

TOPICS IN GERMAN SYNTAX

by

CRAIG L. THIERSCH

B.A., University of Illinois
(1966)

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE
DEGREE OF

DOCTOR OF PHILOSOPHY

at the

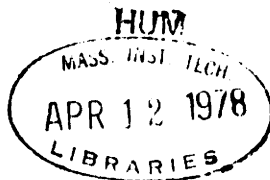
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

March, 1978

Signature of Author Department of Linguistics
March 21, 1978

Certified by Thesis Supervisor

Accepted by Chairman, Department Committee



TOPICS IN GERMAN SYNTAX

by

CRAIG L. THIERSCH

Submitted to the Department of Linguistics and Philosophy
on March 21, 1978 in partial fulfillment of the requirement
for the degree of Doctor of Philosophy.

ABSTRACT

This thesis examines several proposals for a base structure and rule framework for German, in an attempt to show that many different constructions can be accounted for by the interaction of a very small set of highly general (movement) rules with conditions on interpretation which have been proposed in the recent literature, and surface structure filters, in lieu of former analyses, which posited a large number of construction-specific rules with rule-specific conditions attached. This is similar to recent proposals for English, French, etc., but in a typologically quite different language.

It is hoped that the rules proposed are better candidates for subcases of universal rules, and that the differences between, say, German and English, are to be found in the interaction of these rules (and the universal conditions on interpretation) and the different base structure of German.

Discussed are:

- Possible formats for the base;
- The basic (core grammar) rules analogous to English NP and WH movement;
- A "stylistic" rule which gives a test for underlying constituent order;
- Its effect on the analysis of the passive construction;
- Clitic placement (unstressed pronouns);
- So-called Verb-Raising in embedded infinitivals;
- Cases of unbounded movement of NPs;
- The status of certain alleged parentheticals;
- Various raising constructions.

Finally, a suggestion is made that the analysis given of the above constructions leads us to posit an extra bounding node in certain types.

Thesis Supervisor: Noam Chomsky
Title: Institute Professor, Professor of Linguistics

ACKNOWLEDGEMENTS

Like most dissertations, this has been a production number with a large cast of characters. Top billing goes to my advisor, Noam Chomsky, who would manage to come up with ideas when I would come up with a blank, whose analyses of English are the inspiration for undertaking a similar task in German, and who has always managed to have time to read yet one more draft or to discuss one more idea. Due to my over-long stay at MIT, I have had a musical-chairs thesis committee, never the same in any two successive semesters, as various faculty went on or off leave: Ken Hale, whose instinctive feel for exotic languages usually had an answer for the question, "What do you think is really going on here?"; Haj Ross, not only an inexhaustible supplier of German sentences, but of sound advice and good vibes; Joan Bresnan, whose work on comparatives drew me back into the field; and Paul Kiparsky, who came back from an extended stay in India and phonology to wade through pages of German syntax. Morris Halle, our Urgrossvater, who was able to put up with 11 years of my vicissitudes, dispensing discipline, support, warmth or advice as needed; our new department chairman, Jay Keyser, who helped me through several crises. I have a special debt to my "predecessors" in German syntax upon whose work I have drawn extensively: especially Jürgen Lenerz and Arnold Evers, upon whose work I have tried to

build, as well as Marga Reis, J. Breckenridge, and others. I can only begin to list my colleagues here at MIT who have listened patiently to these ideas: Bob Fiengo, Bob Freidin, Mark Baltin, Leland George, Howard Lasnik, Mary-Louise Kean, Gary Milsark, Carlos Quicoli, and Dorothy Siegel, among others. I also am indebted to my Dutch colleagues Henk van Riemsdijk, Jan Koster, Hans den Besten, Franz Zwarts. The ideas of Mitch Marcus, Bill Woods, and others from the other side of Vassar Street have found their way into the thesis. Special thanks to all those informants too numerous to name who have supplied judgments; especially Erich Woisetschlaeger and Jaklin Kornfilt, as well as Walter Beer, Godehard and Hannelore Link, Werner Krautstrunk, Theresa Decker, Margaret Guillemin, Heike Higginson, Jutta Reed, Margaret Palazzi, Marga Pelkey, Irene Petri, and Frau Adler. Many thanks to Phyllis Cusanelli, Carol Tinelli, and especially Bonnie Wilker for preparing the final draft. And last but not least, to Alison Barnet, Emil Kirstein, Bunny La Rue, Serge, Max, and my parents for their support.

CONTENTS

| | |
|--|-----|
| Abstract | 2 |
| Acknowledgements | 3 |
| Introduction | 6 |
| Chapter I: Review of SOV Arguments | 11 |
| 1.1 The Verb-final vs. Verb-second Problem | 11 |
| 1.2 The Gapping Argument | 15 |
| 1.3 Pro-SOV Arguments | 21 |
| 1.4 Some Further Considerations | 28 |
| Chapter II: Rules R1 and R2 | 33 |
| Chapter III: Lenerz's Rule and the Passive Construction | 46 |
| 3.1 Lenerz's Rule | 46 |
| 3.2 The Passive Construction | 59 |
| Chapter IV: Clitic Pronoun Placement and Embedded Infinitivals | 83 |
| 4.1 Clitic Pronoun Placement | 83 |
| 4.2 Evers' dissertation (Monosentential arguments) | 88 |
| 4.3 Evers' dissertation (Bisentential arguments) | 98 |
| 4.4 Clitic movement reconsidered | 104 |
| 4,5 Extraposition reconsidered | 114 |
| Chapter V: "WH-Movement" Constructions | 124 |
| 5.1 English WH-Movement vs. NP-Movement | 124 |
| 5.2 Rules R1 and R2: adjunctions or structure preserving? | 129 |
| 5.3 WH-movement in quoted discourse | 133 |
| 5.4 Other possible embeddings | 139 |
| 5.5 The status of parentheticals | 140 |
| Chapter VI: Tough-Movement and the structure of "S?" | 144 |
| 6.1 Impersonal passives | 144 |
| 6.2 "Tough-movement" | 148 |
| 6.3 The verb <u>scheinen</u> | 158 |
| 6.4 The structure of "S?" | 163 |
| Summary | 174 |
| Footnotes | 177 |
| Errata | 206 |
| Bibliographical References | 207 |
| Vita | 210 |

INTRODUCTION

The subject matter of this thesis belies its title. Although it deals with the German language almost exclusively, except for certain side excursions, it is not so much "about" German syntax, but rather attempts to establish certain sections of German syntax, so that the rules or processes discovered may illuminate certain general linguistic issues. In the following introduction, I would like to first explain the thrust of the thesis: what sorts of things I am looking for; and secondly, why German might be expected to be an interesting place to look.

In most of the work in generative grammar over the past 10 or 15 years, there has been a pervasive, but never (to my knowledge) explicitly stated assumption: namely, that there is a roughly one-to-one correspondence between constructions and rules of grammar (e.g., transformations). That is, aside from certain phenomena, such as case-marking, each construction, such as passive, relative clause formation, question formation, was primarily created by a rule specific to the construction. This naturally led to more and more complicated rules, as more complicated phenomena were noted among the world's languages and attempts were made to account for them by rules alone or with rule-specific conditions. This made the original simple notion of "transformational

rule" all but untenable, as rules were required to look at all sorts of phenomena other than simply an analysis of the string in question, and a good part of their explanatory appeal, both in language learnability and language processing (parsing) was lost as a consequence.

While this led in some quarters to abandoning the simple notion of transformation (diluting it to mean something like "rule" or process), in others attempts were made to formulate certain conditions on the application of (transformational) rules or on the interpretation of their output. These (hopefully universal) conditions would prevent over-generation by ruling out large numbers of sentences produced by the simple transformations.

The proposed conditions are, of course, a whole subject in their own right, which I will not dwell on at this point since they have been much discussed in the literature already, and continue to be. What I would like to focus on, is that this approach opened up the possibility of a somewhat different view of the (transformational) rules. Instead of assuming that they are "paired" with constructions -- a rule of passive, a rule of relative clause formation, etc., and even that sub-cases of a construction require sub-cases of the rule (or a separate rule) -- one can move in the opposite direction and try to show that the processes which create the similarities among different constructions are in fact

the "same" rule (e.g., question-formation, topicalization, relative clause, and comparatives in English all being instances of WH-movement) and that complex constructions are the result of several (applications of) very simple and general rules interacting with each other and with the conditions on application or interpretation (e.g., passive being the result, under one analysis, of NP-preposing, NP-postposing, prelocation-conditions, verb-morphology, and the rules for interpreting the element TRACE). The former has the advantage of explaining the similarities noted between different structures without having to explain why, for example, nominal passives are different from verbal passives, since the similar part has been separated out. The latter has several advantages, among them: the simplified rules are better candidates for a plausibly universal status; it is much easier to propose parsing strategies for rules like Front-NP than for "old-fashioned" transformations which could have several simultaneous complicated effects; the simplified rules (assuming the conditions are genetic and universal) are better candidates for learning.

Most of the work done in support of this position has been done in English with some supporting work in some other languages.¹ However, these languages are very similar in some structural respects: they have a SVO base-structure, fairly rigid word order (no one would think of claiming they

were "scrambling" languages), and similar constructions. German, on the other hand, has a radically different structure from that of English, even though the two languages are genetically related. It has an arguably SOV base (cf. Chapter 1) a fairly free word-order (some have claimed there is extensive "scrambling"), and some constructions which although superficially similar to English strings, behave differently and have a different origin. In addition, case marking plays a much more important role.

It, therefore, would seem appropriate to try to establish a fairly large segment of German syntax to see if it is amenable to the same or similar treatment as English, which we can fairly say is a typologically different language. We would like to say, at best, that the many different constructions (surface strings) of the language can be produced (from the correct base) by a limited number of very simple rules, similar to if not the same as the ones proposed for English, and over-generation prevented by roughly the same conditions.

In order to pursue this course, the first step is to resolve the form of the base and the basic rules affecting the gross resulting surface structure; thus the first chapter consists of reviewing arguments for a verb-final base structure, and given this, the rules needed to produce main clauses, at most two in number. Following this I discuss a

subsidiary rule which accounts for the alleged scrambling and some surprising behavior of the passive construction in German. Following this, it will be argued that unstressed pronouns (clitics) need a separate rule and that this rule when properly formulated resolves a dilemma first noted by A. Evers. Finally, having established the above rules we can look at the properties of WH-movement (which falls together with one of the above rules) and TOUGH-movement (likewise results from the above constellation of rules).

CHAPTER I

Review of SOV Arguments

1.1 The Verb-final vs. Verb-second Problem

For some years now, there has been a debate in the literature as to whether German (and Dutch) have a structure which is basically SVO or SOV. Given the preponderance of evidence (to be considered below) for SOV order, the perhaps more interesting question becomes why there is such a debate in the first place. Before considering arguments, I think a few words about this are in order, since I myself approached this review believing that there was some question as to which analysis was correct.

Since the facts are that German surface word order exhibits both SOV and SVO,

(1) Johann sieht den Mann.

Johann sees the man.

(2) Weil Johann den Mann sieht, ...

Because Johann the man sees, ...

what considerations can be brought to bear in deciding which order is basic? First of all, there is the trivial but common confusion between using "basically" to mean

"base-generated" and to mean "essentially". Obviously the former can make sense only within a theory which has base-forms and (transformationally) derived forms, and someone who rejects this framework must provide some other framework for clarifying and making testable the claim that one or the other order is the "essential" one. Clearly this does not bear on the theory-internal question.

Given a theory of base-generating rules and transformations, then, one has the option of generating the verb second and moving it to the end by transformation when required, or, alternatively, generating it in final position and moving it into second position in some cases.² By looking at additional sentences with direct object NPs and compound verbs, we can see immediately that the verb second position is extremely restricted:

(3) MAIN CLAUSE: Hans hat den Mann gesehen.

Hans has the man seen.

Hans wird den Mann gesehen haben.

Hans will the man seen have.

Hans kann den Mann sehen.

Hans can the man see.

SUBORDINATE CLAUSE:

Weil Hans den Mann gesehen hat, ...

Weil Hans den Mann gesehen haben wird, ...

Weil Hans den Mann sehen kann, ...

for the moment the special cases like

(4) Das Pferd, das den Wagen hat ziehen müssen, ...

The horse, which the cart has pull must

(which are also verb-final, but with the verbs in a different order),³ it seems rather obvious that inasmuch as the verb-second position is restricted to a single element in main clauses only, and in fact to the element that occurs last in the string of verbs finally elsewhere, the simplest solution ought to be to generate a string of verbs clause finally and moving the last element to second position on the last cycle, i.e., $NP_1 NP_2 NP_3 \dots V_3 V_2 V_1 \rightarrow NP_1 V_1 NP_2 NP_3 \dots V_3 V_2 \text{ — } \cdot$

I think one (perhaps misleading) intuition that might make one view the obvious solution with suspicion is that somehow the main clause is the "simplest" form in the language, and subordinate clauses are "more complicated", and thus the simplex sentence ought to exhibit the unmarked word-order. Theory internally, however, just the opposite is true: if Emonds' structure preserving hypothesis is

true,⁴ then there should be rules which apply on the root sentence only; rules applicable on all cycles; but not rules applicable on all cycles but the last. Thus we could claim the main clause, having had this special set of rules apply on it, exhibits the marked format. While Emonds' claim is not uncontroversial, there seems to be a reasonable amount of evidence to lend it plausibility.

The following sort of counter-argument has been advanced by T. Vennerman (1972, 1973), among others; roughly that (1) main clauses are the most frequently occurring clause-type, (2) main clauses exhibit SVO order, (3) children form their basic grammatical model from the most frequently occurring clause-types, and (4) contradictory data, such as subordinate clauses, results in the addition of rules, not the revision of the base. However, as Marga Reis (1974) points out, while these premises imply an SVO base with a rule of verb-final, they are not supported in actual observation: for example, as for (2), most main clauses contain an auxiliary or modal of some sort, and hence do not exhibit SVO order but rather verb-final (i.e., S-Aux-O-V, where "O" is the direct object of "V", not of "Aux"); as for (3), child language development studies seem to show that two-word pivot sentences which have a verb/direct-object relationship show the OV order for German-speaking children, as opposed to a VO order for English-speaking children. (E.g., Balla haben = "Ich will

den Ball haben.") See Reis (1974), pp. 311-312 for a complete discussion.

Another "intuition" might be that since German is closely related to English, a strict SVO language (VSO arguments notwithstanding), how could two so closely related languages differ in such an important aspect? Given the observations in the preceding paragraph, we simply have to assume that linguistic change proceeds differently in different languages (not surprisingly, since when dialects split, some often retain "older" features) and readjust our feeling about "how fast" the differences build up.

1.2 The Gapping Argument

In view of the above observations about the plausibility of base-generated SOV order, it is not surprising that there are a multitude of substantial pieces of evidence for this, and only one substantial (theory-internal) argument against it in the literature. The pro-SOV arguments are discussed below, after first considering the SVO argument in Ross (1970) (and Maling's reply).

The original line of argumentation was more or less as follows: in English, an SVO language, multiple conjoined (transitive) clauses with identical verbs can appear with all but the first occurrence of the verb deleted:

(5) I ordered mashed potatoes, and Tom __ peaches, and
 Suzie __ liver.

Similarly, in Japanese, a strict SOV language, we find the mirror image construction: SO_+SO_+SOV. Thus in dubious cases (e.g. German) we can use the facts about these constructions to determine which is the real underlying order.

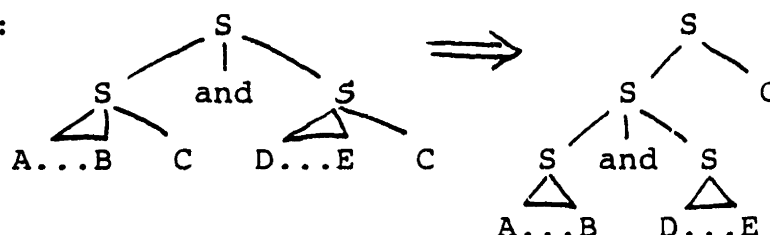
Calling the first (SVO+S_O+S_O) order "A", the Japanese "gapping" order "C", and a further order (SOV+SO_+SO_) "B", Ross finds that some languages like Japanese and Siouan have only C; Hindi and Turkish have B and C, Russian and Latin (which scramble) have A, B, and C; English and French have only A; other possibilities seem to be excluded. German, in this respect, has order A in main clauses and orders B and C in subordinate clauses. It is not clear why this alignment of facts did not already suggest that the SOV/SVO question was not likely to be resolved by looking at this rule for the case of German, in which its application simply mirrors the surface facts. Furthermore, the existence of pattern "B" makes it seem even less likely that there would be a direct connection between the direction of the proposed gapping rule, and the order of constituents. Ross accounts for this, however, by suggesting that the "B" in, e.g. Russian, would result from gapping being an anywhere rule, and thus could apply before or after scrambling, so that we could have

$S_1VO_1+S_2VO_2+S_3VO_3$ operated on by gapping, giving $S_1VO_1+S_2O_2+S_3O_3$, to which scrambling applies giving $S_1O_1V+S_2O_2+S_3O_3$.

A similar interaction with a German verb-final rule would give the various outputs for German. This led to various theoretical problems, such as the status of "anywhere" rules, plus implausible practical conclusions, such as Hindi being an SVO language, "like all other Indo-European languages."

Maling's (1972) analysis of backward gapping as an instance of another process clears this up. Her claim is that there must be some sort of reduction process by which any right-most identical constituents can be combined in roughly parallel structures which are conjoined:

RIGHT NODE RAISING:



this would account for such sentences as the notorious

- (6) John drove his car through and broke the plate glass window.

One can then claim that there is gapping, which gives the "A" and "B" cases, and node raising, which gives the "C" case.

Making the assumption that these two rules, (forward) Gapping and Node Raising, apply after any verb movement rules occur gives all the correct sentences, but unfortunately means that the output of these rules will no longer bear on underlying order. Maling concludes by offering more evidence that there are indeed two rules: first, the forward version of gapping and the backward version (i.e. node-raising) behave differently: (her sentences)⁵

Node Raising:

(7) [4.b] Weil Peter den Brief geschrieben und Heidi das Buch gelesen hat, ...

Because Peter the letter wrote and Heidi the book read has, ...

Gapping:

[4.c] ?*Weil Peter den Brief geschrieben hat und Heidi das Buch gelesen, ...

If we have two rules, we can say that gapping is restricted to deleting the entire verb.

(7') Weil Hans den Brief las, und Heidi das Buch __, ...

but: *Weil Hans den Brief gelesen hat, und Heidi das Buch geschrieben __, ...

whereas node raising takes only the rightmost identical element(s):

(7'') Weil Peter den Brief geschrieben __ und Heidi das Buch gelesen hat, ...

Examples like (6) already indicate node raising behaves peculiarly with regard to constituent structure. Secondly, they also behave differently with respect to the position of the verb: sentences with internally extraposed relative clauses can gap forward, but only the unextraposed versions (with the verb final) can "gap" backwards, as would be predicted if the backwards case were a rule raising just the last (identical) element(s).

For example, in (8a), backward "gapping", i.e., node-raising, is possible, since the verb is strictly final:

- (8a) Weil ein Mann, der eine Taschenuhr trug, nach Rom fuhr, und eine Frau, die einen Pelzmantel trug, nach Paris fuhr, ...

Because a man, who a pocketwatch wore, to Rome went, and a lady, who a fur coat wore, to Paris went, ...

- (8b) [8a] Weil ein Mann, der eine Taschenuhr trug, nach Rom, und eine Frau, die einen Pelzmantel trug, nach Paris fuhr, ...

But if either relative clause has been extraposed

- (9a) Weil ein Mann nach Rom fuhr, der eine Taschenuhr trug, und eine Frau die einen Pelzmantel trug, nach Paris fuhr, ...

node-raising is impossible:

- (9b) [8b] *Weil ein Mann nach Rom, der eine Taschenuhr trug, und eine Frau, die einen Pelzmantel trug, nach Paris fuhr, ...⁶

Maling discusses these cases at greater length.

Thus, although some of the gapping judgements are less than clear, and the facts as to which elements can be gapped are more complicated (see also discussion in Chap. 4), it seems that gapping alone can hardly be said to provide a substantial argument for underlying word order.^{6a} (Another

argument, by Bach, is based on incorrect data, as Koster (1975), p. 114, points out.)

1.3 Pro-SOV Arguments

Turning then to arguments supporting SOV order, here is a brief summary, roughly following the order of the list (for German) in Esau (1973):

1.3.1 Placement of Verbs

Aside from the case mentioned in footnote (3), only one rule is needed to specify order of verbs, a root transformation which moves the tensed verb in a verb cluster (i.e., the last one) into second position.⁷ A verb-final rule (with SVO order) would have to apply iteratively, and since Emonds' suggestion about root transformations could not be invoked, the rule would have to be arbitrarily prevented from applying to the tensed verb on the root cycle only. Suppose such a rule of verb-final were something like: $V, X \rightarrow X, V$. An additional condition would have to be attached to the rule: since the verbs have to end up in reverse order (e.g., $V_1, V_2, V_3, X \rightarrow X, V_3, V_2, V_1$), we would have to not allow the variable X to contain a V , so that it would not, for example, apply to V_2 first. However, the variable X must be allowed to contain a V , in order to allow it to skip over V_3 after it has been moved, which is self-contradictory. Thus the

condition would have to be that X is not analyzable as V, X'. Alternatively, one could allow a new kind of "schematic" rule, such as

(10) $V_1, V_2, \dots, V_n, X + X, V_n, V_{n-1}, \dots, V_1$

or breaking up the rule into several rules. (Note the difficulty of adjusting these to get the right result in main clauses with more than one verb in the verb complex.) None of these theoretical extensions are particularly desirable solutions in view of the simple solution available with an SOV base having a single rule without rule-specific conditions and without the use of quantifiers. (This seems to me to be one of the strongest arguments against the SVO position.)

1.3.2 Subcategorization Restrictions

Generating a single sequence clause finally makes it possible to state the subcategorization restrictions such as NP-V or V-V at one place in the grammar (this is really an argument against having two positions for verbal elements generated in the base).

1.3.3 Generation of adverbs, e.g., nicht and auch placement

The generalization that these adverbs come immediately before the verb (i.e., the verb complex), would otherwise be

missed:

(11) Er gab es dem Mädchen nicht.

He gave it the+DAT. girl not.
= 'He didn't give it to the girl.'

Weil er es dem Mädchen nicht gab, ...

Er hat es dem Mädchen nicht gegeben.

Weil er es dem Mädchen nicht gegeben hat, ...

Although one might suggest generating these adverb clauses finally and extraposing the verbs around them, this suggestion gets into trouble in the following similar case.

1.3.4 "Separable prefixes"

This is one of the better arguments, and as Koster shows for Dutch (see below) it is part of a more general phenomenon. The elements in German (and Dutch) which correspond to the English particles such as up in

(12) He looked up the information.

He looked the information up.

have a very peculiar distribution, from the point of view of an SVO base. In main clauses they appear at the end of the clause, unless a verbal element is present clause finally, in which case (unlike nicht in (8) above) they form a single

lexical item with the left-most verbal element; in subordinate clauses they are always attached to the verb.

(13) Meine Mutter steht immer sehr früh auf.

My mother gets always very early up.

Weil meine Mutter immer sehr früh aufsteht, ...

Clearly they form a semantic unit and must be entered together in the lexicon as such (e.g., zu-machen, to close; ab-fahren, to leave; an-ziehen, to put on (clothes)). If we take the course suggested for nicht above and generate them in place clause finally we will have to state the dependency on the verb somehow over a variable; if we insert the particle and verb as a unit (in second position) then we need a rule of particle-final in addition to verb-final, which is obligatory and ordered before verb final. We can't collapse the two, because we would then have to explain why such a transformation applies sometimes to the entire verbal "element" (auf+machen) and other times only to the particle auf. The situation is even more complicated in Dutch (see below). All of these complications can be avoided by generating particle plus verb clause finally, and the single rule of verb-second produces the correct results:

- (14) Die Lehrerin machte das Fenster auf __.
The teacher made the window open.

1.3.5 Independent infinitive phrases (tenseless VP's)

In German, unlike English, these always occur in OV order rather than VO order:

- (15) [To see a new movie] would be fun.
[Ein~~n~~neue~~n~~ Film zu sehen] wäre angenehm.
It would be fun [to see a new movie].
Es wäre angenehm, [ein~~n~~neue~~n~~ Film zu sehen].

This follows directly if the verb-fronting rule operates only on the tensed verb.

1.3.6 Imperatives

Although imperatives usually operate like main clauses ("Schliess das Fenster!"; "Mach das Fenster zu!") there is also a tenseless imperative; since the verb-second rule only moves tensed verbs, in an SOV analysis we would expect these imperatives to remain verb final, which they do:

- (16) Bitte das Fenster zumachen!
Please the window close.

(16) Von der Tür zurückstehen!

From the door stand back.

1.3.7 Idioms and set expressions are always quoted as verb-final infinitives: e.g., "jemanden übers Ohr hauen" ('to cheat s.o.').

1.3.8 Insofar as Bierwisch's verb-proximity principle (that elements which are more closely related to the verb semantically are closer to it in the string) holds, it could be claimed for German only with a verb-final base; e.g., sentence adverbs are on the left and then objects, etc.

An example of this is the placement of the two PP's in the following sentences (taken from a later discussion in Esau):

(17) [18a] Die Autos stehen [in Deutschland] [auf den Dächern].

The cars stand in Germany on the roofs (stand =
"are parked")

[18b] [In Deutschland] stehen die Autos [auf den Dächern].

[18c] M[Auf den Dächern] stehen die Autos [in Deutschland].

(M = marked, rather than strictly ungrammatical.)

(18) Die Autos stehen auf den Dächern., versus

[20.] *Die Autos stehen.

?Die Autos stehen in Deutschland. (wrong interpretation)

From (17) and (18) we see evidence that "auf den Dächern" is more closely bound to the verb stehen than "in Deutschland; but it is further from the verb in the normal surface order of [18a]. It is closer, however, if we have SOV order and a verb-second rule.

1.3.9 Topicalized Expressions

Verb-final base makes it possible to topicalize adverbial expressions and verbs together as a unit in the right order without further comment:

(19) Er ist nicht in den Fluss gefallen.

He is not in the river fallen.
= 'He didn't fall in the river.'

[In den Fluss gefallen] ist er nicht __!

Er wollte nicht schnell aufstehen.

He wanted not quickly to get up.

[Schnell aufstehen] wollte er nicht __!

(For complete discussion of these cases, see Chap. 2 ff.)

1.3.10 Affix Hopping

This could be dispensed with a verb-final base, as the

affixes would already be in the proper position.

1.4 Some Further Considerations

In addition to the above arguments for German due to Bach, Bierwisch, Esau and myself, Koster (1975) extends them for Dutch, showing that the particle movement argument in particular is part of a more widespread phenomenon in Dutch. In addition to the considerations discussed in section 1.3.4 above, he cites eight different contexts where verbs would have to be moved by a purported verb-final movement rule, and shows that the lone particle moved by particle-movement shows up in exactly these places:

For an example of one such context, the verb deed appears on either side of the PP met liefde, and a rule of V-final would have to move it from second position to the positions in (20):

- (20) [38a] Omdat hij zijn werk met liefde deed, ...
 Because he his work with love did, ...
- [38b] Omdat hij zijn werk deed met liefde, ...
 (PP extraposition over V)

However, if we take a verb (afmaken = "to finish") which has a separable particle, the particle appears in exactly the same contexts, and only those, in a main clause, in which a

verb (like deed) would appear in a subordinate clause:

(21) [39a] Hij maakte zijn werk met liefde af.

[39b] Hij maakte zijn werk af met liefde.

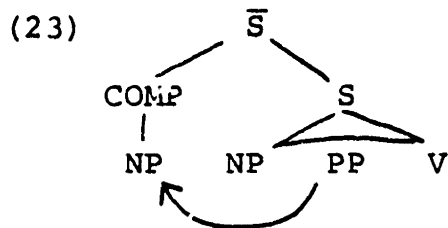
In all these cases, the results follow if we generate Prt+Verb clause finally and move the verb away in the appropriate case. However, not only particles (separable prefixes) behave in this way, but also certain adjectives and certain nouns which have been joined to (or were a constituent originally with) the verb. For example,

(22) [43] Hij is het huis aan het [schoon_{adj} maken_v].
 = "He is cleaning the house.

Since these adjectives and nouns occur in the same context as the particles, we would neither need separate but identical rules of Particle Movement, Adjective Movement, and Noun Movement, or else explain why Verb-final should apply selectively and identically to sub-parts of the compound verbal structure which had nothing in common. All of this could obviously be avoided with SOV order, generating all these elements in place, and having one single movement rule, verb-second, in root clauses.⁸

Koster further discusses some problems with regard to the verb-second transformation. First, in order to explain

that in German and Dutch one and only one constituent precedes the finite verb in main clauses, he suggests that the verb should actually be placed clause initially, i.e. at the front



of S in the structure shown in (23), and then one and only one element moved into COMP, whether that element be a WH phrase,

subject NP, topicalized NP, PP, or Adv.⁹ The only case in which this alone fails to yield the correct surface string for a main clause is in yes/no questions, which he handles by assuming that the element of (Gern. ob, Engl. whether) is the item moved, and is obligatorily deleted in main clauses only. (This proposal is examined and extended in Chap. 2.) He also discusses the problem with A/A, which is no problem if we refer to V+Tns, as mentioned above. (Or alternatively, to [+object, +tense].¹⁰)

Koster concludes with a critique of Bartsch and Vennemann's (1972), p. 127, claim that the SOV analysis with V-second movement is incorrect. The problem here is that they evidently reject the generative approach entirely and are forced to then retreat to an ad hoc explanation, which would have been naturally explicable in terms of the (independently motivated) rules of verb-second and extraposition of PP over the final verb (cf. Dutch examples in (20)-(21)): [Bartsch

and Vennemann's numbering]:

- (24) [179] (a) (dass) Hans wegen des Tadels sorgfältig schreibt
 'literally: (that) John because-of the reprimand
 carefully writes.'
 (b) *(dass) Hans sorgfältig wegen des Tadels schreibt
- (25) [180] (a) Hans schreibt wegen des Tadels sorgfältig
 (b) Hans schreibt sorgfältig wegen des Tadels.

They are discussing the position of PP's and Adverbs with respect to the verb and say, "Sentence [179a] shows the construction of a consistent OV language. Since German is still OV in dependent clauses, [179b] is ungrammatical. Sentence [180a] shows the inconsistent situation after the verb snift in main clauses. [They mean this in the historical sense. -- CT] It is the regular construction of contemporary Standard German (which makes this language so abominably difficult for speakers of English to learn.) [180b] is the construction of the future which can be heard quite frequently in colloquial German and is generally accepted."

Koster points out that, on the contrary, their data is completely predicted by a verb-base and movement to second position analysis: German, like Dutch, has the extraposition rule, PP-over-V, which we saw in sentence (20) [38b] above, repeated here with Koster's German example: [Koster's numbers]

- (26) [38b] Omdat hij zijn werk deed [met liefde], ...
[61] (dass) Hans sorgfältig schreibt [wegen des Tadels], ...

Hence, if Bartsch & Vennemann's sentence [179a] represents the base order of constituents, all the sentences are generated except [179b], which is exactly the result wanted.

Having reviewed the main arguments for choosing an SOV base, let us turn our attention to the more precise formulation of the rules that such a base will interact with.

CHAPTER II

Rules R1 and R2

Having presented a review of several arguments for considering German to be a verb-final language, in the sense that the base is verb-final, and some rule moves the tensed part of the verb complex forward in main clauses (and in quote discourse such as: Er sagte, sie habe Fritz gesehen), we now want to ask what form this rule of verb forwarding will take.

Although it seems we have a fairly large amount of evidence so far that German is basically verb-final with some sort of verb fronting rule, there is less direct evidence as to what form this fronting rule should take. Let us leave aside for the moment the question of whether the base rules can generate multiple verbs or only one per clause; i.e., whether a string of the form $NP_1 NP_2 NP_3 \dots V_3 V_2 V_1$ always has the structure $[\dots V_3]_{S_3} V_2]_{S_2} V_1]_{S_1}$, or whether there are base rules of the form $S \rightarrow \dots V^*$.

Either way, at some stage in the derivation, there will be some completely verb-final string: $NP_1 NP_2 NP_3 \dots V_3 V_2 V_1$ as a main clause which "ends-up" as $NP_1 V_1 NP_2 \dots V_3 V_2$. How are we to effect the change? The most immediate solution would seem to be a rule like

- (1) $NP, \dots, V \rightarrow NP, V, \dots$

where the variable "... " has the widest possible interpretation in the clause, by convention. However, it is immediately obvious that this alone is not sufficient because of so-called topicalized sentences like

(2) Im Garten stand ein seltsamer Greis in einem blauen Mantel.

In-the garden stood a peculiar oldster in a blue coat.

Gestern ist sie nicht in die Schule gegangen.

Yesterday is she not in the school gone.
= 'Yesterday she didn't go to school.'

Jene Frau habe ich nie vorher gesehen!

That lady have I never before seen.

and questions like:

(3) Wen hat sie gesehen?

Who has she seen?

Wo findest du so einen?

Where find you such a one?


Wann kommt der Zug?

When comes the train?

A single verb-second rule would produce, for example, from

- (4) BASE: ich jene Fraun^{ie} vorher gesehen habe
I that lady never before seen have

the sentence

- (5) Ich habe jene Frau nie vorher gesehen


and an additional fronting of the NP "jene Frau" would produce the ungrammatical

- (6) *Jene Frau ich habe nie vorher gesehen.

One alternative is to have an additional rule of topicalization (and WH-movement), and then AUX inversion (as in English) to yield the above sentences:

- (A) 1. NP, ..., V → NP, V, ... (V-front.)
2. ..., $\bar{\bar{X}}$ → $\bar{\bar{X}}$, ... (Top.; similarly for WH-fronting)¹¹
3. $\bar{\bar{X}}$, NP, V, ... → $\bar{\bar{X}}$, V, NP ... (AUX-inv.)

where $\bar{\bar{X}}$ is meant to stand for the phrasal categories NP, AdjP, PP, etc.¹² (Although this convention is assumed from X-bar theory, for the purposes of this thesis, it may simply be regarded as an abbreviation. Cf. footnote 10, Chap. I.)

Another possibility is the set of rules:

- (B) 1. ..., $\bar{\bar{X}} \rightarrow \bar{\bar{X}}$, ... (Top.)
 2. $\bar{\bar{X}}$, ..., $V \rightarrow \bar{\bar{X}}$, V , ... (V-front.)

Notice that in set (B) the order of V-front. and Top. is reversed. Finally, we may have the set of rules:

- (C) 1. ..., $V \rightarrow V$, ... (V-front.)
 2. ..., $\bar{\bar{X}} \rightarrow \bar{\bar{X}}$, ... (Top.)

Now all three sets of rules (if the rules are applied in the order stated) allow us to generate the sentence types above. They also rule out (if AUX-Inversion is obligatory) the sentence types:

(7) * Wen Johann hat gestern gesehen?

Who Johann has yesterday seen?

* Im Garten sie hat Johann gesehen.

In the garden she has Johann seen.

* Den Mann der Hund hat gebissen.

The man the dog has bit. etc.

i.e., the type " $*\bar{X}_1, \bar{X}_2, V, \dots$ ", adhering to the generalization that

- (8) "THERE CAN BE NO MORE THAN ONE \bar{X} -PHRASE BEFORE THE TENSED VERB IN THE MAIN CLAUSE."^{12A}

However, only sets (B) and (C) "capture" the generalization, in any sense: (A) consists of an obligatory rule, an optional, rule and an obligatory "fixing" rule which seems to be an ad hoc patch. Because I see nothing to recommend (A) over the two "simpler" sets of rules (B) and (C) I will reject that possibility. However, it should be noted that (A) has been argued for in the literature by Haiman (1974); cf. a full discussion of Haiman in Thiersch (1976).

In deciding between (B) and (C), we need to consider questions like

- (9) Hat sie den Fritz gesehen?
 Has she the Fritz seen?
 = 'Has she seen Fritz?'

and imperatives like

- (10)a. Machen Sie die Tür zu!
 Make you the door closed!
 = 'Close the door.'

(10)b. Reiche mir deine Hand!

Give me your hand!

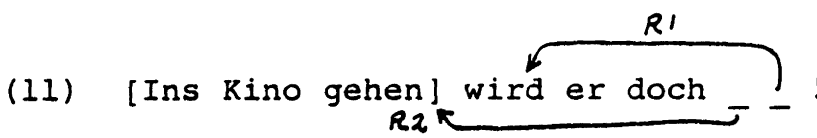
Both of these types have the form "V $\bar{X}_1 \bar{X}_2 \dots$ " and are easily obtainable from rule set (C), if we consider rule (C2) to be optional. There is no way such sentences could be obtained from either (A) or (B) without additional rules.

This sidesteps the question of why Rule 1 in (C) above is apparently obligatory and Rule 2 is apparently optional, but the mixture of apparent optionality and the necessity of ordering are properties of the set (A) and (B) as well; and since they are insufficient to generate these "basic" clause types, I see no reason to consider them further (in addition, as we shall see momentarily, that the set "C" also offers us the opportunity to eliminate the obligatoriness and intrinsic ordering constraints). This choice is not original to me, as noted earlier; cf. Koster (1975), for example, for a discussion with more examples); I merely cite a familiar line of argumentation so that we have a starting point for talking about the rules involved. To repeat, then, let us assume that we have at least the following rules, which we have assumed up til now are "main-clause" rules:

R1: $\dots, V_{[+tense]} \rightarrow V, \dots$

R2: $\dots, \bar{X}_{[-verb]} \rightarrow \bar{X}, \dots$

It should be remarked that many if not most speakers allow the following, especially with stress on the topicalized constituent:

- (11) [Ins Kino gehen] wird er doch _ _ !

 in the movies to go will he yet
 = 'He will go to the movies anyway!'

from the base

- (12) er doch ins Kino gehen wird

where the expression "ins Kino gehen" might be considered a VP. However, since VP seems to be a questionable node in German for various reasons discussed elsewhere in the thesis; and since the real VP in this clause is presumably "[doch ins Kino gehen wird]_{VP}", I am inclined to think frontings of this sort are some other kind of constituent, perhaps AdjP. Note that if the only instance of VP in a clause is the one with the tensed verb, then we need not specify any feature with rule R2, since the remainder of the NP will probably be unavailable after the tensed verb is moved out, depending upon various conventions suggested in the literature.

At this point we have two rules, which, superficially at least, are sufficient to generate the sentence initial proportions of the major main clause types: WH-Question, Yes/No

Question, Declarative, Topicalized Declarative, and Imperative, assuming as noted for the moment that rule R2 moves items regardless of whether they are +WH or -WH (this is discussed more fully in Chap. 5). In addition, it turns out that they are sufficient for generating the two subordinate tensed clause types: relative and complementizer-introduced.

Suppose we allow R1 and R2 to apply freely; then we have the following possibilities:

- 1) NEITHER R1 nor R2 applies. (COMP, NP, ..., V_{tns})

Normal dependent clause:

Ich wusste schon, dass Hans Maria gesehen hat.

I knew already that Hans Maria seen has.

- 2) ONLY R2 applies. (NP_{rel}' ..., -rel ..., T_{tns})

Relative clause:

Der Mann, den_i meine Schwester_{-i} sehr lieb hat, ...

The man who my sister very dear has
= 'The man, who likes my sister, ...'

- 3) ONLY R1 applies. (V_{tns}' NP, ..., -tns)

Imperative clause:

Geben_i Sie mir ein Streichholz_{-i}!

Give you to me a match
= 'Give me a match.'

Yes/no Question:

Ist_i sie nach Frankfurt gefahren_{-i}?

is she to Frankfurt gone

Conditional:

Ist_i die Brücke noch da_{-i}, ...

is the bridge still there
= 'If the bridge is still there, ...'

- 4) BOTH R1 and R2: (\bar{X}_i , V_{tns} , ..., $-i$, ..., $-tns$)
"Normal declarative":

Fritz_i hat_j $-i$ den Metzger schon bezahlt $-j$.

Fritz has the butcher already paid
= 'Fritz paid the butcher already.'

"Topicalized" declarative:

Den Metzger_i hat_j Fritz $-i$ schon bezahlt $-j$.

(Both from: \emptyset FRITZ DEN METZGER SCHON BEZAHLT HAT)

WH-question:

Wen_i hat_j Fritz $-i$ gestern bezahlt $-j$?

Who had Fritz yesterday paid

Now when I say that R1 and R2 are superficially sufficient to generate the major clause types, I simply mean that, starting from a base string of the form $NP_1 NP_2 NP_3 \dots V_3 V_2 V_1$ a proper application of R1 and/or R2 will reconfigure the string into the appropriate clause type as shown in (1)-(4) above. What is a proper application of the rules? This question in linguistics is usually phrased in the converse: What prevents an improper application of the rules. E.g., why

do we not get an application of R2 and R1 in relative clauses:

- (13) *Der Mann, den hat Fritz, gestern gesehen, ...
 The man who has Fritz yesterday seen
-


I think this is asking the question backwards; rather we should allow free application of R1 and R2, and that if they have applied, a certain meaning or reading will be assigned to the sentence in LF (logical form); if this is inappropriate for the context, then the sentence will be ruled out for that reason.

That is, one might want to say a failure of R1 to apply would mean that the clause in question was a dependent one, its meaning linked to some main clause by looking at the element in clause initial position (either a relative pronoun or some other COMP like weil, als, etc.). If rule R1 failed to apply in a main clause, it would be marked as a subordinate clause, the parsing device would attempt to link it to a non-existent main clause, fail, and hence the sentence is "marked" as ungrammatical.¹³

Consider another example where the application of the rules yield a clause-type which is inappropriate for the context. Application of rule R1 only to the base

- (14) sie nach Hause ging
she to home went

would give

- (15) ging sie nach Hause —


which has the interpretation of either a yes/no question or a conditional:

- (16) Ging sie nach Hause?

Did she go home?

Ging sie nach Hause, ...

If she were to go home, ...

which is inappropriate in the context "Ich weiss, ..."

- (17) *Ich weiss, ging sie nach Hause.

which takes a "dass" complement:

- (18) Ich weiss, dass sie nach Hause ging.

In the absence of a comprehensive theory of interpretive rules, we might, for our purposes here, arbitrarily say that the verb

wissen takes a [-R1] complement (unlike the verb sagen, which can take a [+R1] complement: Er sagte, sie sei krank.), thinking of clauses as being marked with "features" indicating the application or non-application of R1/R2. Alternatively, this sort of subcategorization could be done on a structural basis. However, no particular point seems to hinge on the choice of how we are to indicate this, so I will leave it with ad hoc features.

While there is a more detailed discussion of this in Chapter 5, and a suggestion for the actual phrase structures involved, this much should be sufficient for our purposes here, as we move on to discuss other types of rules before settling on the exact details of R1 and R2. However, it should be noted that the above explanation for the "ungrammaticality" or unacceptability of (13) is exactly of the kind one hopes to find; i.e., one hopes to have an ongoing program of distinguishing different kinds of unacceptability -- for example, the semantico/pragmatic problem of a sentence like

(19) *Den Mann Fritz gesehen hat.

The man Fritz seen has

where R1 has failed to apply, and a syntactic type as in

(20) *Im Garten Fritz hat eine Schlange gesehen.

In the garden Fritz has a snake seen.

where the rules do not allow for the generation of such a string.

CHAPTER III

Lenerz's Rule and the Passive Construction

3.1 Lenerz's Rule

Let us review our assumptions up to this point. We are now assuming a base of phrase structure rules which yield clauses roughly of the form

$$(1) \quad (\text{COMP}) \text{NP}_1 \dots \text{NP}_k (\text{PP})^* (\text{AdvP})^* V_i \dots V_l$$

(still holding in abeyance the question of whether there can be more than one V per clause); and two rules,

$$(2) \quad \text{R1:} \quad \begin{array}{c} \dots \\ \curvearrowright \\ V \text{ [+tns]} \end{array}$$

$$\text{R2:} \quad \begin{array}{c} \dots \\ \curvearrowright \\ \bar{X} \end{array}$$

which, applied optionally, yield the possible clause types, as shown in Chapter II. This is fairly straightforward, and will not be discussed further except for the observations in Chapter V.

If we have assumed a base clause structure like that in (1) above, it is clear that there are other movements (displaced constituents) which are not accounted for by R1 and R2. For example, both of the following strings are

acceptable (grammatical) sentences:

(3) Fritz gab einem Mann das Buch.

Fritz gave a(DAT.) man the(ACC.) book.

Fritz gab das Buch einem Mann.

Although such pairs may have slightly different meanings, different emphasis, or may be only acceptable in different contexts, they are both grammatical, which is what concerns us here: they must be generated by the grammar, and if we hold the base constant (and R1, R2), then logically anything in the language not generated by a combination thereof requires an additional rule.

This only follows, however, if we have defined what we mean by "hold the base constant." If we were to have the string (1) base generated then in view of the sentences in

3 (4), there are two options which come to mind:

(4) A. **FIXED ORDER HYPOTHESIS:** The NP's are either generated in the base in a fixed order (with respect to case) or generated caseless and assigned case in a fixed order; then there must be a rule switching NP's in certain cases.

B. **RANDOM ORDER HYPOTHESIS:** NP's are either generated or assigned case in any random order; then there is a series of filters eliminating all but the correct orders.

This question has been discussed at great length by Jürgen Lenerz (1973;1975). In the earlier 1973 paper he discusses the clause internal order of NP (and PP) constituents and attempts to show the existence of a squish (in the sense of Ross)* in the ordering of the constituents (roughly, reading left to right, most definite to least definite). In the 1975 thesis he further generalizes this to the general notion theme/rheme or topic/comment as the operative distinction (of which + or - definite is just a subcase). However, in presenting data in order to establish this interpretation of the two different orders of constituents, he also provides data suggesting a partial answer to the above question as to the genesis of the two different orders.

Observe the following array of judgements, which serves as a schema for numerous others involving two neighboring \bar{X} 's with various combinations of definiteness, etc. (Lenerz, 1973, p. 3):

- (5) [1.]a. Der Verkäufer empfahl dem Kunden einen Wein.
 The seller recommended the(DAT.) customer a(ACC.) wine.
- b. Der Verkäufer empfahl einem Kunden den Wein.
 c. " " " dem Kunden den Wein.
 d. " " " einem Kunden einen Wein.

*(1973b), (1974), (1975)

- [2.]a. * Der Verkäufer empfahl einen Wein dem Kunden.
 b. " " " den Wein einem Kunden.
 c. ? " " " den Wein dem Kunden.
 d. * " " " einen Wein einem Kunden.

We see these judgements repeated in case after case.¹⁴ In [1.]a.-d. where the order is indirect-object /direct-object (IO/DO), any combination of definite or indefinite articles (or stress, etc.) is good. In [2.]a.-d., however, where the order is reversed (DO/IO), the only acceptable sentence has the last item [-definite] and the first item [+definite]. Lenerz continues to show for a wide range of cases, vocabulary items, pragmatic situations, etc., that this is always the case.¹⁵ This strongly suggests that there is a marked order and an unmarked order, and, given our framework, that there would be a rule which exchanges the two; perhaps:

$$(6) \text{ St1: } \bar{X}, \bar{Y} \longrightarrow \bar{Y}, \bar{X} \\ \text{[-pro]}$$

That is, there evidently is an order among the NP's in the base with regard to argument position. In this case the order seems to be $NP_{\text{dat.}}$, $NP_{\text{acc.}}$ (or NP_{IO} , NP_{DO}).

It should be noted that in stating rule St1 as above, even though this is not the final form that I will adopt here, I am already drastically generalizing away from the framework in which Lenerz's material is presented. He builds his case

slowly, considering the case of adjacent IO/DO with other determiners: dieser, jener, einer, keiner, etwas, nichts, beide; as well as considering the cases with other adjacent constituent pairs such as Direct Object and Prepositional Indirect Object for which the underlying order is evidently DO/PIO (Lenerz, 1973):

(7) [28b.] Peter schreibt einen Brief an den Parteivorstand.

Peter is-writing a(ACC.) letter to the(ACC.) Party-directorate.

[28c.] Peter schreibt an den Parteivorstand einen Brief.

but [30a.] Mein Bruder sandte an das Rote Kreuz eine Spende.

My brother sent to the(ACC.) Red Cross a(ACC.) donation.

[30b.] *Mein Bruder sandte an eine Hilfsorganisation die Spende.

Note that when viewed in this way, Lenerz's test (rule ST1) gives us a powerful tool: given any two constituents A and B for which we have no other evidence as to their underlying order in the base, we can apply the test in the same way it was just applied to DO and PIO above in (7). One order, say B/A, will be acceptable in all situations, regardless of such considerations as the definiteness of the items, which one is

topic, etc. But the other order, A/B, will be acceptable only under limited circumstances, namely, when the rightmost item is less definite than the lefthand one.¹⁶

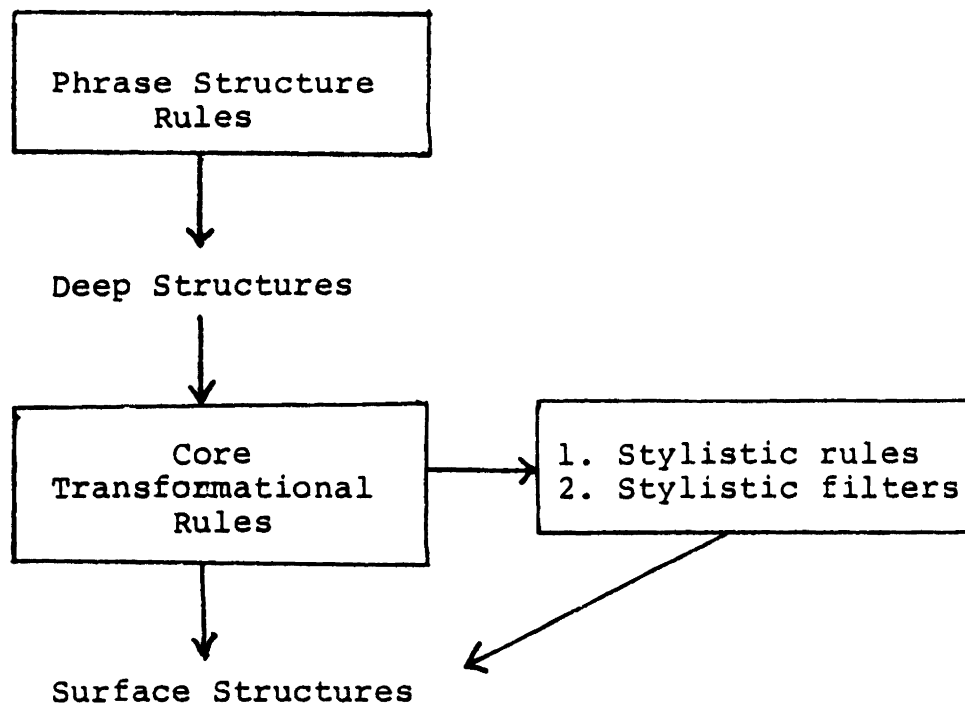
It makes no difference for our purposes here exactly how this result is effected; that is, how we insure that the output of the rule has the less definite (new, etc.) on the right. One possibility might be to put a condition on the rule itself:

$$(8) \text{ Stl: } \begin{array}{l} \bar{X}, \bar{Y} \\ [-\text{pro}] \end{array} \longrightarrow \bar{Y}, \bar{X}; \text{ where } \bar{X} \text{ is the less definite, more heavily stressed, etc.}$$

Another possibility might be to require a surface filter, and assume that such a rule was in some different component (the "stylistic" one?) of the grammar from "core" transformations such as WH-movement (see fig. 9). If the filter were in the component (box) marked Styl. rules, then it would apply only in the cases where such rules applied.

Thus in trying to decide between the options A and B in (4), i.e. whether this apparent switch is achieved by a movement rule or only by filters, we already have one reason for choosing (4A), a movement rule: it would make it easy to account for the difference in marked vs. unmarked orders in some straightforward way. (It is difficult to see why this should be true in the alternative scheme; see discussion below.)

(Fig. 9)



(This diagram is only an ad hoc illustration of the point made in the text, that stylistic filters could be made to apply only to the result of St1, and not to sentences having undergone only R1, R2 but not St1. A much revised version and discussion appear at the end of this chapter, after we have considered some additional issues.)

Furthermore, alternative A allows us to state the rule for case marking in a very simple way as well. Consider the following kinds of clauses with various numbers of arguments: (all cited in subordinate clause form, to eliminate the effect of R1 and R2)

(10) Weil [der Mann] [meine Schwester] sah,...

because the(NOM.) man my(ACC.) sister saw,...

Weil [meine Schwester] von ihm gesehen wurde,...

because my(NOM.) sister by him seen was,...

Weil [der Mann] [meiner Schwester] [einen Bleistift] reichte,...

because the(NOM.) man my(DAT.) sister a(ACC.) pencil handed,...

Weil [meiner Schwester] [ein Bleistift] von dem Mann gereicht wurde,...

because my(DAT.) sister a(NOM.) pencil by the man handed was,...

Weil [er] [den Mann] [meiner Schwester] [einen Bleistift] geben liess,...

because he(NOM.) the(ACC.) man my(DAT.) sister a(ACC.) pencil give let,...

If we consider the dative and nominative to be the cases which are marked by rule, and accusative the unmarked,^{16A} or "default" case, we simply say that certain verbs (like

helfen, geben) have one of their argument positions lexically marked for dative; then,

- (11) Rule (C): THE LEFTMOST UNMARKED NP GOVERNED¹⁷
BY A TENSED VERB IS MARKED "NOMI-
NATIVE"; ALL THE OTHER UNMARKED NP'S
ARE LEFT IN "ACCUSATIVE".

There are two apparent exceptions to this. The first is handled simply: when there are more than one nominative, the second is a lexically marked one, like the datives above; e.g., sein (to be) takes a nominative --

- (12) Weil ich ein Student bin, ...
because I(NOM.) a(NOM.) student am, ...

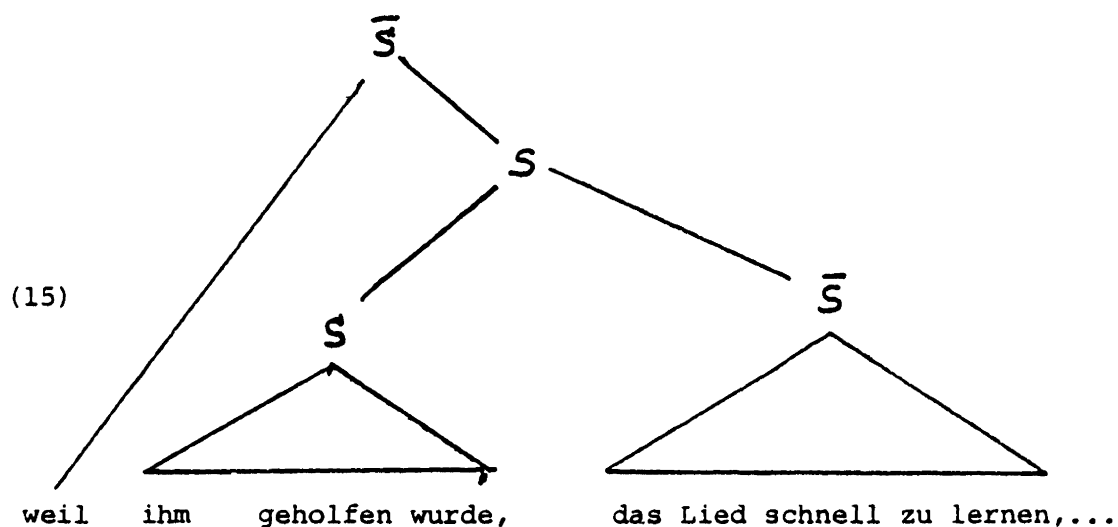
The other cases are the so-called subjectless sentences (clauses), where there is no nominative at all:

- (13) Weil ihm geholfen wurde, das Lied schnell zu lernen, ...
because him(DAT.) helped was, the(ACC.) song quickly
to learn, ...

presumably by extraposition from

- (14) Weil ihm [das Lied schnell zu lernen] geholfen wurde, ...
'Because he was helped to learn the song quickly, ...'

The exact grammar of these constructions is discussed at greater length in Chapter IV; for our purposes here, we need only note that in (13), the dative case of ihm is determined by the verb (cf. "Weil ich ihm half,...), and das Lied is not governed by a tensed verb, and hence remains accusative:



I have stated the rule (C) this way rather than referring to the "subject" of the tensed verb, since this begs the question as to which NP is the subject in German. (Cf. fn. 17).

Let us consider for a moment how the alternative to (4)A., the movement hypothesis, might work. Could there be a way in which the non-movement approach, (4)B., could be made to give the effect of a marked/unmarked order? Suppose we try to formulate what the filters in such an arrangement might look like. Suppose we take just the case of a direct and indirect object, where the unmarked order is NP(dative)/NP(accusative). Then if we take the cases with the NP's

marked definite or indefinite (+ or - def.) to represent all the other cases (e.g., +/- stress, +/- focus), we have the following paradigm:

| | | | | | | | |
|------|-----|---------|----------|--|-----|----------|----------|
| (16) | (a) | NP(dat) | NP(acc.) | | (b) | NP(acc.) | NP(dat.) |
| | | + | - | | | + | - |
| | | + | + | | * | + | + |
| | | - | + | | * | - | + |
| | | - | - | | * | - | - |

in which the unacceptable combination of order and definiteness are the last three possibilities on the (b) side in (16); cf. sentences in (5) [2.]a., c., d. Now it has been suggested that a strategy for using filters here might be to have two filters: failing one filter gives the "marked" cases, and failing both gives the ungrammatical ones. But suppose our notion of filter is something like that developed in Chomsky and Lasnik (1977); then the filter which allows the (a) column to pass might look like:

$$(17) \quad \overset{M}{\left[\begin{array}{cc} \text{NP} & \text{NP...} \\ \text{Acc.} & \text{Dat.} \end{array} \right]}_{VP}$$

where M takes the place of *; i.e., the strings with order DO/IO are marked, but not ungrammatical. Thus, the sentences in the (b) column are marked "M". But now the filter which rules out all but the first case in the (b) column cannot be

a simple one, and must either contain a Boolean condition, or be a "backwards" filter, ruling sentences "in" instead of "out"; either

$$(18) \left(* \begin{bmatrix} \text{NP} & \text{NP} & \dots \\ \text{Acc.} & \text{Dat.} & \\ -\text{Def.} & & \end{bmatrix}_{\text{VP}} \text{ OR } * \begin{bmatrix} \text{NP} & \text{NP} & \dots \\ \text{Acc.} & \text{Dat.} & \\ & +\text{Def.} & \end{bmatrix}_{\text{VP}} \right),$$

which rules out the three bottom cases,

or

$$(19) \text{ "OK" } \begin{bmatrix} \text{NP} & \text{NP} & \dots \\ \text{Acc.} & \text{Dat.} & \\ +\text{Def.} & -\text{Def.} & \end{bmatrix}_{\text{VP}}, \text{ which rules the top case in.}$$

Neither of these seem particularly attractive expansions of the theory of filters; furthermore, there would have to be separate sets of these filters for all the combinations of possible case sequences (most of which would never arise at all under the fixed-case-sequence hypothesis) and other categories besides NP, since the facts, as Lenerz points out, are true of other constituents as well; e.g., PP's. (Note that this latter problem is also true of a filter applied to the output of the switching rule as well.) Furthermore, the first order in (b) is not really felt (so far as I can tell) to be "marked" in any sense; rather the latter three cases in column (b) are felt as more-or-less marked by informants, so that perhaps one would want filters only of the latter type

(18) or (19), not (17).

In any case, having a large number of filters to rule out cases which would not arise under a fixed-case plus movement rule hypothesis, seems unattractive compared to the single rule with a condition on one item, at least until we can provide some more general solution to this phenomenon. In particular, it seems very reminiscent of Heavy-NP-Shift in English, although of course the conditions are different here. Thus henceforth I will assume the fixed case-sequence hypothesis, either with the cases generated in place, or assigned by rule (C) on p. 54, and that Lenerz's phenomenon is to be explained by a rule, roughly of the form in (8), repeated here:

- (8) St1: $\bar{\bar{X}}, \bar{\bar{Y}} \rightarrow \bar{\bar{Y}}, \bar{\bar{X}}$; where $\bar{\bar{X}}$ is the less definite,
 [-pro] more heavily stressed, new information, etc.

Failure of the moved $\bar{\bar{X}}$ to conform to one or more of the conditions constitutes an incorrect application of the rule, and is felt to be a marked order.

It should be noted, incidently, that this is in some sense a pre-theoretic solution of the Lenerz phenomenon, in that I give no general account of this type of rule, other than to note its salient characteristics so that we can continue to investigate how it interacts with other rules. How-

ever, I would suggest that Rule St1 does in fact fall together with Heavy-NP-Shift and the Scrambling Rule (for languages which have scrambling), and they are the complementary phenomenon to the Move-NP, Move-WH type of rule (in German, rule R2). Heavy-NP-Shift might be said to be one of the most "conservative" instances of this phenomenon, scrambling the least conservative instantiation. I will return to this issue in greater detail at the end of Chapter IV and again in Chapter V.

[NB: Numbering of example sentences begins over in sect. 3.2 with (9).]

3.2 Passive

Now this has some interesting implications for treatment of the passive construction in German. The passive construction has occupied a central position in the history of generative grammar, as well as in non-generative transformational grammar, as in the work of Zellig Harris. That sentences like "John saw Mary" and "Mary was seen by John" have the same meaning in some sense was noticed early on, and several different attempts have been made to account for this. Although the early non-generative transformational account (Harris's) related the two sentence types by stating a sort of equivalence relationship:

(9) $NP_1 V NP_2 \sim NP_2 \text{ be } V\text{-d by } NP_1$ (slightly reformulated--ct)

(11) Move NP (left).

One reason, historically, for the emphasis on movement as part of the passive construction (transformation) has been that so much of the transformational generative work has been on the English language, which has two important characteristics in this respect: (1) it is a "fixed word-order" language -- that is, changes in word order seem to be severely restricted, unlike "scrambling" languages; and (2) it is SVO in both base and surface structure (claims of a VSO base notwithstanding; the surface strings are almost all SVO under any reasonable analysis). That passive might involve some different process becomes plausible when languages are examined that lack one or both of these characteristics.¹⁹

The simple conception of passive as a unitary rule operating on the structure NP, V, NP as in (10) was also undermined by the observation of the parallels in NP's to the passive construction in sentences:

(12) The Vandals destroyed Rome.

Rome was destroyed by the Vandals.

The Vandals' destruction of Rome...

Rome's destruction by the Vandals...

There were, of course, differences as well: the NP

(13) The destruction of Rome by the Vandals...

has no verbal equivalent with destroy; similarly, we find the pair

(14) John's lecture (of) yesterday...

Yesterday's lecture by John...

but not the pair:

(15) John lectured yesterday.

*Yesterday was lectured by John.

There were other similar non-parallels noticed in the literature; in addition, there is no change in the morphology of the noun similar to that in the verb.

However, the parallel does call for an explanation, and in fact seems to suggest that the "passive" phenomenon is perhaps the result of several different rules or processes; some of which, for example, might obtain in both NP's and S's and others only in S's.

A further observation provided the beginnings of a partial solution to this problem, when combined with another

development. Recall the sentence

(16) The book_i reads _____i easily.²⁰

and other sentences such as

(17) John_i seems _____i to be here.

Could it be that there was some more general process which moved NP's forward into blanks? This could possibly generalize in such examples as

(18) PRO reads the book easily → The book reads easily.

PRO (was) read the book → The book was read.

(The) destruction of the city → The city's destruction.

(It) seems John to be here → John seems to be here.

and a host of others. But what about when there were no blanks to be moved into?

(19) John saw Mary → ? → Mary was seen by John.

That the morphology is obviously going to have to be taken care of separately in examples (18) suggests that "passive"

sentences might indeed be the result of at least three different processes: in addition to the preposing in (11) and the change in verb morphology, we would need an operation which moved the old subject out of its position, leaving a blank for the object to move forward into. Thus we would have something vaguely along the lines of

(20) Rule A: NP, variable, by, NP ; 1,2,3,4 → e,2,3,1

Rule B: NP, variable, NP ; 1,2,3 → 3,2,3

plus some way of taking care of verbal morphology in passive. (There are many "stages" in the history of the formulation of (20) being ignored here.) Note also that the usual conventions apply, such as recoverability of deletion preventing one of the NP's from moving into an already occupied node and erasing its contents, etc.

This of course makes it more difficult for us to identify passiveness in a universal sense in any straightforward way, but in view of the diversity of passive-like constructions in various languages, this may be exactly the solution we want.²¹

Thus we might find constructions involving one or both of rules A and B for example, with varying verb morphology. If English sentences are in fact a result of several rules applying, then there is no a priori reason to expect that in

some other language we will find constructions which consist of the same configuration of rules. Thus there will be no guarantee, that in Language X, a passive-like construction will be exactly equivalent to English passive. This of course does not mean it will be impossible to give a universal characterization of the passive phenomenon, or that there might not exist a class of constructions in many different languages which one might justifiably group together under the rubric "passive"; it simply means it will be more complicated, and one will have to try to focus on what are the essential elements.

Now it has often been noted in the literature that active and passive sentences don't, in general, have the same meaning; for a time-worn example, consider

(21) Many men read few books.

Few books are read by many men.

Thus to give a characterization of passive, we first might ask, what is the component of the meaning that is identical? The common component is, of course, the argument structure in logical form: if we have two strings containing referential NP's,

(22)NP₁ ... NP₂ ...

(23) ...NP₂ ... NP₁ ...

then what they have in common is the argument structure $P(x_1, x_2)$, where, for example, $x_1 = NP_1$ and $x_2 = NP_2$.

Now we might ask if a further requirement for the two to have an active/passive relation to one another might be something like the following: in (23), NP₂ has to occupy the same structural position as NP₁ did in (22). That is, the former object must be in subject position (or subject case). Interestingly enough, making this precise may require reformulating our analysis of the construction usually considered to be the passive in German. This reformulation is due to an observation made by Lenerz in his earlier (1973) paper, which is expanded upon here.

In German, argument position in logical form is determined by a combination of both structure (i.e., assumed underlying base-generated string order) and case-marking. Lenerz points out, incidentally, in the 1975 dissertation, that the relation between the two is not at all so straightforward as some linguists have assumed.

For example, in view of sentences like:

(24) Er hat den Hund gesehen.

He(NOM.) has the(ACC.) dog seen.
='He saw the dog.'

- (25) Den Hund hat er gesehen.
ACC. NOM.

which have the same meaning (as far as argument position goes), one might assume that argument position is first determined by case marking exclusively, then, if need be, by string position where the two NP's have identical case morphology:

- (26) Die Mutter küsste die Tochter.

Unfortunately, sentence (26) is ambiguous, that is, it has both the readings "The mother kissed the daughter" and "The daughter kissed the mother."²² In view of the discussion so far of rules which might have applied to a given surface string, it is not hard to see that it will be difficult to sort out what might be the relevant rules for unwinding the structure into one or another underlying order so that we could apply a structure based test, such as saying the normal order is Subject, Direct-Object, Verb.

First of all, we can eliminate the possibility that rules R1 and R2 have altered the order of constituents by only considering subordinate clauses, such as those beginning with dass or weil, in which R1 and R2 cannot have applied (as noted in Chapter II and fn. 16):

(27) Weil er den Hund gesehen hat, ...

vs.

(28) *Weil den Hund er gesehen hat, ...

(Cf. sentences (24) and (25) in which R2 has fronted either er or den Hund, respectively.)

For this reason, incidentally, I will restrict myself in the following chapters to citing subordinate clauses almost exclusively, unless R1 or R2 is under discussion, to eliminate their effect, following the precedent of Lenerz, Arnold Evers (in Dutch), and others.

In such a subordinate clause, the only rule which has been discussed up to this time which could apply is Lenerz's St1; so if we look at the possible cases, as indicated earlier in this chapter, we should be able to determine the unmarked, i.e. underlying, order (that is, the order minus the application of St1).

Now what is at issue in German passives? If we look at a typical active/passive pair, it looks at first glance if they are amenable to the same analysis as English:

(29) John saw Mary.

Mary was seen by John.

Johann sah Maria

Maria wurde von Johann gesehen.

That is, in the absence of any other analysis of German syntax, one might assume that the same NP preposing and postposing rules were in effect. But we know from the discussion in Chapters I and II, and the comments above, that main clauses involve R1 and R2, and thus are not the appropriate clause-types to observe any rule behavior that might be specific to the passive construction. Rather we must look at subordinate clauses where there has been no application of R1 and R2:

- (30) Ich weiss, dass Johann Maria sah.
 Ich weiss, dass Maria von Johann gesehen wurde.

Now the two structures look like:

- (31) Active: NP₁ NP₂ V
Passive: NP₂ von NP₁ ge-V-en wurde

While the NP-postposing part of the rule still has some plausibility in that it involves a structural change,^{22A} from a superficial inspection of these two strings there no longer seems to be any strong reason connected with string order to move NP₂, as it would move vacuously. (There might be a case-marking/verb-agreement argument, which will be discussed below.) That is, if we assume German phrase structure

rules generated a verb-phrase node, do we have a rule which moves the NP from the direct object position to the subject position?

(32) [NP e] [VP [NP Maria] [pp von Johann] gesehen wurde]
 → [NP Maria] [VP [NP e] [pp von Johann] gesehen wurde]

(I have omitted co-indexing information on the NP's). Could there be a structural change which was string-vacuous?

We can use Lenerz's observations here to suggest a plausible answer. Suppose we consider active/passive pairs involving a dative NP, in addition to the nominative and accusative NP's, with an uncontested Indirect-Object/Direct-Object (IO/DO) order as the underlying active order. Following are some examples, again with Lenerz's numbering in brackets (Lenerz, 1975, p. 123)²³:

(33) [58] Wem ist das Fahrrad geschenkt worden?
 ='To whom has the bicycle been given?'

[58a] Ich glaube, dass das Fahrrad dem KIND geschenkt worden ist.

I think, that the(NOM.) bicycle the (DAT.) child given
 been has.

[58b] Ich glaube, dass dem KIND das Fahrrad geschenkt worden ist.

[59] Was ist dem Kind geschenkt worden?
 ='What was given to the child?'

(33) [59a] Ich glaube, dass dem Kind das FAHRRAD geschenkt worden ist.

[59b] *Ich glaube, dass das FAHRRAD dem Kind geschenkt worden ist.

Lenerz then observes, "Diese unmarkierte Abfolge OBJ SU, die sich aus [58] und [59] ergibt, scheint allerdings aus der Übereinstimmung mit der entsprechenden Abfolge von IO DO im Aktivsatz erklärbar zu sein." In other words, the unmarked order, that is, the order minus the effect of St1, is the same as that in the active sentences.²⁴

What this means is that if we have any movement at all, in the sense of the proposed English rule "Move NP left", then in sentences containing a dative IO, it would have to iterate as follows:

(34) $[_{NP} e] [_{NP_i} \text{dem Kind}] [_{NP_j} \text{das Fahrrad}] \text{ gegeben wurde, ...}$
 $\rightarrow [_{NP_i} \text{dem Kind}] [_{NP_i} e] [_{NP_j} \text{das Fahrrad}] \text{ " "}$
 $\rightarrow [_{NP_i} \text{dem Kind}] [_{NP_j} \text{das Fahrrad}] [_{NP_j} e] \text{ " "}$

Now all this vacuous movement, done simply on the analogy of the English examples, seems both awkward and unnecessary: we must ask if we need this to account for anything.

One possibility which comes to mind is the classic argument with idiom chunks. If we consider the sentences:

- (35) a. John took advantage of Frank.
 b. Advantage was taken of Frank by John.

in this and similar idioms, the underlined NP which passivizes does not normally appear in subject position, i.e., to the left of the verb. If we are to explain its presence to the left of the verb, as well as account for the fact that (35b) has the same argument structure as (35a), we might propose (as has been done in the literature on English grammar, e.g., Chomsky (1977)) that the base rules generate

- (36) [e]_{NP_i} was taken [advantage]_{NP_j} of Frank by John.

and that we have, say, the following two rules:

- (37) Rule I: MOVEMENT OF NP'S TO AN EMPTY NP POSITION LEAVES AN EMPTY, BUT COINDEXED, NP NODE IN THE OLD POSITION.

Rule II: THE OBJECT OF THE VERB IS THE FIRST NP TO ITS RIGHT²⁵ (IN ENGLISH).

Then in the surface structure, after the application of movement, we have

- (38) [Advantage]_{NP_j} was taken [e]_{NP_j} of Frank by John.

and we have explained both the occurrence of advantage in the subject position, as well as its interpretation as the object of taken (because of the coindexing).

In the German case, however, suppose we change Rule II in (37) to read something like

- (39) Rule II': THE OBJECT OF THE VERB IS THE FIRST NP TO ITS LEFT (IN GERMAN).

Now consider an idiom, "den roten Hahn aufs Dach setzen" = "to set fire to". Now the base form of the active sentence is exemplified by the subordinate clause,

- (40) (Ich weiss), dass die Jungen den roten Hahn aufs Dach setzten.

I know that the boys the red hen on the roof set.
 ='I know that the boys set fire (to it).'

Now by Rule II', den roten Hahn is the first NP to the left of the verb setzten and interpreted as its direct object, and the whole is given the idiomatic reading in whatever way we have chosen (this is irrelevant here). In the passive sentence,

- (41) (Ich weiss,) dass der rote Hahn (von den Jungen) aufs Dach gesetzt wurde.

the NP der rote Hahn is still the first NP to the left of the

verb gesetzt and hence, by Rule II', interpreted as its object. It is, however, in nominative case, and agrees with (is the syntactic subject of) wurde. But this follows directly from rule (C) repeated here:

Rule C: THE LEFTMOST UNMARKED NP GOVERNED BY A TENSED VERB IS MARKED NOMINATIVE; ALL THE REMAINING UNMARKED NP'S ARE ACCUSATIVE.

Hence, in the passive version, (41), Hahn is marked for nominative (and therefore agrees with the tensed verb), while simultaneously being interpreted as the logical object by Rule II'.

The point of this is that there was, again, no reason to suppose any movement had been involved.

Finally, something needs to be said about the interaction of passive with other rules. It has been assumed in the literature that German passive doesn't "act" across clauses, and hence probably does not involve movement (cf. Evers, 1975), although no one to my knowledge has offered such an explicit argument as that given by Lenerz (1973), and above. However, that it doesn't "interact" in the sense of English

(42) John_i was believed —_i to have been arrested —_i by the police.

turns out to be not exactly true.

First of all, we cannot look at the believe cases in German, since the NP position following believe in English allows lexical NP's:

(43) Frank believed John to be a fool.

Frank believed John to have read the book.

whereas German does not:

(44) *Fritz glaubte den Fritz einen Narren (zu sein).

*Fritz glaubte den Fritz das Buch gelesen zu haben.

Since the active infinitivals with glauben are all bad, it is no surprise that the passives are bad as well, and we need not consider them.

Furthermore, embedded, as opposed to extraposed, infinitivals are also bad with passive constructions:

(45) Weil Fritz meine Schwester das Lied singen hörte, ...

Because Fritz my sister the song sing heard, ...

but: *Weil das Lied von Fritz (**von meiner Schwester) singen
gehört wurde,

for reasons which are essentially irrelevant here (but dis-

cussed in Chapter IV, where the syntax of these embedded infinitivals is considered, and it is suggested that there is a local filter which applies to verb clusters like "singen gehört").

Let us then consider the cases with extraposed infinitivals:

- ACTIVE:
 (46) Er hat die Heidi gezwungen, den Käse zu essen.
 ='He made Heidi eat the cheese.'

Weil er die Heidi gezwungen hat, den Käse zu essen,...

PASSIVE:
 Die Heidi wurde von Fritz gezwungen, den Käse zu essen.

Weil die Heidi von Fritz gezwungen wurde, den Käse zu essen, ...

Compare to

- ACTIVE:
 (47) Er hat der Heidi versprochen, den Käse zu essen.
 ='He promised Heidi to eat the cheese.'

Weil er der Heidi versprochen hat, den Käse zu essen.

PASSIVE:
 *Der Heidi wurde von Fritz versprochen, den Käse zu essen.

*Weil der Heidi von Fritz versprochen wurde, den Käse zu essen, ...^{25A}

These are the same judgements we find in English for the corresponding verbs, force and promise:

(48) Heidi was forced (by Fritz) to eat the cheese.

*Heidi was promised (by Fritz) to eat the cheese.

However we propose to assign the subject of the infinitive (say, by assigning it a structure like)

(49) ..., [e]_{NP_i} [den Käse]_{NP_j} zu essen

and requiring that control of NP_i is assigned by the matrix verb), then the same explanation valid for English should be true in German: in the force cases, the object controls the downstairs subject; in the promise cases, it is the subject which controls. But in the passive in both languages, the subject is no longer present, and control fails.²⁶

So far we have considered the cases with passive in the "upstairs" clause, for which the facts are similar to those in English (with the noted caveats) and are amenable to a similar explanation. What about "downstairs" passives? These cases, while not entirely ungrammatical, are felt to have a strange ring to them:

(50) ??Er hat die Heidi gezwungen, von dem Arzt untersucht zu werden.

??Er hat der Heidi versprochen, von dem Arzt untersucht zu werden.

evidently because the passives with werden do not have the "volition" reading

- (51) He promised Heidi to be examined by the doctor.
 =He promise Heidi to let himself be examined by the doctor.

The "let" passive (51b) is strongly preferred in German:

- (52) Fritz hat die Heidi gezwungen, sich von dem Arzt untersuchen zu lassen.

Fritz hat der Heidi versprochen, sich von dem Arzt untersuchen zu lassen.

Note that the downstairs lassen clause itself contains an embedded passive; cf.,

- (53) Er liess einen Wein von dem Ober holen.

(lassen participates in the so-called double-infinitive constructions: i.e., takes an infinitive rather than a past participle; but this suppletion does not affect the meaning, i.e., the application of Rule II'). So that in a sentence like

- (54) Heidi wurde von Fritz gezwungen, sich von dem Arzt untersuchen zu lassen.

we can have control from an upstairs passive to a downstairs passive over three clauses; hence the alleged "non-interactivity" of passive is only apparent.

At this point, having discussed the interaction of several phenomena: Lenerz's ordering principle (rule St1), the passive construction, case assignment rule (C), and a sample rule of argument identification (Rule II', which identifies the logical object), we can return to a point left hanging at the end of the first section. Recall that we had tentatively rejected the use of a filter on the stylistic rule in favor of a condition, because of problems stating the filter and obtaining precisely the right result, as well as a proliferation of unwanted sequences of cases, each of which would have to be ruled out by a separate filter, if we use negative filters roughly of the type proposed in Chomsky & Lasnik (1977). Also recall the diagram in fig. 9, which suggested how different components of the grammar might relate to one another. This diagram omits mention of semantic interpretation and hence cannot be considered complete.

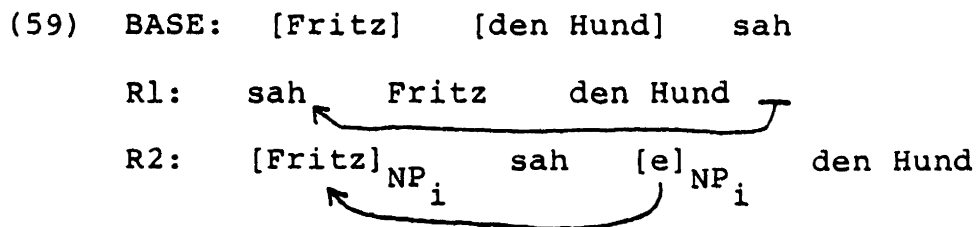
Now that we have seen several candidate components for rules of German, let us see how they might fit together. Suppose instead of the diagram in fig. 9, we adopt one from the recent literature (Chomsky & Lasnik, 1977) as a starting point:

- (55) [6.] 1. Base
2. Transformations (movement, adjunction, substitution)
-
- 3a. Deletion 3b. Construal
- 4a. Filters 4b. Quantifier interpretation, etc.
- 5a. Phonology
- 6a. Stylistic rules

In this model, we would say that rules R1 and R2 fall under "2. Transformations", rule St1 under "6a. Stylistic rules", and rule II' (identifying the logical object) would be on the "b" side in the position of "3b". Presumably the case assignment rule, (C), would come between "1." and "2." Now there are several observations which need to be made. First of all, if the order is correct on the "a." side of the diagram (55), then we must opt for a condition on St1, since a filter cannot affect it.

Secondly, if argument assignment (e.g., rule II'), is on the "b" side, with the other semantic interpretation rules, it applies to the stage in derivaton indicated by the solid line, i.e., disregards the effects of any rules on the "a" side, in particular, rule St1. This seems the right result with respect to St1 (which like other stylistic rules, leaves no TRACE); rule II' must apply to the sentence before St1:

itself immediately:



(In this example I have fronted the subject, to make the point more obvious.) The NP to be interpreted by rule II' is now on the right of the verb by virtue of the verb's having moved. Thus rule II' fails if interpreted literally. However, since rule R1 is a movement rule like R2 (and in parallel format), if R2 leaves a trace element $[e]_{NP_i}$, then there is no reason not to assume that rule R1 leaves a trace element $[e]_{V_i}$, similarly coindexed. The verb which has been moved could be said to "bind" its trace in a sense analagous to that in which the NP binds its trace. In both cases, the construal or "binding" is necessary to preserve a simple and general form of some argument assignment rule.

One final note: I have not considered here all of Lenerz's cases; e.g., I have not discussed the unmarked orders of various prepositional phrases and locatives; also, rule II' is oversimplified. I will defer discussion of these interesting but complex cases to future work. Let us now turn to another class of constructions in Chapter IV.

CHAPTER IV

Clitic Pronoun Placement and Embedded Infinitivals

In this chapter I would like to discuss certain aspects of embedded infinitivals, building on the work of A. Evers. Before I do, however, we need to consider one additional rule, that of clitic pronoun placement.

4.1 Clitic pronoun placement

Recall that the unmarked order of constituents, under the Lenerz hypothesis in a normal active sentence was supposed to be SUBJ/IO/DO:

- (1) Weil ich dem Mann das Buch gab, ...
 because I the(DAT.) man the(ACC.) book gave, ...

and under certain circumstances, the order DO/IO was allowed:

- (2) Weil ich das Buch [einem seltsamen Mann, den ich nicht kannte,]
 because I the(ACC.) b'ok a(DAT.) peculiar man, who I didn't know,
 gab, ...
 gave, ...

However, while the marked order was allowable only under some circumstances, the unmarked order was supposed to be allowable under any circumstances. But what would happen if the direct object in the sentence were a pronoun?

The sentence is ungrammatical; and in fact the grammatical version is the one with order DO/IO:

(4) Weil ich es dem Mann gab, ...

Furthermore, we notice that the unstressed accusative pronouns which contract (cliticize) with an adjacent word have a rather odd surface distribution, if we consider further clause types, cf.

- (5) a. Weil ichs dem Mann gab, ...
- b. Ich gabs dem Mann.
- c. Dem Mann gab ichs.
- d. Ich habs dem Mann gegeben.

The es cliticizes, variously, to the subject, the main verb, the auxiliary, and even appears clause finally. In addition, note (with unstressed es),

(6) *Es gab ich dem Mann.

All of the above surface results follow directly if we assume the unstressed accusative pronouns are moved to clause second position by a rule like^{26a}

(7) Rule C1: SD: (Comp), NP, ..., $\left[\begin{array}{l} +\text{pro.} \\ +\text{acc.} \\ -\text{str.} \end{array} \right]$, ... SC: 1,2,4,3,∅,5

1 2 3 4 5

for example,

(8) NP, ..., es \Rightarrow NP, es, ...

The results follow from our rules R1 and R2. For example,

(9) BASE: \emptyset ich dem Mann es gab
 C1: \emptyset ich es dem Mann gab
 R1: gab ich es dem Mann
 R2: ich gab es dem Mann.

Note that in a subordinate clause, we get the form in which only C1 has applied,

(10) BASE: weil ich dem Mann es gab
 C1: weil ich es dem Mann gab

and different application of R2 to the third line in (9) gives (5c):

(11) R2: Dem Mann gab ich es

Non-application of R2, as noted in chap. 2, gives the yes/no question (3rd line in (9) above):

(12) Gab ich es dem Mann?

and so on. Remember also that we have been tentatively assuming (pending some more discussion in chap. 5) that rule R2 collapses such fronting processes as WH-movement and topicalization, and

hence it is not unreasonable to suppose that cliticized (unstressed) pronouns are immune to it, hence the star in sentence (6), repeated here:

(13) *Es gab ich dem Mann.

(Cf., for example, the distinction between strong and weak forms of pronouns in French, such as moi and me, and their attendant behaviour.)

Rule Cl is basically a formalization of Wackernagel's idea that such unstressed items gravitate to sentence second position. It is to be hoped, in fact, that Cl generalizes to a statement of clitic placement which seems widespread among languages.

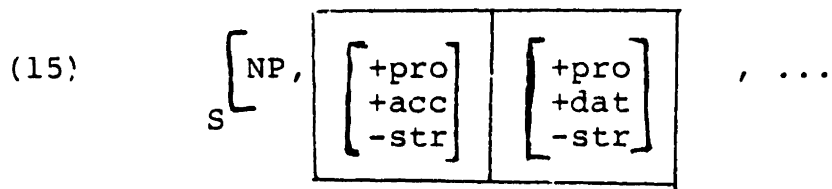
Note that there are other possibilities for explaining these phenomena. One could, as Lenerz does in his earlier paper, try to bring the pronoun cases together with rule St1, saying that St1 is obligatory just in the case of pronouns. For example,

(14) Weil ich es [dem Mann] gab, ...

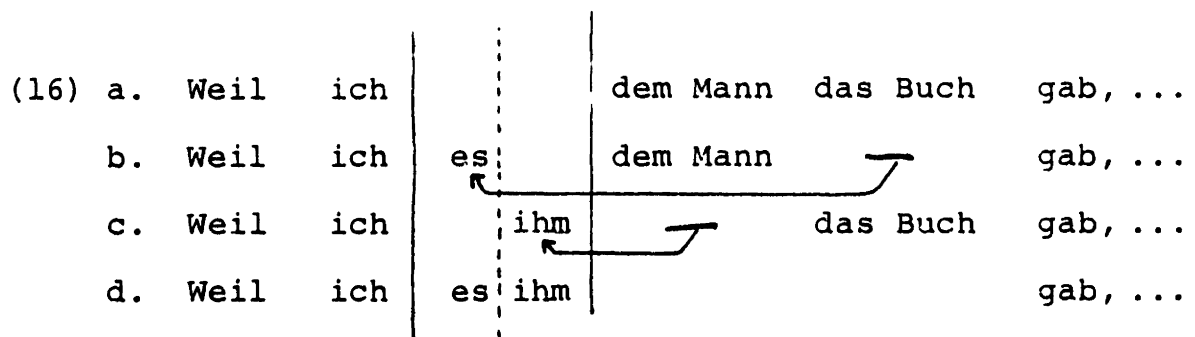
I feel there are several reasons for opting for the cliticization alternative:^{28A} (a) theory internally, adding a condition to St1 specifically for pronouns to make the rule obligatory just in these cases, is undesirable (I am assuming we disallow squishes, and that "squish-like" phenomena are to be explained by a conjunction of several discrete processes); (b) the clitic process seems to have universal applicability (cf. fn. 28); (c) it concurs with the non-applicability of R2 to unstressed

pronouns; (d) in sect. 4.4 we will examine a construction in which the rules behave differently.

There is a further reason for preferring C1, which we will have to defer until chapter 6, since it involves considering yet another construction (the tough-movement sentences), but briefly, there seems to be some evidence that it is not only the accusative pronouns which take part in this process, but rather there is a fixed landing site for ACC, NOM, and perhaps even DAT pronouns. Note that this will be extremely hard to show for the constructions we have considered so far, since even if there was a fixed, clause second position,



(indicated in the boxes in the diagram), and unstressed dative pronouns moved into their "box", the move in (16c), unlike (16b), would be string vacuous:



With the above discussion in mind, let us tentatively accept rule C1 as stated, and examine a case where it allegedly interacts with a particular construction.

4.2 Evers' dissertation (Mono-sentential arguments)

Let us turn our attention now to the so-called "V-raised" constructions: those involving an embedded infinitival complement. These clauses are the ones in which the embedded infinitival is not extraposed; i.e., (17) not (18):

(17) Weil wir Peter die Geschichte erzählen halfen, ...

Because we Peter the story to-tell helped, ...

= 'Because we helped Peter to tell the story, ...'

(18) Weil wir Peter halfen, die Geschichte zu erzählen, ...

Not all verbs allow this construction; some verbs, like helfen in (17) and (18) above, can appear in either extraposed or intraposed constructions; others, like hören, can appear only in the intraposed constructions; cf.

(19) a. Weil wir Peter die Geschichte erzählen hörten, ...

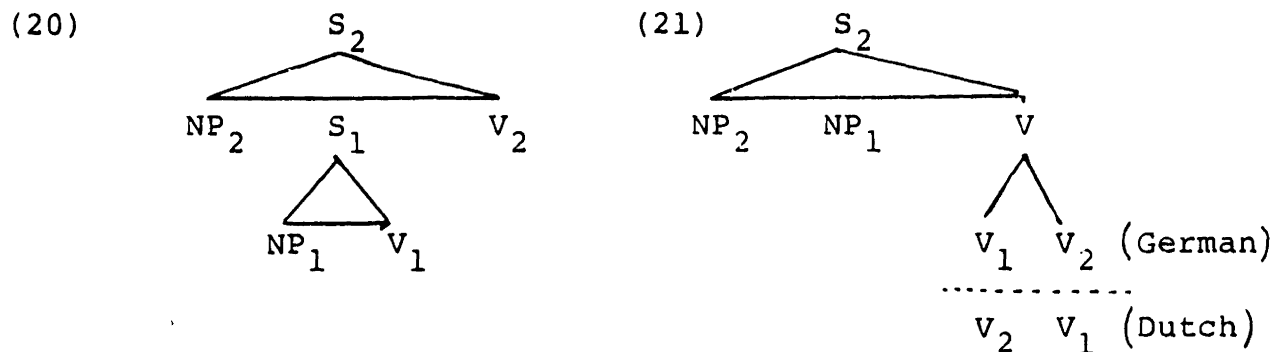
Because we Peter the story to-tell heard, ...

b.*Weil wir Peter hörten, die Geschichte zu erzählen, ...

This construction has been discussed in great detail by Arnold Evers in his thesis, "The Transformational Cycle in Dutch and German," 1975, and further aspects of the analogous construction in Dutch by Henk van Riemsdijk (in preparation).

Evers' thesis takes as a given the arguments discussed in Chapters 1-2 for SOV structure in Dutch as well as in German, and tries to show that there is a rule of verb-raising

(post-lexical, not to be confused with the Generative Semantics "predicate lowering" rules, although the possibility of identifying this rule with "predicate raising" is discussed), which transforms a structure of the form (20) into the form (21).



Evers then discusses the theoretical consequences of such a rule. The plan of argumentation is to show that the sentences have a surface structure which behaves like a simplex sentence with a compound verb²⁹, and yet the deep structure must be bisentential. Before describing the various arguments, it should be pointed out that there is an important difference between the resulting structures in German and those in Dutch. Since in German, the verbs line up in reverse order clause finally with the most deeply embedded verb leftmost: ...V₁]_S V₂]_S V₃]_S, the proposed transformation is string-vacuous for German. In Dutch, however, the order for the same verbs (clause-finally) would be ... V₃ V₂ V₁. NP order is the same for both languages. For example,

(22) GERMAN: Weil Cecilia die Kraniche fliegen sah, ...

DUTCH: Omdat Cecilia de kraanvogels zag vliegen, ...

= 'Because Cecilia saw the cranes fly(ing), ...'

This is discussed in more detail below.

First, the arguments for a simplex S structure.

4.2.1. GAPPING.

The claim here is that gapping can refer only to the whole verb complex and (by A/A, for example) is unable to delete only one of the verbs, thus suggesting that the verbs must be under a single V node³⁰:

(23)[15a.] Weil Johann eine Elegie vorzutragen zu versuchen beschloss,
Because Johann an elegy to-read to try decided,

und Cecilia eine Ode ---- -----, ...

and Cecilia an ode
,

[15b.] *Weil Johann eine Elegie vorzutragen zu versuchen beschloss,
Because Johann an elegy to-read to try decided,

und Cecilia eine Ode abzuschreiben zu beginnen ----, ...

and Cecilia an ode to-write-down to begin
,

He brings up as counter-evidence sentences like

(24)[20.] Weil wir Johann ein Lied singen hörten,

und --- ----- ein Gedicht vortragen -----, ...

and says he has no explanation for this strange effect. However, it seems possible that sentences such as (24) are not

really gapping at all, but rather derived from a sentence with conjoined VPs:

(25) Weil wir Johann ein Lied singen und ein Gedicht vortragen hörten, ...

This might also explain the question mark on his sentence [19]:

(26)[19.] ?Weil wir Johann ein Lied singen horten, und
 --- Cecilia ein Gedicht vortragen ----, ...

if in fact it were derived from a questionable

(27) ?Weil wir Johann ein Lied singen, und Cecilia ein Gedicht
 vortragen hörten, ...

Judgments on the difficult cases might be checked further. In any case, they seem to be a different phenomenon from gapping, as more is deleted than just the verb. I will not pursue this here.

4.2.2. NOMINALIZATIONS.

In contexts where verb raising is impossible in the corresponding sentence (e.g., where idiomatic material is interposed between the two verbs) extraposition is obligatory, and similarly in the nominalization:

(28)[28c.] *Sein [Kap Horn zu umsegeln] in Erwägung Ziehen ist
 selbstverständlich.
 His [Cape Horn to circumnavigate] attempt is
 understandable

[28d.] Das in Erwägung Ziehen, [Kap Horn zu umsegeln,] ist
 selbstverständlich.

The entire "sentential" object must be extraposed as in [28d] above. However, in the cases where the corresponding clause would have undergone verb-raising, the nominalization behaves as though it were a single word (and is spelled as such), and only the object is extraposed: cf.

(29)[28f.] *das zu umsegeln in Erwägung Ziehen [Kap Horn] ...

versus

(30)[30b.] das Ersteigen-sehen [einer gefährlichen Bergwand], ...

the climbing-seeing (of) a dangerous cliff

= 'The sight of climbing a dangerous cliff ...'

[31b.] das Entwerfen-lernen-wollen eines Segelschiffes ...

the rigging-learning-wanting of a sailing-ship

= 'The desire to learn to rig a ship, ...'

(Evers assumes a transformational derivation of nominalizations.)

4.2.3. EXTRAPOSITION. Part 1.

Evers claims that extraposition of sentential objects is obligatory, citing examples such as:

(31)[36a.] *Weil wir Peter [die Geschichte zu erzählen]_{S?} halfen, ...

= 'Because we helped Peter to tell the story'

[36b.] Weil wir Peter halfen, [die Geschichte zu erzählen]_{S?} ...

He claims thus that extraposition of this type is a test for

sentence-hood, and therefore the complements in the V-raising sentences are not dominated by an S node:

(32)[47b.] *Weil wir Peter halfen, die Geschichte erzählen, ...

[46b.] Weil wir Peter die Geschichte [[erzählen][halfen,]]_V ...

It is not clear to me, however, how to overcome what seems to be a circularity pointed up by my juxtaposition of his sentences involving the same two verbs, erzählen and halfen in my (31) and (32) above. If one accounts for the difference in extraposition facts by positing verb-raising, what is the criterion for whether a sentence undergoes verb-raising or not? Sentences (clauses) [46b] and [36a] above are identical except for the presence of the infinitive marker zu, which clearly has nothing to do with the differences in eligibility for undergoing V-raising; cf.

(33)[46a.] Weil wir Peter die Geschichte zu erzählen pflegten, ...

= 'Because we used to tell Peter the story, ...'

[47a.] *Weil wir pflegten, Peter die Geschichte zu erzählen, ...

in which the zu is present, and yet the extraposition facts are the opposite from (31). According to Evers, halfen belongs to Class II verbs, for which V-raising is obligatory if the embedded clause is tenseless (his p.4), which it certainly is in (31), which does not V-raise. I do not understand the discrepancy³¹.

Part 2.

Also under extraposition, he considers extraposition

of such things as PP's and relative clauses, which in V-raised sentences extrapose to the end of the matrix clause rather than to the end of their own clause; that is, the judgments on the German sentences in (35) and the familiar English ones in (34) are opposite:

(34) That the man came who Mary met yesterday surprised us.

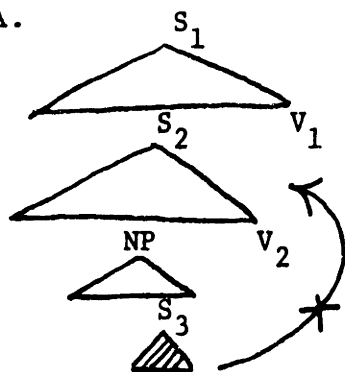
*That the man came surprised us who Mary met yesterday.

(35)[54.] *Weil wir Peter die Geschichte_i erzählen [die Maria
Because we Peter the story tell that Maria
schon wusste]_S hörten, ...
already knew heard,

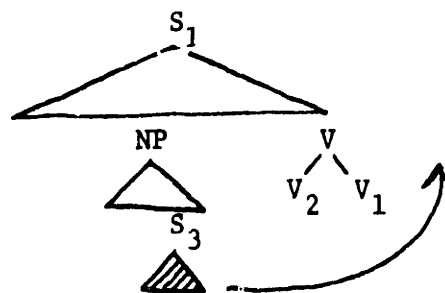
[55.] Weil wir Peter die Geschichte_i erzählen hörten,
[die_i Maria schon wußte]_S, ...

That is, extraposition of S (or PP is assumed to be upward bounded and V-raising destroys (prunes) the extra S-boundary, allowing the extraposition over the (former) clause boundary. To illustrate, at the point in the derivation where extraposition applies, it is the structure B, not A, to which it applies:

(36) A.



B.



This argument has several significant problems, so I will return to it in section 4.5.

4.2.4. CLITIC PLACEMENT.

Recall that, as discussed in 4.1, unstressed accusative pronouns in German cannot remain in place, but migrate to the "Wackernagel" position:

(37)[62.]a. *Wir gaben gestern unserem Freund es.
We gave yesterday our(DAT) friend it(ACC).

b. Wir gaben es gestern unserem Freund.

Evers assumes rule C1, repeated here,

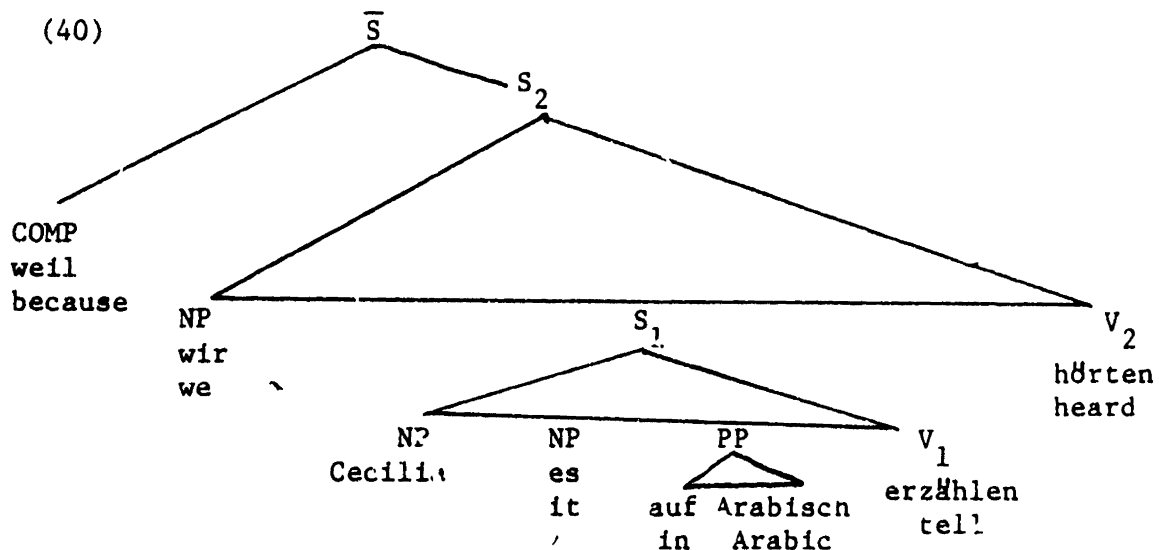
(38) Rule C1: (Comp) NP, ..., $\left[\begin{array}{l} +\text{pro.} \\ +\text{acc.} \\ -\text{str.} \end{array} \right] \rightarrow 1, 3, 2$

1 2 2

which in a subordinate clause yields

(39) Weil wir es gestern unserem Freund gaben, ...

and in the main clause, (37b) above. Now, in a structure like



movement of the es indicated by the arrow should be blocked (e.g. by the specified subject constraint). However, the surface form with movement is grammatical:

- (41) Weil wir es Cecilia auf Arabisch erzählen hörten, ...
 or Weil wir's Cecilia " " " " , ...

indicating that when the movement takes place on S_2 , Cecilia can no longer be the subject of erzählen. Verb-raising would at least remove V_1 from S_1 so that on the cycle for S_2 , Cecilia would indeed no longer be the subject of V_1 . It is to this argument that I would like to devote most of my attention in this chapter, so I will return to it in sect. 4.4 rather than comment further here.

4.2.5. QUANTIFIER HOPPING.

The claim here is that there is a possible transformation moving the quantifier beide similar to English Q-float, and that in fact it can move the quantifier into what looks like the subordinate clause:

- (42) Weil wir beide Cecilia das Geld leihen sahen, ...
 Because we both " the money lend saw, ...

becomes

- (43)[77.] Weil wir Cecilia das Geld beide leihen sahen, ...

indicating the absence of clause boundaries (which could presumably block movement down into an embedded clause).

However, not many people consider sentences like (43) gram-

matical; in an experiment discussed in Evers' appendix II, judgments vary widely.

4.2.6. NEGATION.

This section has two basic points: firstly, that simplex sentences can have only one negation, and multiply embedded S's can take one NEG per clause; since the V-raised constructions take only one NEG, they must have a monoclausal structure. Secondly, in sentences in which V-raising has already taken place, a NEG on one of the items in the embedded clause has scope over the matrix S, whereas in non-V-raised constructions, a NEG in the embedded clause has scope over only the embedded clause. Sentences illustrating the first point are:

(44)[80c.] Weil wir nicht versprochen haben, [keine Kraniche zu fotografieren,] ...

because we not promised have no cranes to photograph

[83b.] *Weil sie keine Kraniche nicht zu [fotografieren pflegten,] ...

and illustrating the second point are: (ebenso indicates positive S-anaphora, ebensowenig indicates negative anaphora)

(45)[86a.] Sie freute sich nicht, [Kraniche zu sehen], und er $\left\{ \begin{array}{l} \text{ebenso*} \\ \text{ebensowenig} \end{array} \right.$

[86b.] Sie freute sich, [keine Kraniche zu sehen,] und er $\left\{ \begin{array}{l} \text{ebenso} \\ \text{ebensowenig*} \end{array} \right.$

[87.] Weil sie [keine Kraniche zu fotografieren], pflegten,
und er $\left\{ \begin{array}{l} \text{ebenso*} \\ \text{ebensowenig} \end{array} \right.$

Thus the general drift of the above arguments, some more

substantial than others, seems to support a simplex structure beyond a certain point in the derivation. Turning now to the arguments for bi-sentential deep structure, we find four, involving clause anaphora, lexical insertion, passive and reflexive.

4.3. Evers' dissertation (Bisentential arguments)

4.3.1. CLAUSE ANAPHORA.

The argument here is a familiar one: pronominalization is a deep structure transformation which replaces one of two identical constituents by the appropriate pronoun; thus, if a string is replaced by a single pronoun, it is to be assumed that it was at one time dominated by a single node. For example,

(46) [similar to Evers' 94.]

Es ist merkwürdig, dass, als wir Cecilia das Felsengebirge zu
It is notable, that while we Cecilia the cliff to

besteigen versuchen sehen wollten,
climb try-to see wanted ,

- a) du es sie nicht zu besteigen versuchen sehen wolltest.
- b) du es sie nicht -- ----- versuchen sehen wolltest.
- c) du es --- nicht -- ----- ----- sehen wolltest.
- d) du es --- nicht -- ----- ----- ----- wolltest.

The pronoun es in (46a) refers to "das Felsengebirge"; in (46b) to "das Felsengebirge zu besteigen"; and so forth³². This presumably shows that there are nested S's which

provide the constituents which are deleted progressing from the a to the d version, and also explains why the pronoun sie, which is the subject of zu besteigen and of versuchen must remain in the first two versions and be deleted in the latter two. However, it should be noted that in addition to requiring cyclic pronominalization, this involves positing the adverbs nicht and auch (Dutch niet and ook) as originating outside the sentences, or at least somewhere in the top sentence, and being lowered into the preverbal position; otherwise, the deleted portions are not even contiguous strings. It would seem hard to motivate a base position for the sentential nicht elsewhere than between the last of the NP objects and the first verb in the verbal complex:

(47) MAIN CLAUSE: Der Mann gab es dem Mädchen nicht.

Der Mann wollte es dem Mädchen nicht geben.

SUBORD. CL.: Weil der Mann es dem Mädchen nicht gab, ...

*Weil der Mann es dem Mädchen geben nicht wollte, ...

Weil der Mann es dem Mädchen nicht geben wollte, ...

Note then that positing the bi-sentential deep structure will then require an extra movement rule, one way or the other, to get the nicht to appear in the appropriate place³⁴.

In any case, suppose we do take clause anaphora to indicate a multi-sentential deep-structure. Then since V-raising (cyclic) destroys the environment for such pronominalization, the pronominalization must occur precyclicly,

perhaps at the time of lexical insertion.

However, it is well known that pronominalization (clause anaphora, particularly) seems to be an unreliable indicator of syntactic deep structure. Cf. the usual examples,

(48) Goldwater won in the West, but it couldn't happen here.

(49) Mary wanted to be seen by the Duke, but John was afraid of its consequences.

where it is hard to say exactly what the it or its replaces. For example the second seems to have readings for "Mary's wanting to be seen...", "Mary's being seen..." and "the Duke's seeing Mary" -- which suggests that the pronouns don't refer to segments of syntactic structure, but are linked to some part of the semantic representation by pragmatic heuristics. In general, recent work³⁵ seems to suggest that pronominalization, except for Disjoint Reference, is not a phenomenon of sentence grammar, but of discourse.

4.3.2. LEXICAL INSERTION.

Here the argument is that a generalization in stating strict subcategorization features is achieved by stating them individually for the verb on each S; that is, in the following clauses,

(50)[103b.] Weil Johann zu erwachen scheint, ...

because " to awake seems , ...

[104b.] Weil Johann die Stadt zu besingen scheint, ...

because " the city to serenade seems , ...

[105b.] Weil Johann Cecilia erwachen hrt, ...

because " " to awake hears, ...

[106b.] Weil Johann Cecilia die Stadt besingen hrt, ...

because " " the city to serenade hears, ...

the verbs besingen and erwachen subcategorize, respectively, for two and one, or three and two, NP's, depending on whether they appear in the environment "___scheinen" or "___hren".

However, if we say erwachen subcategorizes for +[NP ___], and besingen subcategorizes for +[NP NP ___], while scheinen subcategorizes³⁶ for +[S_{inf} ___] and hren for +[NP S_{inf} ___], then the results follow when the infinitival sentences are substituted for the S_{inf} in each case. Note that the statement in German must also mention the subject -- this is true independently, because of verbs for which the first NP is an inherent dative. (Discussed in sect. 6.3.)

4.3.3. PASSIVES.

Here Evers begins by arguing that there is an embedded S, because the passive transformation can apply on it, yielding

(51)[117b] Weil Johann von Cecilia gehrt zu werden hoffte, ...

because J. by C. heard to be hoped,

= 'Because Johann hoped to be heard by Cecilia, ...'

However, he notes that such a "transformation" in German and Dutch behaves differently than the English one, in that

it cannot apply to the output of other transformations, and particularly to V-raising:

(52)[124b.] *Weil Cecilia von Johann singen gehört wurde, ...

= 'Because Cecilia was heard by Johann to sing, ...'

He concludes, however, that perhaps there is no such transformation in German and Dutch, and that the construction is derived by lexical redundancy rules. While I think he is right in taking this approach to passive in German (cf. the discussion in sect. 3.2.), it unfortunately invalidates his argument as stated, as he notes. I think some of his facts are otherwise explicable; e.g., the upstairs passive in (52) is probably out due to the general prohibition of any intervening lexical material between verbs which are obligatorily required to V-raise (i.e., *VaV; cf. discussion in sect. 4.6.). He also notes that in some cases the German form sounds quite bad with a downstairs passive, while the Dutch sentence is perfectly good:

(53)[113b.] Omdat Jan het lied door Cecilia gezongen hoorde worden, ...

?Weil Johann das Lied von Cecilia gesungen werden hörte, ...

= 'Because John heard the song (to be) sung by Cecilia, ...'

Without commenting on the Dutch case, it should be noted that in German, for certain of these verbs (lassen, hören, etc.), the past participle suppletes to an infinitive:

(54) Weil Johann das Lied von Cecilia singen hörte, ...

which has the intended meaning of (53). Note the correct argument assignment follows directly from rules (C) and II' from chap. 3. I return to this in 4.6.

4.3.4. REFLEXIVES.

This actually comes later in the book, when he is discussing cyclic application of rules. If there are two sentences, then there should be two cycles, and we should be able to find an ordering paradox. He offers the following two derivations in which V-raising precedes and follows, respectively, the reflexivization transformation:

(55)[216.] Weil Johann [sich selbst für die Pferde sorgen]_S sah, ...^{36A}

↓ (V-raising)

Weil Johann sich selbst für die Pferde [sorgen sah]_V ...

↓ (Reflexivization)

Weil Johann_i sich selbst_i für die Pferde [sorgen sah]_V ...

= 'Because Johann saw himself care for the horses, ...'

[217.] Weil Johann [die Pferde für sich selbst sorgen]_S sah, ...

↓ (Reflexivization)

Weil Johann [die Pferde_i für sich selbst_i sorgen]_S sah, ...

↓ (V-raising)

Weil Johann die Pferde_i für sich selbst_i [sorgen sah]_V ...

= 'Because Johann saw the horses care for themselves, ...'

The application of a reflexive rule on the lower cycle is supposed to rule out cases like

(56)[218.] *Weil Johann_i die Pferde für sich selbst_i sorgen sah, ...

in which the reflexive rule obligatorily marks sich selbst_i as coreferent with die Pferde, and thus rules out the

possibility of it being coreferent with Johann.

In view of recent interpretive formulations of reflexive, I think this argument should be reformulated, so I will not pursue it here, but again defer discussion to later in 4.6.

The foregoing discussion is presented to give the flavor of the argumentation regarding this construction. It turns out, that in the context of the observations given in chapters 1-3, that one of Evers's arguments will have to be drastically reformulated. In order to see this, let us reconsider the fourth argument, CLITIC MOVEMENT.

4.4. Clitic movement reconsidered.

First recall how the following sentence was supposed to fit into his argumentation; he argues for a bi-sentential source in deep structure for

(59) [weil ich [Cecilia es auf Arabisch singen]_{S₁} hörte]_{S₂}, ...
 because I " it in Arabic sing heard

and tries to show that at some later point in the derivation, there could be only one S-node present. One piece of evidence for this (cf. 4.2.4.) was supposed to be the sentence (clause)

(60) "Weil ich es Cecilia auf Arabisch singen hörte, ...

which was allegedly derived from (57) by movement of the unstressed pronoun es. What is the nature of the rule which moves the es? Evers claims that it is $C\bar{L}$, the same "clitic"

movement rule which is involved in simplex clauses such as "Ich gab's dem Mann" (gab's = gab+es), as discussed in sect. 4.1, repeated here:

(7) Rule C1: SD: (COMP), NP, ..., $\left[\begin{array}{l} +\text{pro.} \\ +\text{acc.} \\ -\text{str.} \end{array} \right]$, ... SC: 1,2,4,3,∅,5

1 2 3 4 5


For example,

(3) *Weil ich dem Mann es gab, ...

Weil ich es dem Mann gab, ...

Now Evers' crucial assumptions are (i) that the rule which applies to derive (58) from (57) moves the es and (ii) that it is in fact rule C1. Now he argues that in order for C1 to produce (58) it has done this:

(59) [Weil ich es [Cecilia auf Arabisch singen]_{S1} hörte]_{S2}, ...



which supposedly follows from the statement of rule C1, as well as the assumption that sentences of the form

(60) "Weil ich Cecilia das Lied auf Arabisch singen lehrte, ...

because I Cecilia the song in Arabic to-sing taught, ...

have the underlying form

(61) [Weil ich Cecilia₁ [sie₁ das Lied auf Arabisch singen]_{S1} lehrte]_{S2}

where the sie deletes under identity with Cecilia. I will return to this case below; but let us turn our attention

This might lead us to suppose the existence of a second rule, C2, which moves the unstressed pronouns to sentence initial position. If rule C2 instead of C1 were involved in this construction, then sentence (65) indicates that the movement would in fact be as shown in sentence (63), not as in (62).

The second fact is simply that sentence (58) has the optional alternate with the es in original position:

(66) Weil ich Cecilia es auf Arabisch singen hörte, ...

That is, it is acceptable in the underlying order with no movement of the pronoun es, unlike (4) which is not acceptable in the underlying order (3):

(3) *Weil ich dem Mann es gab, ...

(4) Weil ich es dem Mann gab, ...

This indicates that (58) behaves like (64) and (65), not like (3) and (4). This seems, at least at first glance, to indicate two different rules or processes, one the clitic rule C1 stated in (7) operating in (3) and (4) and the other, perhaps a rule "C2", operating in (64) and (65), and (58) and (66). That is, one might assume that C1 is some sort of obligatory rule or process (for whatever reasons) and C2 is an optional one; then since (58) and (66) are optional variants, one might assume that it is C2 that is applying. But if we assume that C2 is the rule operating in sentence (58), then (58) indeed has the structure indicated in (63) and is no longer a violation of the Specified Subject Condi-

ition, for example, even with the S-boundary still in place.

So far then, we have one (partial) solution; i.e., a set of rules which accounts for the data. However, if we reflect on the array of rules we now have, they begin to look somewhat less desirable. Rule C1 now only accounts for "real" clitics; i.e., the ones involved in sentences like (4). It seems awkward and somewhat redundant to have these two specialized rules for unstressed pronoun placement applying one after the other; and so similar in statement:

| | | |
|-----|--------------------------------------|------------|
| C1: | #, NP, <u> , . . . , es</u> | OBLIGATORY |
| C2: | #, <u> , . . . , es</u> | OPTIONAL |

Why is one obligatory and the other optional? Should we take the route of trying to collapse them by parenthesizing the NP in C1? Is the obligatoriness of C1 an artifact? R1 and R2 have the format of C2 and yet C2 cannot be collapsed with R2³⁸. Before raising any more objections to the present array of rules, perhaps a short digression is in order about the significance of a decision on the status of our "C1" and/or "C2".

One would be very loath indeed to abandon C1, inasmuch as C1 might generalize to a statement of clitic placement which seems widespread among languages, as noted in footnote 28, sect. 4.1. We would like to preserve rule C1 therefore, because of its apparent widespread significance. What about rule C2? Here we have a rule without obvious parallel -- shifting unstressed pronouns to sentence or

of St-1 jumping the full NP over the pronoun, then not only do the original data no longer bear directly on the issue of alleged verb-raising (or S-pruning), but we no longer need the ad hoc rule C-2, since the already well motivated (by J. Lenerz) rule of St-1 gives exactly the right effect.

We can now, however, look back at the interesting cases which will bear on the V-raising question. Recall that hören has the analysis

(71) [Weil ich [Cecilia es auf Arabisch singen]_{S₁} hörte,]_{S₂} ...

in which hören takes a sentential object. What about those verbs for which Cecilia is in the matrix clause?⁴⁰

(72) Weil ich Cecilia_{NP_i} [[e]_{NP_i} es auf Arabisch singen]_{S₁} {
 lehrte, ...
 taught
 half, ...
 helped

That the NP position of Cecilia is respectively ACCUSATIVE or DATIVE, governed by the matrix verbs lehren or helfen would seem to indicate that Cecilia is in the top clause:

(73) Weil ich meine Schwester es auf Arabisch singen lehrte, ...
 (ACC.)
 Weil ich meiner Schwester es auf Arabisch singen half, ...
 (DAT.)

Compare the sentences without embedded infinitivals:

(74) Weil ich meine Schwester das Lied lehrte, ...
 Because I my(ACC.) sister the song taught, ...
 Weil ich meiner Schwester mit ihrer Arbeit half, ...
 Because I my(DAT.) sister with her work helped, ...

Now, just as in the case of hören, we find the version with es and Cecilia transposed:

(75) Weil ich es Cecilia auf Arabisch singen lehrte, ...

Weil ich es Cecilia auf Arabisch singen half, ...

This might arouse suspicion as to the validity of the foregoing discussion, since Cecilia would, by St-1, have to move over both $[e]_{NP_1}$ and es⁴¹:

(76) Weil ich (Cecilia)_i [[e]_{NP1} es Cecilia auf Arabisch singen]_{S1}
 lehrte, ...

However, we can guarantee that it is St-1 and not Cl involved here by considering cases which involve only full NPs and comparing them to cases involving only pronouns.

(77) Warum kennst du den Liebestod auswendig?

= 'Why do you know the Liebestod by memory?'

a. Weil ich EINE SEHR BERÜHMTE SOPRANISTIN das Lied singen lehrte.

b. Weil ich das Lied EINE SEHR BERÜHMTE SOPRANISTIN singen lehrte.

= 'Because I taught the song to a very famous soprano!'

(78) Warum kennst du Cecilia so gut?

= 'Why do you know Cecilia so well?'

a. Weil ich Cecilia EIN SEHR BERÜHMTES FRANZOSICHES LIED singen lehrte.

b. *Weil ich EIN SEHR BERÜHMTES FRANZOSICHES LIED Cecilia singen lehrte.

= 'Because I taught Cecilia to sing a very famous French song.'

accidentally created by the inherent dative of helfen.

Trying to rescue it by applying Cl, (32b), just makes the sentence sound worse, unlike (80). Hence, Cl cannot apply in these structures.

Now if the explanation for this is that in these structures, Cl is blocked by, say, the Specified Subject Constraint:

(83) [Weil ich _i ihr _i [[e]_{NP₁} es _i singen]_{S₁} half]_{S₂}, ...

(Spec.Subj.)

and St-1 is not blocked by the SSC, for whatever reason:

(84) Weil ich _i [es [meiner Schwester] singen] half, ... ;

then this shows that

Cl AND St-1 CANNOT BE SUB-CASES OF THE SAME RULE (cf. comments in sect. 4.1., p.), since Cl evidently applies "before" V-raising and St-1 "after" V-raising⁴².

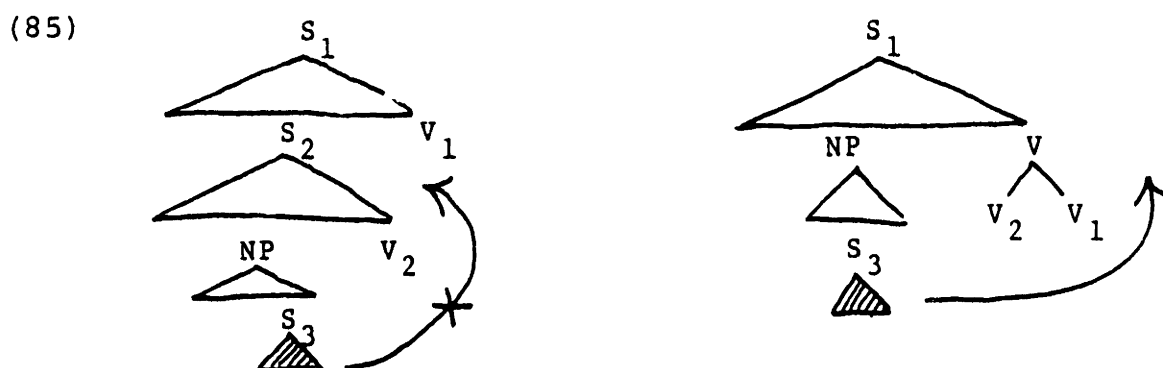
There of course remains the question of precisely why rule St-1 ignores the bound trace, or rather, even more generally, why Cl should be blocked and St-1 not blocked from applying. This would follow, however, if St-1, as noted in Chapter 3, is in the Stylistic Component "6a". in Fig. , p. . Presumably leftward movement rules which create bindings must observe conditions like SSC (or alternatively, opacity) but the rightward stylistic rules do not.

I will expand on this somewhat after we reconsider the the extraposition facts, from the argument in sect. 4.2.3.,

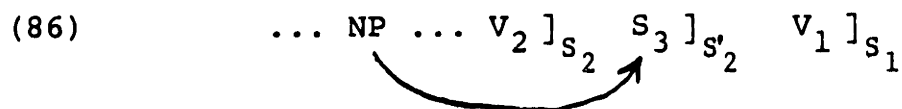
whereupon we can reassess where we stand with respect to the status of the verb-raising construction.

4.5. Extrapolation reconsidered.

Recall that the argument is that the extrapolation of S (or PP) is upward-bounded (for whatever reason; e.g., subjacency) as shown by examples like the English (34); hence, extrapolation over the two infinitival sentence boundaries should be out. Verb-raising presumably removes one S-boundary, permitting extrapolation of the embedded S_3 :



If both Extrapolation and V-raising are in the cycle, there is a problem in ordering. On the first cycle, S_2 , extrapolation presumably is free to extrapolate S_3 , giving⁴³



Now if V-raising precedes extrapolation on the outer cycle, we must state it to include an intervening S (i.e., \bar{S}) as Evers does on p. 38; although this contradicts his observation that any intervening material, such as reflexives, idiomatic PPs, etc., blocks V-raising; cf. Evers pp. 40 ff.)

We then have

$$(87) \quad \text{V-raising:} \quad \dots, \quad S_3 \quad [V_2+V_1]_V]_{S_1}$$

$$\text{Extrapolation:} \quad \dots, \quad [V_2+V_1]_V]_{S_1} S_3]_{S'_1}$$

If extrapolation precedes V-raising, we need not specify the intervening S, since we have

$$(88) \quad \text{Extrapolation:} \quad \dots \quad V_2]_{S_2} \quad V_1]_{S_1} \quad S_3]_{S'_1}$$

$$\text{V-raising:} \quad \dots, \quad [V_2+V_1]_V]_{S_1} \quad S_3]_{S'_1}$$

Handwritten note: ~~Handwritten~~
~~Handwritten~~

which is the same result as the other order of application.

In either case, it is not at all clear to me what should allow the double (successive cyclic) extrapolation in this case (or disallow an optional single application). Any stipulation which restricts, for example, the environment for S_3 to be moved (i.e., a more restrictive SD for the rule), so that once it has moved, it cannot be moved again (to account for the "normal", upward-bounded case), will also disallow the successive cyclic application necessary to get the V-raised cases. Moving the S_3 up after V-raising in one fell swoop on the last cycle would violate strict cyclicity and fail to explain why we don't get the $*\dots V_1 S_3 V_2$ version as an optional variant.

One possibility is that extrapolation is cyclic and V-raising occurs precyclically. Another is that V-raising is

cyclic and extraposition is post-cyclic, or even that both are post-cyclic. We will consider the latter possibility in the next section.

4.6 Reassessing the V-raising construction

In view of the arguments by Evers, as revised herein, there are several possibilities as to how we might regard the "V-raising" construction. One possibility (as in Evers) is that V-raising is a (cyclic) rule, in which case we are faced with an ordering problem with respect to extraposition, as outlined in the previous section.

Another possibility is that extraposition is cyclic and V-raising occurs precyclically, or that V-raising is cyclic and extraposition is post-cyclic, or even that both are post-cyclic and intrinsically ordered. I will return to this latter possibility below, but it should be noted here that all of these assume that V-raising is a rule. There is another alternative.

It might be suggested that, for German, at least⁴⁴, V-raising is not a rule at all, but rather that these constructions have an alternative analysis, such as has been suggested for English constructions like "take advantage of". If we consider the phrase-marker⁴⁵ of such sentences to contain both analyses:

- (89) {S, NP VP, ..., NP take NP PP, NP take advantage PP,
NP take advantage of NP, ..., NP V NP, NP V John, ..., etc.}

then a rule such as Move-NP can choose either analysis, since both are proper, producing, respectively,

- (90) John was [taken advantage of]_V ___ by Fred.
 Advantage was [taken]_V ___ [of John]_{pp} by Fred.
-

Similarly, the V-raised constructions would have phrase-markers which contained both analyses: (I have simplified to one NP per clause and eliminated \bar{S} for expository purposes)

- (91) { S_1 , $NP_1 S_2 V_1$, $NP_1 NP_2 V_2 V_1$, $NP_1 NP_2 V$, ...}

Now for the purposes of extraposition, the latter analysis could be chosen, whereas the first would be used, for example, for argument assignment as discussed in chap. 3, or for Cl.

This has some advantages. Aside from eliminating the ordering problem with respect to extraposition (but see below for a different sort of ordering problem), we can drop Evers' stipulation that an optional S or PP can intervene in V-raising, and make complete the generalization that no lexical material whatsoever can intervene if V-raising is to take place (i.e., if the alternative analysis is to be available)⁴⁶. We might say that certain verbs were strictly subcategorized to take $+ [V_{inf} \text{ ___}]$, and these are the only ones which allow the alternative analysis in the phrase marker. That is, the only thing that may be directly adjacent to a "V-raising" matrix verb is an infinitive.

Hence,

- (a) Verbs which require idiomatic PPs, reflexives, etc., cannot partake in V-raised constructions, by definition;
- (b) Any sentential extraposition must be to the right of the matrix verb;
- (c) Passives, which usually involve a ge- past participle, must either supplete to an infinitive, or are ungrammatical.

This is actually less promising than it seems at first glance. The assumption of two analyses for the string in the basic Phrase Marker does not explain why various rules have access to different analyses. For example, if we assume argument assignment or reflexive has access to the bisentential analysis, and St-1 has access to the monosentential analysis, then (i) we have no explanation as to why either should pick one particular analysis over the other, and (ii) they can both, obviously, apply in the same sentence -- and it has generally been assumed that if one analysis is chosen, the other is unavailable⁴⁷.

This sends us back to the various ordering solutions. However, I think we have enough detail built up to make a promising hypothesis.

An alternative approach to this reanalysis is based on a suggestion for Romance languages^{47A}. Before seeing how it might apply here, let us first go back and review where we stand in terms of analyzing the embedded infinitivals (the V-raising construction). Recall the diagram in which

we tried to assign components of the grammar to their respective positions in chapter 3: (from Chomsky & Lasnik, 1977)

- (55)[6] 1. Base rules (DS)
 2. Transformational rules (SS)
-
- 3a. Deletion 3b. Construal
 4a. Filters 4b. Quantification
 5a. Phonology
 6a. Stylistic rules

where I suggested that some of the rules proposed so far might fall as follows:

- (92) 1. Base rules
 2. Rule R1 & Rule R2
-
- 3a. ... ?b. Rule II'

 6a. Rule St-1

We now have to ask where the following might fit into such a schema: the "clitic" rule Cl; extraposition ($\left\{ \begin{matrix} S \\ PP \end{matrix} \right\} \overset{V}{\curvearrowright}$); and V-raising, if we decide to treat it as a rule. As just suggested, there are, as demonstrated by Evers (revised), two analyses available for a string like $NP_1 NP_2 V_2 V_1$; namely

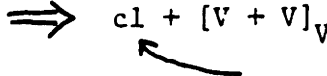
- (93) NP_1, S, V_1 ; i.e., $[NP_1 [NP_2 V_2]_{S_2} V_1]_{S_1}$

(94) NP_1, NP_2, V ; i.e., $[NP_1 NP_2 [V_2 V_1]_V]_{S_1}$

Now evidently some rules, such as extraposition and St-1, have access to the latter analysis only; others, such as Cl, have access only to the former analysis.

It has been suggested that in Romance languages (Spanish and French in particular) there is a rule of reanalysis in the phonology whereby two immediately adjacent verbs are reanalyzed (in the phonological component) as a single verb. When this occurs, a rule⁴⁸ of clitic climbing can occur: (roughly)

(95) $V_S [V + cl \Rightarrow cl + [V + V]_V \cdot$



(Or in terms of the analysis recently suggested for Spanish by A. Rivas (1977), clitics generated on the leftmost verb can be interpreted as belonging to the bottom clause just when this occurs.) Without going into the mechanics of this process in Romance (which, I think, would entail delving as deeply into Romance grammars as we have into German here), I think the reanalysis seems remarkably similar in its properties to the German V-raising constructions: e.g., intervening material blocks the reanalysis; minor movement rules (clitic movement in Spanish, S-extraposition in German) apparently violate subadjacency; both occur in "causative" constructions, i.e., embedded infinitivals.

Suppose we take the position that there is a rule of

reanalysis, and it is in 5a. Phonology. The logical consequence of this position is that Extraposition also goes under 6a. Stylistic rules with rule St-1, and rule Cl goes^{48A} somewhere above the phonology, perhaps with 2. Transformations.

We might also want to rename these categories in a more neutral way; perhaps calling them "2.T-rules" and "6a.S-rules." Note that if there exists a Q-float rule in German as Evers argued (cf. sect. 4.2.5.), then it is a rightward movement, and has access to the V-raised version, and hence is also in "6a." One might want to speculate that T-rules = Leftward movement rules, and S-rules = Rightward movement rules. The semantic interpretation rules (e.g., reflexive, cf. 4.3.4.) of course, being on the "b." side, have access to only the non-V-raised analysis, which is exactly what we want.

Unfortunately, we cannot test, it seems, which analysis rules R1 and R2 can access, since if R2 collapses Move-WH and Move-NP, moving either one into COMP, as assumed in Chap. 2, successive cyclic movement producing apparently unbounded movement in surface structure will be possible if the appropriate bridge conditions are met. (This is the topic of the next chapter.)

On the other hand, however, we have with this analysis a principled way of accounting for several of the phenomena noted:

4.2.1. If gapping, as has been suggested⁴⁹, is a discourse phenomenon, unlike free deletion of specified

lexical items (e.g., for $\rightarrow \emptyset$, that $\rightarrow \emptyset$ in English), then it would presumably come after the rules of sentence grammar, and, of course, after the phonological reanalysis.

4.2.2. If nominalizations are in the lexicon (e.g., related to verbs by a redundancy rule) then such forms as Ersteigen-sehen are a single word by definition and the extraposition facts follow⁵⁰.

4.2.3. Sentential extraposition, a rightward adjunction, is bounded by subjacency, except with the apparent violation caused by the V-V \rightarrow V reanalysis.

4.2.4. St-1, like extraposition, is a rightward rule which apparently violates subjacency only when the V-V \rightarrow V reanalysis occurs, but the clitic rule, Cl, being a leftward movement rule, is blocked from movement, since it is prior to the reanalysis.

4.2.5. Quantifier-hopping, if it turns out to be a valid rule in German, follows the same rightward pattern of St-1.

4.2.6. What the negation facts seem at first to show is that 4b. Quantification (scope interpretation) has access to the "a." side of the grammar. However, I think what is involved here is anaphoric interpretation of ebenso/ ebensowenig, which is, like gapping, not a rule of sentence grammar; cf. sentences parallel to those in Sag and Hankamer (1976):

(96) A: Sie freute sich nicht, Kraniche zu sehen!

B: Ja, und er { *ebenso.
 { ebensowenig.

etc.

The facts then follow as in 4.2.1. Among the bisentential arguments,

4.3.1. clause anaphora of the kind in these sentences, as already noted, doesn't even refer to contiguous strings in either deep or surface structure, and hence is an unreliable indicator of bracketing per se; but

4.3.2. lexical insertion (and by extension, argument assignment) follow directly from a bisentential source as noted;

4.3.3. the passive construction, as noted, is apparently blocked when suppletion cannot occur and the rule V-V → V is inapplicable to the string "V ge-V";

4.3.4. sentence (56)[218.] is now blocked by the Specified Subject Condition⁵¹ as desired since reflexive, on the "b." side, has access to the un-reanalyzed structure.

Let us now turn our attention to rule R1 and R2⁵².

CHAPTER V

"WH-MOVEMENT" CONSTRUCTIONS

5.1 English WH-movement vs. NP movement.

So far we have introduced five movement rules for German: the two major rules, R1 and R2, which "determine" clause type; the unstressed pronoun placement (clitic) rule, Cl; Lenerz's stylistic permutation rule, St-1; and extra-position of PP and S. They are roughly as follows:

| | | | | |
|--------------------|-----|--|-----|---------|
| R1: | SD: | $\dots, \underset{1}{V} \underset{2}{[+tns]}$ | SC: | 2, 1 |
| R2: | SD: | $\dots, \underset{1}{\bar{X}} \underset{2}{\bar{X}}$ | SC: | 2, 1 |
| Cl ⁵³ : | SD: | $\underset{1}{\bar{X}}, \dots \underset{2}{\left[\begin{array}{l} +pro \\ -dat \\ -str \end{array} \right]} \underset{3}{}$ | SC: | 1, 3, 2 |
| St1: | SD: | $\underset{1}{\bar{X}}, \underset{2}{\bar{Y}}$ | SC: | 2, 1 |
| Extr: | SD: | $\left\{ \begin{array}{l} PP \\ S \end{array} \right\} \underset{1}{}, \dots, \underset{2}{V} \underset{3}{}$ | SC: | 2, 3, 1 |

The simplicity of statement without wild overgeneration is possible because of the usually assumed conventions, such as maximal interpretation within a clause of the variable "...", subjacency, etc.; as well as the specific considerations⁵⁴ discussed in chapters I-IV, such as the particular conditions (stylistic?) on rule St1: "where \bar{X} is the less definite, more heavily stressed, etc." and the placement of the rules in a hypothetical grammar relative to one another.

There have also been mentioned some sample interpretive rules such as reflexive (in passing), rule II' which assigned the logical object of a verb, rule (C) which assigned the (nominative) casemarking, and also, in effect, determined the NP targeted for agreement with, and subjecthood of, the tensed verb.

There are, of course, many aspects of the above rules that have been deliberately left unspecified. For example, rule R2 is stated as an adjunction just like R1. Indeed, the resulting structures after application of each are parallel. But, as will be discussed immediately below, there may be evidence that R2 and R1 move into existing structures -- specifically that R2 is movement into the node equivalent to English COMP.

I say "equivalent to COMP" rather than "COMP" advisedly, since the remaining two chapters, in addition to discussing a particular range of constructions, will be devoted to considering how close the German phrase structures and rules come to being analogues of rules discussed in the literature for English (and other SVO languages such as French, Spanish, etc.). Already I have noted several times in passing that rule R2 seems to collapse two rules which have been assumed in some recent formulations of English grammar⁵⁵, namely, move NP and move WH.

Since these two rules have been discussed so extensively in the literature, I will simply note here in passing some of their characteristics⁵⁶. For example, the former

(move NP) obeys strict subjacency: apparent unbounded movement only occurs when there is an unblocked route from subject to subject:

- (1) John_i seems _{-i} to be believed by everyone _{-i} to have been arrested _{-i}
-

Compare:

- (2) Mary seemed to see John.
*John seemed Mary to see .
-

The WH-movement, on the other hand, is not blocked by intervening subjects:

- (3) Who did John think Irving saw ?
Who did John think saw Irving?
-

presumably, in this formulation of the theory, because the WH-phrase moved through the node COMP rather than NP:

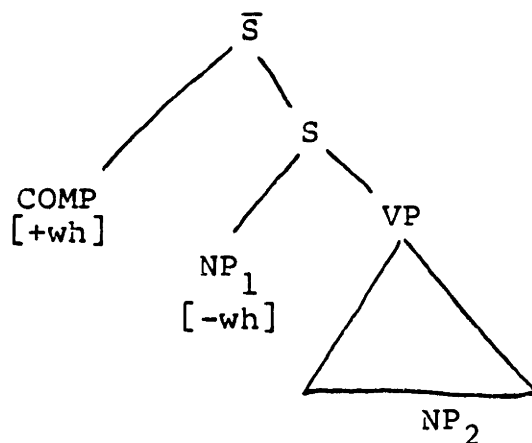
- (4) [[Who] did John believe [e] Frank claimed [[that] Sheila saw [e]?]]
- \bar{S}_1 COMP \bar{S}_2 COMP \bar{S}_3 COMP NP
-

This can be tested by such means as replacing \bar{S}_2 with an intervening structure having no COMP, such as NP rather than \bar{S} :

- (5) [*Who did John believe [the claim [that Sheila saw ?]]]
- \bar{S}_1 NP \bar{S}_3
-

Now it will be noted that the apparent behavior of two rules, even in English, may be illusory: if we had the German rule, R₂, in English (i.e., Move \bar{X}), one might be able to argue that the above noted characteristics follow from the base structure of English:

(6)



A noun phrase, say NP_2 , will be eligible to move into NP_1 if it is [-wh] (John, the man, etc.), but into COMP if it is [+wh] (who, what). It follows then that cases like (1) produce "unbounded" NP-movement and cases like (4) produce "unbounded" WH-movement, and each is blocked by the absence of an available intervening subject or COMP, respectively.

What about German? It was more or less tacitly assumed in chapter II that rule R2 moves any NP, PP, etc., whether or not it is marked [+WH]. If there is a [+WH]NP in the sentence, and it is not moved by rule R2, then we simply have the echo question:

(7) Hans hat WEM das Buch gegeben?

(R2 applied to Hans); if it applied to the [+WH] phrase, we get the normal question

(8) Wem hat Hans das Buch gegeben?

Since this gives us exactly the right results (as noted

earlier, also by Koster, Evers, etc.), there seems no reason not to assume that all of the following sentences are produced by an application of R1, then R2:

(9) Hans hat mir das Buch gegeben.
Hans has me(DAT.) the book given.

Das Buch hat Fritz auf der Strasse gefunden.
The(ACC.) book has Fritz(NOM.) on the street found.

Auf der Strasse hat Fritz einen Pfennig gefunden.
On the street has Fritz a penny found.

Was hat der Fritz gestern gefunden?
What has the Fritz yesterday found?

Since we can state the production of all these sentences with one rule, namely R2, and simultaneously rule out the possibility of two constituents before the tensed verb (which might result from having two or more rules)⁵⁷

(1') *Hans auf der Strasse hat einen Pfennig gefunden.
*Wen gestern hat Hans gesehen?
**Wen Hans gestern hat gesehen? etc.,

I will assume that all of these frontings can be collapsed in rule R2, and hence that rule R2 directly corresponds to English move \bar{X} (i.e., move NP and move WH).

What about the corresponding German constructions, however? As we have already seen, there is evidence that passive simply does not involve a movement rule, so it can be ruled out as a candidate construction for studying the "move NP"-like phenomena. The other possibility is the so-called "raising" constructions, like

- (11) Hans_i scheint —_i das Buch gefunden zu haben.
 Hans_i seems the book found to have

or

- (12) Elefanten_i sind schwer —_i mit Doppeldeckern zu transportieren.
 Elephants_i are hard with biplanes to transport

Since these are discussed in detail in chapter 6, I will defer comment on them until then.

5.2. Rules R1 and R2: adjunctions or structure preserving?

In this chapter I will look at some of the constructions which ought to correspond to the most basic WH-constructions in English, embedded WH-questions; e.g.,

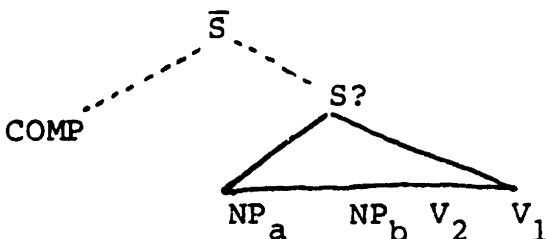
- (13) Who_i did John think that Bill saw [e]_{NP_i}?

But first a few words about the phrase structure of \bar{S} in German.

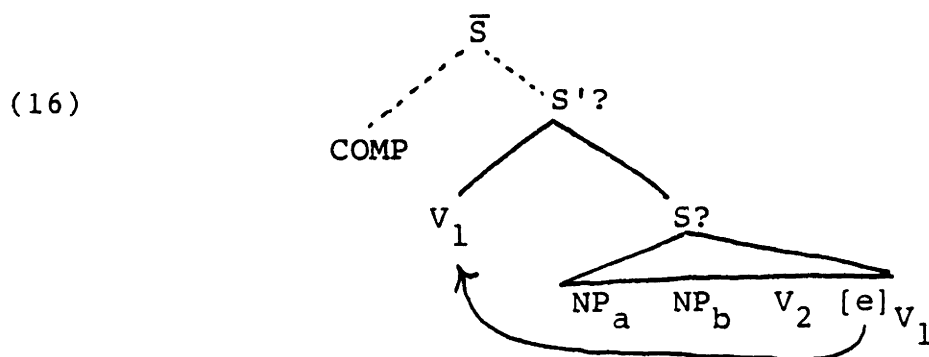
Suppose we posit a base structure of something like

- (14) $\left[\begin{array}{c} \bar{S} \\ S \end{array} \right] \left[\begin{array}{c} \text{NP} \quad \text{NP} \quad \dots \quad \text{V} \quad \text{V} \end{array} \right]$

then clearly the operation of R1 will be structure changing, and perhaps rule R2 as well. What is the change effected? Leaving aside the question of whether or not there exists a VP node, i.e., the internal structure of S, which will be discussed later on, let us look at a structure before R1 applies⁵⁸.

- (15) 

Presumably this has a phrase-marker containing $\{S, \text{COMP-S}, \text{COMP-NP}_a\text{-NP}_b\text{-V}_2\text{-V}_1\}$. Now if we adjoin V_1 to the node "S?", we get a structure



with the new phrase marker containing $\{S, \text{COMP-S}', \text{COMP-V}_1\text{-S}, \text{etc.}\}$. Since it is an adjunction, whatever the node "S?" is, the new structure which dominates it is of the same type; just as if we join an affix to a verb, we still have a verb, if we start out with a proposition compounded of \underline{n} verbs and \underline{m} NPs, we still have a proposition of \underline{n} verbs and \underline{m} NPS after the movement.

Now this account makes R1 a structure changing rule (in the Emonds' sense), and hence it ought to be a root-transformation. However, as we have seen, this is not the right generalization: there are at least two "non-root" clause-types in which R1 applies: the first, to be discussed below, is quoted indirect discourse, in which both R1 and R2 apply:

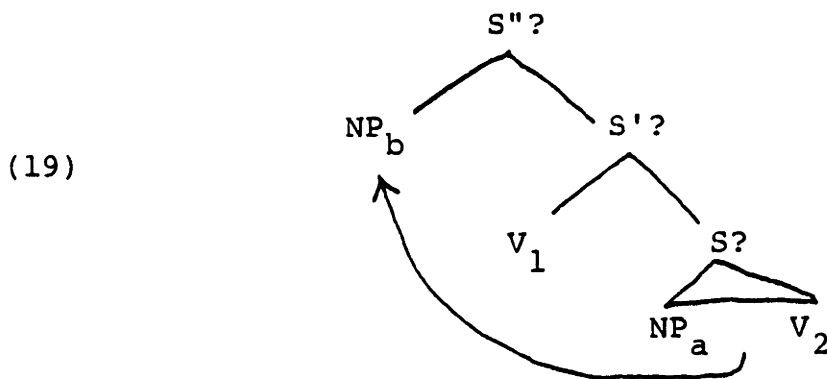
- (17) Johann sagte, er habe Fritz gesehen.
 " said he has " seen

and the second conditionals like

- (18) Hätte er das früher gewusst, so würde er ...
 Had he that earlier known, so would he
 = 'If he had known that earlier, he would have ...'

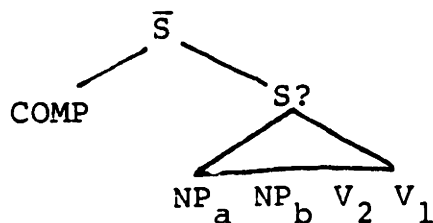
in which only R1 applies. Hans den Besten (1977) has suggested that R1 is structure preserving as well as R2, and that all clauses have a node in the position of V_1 in (16), and that it can be filled either by complementizers like dass, weil, or by tensed verbs. While this position has some initial attractiveness, it raises questions and problems too numerous to go into here, so rather than trying to resolve this question herein, I will merely assume that after the application of rule R1, we have a resulting structure that looks like an adjunction, regardless of whether that is its actual synchronic genesis. This is sufficient for our purposes in examining rule R2.¹

Now what about rule R2? We have two options: either treating it exactly as R1, and saying the further application of R2 to the structure "S'?" in (16) yields



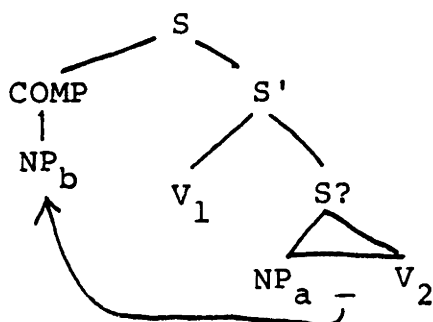
in which case R2 should also be a root transformation. Another alternative is to say the structure S? is embedded directly under \bar{S} :

(20)



and that R1 applies as already discussed, and R2 is movement into COMP.

(21)



If this were the case, then we should expect that R2 could apply freely on either embedded or root clauses; and as we have seen in the examples in chapter 2, this is exactly the case:

(22) EMBEDDED RELATIVE CLAUSE: R2 but not R1:

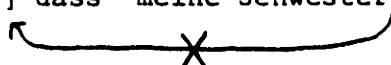
der Hund, den₁ mein Vater —₁ für Fritz gekauft hat, ...
 the dog which₁ my father —₁ for Fritz bought has

Thus we might already be predisposed somewhat to favor the second account over the first: namely, that R2 is movement into a node which corresponds to English COMP. (I am, incidently, assuming the existence of the COMP node, roughly as discussed in the literature, without further comment or argumentation.)

5.3. WH-movement in quoted discourse.

There are some further facts which seem to bear on this choice. It is striking that exactly those embedded clauses which already contain some other overt morphological item in COMP position are the ones in which there is no movement of morphological material by R2:

- (23)a...., dass meine Schwester den Fritz gesehen hat.
 that my sister the(ACC.) Fritz seen has
 b.*...., [den Fritz] dass meine Schwester gesehen hat.



Note that we must rule out cases in which some NP has migrated to the right of a dass or weil via rule St1:

- (24) ... , dass den Fritz [eine wunderschöne junge Dame] küsste.
 that the(ACC.) Fritz a beautiful young lady kissed

Furthermore, for a large class of speakers⁵⁹, these are also exactly the sentences that do not permit WH-extraction:

- (25) *Wen_i glaubst du, dass der Hans ____i gesehen hat?
 Whom(ACC) believe you, that the(NOM) Hans seen has?

If we assume that R2 moves into COMP, and WH-extraction proceeds cyclicly from COMP to COMP as has been suggested in the literature, then we might want to try to claim that whenever R2 is blocked from moving items into COMP, since R2 collapses movements of [-WH] and [+WH] phrases into COMP, WH-extraction is therefore blocked. This could be tested by examining embedded clauses without an overt complementizer word like dass, weil, etc.

There are two kinds of such clauses: the embedded infinitivals which we have already discussed, which do allow WH extraction:

- (26) Was_i hat dein Vater [die berühmte Friedlandia —_i in Wien singen] h_Sören?
 What has your father the famous " " in Vienna sing heard
 = 'What did your father hear the famous Friedlandia sing in Vienna?'

Note that although the embedded clause is tenseless, it has a full NP subject. Presumably the extraction works as follows⁶⁰

- (27) [[Was_i] hat dein Vater [[e] die berühmte F. —_i in Wien singen] h_Sören?]
_S₁ _i COMP _S₂ COMP
-

What about tensed embedded clauses? As mentioned above, there exists a class of sentences containing embedded discourse which are tensed and have no overt COMP like dass. Cf.:

- (28) a. Fritz sagte, dass er Maria gesehen hat.
 " said that he " seen has
 b. Fritz sagte, er habe Maria gesehen.
 " said he has(SUBJUNCTIVE) Maria seen

The embedded clause in (28b) is often, but not always in subjunctive tense; some speakers accept

- (29) Fritz sagte, er hat Maria gesehen.

The tense, however, is irrelevant for our discussion. The important point is that these embedded clauses behave just as main clauses, with R1 and R2 applying:

- (30) Fritz sagte, er_i habe_j —_i Maria gesehen —_j.
_i _j R2 R1
-

So whatever the reason, we will want to treat them as main clauses with respect to rule application.

Now it turns out that these embeddings, even in dialects that don't permit WH-extraction over dass, permit WH-extraction:

(31) *Wen sagt Johann, dass er ___ sieht?

(32) Wen sagt Johann, sehe er?

The most curious feature of this construction (first brought to my attention by Leland George) is the odd apparent inversions of the subject and verb, utterly unlike the word order elsewhere in the language, and hardly what one might expect, if these embeddings are to be treated as instances of main clause word order.

In fact, the "normal" main-clause subject-first, verb-second, word order turns out to be ungrammatical:

(33) *Wen sagt Johann, er sehe?

Thus we have two things to explain about this construction:

(i) why WH extraction is allowed at all, and (ii) the peculiar word order, in particular the seeming subj/aux inversion when and only when WH-extraction has occurred.

In the framework presented up to this point, however, these facts follow immediately: we remember that (i) apparent subject/aux inversion in main clauses is just the application of R2 to some other item besides the subject:

(34) [Auf der Strasse]_i hat_j Hans einen Fünfmarkschein ₋₁ gefunden _{-j}.
 On the street has Hans a 5 DM piece found

and (ii) collapses [+WH] and [-WH] movements. Compare the derivation of the non-WH movement case,

(35) DERIVATION OF "Johann sagt, er habe Maria gesehen."

BASE: [Johann [er Maria gesehen habe]_{S₁} sagt]_{S₂}

Cycle 1

R1: [" [habe er Maria gesehen ___] "]

R2: [" [er habe ___ Maria gesehen] "]

Cycle 2

R1: sagt Johann [er habe Maria gesehen] ___

R2: Johann sagt ___ [er habe Maria gesehen]

with the derivation in the case where we replace Maria with a WH word:

(36) DERIVATION OF "Wen sagt Johann, sehe er?"

BASE: Johann [er wen sehe] sagt

Cycle 1

R1: " [sehe er wen ___] "

R2: " [wen sehe er ___] "

Cycle 2

R1: sagt₁ Johann [wen sehe er] _{—1}

R2: wen sagt Johann [___ sehe er]

The WH word wen at the end of cycle 1 is in COMP position, and hence is available for movement by R2 to a higher COMP, creating the acceptable sentence and the peculiar word-order

in one stroke.

So far we have shown that the framework assumed is sufficient to generate the sentences in question. If it is to be truly plausible, what about the other cases? That is, is the bad order ruled out? And what happens if we apply rule R2 to some other element (as we are free to do, under the assumptions made so far)?

What would the derivation of "*Wen sagt Johann, er sehe?" look like? Presumably this would result from applying rule R2 to er instead of wen

(37) BASE: Johann [er wen sehe] sagt

Cycle 1

R1: " [sehe er wen ____] "

R2: " [er sehe ____ wen] "

Cycle 2

R1: sagt Johann [er sehe wen] ____

Now at this point we have two choices. Either we can apply R2 again to Johann, giving the perfectly good sentence "Johann sagt, er sehe wen?!" (the echo question)

(38) R2: Johann sagt ____ [er sehe wen]

or we can try to apply R2 to the wen.

(39) * R2: Wen sagt Johann, [er sehe ____]

which would produce the bad sentence, "*Wen sagt Johann, er sehe?" But if WH movement (and by implication R2) is cyclic and can move only from complementizer to complementizer, this

sentence is blocked as wanted since we have finished cycle 1 and the WH-word is not in COMP and hence not eligible for movement. That is, the WH-word is blocked from moving by any of several recent formulations of conditions. For example, it would be blocked from moving directly into the matrix sentence COMP by the Specified Subject Condition, since the subject er is still present in the lower \bar{S}

(40) * Wen sagt Johann, [er sehe ____] \bar{S}

or, more precisely, its bound trace \downarrow (recall sect. 3.2)

(41) * Wen sagt Johann, [[er₁]_{COMP} sehe_j [e]_{NP₁} ____ [e]_{V_j}] \bar{S}

And the WH-word cannot move cyclically, of course, since er is in the lower COMP preventing its use as an "escape hatch." Thus there is no way of generating the unacceptable word order,

(42) * Wen sagt Johann, er sehe?

5.4. Other possible embeddings.

Having shown how the unacceptable version can be blocked, what about the application of rule R2 to other items in the sentence? This question is particularly important in view of framework being adopted here: that the rules are (at least R1, R2, and St1) all optional, and the results are interpreted accordingly. (E.g., mistakenly applying rule R1 in a relative clause would cause it to be interpreted as a main clause, and hence the sentence would be ruled out -- cf. remarks in chapter II.) I have already indicated one such option: when R2 applies to er on the lower cycle and

Johann on the top cycle, we simply get the echo question, (38).

What happens if R2 applies to the wen on the bottom cycle and to Johann on the top cycle? This would give the sentence

(43) *Johann sagt, wen habe er gesehen.

We might suppose this sentence is bad because the verb sagen doesn't take an embedded question. But the following, with fragen, is also bad:

(44) ?*Johann fragte, wen habe Fritz gesehen.

This is not a problem with the lexical item fragen as can be seen from

(45) Johann fragte, wen Fritz gesehen habe. (or "...hat.")

Evidently, rule R1 cannot apply in these sentences on the inner cycle. But this follows directly from the assumption in chapter II that verbs can subcategorize, in German, not only for [+WH] or [-WH] complements, but for [+R1] or [-R1] complements as well, the latter of course not a possibility in English, which has no equivalent of R1. Instead of ad hoc rule features, we might say, alternatively, that fragen is subcategorized for +[___ [+WH] COMP] and is associated with a filter *[___, \bar{X} , V], while sagen has neither but is free in its choice of complement clause types.^{60a}

5.5. The status of parentheticals.

Another issue often raised with regard to these

constructions is whether or not they are merely parentheticals. Although some evidence has been adduced that they are not, such as multiple embeddings

- (46) ?Wen_i glaubte Hans, habe Fritz gesagt, konnte er ____i einladen?
 Who believed Hans, has Fritz said, could he invite

judgments are problematical on the more complicated cases⁶¹.

A question one might want to raise is the reverse one: how do parentheticals arise in German? In particular, why are they always in inverted order?

- (47) Hans sei schwer verletzt, meinte Karl.
 Hans is badly wounded thought Karl
 Hans, meinte Karl, sei schwer verletzt.

One possibility is that the sagte Johann in

- (48) Wen sagte Johann, sehe er?

and the meinte Karl in (47) are in fact instances of the same construction and that they have a different status from true parentheticals such as

- (49) "...und er verzweifelte -- es ist furchtbar zu sagen -- er
 ... -- it is terrible to say -- ...

verzweifelte an Wissenschaft und Fortschritt." (Th. Mann, Duden, p. 526)

which (i) have main clause word order, and (ii) can appear in almost any position:

- (50) Maria[†] will[†] ihre Blumen[†] in den kleinen Garten hinter dem Haus[†]
 Maria wants her flowers in the little garden behind the house

möglichst bald pflanzen.
 as-soon-as-possible to-plant

The phrase "Gott sei Dank!" may be inserted in any of the checked locations in (50) unlike "Hans sagte/sagte Hans" which can appear only where it would have been as a result of some application of R1/R2, assuming it to be the matrix clause as in the foregoing discussion of WH-extraction:

- (51) Hans sagte, Maria will ihre Blumen ...

Maria, sagte Hans, will ihre Blumen ...

Maria will ihre Blumen ... bald pflanzen, sagte Hans.

- (52) ?? Maria will, sagte Hans, ihre Blumen ...

?? Maria will ihre Blumen, sagte Hans, ...

?? Maria will ihre Blumen in den kleinen Garten, sagte Hans, ...etc.

That is, true parentheticals, as in (50) are truly inserts,^{61A} not interacting with the matrix sentence; but the phrases like meinte Hans are not parentheticals inserted in a main clause, as commonly understood, but are the matrix clause, as in the WH-extraction cases just discussed. Thus the sentences in (47) have the base structure

- (53) [Karl [Hans schwer verletzt sei]_S meinte]_S

From this it follows that in such a sentence as

- (54) Wen, sagte Hans, sollte ich anstellen?
 Who(ACC.), said Hans, should I appoint?

the top clause is sagte Hans and is [+R1].

Suppose we consider a "sentential subject" sentence⁶²
such as

- (55) Wen ich anstellen sollte, ist nicht klar.
Whom I appoint should, is not clear

or its extraposed form,

- (56) Es ist nicht klar, wen ich anstellen sollte
It is not clear, whom I appoint should

Now regardless of the analysis of so-called sentential
subject sentences (cf. fn. 62) they must be [-R1] clauses:

- (57) *Wen sollte ich anstellen ist nicht klar.
*Es ist nicht klar, wen sollte ich anstellen.

Now the embedded clause in (55) and (56) can itself take
an interposed sagte Hans as shown in (54). Suppose sagte
Hans were not the top clause, as just assumed, but a true
parenthetical. Then we might assume that using (54) would
be possible as a sentential subject, since other sentences
with embedded parentheticals are:

- (58) Wen, nach seiner Meinung, ich anstellen sollte, ist nicht klar.

but in fact no version is good:

- (59) *Wen { Hans sagte } sollte ich anstellen, ist nicht klar.
 { sagte Hans }
- (60) *Wen { Hans sagte } ich anstellen sollte, ist nicht klar.
 { sagte Hans }

But this follows if these constructions are not true parentheticals, but rather our original assumption, that sagte Hans is the main clause, is correct; (59b) and (60b) are bad because they are [+R1], not [-R1] as required for sentential subjects; (59a) and (60a) are bad because there is no way of generating them from the rules so far proposed, giving us the desired result.

The closest I can come to duplicating this in English is

(61)a. Who John said we should invite isn't clear.

b. It isn't clear who John said we should invite.

which are grammatical, presumably because English does not have the \pm [R1] distinction. However, the John said is the matrix clause of the embedded subject, which can be shown by picking an example which gives an anomalous reading:

(62) ?That Sheila, snickered John, would leave early, surprised me.

The only possible reading is the unintended one: "John snickered, 'That Sheila would leave early surprised me.'"

This ends the discussion of these constructions in German; our assumption that R2 includes WH-movement as commonly understood and moves the WH-phrase cyclically into COMP seems born out so far by these examples.

CHAPTER VI

TOUGH-MOVEMENT AND THE STRUCTURE OF S

6.1. Impersonal passives.

Another question which arises is that of the status of the "raising" rules involved in constructions of the so-called "tough-movement" variety; e.g., "Dieses Lied ist leicht zu singen." (= 'This song is easy to sing.')

Janet Breckenridge has written a thesis which discusses these sentences (among others) in German. Although the main focus of her thesis is in a different area, it provides a good point of departure for a discussion of these and related constructions.

The basic claim of her thesis is that if one conceives of grammatical rules as consisting of two parts, such as movement and morphological change, the former being the "main" part of the rule, and the latter a subsidiary "side-effect", then one can divide languages typologically into two classes: in one type (e.g., English) both parts of a rule must apply obligatorily; in the other type (e.g., German) the rule may "apply" in the sense of producing the side effects without the main part doing anything; i.e., there is no movement⁶³. Hence the title of her thesis, "Rules which nothing undergoes." To illustrate, if one conceives of passive as a single rule which (i) postposes the subject NP, (ii) preposes the object NP, and (iii) changes the verb morphology, then although in English we find no passive constructions without preposed direct object, we do in

German:

- (1) Er sagte, dass gestern getanzt wurde.
He said, that yesterday danced was.
- (2) *He said, that was danced yesterday. (Ungrammatical for all word orders.)

Note that in view of the preceding discussion, this is somewhat less surprising: if there is no passive rule, but rather various independently motivated grammatical processes which interact severally to produce the construction, then any one might fail to apply, subject to the usual conditions on interpretability of the result. (That is, such a sentence might still be ruled out on other grounds.) It should be noted in support of such a notion, incidentally, that there are also in German clauses which, as noted in chapter IV, are clearly passive without the passive morphology on the verb:

- (3)a. Sie liess ihm ein Bier von dem Ober holen.
She let him(DAT.) a beer by the waiter bring.
= 'She had him brought a beer by the waiter.'
- b. Er liess das Haus malen.
He let the house paint.
= 'He had the house painted.'

Furthermore, if we accept the account of passive given in chapter III, i.e., there is no movement in German, then we do not even need to discuss "parts" of passive not applying. Rather, the question reduces to a different one: why does the verb werden allow its subject to be empty? That is,

if we were to view the structure for a passive sentence to be roughly

(4) BASE: [[_{COMP}dass] [das Kind]_{NP} [[von Maria]_{PP} gesehen]_{AP} wurde]_S
 that the child by Mary seen was

i.e., das Kind is the syntactic subject, by rule (C), of wurde, then we note that it is not usually the case in German that subjects can be lacking:

(5) *Ich weiss, dass ___ den Hund gesehen hat.
 I know that the(ACC.) dog seen has.

Yet in sentences like (1) above, there is no subject for werden. However, the subject for werden cannot always be absent:

(6) *Ich weiss, dass ___ von Maria gesehen wurde.
 I know that by Maria seen was.

The distinction is, of course, that werden can fail to have a subject just where the verb (past participle) embedded under it can fail to have an accusative object⁶⁴:

(7) Ich weiss, dass
 I know that

a. *Maria ___ gesehen hat.
 Maria seen has.

* ___ von Maria gesehen wurde.
 by Maria seen was

b. Maria mir geholfen hat.
 Maria me(DAT.) helped has

mir von Maria geholfen wurde.
 me(DAT.) by Maria helped was

c. jemand hier tanzte.
 someone here danced

hier getanzt wurde.
 here danced was

It is also true that not all verbs have overt subjects:

(8) Nach Berlin ist leicht zu fliegen.
 To Berlin is easy to fly

Er glaubt, dass nach Berlin leicht zu fliegen ist.
 He thinks that to Berlin easy to fly is

Now there seem to be two kinds of es sentences: those in which es is generated by the base rules, as in

(9) Ich weiss, dass es regnet (* ...dass regnet.)
 I know that it is-raining

and one which is inserted by rule, as in the main clause version of (8) if nach Berlin is not fronted⁶⁵:

(8') Es ist nach Berlin leicht zu fliegen.
 It is to Berlin easy to fly

Thus it evidently is possible for some verbs to be sub-categorized in German not to take a logical subject NP; whether there is a syntactic subject is determined by rule (C). We will see shortly that this actually appears to be part of a much more general property of German phrase structure rules, when I discuss the structure underneath the node referred to in chapter V as "S?" under \bar{S} (e.g., in fig. (15)). (See sect. 6.4)

6.2. "Tough-movement."

Let us now turn to the leicht/schwer impersonals and see how they actually work. Having just seen Breckenridge's approach to passives (and "impersonal passives") illustrated, we can see the point of discussing the tough-movement cases within that framework, as they occur in personal and impersonal forms too, and thus are adduced to support the thesis of rules which nothing undergoes; viz.,

(10) Elephanten sind leicht zu transportieren. (Personal)
 Elephants are easy to transport.

(11) Nach Berlin ist leicht zu fliegen. (Impersonal)

Notice in her framework, (11) is "impersonal" because nach Berlin is not the subject' (e.g., no verb agreement) of ist. What I would like to focus on here is not the relation between sentences (10) and (11), which is her primary concern, but rather the status of the rule which allegedly produces (10). As in the case of passive, I would like to show that the constructions in question are a natural result of the rules already at hand.

To demonstrate the strategy, let us look at an easier case of another rule hypothesized in her framework, namely Quantifier Float⁶⁶. She cites such examples as [p. 14]

(12)[29a] Die Jungen sind alle ins Kino gegangen. ^{66A}
 The boys have all to-the movies gone.

(13)[30a] Die Äpfel habe ich alle gegessen.
 The(ACC.) apples have I all eaten.

(albeit to illustrate a different point). The sources are presumably

(14) *Die Jungen alle sind ins Kino gegangen.

(15) *Die Äpfel alle habe ich gegessen.

both bad, in which the quantifier alle floats to somewhere after the verb. However, under the analysis given in the foregoing chapters, the sources would be

(16) BASE: [DIE][JUNGEN][ALLE] INS KINO GEGANGEN SIND

(17) BASE: ICH [DIE ÄPFEL] [ALLE] GEGESSEN HABE

R1 moves the verb to the front, then R2 takes only the NP: wir, or die Äpfel to the front, stranding the word alle in the position in which it was generated. My guess is that this alle is an appositive to the NP generated separately; e.g., a base rule might contain: "VP → ...NP (Q) ...V" ⁶⁷. In any case, this not only avoids (14) and (15), but correctly gives

(18) Weil wir alle ins Kino gegangen sind, ...
 Ins Kino sind wir alle (gestern) gegangen!
 Gestern sind wir alle ins Kino gegangen.
 Ich habe die Äpfel alle gegessen.

...etc.

and avoids having to explain all the bad landing sites for Q-float that one could think of. Thus the analysis of (13) is

(19) Die Äpfel habe ich alle gegessen.

R1

R2

This, then, is the strategy in trying to explain the "tough-movement" cases in our framework; however, they turn out to be somewhat more complicated.

First, let us consider briefly the analysis offered in the Breckenridge thesis. Sentences like

- (20) Elefanten sind schwer mit Doppeldeckern zu transportieren.
 Elephants are hard with biplanes to transport

begin as

- (21) [[PRO [transportieren]_V Elefanten mit Doppeldeckern]_{S₁} [sein]_V schwer]_{S₂}

(remembering she has an SVO base), as do sentences like

- (22)[3b] Elefanten sind mit Doppeldeckern schwer zu transportieren.

"This word order," she comments, "is truly surprising." Even more so if both (20) and (22) have the deep structure (21).

She suggests that what happens is basically that S_1 is extraposed, then Elefanten is raised to subject position in (22) -- although it is not explained why transportieren is eventually in final position -- and in (22), mit Doppeldeckern is also interposed (raised) into the main clause from the extraposed infinitival. Since the thrust of her argument will be to show that the sentences like (11), the impersonals, are instances of rules which nothing undergoes, she first gives evidence to establish a raising rule: that there is always an (anaphoric) gap, selectional restrictions are with the lower verb, idiom chunks are preserved, object-deletion would otherwise be obligatory,

and that one would need two subcategorizations for intra- and extraposed versions. Granting that some type of "raising" or leftward movement takes place in these constructions, what could it mean to say that it has not happened in (11)? [repeated here:]

(11) Nach Berlin ist leicht zu fliegen.

Ignoring differences in base and rule structure, surely nach Berlin has been fronted just as has Elephanten in (10). That is, the further attempts to show the impersonal "tough-movement" sentences are like the impersonal passives in many aspects of behavior and that nach Berlin is not the subject of ist (both of which are of course true) are beside the point. The central issue is how nach Berlin was raised to the position between ist and the front of the sentence: if it is by "tough-movement", then "tough-movement" is not a rule which nothing undergoes; if it is some other rule, then one opens again the vast Pandora's Box of multiple fronting rules which are mutually exclusive.

It seems that the confusion here is over the involvement of the notion of "subject" or of "make-something-a-subject" as part of the intrinsic function of a rule. With the exception of Relational Grammar (which she rejects, cf. footnote 63), rules, even in older formulations, only involved notions of, say, moving an NP to another NP position, regardless of the function of the moved NP. The German constructions and rules presented

so far seem to indicate that this is true of the position into which the NP is moved as well: the "slot" between the beginning of the sentence and the finite verb in German main clauses is in no way a subject position:

(23) Den Mann hat ein kleiner, lichtbrauner Hund gebissen.
The(ACC.) man has a little, light-brown dog bitten.

Gestern habe ich meinen Vater gesehen.
Yesterday have I my father seen

...etc.

If the notion "subject" has any meaning for German, it must be something like "the NP in Nominative case and which agrees with the tensed verb," as noted in chapter III. When we don't think of the rule as "move NP (or PP) into subject position" but simply "move NP" or "front NP" then all the cases become candidates for being instances of the same rule, and in fact, R2.

This having been said, the next step is to show that the raising cases are actually all explicable as instances of R2; that is, we can reasonably rule in the good cases and rule out the bad ones.

In order to do this we must, as usual, look at the cases where R1 and R2 cannot have applied, i.e., dass-clauses, in order to see if there is anything else going on. Then we can look at main clauses, and see if the mere application of R1 and R2 reproduce the main clause judgments. Consider the following:

(24) Ich weiss, dass

- a) es schwer ist, Elephanten mit Doppeldeckern zu transportieren.
- b) *Elephanten mit Doppeldeckern zu transportieren schwer ist. (**sind)
- c) Elephanten mit Doppeldeckern schwer zu transportieren sind.
- d) mit Doppeldeckern Elephanten schwer zu transportieren sind.
- e) ? Elephanten schwer mit Doppeldeckern zu transportieren sind.
- f) *mit Doppeldeckern schwer Elephanten zu transportieren sind.

Leaving aside for the moment the question of why there are varying judgments in (24 a-f) relative to each other, let us look at the judgments after R1 and R2 apply directly to each one of (24 a-f) to produce a declarative:

- (25) a) Es ist schwer, Elephanten mit Doppeldeckern zu transportieren.
- b) *Elephanten ist (sind) mit Doppeldeckern zu transportieren schwer.
- c) Elephanten sind mit Doppeldeckern schwer zu transportieren.
- d) Mit Doppeldeckern sind Elephanten schwer zu transportieren.
- e) Elephanten sind schwer mit Doppeldeckern zu transportieren.
- f) *Mit Doppeldeckern sind schwer Elephanten zu transportieren.

With the exception of (25e), which is slightly better than (24e), the judgments for the main clauses parallel those for their hypothetical sources (assuming one simply applied R1 to the verb and R2 to the first NP in each of (24 a-f)). Note, of course, that (25d) could also have (24c) as a source, since rule R2 could apply to either Elephanten or mit Doppeldeckern (in 24d). It would seem likely, in view of the above pairs of judgments, that we might assume for

a start that there were two base forms for these types of sentences:

(26) SENTENTIAL SUBJECT BASE:

es_i schwer ist, [Elephanten mit Doppeldeckern zu transportieren]_{S_i}

(27) INFINITIVAL BASE:

Elephanten mit Doppeldeckern [schwer zu transportieren]_{Adj P?} sind

Now what indication do we have that (a) there are really two different base forms, i.e., that they are not mutually derived, and (b) that schwer zu transportieren is a constituent?

First of all, Breckenridge notes (p. 39ff) that these constructions, unlike their English counterparts, are severely limited: they occur with leicht, schwer, and a few other adverbs; true adjectives do not allow the so-called "object-to-subject-raising"; i.e., although we find forms which presumably have (26) for a source freely, those with (27) as their alleged source are limited to a few lexical items: (Breckenridge's numbering)

(28)[33] Es ist nett, Blumen zu finden.
It is nice flowers to find.
= 'It is nice to find flowers'.

[35] Es ist wichtig, ihn zu erreichen.
It is important him to reach.

but compare

(29)[38] *Blumen sind nett zu finden.
Flowers are nice to find.

- (29)[40] *Er ist wichtig zu erreichen.
He is important to reach.

I think it is no accident that the few words which allow the "raising" construction in German are also interpretable as adverbs as well as adjectives. This would follow from the two structures (18) and (19): the first, containing an adjective position, allows any adjective in the "sentential" construction; the latter, however, being an adverbial position, only allows adverbs. Hence the "raising" constructions are limited to those lexical items. (Since the adverb modifies "zu transportieren", not the whole phrase, this supports (b), that "schwer zu transportieren" is generated as a constituent, as well.)

Secondly, in support of the constituency of "schwer zu transportieren", note that it can be fronted by R2 in dialects which allow infinitive fronting:

- (30) [Schwer zu finden] war er nicht!

Thirdly, these phrases can also function as pre-nominal adjectives. Note that fairly long constituents can occur prenominally, taking a gerund ending (-d-) on the infinitive plus the adjective case: cf.

- (31) Weil die Maikäfer [in diesem Frühjahr besonders zahlreich auftreten]...
Because the may-bugs in this spring especially numerously VP
are-coming-out

- (32) Die [[in diesem Frühjahr besonders zahlreich auftreten]-d-en]Maikäfer...
= 'The may-bugs (which are) coming out in great numbers this spring...'

Similarly, cf.

- (33) Dieses Buch ist [leicht zu lesen.]
This book is easy to read
- (34) Ein [[leicht zu lesen]-d-es] Buch ...
= 'An easy book to read...'

Note in addition,

- (35) *Ein leichtes Buch zu lesen ...
- (36) *Ein leichtes zu lesen Buch ...

Furthermore, note that the argument assignment works correctly, even if we consider leicht zu transportieren a constituent. Recall how rule II' assigned das Buch as the logical object of gegeben in passive sentences:

- (37) Weil ihm das Buch von seiner Mutter gegeben wurde, ...

Das Buch is the first NP to the left of gegeben (governed by the tensed verb -- we want to exclude, e.g., Mutter).

Similarly in

- (38) Weil Elefanten mit Doppeldeckern leicht zu transportieren sind, ...

Elefanten is simultaneously the direct object of transportieren by rule II' and agrees with the tensed verb sind by rule (C), just as in the passive.

Finally, it should be noted that in no case can an extraposed version be the source for the raising sentences:

- (39) Er weiss, dass
?*Elefanten schwer sind, mit Doppeldeckern zu transportieren.

This might have come to mind as the source of (25e),

(25e) Elefanten sind schwer mit Doppeldeckern zu transportieren.

instead of (24e). Although (24e) is not entirely good, it seems to be considerably better than (39).

There arises the question, however, of how (24e) is derived from the base form (27). I would suggest that mit Doppeldeckern is hopped over schwer by a local rule, either St1, or the rule called Extraposition in chapter IV discussed in Koster 1975, as "PP-over-V", if they are not in fact sub-cases of the same rule. If schwer zu transportieren is viewed as a constituent, then under the assumption that mit Doppeldeckern hops over schwer via a local rule, we might expect the less-than-good judgment on (24e), since the phrase mit Doppeldeckern has, in effect, gone down into the constituent. Why the main clause version, (25e), should be so good, is then left unexplained. Another possibility is that one can generate two modifiers on transportieren, i.e., one between the adverb schwer and zu transportieren; it was hard to find any which were felicitous:

(40) Er weiss, dass

a) **Elefanten schnell schwer zu transportieren sind.

b) ?Elefanten schwer schnell zu transportieren sind.

Schnell can only go on transportieren, of course, as shown by (40a); however, even so, it is not very good (40b).

This is left as a problem to be solved; it should be reiterated however, that the problem sentence is (25e), the mainclause which has a questionable source. Also, it is worth noting that there was considerable informant waffling on judgments for (24e) and (25e), as opposed to the other versions. A hint of the complexities that might be involved in solving such problems as (24e/25e) is contained on the next example.

6.3. The verb "scheinen".

What about some other supposed raising cases? For example, the verb scheinen, which takes an infinitival complement:

- (41) Er scheint mir ein kluger Junge zu sein.
 He seems me(DAT.) a smart boy to be
 = 'He seems to me to be a smart boy.'

Semantically, er is the subject of sein; scheinen also takes part in a "true" extraposed form (sentential subject):

- (42) Es scheint mir, dass er ein kluger Junge ist.
 It seems me(DAT.) that he a smart boy is

Now if we assume, as we did for leicht/schwer, that these are generated from two different base structures, is the underlying structures for (41) the following extraposed version?

- (42') [Er] _{NP₁} scheint mir, [[e] _{NP₁} ein kluger Junge zu sein] _S

Again, what we need to do is to look at the form of the clause without the possibility of R1 and R2 having applied: i.e., the word-order of the subordinate clause. Evidently an extraposed version is not the source:

(43) *Weil er mir scheint, ein kluger Junge zu sein, ...

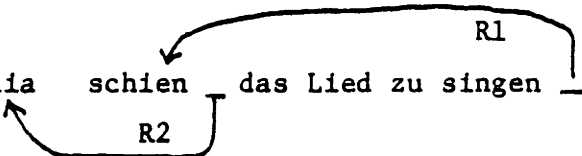
cf.

(44) Weil er mir half, das Lied zu übersetzen, ...

Normally this would just mean that scheinen takes the intraposed infinitive complements (cf. chapter IV on "V-raising"):

(45) Weil Cecilia das Lied zu singen schien, ...
 Because " the song to sing seemed

which could become a main clause by a straightforward application of R1 and R2, as illustrated in more detail in chapter V:

(46) Cecilia schien das Lied zu singen _


One possible candidate for the source of (42) is the sentence

(47) Weil er mir ein kluger Junge zu sein scheint, ...

It would seem, however, that it should be bad, since the er is the subject of [__ ein kluger Junge zu sein] and hence ought to form a contiguous string with it, just as does

Cecilia in

(48) Weil ich [Cecilia das Lied singen] hörte, ...

However, this version is quite bad:

(49) *Weil mir [er ein kluger Junge zu sein] scheint, ...

However, upon closer examination, using full NPs instead of pronouns, and applying the Lenerz tests, we find that the underlying order evidently is DATIVE-NOMINATIVE for scheinen:

(50) a. Weil dem Eckhard sein Sohn ein kluger Junge zu sein scheint, ...
 b. ??Weil der Hans seinem Vater ein kluger Junge zu sein scheint, ...

(51) a. Weil ihm der Hans ein kluger Junge zu sein scheint, ...
 b. *?Weil der Hans ihm ein kluger Junge zu sein scheint, ...

Since the a. sentences seem to provide a reasonable DATIVE/ACCUSATIVE source⁶⁸, what could be wrong with sentence (49)? It would seem that this case is similar to the one discussed in chapter IV, where sentence (82a), repeated here

(82a) *Weil ich ihr es auf Arabisch singen half, ...
 Because I her it in Arabic to-sing helped, ...

was claimed to be bad due to a filter *DAT/ACC on unstressed pronouns, so that even though the pronouns were generated in this order in the base, the sentence was unacceptable.

Sentence (49) would seem to indicate the filter is more general than *DAT/ACC; if we state it in terms of features (cf. footnote 53 on the revision of rule C1), the filter becomes *[+dat.][-dat.] and rules out both sentence (82a) from chapter IV as well as (49) above. Note that we need this independently, because of the passive cases; if we pronominalize in (52) the sentence becomes unacceptable (the es in (53) is nominative case):

(52) Weil dem Kind ein Buch gegeben wurde, ...
Because the(DAT.) child a(ACC.) book given was,

(53) *Weil ihm es gegeben wurde, ...
Because him(DAT.) it(ACC.) given was, ...

However, this raises some interesting questions. Recall that one of the "effects" of rule C1 was to "rescue" sentences with unacceptable pronoun order. For example,

(54) *Weil ich dem Kind es gab, ...

(55) Weil ich es dem Kind gab, ...

Such an application of C1 was blocked in (82a), allegedly by the Specified Subject Constraint:

(82a') *Weil ich ihr_i [_S [e] es auf Arabisch singen] half, ...
NP_i

Now also note that for the passive sentence (53) there is

an acceptable word order,

(56) Weil es ihm gegeben wurde, ...

as though some rule C2 existed to move the es to clause initial position, just as C1 moved the es to clause second position in (55). Short of proposing some new rule, we might try to generalize rule C1 as C1':

(57) C1'?: SD: (Comp), (NP), ..., $\left[\begin{array}{l} +\text{pro.} \\ -\text{dat.} \\ -\text{str.} \end{array} \right]$ SC: 1, 2, 4, 3

1 2 3 4

with the NP optional and the usual convention (as in phonology) of taking the maximal expansion first. Unfortunately, this still wouldn't give the right results, since maximal expansion in the passive case, with "... " = " ϕ ", would give string vacuous movement, not movement around the dative NP:

(58) Comp NP ... [+pro]
 Weil ihm ϕ es gegeben wurde, ...

unless we require that "... " be non-null.

A solution for this involving a slight restatement of rule C1 is suggested in section 6.4.; it seems that this is part of a more general phenomenon. Note however, that the passive and scheinen cases now fall together, and whatever rule "rescues" the passive case is likely the same one in the scheinen sentences:

(58.1) *Weil ihm es gegeben wurde, ...

Weil es ihm gegeben wurde, ...

(58.2) *Weil ihm er ein guter Junge zu sein scheint, ...

Weil er ihm ein guter Junge zu sein scheint, ...

The movement indicated in sentence (58.2) is not, as in (82a), blocked by the SSC.

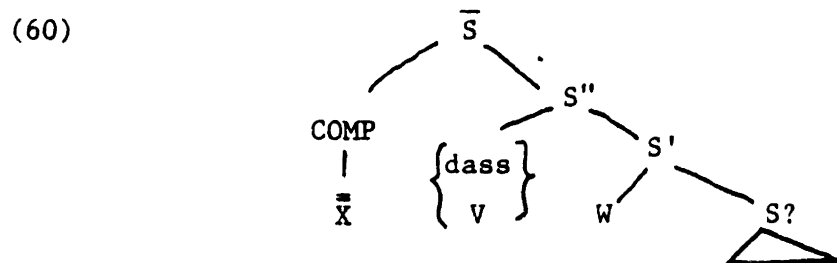
I would like to suggest that it is in fact rule C1 that is operating here, but before we can revise the statement of C1 correctly, we need to consider the base structures of these sentences in more detail.

6.4. The structure of "S?".

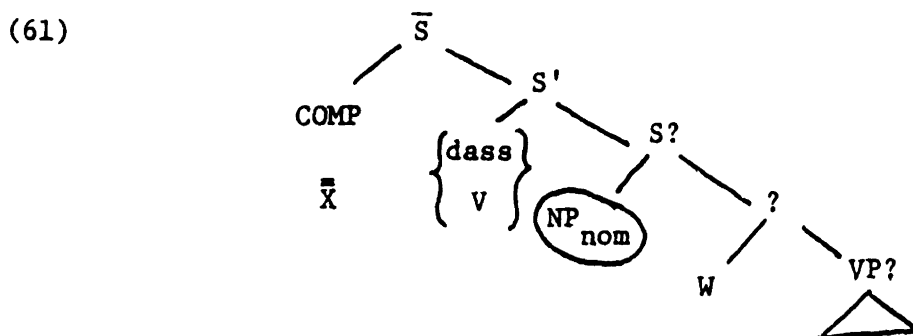
It was suggested in chapter IV that rule C1 belongs in the same component of the grammar as rules R1 and R2; furthermore, it was noted in chapter V that rules R1 and R2 seem to be substitutions (structure preserving) and look like adjunctions only because of their historical genesis. From these two observations we might then wonder why rule C1 is not a substitution (structure preserving) rule as well, since it is certainly cyclic. Suppose we claim this is true: there exists a position "W" into which the unstressed pronouns move, just as there is a COMP which is the position for R2 movement, and rule C1 should be stated in parallel fashion to R1 and R2:

- (59) C1: W, ..., $\begin{bmatrix} +\text{pro.} \\ -\text{dat.} \\ -\text{str.} \end{bmatrix}$ 3, 2, \emptyset
- R1: COMP₁, ..., V [+tns] 3, 2, \emptyset
- R2: COMP₂, ..., \bar{X} 3, 2, \emptyset

or more generally, each is an instance of MOVE _{α} , and the base generates positions W, COMP₁, COMP₂ with feature bundles to accept clitics, X, and \bar{X} , respectively. Now where is the position "W" generated? Clearly, for a normal sentence, the following is incorrect:



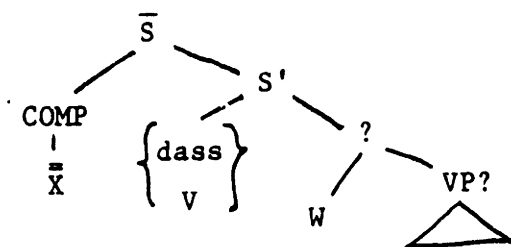
Cf. the subordinate clause, "Weil Hans es dem Mann gab,..." where Hans has not been moved by St1 or by R2. Suppose we say the structure is as follows⁶⁹:



Now this will correctly account for all of the cases discussed so far except the passive, as the reader may

verify, trivially, since it falls together with the earlier statement of rule C1. Now what is the structure of the passive? I would like to suggest that it corresponds to the node "?" (i.e., without "S?"):

(62)



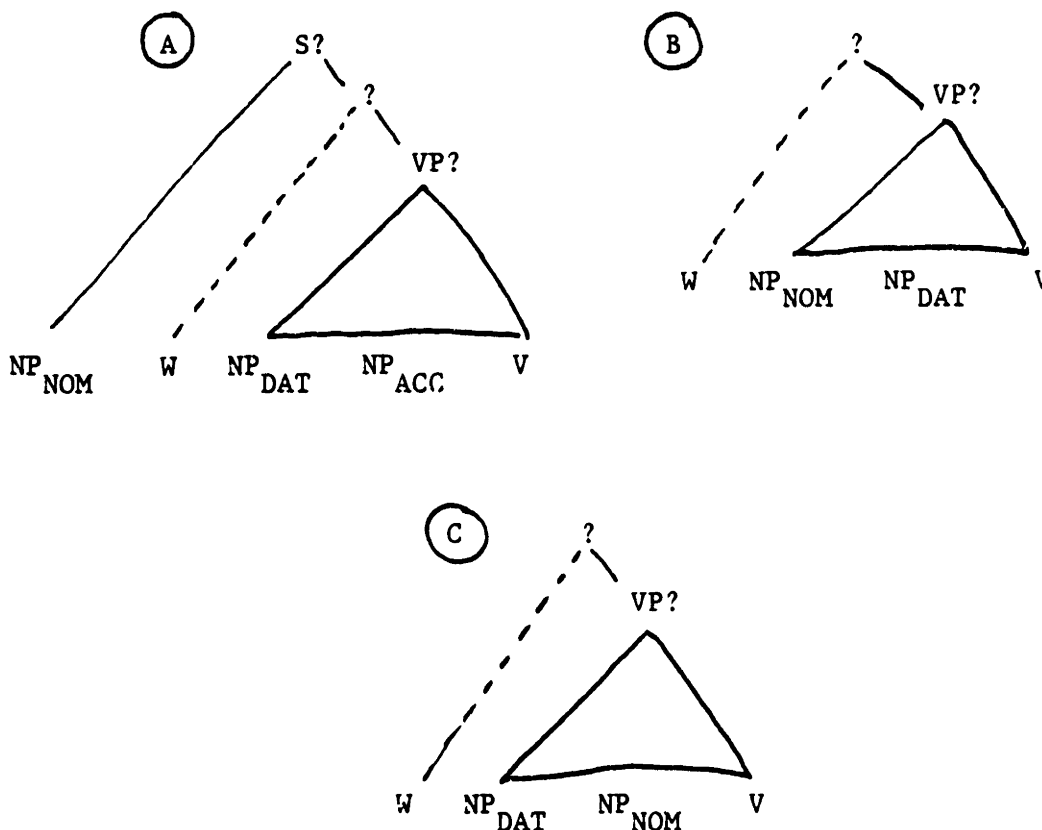
Note that this would seem to be implied by the base word-orders for the passive suggested as early as chapter III:

(63) Weil Fritz dem Kind ein Buch gab, ...

Weil dem Kind ein Buch gegeben wurde, ...

Thus suppose our phrase-structure rules allow us to generate sentences with the circled NP node in (61) optionally.

This allows us to bring together several different observations which have been left hanging so far. First of all, as observed by Lenerz, among others, there seem to be (at least) three types of base word order. Let us call them A, B, C, and suggest the following tentative phrase structures ("S?" only shown, \bar{S} omitted)⁷⁰:



A is characteristic of "normal" verbs, like geben, zeigen, etc. The order B seems to hold for a small class of verbs like helfen; the order C holds for verbs like gelingen, gefallen, folgen and the passives of A. Interestingly, the passives of B are the "impersonals" and the C verbs usually don't passivize in their "psych-verb" sense (although some have normal active variants of the A variety -- cf. Lenerz, op.cit. for discussion).

Now suppose something roughly like this is true, and that the node "VP?" is a binding node. Several things follow. First of all, we now get the correct orders for pronoun movement by Cl in the active and passive cases (as

well as with verbs like gefallen:

- (64) a. Ich glaube, dass dem Kind das neue Fahrrad gefallen hat.
 I think, that the(DAT) child the(ACC) new bike pleased has
- b. *Ich glaube, dass dem Kind es gefallen hat.
- c. Ich glaube, dass es dem Kind gefallen hat.
- d. *Ich glaube, dass ihm es gefallen hat.
- e. Ich glaube, dass es ihm gefallen hat.
- cf. f. *Ich glaube, dass meinem Sohn es gegeben wurde.
- g. Ich glaube, dass es meinem Sohn gegeben wurde.

Secondly, it was noted by Lenerz that the subjects of normal verbs (the A type) are not subject to permutation (by St1=PERM) like their direct and indirect objects. Subjects of verbs like helfen permuted more freely, as did those of verbs like gefallen. However, if the structures in A-C are correct, then the subject of a sentence is normally outside the binding node "VP?" and cannot permute by St1, even if the appropriate conditions are met:
 (Lenerz, 1975)

(65)[23.] Wer besitzt den Porsche?
 Who owns the(ACC.) Porsche?

[23b.] *?Ich glaube, dass den Porsche unser Chef besitzt.
 I think, that the(ACC.) Porsche our boss owns.

Compare

(66)[27.] Würde dieses Medikament auch einem Lungenkranken
 Would this(NOM.) medicine also a(DAT.) tuberculosis patient
 helfen?
 help?

[27t.] Nein, ich glaube nicht, dass einem Lungenkranken dieses
 No, I think not that a(DAT.) tub.-patient this(NOM.)

Medikament helfen würde.
 medicine help would.

in which the NPs are both under the node "VP?" in this analysis.

Thirdly, as noted in chapter IV, (and also by Lønerz), the facts for the pronouns are completely different; they can permute freely with an active subject:

- (67) a. Weil mein Bruder es gestohlen hat, ...
 Because my brother it(ACC.) stolen has,
 b. Weil es mein Bruder gestohlen hat, ...

But this follows as well if Cl has moved the accusative pronoun into W, which is under "S?" but not under "VP?".

Finally, these analyses also seem to fit in with an observation made by Tilman Höhle in a different context (personal communication); namely, that in certain embedded infinitivals, permutation of the downstairs subject and a dative pronoun is impossible:

- (68) a. Fritz sah den Jungen ihr ein Bild zeigen.
 Fritz saw the(ACC.) boy her(DAT.) a(ACC.) picture show
 b. *Fritz sah ihr den Jungen ein Bild zeigen.

and for these sentences, WH-movement of the dative pronoun is also bad:

- (69) *Wem sah Fritz den Jungen ein Bild zeigen?

In other sentences the permutation is possible

- (70) a. Fritz sah ihr einen Stein auf die Füße fallen.
 Fritz saw her(DAT.) a(ACC.) stone on the feet fall.
- b. Fritz sah einen Stein ihr auf die Füße fallen.

In these sentences, the dative WH-movement was permitted.

(71) Wem sah Fritz einen Stein auf die Füße fallen?

These observations would again follow from the proposed structures: extraction of the embedded datives should not be possible just in the cases where the dative cannot permute with the nominative, namely (A), since it is two binding nodes away from the top clause. In those cases where it can permute, it is presumably a (B) or (C) type sentence and hence also subject to WH-extraction.

In addition, I found that some informants who duplicated Höhle's judgments (sentences (68)-(71) above), did permit the accusative to be extracted:

(72) Was sah Fritz den Jungen ihr zeigen?

This would also follow from the above analysis, since if Cl moves the accusative pronoun into the position W, it is now outside the binding node "VP?" and eligible for extraction.

It should be noted, under this last point, that because of the complexity of the doubly embedded sentences, I had a great deal of difficulty obtaining consistent

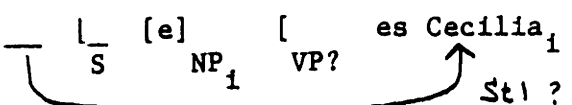
judgments, and I tried to take into account relative judgments between pairs, where possible⁷¹.

In addition to the problem of getting consistent judgments on the Höhle cases, there are several outstanding problems with this analysis. First of all, under this analysis, permutation of the nominative NP and a dative pronoun in the (A) cases should be bad in the top clause as well as embedded under lassen or sehen; however, although these were felt to be not quite so good as with the accusative pronouns, they were not altogether bad (but cf. fn. 70a):

(73) Weil Fritz ihr ein Bild zeigte, ...

?Weil ihr Fritz ein Bild zeigte, ...

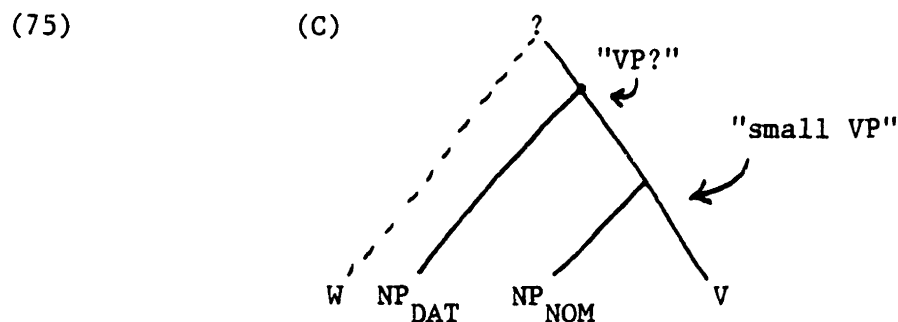
raising doubts as to whether the dative might also move into W (and we would lose the explanation of the WH-movement facts), or that St1 can ignore the node "VP?" under certain circumstances⁷². Note that this seems to be true in some (but not all) of the sentences discussed in chapter IV:

(74) Weil ich \bar{S} [e] NP_1 [es Cecilia₁ singen]] half, ...

 St1?

Although these latter cases might still obtain as follows: on the lower sentence, the es has moved into W, and hence is outside the "VP?" node in its \bar{S} , and the reanalysis accompanying V-raising then destroys the embedded sentence \bar{S} (as claimed by Evers).⁷³ Note that V-raising is irrelevant

to the permutation in Höhle's examples, since the permutation is within the lower sentence.

Given the complexity of this latter analysis, and the difficulty of obtaining consistent and reliable judgments, since so many factors can vary, it will probably be some time before a clear picture of its accuracy can be formed -- and even if the analysis is roughly correct, for the details to be worked out. There are many other phenomena which might be checked as relating to the extra binding node. For example, properties of control: suppose the nominative NP in the (C) cases is in a "small VP" and hence not an eligible position for control:



Unfortunately, sentences with verbs like gelingen, gefallen, etc. downstairs, and versprechen or zwingen upstairs are difficult to concoct, semantically. However, it offers an interesting possibility for explaining the passive control facts noted in chapter III, namely that the ordinary downstairs passive was extremely awkward, but the triply embedded form with lassen is good:

(76) ??Weil Fritz die Heidi zwang, vom Arzt untersucht zu werden, ...
 Because F.(the) H. forced, by-the doctor examined to be, ...

(77) Weil Fritz die Heidi zwang, sich vom Arzt untersuchen zu lassen, ...
 Because F.(the) H. forced, herself by-the doctor examined to let

The sentence (76) would have the analysis

(76') Weil Fritz die Heidi zwang, $\underbrace{[[e]_{NP_i}]}_{S \text{ VP?}} \text{ vom Arzt untersucht zu werden,]} \dots$

but in sentence (77)

(77') Weil Fritz die Heidi_i zwang, $\underbrace{[[e]_{NP_i}]}_{S} \underbrace{[\text{sich}_i \text{ vom Arzt untersuchen}]}_{\psi} \text{ zu lassen,]} \dots$

the $[e]_{NP}$ is the subject of lassen, an (A) type verb, and hence eligible for control from the matrix clause. Regardless of the structure we eventually decide upon for embedded clauses under lassen (the ψ node), the sich_i is controlled by the normal reflexive rule; cf. the main clause version⁷⁴:

(78) Fritz_i liess sich_i von dem Arzt untersuchen.

Note incidently, that under this formulation of Cl and base structure the sentences with scheinen mentioned at the end of section 6.3.,

(58.2) *Weil ihm er ein guter Junge zu sein scheint, ...

Weil er ihm ein guter Junge zu sein scheint, ...

fall together with their passive counterparts as suggested

there, the movement by Cl into W not being blocked by the SSC.

While the material in 6.4. is much more speculative than the rest of the thesis, the assumptions about base structure made here do bring together several random observations by Lenerz, Höhle, Evers, and others, and I think they might indicate a promising line of future investigation. As noted earlier, judgments involving NP order are often quite difficult to obtain, since many informants will accept anything for which they can imagine a plausible situation and others are quite rigidly prescriptive in what they will allow, and it is often quite time-consuming to teach them to look for the inappropriateness of a particular configuration. Also, as noted, the same verb may have two different senses with two different corresponding types (A-C) and the same verb may differ from speaker to speaker. Thus the suggestions in section 6.4. are offered only on a tentative basis.

SUMMARY

One of the purposes of this thesis was to show that, as in recent work on English and some other languages, a wide variety of constructions in German result not from the application of many complex, construction-specific rules, but rather from the interaction of a few very general rules, conditions on interpretation, and filters on surface structure. We have seen this in the case of passive, WH-questions, topicalization, "tough-movement," impersonals, raising (seem) constructions, and embedded infinitivals. Furthermore, I have tried to demonstrate that these constructions which are the analogs of the similarly named constructions in English (often string-identical, in certain tenses) actually behave quite differently, having a different genesis than their English analogs; and that their different behavior results from the interaction of the proposed rules, conditions and filters with a different (SOV) base structure.

It would seem that most of the rules themselves (except R1) are quite similar to those in English; for example, the English fronting rules for WH and NP and German R2 seem to be sub-cases of the general rule Move \bar{X} , the difference being that English (as noted in chapter V) has two positions sentence-initially (+WH and -WH) whereas German has one, and hence the appearance of two

rules in English and one in German. On the other hand, the passive construction looks the same in both languages, but has a completely different genesis in German. Some apparent movements are, upon closer examination, not movements at all, but the result of other constituents moving around the constituent seeming to move.

If there is any moral in all of this, it is not to be misled by any cultural (or linguistic) chauvinism when approaching a new language. Even though German may be closely related to English genetically, we have seen that apparently analogous constructions behave quite differently, and that while the bulk of the rules and conditions are similar to (if not subcases of) those proposed for English in the recent literature, the interaction of these with a single extra rule, R1, and a different base structure, produces a language that behaves in many respects more like some non-Indo-European languages, typologically. That is, when approaching a new language, one should not (as has often been done in the past) try to project onto it an English system of rules, but approach it as though it were terra incognita, especially if it is closely related. Even such closely related languages as German and Dutch, as noted in chapter IV, differ in significant respects, although not, we hope, in underlying principles. It is for this reason that I have tried to keep the scope of thesis vertical, restricting myself to one variety and its structures, rather than ranging over several dialects.

While one can draw inspiration from cross-linguistic phenomena, one must first get the language internal structures correct.

I have tried to put together what I think are some of the best hypotheses of various linguists working on German and some of my own to try to provide a basic working structure and set of rules for further research into more complex aspects of German clause-syntax, perhaps along the lines suggested in section 6.4. While the latter section is fairly speculative, hopefully it will provide, along with the more basic structures and processes discussed in earlier chapters an inspiration for future work.

FOOTNOTES

¹For example, R. Kayne's work in French, C. Quicoli's in Portuguese. (Cf. Bibliography). In addition to the work along these lines in Romance languages, there has been more work in Dutch by J. Koster and H. van Riemsdijk. Dutch, as noted, has a structure similar to German in many respects rather than to English.

²I reject without further comment the third alternative, that of generating verbs in both locations in the base, as more unwieldy than either of the other options, and requiring extensive theoretical additions.

³These constructions form a special case, in which the order of the verb cluster is altered:

- (a) Weil das Pferd den Wagen hat ziehen müssen, ...
Because the horse the cart has to-pull (= have-to), ...
- (b) *Weil das Pferd den Wagen ziehen müssen hat, ...

most probably by a minor movement rule which hops the tensed verb over the verb complex when it has been reanalyzed as a single verb. Cf. discussion in chapter IV, fn. 44.

⁴Various linguists have proposed principles which claim, roughly, that there can be rules applying in "main" clauses only, or rules applying in both main and subordinate clauses, but not rules which apply only in subordinate clauses. Cf. Emonds (1970), Ross (1973). These claims are not without problems, as we shall see in chapter V, where sentences having "embedded" root sentences ("Er sagte, sie sei krank.") are discussed; however, I think they seem roughly right for a

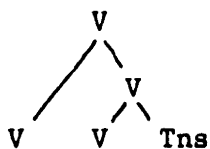
variety of cases, and provide a general, rather than rule-specific, limit on applicability.

⁵ Throughout, whenever sentences have two sets of numbers, the second [in brackets] refers to the numbering in the article being quoted.

⁶ Note these results still obtain even if Node Raising precedes Extraposition, since attempts to extrapose over the raised node will fail.

^{6a} Actually, there are some problems with the rebuttal argument involving right-node raising as well, which I won't go into here, since they do not affect the bulk of the argumentation. It may be, in fact, that such processes as gapping and right-node raising are rather different kinds of rules than those being discussed (perhaps not even rules of sentence grammar, as in the case of gapping) and not part of core grammar; and hence, not good indicators of base structure. Since there is abundant other evidence bearing on this, I will not belabor the point here.

⁷ Note that there is no problem with A/A blocking application even if we want the entire verb complex analyzed as a V:



Since only tensed verbs occur in second position, we can mention the affix in the rule: V+Tns.

⁸ It is also perhaps worthwhile speculating in an aside at this point that the verb-final order also makes sense with regard to the genesis of the odd separable prefixes (like ab+fahren) from prepositions.

AdjP, etc., knowing that N^3 ($= \bar{N}$) and even N^4 have been argued for in the literature; similarly, there are arguments that if $VP = V^2 = \bar{V}$, then $S = V^3$, $\bar{S} = V^4$. This may turn out to be correct (and it is even suggested here that it may be indicative of a historical process -- see chapter V, fn. 58a) but is not essential to the discussion here to establish the exact number of bars, only consistent relative level.

Similarly, within the bar system categories are represented by features, much in the same way phonological segments have been; two common systems in the literature are Jackendoff's, consisting of the features SUBJECT, OBJECT, COMPLEMENT, which gives

| | +SUBJ | | -SUBJ | |
|------|-------|--------------------------|--------------|-----------|
| | +COMP | -COMP | +COMP | -COMP |
| +OBJ | Verbs | Aux./Modals | Prepositions | Particles |
| -OBJ | Nouns | Quantifiers/ Articles | Adjectives | Adverbs |

There is also the system of Chomsky and Lasnik (1977) which has the features N and V:

| | -V | +V |
|----|--------------|------------|
| +N | Nouns | Adjectives |
| -N | Prepositions | Verbs |

The only essential ingredient of the feature systems used in the thesis is that prepositions and verbs be grouped together ([-N] in the Chomskian system, [+OBJ, +COMP] in the Jackendovian system) which is common to both systems, and that a rule which I subsequently propose be excluded from applying to a VP, if there is one in German; since this is possible in neither system, I take this as a possible indication that there is no VP node. More discussion of this in chapters II and V.

¹¹Since the format of "topicalization" as discussed here is

... $\bar{X}_{[-wh]}$ (e.g., "Den Metzger hat er __ gestern bezahlt.")

and the format of WH-fronting is also

... $\bar{X}_{[+wh]}$ (e.g., "Wen hat er __ gestern bezahlt?")

I will assume without further comment that we can collapse the two rules by omitting the features [-wh] and [+wh], respectively. This has some interesting theoretical consequences which are the topic of chapter V.

¹²But probably not VP. We might think of this as a feature [-verb] on the \bar{X} ; however, subsequent discussion in the next few paragraphs will, I think, show this to be unnecessary.

¹³This approach was first suggested to me by Howard Lasnik's treatment of the English auxiliary system (personal communication); all the rules are allowed to be optional and all the forms are generated ("Does John go?"; "John went"; "John does go"; etc.) and simply interpreted differently.

¹⁴If the reader finds this particular example infelicitous or has trouble replicating the judgments (since there is a fair amount of speaker variation on these sentences), the two Lenerz papers provide many other different examples using other lexical items.

¹⁵Pronouns constitute a separate case entirely, and are discussed in chapter IV.

¹⁶Note that Lenerz's examples so far include only sentences in which the NP's under discussion are not affected by what I am calling rule R2. (E.g., DO and IO in (5) and (7) in text.) As he shows by some discussion in the dissertation, the sentence initial position is distinguished from

what he calls the middle-field (Mittelfeld); in our terms, rule R2 (or its landing site, COMP, cf. chapter V) behaves differently from rule St1. For example, St1, as we shall see, can hop over pronouns, but R2 cannot move unstressed accusative or dative pronouns into COMP:

(Lenerz's sentences, my arrows)

[39a] Paul hat ihn meinem Bruder vorgestellt.

← R2

Paul has him(ACC.) my(DAT.) brother introduced.

[39b] *Ihn hat Paul meinem Bruder vorgestellt.

← R2

[39c] Ich glaube, dass Paul ihn meinem Bruder vorgestellt hat.

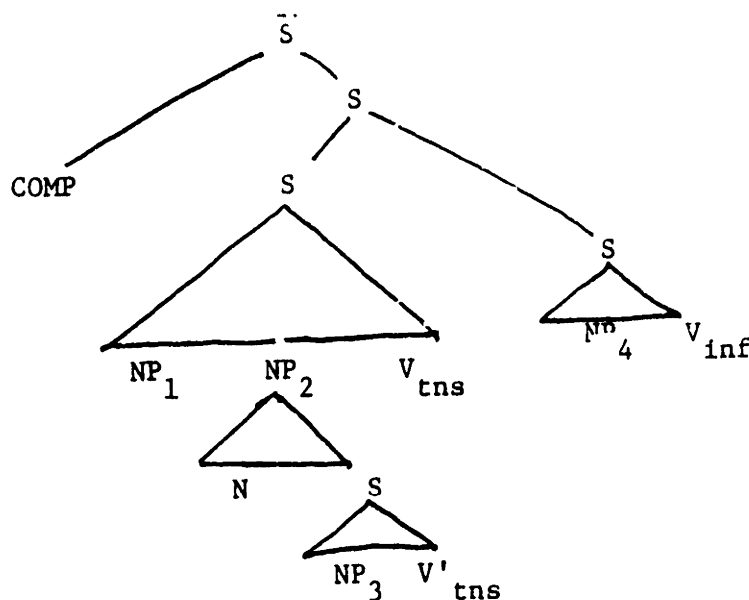
[39d] Ich glaube, dass ihn Paul meinem Bruder vorgestellt hat.

← St1

Similarly for many other cases.

[Fn. 16a: see Errata]

¹⁷By "governed" I simply mean directly C-commanded (in the sense of T. Reinhart, 1976, and elsewhere in current literature). For example, in the structure



NP_1 and NP_2 are governed by V_{tns} , NP_3 and NP_4 are not. NP_3 is governed by V'_{tns} .

Note that we can then say that the NP marked Nominative by rule (C) agrees with the tensed verb and is its syntactic subject. Alternatively, we could have used rule (C) to define syntactic subject, and done agreement and nominative case assignment off the notion "syntactic subject."

¹⁸ Even formulations in Relational Grammar involve a hidden, or pseudo-movement. The $II \rightarrow I$, an advancement, while it doesn't necessarily imply linear movement in a string, implies change of position in a hierarchy.

¹⁹ It is perhaps worth a further discussion on what one means by the term passive. I have up to this point deliberately used "passive construction" rather than "passive rule" or "passive transformation" to separate out (as noted in the introduction) the notion that there is necessarily a one-to-one correspondence (even roughly) between constructions between rules and constructions. However, even the use of the phrase "passive construction" implies the existence, apart from the English sentences like "John was seen by Mary" a universal or more widespread notion of what we mean by passive construction in other languages. However, what we are to call a passive construction in some other languages is not clear. For example, in Lardil, which has an SVO structure not unlike that of English in many respects, we find pairs like:

(9) Ngawa petha yaramanin. (DOG+NOM. BITE HORSE+ACC.)

(6) Yaraman peyikun ngawun. (HORSE+NOM. BITE DOG+ACC.)

Now the verbs do differ in morphology, but there is no a priori reason to assume that one or the other is the one which corresponds to the English passive sentence. We could argue that the case marking which is

∅ is the one which corresponds to the English nominative and the verb with ∅ morphology is the "active" form, but then what about ergative languages? Would we want to say they have only passive sentences in the absence of active sentences? Without belaboring the point, as we go from language to language, identifying passive constructions is not all that straightforward. Consider even English, which has sentences with the active (logical) object in subject position without passive morphology: "The book reads easily," or German lassen passives, where the verb-form is an infinitive, not a past participle.

²⁰(Footnote 20 omitted.)

²¹Cf. also, such constructions as the morphological passive in Arabic (McCarthy, 1976), various impersonal and reflexive "passives" (Spanish, German, etc.), and footnote 19 above.

²²Naturally, the default reading, in the absence of context, contrastive stress, etc., is "The mother kissed the daughter." The other reading must be brought out by context, emphasis, etc. (cf. Lenerz, 1975, p. 108). The point is that both readings are available.

²³In these particular examples Lenerz uses [+stress] rather than [-definite] as the "trigger" for the application of the rule (i.e., my rule, or his ordering principle). [+stress] is indicated in my quoted examples by CAPITAL letters.

²⁴Unfortunately, we do have to be cautious, since this is a stylistic rule and while the results hold in general, there are problems with certain lexical items, e.g., so-called psych-movement verbs and others. Since Lenerz discusses all the cases in great detail in his thesis, I

won't repeat them here, except to note that we have to be careful to pick sentences for whose lexical verb, the unmarked active order exemplifies the general NOM/DAT/ACC order, rather than, say, the exceptional DAT/NOM order.

To see this, take for example the case of psych-verbs. Following are Lenerz's examples for the verb gelingen [to succeed], with his numbering in brackets: (Lenerz, 1975, p. 121)

- (38)[54] Wem ist der Coup gelungen?
Whom (DAT.) has the(NOM.) coup succeeded.
- [54a] Ich glaube, dass der Coup einem BARON gelungen ist.
I believe, that the coup the(DAT.) " succeeded has.
- [54b] Ich glaube, dass einem BARON der Coup gelungen ist.
- [55] Was ist dem Baron gelungen?
- [55a] Ich glaube, dass dem Baron ein COUP gelungen ist.
- [55b] *Ich glaube, dass ein COUP dem Baron gelungen ist.

(Capital letters indicate [+1-stress].)


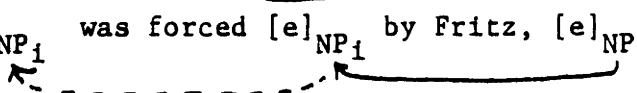
Hence the underlying order must be (Dative-) Object, Subject rather than the reverse. (This is not true of all psych-verbs, either.)

This example demonstrates two things: (1) the utility of the rule as a test for determining underlying order in dubious cases (in this case, lexical variation); (2) because of lexical variation, if we are to use the test to determine the underlying order in some construction, then we must be careful to weed out side effects due to peculiar properties of certain lexical items. That is, we must consider the general cases first.

^{24a}Note again, that pronouns are a different case entirely. The resolution of the passive pronoun cases is discussed in section 6.4.


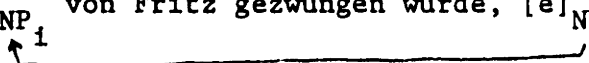
²⁵I am oversimplifying for expository reasons here. Obviously the actual rule will have to be more complicated, just as will the following rule II' for German, to take into account indirect as well as direct objects, locatives, and will have to be lexically dependent, since as noted earlier in this chapter, not all verbs in German (e.g., psych-verbs) have their arguments in the same order.

²⁶This incidently involves some refinement of the notion of control. In English, by the conventions assumed so far (which are common to much recent work on English), we could have said that control is assigned either to the syntactic subject or the syntactic object, since in English cases, if the assumptions about the existence of TRACE (i.e., $[e]_{NP_1}$) hold, then in both the active and passive sentences, we can say that control proceeds from the syntactic object:

- i) Fritz forced $[Heidi]_{N_{-i}}$, $[e]_{NP_1}$ to eat the cheese.

- ii) $[Heidi]_{NP_1}$ was forced $[e]_{NP_1}$ by Fritz, $[e]_{NP_1}$ to eat the cheese.


(The solid arrow represents control assigned by the verb forced, the dotted arrow represents control due to movement.)

In German, however, if there is no movement (and hence no trace element), we must say that it is the logical object (the one identified by rule II') rather than the syntactic object which controls the empty subject in the lower clause:

- iii) Weil Fritz die $[Heidi]_{NP_1}$ zwang, $[e]_{NP_1}$ den Käse zu essen, ...

- iv) Weil $[Heidi]_{NP_1}$ von Fritz gezwungen wurde, $[e]_{NP_1}$ den Käse zu essen.


This now contrasts with the "subject-control" (versprechen) case, since we must still say, in both English and German, that it is the syntactic

matrix subject which controls the downstairs subject, if we are to rule out the passive cases (cf. sentences (47) and (48) in text), since it is the syntactic subject of versprechen (and promise) which is not present. (E.g., rule (A) implies Heidi is the syntactic subject of the tensed wurde, not the participle versprochen.)

One way of eliminating this asymmetry (N. Chomsky, personal communication) is by saying that control normally proceeds (i.e., the unmarked case) by some minimal distance principle, hence is coincidentally assigned to the logical object in German and to the syntactic object in English (as represented by $[e]_{NP_1}$). The exceptional (marked) case is the only one specifically lexically assigned, and it invokes control by the syntactic subject.

26a I am assuming that the cliticization process consists of two parts, the movement (rule C1), and phonological contraction.

27 This is discussed in his (1892) "Über ein Gesetz der indogermanischen Wortstellung". I will continue throughout to assume something roughly like this is valid (depending on formulation) and refer to it as Wackernagel's position. This is further discussed in section 6.4.

28 For example, in Fiengo (1976) it is suggested that the rule for placing clitics in preverbal position in French is not to be stated

(a) $\overbrace{V, \dots, cl}$

but rather rule C1, or something like it -- i.e., the clitics are moving into "second" position. While both (a) above and rule C1 give the same result in simple NP, V, NP sentences, consider

(b)

| | | | |
|--------|----|----------------|------|
| Je | le | donnerais ... | |
| Ne | le | donnez pas ... | |
| Donnez | le | moi ... | etc. |

(See Fiengo, 1976, for a full discussion of attendant problems). While this claim is not uncontroversial, there seems to be some validity in it.

Consider also Spanish (from Rivas, 1977, p. 41): "Clitics are placed before the verb, except in the imperative, infinitive, and gerund forms. [emphasis mine--CT].

| | | |
|----------------------|-------------------|------------------|
| Example: [3.4.1.] a. | <u>lo</u> canto | 'I sing it' |
| b. | <u>lo</u> cante | 'I sang it' |
| c. | <u>lo</u> cantare | 'I will sing it' |
| d. | canta <u>lo</u> | 'sing it!' |
| e. | canta <u>lo</u> | 'to sing it' |
| f. | canta <u>dolo</u> | 'singing it' |

In literary and journalistic Spanish, clitics that are [normally--CT] placed before the verb can be placed after the verb under certain stylistic conditions ...

[3.4.4] Reuniose el presidente con los ministros.
'The president met with the secretaries.'

That is, although Rivas argues these positions are base-generated, it seems no accident that the clitic is before the verb in NP, cl, V... sequences, but after the verb just in those cases where the verb is first: V, cl, ... so that the clitic is in clause second position throughout. (More on this in section 4.6.).

Another example, somewhat further afield, is in Walbiri (spoken in central Australia), an ergative "scrambling" language, which has a basic word order of

$$\alpha_1, \text{AUX}, \alpha_2, \alpha_3, \dots, \alpha_n$$

where the α 's are "freely" scramblable constituents. Suppose that we assume that Walbiri has (or had historically) an SOV base and roughly the

same rules as German (I am assuming this without argument -- there is some controversy regarding the ordering of the base, and Ken Hale (personal communication) argues for an unordered base in Walbiri). That is, if we assume something like R1, R2, St1, and C1, with the only alteration being to allow St1 to transpose (scramble) everything including verbs. This gives sentences the same format as German:

| | | | | |
|-----|--------------|------|----------|----------|
| (c) | NP | AUX | NP | V |
| | Ngarrka-ngku | kapi | maliki | pinyi |
| | man+ERG. | FUT. | dog | hit |
| | Der Mann | wird | den Hund | schlagen |

= 'The man will hit the dog.'

Similarly,

| | | | | |
|-----|----------|------|-------------|-----------|
| (d) | Maliki | kapi | ngarrkangku | pinyi. |
| | Den Hund | wird | der Mann | schlagen. |

Walbiri, of course, has the other possible order, e.g.,

| | | | | |
|-----|--------|------|--------|-------------------|
| (e) | Pinyi | kapi | maliki | ngarrkangku. |
| | Maliki | kapi | pinyi | ngarrkangku. etc. |

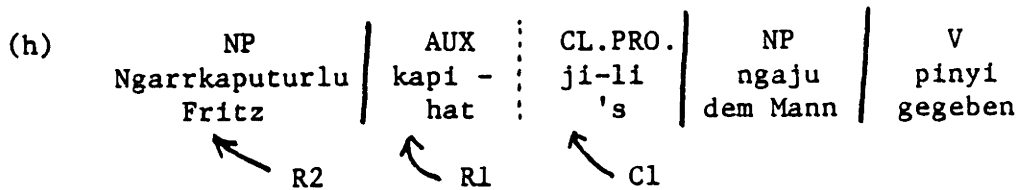
Now if rule C1 applied as in German, we would find the clitics after the censed part of the verb. Strikingly, we find the Walbiri AUX consists, morphologically, first of a tense/mood marker(s), then agreement markers which are probably the historical remnants of clitics (cf. Hale, 1973).

| | | | | |
|-----|----------------------------------|------------------------|---------|---------|
| (f) | Ngarrkapaturlu | kapi-ji-li | (ngaju) | pinyi. |
| | men+several+ERG. | fut+1st.pers.+3rd.pers | (me) | strike. |
| | = 'The several men will hit me.' | | | |

where the AUX refers to the NP positions as shown:

| | | | | |
|-----|----------------|------------|---------|--------|
| (g) | Ngarrkapaturlu | kapi-ji-li | (ngaju) | pinyi. |
|-----|----------------|------------|---------|--------|

Compare to the German, "Fritz hat's dem Mann gegeben," especially the second column:



Here again there is an indication that the process of "cliticization" is widespread and operates in the same way, even though the surface positions may be different. In the Walbiri case, of course, I think this must be a historical, rather than synchronic, result.

^{28a}As does Lenerz (1973), opting for two rules: PERM and PRONHOP. Although PERM is equivalent to St1, PRONHOP is formulated somewhat differently from C1 (and quite differently from my final form for C1):

| | | | | | | |
|----------------|-----|----|-----|------------------------------|---|---------------|
| [_S | NP, | X, | NP, | [+pers. ^{NP} pron.] | Y | 1, 2, 4, 3, 5 |
| | 1 | 2 | 3 | 4 | 5 | |

By mentioning three NP's explicitly in the SD, he need not refer to [+acc.] as in C1, if we assume an underlying order of NP_{nom.}, NP_{dat.}, NP_{acc.}. More on this issue after discussing which rules St1 and C1 might interact with.

²⁹That is, after a certain point in the derivation, the construction behaves like a monosentential clause.

³⁰Cf. comments on gapping in chapter I, sect.1.2.

³¹That is, while extraposition is certainly obligatory for tensed sentential objects,

(a) Weil er wusste, [dass Fritz den Apfelkuchen gegessen hatte,]...

*Weil er dass Fritz den Apfelkuchen gegessen hatte wusste, ...

perhaps because of a prohibition (filter) against two adjacent tensed verbs, in the case of tenseless complements, their sentencehood is precisely what is at issue. Perhaps the argument might be better stated

in reverse: assuming the sentencehood of just those clauses which extrapose allows us to preserve a generalization about extraposition, viz., that only PP or S extrapose. That sentencehood in the case of infinitivals obligatorily requires extraposition seems to run afoul of some facts brought to my attention by Henk van Riemsdijk; cf. footnote 46 later in this chapter.

³²Note there is also a difference in meaning based on the scope of the negation: only the verbs to the right of the nicht in the second clause are denied.

³³The nicht (stressed) which moves about to negate single items is not meant, of course.

³⁴Evers also notes that there are certain verbs (involved in verb-raising constructions) which do not allow clause anaphora of this sort, probably because they are strictly subcategorized not to take any NP objects, and es is an NP. This subclass of verbs thus cannot provide evidence for their own participation in bi-sentential sources from the above argument.

³⁵For example, Lasnik (1976), Sag (1976), Hankammer and Sag (1976) and many others.

³⁶The subcategorization given here for scheinen is actually incorrect. This is the topic of chapter VI, section 6.3. It does not affect this argument, however.

^{36a}Actually, the first example in (55) is a bit confusing, since it also seems to have the reading "John himself saw (someone) care for the horses": (55)[216.] Weil Johann sich selbst [PRO für die Pferde sorgen]_S sah, ... The reading required for [216.] seems a bit forced.

³⁷Evers himself, rather than tying himself to a particular formulation of conditions simply notes by example that the rule seems to be upward bounded in other cases. Unfortunately these examples are irrelevant, since as we will see in the course of the discussion, these cases have a different analysis altogether.

³⁸Because, as noted in section 4.1., for example, R2 evidently does not apply to unstressed accusative pronouns,

(a) *Es gab ich dem Mann.

and more importantly, C2 applies in subordinate as well as main clauses, where as R2 applies in main clauses only, except for moving the relative pronoun in relative clauses, as already noted. More discussion on these points follows here and in chapter 5.

³⁹With contrastive stress on "eine schlanke, alte Dame" or with the assumption that it is introduced as new information, etc. For perhaps more felicitous sentences, see the examples immediately following, in (77) and (78) which make the same point.

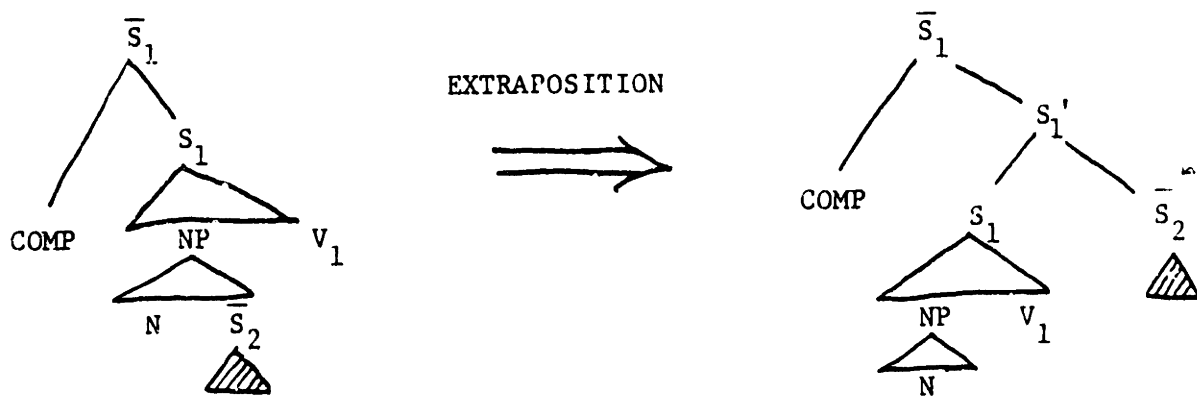
⁴⁰Evers gives several other arguments beside the one which follows for Cecilia being in the matrix clause, p. 47 ff. Also, Evers represents $[e]_{NP_1}$ by assuming sie₁ is present in the DS and deleted upon identity with Cecilia₁; since I am assuming obligatory control of base-generated PRO = $[e]_{NP}$ as outlined by Chomsky, 1976, 1977, and Chomsky and Lasnik, 1977, I will use this symbol in the following discussion.

⁴¹That is, we would like to say that rules do not move elements into embedded clauses. This is not strictly a violation of the SSC as usually formulated, since (i) Cecilia controls the subject of the

embedded clause, and (ii) more importantly, the SSC probably only applies to leftward (binding creating) rules, and not to a rightward "stylistic" rule. More on this in section 4.6.

⁴²In the last analysis considered in section 4.6., below.

⁴³I am assuming for expository purposes that sentence extraposition is an adjunction rule; that is,



⁴⁴Clearly, Dutch works differently from German. Since in German the "transformation" suggested by Evers is, as he notes, string-vacuous, it makes some sense to suggest that there is only a reanalysis involved (cf. discussion in main text). In the case of Dutch, however, there must be a movement involved, since the sequence of verbs clause finally is the mirror image of the German, as noted in 4.2. Thus, we must somehow account for the "odd" inverted lineup of verbs in Dutch. Evers mentions in an aside that the order in neither language is completely rigid. Assuming the lower indices to be the most deeply "embedded" verbs, the German order ... $V_1 V_2 V_3 V_4$ may in certain circumstances show up as ... $V_4 V_1 V_2 V_3$ or even as ... $V_4 V_3 V_1 V_2$. In Dutch, the opposite is true; while ... $V_4 V_3 V_2 V_1$ is the normal order, in case there are just two the "unflipped" order, ... $V_1 V_2$, is allowed optionally. This suggests to me that at one time the verbs in both languages were generated in the

(German) ... $V_1 V_2 V_3 V_4$ order, and that a reordering rule has entered both languages but is of limited application in German; its application is more widespread in Dutch, where it is all but obligatory. Since, under this analysis, the reordering is "stylistic" and reduces the nested dependencies which, according to Evers, even German native speakers find difficult, the progressive spread of the rule seems not surprising.

As previously noted, the analysis of the Dutch cases as instances of a minor movement rule will be discussed in detail in van Riemsdijk (in preparation).

⁴⁵For discussion of this notion of a phrase marker, see Chomsky (1955) and Lasnik and Kuprin (1976), among others.

⁴⁶Henk van Riemsdijk (personal communication) has suggested that there are dialects in which (for German) embedded infinitivals are allowed which do not "V-raise." For example,

(a) Weil mein Bruder das Lied zu singen sich vorgenommen hatte, ...
is good, and the alternative $[V_2+V_1]_V$ analysis is not possible because of the intervening reflexive. In this case, unlike the examples considered earlier, St1 cannot hop mein Bruder over a pronoun:

(b) Weil mein Bruder [es zu singen] sich vorgenommen hatte, ...
Because my brother it to sing undertaken had

*Weil [es mein Bruder zu singen] sich vorgenommen hatte, ...

(Cf. sentences like (76)).

As noted in chapter III (and by Lenerz), the application of St1 to subjects is problematical even in simplex clauses, however, and thus I leave this as a topic for future investigation, since the blockage of St1 in (b) raises more questions about conditions on the application of St1, or stylistic rules in general, than can be discussed here.

⁴⁷Cf., for example, Chomsky (1973).

⁴⁸Cf. Jaeggli (1977). In view of the earlier discussion of Spanish in footnote 28, I would suggest that clitic climbing may be a different rule from Cl. However, the facts coincide with the discussion in fn. 28: when the sentence is perceived to be bi-clausal, for example,

(a) [NP V_[+tns] [V_[-tns] cl ...]_{S₁}]_{S₂}

the clitic is clause second in the lower clause, as shown in (a); when reanalysis has occurred,

(b) [NP cl [V_[+tns] V_[-tns]]_V ...]_{S₂}

and the sentence is perceived as monoclausal, the clitic occurs in second position in the top clause, as shown.

Unfortunately, there are problems with trying to push this sort of an analysis. If this account is correct, then clitic movement would follow rather than precede reanalysis, contra the account given for German in the main text. Alternatively, there may be no movement as suggested by Rivas. (cf. comment in main text). A full discussion of Spanish is beyond the scope of this thesis, of course, and these are merely suggestions that an analogous process is involved across languages.

^{48a}This supports Lenerz's (1973, p. 38) hypothesis that PERM (i.e., St1) is also "post-cyclic". However, he suggests that PRONHOP (Cl) is also "post-cyclic" which, while it seems true of the Spanish clitic movement, doesn't seem to hold for my formulation of Cl, which is blocked apparently by SSC, and hence would occur before reanalysis. Since this is only one argument, and rather a complex one, for the status of Cl, further evidence may suggest an alternative analysis. A revision of Cl is

suggested in section 6.4., although the facts discussed there could perhaps be consistent (as could this formulation) with a clause-bound simple adjunction.

⁴⁹For example, Sag (1976), Hankamer and Sag (1976).

⁵⁰The grammar of noun-phrases is of course a full subject in its own right, and aside from a few comments about analogous or similar processes going on in argument assignment in NP's, I will restrict myself to clause-grammar.

⁵¹Or alternatively, by opacity conditions. Cf. Chomsky and Lasnik (1977), Chomsky (1977, forthcoming), Freidin. (1978).

⁵²I should mention in passing another set of facts which I take to be a case of this same (V-raising) phenomenon. In her dissertation (1975) and an article (1974), Ellen Kaufman discusses the movement of spatial enclitics in Navajo. Now, Navajo is a strictly verb-final language (and postpositional). Normally the spatial enclitic is attached to an existing NP in the sentence: [Kaufman, 1974],

[16.] Kii kinlání-déé' oolbąs.
 Kee Flagstaff+from 3+drive
 = 'Kee is driving from Flagstaff.'

In certain cases, however, where the NP is not present, the spatial enclitic (e.g., -déé from [16.] above) attaches to the verb of its clause:

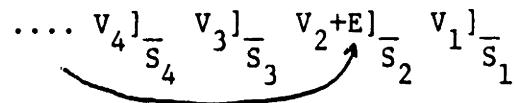
[30.] Jáan díí ashkii naagháńí-déé' yaa'áhonízin.
 John this boy 3+come+[?]+from 3+3+be-aware
 = 'John is aware of where this boy comes from.'

(I have replaced her gloss of -í- as COMP with -?-, since it is not clear that this is the COMP in the usual sense, and in fact precisely this is what is at issue in much of the discussion. There is left WH-movement in

Navajo as well as the rightward movement of the enclitics, suggesting that there is a left COMP position.)

Now the sentences in which this can happen are roughly equivalent, semantically, to what German and other IE languages express by embedded infinitivals, although there is no equivalent of infinitivals in Navajo. Rather, the embedded sentences are marked by altered person marking of the pronouns. E.G., "Mary wants I go to the store," means 'Mary wants to go to the store.' ("*Mary wants she go to the store," with this interpretation.)

Now Kaufman notes in the dissertation that when there are more than one embedded clause, with the spatial enclitic in the lowest can in certain cases move up several clauses: for example,



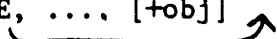
and claims this is the rightward analogy of unbounded leftward WH-movement through successive COMPs.

In view of the phenomena discussed in chapters III-IV for German, and the Spanish case mentioned as well, another alternative seems plausible: namely, that there is a minor movement rule,

Rule E: E, \dots, V

similar to the extraposition rule discussed for German, or the clitic climbing in Spanish. In support of this view, note that the movement can only take place when the string of V's can be reanalyzed as a single V: only over successive strings of V's belonging to clauses equivalent to embedded infinitivals, and not when there is intervening lexical material between the two verbs, preventing the reanalysis, as discussed in chapter IV (K. Hale, personal communication).

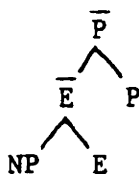
Furthermore, if we rewrite rule E, stating V as a combination of features (say of the Jackendovian system, $V = [+obj, +subj]$, $P = [+obj, -subj]$), we can obtain a further interesting result. (Cf. discussion of the German case in footnotes 8 and 10, chapter I.)

Rule E': $E, \dots, [+obj]$ 

Kaufman notes in the dissertation that there are postpositions as well as enclitics in Navajo, so that one has postpositional phrases as well as enclitic phrases: N+E and N+P. Now suppose these two have structures like



Since the enclitics cliticize to the nouns and the postpositions are separate words as well as being "more remote" semantically, one would expect that a phrase consisting of both an enclitic phrase and a postpositional phrase embedded one inside the other would have the structure



but in fact, she notes, the surface word order is "N P+E", not "N+E P". She leaves this as a puzzlement. But I think we might suggest this as another instance of rule E', which would move the enclitic around P's or V's alike, as stated here. While the detailed work necessary to verify such a proposal for Navajo is clearly beyond the scope of this thesis, I think in light of the cases we have seen of V-raising (or rather, V-reanalysis) and the behavior of clitic words and these minor adjuncts (component 6a.), it ought to be given some consideration,

particularly in view of the importance of the issue at stake; whether there is really a case here of unbounded rightward movement through a right COMP. Hopefully someone with access to the data will be able to do a more comprehensive analysis of this phenomena in this light.

⁵³Note I have generalized the SD for rule C1: \bar{X} instead of NP, the feature [-dat] instead of [+acc], since this really corresponds to the case system described in footnote 16A in chapter III. As we will see in chapter VI, an important point turns on this distinction.

⁵⁴For example, what prevents St1 from moving the NP moved by R2 back inside the sentence? First of all, we have already seen that a requirement for movement by R2 is greater definiteness, not less (cf. unstressed pronouns can't be moved by R2 as already noted), and secondly, the verb moved by R1 is not an \bar{Y} so the SD that fails.

⁵⁵For example, Chomsky (1976, 1977, 1978) and Chomsky and Lasnik (1977).

⁵⁶This dichotomy has also been captured in quite different frameworks by Bresnan (1977) and Marcus (1977).

⁵⁷I am omitting from this, of course, sentences which have a preliminary "topicalized" expression separated from the main clause by comma intonation:

(a) Gestern im Garten, wen hast du gesehen?

corresponding to English

(b) Yesterday in the garden, who did you see?

or (c) My sister, everybody likes her.

I assume these are in some presentential expression "E" as has been discussed elsewhere in the literature.

⁵⁸I will write "S?" instead of "S" in these structural diagrams, leaving open the question of whether or not this node directly corresponds to "S" in English. This turns out not to be an easy question as we will see in Sect. 6.4.

^{58a}Note that this is suggestive of an on-going historical process of fronting rules, which perhaps start out as simple adjunctions, then become reanalyzed as positions into which movement is possible; finally, they become frozen and are viewed as base-generated constituents. For example, a language might acquire rule R1 allowing the verb to be fronted in certain cases, and end up with a verb generated initially. This is not to suggest, however, that the onion-skin layered effect clause initially proceeds at the same "rate", or even in the same way in different languages. In Modern English, one might try to suggest that the adjunction-like structure clause initially is the result of historical fronting rules from an earlier SOV stage (too early to be attested, evidently), only the last two of which (movement into COMP, and to some extent, movement into subject NP) are still active processes.

Icelandic, on the other hand, seems to have frozen rule R1 giving a verb-initial base, but retained rule R2 actively in all clause types, so that we find the sentence structure to be " \bar{X} , V_{tns} , ..." where \bar{X} is some fronted constituent. (This is over-simplified; a detailed analysis will surely show this to be incorrect in certain aspects.) See also section 6.4.

⁵⁹There are also speakers who permit WH-extraction in these cases, evidently South German, Swiss and perhaps Austrian. I am assuming that

these dialects have different rules and should be studied in detail as separate languages, just, for example, Dutch, which also permits WH-extraction of this type.

⁶⁰But not from extraposed infinitive clauses:

*Was hast du Hans geholfen, (im Konzert) zu singen?

*Was hast du Hans versprochen, ihm als Geschenk zu geben.

??Was hast du Hans gezwungen, als Frühstück zu essen?

Also, there is a problem with extracting certain dative NPs from embedded infinitivals which is discussed in section 6.4.

^{60a}That is, while sagen is free in its choice of clause types, I mean that it can take either [+WH] and [-R1] clauses, or [-WH] and [\pm R1] clauses, but not a clause which is [+WH] and [+R1].

⁶¹Probably due to processing constraints: the English examples with multiple embeddings only involve the equivalent of rule R2, whereas the German examples of this type each involve three applications of R1 as well, which means saving in buffer memory not only the extracted WH, but three tensed verbs.

^{61a}Two points need to be noted here. First, the reader may have to experiment to find a parenthetical which sounds natural to him in (50). Once found, however, with the proper emphatic stress, such a parenthetical can truly go almost anywhere:

(a) ... in den -- es ist furchtbar zu sagen -- zu kleinen Garten ...

these are totally out with "sagte Hans":

(b)*... in den -- $\left. \begin{array}{l} \text{sagte Hans} \\ \text{Hans sagte} \end{array} \right\}$ -- zu kleinen Garten ...

Secondly, however, note that there is a literary (narrative) device of

interrupted quotes which gives the "sagte Hans" phrases considerably more latitude. What is meant here is the normal discourse sagte Hans.

⁶²Koster (1975b) has shown that we may want to analyze sentential subjects as occurring in "E":

[\bar{S} [\bar{E} [S_i Wen ich anstellen sollte]] [\bar{S} [COMP_i e] ist nicht klar]]

Similarly, extraposed sentences may, in actuality, be generated in place by the PS rules. This will have no bearing on the following argument, however.

⁶³Breckenridge explicitly rejects a Relational Grammar account early on in her thesis, after a good deal of discussion, which need not concern us here, except to note this here, since some problems arise later concerning the notion of "subject".

⁶⁴There is some problem in casemarking of the double accusative constructions, which in passive are double nominatives:

- (a) ACTIVE: Er nannte den Kaufmann einen Betrüger.
He called the(ACC.) merchant a(ACC.) swindler.
- (b) PASSIVE: Der Kaufmann wurde von ihm ein Betrüger genannt.
The(NOM.) merchant was by him a(NOM.) swindler called.

Since Betrüger is accusative in (a), it can't be an inherent nominative as in

- (c) Er ist ein Student.
He is a(NOM.) student.

However, my feeling is that this construction is similar with regard to case-marking to the so-called "body-part" constructions in other languages. For example, there is in Lardil a case-marking rule, discussed in Thiersch (1975), which simply marks the second of the two NP_i in the construction with the case of the first. For a full discussion of how it interacts with other grammatical rules, see that

which is good since the filter can no longer rule out *mir, er, and R2 is applicable to nominative pronouns.

Note also, incidentally, that this suggested base order shows that subcategorizations in German have to include the "subject" position, or more precisely, the whole clause. This will become more clear in section 6.4., when we discuss a variety of other cases; actually, the subcategorization has to include the node called "VP?" in the text, which in some sentence types corresponds roughly to English "S" and is a binding node, and in other ways corresponds to English "VP."

⁶⁹The node names used in the text are, of course, entirely arbitrary. As noted in fn. 68, the node "VP?" corresponds in some ways more closely to English "S" than does the node "S". It has been suggested that the German phrase structure rules, under this analysis, are roughly equivalent to the English ones suggested where

$$\bar{S} \rightarrow \text{COMP}, \left\{ \begin{array}{c} S \\ \bar{S} \end{array} \right\} \quad \text{and} \quad \bar{S} \rightarrow E, \bar{S}$$

Since the examples needed to resolve this are quite complex, I leave this open as a topic for future research.

⁷⁰It should be noted that this analysis is an extension of an idea broached in Lenerz (1973) in his discussion of passive, although dropped from his (1975) thesis. I think his earlier analysis is basically the correct one, with the additions and modifications suggested here.

⁷¹A wide variety of sentences including various lexical items, different kinds of extraction, different cases of transposition (St1=PERM), and both lassen and sehen/hören constructions were tried out on a number of

informants. While the results in general seemed to support, roughly, Hühle's judgments, there were many striking things that came out of this as well as discovered problems. For example, some informants seemed to consider helfen of type (B), allowing both permutation and WH-extraction, and others considered neifen to be like (A), permitting neither. Similarly, for many people, the constituent embedded under sehen seemed to be different than that embedded under lassen (cf. the English for/∅ distinction). Cf., for example,

- (a) Fritz liess dem Hans ein Bier (vom Ober) bringen. (or...bestellen,
holen.)
- (b)*Fritz sah dem Hans ein Bier (vom Ober) bringen.

Sehen does not allow the passive interpretation.

I hope to discuss these results at greater length in a future paper.

⁷²As noted earlier in fn. 71, I tried to rely on relative judgments with each informant, realizing that a full investigation of the difficult examples will take more time.

⁷³Again, I think a complete review of the facts using full-NPs in example sentences is called for, in light of the significance it might have in establishing underlying structure. Time did not permit reconstructing all the examples to test these cases.

⁷⁴In particular, as noted in fn. 71, different verbs allow, evidently, the embedding of different nodes; perhaps some \bar{S} , some "S?", some "VP?". The sehen cases are not allowed, as noted in fn. 71(b), and hence do not allow upstairs control either.

ERRATA: Missing footnotes

^{16A} That is, the cases would be NOM = [+nom, -dat], DAT = [-nom, +dat], ACC = [-nom, -dat], and GEN = [+nom, +dat] if expressed in "features." Hence, ACC could be regarded as the "unmarked" case, where "unmarked" is used in a technical sense referring to features. An important case discussed later in chapter VI will turn on this point.

^{66A} I have substituted die Jungen for her wir in [29a.]. Her original sentence is:

[29a.] Wir sind alle ins Kino gegangen.

for which some people accept the alle preverbally:

(a) Wir alle sind ins Kino gegangen.

This would seem to present a problem for the analysis just proposed, since presumably rule R2 could front only the wir. But since this seems to be limited to pronouns, one might suggest that in the pronoun cases only, the pronoun and quantifier form a single unit by some sort of contraction or reanalysis. While this gives the right string result, it presents a problem for the ordering of the components in the grammar as discussed in sect. 4.6, where rule R2 should precede (phonological) reanalysis. I leave this as a problem to be investigated.

MISSING BIBLIOGRAPHICAL ITEM:

FREIDIN, R. (1978) "Cyclicity and the Theory of Grammar" (to appear in Linguistic Inquiry 9:4)

BIBLIOGRAPHICAL REFERENCES

- AKMAJIAN, A., Culicover, P., and Wasow, T., eds. (1977) Formal Syntax. New York, Academic Press.
- ANDERSON, S. and Kiparsky, P., eds. (1973) A Festschrift for Morris Halle. New York, Holt, Rinehart, & Winston.
- BARTSCH, R. and Vennemann, T. (1972) Semantic Structures. Frankfurt/M.
- BIERWISCH, M. (1963) Grammatik des deutschen Verbs. Berlin, (Studia Grammatica, II)
- BRECKENRIDGE, J. (1975) Rules which nothing undergoes. Unpubl. B.A. Diss., Harvard University.
- BRESNAN, J. (1978) "A realistic transformational grammar" (forthcoming in Linguistic Theory and Psychological Reality, Bresnan, Halle, and Miller, eds. Cambridge, Mass., MIT Press.)
- CHOMSKY, N. (1955) Logical Structure of Linguistic Theory. Ph.D. Diss., Univ. of Pennsylvania. Reprinted by Plenum Press, N.Y., 1975.
- (1962) Syntactic Structures. The Hague, Mouton.
- (1973) "Conditions on Transformations," in Anderson, S. and Kiparsky, P., eds.
- (1976) "Conditions on Rules of Grammar," in Linguistic Analysis, 2:4, p.303 ff.
- (1977) "On WH-Movement," in Akmajian, A., et al., eds.
- (forthcoming) "On Binding" n.p.
- CHOMSKY, N. and Lasnik, H. (1977) "Filters and Control," Linguistic Inquiry, 8:3, p.425 ff.
- DEN BESTEN, Hans (1977) "On the Interaction of Root Transformations and Lexical Deletive Rules." Unpubl. mimeo, Univ. Amsterdam, Inst. voor Algemene Taalwetenschap.
- DUDEN: Grammatik der deutschen Gegenwartssprache. (Der grosse Duden, Bd.4) 2.Aufl. Mannheim, Bibliographische Institut, 1966.
- EMONDS, J. (1970) Root and Structure-preserving Transformations. Ph.D. Diss., MIT (Reproduced by Univ. of Indiana Linguistics Club, Bloomington, Ind.)
- ESAU, H. (1973) Nominalization and Complementation in Modern German. Amsterdam, North Holland Press.
- EVERS, A. (1975) The Transformational Cycle in Dutch and German. Ph.D. Diss., Rijksuniversiteit te Utrecht.
- FIENGO, R. (1974) Semantic Conditions on Surface Structure. Ph.D. Diss., MIT.
- (1977) "Remarks on French Clitic Order." Unpubl. mimeo, Queens College, City University of New York.
- HAIMAN, J. (1974) Targets and Syntactic Change. The Hague, Mouton.

- HALE, K. (1973) "Personmarking in Walbiri," in Anderson, S. and Kiparsky, P., eds. p.308, ff.
- HANKAMER, J. and Sag, I. (1976) "Deep and Surface Anaphora." Linguistic Inquiry, 7:3 .
- JACKENDOFF, R. (1974) "Introduction to the \bar{X} Convention." Mimeo, reprod. by Indiana University Linguistics Club. Bloomington, Ind.
- (1977) \bar{X} Syntax: A study of phrase structure grammar. (LI Monograph 2) Cambridge, Mass., MIT Press.
- JAEGGLI, O. (1978) "Spanish Infinitival Complements." Unpubl. MIT paper.
- KAUFMAN, E. (1974) "Navajo Spatial Enclitics: a case for unbounded rightward movement." Linguistic Inquiry, 5:4, p.507ff.
- (1975) Theoretical Responses to Navajo Questions. Ph.D. Diss, MIT
- KOSTER, J. (1975a) "Dutch as an SOV Language." Linguistic Analysis, 1:2, p.111ff.
- (1975b) "Why Subject Sentences Don't Exist." Unpubl. mimeo. Univ. Amsterdam / Univ. Utrecht.
- LASNIK, H. (1976) "Remarks on Coreference." Linguistic Analysis, 2:1, p.1ff
- LASNIK, H. and KUPIN, J. (1976) "A Restrictive Theory of Transformational Grammar." (to appear in Theoretical Linguistics)
- LENERZ, J. (1973) "Die Permutation benachbarter Nominalphrasen im Deutschen." Unpubl. mimeo, MIT/Universität München.
- (1975) Zur Abfolge Nominaler Satzglieder im Deutschen. Ph.D. Diss., Universität München.
- KAYNE, R.S. (1969) The Transformational Cycle in French Syntax. Ph.D. Diss., MIT
- (1975) French Syntax: the transformational cycle. Cambridge, Mass., MIT Press.
- MALING, J. (1972) "On 'Gapping and the order of constituents'." in Linguistic Inquiry, 3:1, p.101ff.
- MARCUS, M. (1978) A Theory of Syntactic Recognition for Natural Language. Ph.D. Diss., MIT
- MCCARTHY, J. (1976) [n.t. Syntax general examination on Classical Arabic] Unpubl. ditto, MIT
- QUICOLI, A.C. (1975) "Clitic Movement in French Causitives" Unpubl. MIT paper.
- (1976a) "Conditions on Clitic Movement in Portuguese" Linguistic Analysis, v.2, p.199ff.
- (1976b) "Conditions on Quantifier Movement in French." Linguistic Inquiry, 7:4.
- REINHART, T. (1976) The Syntactic Domain of Anaphora. Ph.D. Diss., MIT.

- REIS, M. (1974) "Syntaktische Hauptsatz-Privilegien und das Problem der deutschen Wortstellung," in Zeitschrift für germanistische Linguistik, 2:3, s.299ff.
- ROSS, J. R. (1970) "Gapping and the Order of Constituents," in Bierwisch, M. and Heidopff, eds., Progress in Linguistics. The Hague, Mouton.
- (1973) "The Penthouse Principle and the Order of Constituents," in You take the high node and I'll take the low node, Corum, C., ed., a Chicago Linguistic Society supplement.
- (1973a) "Nearer to Vee." Unpubl. ditto, MIT.
- (1974) "A fake NP Squish." Reprinted in NWAVE 1 (Proc. of the Conf. on New Ways of Analysing Variation in English, Washington, D.C.) Bailey, C.J., ed.
- (1975) "Clausematiness." in Formal Semantics, Keenan, E., ed.
- SAG, I. (1976) Deletion and Logical Form. Ph.D. Diss., MIT.
- THIERSCH, C. (1975) "Body-part in Lardil and Walbiri." Unpubl. ditto, MIT.
- (1976) "Review of J. Haiman's Targets and Syntactic Change" Unpubl. ditto, MIT.
- Van RIEMSDIJK, H. (1976) "On the Diagnosis of WH-Movement." Unpubl. mimeo, U. Amsterdam, Inst. voor Algemene Taalwetenschap. (also in NELS VII, Proc. of the North Eastern Linguistics Society.)
- (1977) The binding nature of prepositional phrases. Ph.D. Diss. U. Amsterdam.
- (in preparation) "The V-raising construction in Dutch."
- VENNEMANN, T. (1972) "Rule inversion" Lingua, 29, p.209ff.
- (1973) "Explanation in Syntax," in Syntax and Semantics, v.2, Kimball, J.P., ed.
- WACKERNAGEL, J. (1892) "Ueber ein Gesetz der indogermanischen Wortstellung." in his Kleine Schriften, Bd.1, Göttingen, Vandenhoesch & Ruprecht.

BIOGRAPHICAL NOTE

The author was born April 16, 1944, in Peoria, Illinois, attended Peoria Public High School and later the University of Illinois at Urbana-Champaign, majoring in mathematics, with minors in Russian and German. He was a graduate student of linguistics at M.I.T. in 1966-67, but dropped out to seek his fortune at a variety of occupations for six years in Cambridge, Mass. Having seen the error of his ways, he returned to M.I.T. in 1972. He plans to teach at the Seminar für englische Philologie of the University of Tübingen, Germany, after graduation.