

Word Order in English: Old Problems and New Answers

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In the following, I would like to discuss a very old problem of English syntax that has found surprisingly new answers recently. The old problem is the status of English as a "fixed word-order" language. And the new answers are concerned with the questions of how word-order regularities arise and what they tell about the structure of the language.¹

1. The Standard Hypothesis: Fixed Word-Order & Layered VP

It has been a standard assumption of Modern Linguistics during the last 25 years or so that English is a paradigm configurational language. This does not only apply to the strict SVO order, with its Subject-Predicate, or: NP-VP structure. The Verb Phrase itself is standardly assumed to be configurationally organized also. Thus, in the examples of N⁰ (1), it is the ordering of the *a*-sentence that represents normal word-order, whereas deviations from this order lead to ungrammaticality or a loss of acceptability, at least:²

(1)			C	C	A	A	A
a.	John treated	[his wife]	[badly]	[three times]	[at the party]	[last night]	
b.	*	[badly]	[his wife]	[three times]	[at the party]	[last night]	
c.	*	[his wife]	[three times]	[badly]	[at the party]	[last night]	
d.	*	[his wife]	[three times]	[at the party]	[badly]	[last night]	
e.	*	[his wife]	[three times]	[at the party]	[last night]	[badly]	
f.	?	[his wife]	[badly]	[at the party]	[three times]	[last night]	
g.	?*	[his wife]	[badly]	[at the party]	[last night]	[three times]	
h.	?	[his wife]	[badly]	[three times]	[last night]	[at the party]	

The verb *treat* takes a DO and a MANNER adverb as Complements, and requires, as any transitive verb, that the NP precedes any other Complement (cf. N⁰ (2a)); hence the ungrammaticality of *b.* Furthermore, as the sentences *c.-e.* seem to indicate, Adjuncts may not come before Complements, with the additional effect that reorderings become worse the farther the Complement adverb *badly* is separated from the verb. This is captured in (2b). A similar effect occurs in *f. & g.* when the FREQUENCY adjunct is postposed behind the PLACE & TIME adverbials. This has led, e.g., Jackendoff (1977) to the distinction of restrictive & nonrestrictive Mo-

¹ The present paper is a slightly enlarged version of a talk given at the University of Constance, Dec. 17, 1992. Despite some editing, it still preserves much of the character of the oral version, in particular, in that many technical/theoretical aspects are treated only perfunctorily, perhaps to the disappointment of the more formally oriented reader. But I like to think that a more general perspective may have its merits also.

² My informants for these and the following data were various native speakers of English living in the Göttingen and Tübingen/Stuttgart areas. I am particularly grateful to R.D. Van Valin (SUNY, Buffalo), Ben Shaer (Göttingen/Montreal) and Joachim Tuschinsky (Göttingen) for discussing a previous version of the paper with me. They are not responsible for the content, though.

difiers and the ordering hypothesis (2c) that the former have to precede the latter type of Adjuncts (similarly Williams 1975). Finally, even among nonrestrictive Adjuncts, ordering seems to obtain, as school grammars teach us as the PLACE-*before*-TIME rule (2d).³

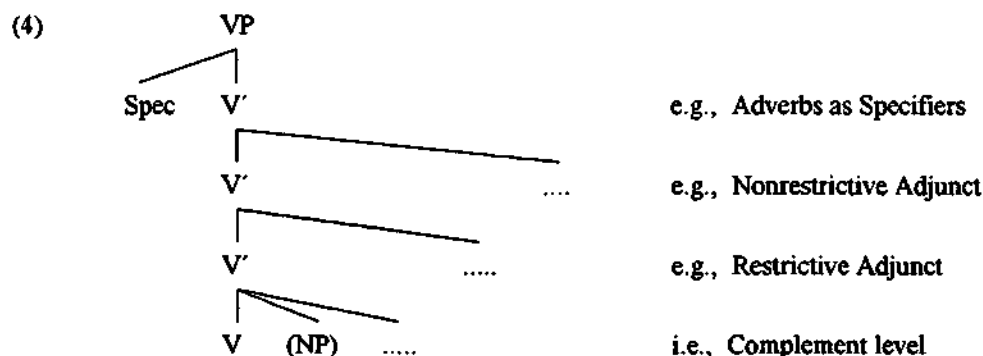
- (2) Word-Ordering in the English VP:
- (a) An NP complement precedes any other other complement
 - (b) Complements precede Adjuncts
 - (c) Restrictive Adjuncts precede nonrestrictive Adjuncts
 - (d) PLACE precedes TIME

Such ordering effects could be replicated with many verbs. And even though the ordering statements in (2) clearly do not have equal statuses, their conjunctive effect is to give English the appearance of being a fairly strict word-ordering language.

The NP-First effect of (2a) is commonly seen to follow from Case theory, i.e., that a nominal must be Case-governed and that a Verb can Case-govern a nominal only adjacently. And the Complement-Adjunct ordering of (2b) may be ascribed to lexical semantics & θ -theory, say: lexical arguments need to be as close as possible to their head. Independent evidence for these ordering restrictions is provided by the constituency tests of modern linguistics. Thus, Complements and Adjuncts behave differently under grammatical processes, such as *So* SUBSTITUTION, as shown in (3):

- (3)
- | | | | | |
|----|--|-------------------|------------------|----------|
| | C | C | A | A |
| | John will drive [his car] | [into the garage] | [for a check-up] | [today], |
| a. | and [<i>so</i>] will Bill | | | |
| b. | and [<i>so</i>] will Bill tomorrow | | | |
| c. | and [<i>so</i>] will Bill for a repaint tomorrow | | | |
| d. | *and [<i>so</i>] will Bill to the station for a repaint tomorrow | | | |
| e. | *and [<i>so</i>] will Bill the bike to the station ... | | | |

The ungrammaticality of *d.* & *e.* shows that Complements cannot be separated from the verb by substitution, but Adjuncts can, as *b.* & *c.* show. And if there are more of them, each Adjunct appears to constitute a level of its own. This gives the picture that the verbal domain is structured *from the inside out*, with a minimal COMPLEMENT domain at the core, and Adjuncts layered in shells on top of it, as shown schematically in (4):



Thus, lexical considerations, unmarked ordering and constituency tests converge to let English appear to be a strict configurational language.⁴ And this, in turn, complies with the

³ Ex. (1b) is o.k. for R.D. Van Valin.

⁴ Structure (4) corresponds to an analysis à la Jackendoff (1977), abstracting away, though, from his Uniform Three-Level Hypothesis, which includes the Subject phrase as a Specifier in the V-projection. This is quite

traditional assumption, taken up by Haider (1988) recently, that languages are characterized by an inverse relationship between richness of morphology and rigidity of word-order, as given in (5):

- (5) (a) (rich inflection \Leftrightarrow free word-order) \Rightarrow "flat" structure
 (b) (little/no inflection \Leftrightarrow fixed word-order) \Rightarrow "configurational"

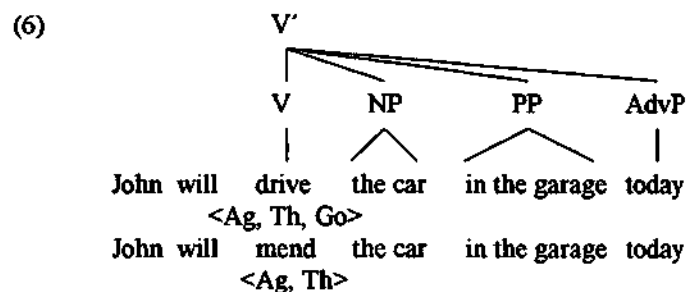
Acc. to (5b), English, having lost most of its inflectional morphology, has become a fixed word-order language, expressing grammatical relations configurationally rather than morphologically.

2. Recent Alternative Hypotheses

The evidence for this view of English seemed so clear and overwhelming that it has gone uncontested for quite some time. But in recent years, new ways of analyzing English clause structure have been proposed: partly based on a new awareness of empirical phenomena which appear to have been overlooked before; and, of course, also based on theoretical innovations that led to a rethinking of how to interpret empirical facts.

2.1 The "Flat VP" Hypothesis

One alternative to the standard view (cf. Czepluch 1989, 1992) claims that the English VP basically has a "flat structure", as shown in (6), rather than the layered structure of (4):



This analysis denies that the Complement-Adjunct distinction is a basic *structural* fact, at least for sentences in a neutral context. Hence, the same basic structure is ascribed to sentences with the 3-place verb *drive* and the 2-place verb *mend*. The two sentences only differ as to whether the verb thematically identifies the LOCATIVE phrase, or not.

This state of affairs is taken to fall out as the modular effect of the three parameters in (7):

different from the recent VP-internal Subject Hypothesis (e.g., Koopmann & Sportiche 1990), which holds that the Subject argument is thematically licensed in the SpecVP position, but must move to SpecIP, where it is licensed for nominative Case.

Note that, although processes like SO-SUBSTITUTION may not break up the Θ -domain of a head, they may pick out any single adverbial or sequence of adverbials as falling *within/outside* the substitution domain. This conforms to the assumption in the standard text book of Radford (1988) that each Adjunct projects a single V' level, but not to the Fixed-Level hypothesis of Jackendoff (1977), according to which there are separate single levels for RESTRICTIVE and NONRESTRICTIVE ADJUNCTS, as given in (4).

- (7) a. **Head-Position Parameter**
A head X^0 appears at the *left / right* periphery of its minimal domain.
German: **right** English: **left**
- b. **Argument Licensing Parameter**
Arguments are (Θ -/Case-) licensed at the *left / right* periphery of a domain.
German: **left** English: **left**
- c. **Morphological Licensing Parameter**
The arguments of a head are distinguished *morphologically* in syntax.
German: **yes** English: **no**

For a 3-place verb like *geben / give*, the parameters yield a layered VP in German:

- (8) ... [vp [v-einem Jungen_{Dat} [v-einen Lolli_{Acc} geben]]]

The interesting case is English. The two complements are realized unmarkedly in the flat V-NP-PP structure (9). For expository reasons, its derivation is given stepwise in *a. - c.*:

- (9) ... [vp [v{v-give a candy to the boy}]]
- | | | |
|-----|--|--|
| a. | ... [v ⁰] | wrt Head Parameter |
| b. | ... [v ⁰ NP] | wrt Argument Licensing |
| c1. | *... [v ⁰ [v ⁰ NP] NP] | *wrt Argument Licensing |
| c2. | *... [v ⁰ NP NP] | *wrt Morphological Licensing |
| c3. | ... [v ⁰ NP pNP] | wrt Argument & Morphological Licensing |

Line *a.* represents the effect of the Head Parameter: Because of its left-peripheral position, V governs to the right. -- Line *b.* adds the effect of the Argument Licensing Parameter for the semantically closest (direct) verb argument: Since in English the left periphery is already occupied by the verb, Argument Licensing is satisfied in the next available left-peripheral position, which is right-adjacent to the verb because of rightward government. This yields V-NP adjacency of English (cf. (2a)) as a modularity effect. -- As to lines *c1-3*: The realization of a second NP argument, i.e. the indirect argument, has two aspects: It must satisfy both left-peripheral Argument Licensing (7b) and the Morphological Distinctness requirement (7c): HEAD-LEFT and Θ -LEFT, taken in conjunction, block the projection of a second argument domain as it results in German. Hence line *c1.* represents an illicit argument structure for English.⁵ The projected structure rather should be flat, as given in line *c2.*, which clashes with the Morphological Distinctness requirement, though: Contrary to German, which has distinct verbal Cases (Accusative, Dative & Genitive), English having lost its morphological Case distinctions, so there is only one verbal Case left, the Objective, can only license *one* NP object by Case. Hence, as in line *c3.*, the second NP argument must be realized with a Case assigner of its own, the thematically determined preposition *to*.

This parametric account is based on the assumption that the mapping of lexical properties onto X-bar syntax (i.e., the Projection Principle of Chomsky 1981) directly accounts for unmarked syntactic realizations of verbal arguments only. Modulo their lexical properties as to whether they are ad-V's, ad-VP's, etc. (cf. McConnell-Ginet 1982), adverbial adjuncts are freely generable in positions which are not used up for argument realization: i.e., the dotted

⁵ A structure as in line *c1.* would allow arbitrary non-thematic material to be realized preceding the IO phrase. Apparently, this would be empirically inadequate.

spaces in the German (8) and the open righthand side of a flat V^0 domain in English. This gives the overall picture that the German VP has a shell structure of layered single argument domains, whereas English shows a flat VP -or rather: V' domain- essentially.⁶

The analysis sketched here, was based empirically on comparative data of Complement-Adjunct distribution in English and German. Let us, therefore, have a quick look at some English data that do not fit well into the standard configurational picture of (4).

2.1.1 Unexpected Complement-Adjunct Orderings

As to word ordering in the English VP, it actually seems to be much freer than the statements of (2) let expect. Consider, e.g., the ex. in (10):

- (10) a. John left home [with Mary] [for Tokyo] [by train] [last week]
 b. [for Tokyo] [with Mary] [by train] [last week]
 c. [for Tokyo] [by train] [with Mary] [last week]
 d. [with Mary] [by train] [for Tokyo] [last week]
 e. [with Mary] [last week] [for Tokyo] [by train]
 f. [with Mary] [last week] [by train] [for Tokyo]
 ...

Of course, I do not claim that the Adjunct orderings are equally natural.⁷ But note that none of them is outright ungrammatical. In fact, as the Adjunct analysis of Radford (1988) (cf. n.4) seems to imply, there are no *syntactic* reasons to prefer one Adjunct ordering over the other. Thus, the appropriate *actual ordering* of Adjuncts would rather be a matter of semantic, pragmatic or contextual factors. So, some people might prefer version *a.* to *b.* & *c.* because of an *Animacy effect* that favors the order *animate before inanimate referent*. And *d.* may seem better than *e.* & *f.* if one prefers TIME adverbials to come last in a sentence, according to the school-grammar rule (2d).

A similar free ordering effect obtains among Prepositional Complements, as in (11):

- (11) a. John talked [to the candidate] [about the new policy]
 [about the new policy] [to the candidate]
 b. John argued [with the chairman] [about our decision]
 [about our decision] [with the chairman]

While this freedom of ordering has been ascribed to the lack of a Case Filter effect (e.g., Chomsky 1981), such an account does not hold for the fact that we even find Adjuncts naturally preceding Prepositional Complements, according to my informants, as in ex. (12):

- (12) a. John talked [to the candidate] [*for three hours*] [about the new policy]
 b. John travelled [*for two weeks*] [through Europe]
 c. John drove [the ball] [*with a tremendous blow*] [into the outfield]

This effect is even clearer with MANNER adverbs, as in the ex. of (13):

- (13) a. John laid [the book] [on the table] [*quickly*]
 [the book] [*quickly*] [on the table]

⁶ In Czepluch (1992), the issue is addressed of how to account of more internal VP structure in this framework, as it arises contextually under VP Deletion, Substitution, etc. phenomena (s.a. sect. 3.2.3.2). The question of the English double-object construction is taken up in sect. 3.2.2 and in Czepluch (1994).

⁷ In fact, R.D. Van Valin considers exx. (10e&f) as highly awkward.

which applies to the unmarked DO position, may not apply to a postposed DO, which is "frozen" to this process.

By these criteria, the second sentence from (13a), *John laid the book quickly on the table*, is indeed an unmarked word-order, as shown in (16), because contrastive focus can fall on each postverbal position:

- | | | | |
|------|----|--|-------------------------|
| (16) | a. | John laid the book quickly on the table, | but not his term paper. |
| | b. | | but not fast enough |
| | c. | | but not on the shelf |

And similar results can be obtained for most of the examples where Adjuncts precede Complements.

This effect supports our claim that Complements and Adjuncts need not be structurally distinct. Though not completely free, the ordering of Prepositional Complements and Adjuncts is much less regulated than that of NP objects. But, then, the statement (2a), or rather the parametrized principles of syntactic realization, such as those of (7), yield the almost only *absolute* ordering effect, the other ordering relations in (2) probably expressing *stylistic tendencies* rather than grammatical constraints.

2.1.3 Adjuncts and Sister-sensitive Processes

Other phenomena that do not fit into the standard picture relate to domain-specific dependencies between elements. The domain of an element is commonly determined in terms of the notion of C-COMMAND, which may be defined as in (17):

- (17) C(onstituent)-command:
A node α c-commands a node β iff. β is a sister of α or a dependent of a sister of α .

So, it is generally assumed that a reflexive pronoun must be C-COMMANDED by its antecedent. Hence, in sentence (18a), the Object antecedent c-commands the phrase that contains the reflexive pronoun. But the *with*-phrase is an Adjunct, as the *Do-So* test shows. Thus, contrary to the configurational view, the Adjunct must not be at a structural level higher than the object:

- | | | |
|------|----|--|
| (18) | a. | Bill annoyed [<i>Mary</i>] [with a picture of <i>herself</i>], and
Tom did so [with a tape-recording of her lecture] |
| | b. | This table has been eaten at e_1 (cf.: ... [_{VP} [_V eat (food)] at this table]) |
| | c. | He put [the lettuce] ¹ on the kitchen table last night [still wet] ¹ |

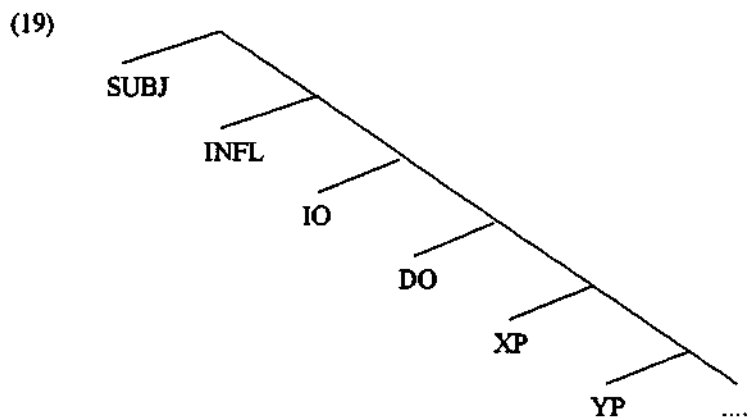
As to (18b), passivization is commonly thought to apply to Verb-sisters only. But Pseudo-Passives from an Adjunct position do occur also⁹, which again indicates that Complements and Adjuncts may be on the same level of structure. Finally, consider (18c), taken from Culicover (1988): The point is that SUBJECT-PREDICATE relations are again assumed to fall under C-COMMAND. If so, the Secondary Subject in (18c) c-commands its Predicate, and hence also the intervening TIME Adjunct *last night*.

⁹ Adjuncts do behave differently in this respect. Cf., e.g., A. Davison (1980) for the variety of phenomena of passivization from Adjunct positions.

2.2 The Second Alternative: Right-Branching English

Empirical phenomena like those just presented led me to assume a flat VP for English. In view of the respectability of the standard configurational view, I thought this analysis quite remarkable. But I didn't recognize at that time that different alternatives to the standard view on English word order and clause structure were already emerging --alternatives even more radical than the flat VP hypothesis. Since this new approach has been adopted meanwhile at the center of the Generative Enterprise, I think a comparison of the two approaches might be illuminating.

The empirical background for the new MIT standard is a new awareness of phenomena that not only call into question the old standard analysis, but even seem to indicate that the *left-right* order of elements reflects a *top-down* structure -as shown in (19), where, of course, much intermediate structure has been omitted and only the hierarchical relations are captured:



The data presented for the "flat VP" hypothesis are compatible with this view. But additional data seem to favor the top-down view.

2.2.1 Asymmetric C-Command & Binary Branching

The first piece of substantial evidence comes from asymmetries between Indirect & Direct Objects in the English Double-Object construction, extensively discussed in Barss & Lasnik (1986) and Larson (1988):

- (20) a. They showed *John himself* in the mirror
 b. *They showed *himself John* in the mirror
 c. They showed *John to himself* in the mirror
- (21) a. They sent *every owner his* new car
 b. *They sent *its owner every* new car
 c. They sent *every new car to its* owner
- (22) a. John told *noone anything*
 b. *John told *anyone nothing*
 c. John told *nothing to anyone*

All three phenomena are commonly assumed to fall under C-COMMAND. For REFLEXIVIZATION in (20), this has already been mentioned with respect to (18a). In (21), a pronoun bound by a quantified NP must be in the domain of the quantifier. And the so-called NEGATIVE POLARITY

item *any* in (22) must be in the domain of Negation or a negative quantifier.

Under this perspective, we see that the IO phrases in the *a*.-sentences c-command the DO phrases; but not vice versa, as the ungrammaticality of the *b*.-sentences indicates. Only in the PIO construction of the *c*.-sentences does the DO c-command the following PIO. -- Since c-command holds among sister nodes irrespective of order, it has been concluded from the *a/b*.-contrasts that the IO needs to *asymmetrically c-command* the DO --hence, that the IO has a higher structural position than the DO.

As the *c*.-examples in (20)-(22) already show, this asymmetry also holds for the relation between an NP object and Prepositional Complement. And the claim is that it holds generally. Sentence (18a), with REFLEXIVIZATION into an Adjunct, fits into the picture, as do the NEGATIVE POLARITY effects in (23):

- (23) a. John asked *no* questions at *any* time
 John said *nothing* at *any* party
 b. John looked for *no* particular girl in *any* place
 John depended on *noone's* help at *any* time
 c. John drove into *noone's* car on *any* occasion
 John informed us of *no* vote *anytime* last week
 d. John talked about it in *no* department at *any* time
 John talked about it at *no* time in *any* department

In (23a), a negated DO exerts a NEGATIVE POLARITY effect on an Adjunct; in (23b), it's a PO that affects an Adjunct; in (23c), the NEGATIVE POLARITY relation holds between a P-Complement and an Adjunct; and finally, according to (23d), there may even be a NEGATIVE POLARITY effect between Adjuncts. Since this effect shows up in both orders of the Adjuncts, it corroborates our view that Adjunct ordering is quite free grammatically.¹⁰

Clearly, the data presented pose severe problems for both the configurational and the flat VP hypotheses, since they seem to necessitate a consistent right-branching structure like (19). Note, though, that the analysis does not presuppose a strict linear ordering of Complements before Adjuncts, i.e., (2b).

2.2.2 Verb- & Object Movements

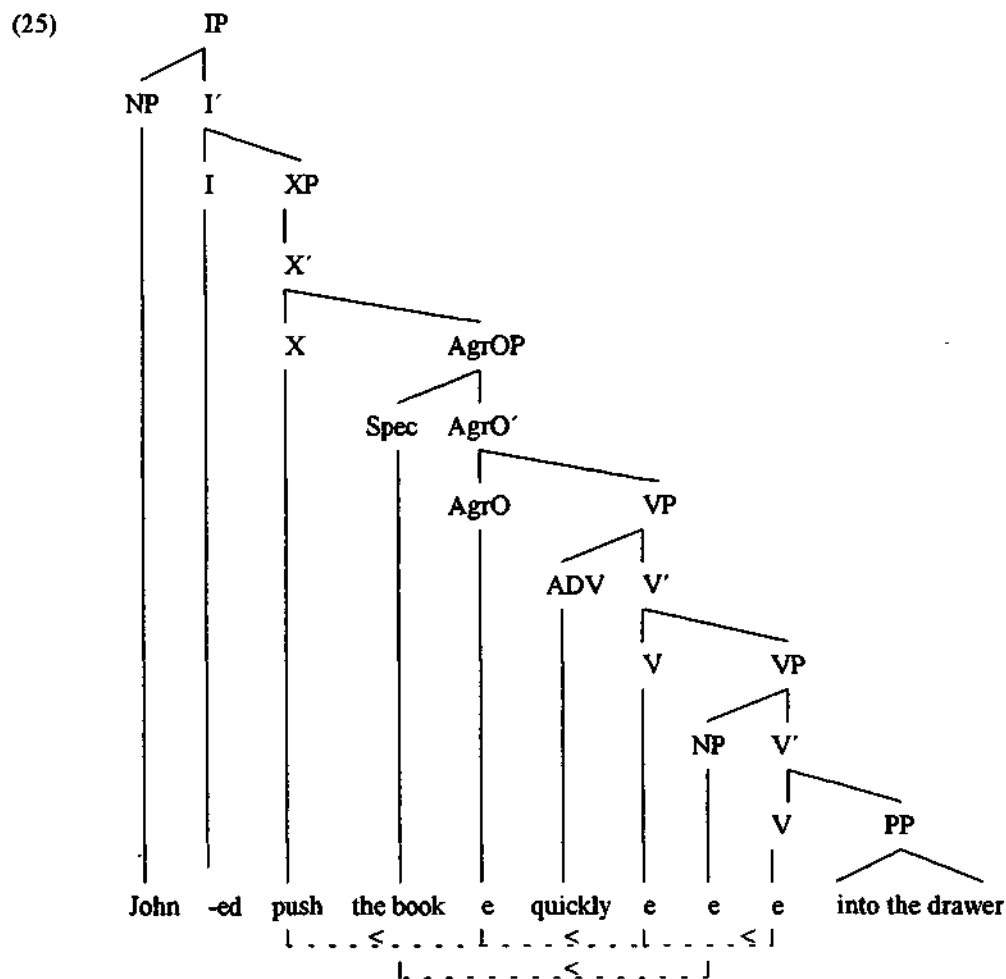
Let me now address a second aspect of the new analysis. That is the claim that the order in a sentence like (24a) arises from the movement of both the Verb and the Object to positions outside the VP:

- (24) a. John pushed the book *quickly* into the drawer
 b. *John pushed *quickly* the book into the drawer
 c. John *quickly* pushed the book into the drawer

The structure for (24a) would, then, look something like (25):¹¹

¹⁰ Of course, some of these examples may sound a bit peculiar. But this seems to be rather a matter of *stylistic markedness*, which may stem from the fact that it is preferable to use sentence negation when possible. So, instead of (23c) one may prefer the version *John didn't drive in anyone's car on any occasion*, or for (23d) the version *John didn't talk about it in any department ever*. But note that the alternatives, although equivalent in some contexts, may have different interpretation in other contexts, depending on the position of the Negation element.

¹¹ For ease of exposition, I do not split up the INFL features of the sentence into AGR_S & TENSE, as has



The verb moves for two reasons: first, to pick up its inflectional features outside the lexical VP, in this case the features of TENSE & SUBJECT-AGREEMENT; secondly, to license NP objects for Case inflection. And NP objects leave the basic VP to get their Case inflection in the Agreement-Object Phrase. Hence, both Subject & Object Case-marking are now assumed to fall under a generalized process of Agreement.¹²

Inflectional properties are regarded as being situated in an array of Functional Categories layered above the thematic VP domain of a lexical verb. They provide Head positions for local VERB MOVEMENT, and Specifier positions for OBJECT MOVEMENT. Generally, the only elements that remain in the basic VP are those that need not be licensed for inflectional properties by the verb, that is, Prepositional Complements and Adjuncts.

This analysis involves quite a bit of rethinking of how structural properties of sentences arise, what determines word-order, and what are the determining factors of language variation. So let me just mention what I see to be its major attractions and features:

become customary. I leave open how the landing site X^0 of VERB MOVEMENT should be called: In any case, a main verb may not reach the TENSE node, as, e.g., DO SUPPORT in Negative contexts and the inavailability of a main verb to SUBJECT-AUXILIARY INVERSION show. Hence the verb gets its inflectional features by AFFIX LOWERING, whereas Auxiliaries raise to the INFL position.

¹² AgrOP unifies Object/Subject Case-marking with Agreement under Spec-Head relations. Do we have to assume AgrP's for prepositional and adverbial Case-marking also? This has been proposed for PPs, but it seems less plausible for NP adverbials.

1. The conceptually perhaps most attractive feature of the analysis is that it aims at a systematically related and uniform account of verbal and nominal inflection.
2. Language variation, accounted for by parameters of universal principles, is now seen to reside almost only in language-particular features of Functional Categories as to their innumber, array and inherent properties. Thus, the thematic-lexical VP domain may be invariant across languages.
3. If this view of language variation is feasible, the word-order regularities across and in languages are primarily effects of the "reach" of Head & Phrase movements triggered by the properties of Functional Categories.

So much for the good parts of the new theory. But I still have some reservations about it, and, of course, I do not wish to give up my own analysis all too easily. In the following, I will raise a couple of questions. And, as before, emphasis will be not so much on theoretical aspects, but rather on empirical phenomena.

3. Some Critical Considerations

As I see it, it is no point of criticism that in the new analysis structures and processes may appear overly complex. In fact, there are really no new mechanisms introduced into grammatical theory:

- Structures like (25) are only apparently more complex than more conventional structures: Every part of the structure conforms to the X-BAR THEORY of phrase structure, which has to be assumed in some form or other, anyway.
- And VERB-MOVEMENT just generalizes from AUXILIARY MOVEMENT, the standard HAVE/BE SHIFT rule in the analysis of the peculiarities of the syntax of auxiliary & main verbs in English.
- And OBJECT MOVEMENT is simply another instance of movement to the SPECIFIER position of a higher phrase, as in the traditional MOVEMENT TO SUBJECT in passive or raising structures, and the *Wh*-MOVEMENT in interrogatives, relatives, etc..

But there are at least two aspects of the new analysis that deserve closer scrutiny: first, the independent motivation for a VP-external Object position in the AgrOP of (25); secondly, the top-down right-branching structure of (25), which is motivated by C-COMMAND effects.

3.1 On the Existence of AgrOP

Let's turn first to the empirical evidence for the existence of a VP-external Object position.

3.1.1 "Fixed" Adverb Position?

First of all, if it is assumed that the Verb leaves its basic VP, then there must be Object movement too, because of the adjacency effect for verbs and objects in English (cf. (24b)). The original argument for VERB MOVEMENT in Pollock (1989) is based on the assumption -taken over by Chomsky in recent works- that Adverbs are "fixed" in the Specifier position of the

basic VP in (25).¹³ Hence, the occurrence of Verbs in front of these Adverbs is taken as an indication of VERB MOVEMENT. And if you look at (24a): then the DO has to have moved over the Adverb also. This is quite different from the old standard and the flat VP views, where it is assumed that postverbal Adverbs can be generated *in situ*. But is there independent evidence for the *fixed Adverb* position? I am not sure about that: Because to account now for (24c), one has to assume that the Adverb moves also --over the derived Object & Verb positions. Well, if all elements are moveable, there seems to be no convincing evidence for a "fixed" Adverb position in the first place.¹⁴ And if so, there is no real evidence for VERB MOVEMENT; and subsequently, we lack evidence for OBJECT MOVEMENT also.

Well, Pollock has rightly been criticized by various authors for his undifferentiated view of Adverbs.¹⁵ That the Adverb problem is, in fact, more complicated is shown, e.g., by the sentences in (26):

- (26) a. John *probably* will *unnecessarily* have *repeatedly* been *rudely* insulting Mary
 b. John will *repeatedly* have *unnecessarily* been *rudely* insulting Mary
 c. John will *repeatedly* have *rudely* been insulting Mary
 d. ?John will *repeatedly* have been *rudely* insulting Mary

Apparently, there are quite a few Adverb positions before the VP, and particular Adverb types have different privileges of occurrence, as the rather fixed Adverb orders in (26a&b) show.¹⁶ Nevertheless, these Adverbs tend to appear as high as possible in the Auxiliary domain, as

13 Alternatively, one may prefer to assume that Adverbs are Chomsky-adjoined to the left of the maximal VP. This is more readily compatible with the recent VP-internal Subject hypothesis. And it complies with a distributional difference of subjects in German:

- a. weil die Leute *hier noch niemals* getanzt haben
^mweil *hier noch niemals* die Leute getanzt haben
 b. ^mweil Leute *hier noch niemals* getanzt haben
 weil *hier noch niemals* Leute getanzt haben

Definite/specific subjects are realized in (or moved to) the traditional SU-position SpecIP, i.e., the first position in the German *Middle Field*, as in *a.* On the other hand, indefinite/unspecific subjects tend to appear to the right/in the scope of certain adverbials and the Negation particle, as in *b.* This state of affairs falls out nicely if these adverbials and NEG elements are generated in a VP-adjoined position. -- Since in German passive and unaccusative subjects may appear in the DO position, as in *c. & d.*, there are actually three positions, SpecIP, SpecVP & ComplV⁰, in which subjects may turn up:

- c. weil [IP [VP [V-dem Jungen [V-der Lolli_{nom} weggenommen]]] wurde]
 d. weil [IP [VP [V-dem Jungen [V-der Lolli_{nom} gefallen]]] hat]

14 The old standard analysis ascribed the variability of V-ADV ordering to the "transportability" of adverbs (cf. Keyser 1968). In the approach of sect. 2.1, Adverbs are taken to be freely generable in various non- Θ -positions as long as they satisfy their lexically determined Scope properties.

15 E.g., S.Iatridou (1990), H.Nakajima (1991), C.L.Baker (1992). Pollock's fixed Adverb position was meant to justify different Verb Movement properties in French and English. But this assumption has been quite succinctly called into question in Iatridou (1990): firstly, on the basis that Pollock did not distinguish Adverb types with different syntactic & semantic properties, so that his conclusions as to when VERB MOVEMENT occurred and when not, are indecisive. Secondly, Iatridou shows that whether an Adverb can occur pre- or postverbally, has to do with semantic compatibility between the Adverb semantics and the Predicate semantics. If so, this is no independent evidence for Verb Movement. Pollock's fixed Adverbs have different interpretational properties, depending on whether they occur pre- or postverbally.

16 Now, there can be hardly any other order in (26a) for the Speaker-oriented Adverb *probably* (which like *certainly, frankly* etc. is special anyway in that it may appear pre-Modal), the Modal adverb *unnecessarily*, the Temporal adverb *repeatedly* (also: *often, seldom* etc.) and the Manner adverb *rudely* (like *carefully, hardly, completely* etc.). *Unnecessarily & repeatedly* can be reordered, as (26b) shows, but of course with a change of the modificational domain of *unnecessarily*. So these Adverbs have to be distinguished anyway as to their positional & semantic properties.

(26b) shows for *repeatedly*, and (26c) for *rudely*. Ex. (26d) might be slightly less acceptable because the Adverb *rudely* is not promoted. So again, it is not clear at all that observations from Adverb positioning really show the existence of VERB and, subsequently, OBJECT MOVEMENT. My impression is that the more complex Adverb structures rather seem to indicate that Verb and Object do not move.

3.1.2 The *Believe* Argument

There are stronger arguments for the VP-external Object position. To my knowledge, the strongest one is provided by data like (27), taken from J.Ouhalla (1991) & K.Johnson (1991). And this is the only one I will discuss in any detail:¹⁷

- (27) a. They believed John sincerely to be the best mathematician in school
 b. Who did they believe sincerely to be the best mathematician in school?

What's the problem with (27)? For one thing, we know that the Adverb *sincerely* must be a modifier of *believe*. On the other hand, we know from the lexical properties of *believe* that *John* is the thematic subject of its infinitival clause complement. This seems to mean that, if we assume that *sincerely* may not have been lowered into the infinitival clause, then it is the infinitival Subject that must have moved from its clause over the Adverb to a position where it can be Case-marked by *believe*. This position is assumed to be SpecAgrOP. Of course, *believe* must have left its basic VP, too, so that the structure would be something like (28):

- (28) ... believe [_{AgrOP} John_i [_v sincerely [_v [_{IP} ξ_i to be ...]]]]
-

It is easy to see that the analysis accounts for WH-MOVEMENT in (27b) too.

Clearly, these data are quite intricate. And they seem to fit well into the Verb & Object Movement analysis. But is (28) the most probable, or even the only possible, analysis of this phenomenon? A closer look at data like (27) may be instructive.

First of all, there is a curious difference in native speakers' judgements about such sentences. While almost all speakers accept the interrogative (27b), I find that my informants have split opinions about (27a). This is not what one would expect under the Functional Categories analysis since Verb and Object movements are triggered reflexes of verbal inflection and nominal Case-marking, and should therefore yield the unmarked ordering of elements. Whatever this split in native speaker's judgements means, this difference in acceptability is not what one would expect if (28) is the appropriate analysis.

Secondly, the acceptability of a sentence like (27a) decreases if, as in (29), the infinitival predicate becomes simpler:

- (29) a. ?They believe John sincerely to be there
 b. ?They believe John sincerely to have come
 c. ??They believe John sincerely to leave

Again, under the analysis (28), this is quite unexpected.

Thirdly, for the AgrO analysis, Small-Clause subjects should behave quite parallel to infinitival

¹⁷ R.D.Van Valin finds (27a) ungrammatical and (27b) questionable.

subjects. But, in fact, as (30b-d) show, in SMALL-CLAUSE Complements, the Subject and Predicate parts can hardly be separated at all:

- (30) a. They believed/thought/considered [_{SC}John [a fool/foolish/out of his mind]]
 b. ??They believed John sincerely the best mathematician in school
 c. *They believed John sincerely the best mathematician
 d. **They believed John sincerely a fool

Notice that (30b), a close parallel to (27a), is much worse than (27a). And as in (29), the acceptability decreases remarkably with the weight of the predicate.

Now, these effects, while unexpected under the AgrO analysis, are reminiscent of the Heaviness effects of the FOCUS SHIFT phenomena discussed in (14) & (15). And this seems to provide an alternative to the AgrO analysis. Because of the Heaviness effect it may well be that, as shown in (31a&b), infinitival and small clauses are generated directly in postverbal positions, as one would expect under a more conventional analysis, and that the Predicates of these constructions are extraposed to the end of the VP:

- (31) a. ... [vp[vpbelieve [_{IP}John _{S_i} sincerely] [_ito be ...]]
 b. ... [vp[vpbelieve [_{NP}John _{S_i} sincerely] [_ithe best mathematician ...]]

This directly explains the Case-marking of *John* by *believe*. And neither VERB MOVEMENT nor Movement of the embedded subjects to AgrOP would be necessary. Of course, I do not claim that this alternative is without problems descriptively or theoretically.¹⁸ But I would like to stress that apparently even data like (27) do not necessarily justify the existence of a VP-external Object position and the far-reaching consequences of the new analysis.

3.2 On Asymmetric C-Command

As far as I see, there may be at least two further major problems for the new analysis, one descriptive, the other of a more fundamental nature. Both relate to the underlying idea that *all asymmetric dependencies indicate structural C-COMMAND asymmetries* in the sense of (19) or (25).

¹⁸ As far as I know, PREDICATE EXTRAPOSITION has never been proposed before. But it should not be objected, in my view, that this process moves non-maximal and non-minimal constituents, hence violating deep-seated grammatical principles. I assume that Small Clauses have the structure [_{XP}SU [_{XP}...X⁰...]]. Consider, e.g:

- a. they saw [vpJohn leave the house]
 b. they saw [John quickly leave the house]

Ex. a. may seem to involve only a simple VP, with *John* in SpecVP. But as ex. b. shows, the structure must in fact be a bit more complex if one assumes that preverbal Adverbs are in SpecVP or VP-adjoined. Independent evidence for the Chomsky-adjunction analysis of Small Clauses comes from nominal Small Clauses, where the predicative part has a full NP structure by itself. Hence, the assumed process of Predicate Extraposition applies to maximal phrases, as it should be. Extraposition of *to*+VP may still seem problematic because it would be analyzed as single-bar constituent traditionally. But if *to* is the marker of [-finite]-Tense, and Agreement-Subject & Tense are separate Functional Categories, then in (31a) a complete TnsP may be extraposed, if infinitives have an *inert* AgrS projection.

3.2.1 C-command & Linearity

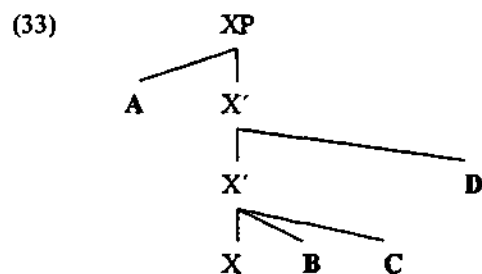
Before I turn to these aspects of the new MIT standard, let me point out that, in my view, the underlying assumption that C-COMMAND asymmetries always indicate structural asymmetries, is not as strong as it may appear. The asymmetries may just reflect a LINEARITY effect.

With the descriptive success of T.Reinhart's C-COMMAND relation over the PRECEDE-AND-COMMAND analysis of Langacker (1969), the possibility that LINEAR ORDER -or- PRECEDENCE- may be grammatically relevant, has been dismissed: PRECEDENCE was thought to be superfluous. But this may be too strong a position, as the COORDINATION data in (32) show:

- (32) a. [NP[NPJohn] and [NP^{his} friend]] / *[[NP[NP^{his} friend] and [NPJohn]]
 b. [[NPJohn's brother] and [NP^{his} friend]] / *[[NP^{his} friend] and [NPJohn's brother]]

In Coordination, the antecedent must precede a coreferential pronoun. And clearly, in (32a) the C-COMMAND relation between *John* and *his* holds under both orderings, yet the second is ungrammatical. And in (32b), there is no C-COMMAND relation at all between the two items, both being too deep in their respective NPs. Yet ordering is required. It seems then that this ordering restriction has to be expressed in terms of LINEARITY simply. But if PRECEDENCE is grammatically relevant in this case, it may be relevant for the asymmetries in (20)-(22) also.

It is definitely not intended to call into question the descriptive and explanatory value of the notion of C-COMMAND. But one may be critical of the recent tendency in Binary-Branching approaches to interpret *all* asymmetry effects as instances of asymmetric c-command.¹⁹ It may well be the other way round: C-command asymmetries have to be motivated independently in syntactic terms in the first place; and only then, they can be correlated with asymmetric dependencies of various sorts. That is to say: If there is ASYMMETRIC C-COMMAND between two elements, it is always the c-commanding element that determines the c-commanded element. Thus, in the simple X-bar structure (33), A or D may determine properties of B or C, but not vice versa. This corresponds with the standard view. But when two elements, as B & C in (33), stand in a sister relationship -that is: mutual c-command-, and only in this situation, PRECEDENCE becomes relevant: B may determine a property of C, but not the other way round:



This restricted use of LINEARITY has two consequences, at least: Firstly, structures need not be strictly binary-branching, i.e., multiple sister-relationships are licit. Secondly, the asymmetries

¹⁹ As it is the consequence of the Single-Complement hypothesis of, e.g., Larson (1988) or Hoekstra (1991a), or the Binary Branching Conjecture of Haider (1992, 1993).

In the following, I distinguish C-command and Linearity terminologically. Alternatively, one could build Linearity into the definition of C-command, so that (17) becomes something like (17'):

- (17') A node α c-commands a node β iff. either (a) or (b):
 (a) β is a dependent of a sister of α ; (= asymmetric c-command)
 (b) α and β are sisters and α precedes β . (= linearity)

in (20)-(22) that seem to favor the top-down analysis (19), can also be expressed in a flat VP. So, in this respect, there is no descriptive difference between the two approaches.²⁰

3.2.2 The Dative Problem

On the basis of the Double-Object data in (20) - (22), it has been argued that the IO must be hierarchically higher than the DO. I have already indicated an alternative to this conclusion. But, what is more, such an analysis seems to make false predictions.

3.2.2.1 Double Objects under Binary Branching

In a binary branching analysis, the IO has to be licensed in an Agreement phrase outside the basic VP, over and above the AgrOP.²¹ If so, it is predicted that the derived IO position is syntactically unmarked --hence, that the IO should be freely accessible to grammatical processes. This is true with respect to passivization, where it is widely assumed that the passive (34b) is derived from the structure of (34a):²²

- (34) a. They gave John the book
b. John was given the book

²⁰ Other linguists have captured certain asymmetric relationships in terms of LINEARITY also: E.g., Napoli (1990) assumes a flat VP also, which implies that secondary Subject-Predicate relationships are expressed linearly, the Subject necessarily preceding its Predicate. -- And Klein (1992) has based his analysis of Adverbial scope on the simple statement: *The scope of an adverb extends to the right*. The proper ordering of Adverbs falls out from inherent lexical properties, such as that one Adverb type has wider scope than another. Thus, differential Scope properties in the postverbal domain may not be due to hierarchical distinctions, but simply to lexical properties of the Adverbs involved.

²¹ Actually, binary branching analyses of the English double-object construction differ among each other, as, e.g. Larson (1988), Johnson (1991), Mulder (1992).

Larson's analysis, which does not make explicit use of Functional Categories, assumes a "passive"-like Dative Shift rule. Mulder takes issue with Larson's A-movement analysis of the Dative phrase: He questions the "passive" character of the double-NP construction and points out some problems with anaphoric binding.

Mulder himself suggests a Small-Clause analysis where the IO is base-generated as the SC-subject. If this were so, one would expect that the IO would more explicitly show subject properties; e.g., wrt Binding theory in blocking anaphoric relationships over the SC-subject. This is not the case, though: *Mary gave John a picture of herself*.

Johnson assumes that IO & DO form a complex DP, with the IO as SpecDP, an empty D head, and the DO a complement. It is quite unclear how Θ -marking of the IO & DO can be properly implemented wrt the empty D; how both IO & DO passives from such a structure could be licensed (cf. fn.22), etc..

In general, binary branching analyses of English double objects primarily aim at accounting for the Barss-Lasnik asymmetries, but they either do not address the "frozenness" of the IO phrase at all (Mulder is a rare exception in this respect) or are quite vague on this point.

The following criticism also applies to analyses that assume a relational advancement of the IO to "direct object" status (as, e.g., in Relational Grammar and Lexical-Functional Grammar). For a detailed descriptive criticism of the IO=DO assumption see Hudson (1992) most recently.

²² Alternatively, analyses such as, e.g., Stowell (1981), Czapluch (1982), derive the IO passive (34b) from the second Complement position rather: *John was* [_{VP} *given the book* e]. Note also that the passivization problem is a bit more complicated: As b. & c. show, the DO may be passivized over an IO, although this is

- a. ??The book was given the clever student
b. ?The book was given John
c. The book was given him

much better when the IO is a pronominal or a name, dialectal variations aside. *Prima facie*, these passives seem to speak against the explicit or implicit assumption in many analyses that passivization is possible only from a V-adjacent position. Recent binary branching analyses do not address this issue.

But, in fact, the IO is excluded from almost all other processes that normally operate on objects; a sample is given in (35):

- (35) a. *Who did they give the book? (= Dative Question)
 Who did they give the book to?
 b. *They gave John the book, not Mary (= Contrastive Focus)
 They gave the book to John, not to Mary
 c. Who did they give the book to? *They gave John the book (= Theme-Rheme)
 They gave it to John
 d. *It was John that they gave the book (= Cleft Sentence)
 It was John that they gave the book to

Hence, there must be something special about the Double-Object construction: In comparison to the PIO construction, which does not show such restrictions, it appears to be a marked, albeit common, syntactic pattern. And its markedness must be due to the IO position itself. The contrasts in (35) may be summarized to mean that the IO is "out of focus", hence, inaccessible to grammatical processes.²³ But exactly this fact is not expressed, and, I guess, not expressible, if it assumed that the IO asymmetrically c-commands the DO, as in (19).

3.2.2.2 Double Objects under the Flat VP Hypothesis

A quick look at how the Double-Object facts might be handled in a flat VP analysis, is in order (s.a. Czepluch 1994). I assume that any analysis of English double-object constructions has to account for two basic properties, at least: the IO-DO asymmetries of (20)-(22), and the marked status of the IO position.

For the prepositional IO construction, the flat VP analysis yields the structure (36), which should not cause any problems if it is accepted that the asymmetry effects between the DO and the PIO are accounted for by the LINEARITY condition on mutually c-commanding phrases as discussed in sect. 3.2.1:

- (36)
- (37)

If the structure for the IO-DO construction were as given in (37), the Linearity condition would again account for the asymmetry effects. But there would be no apparent possibility to account for the "out of focus"-character of the IO position. It seems to me that the marked character of the V-IO-DO structure is still best accounted for by treating the IO phrase as V-

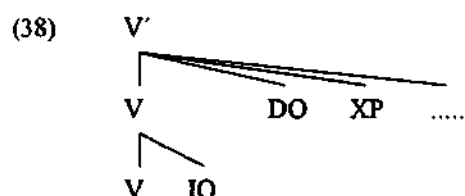
²³ More precisely, the IO phrase in V-NP-NP may be focussed, according to Drubig (1992). But it has narrow Focus only. This might mean that (35b) is not completely out, although my informants prefer the PIO version in this case. Nevertheless, the exemption of the IO position from grammatical processes is quite similar to the restrictions on Adjunction positions derived by Focus Shift (cf. sect. 2.1.2).

Note also that even for those speakers of English who tend to *accept* the Dative question (35a), WH-movement of the IO inside an embedded clause is less felicitous (cf. a.), and the extraction of an IO phrase from an embedded clause is hardly tolerable at all (cf. b. & (35e)):

- a. ??They didn't know [_{CP}who [_{IP}John [_{VP}gave _ε the book]]]?
 b. *Who do you know [_{CP}_ε that [_{IP}John [_{VP}gave _ε the book]]]?

Clearly, the lack of grammaticality cannot be ascribed to some property of WH-movement itself. Hence it must be due to the nature of the IO position. And this, in turn, means that (35a) should be ungrammatical, too. As argued by Hornstein & Weinberg (1981), ease of processing may render *ungrammatical* Dative questions like (35a) *acceptable*.

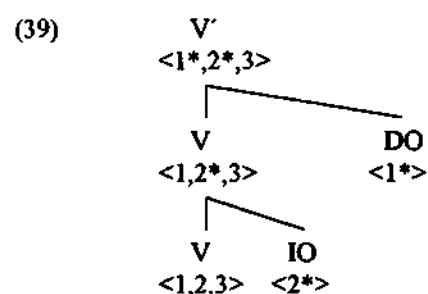
incorporated (similarly, the Freezing analysis of Culicover 1976, and the incorporation analyses of Stowell 1981 and Baker 1988). This gives a structure like (38):



While this analysis straightforwardly accounts for the marked status of the IO in that an incorporated element is no longer accessible to processes beyond the X^0 level, the question arises of how to account now for the Barss-Lasnik asymmetries on the basis of (38).

At first glance, the incorporated IO should no longer be able to c-command the DO, which is the precondition for exerting the asymmetric linearity effect. But what if the IO indirectly c-commands the DO via the incorporating higher V^0 node? This may not be inconceivable.

Under standard views of the process of Θ -saturation²⁴, the Θ -grid of a head is projected along the head-projection line, successively discharging a Θ -index. For structure (38), this would yield something like (39):



The process of Θ -discharge ascribes thematic properties of heads to projected categories. But it seems that it also ascribes properties of discharged elements to higher nodes. This has always been assumed for compositional SU- Θ -role assignment; and it can be seen from idiom chunks, e.g., [*take advantage*] of someone vs. [*take notice*] of someone, where *someone* receives slightly different thematic interpretations from the compositional readings of *take advantage* and *take notice*, respectively.²⁵ Hence, we may assume that the incorporating higher V^0 -node in (39) realizes the properties of the saturated IO features "2" also. In other words: A complex X^0 category instantiates the properties of its components. If so, we may assume that it is the IO features of the incorporating V^0 -node that c-command the DO phrase in (39) and hence exert the Linearity effects that yield the IO-DO asymmetries in (20) - (22).

If this approach is feasible, it would considerably weaken the argumentation from apparent c-command effects. And it becomes debatable, at least, whether one should really assume

²⁴ E.g., Higginbotham (1985); similarly Bierwisch (1988), Speas (1990), Drubig (1992), Haider (1993). In (39), Θ -indices are numbered according to their semantic closeness to the lexical head: "1" = *direct argument* (DO); "2" = *indirect argument* (here: IO), "3" = *external argument* (SU).

²⁵ Compositionality may also play a role in the THEME-LOCATIVE alternation *a/b*:

- a. They loaded hay on the wagon
- b. They loaded a wagon with hay (and we [[did so] with bricks])

Since the demoted THEME turns up as an Adjunct in *b.*, the alternation must be due to a lexical process affecting the Θ -grid (though not necessarily the lexical-conceptual structure). And the V-LOC composition now interprets the THEME adjunct as an "Instrumental", as it is called in more traditional terms.

AgrIO & AgrDO projections at all.²⁶

3.2.3 C-Command and/or Constituency

I will now argue that there is a second problem for the C-COMMAND analysis of asymmetries, which, apart from the probable relevance of PRECEDENCE mentioned before and the descriptive problem just discussed, may be even more fundamental. It seems that, as the Pollock-Chomsky analysis stands, it is in conflict with another basic principle of linguistic analysis.

It is assumed in all modern linguistics that grammatical rules and processes may operate on constituents only. Chomsky himself has repeatedly called this the PRINCIPLE OF STRUCTURE DEPENDENCE. Without this principle, we would have no formal basis at all for setting up structures and formulating rules or principles.

3.2.3.1 Constituency vs. Binary Branching

In binary right-branching structures like (19) or (25), Adjuncts are embedded under phrases which contain Complements. And that means that it becomes impossible to account for the phenomena that motivated the configurational shell structure of VPs in the first places. I think of the *Do-So* SUBSTITUTION data in (3) & those in (40a); in the latter case, neither *mend the car* nor *mend the car in the garage* is a constituent in a right-branching structure. Similarly, for the VP DELETION data in (40b), or the COORDINATION data in (40c):

- (40) a. John will [mend [the car [in the garage [on Monday]]]],
and Bill will do so on Thursday
and Bill will do so in the backyard on Thursday
- b. John will [mend [the car [in the garage [on Monday]]]], and Bill will [___] tonight
- c. John will [mend the car] and [paint it] in the garage on Monday
John will [mend the car in the garage] and [paint it there] on Monday

Well, if ASYMMETRIC C-COMMAND is the right mechanism to describe postverbal asymmetries, then the CONSTITUENCY PRINCIPLE cannot hold. But this is really a very high cost to pay. Actually, I think, it is too high a cost. If we want to preserve both principles, CONSTITUENCY and C-COMMAND, as seems wise, we have to constrain the use of one of them; and this has to be C-COMMAND, and its corollary that structures should be BINARY BRANCHING (Kayne 1984). This would mean, of course, that asymmetries between postverbal constituents should not *a priori* be interpreted as top-down right-branching structures.

²⁶ The objections, and the alternative, to the presently prevailing Agreement analysis of Object Case-marking do not necessarily carry over to the Split-INFL analysis for verbal inflection. I resist the temptation to go into this issue here. Only so much: It is clear that, if there is V-movement but no Object-movement, the question arises of how to account for the V-NP adjacency effect. But this aspect has to be made a bit more clear in the AgrOP analysis also, which must preclude sentences like *a.*, which just reflect the situation at licensing objective Case-marking under Spec-Head agreement in the framework of Chomsky (1989, 1992):

a. *John (...will...) [_{AgrOP}the book [_{AgrO}put [_{VP} [_{V'} ϵ ϵ on the table]]]]

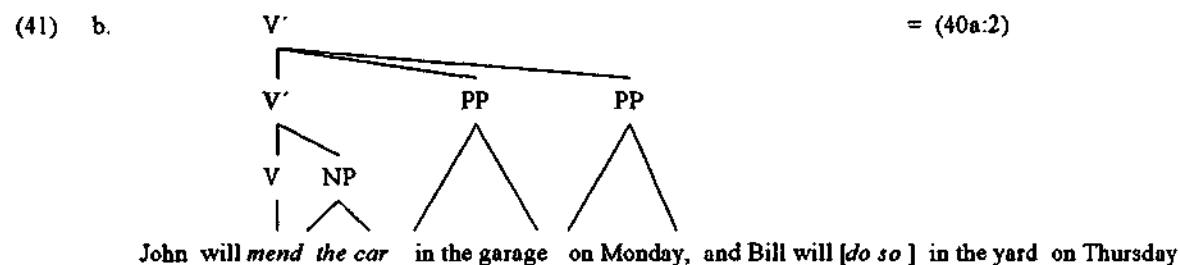
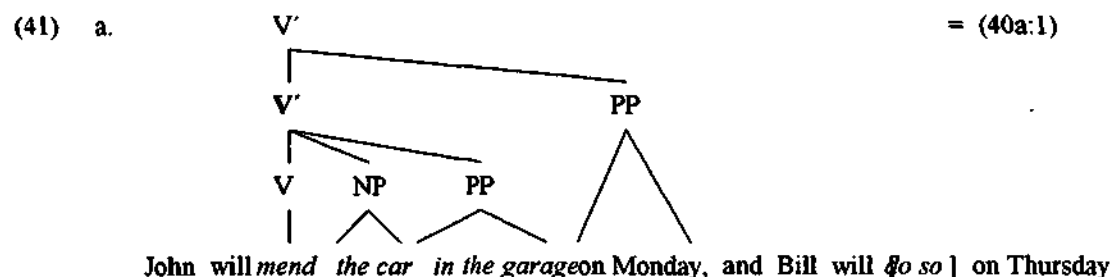
The issue is what motivates V-movement from AgrO⁰ to X⁰ in structure (25) for ex. (24a). Clearly, it is not the Tense features of X⁰ because there are sentences such as:

b. John has pushed the book into the drawer
c. John will push the book into the drawer
d. John is (about) to push the book into the drawer

What, then, are the properties of the relevant X⁰ position such that it triggers the further Head movement from AgrO⁰ to yield the V-NP effect under the varying contexts of *b.* - *d.*? Cf. a. n.29.

3.2.3.2 'Extra' Constituency in the Flat VP

Perhaps, I should indicate how the data in (3) & (40) may be captured in the flat VP analysis (s.a. Czepluch 1992). Clearly, these data show that there may be more structure than just a flat VP. The basic idea is that there is only as much structure as necessitated by the principles of grammar. In a "sentence out of the blue", where there are no contextual conditions on a clausal domain, the principles of grammar are such that they yield a flat VP (cp. (7) & (9)). More structure only arises in complex sentences (or discourse), when Substitution, Deletion or Coordination impose contextual requirements on the matrix clause. And it is this context that requires *extra structure* by virtue of the CONSTITUENCY PRINCIPLE. Thus, as shown in (41), the constituency of the *do-so* substitution requires a parallel constituent in the first clause:



In (40a), *do so* is either a proform for *mend the car in the garage*, as given in (41a); or it is a proform for *mend the car*, as in (41b). But note: If SO SUBSTITUTION excludes a Complement, as in (3d&e), then the CONSTITUENCY PRINCIPLE clashes with θ -THEORY: If a Complement is excluded from the SUBSTITUTION domain, it would become a V'-sister, but θ -MARKING requires the Complement to be a V-sister (in English). Hence, Complements must always be included in substitution domains.

Thus, it seems that the phenomena in (40) can be handled in the flat VP analysis, if a limited flexibility of structuring is admitted.²⁷ Since this extra-structure is a secondary effect triggered by the CONSTITUENCY PRINCIPLE, it is not necessary to capture *all possible substitutions in one structure* -as it is the assumption behind the old configurational view exemplified in structure (4). In fact, since such context-sensitive processes can apply only once in a clause, there will be only one extra-level in a single structure. But in the absence of such contextual requirements, I would like to think that a flat VP is not so implausible after all, even if it is not in line with the mainstream analysis.

²⁷ As a by-effect, a more flexible view of structure emerges than is commonly assumed --which, furthermore, agrees quite readily with the guiding idea of modern syntactic theory, namely, that structural properties arise from the modularity of lexical properties and grammatical principles.

4. Concluding Remarks

Summarizing the foregoing discussion, three aspects should be pointed out.

1. One point that I attempted to make clear is that word-order in English is in certain respects less strictly regulated than the traditional characterization of English as a "fixed word-order" language may suggest. In this respect, the new MIT standard and the flat VP hypothesis converge.

In this respect, it has been argued that although the SVO order is fixed in English, in almost all other respects of the statements in (2), we find much more variability than earlier approaches let expect. The fixed preverbal SU position appears to be a consequence of the fact that, in English, but not in German (cf. n.13), SpecIP has to be filled almost always. And the VO adjacency effect is due to Case theory.²⁸

2. In both approaches, word-ordering is not an independent property of languages; rather, it is seen as an epiphenomenon that arises from the interaction of grammatical principles and language-particular properties. It is obviously in the assumptions about the relevant grammatical principles that effect structuring and ordering in languages where the two approaches diverge.

The approach advocated here is clearly more in line with the original *LGB* approach than with more recent developments in that it relates parametric variation to "open slots" in grammatical principles and (as far as there are) language-particular rules. As to the theory of Functional Categories, it is not quite clear at the present, if I am not mistaken, whether all languages are cut to the same superstructure of functional categories (which would restrict parametric variation to varying properties of the same functional categories, from which word-order variation would follow as the varying "range" of verb & object movements). On the other hand, it has also been assumed that languages may differ as to the hierarchical arrangement of functional categories (e.g., Laka 1989, Mahajan 1989), or which functional categories they make use of (e.g., Iatridou 1990).²⁹ In the latter case, it may well be that a morphologically poor language like English has fewer functional projections than often thought. And plausible candidates for missing functional categories would, of course, be the Agr(I)O categories.

3. It has been shown, mostly on a purely empirical basis, that the old standard configurational view of English has to be revised. And on the same empirical basis, some assumptions and consequences of the new MIT approach to language analysis have been called into question.

It is my impression that, as to the Split-INFL analysis, the arguments for Verb movement are somewhat stronger than those for Object movement. In particular, the role ascribed to C-command deserves reconsideration along the lines indicated in sect. 3.2.1. Since there seem to be ordering restrictions due to linearity solely, as well as phenomena of adverb scope and adverbial modification that do not render themselves easily to a c-command analysis³⁰, it is unlikely that all kinds of asymmetric dependencies are

²⁸ More particularly, if it is really necessary to assume that main verbs move out of the basic VP in English (an assumption not followed by, e.g., Pollock (1989) & Ouhalla (1990)), then the simple modular account of V-NP adjacency in terms of the parameters (7a&b) would have to be elaborated (e.g., in terms of the notion of Θ opacity of Pollock (1989) & Chomsky (1989)). Perhaps the addition would suffice (if it can be motivated independently) that Case/ Θ -role is assigned from the V-trace position and that V-trace can do so only if it is not separated from the actual V position by any lexical material. So far I am not completely convinced that English main verbs need to move. Clearly, this issue requires further consideration.

²⁹ Perhaps as a consequence of the principle of Morphological Identification (Baker 1988): If the appropriate morphology to license particular elements is lacking, it may be that the corresponding inflectional category is absent in a language, too. -- Baker's idea is similar in spirit, though not in execution, to (7c).

³⁰ Consider, e.g., the following examples, where Adverb scope is indicated by curly brackets:

- a. John {walked} to the store *slowly* / *quickly*
- b.a. John *slowly* {walked} to the store
- b.b. John *quickly* {walked to the store}

According to Pustejovsky (1991), in *a.* both *slowly* & *quickly* are pure Manner adverbs that, as Ad-V's in the sense of McConnell-Ginet (1982), modify the verb only. It is not clear how this could be expressed in

to be interpreted as instances of asymmetric structural C-command. But if so, the arguments for Binary Branching may not be so strong as assumed under the Split-INFL analysis and the Single-Complement hypothesis.

In this paper, a couple of questions have been raised with respect to some underlying assumptions of recent versions of generative linguistics. If they help to clarify issues, the paper would have served its purpose. Insofar an alternative to the prevailing approach has been presented, I hope to have shown that there is more than one way to look for answers to old problems, and new ones as they arise.

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terms of c-command, even if there is V movement, because it is generally assumed that PPs remain in their base position (cf., e.g., Koopman & Sportiche 1990). For the preverbal adverbs in *b.*, Pustejovsky notices an interpretative contrast: *quickly*, but not *slowly*, may assume a 'temporal' reading in that it measures out the process of *going-to-the-store*. Since both adverbs are structurally parallel, c-command does not account for this contrast either. Since adverbs have to be lexically specified for their modificational properties anyway (e.g., Travis 1988; Rochette 1990), a more flexible view on the relationship between adverb scope & c-command domain seems possible: Adverbs must be in a position to satisfy their scope properties via c-command (i.e., they must be "high enough"), but they need not modify everything they c-command. This would take care of the contrast in *b.*, and of the phenomena alluded to wrt (28). The basic idea is that lexically determined adverb scopi and structural c-command domains need to be compatible, though not necessarily equivalent. -- For some remarks on adverb scope under the Flat VP hypothesis, cf. Czepluch (1992, 1994).

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