

SYNTAX IN CONTRAST*

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I. A theory of grammar that aims for explanatory adequacy — as for instance EST — has to prove its value for contrastive linguistics as well. The basic tenet of EST is the investigation of the universal principles of human language (Universal Grammar). Marking the limits between universal and specific matters yields results of immediate relevance for contrastive analysis. Three points will be discussed:

- differences in the derivation: base-generated vs. derived (III)
- interaction between syntax and lexical properties (IV)
- the parametrical form of constraints on rule application (VI)

II. The ordinary working syntactician of the EST-type seems at first sight to pay little attention to the needs of contrastive analysis. The effort to find deeper and more revealing explanations appears to be concentrated on the study of a single language. Chomsky nevertheless claims that analysing a single language will lead to the discovery of many universal properties of human languages. The solution of this apparent contradiction works roughly in the following way:

Suppose we find a particular language having the property P. Suppose, furthermore that P is sufficiently abstract and evidence bearing on it is sufficiently sparse and contrived so that it is implausible to suppose that all speakers might have constructed grammars satisfying P by induction (or training). Then it is plausible to postulate that P is a property of the language faculty.

Note that we may plausibly postulate that P is a property of universal grammar on the basis of investigation of a single language. The argument rests on the alleged fact that something is known without relevant experience so that knowledge must be attributed to the language faculty itself, a faculty common to the species. (Chomsky 1977a : 65)

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It is the task of linguistic theory to discover the general structure of the language, faculty, referred to as Universal Grammar (UG) by Chomsky.

Investigations of a variety of languages offers a *corrective* (italics/mine). But it must be kept in mind that superficial study of language is rarely informative and becomes less so as linguistic theory begins to achieve a degree of deductive structure and abstractness. Furthermore, linguistic principles of any real significance generally deal with properties of rule systems, not observed phenomena, and can thus be confirmed and refuted only indirectly through the construction of grammars, a task that goes well beyond even substantial accumulation and organization of observations. (Chomsky forthcoming: 2)

Chomsky assumes that UG provides a highly restricted system of "core grammar" which represents the 'unmarked' case:

Core Grammar:

- | | |
|---|---------------------------|
| 1) Base (Version of X-theory and the lexicon) | |
| 2) Transformations | |
| 3a) Deletion | 3b) Construal |
| 4a) Filters | 4b) Interpretive Rules |
| 5a) Phonology and stylistics | 5b) Conditions on Binding |

1) and 2) constitute the syntax of the core grammar. Transformations are restricted to a single rule: *Move α* , where α is a category.

3a) to 5a) associate phonetic interpretation to surface structure, 3b) to 5b) associate representations in 'logical form' to surface structures. For a detailed discussion see: Chomsky 1975, 1977a, b; Fiengo 1974.

I shall concentrate on the implications of the components of syntax and logical form for contrastive analysis. The whole enterprise has been haunted by the problem of determining the "tertium comparationis". Among others, the following possibilities have been investigated into:

(1) Comparing *translational equivalent* (=representing the same proposition-structures):

This method suffers from the insensibility of grammars to filter out the syntactic triggers for semantic differences. It is by no means certain that semantic similarity warrants the conclusion of a similar underlying syntactic structure for any pair of sentences. This will be no surprise if we adopt the *autonomy hypothesis* for syntax.

A good though crude example are idioms. The propositional content of *tease* and *pull someone's leg*, for instance, is the same. The syntactic behavior of e.g. 'X teases Y' and 'X pulls Y's leg' is quite independent.

(2) Comparing *structural system* and *patterns*:

The disadvantage of that method lies in the explanatory inadequacy of the systems used for modelling grammars. As a consequence of the static view

processes of interaction between different systems cannot be captured in a straightforward manner.

(3) There have been attempts to use TG, comparing deep structures or the relation between deep structures and surface structures (cf. Krzeszowski 1971).

The success of the enterprise depended on the relevance of DSs with respect to the differences between languages and on the possibility of isolating the relevant aspects. Since DSs are not directly observable they have to be constructed in accordance with the transformational rules that map them on SSs, and since many of the rules seemed to be highly language specific the exact contribution of DSs for shaping SSs could not be decided generally. Finally, since it turned out that semantic interpretation had better take SSs as input, the prominent role of DS diminished. The problems indicated were connected with an 'Aspects'-Type of transformational generative grammar. Since then the restructuring and refinement of the theoretical tools — especially the success in developing a highly constrained¹ notion of transformation: *Move α* — lead to the possibility of isolating a few parameters of syntax, slight changes of which will lead to complex effects on generated structures. I shall mainly dwell on two of them: 1) Base-generated vs. derived; 2) Subjacency.

What we suggest is to contrast languages as to how their specific properties differ from UG, instead of investigating into differences with regard to special grammatical constructs, as for instance DSs or certain rules.

III. As for transformational rules, Emonds (1976) proposed that all such rules fall into a few restricted types. Among them are the cyclic rules, which are structure-preserving, i.e. the structure of the output is a structure isomorphic to base-generated structures. Bresnan (1976) has suggested that all structure-preserving transformations² should be replaced by lexical rules.

Without dealing with her arguments I want to exploit Wasow's (1977) suggestions in connection with the analysis of passives for contrastive analysis.

He offers distinguishing criteria for a decision whether a structure is derived or base-generated and has therefore to be accounted for by means of lexical rules. His conclusion is that there are *two sources* for passive structures in English, one transformationally derived and the other base-generated. He proposes the following criteria: Wasow (1977: 331)

¹ Constraints on transformations do not necessarily imply a more constrained theory of grammar since there is a trade-off relation between the components of a grammar. A *normal form of a transformation*, however, is necessary for keeping track of the counterbalance.

² As a matter of fact Bresnan (1976) equates 'structure-preserving' with 'function-dependent', which does not hold. Cp. e.g. example (8).

(4) Lexical Rules	Transformations
1. do not affect structure	need not be structure-preserving (cp. root-transformations)
2. may relate items of different grammatical categories	do not change node labels
3. "local"; involve only NPs bearing grammatical relations to items in question	need not be "local"; formulated in terms of structural properties of phrase markers
4. apply before any transformations	may be fed by transformations
5. have idiosyncratic exceptions	have few or no true exceptions

These properties of lexical rules are direct consequences of the organization of the theory. Criterion 3. deserves some comment. It is intended to cover the fact that the only information available for LRs is the information provided by the lexical entry. For our purpose that includes subcategorization frames, especially with regard to the complements of verbs, information about the case governed by the verb, and selectional features.

This property is opposed to the 'blindness' of transformations to relational properties and to the fact that transformations take whole phrase markers as input.

In the main line of the argument Wasow tries to show that some participles behave like base-inserted adjectives while others do not. I shall present a selective survey of the evidence:

Passive-participles as adjectives

(5) Occurrence in prenominal position

A The	}	broken filled painted cherished	} box sat on the table (Wasow (38))
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(6) Complement position of verbs requiring adjectival complements

John	}	acted became looked sounded	}	happy, elated annoyed at us convinced to run	} (Wasow (39))
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(7) 'un-' prefixed participles

Our products are untouched by human hands

*Human hands untouch our products (Wasow 40a, 41a)

For an extensive discussion of the nonderivability of 'un-' passives consult Hust (1977).

Derived passive-participles

(8) Double object constructions

- a) The United Fund was given *(\$ 10)
\$ 10 was given (to the United Fund)

It would be very difficult to specify the subcategorization features for 'given' analyzed as adjective.

- b) John is believed to be a fool.

Structures like this are convincing evidence for a transformational analysis since there is no relational dependency between the derived subject and the verb.

(9) Passive of idiom chunks

- a) *Headway has been made towards the solution of the problem.*
b) *Efforts have been made towards the solution of the problem.*
c) *Efforts have been indispensable for ...*
d) **Headway has been indispensable for ...*³

The ungrammaticality of d) can be explained if we assume that 'headway' is strictly subcategorized for the object of 'make'. 'headway' is therefore not expected in subject position unless it is a derived subject.

If we agree with Wasow that there are two sources of passive we are prepared to search for differences in syntactic behavior, since base-generated structures are constrained by criteria 4.3 (locality) and 4.4 (not fed by transformations).

The predicted properties follow:

- (10) a) *John $\left\{ \begin{array}{l} \text{looks} \\ \text{acts} \\ \text{seems} \end{array} \right\}$ given first prize every time we have a contest told the bad news (Wasow (54))
- b) Advantage $\left\{ \begin{array}{l} *sounds \\ is \end{array} \right\}$ easily taken of John

A comparison with German reveals similar properties. There are (at least) two passive constructions, referred to as 'Vorgangspassiv' (passive of action: PA) and 'Zustandspassiv' (passive of condition: PC):

- (11) a) *Die Gäste werden begrüßt.* : Vorgangspassiv (PA)
(=The guests are welcomed)
- b) *Die Gäste sind begrüßt,*
das Fest kann beginnen : Zustandspassiv (PC)
(=The guests have been welcomed
the party may begin)

³ Idiomatic NPs as head nouns of relative clauses do not invalidate the claim. e.g. The headway they made was incredible; In any analysis, raising or deletion, the generalization is captured: 'headway' has to be bound to a trace (by movement or interpretation) which occupies the object position of 'make'.

The morphological similarity between ordinary predicate constructions like (12)

(12) *Die Birnen sind reif* (=The pears are ripe)

and PC with respect to the copula is no reliable evidence for base-generation since the same regularity holds for PA:

There exist structures like (13)

(13) *Die Birnen werden (heuer sehr langsam) [reif]_{ADJ?}⁴*
 [= (This year) the pears are ripening (slowly)]

Nevertheless, this is what we expect to find if we analyze passive in the way proposed by Chomsky (1977a):

(14) [_{NP_e} be [_{AP en} [_{VP}]] (by NP)

(14) is mapped on the surface structure by an instance of the application of 'move NP' (The terminal symbol *e* results from the nonapplication of a rule expanding some category).

Since German shows two different copula constructions we expect to find two different passive constructions.

Application of Wasow's tests yield the following results for

German: Compare (15)–(19) with their respective counterparts (5)–(9):

(15) *die verrissene Aufführung* (=the performance, pulled to pieces)
Die Aufführung ist verrissen (the performance is pulled to pieces)

(16) *Avram wirkt schüchtern | ein jeschüchtert.*
 (Avram gives the impression of being shy | intimidated)

(17) *Die Chance ist (noch) ungenützt.*
 (The opportunity has not been taken advantage of)
 **Die Chance wird ungenützt.*

(18) *Sie nannten ihn einen Dichter* (They called him a poet)
Er wird ein Dichter genannt. (He is called a Poet)
 **Er ist ein Dichter genannt.* (He is called a poet)

(19) *Die Leviten werden den Linguisten gelesen.*
 (The linguists are being reproached)
 **Die Leviten sind* { *den Linguisten gelesen* }
 { *erstaunlich* }

As we see, the distinction between PA and PC correlates to the distributional difference between base-generated adjectives and derived participles.

There is additional evidence that PA and PC are syntactically unrelated:

(20) Coordination (Sinha 1973)

a) **The pilots are stationed in Thailand and satisfactory*

⁴ Note that there is an ambiguity. *Hans wird langsam gelehrt.* a) *John is taught slowly.* b) *John slowly becomes a scholar.*

- b) *Die Tür war geöffnet und unbemalt.*
 (The door was open and unpainted)
 c) **Die Tür wird geöffnet und unbemalt*

Suppose we derived PC from PA by means of 'to be'-deletion.

(21) a) *Die Tür ist geöffnet worden.*
 ⇒ *Die Tür ist geöffnet* ∅

Even though as it seems the rule could be designed to filter out the 'passive-be' there are immediate problems. The analysis would fail since there are structures of each type without corresponding counterparts.

(22) *Die Brücke ist gestern gesprengt worden.*
 (The bridge has been blown up yesterday)

**Die Brücke ist gestern gesprengt* ∅

The derivation of (22) would have to be blocked. On the other hand there is no structure where (23) could be derived from:

(23) **Das Fenster ist seit gestern geöffnet worden.* (Helbig: 144)
 (The window has been opened since yesterday)
Das Fenster ist seit gestern geöffnet ∅

No conclusive evidence can be drawn from participles in prenominal position for German (cp. Helbig: 144).

(24) *der gesuchte Bleistift* (the pencil that is searched for)
die aufgewendete Zeit (the time spent)
die ausgeübte Funktion (the practiced position)
das gelesene Buch (the book read)

In many cases the predicative use is ungrammatical. The semantic conditions⁵ responsible for the peculiar behavior are paralleled by 'bleiben' (remain)-constructions.

(25) **NP sein* [_{ADJ?}participle]
 e.g. **Der Bleistift ist gesucht.*
 **Der Bleistift bleibt gesucht*

However, we recognize that the semantic modification accomplished by prefixing 'un-' is sufficient to make these sentences acceptable.

(26) *Die Funktion blieb unausgeübt.*
Das Buch blieb ungelesen.

⁵ Cf. Helbig (1969: 144). There is a class of durative-imperfective verbs which, although a participle exists, cannot be attributed a mutative-perfective 'Aktionsart' to, necessary for property interpretation in PC. E.g. *ausüben*, *bitten*, *fragen*, *hindern*, ...

Phenomena like cited above must be kept in mind when we deal with passives. They show that data are not a priori labelled for syntactic or semantic explanations. For a detailed investigation into semantic constraints on passive see Bolinger (1975).

In essence there seems to be the following situation:

Passive, syntactically a copula structure, has two sources, both in English and German. In German the difference is reflected morphologically. The morpho-syntactic difference goes parallel with a semantic one:

'werden' indicates an action; or more precisely, an action being the acquisition of a property

'sein' indicates a property (commonly expressed by adjectives)

The occasionally noted relation between PA and PC, namely action vs. result, seems to be attributable to the semantics of the copula. When we consider (27) it is natural to conjecture that each interpretation is associated with one of the derivations (cp. Wasow 1977: 350)

- (27) *The door is closed* $\left\{ \begin{array}{l} \textit{Die T\ddot{u}r ist geschlossen.} \\ \textit{Die T\ddot{u}r wird geschlossen.} \end{array} \right.$
- a) *The door is not open.*
b) *Someone or something closes the door.*

The result for contrastive analysis seems to be trivial: There is a lexical difference as to which participles are specified as adjectives proper by a lexical redundancy rule.

Fortunately this does not amount to the triviality of Joos' dictum of the unpredictable variability of language, since the lexicon is not any longer viewed as a depository for otherwise unaccountable phenomena. There are two different and clearly distinguishable types of copula constructions one of which is accounted for by a movement rule, the other by a lexical redundancy rule.

IV. A similar source for contrasts — being connected with the Lexicon — is the *property of control* associated with verbs.

- (28) a) *I believed Bill to have left*
b) *I persuaded Bill to leave*
c) *I promised Bill to leave*

The underlying structure is according to Chomsky (details omitted):

- (29) a) *I believed [Bill to have left]* : no control
b) *I persuaded Bill [[e] to leave]* : object control
c) *I promised Bill [[e] to leave]* : subject control +[SC]

In the unmarked case control is governed by the Principle of Minimal Distance (in terms of c-command). Certain verbs are marked in the lexicon +[SC] indicating that they exceptionally require subject control. (cp. Chomsky *forthc.*: 43)

There are further properties of embedded clauses that have to be accounted for — the so-called island phenomena (cp. Ross 1967, Chomsky 1973). Two familiar examples:

Tensed-S-Condition (Chomsky 1977a : 90)

- (30) *The candidates hated each other*
The candidates expected [each other to win]
**The candidates expected [that each other would win]*

Specified Subject Condition

- (31) a) **Tom' seems to us [t₁ to like each other]*
b) *Tom appealed to us to like each other*
c) **It seems to us that Bill likes each other*

Chomsky notes that there is a redundancy, (28) c) being blocked both by TSC and SSC. He reformulates the conditions in a way that interesting consequences for contrastive analysis result.

(32) Assumption:

The subject of a tensed clause is assigned nominative case (Chomsky *forthc.*: 17)

(33) A nominative anaphor cannot be free in \bar{S} (*ibid.*: 48)

(34) If α is in the domain of the subject of β , β minimal, then α cannot be free in β .

'each other' being a nominative anaphor in (30) cannot be free in \bar{S} according to (33). Therefore it cannot be bound to the NP of the matrix-S.

- (31) a) 'each other' is in the domain of the subject of \bar{S} , thus according to (34) not free and cannot be bound to the object NP of the matrix-S.
(31) b) Underlying structure: ... to us [[e] to like each other] 'appeal' is unmarked, therefore *us* will control [e]_{NP}, which is a suitable antecedent for each other".

The familiar constraints follow from the reformulation. What remains to be accounted for is the fact that in structures of 'obligatory control' (cp. Chomsky/Lasnik) the embedded NP of

(35) h₃ to be [e], i.e. not lexically filled.

(35) [sw_h-phrase [s NP to VP]] (Chomsky *forthc.*: 24)

Leaving out Chomsky's lines of argumentation I summarize his solution. He notes that there has to be a filter.

(36) **N*, where *N* has no case (Chomsky *forthc.*: 33)

Case assignment, then, follows the general principles (37).

(37) a) NP is oblique when governed by P and certain marked verbs

b) NP is objective when governed by V

c) NP is nominative when governed by *TENSE* (Chomsky *fc.*: 33)

(38) *a* is governed by *B* if *a* is c-commanded by *B* and no major category boundary appears between *a* and *B*.

Note that these conventions permit an NP subject to be nominative while its trace is governed by V, but they do not permit an NP subject to be nominative or objective (i.e. nonoblique) while its trace is governed by P. If we interpret conflict of case assignment rules as assigning*, it then follows that there can be no preposition stranding under NP-movement, though there can be under wh-movement. This holds if we assume that oblique case is assigned in the base. (Chomsky *forthc.*: 35)⁶

Case assignment is taken to be clause bound in the unmarked case. Certain verbs are assigned a marked feature, call it *F*, which permits case to be assigned across clause boundary. An example is 'believe'. (cp. Chomsky *forthc.*: 38)

(39) I believe him to be a fool

The corresponding verbs in German and French are control verbs.

(40) **Ich glaube Wiltrud diesen Mann gesehen zu haben.*

(*I believe Wiltrud to have seen that man*)

**Je crois Ulli avoir vu cet homme*

Consider now the context of obligatory control (41).

(41) *V* ... [*S* comp ... [*NPE*] ...] where *V* is [*-F*] and *V* and *S* c-command one another

The rule of control for the context (41) can be given as (42)

(42) i) if comp ≠ null and *V* has no controller, then [*NPE*] is assigned ARB (=arbitrary)

ii) [*NPE*] is assigned the index of the nearest controller (i and ii apply in the order given)

A controller c-commanded by *S* of (42) is 'nearer' to [*NPE*] than one not c-commanded. (Chomsky *forthc.*: 43)

Thus case-assignment as well as control properties seem to be parameters useful for contrastive analysis as can easily be verified by a comparison of English and German passives.

⁶ Postulation of two levels for case-assignment seems to be an unelegant way of handling the facts. That is of course not so much an invalidating argument than a hint to consider alternative ways as well. Case assignment at SS only would have to meet the condition that for some structures case is governed by the trace which the NP is bound to.

V. Suppose the underlying structure for passive is (43).

(43) [*NPE*] copula [*AP* ... *VP*] (by *NP*)

German differs from English in the following respect:

German morphologically differentiates two types of NP complements — indirect object (dative) and direct object (accusative). As it is sometimes noted there is no major semantic difference between the various types of passive (PA).

(44) a)	<i>He was expected</i>	<i>ER wurde erwartet</i>	(nominative)
b)	<i>He was helped</i>	<i>IHM wurde geholfen</i>	(dative)
c)	<i>He was remembered</i>	<i>SEINER wurde gedacht</i>	(genitive)
d)	<i>He was waited for</i>	<i>AUF IHN wurde gewartet</i>	(prepositional)

(Helbig 1969 : 134)

Yet sentences (44) cannot be accounted by the same mechanism. (44) a) is parallel to the English passive but not b)–d). They have to be derived by means other than object-preposing. Let us consider b) in detail. The dative-NP cannot be fronted to the subject position. Since it is assumed that dative is assigned in DS it is carried along in the course of NP movement. First of all there will be a case conflict when the dative NP is moved to the position of the subject and should be assigned nominative case. Further evidence is furnished by subject-interpretation (previously called EQUI, now a case of control):

(45) a)	<i>Der Butler versuchte</i> [[<i>e</i>] <i>dabei unterstützt zu werden</i>]
	(<i>The butler tried to get supported</i>)
b)	* <i>Der Butler versuchte</i> [[<i>e</i>] <i>Dat. dabei geholfen zu werden</i>]
	(<i>Reis 1976 : 65</i>)

The ungrammaticality of b) follows if dative is incompatible with the subject position.

Note also that there is no subject-verb agreement:

(46) a)	<i>Den Kindern wurde geholfen.</i>
b)	<i>Den Kindern wurde der Kuchen gegeben.</i>
	(<i>The children were given the cake</i>)

Sentence b) is derived from (47) by topicalization, a very frequent and regular process in German.

(47) *Der Kuchen wurde den Kindern gegeben.*

It would therefore be natural to suppose that (46) a) is derived by the same mechanism.

There remains a problem to be solved: We took (43) to be the underlying structure of passive. (46) a) would then be derived on the following manner:

- (48) $[_{NP_e}]$ *werd*- $[_{AP}$ *den Kindern geholfen*]
 \Rightarrow *Topicalization*
Den Kindern $[_{NP_e}]$ *werd-geholfen*.

There is an unbound trace left and the sentence should be ungrammatical. A provision to be made suggests itself immediately.

- (49) *Es wurde den Kindern geholfen*.

We might guess that $[_{NP_e}]$ is replaced by 'es'. Before we can accept this solution we must show how the following sentence is ruled out:

- (50) **Es wurde dem Gast den Hut_{AC} gestohlen*.
 (*The hat of the guest has been stolen*)

This sentence is derived by non-application of move-NP (since it is optional) and insertion of 'es'.

The problem, in other words, is that object-preposing in passive of transitive verbs has to be made obligatory or provisions with a similar effect have to be made.

There exists a similar problem in English which has to be accounted for if we analyze passive in the proposed way. As it is possible to expand a node by inserting lexical material or to leave it unexpanded it is also possible to expand all nodes leaving no node open for NP-movement.

- (51) *Alexander PAST* [*be en*] *conquer Egypt by Plato*
 \Rightarrow
 **Alexander was conquered Egypt by Plato*

There seems to be involved a process of *property interpretation* (for a detailed discussion see Fiengo 1974) for copula constructions which rules out 'be conquered Egypt by Plato' as a grammatically possible property attributable to 'Alexander'. Essentially this is a problem related to word formation. Passives are analyzed parallel to copula structures with ordinary adjectives the difference being that AP dominates a VP node in passives. We have to specify conditions under which a participle may be interpreted as an adjective. Since adjectives generally determine properties which are attributed to a term, roughly speaking, it should be possible to find syntactic reflexes of that behavior in connection with participles. Fiengo proposes principle (52) for property interpretation:

- (52) *in the structure ... NP ..._a[... t ...] ...*,
 where NP binds t, a is interpreted as specifying a property of the intended referent of NP

The immediate consequence of (52) is that the copula cannot be interpreted unless a specifies a property, which gives an explanation for the ungrammatic-

ality of sentences with an NP other than *trace* in the object position of a transitive verb.

This apparently ad hoc condition will become more plausible if it can be shown that there is a close connection between passive and the attributive structure of adjectives. In fact there is a connection and it results from the base-structure, underlying passive: a copula structure parallel to predicative adjectives. The constraint is a consequence of the structure of AP, which does not allow a direct object.

Obviously sentence (50) is ruled out by principle (52).

We note that there are no adjectives in German⁷ requiring a direct object although there are a lot of adjectives which require dative or genitive or prepositional complements.

- (53) *der Toten eingedenk sein* (genitive)
der Frau treu sein (dative)
von der Aufführung begeistert sein

This seems to be a syntactic counterpart to the proposed LRR for base-generated passive.

- (54) $\left[\begin{array}{l} |x| \\ +V \\ +[NP - NP]_z \\ w \end{array} \right] \leftrightarrow \left[\begin{array}{l} |x| \text{ past participle} \\ +Adj \\ +[NP_a \text{ be} - (\text{by NP})] \\ w \end{array} \right]$

One problem is still left open, the status of "es".

An analysis of 'es' deleting trace would be parallel to the analysis of 'there'-insertion proposed by Milsark (1974).

Unfortunately the parallel does not hold in relevant aspects. 'there' behaves like a real subject syntactically which 'es' does not.

- (55) **Wird es den Freunden geholfen?*
 Will there be a revolution? (cp. also Breckenridge 1975)

Since topicalized phrases and 'es' are in complementary distribution this might suggest that 'es' is inserted in the topic position with the following structure for German sentences:

- (56) $\bar{S} \rightarrow \text{topic } \bar{S}$
 $\bar{S} \rightarrow \text{Comp [NP TENSE VP]}$

⁷ There are two exceptions: *Ich bin das Mädchen los* (I got rid of the girl); *Ich bin die Arbeit gewohnt* (I am accustomed to work). This accusative is referred to as 'Accusative by Error' in traditional grammar. Originally a genitive, it has been preserved in several idioms.

One difference between English and German passive would have to be accounted for by a modification of the rule of binding. We could imagine the following condition:

(57) If *topic* ≠ null, then [NPE] is deleted

There is another less ad hoc possibility which could be entertained. If we follow the minimal distance principle the precedence-command property of bound anaphora could be saved in another respect, if we realize that anaphora is checked at the level of logical form, the input being SSS, then we could interpret the topicalized dative-NP as a possible controller of [NPE] which would permit us to attribute semantically a property to the intended referent of the dative-NP. This would not be an undesirable result since it accounts for the semantic correspondence between (58) a) and b).

- (58) a) Den Kindern wird geholfen
(The children are helped)
b) Die Kinder werden unterstützt.
(The children are supported)

Yet, this is no promising avenue since the semantic properties are the same even if an adverb is topicalized and the indirect object is not moved.

In all cases—whether there is an 'es' or a topicalized phrase in the topic—there is still the possibility of assigning arbitrary reference to [NPE], which would be a syntactic account for the fact that quite a few transitive verbs seem to be used in passive as if they were intransitive.

- (59) Es wurde mit Begeisterung eingekauft
(Shopping was done with enthusiasm)

We propose to replace (57) by (60).

- (60) If comp null and [NPE] is not in the domain of V, then
[NPE] is assigned ARB. (arbitrary reference)

As for passive of intransitive verbs the solution seems to be semantically equivalent to an analysis in terms of subjectless sentences.

VI. The applicability of the transformational rules of 'core grammar' is supposed to be constrained by subjacency. Let us suppose that syntactic rules of core grammar are identical for a wide range of languages. Let us suppose furthermore that the principles constraining the rules are identical. What causes the contrast then in the syntactic structures of the respective languages are the *different parameters* of the constraint. As an illustrative example we shall consider the subjacency constraint. I shall rephrase it in terms suitable for discussion.

- (61) No rule may move an item A to a position X unless A and X are contained in the same or the adjacent domain.

Thus, parameters specify what counts as a domain and determine thereby the actual content of the constraint. For German bounding nodes for subjacency seem to be

\bar{S} , NP (universally perhaps), S, PP.

I shall try to demonstrate with a few examples that the English data are compatible with the following subjacency-domains:

\bar{S} , NP, PP (not S)

One effect of the different set of parameters, is obvious. In German a wh-item cannot be extracted out of the following configuration:

- (62) [comp [S... [PPP — —]]]

That accounts for the fact that a preposition cannot be stranded in German.*

- (63) Who did you talk about?
*Wen habt ihr über gesprochen?

Evidence for PP as a bounding node in English and German:

1) Extraposition of relative clauses

- (64) Which magazine — did you see it in which was lying on the table
(Baltin ms.)
*In which magazine — did you see it which was lying on the table
Ein Buch ist erschienen, das mich zu lesen ekelt (literally: A book appeared which to read makes me sick)
*In einem Buch fand ich diese Stelle, das mich zu lesen ekelt.

2) wh-movement

- (65) *What did John destroy a book about?
As Horn (1977) showed, the PP is contained by the NP.

3) Left-Branch-Condition (German)

- (66) Was hast du gestern — schreckliches gesehen?
(literally: What did you see terrible yesterday)
*Was bist du gestern auf — schreckliches gestossen?

In English, PP and S exclude each other as bounding nodes:

* For a different analysis cp. v. Riemsdijk (1976). I do not discuss his proposal since I am primarily interested in the logic of the argument with respect to contrastive analysis.

(67) Who did you buy this for?

Sentences like (67) would be ruled ungrammatical if both S and PP were bounding as it is the case in German. Crucial data for a choice between S and PP are of the following type:

If *S* is not bounding and PP is bounding, wh-movement of the whole PP-phrase embedded in a NP should give better results than extracting the wh-word only. If *S* is bounding and not PP on the other hand, there should not be a difference.

The data are not uncontroversial but seem to support the line of argumentation in favor of PP as a bounding node for English:

(68) *Who is a picture of — hanging on the wall?
? Of who is a picture hanging on the wall?

Here the function of the Subject Condition is fulfilled by PP as a bounding node.

In German *S* is clearly bounding:

(69) *Worüber [_S hast du [_{NP} ein Buch [_S zerstört]?

Similar sentences are nicely accounted for by subjacency.

(70) a) Von wem ein Bild zu sehen freute Hans?
(literally: Of to see a picture made John happy)
b) *Von wem freute ein Bild zu sehen Hans?

Sentence b) shows that the wh-phrase can only go to the first comp, i.e. the comp of the embedded complement sentence. In German the rule of verb-second places the finite verb in a main clause after the first constituent. The ungrammaticality of (70) b) follows from the assumption that *von wem* cannot be in the comp of the matrix sentence since then comp would be the required single constituent for verb-second. Movement to the higher comp is prohibited by subjacency. Notes on counterexamples: The following sentence seems to be a counterexample for S-bounding (Chomsky 1977b) as well as for PP-bounding or the NP-constraint (Horn 1977).

(71) What [_S did he express [_{NP} the fear [_S that I might do —]]]

Chomsky (forthc.: 19) suggests that there are bridge conditions for wh-movement such that with certain matrix verbs \bar{S} does not count as a bounding node for subjacency, as a marked property of these verbs.

This would not support an S-bounding analysis or the NP-constraint but it supports the analysis where *S* is not bounding.

(72) *About whom did John destroy a book?

Superficially (72) seems to disconcert the proposed analysis with PP and not *S* as bounding nodes. The explanation I want to suggest is exemplified by the following data presented by Culicover and Wexler (1977: 51).

(73) Mary is the author (*who is) of this book
Which book is Mary the author of?

Susan proposed mercy (*that was) towards the victim.

Who did Susan propose mercy towards?

Horatio measured the length (*which was) of the bridge.

What did Horatio measure the length of?

Sam proposed a solution (*which was) of your problem.

Which problem did Sam propose a solution of?

Sam proposed a solution (which was) of little interest.

*How much interest did Sam propose a solution of?

I found a box (which was) of pine

*Which kind of wood did you find a box of?

We cooked the meat (which was) in the refrigerator.

*Whose refrigerator did you cook the meat in.

The ungrammatical result of wh-movement follows from the assumption that the respective cases contain reduced relative clauses. Wh-movement then is prohibited by subjacency.

(74) [_{NP}... [_Srelative clause]]

The German example in (74) could be used as a counterexample too.

(75) Das Buch [_{comp} [_S [_Swh-zu lesen] mich ekelt]⁹

Subjacency should rule out this sentence since wh-movement has to cross *S* and \bar{S} .

(76) Witurd schien [_S [_S [e] betrübt zu sein]]

Witurd seems to be distressed.

As we see from (76) subjacency is permitting movement across *S* and \bar{S} boundaries provided that they are adjacent, i.e. *S* is the leftmost proper subtree of \bar{S} . The same explanation holds for conjoined structures:

(77) comp wh [_S [_S ...] and [...]]

VII. To summarize, the implications for contrastive analysis seem to be:

1) There will be differences in the patterns generated by the base component, explained in parameters of the X-theory. I did not discuss it explicitly but do not want to miss mentioning it since these differences bear on the question of the analysis of sentences in terms of base-generated vs. derived. 2) There will, of course, be differences in the lexicon. The control properties, for instance, are syntactically relevant for contrasts. 3) Among the syntactic principles worth contrasting there will be parameters of subjacency and bounding parameters of case assignment.

Thus a few principles suffice to explain a wide range of data, small changes of the parameters lead to complex differences at the level of the surface.

⁹ For the contrast between English and German in this case I do not have a clear solution. We might assume that in English the subject clause is dominated by NP whereas it is only *S* in German.

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