ POSS } y \{ (t_z) \}]]]$$

Dieser Vorschlag erlaubt eine Generalisierung über die Anordnung der Argumente im Deutschen, die sich nicht von allgemein akzeptierten, universellen Kasushierarchien unterscheidet:

<Agens_{NOM} <‘Experiencer’ <Adressat_{DAT} <Patiens_{ACC} <Locativum/Directivum_{pp} <verb>>>>>>

Während in Kapitel 2 die Basisordnung diskutiert wird, beschäftigt sich das dritte Kapitel mit Scrambling, das heißt der Umordnung von Argumenten (und Adjunkten) im Mittelfeld. Ein großer Teil dieses Kapitels ist den Bedeutungs- und informationsstrukturellen Unterschieden zwischen basisgenerierten und gescrambelten Konstituenten gewidmet, die in einer Übersicht zusammengefaßt sind. Ich schlage dann aufgrund der Ergebnisse in der Tabelle vor, daß sich gescrambelte Phrasen von ihren in-situ-Varianten durch ein gemeinsames Merkmal unterscheiden, das ich als [+Topik] bezeichne.

Dieses Merkmal kann einer Konstituente nur unter bestimmten Bedingungen zugewiesen werden. Die Entität, auf die sich eine [+Topik]-Konstituente bezieht, muß zum gemeinsamen Hintergrund von Sprecher und Hörer gehören (siehe Jäger 1995). Das heißt, daß [+Topik]-Konstituenten diskursgebunden sein müssen. Diskursgebundenheit an sich ist aber noch keine hinreichende Bedingung. In manchen Fällen kann eine bekannte Entität in ihrer Basisposition verbleiben, zum Beispiel, wenn sie eng fokussiert wird oder semantisch und intonatorisch zum Kommentar der Aussage gehören soll. Letzteres ist häufig bei imperfektiver, atelischer Interpretation des Satzes der Fall. Kapitel 3 enthält auch eine Auseinandersetzung mit de Hoops Theorie von Atelizität und zeigt, daß der Zusammenhang von Objektinterpretation und Aktionsart nur ein Epiphänomen ist. Der tatsächliche Grund für die aspektuelle Interpretation eines Satzes liegt in der Art und Weise der Interpretation des Davidsonschen Arguments.

Kapitel 4 enthält den Vorschlag, daß nominale [+Topik]-Konstituenten in die Spezifiziererpositionen von Kongruenzphrasen (AgrPs) bewegt werden müssen. In der Argumentation weise ich nach, daß Kasuzuweisung ohne Kongruenz von Verb und Argument nicht möglich ist. Die

Idee, daß Bewegung nach AgrP ein syntaktisch-semantischer Prozeß ist, der eine Konstituente als topikalisch auszeichnet, ist in der frappierenden Ähnlichkeit von Scrambling (im Deutschen) und Klitikdopplung (im Katalanischen) begründet. Ich zeige, daß beide Phänomene die gleichen informationstheoretischen Aufgaben erfüllen. Unter einem universalgrammatischen Blickwinkel läßt sich dann Scrambling als Bewegung eines Arguments in die Spezifiziererposition einer Agr-Projektion analysieren, und Klitikdopplung ist die Instanziierung morphologisch präsenter Kongruenzmorpheme (Agr^o) am Verb.

Das vierte Kapitel beschäftigt sich außerdem mit den phonologischen Prozessen, die mit Scrambling (und Klitikdopplung) einhergehen. Es liefert einen prosodischen Beweis für Bewegung, wo die Syntax allein nicht in der Lage ist, Positionswechsel nachzuweisen.

Die Quintessenz von Kapitel 4 ist ein neuer Abbildungsmechanismus, der einen (Deklarativ-) Satz in zwei Bereiche teilt, einen VP-externen, in dem Kongruenzprojektionen enthalten sind und wo sich topikale Konstituenten positionieren sowie die VP selbst, die der Bereich des Kommentars über die topikalen Phrasen ist. Dort befinden sich fokussierte, integrierte, inkorporierte, existentiell interpretierte, neueingeführte Syntagmen:

| | | |
|----------------------------|--|--|
| [CP...[AgrPs... | | [VP ([neueingeführte Adjunkte]) [VP...]] |
| topikalische Konstituenten | | Kommentar |

Kapitel 4 schließt mit einem Versuch ab, die relativ freie Wortstellung im deutschen Mittelfeld zu klären. Die dort entwickelte Theorie, das Prinzip der Hierarchieerhaltung, ist ein Versuch, das informationstheoretische Gewicht (Prominenz) für die Serialisierung verantwortlich zu machen, und zwar dadurch, daß das flexible System der Skopustheorie von Szabolcsi und Zwarts (1991, 1993) erweitert und dann in Sinne der Theorie der Relativierten Minimalität (Rizzi 1990) auf A-Bewegung übertragen wird.

Der dem Kapitel nachgestellte Appendix versucht eine Erklärung für ungewöhnliche Betonungsmuster zu geben, besonders für das Akzentverhalten bei bitransitiven Verben mit einem nominalen und einem präpositionalen Argument, wobei entgegen allen Voraussagen nicht die verbadjazente PP, sondern die weiter entfernte DP den neutralen Akzent bekommt. Die Erklärung läuft auf eine abstrakte Inkorporation der PP in das Verb/ Prädikat hinaus, was strukturell zur Folge hat, daß das nominale Argument wieder der am tiefsten eingebettete, unabhängige Aktant ist, von dem aus Fokus projizieren kann.

Das fünfte Kapitel enthält nochmals eine ausführliche Argumentation, warum topikale Argumente mit Agr-Projektionen assoziiert sein müssen. Die Exemplifizierung geschieht hauptsächlich anhand direkter Objekte. Die postulierte AgrO-Projektion kann in der Hauptsache drei verschiedene, leicht einsichtige grammatische Phänomene auslösen:

- (i) Alternation von zwei morphologisch verschiedenen Kasus für ein direktes Objekt mit entsprechenden, durch die Theorie vorhersagbaren Bedeutungsunterschieden,
- (ii) Präsenz versus Absenz von Objektkongruenzmarkern in Sprachen mit overter Realisierung in Abhängigkeit vom Topik-/Nichttopikstatus der gedoppelten Argumentphrase, und
- (iii) Positionsunterschiede, wenn die Syntax der entsprechenden Sprache notwendigerweise nicht-subkategorisiertes Material zwischen derivierter und Basisposition einsetzt und damit einhergehende Interpretationsunterschiede.

All diese Phänomene sind in den verschiedensten Sprachen in gewünschter Weise attestiert. Die untersuchten Sprachen sind typologisch dabei in jeder Hinsicht sehr verschieden: genetisch: Indoeuropäisch, Finno-Ugrisch, Altaisch, Bantu, Japanisch; morphologisch: flektierend, agglutinierend, isolierend; und in bezug auf die Kasusrealisierung: Nominativ-Akkusativ und Absolutiv-Ergativ-Sprachen, sowie mit Blick auf ihre zeitliche Einordnung: lebende und tote Sprachen.

Kapitel 6 fokussiert eine andere Eigenschaft topikaler Konstituenten, nämlich ihre teilweise Undurchlässigkeit für bestimmte zu extrahierende Konstituenten. Ich zeige, daß für die Möglichkeit der Extraktion aus einer Phrase heraus nicht der Argumentstatus dieser Phrase (Objekt vs. Subjekt) entscheidend ist, sondern die Position der Extraktionsdomäne. Somit werden zumindest für das Deutsche die klassischen Subjekt- / Objektasymmetrien auf diskursbezogene Unterschiede zurückgeführt. Die richtige Generalisierung lautet: VP-interne Argumente blockieren Extraktion nicht, VP externe (gescrambelte, mit Agr-Projektionen assoziierte) Argumente sind hinsichtlich der Extraktion von Konstituenten aus ihnen heraus selektiv. Phrasen, die aus gescrambelten Argumenten herausbewegt werden können, müssen bestimmten Anforderungen genügen. Sie müssen sich auf Individuenausdrücke im Sinne von Szabolcsi und Zwart (1993) oder referentielle Entitäten im Sinne von Rizzi (1990) beziehen. Ist das nicht der Fall, führt Extraktion zu ungrammatischen Konstruktionen. Das klassifiziert topikale Konstituenten als schwache Inseln zusammen mit Negation, faktiven Prädikaten, W-Inseln usw.

Komplemente faktiver Prädikate werden ebenfalls als topikale Konstituenten herausgestellt. Somit kann die in Kapitel 6 formulierte Verallgemeinerte Spezifitätsbedingung (Generalized Specificity Condition) als eine Generalisierung über eine Vielzahl scheinbar unabhängiger Extraktionsbedingungen betrachtet werden (Specificity Condition (Fiengo und Higginbotham 1981), Name Constraint (Guéron 1978, 1980), Frozen Structure Constraint (Ross 1967), Constraint on Extraction Domains (Huang 1982), Extraktionsblockierung faktiver Prädikate (Kiparsky und Kiparsky 1971, Rizzi 1990, Cinque 1991)).

Die Verallgemeinerte Spezifitätsbedingung lautet:

Topikalische Konstituenten sind schwache Inseln.

Kapitel 7 befaßt sich mit der Analyse von Konstruktionen, bei denen eine Konstituente eng fokussiert ist. Es wird ein Mechanismus vorgeschlagen, wie der Umfang einer Fokusphrase berechnet werden kann. Die Fokusphrase - in Anlehnung an die Arbeiten Drubigs (1993, 1994) - ist diejenige Konstituente, die entscheidend für die Interpretation von Fokus in einer semantischen Theorie ist, die auf dem Alternativansatz von Rooth (1985, 1992) beruht. Da ich von einer Bewegungsanalyse für eng fokussierte Konstituenten ausgehe (Jackendoff 1972, Chomsky 1977), ist der Mechanismus in bezug auf Extraktionsmöglichkeit formuliert. Die Fokusphrase wird als die kleinste Konstituente identifiziert, die bei ihrer obligatorischen Bewegung in die Skopusposition keine Extraktionsvorschriften verletzt.

Es wird gezeigt, daß Fokusbewegung in keiner Weise von klassischer w-Bewegung verschieden ist. Ein scheinbarer Unterschied ist die generelle Unmöglichkeit, Fokus über eine schwache Insel hinweg zu binden, das heißt, Fokusbewegung kann keine schwache Insel verlassen, selbst wenn die zu bewegendende Konstituente alle sonst gültigen Bedingungen (referentielle Theta-Rolle, Diskursverknüpfung, individuelle Interpretation) erfüllt. Der Grund liegt meiner Ansicht nach in der algebraischen Struktur, mit der fokussierte Konstituenten assoziiert sind. Fokus ist ein grammatisches Phänomen, bei der die betroffene Konstituente mit kontextuell angemessenen Alternativen verglichen wird. Die Bedeutung der Fokuskonstituente mit denen der Alternativen bilden gemeinsam die sogenannte Kontextmenge. Diese Kontextmenge ist keine ungeordnete Struktur, sondern im Falle von Entitäten ein Halbverband.

Bei Bewegung aus Skopusgründen muß das Element mit dem weiteren Skopus mit mehr als, aber mindestens genau denselben Booleschen Operationen wie das quantifizierende Element mit den engeren Skopus assoziiert sein (Szabolcsi und Zwarts 1991, 1993), damit die mit der jeweiligen Quantifikation notwendigen algebraischen Operationen ausgeführt werden können. Da

Halbverbände für die notwendigen Operationen, die schwache Inseln fordern (z. B. Negation erfordert die Berechnung von Komplementmengen), nicht definiert sind, ist es für fokussierte Konstituenten nicht möglich, sich aus schwachen Inseln herauszubewegen. Der Grund für die Unmöglichkeit, eine Fokusphrase von außerhalb einer schwachen Insel zu binden, liegt also nicht an der reinen Bedeutung der fokussierten Konstituente (deren Denotat), sondern an der gesamten Fokusstruktur, die mit einem Halbverband assoziiert ist. Grammatisch heißt dies, daß Fokusbindung in das Komplement eines faktiven Verbs genauso schlecht ist wie die Extraktion eines Art-und-Weise-Adverbials über eine Negation.

Essenz:

(Nominale) Konstituenten, die der Sprecher / die Sprecherin als Ausgangspunkt für einen diskurserweiternden Kommentar benutzen möchte, müssen in die Spezifiziererposition von Agr-Phrasen bewegt werden.

Konstituenten, die sich auf bestimmte Entitäten beziehen, die der Sprecher / die Sprecherin besonders betont, um sie von anderen abzugrenzen, müssen in die Spezifiziererposition einer Fokusphrase bewegt werden.

Beide Arten von Bewegung (die erste von Typ A, die zweite vom Typ A') sind gewissen Restriktionen unterworfen, die durch ein universelles Hierarchieprinzip gesteuert werden. Beide Instanzierungen von Bewegung sind diskurs- und sprecherabhängig.