ELEMENTS OF GRAMMAR

Handbook of Generative Syntax

Edited by

Liliane Haegeman

KLUWER ACADEMIC PUBLISHERS

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LILIANE HAEGEMAN

ELEMENTS OF GRAMMAR*

1. INTRODUCTION

The aim of this handbook is to provide a forum in which some of the generative syntacticians whose work has had an impact on theoretical syntax over the past 20 years are invited to present their views on one or more aspects of current syntactic theory. The handbook is destined for an audience of linguists working in the generative framework. A general background knowledge of generative syntax is essential for the understanding of this book, but I hope that the introduction below will make the book accessible not only to a specialized audience but also to advanced students who are relatively new to the field.

During the last five years, the views on theoretical syntax have undergone a number of changes which have a direct bearing on the analyses proposed for empirical data. This situation is mainly due to the developments in the theory referred to as the Minimalist Program (Chomsky 1991, 1993, 1995). While the Minimalist Program adopts, reinterprets and elaborates some of the principles and formalisms of the classical "Government and Binding" ("GB") framework (see Chomsky 1995: 1–11 for discussion), it also departs significantly from many of the standard assumptions of the classical GB approach. To mention but one telling example: the structural configuration "government", which had become central in many respects (Case assignment, ECP, definition of domain for binding etc.) in the traditional GB framework, does not play any role in Minimalism. The literature written in the Minimalist paradigm does not as yet offer a fully fledged theoretical framework: Minimalism is a research program which is being explored and developed and which has already undergone considerable modifications since the first publications appeared in the early nineties.[1] The developments in the Minimalist theory have had a fruitful impact on a more classical "GB"-type approach to theory; Minimalism leads syntacticians to re-examine the concepts standardly assumed in work in syntax, and to explore ways in which "Minimalist" concepts (checking theory, for instance, as discussed in section 2.2.2) can be incorporated in a more classical approach.

The chapters in this volume each focus on one specific aspect of the grammar. As a general theme, the papers are all concerned with the question of the composition of the clause, i.e. what kind of components the clause is made up of, and how these components are put together in the clause. The questions raised concerning the structure of the clause can equally be

Liliane Haegeman (ed.), Elements of Grammar, 1–71.

raised for the structure of other projections, notably the DP. See for instance Abney (1987), Szabolcsi (1989), Taraldsen (1990), Giorgi and Longobardi (1990), Cinque (1994), etc. Pollock's and Rizzi's contributions to this volume deal with the question of the functional structure of the clause, the former concentrating on the IP domain, the latter on the CP domain. Baker's and Grimshaw's papers deal with the insertion of lexical material in the structure. The former focuses on the insertion of arguments in the clause, i.e. constituents having a thematic relation to the predicate; the latter deals with problem of clitic combinations in Romance. McCloskey's paper concerns the traditional notion "subject". He shows that what once was thought of as a unitary concept has gradually become "deconstructed" in the course of the development of generative grammar. Brody, finally, examines the relation between various components of the clause as expressed in the form of chain-relations.

All the contributors to this volume refer more or less intensively to notions introduced by Minimalism and all the papers address questions which every syntactic theory, Minimalist or classical, eventually has to address. Michal Brody espouses his own radically representational version of Minimalism (see section 2.3 below); Jane Grimshaw adopts Optimality Theory as the theoretical basis for her work (see section 5).

In my own introduction I do not attempt to provide a complete survey of the state of the art in generative syntax or of the current developments. Such types of surveys would be the subject matter of a book. What I will do is highlight some of the developments that have occurred in theoretical syntax in the last ten years. My choice of topics is admittedly highly subjective: I have selected those components of the theory that seem to me to be of ongoing interest both for classical GB approaches and for Minimalist approaches, and which are also relevant to the papers in this volume. I will also point out some relations between proposals in the literature which have been made independently and which had, so far, not been brought to bear on each other. Occasionally I will add more speculative remarks, suggesting possible further developments and ramifications.

An introductory textbook to syntactic theory will characteristically try to outline the basic building blocks of a theory and to provide the stable stepping stones for the novice. My introduction to the current handbook may appear rather to be doing the opposite. All work in generative syntax shares the basic methodological assumptions concerning, for instance, what constitutes the type of evidence admitted in linguistic analysis, or how a syntactic argument is formulated. There is also a clear convergence on many specific issues. For instance, nowadays, no one will dispute the need to distinguish functional projections from lexical projections. However, general theoretical issues (say, the issue of locality) or individual empirical phenomena (say, verb movement) may often receive different analyses, depending on the specific assumptions of the researcher, and the different

analyses proposed each have their advantages and disadvantages. I will illustrate some of these different types of analyses in the course of this introduction. I hope that this will not discourage the student away from theoretical syntax. Rather, I hope that my introduction and the papers in this book will show clearly that research in generative linguistics is part of an ongoing debate, that a lot of progress has been made in generative syntax, and also that there is a lot of work yet to be done. Many questions, theoretical and empirical, remain unanswered and even the clear and definite analyses which we thought we had arrived at for a certain range of phenomena should be regularly re-submitted to a critical evaluation.

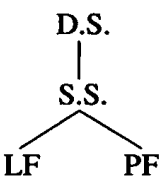
The introduction to the handbook is organized as follows. In section 2 I discuss the levels of representation postulated in the classical GB framework, and I introduce some Minimalist variants: classical Minimalism (Chomsky 1993, 1995), which is strongly derivational, and Brody's (1995a) radically representational approach. In this section we shall consider the general notion of "movement" as it is currently used in generative syntax. Sections 3 and 4 deal with elements of the structure of the clause. In section 3 I discuss the thematic layer of the clause, introducing the notions of thematic hierarchy, Uniformity of Theta Assignment, and the hypothesis that the base position of the subject is VP-internal. In section 4 I discuss the decomposition of the IP layer and the CP layer and the questions raised both for Minimalist and for classical approaches. In section 5 I introduce optimality theory and the question of lexical insertion.

2. LEVELS OF REPRESENTATION

2.1. *The Government and Binding Model*

The classical format of the Government and Binding model of syntactic representation is the so-called T-model, with its different levels of representation as summarized in (1):[2]

(1)



Assuming the theory as presented, for instance, in introductory textbooks such as my own *Introduction to Government and Binding Theory* (Haegeman 1994b), the English sentence (2a) would have the D-structure representation in (2b), the S-structure representation in (2c) and the LF representation in (2d). The representations in (2) are partial and will serve as the basis for discussion. For expository reasons many details are omitted.

(2) a. John eats chocolate.
b. $[_{CP}\ [_{C^\circ}\text{-WH}]\ [_{IP}\ e\ [_{I^\circ}\text{-s}]\ [_{VP}\ [_{DP}\ John\ ]\ eat\ [_{DP}\ chocolate]]]]$
c. $[_{CP}\ [_{C^\circ}\text{-WH}]\ [_{IP}\ [_{DP}\ John_j]\ [_{I^\circ}t_i\ ]\ [_{VP}\ [_{DP}\ t_j\ ]\ eat\text{-}s_i\ [_{DP}\ chocolate]]]]$
d. $[_{CP}\ [_{C^\circ}\text{-WH}]\ [_{IP}\ [_{DP}\ John_j]\ [_{I^\circ}\ eat\text{-}s_i\text{-}t_i\ ]\ [_{VP}\ [_{DP}\ t_j]\ t_i\ [_{DP}\ chocolate]]]]$

French (3a) has the D-structure (3b), the S-structure (3c) and the LF (3d):

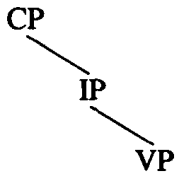
(3) a. Jean mangeait du chocolat.
Jean ate of chocolate
"Jean ate chocolate."
b. $[_{CP}\ [_{C^\circ}\text{-WH}]\ [_{IP}\ e\ [_{I^\circ}\text{-ait}]\ [_{VP}\ [_{DP}\ Jean\ [_{I^\circ}\ mange\text{-}]\ [_{DP}\ du\ chocolat]]]]$
c. $[_{CP}\ [_{C^\circ}\text{-WH}]\ [_{IP}\ [_{DP}\ Jean_j]\ [_{I^\circ}\ mange_i\text{-ait}]\ [_{VP}\ [_{DP}\ t_j]\ t_i\ [_{DP}\ du\ chocolat]]]]$
d. $[_{CP}\ [_{C^\circ}\text{-WH}]\ [_{IP}\ [_{DP}\ Jean_j]\ [_{I^\circ}\ mange_i\text{-ait}]\ [_{VP}\ [_{DP}\ t_j]\ t_i\ [_{DP}\ du\ chocolat]]]]$

The classical conception of the multi-level approach to sentence structure is relatively static: at each level, the clause is projected in full. The modifications between the levels are instantiations of movement, i.e. move-α, where α may be a head or a maximal projection. The levels of PF and of LF are what have come to be called "interface" levels in the Minimalist Program: they are the interface of the language module with the articulatory-perceptive modules, on the one hand, and with the conceptual-cognitive systems, on the other hand. D-Structure and S-structure are internal to the syntactic computational system.

2.1.1. *D-structure*

In the D-structure, (2b), the lexical items are base-generated in their thematic positions: the transitive verb, *eat*, projects a VP which contains the two theta-marked arguments, namely the AGENT *John* and the THEME *chocolate* (for the base position of the subject, cf. the discussion in section 3.3 and also in McCloskey's paper). Thus, D-structure respects the theta criterion, the requirement that (i) each argument be assigned one and only one theta role and, conversely, (ii) that each theta role associated with a lexical head be assigned to one and only one argument.[3] D-structure respects other selectional requirements: VP is the complement of, i.e. selected by, a functional head, I°, which contains the tense and agreement morphology, here *-s*. IP, in turn, is then selected by C. That C selects IP is suggested by the fact that in English, for instance, the complementizer *that* introduces a finite clause and the complementizer *for* introduces a non-finite clause. CP itself may be embedded or independent. C serves to encode the illocutionary force of clause: declarative, interrogative, relative, etc. Anticipating the discussion in section 4.2, observe that C has a dual function: it selects the clausal complement (finite/non-finite) and it also encodes the illocutionary force of the clause.

Schematically, the clause structure decomposes into three layers, each associated with a specific type of information: (i) the VP layer, or the thematic layer, (ii) the IP layer, which contains the functional morphology, and (iii) the CP layer, which establishes the force of the clause.

(4)


We will return to these layers in sections 3 and 4. We will see that the simple structure in (4) has to be decomposed into a more articulated structure, where each of the layers decomposes into a set of discrete projections.

As can be seen from (3b), the D-structure of French (3a) is analogous to English (2b): again the verb is inserted under V°, and its arguments are projected in their thematic positions. The differences between English (2a) and French (3a) emerge at S-structure.

2.1.2. *S-structure*

2.1.2.1. *Movement Dependencies.* S-structure is relevant for the licensing of the morphological properties of the constituents of the clause. It is standardly assumed that a constituent base-generated at one particular position in the structure need not necessarily be found at that point throughout the derivation and that it may be moved to another (c-commanding) position at S-structure. The movement-relation reflects a dependency between two positions in a clause. Consider, for instance, the position of the direct objects in the sentences in (5):

(5) a. John will buy this book.
b. Which book will John buy?

In (5a) the direct object DP *this book* is adjacent to the verb *buy*. This position corresponds to the thematic properties of the object, which is assigned its thematic role ("theme") by the verb *buy*. On the other hand, in (5b) the object *which book* does not occupy the position adjacent to the verb. Rather it occurs clause-initially, a position which is required by virtue of the presence of the *wh*-element *which*, which encodes illocutionary force, here interrogative. However, at the same time, in (5b) *which book* is the object of *buy* just as in (5a) *this book* is the object of *buy*. The thematic properties of *which book* in (5b) require it to be part of the VP; the presence of the *wh*-word *which* requires it to be clause-initial. To capture the dual relation of *which book* in sentence (5b) – object of *buy* and encoder of illocutionary force – we can say that in (5b) *which book* is base-gener-

ated in the object position, and that it moves leftward to the higher position at S-structure. This dependency between the sentence-initial position and the VP-internal base position of *which book* can be represented as in (5c), where t encodes the thematic or base position of the moved object. Dependency relations such as those in (5c) can be expressed in terms of chains. In (5c) there is a chain formed by the preposed *which book* and its trace (5d).

(5) c. Which book$_i$ will John buy t_i?
d. ⟨which book$_i$, t_i⟩

The existence of dependencies such as that between the sentential initial constituent *which book* and the postverbal position signalled by t in (5c) is relatively uncontroversial, although there is no full agreement as to whether the dependency must be expressed derivationally via movement of a constituent, or whether the notion of movement is a metaphor to express a representational dependency. We return to this point in section 2.2.3. Brody's contribution to this volume considers the conditions which govern chain formation, against a background of Minimalist – and Radically Minimalist – assumptions. See also section 2.3 for an introduction to Radical Minimalism.

Two types of dependencies – i.e. of chains – are traditionally distinguished: (i) dependencies between head positions, which could be expressed in terms of X°-movement, and (ii) dependencies between positions hosting maximal projections, expressed by XP-movement. We will briefly look at both types in the following sections.

2.1.2.2. *Head Movement.* The classical GB approach assumes that at S-structure the verb merges with its verbal morphology by a process of morphological incorporation (Baker 1988). According to assumptions current up until the late eighties (see Pollock 1989 and also Pollock's contribution to this volume for references), the finite verb is created derivationally. In (3a) above, for instance, the form *mangeait* ("ate"), which is inflected for past tense and for third person singular, is not base-generated as such. Rather the root of the verb *mange-* is base-generated under V°, the inflectional morpheme *-ait*, an affix, is base-generated under I°, and the root *mange-* incorporates into the finite inflectional morphology, *-ait*, forming the new complex head *mangeait*. The incorporation of the verb to the affix is obligatory: it satisfies the morphological subcategorization frame of the affix. In English, similarly, roots are generated under V°, inflectional morphemes are generated under I°. In English, contrary to French, the root of the lexical verb does not move to I°. Rather, it is proposed that the inflection lowers onto the verb. Evidence for the difference between French and English verb positions is provided by (6): in

French, the finite verb precedes the negative marker *pas* ("not") (6a′) and the frequency adverb *souvent* ("often") (6b′). In English, on the other hand, the finite lexical verb cannot precede the negation marker *not* (cf. (6a)/(6c)) or the adverb *often* ((6b)/(6d)).

(6) a. *John eats not chocolate

a′. Jean ne mange pas de chocolate
Jean *ne* eats not of chocolate
"Jean does not eat any chocolate."

b. *John eats often chocolate

b. Jean mange souvent du chocolat
Jean eats often of chocolate
"Jean eats often chocolate"

c. Jean does not eat chocolate

d. Jean often eats chocolate

Lowering operations, such as lowering the inflection to the verb postulated for English (2) above, are problematic, however, since the traces of the lowered constituents will violate the ECP, the condition that traces have to be properly governed and identified by an antecedent. The question arises, for instance, how the trace of the lowered inflection, t_i, in (2c) could satisfy the ECP, since the inflection *-s* is lower in the structure and hence cannot c-command its trace. We discuss a first solution to the lowering problem in the next section.

2.1.2.3. *XP Movement and Pied Piping.* In addition to dependencies between head positions, there are also dependencies between XP positions. Both in English and in French the subject DP *John/Jean* in (2) and (3), for instance, cannot remain VP-internally, as its case cannot be licensed there. The DP will undergo leftward A-movement to the specifier of IP, where it will be assigned nominative case (2c, 3c). Thus there is a dependency relation between the specifier position of IP, which hosts the moved subject DP, and the VP-internal base position in which the thematic role of the subject is licensed.

Let us for a moment return to our example (5b), in which movement affects the object phrase *which book*. We assume that the DP *which book* is required to move because of the presence of the *wh*-feature associated with *which*, witness the fact that in (5a), *this book* does not undergo movement. *Which* is a *wh*-element which signals the interrogative force of the clause. Strictly speaking, then, the component of *which book* which triggers the movement of the phrase is the element *which*. Observe, though,

that we cannot move the marker of illocutionary force, *which*, all by itself:

(5) c. *Which will you buy book?

So, even though it is *which* alone which triggers the movement, *which* moves with its nominal complement (*book*). We say that *which* pied pipes *book*. *Book* in (5c) appears where it does, not by virtue of its own intrinsic features, but rather because it is associated with an element, *which*, which has this distributional requirement.

Other, perhaps better known, cases of Pied Piping concern examples with PPs containing *wh*-complements such as those in (7):

(7) a. Who did you talk to?
b. To whom did you talk?

In (7a) only the complement of the preposition (*who*) is moved, stranding the preposition *to* in a lower position. In (7b) the preposition *to* is pied piped by the *wh*-movement.

If the surface position of a constituent may be linked to one or more lower positions, the question arises at which of these related positions the various properties of the constituent get evaluated. It is clear, for instance, that although *which book* in (5b) occupies the specifier position of CP (see Rizzi's contribution to the volume for a more precise account), its thematic properties get evaluated at the VP-internal base position. We return to this problem in section 2.1.3.2.

2.1.3. *Logical Form (LF)*

In (2) and in (3) the difference between the S-Structure and the LF representation is minimal. For English (2d) the LF representation will undo the potential ECP violation created by I-lowering (cf. the discussion of (2c) above): the verb-inflection complex created by the S-structure lowering moves up and adjoins to the offending trace, t_i (Chomsky 1991). Other effects of LF movement concern interpretation. I briefly illustrate two cases here: *wh*-raising (1.1.3.1) and reconstruction (1.1.3.2).

2.1.3.1. Wh-*Raising*.

Consider English (8):

(8) a. *John will meet whom?
b. Whom will John meet?

In the interrogative sentence (8b) the *wh*-phrase *whom* is fronted. This is the only option in English: (8a), in which *whom* remains in the base position, is ungrammatical. (8b) has the D-structure (8c), S-structure (8d) and LF (8e):[4]

(8) c. $[_{CP}\ [C°+WH]\ [_{IP}\ e\ [_{I°}\ will]\ [_{VP}\ [_{DP}\ John\ ]\ meet\ [_{DP}\ whom]]]]$
d. $[_{CP}\ [_{DP}\ whom_k]\ [_{C°}\ will_{i\ +WH}]\ [_{IP}\ [_{DP}\ John_j]\ [_{I°}\ t_i]\ [_{VP}\ [_{DP}\ t_j]\ meet_j\ [_{DP}\ t_k]]]]$
e. $[_{CP}\ [_{DP}\ whom_k]\ [_{C°}\ will_{i+WH}]\ [_{IP}\ [_{DP}\ John_j]\ [_{I°}\ t_j\ t_i]\ [_{VP}\ [_{DP}\ t_j]\ meet\ [_{DP}\ t_k]]]]$

Wh-movement moves the *wh*-phrase to the specifier of CP at S-structure. As mentioned already in the discussion of (5b), this movement serves to license the interrogative force of the clause.[5] In (8d) the moved *wh*-constituent occupies [Spec, CP], its scope domain is the domain which it c-commands, i.e. the clause.

S-structure movement of *wh*-phrases is not a property of all languages. In the following examples from Chinese the italicized *wh*-constituent does not occupy a scope position (Huang 1995: 149, ex 97).

(9) a. Zhangsan yiwei Lisi mai-le shenme?
Zhangsan think Lisi bought what
"What does Zhansan think Lisi bought?"

b. Zhangsan xiang-zhidao Lisi mai-le shenme.
Zhangsan wonder Lisi bought what
"Zhangsan wonders what Lisi bought."

The *wh*-constituent *shenme* ("what") occupies the same position in (9a) as in (9b), in spite of the fact that its scope differs. In (9a) *shenme* has matrix scope – the sentence is a direct question – and in (9b) it has embedded scope. The difference in interpretation of the *wh*-phrases in (9a) and (9b) is not reflected by S-structure movement. Since LF is the level encoding interpretive matters, one would expect the LF representations of (9a) and (9b) to encode the fact that the question word *shenme* in (9a) has matrix scope and that in (9b) has embedded scope. The standard proposal (see May 1985) is that at LF the *wh*-constituent *shenme* will raise to the relevant scope position. The LF representation of (9a) is (9c), that of (9b) is (9d) (Huang 1995: 149: his (100a) and (101b)):

(9) c. $[shenme_i\ [Zhansan\ yiwei\ [[Lisi\ mai\text{-}le\ t_i]]]]$
d. $[[Zhangsan\ xiang\text{-}zhidao\ [shenme_i\ [Lisi\ mai\text{-}le\ t_i]]]]$

LF representations are not expected to differ cross-linguistically. The cross-linguistic variation between Chinese interrogatives and their English counterparts rests in the availability of overt movement; it is a matter of S-structure and PF representations, not of LF.

2.1.3.2. *Reconstruction.* Another operation standardly postulated for LF is reconstruction. Reconstruction can be seen as the counterpart of Pied Piping. While Pied Piping means that extra material is moved along with

the target of movement (as seen above in the discussion of (5b) and of (7b) in section 2.1.2.3), reconstruction as it were returns the pied piped material to a lower position. The effect of reconstruction operations is to undo Pied Piping.

In our discussion of Pied Piping we said that a moved constituent does not necessarily get evaluated exhaustively in its surface position. Specifically, in (5b), the thematic role of the constituent *which book* is determined in the base position. With respect to pied piped material, the question arises at which point in the dependency relation the properties of a constituent get evaluated. Reconstruction is in a sense an answer to this question. Let us illustrate this problem with examples showing the relation between Pied Piping and binding relations, i.e referential dependency relations between DPs.

Consider, for instance, the sentences in (10). Each sentence contains the reflexive *himself*, i.e. an anaphoric element which, following Principle A of the Binding Theory, must be bound by a coindexed constituent in an A-position. In each of the examples, the DP *which pictures of himself* has moved leftward. Following the reasoning in section 2.2.2.3, we can say that the target of movement in these examples is the interrogative element *which*, which must move to a left peripheral position where it can encode illocutionary force. In each of the examples, though, *which* has pied piped its complement, *pictures of himself*.

(10) a. John wondered which pictures of himself Mary liked.
b. Which pictures of himself$_i$ will John$_i$ sell?
c. Which pictures of himself$_i$ does John$_i$ think that Jane will sell?

Let us consider the interpretation of *himself* in the above examples, in terms of the requirements of the Binding Theory. (10a) is unproblematic: *himself*, the anaphor, is bound by the matrix subject *John*. In this example, the Binding Theory can apply to the S-structure representation. (10b) is grammatical, even though the reflexive *himself* is not c-commanded by the antecedent *John*. One might account for this by proposing that the Binding Theory, or at least Principle A, applies at D-structure: at D-structure, the *wh*-phrase *which pictures of himself* will occupy its base position and the reflexive can be bound by the subject DP:

(11) [$_{IP}$ ec will [$_{VP}$ John sell which pictures of himself?]][6]

But even though it provides a means of accounting for the grammaticality of (10b), a D-structure approach to binding fails to predict the grammaticality of (10c). The antecedent of *himself* must be a DP with the features [masculine; singular], i.e. *John* rather than *Jane*. As was the case in (10a) and (10b), the antecedent *John* does not c-command *himself* at S-structure. In this example, though, the D-structure will not provide us with the adequate representation either:

(12) a. D-structure
[$_{CP}$ [$_{IP}$ ec [$_{VP}$ John$_i$ does think [$_{CP}$ that [$_{IP}$ ec will [$_{VP}$ Jane sell which pictures of himself$_i$]]]]]]?

At D-structure the only potential binder for the reflexive is *Jane*, in [Spec,VP]. How can we then account for the grammaticality of this example? Consider, again, the S-structure of (10c):

(12) b. [Which pictures of himself$_i$ does [John$_i$ think [$_{CP}$ t$'_i$ that [$_{IP}$ Jane will sell t$_i$?]]]]

Following standard assumptions, the *wh*-phrase *which pictures of himself* moves successive cyclically via the embedded [Spec, CP] to the matrix [Spec, CP]. In (10c) the reflexive is bound by *John*, but neither the S-structure position nor the D-structure position of the *wh*-phrase can ensure this kind of binding in an obvious way. We need a configuration in which there is a c-command relation between *John* and *himself*, but we need to ensure that in such a configuration the potential antecedent *Jane* does not intervene as a c-commanding subject. The relevant position is the one signalled by the intermediate trace, t′ in (12). It is proposed in the literature that the binding configuration required for this sentence is achieved by reconstruction. The *wh*-phrase in our example has moved through the embedded [Spec, CP] and is reconstructed there at LF. As a first approximation let us propose that it be reconstructed there.

(12) c. does John$_i$ think [$_{CP}$ [which pictures of himself$_i$]$_j$ that [$_{IP}$ Jane will sell t$_j$]]

While (12c) provides the configuration to allow *himself* to be bound by *John*, it is not an adequate LF representation for (10c) either. Recall that (10c) is a question and that we assume that the *wh*-constituent (*which* in this example) licenses the interrogative force of the clause at the CP level. English *wh*-phrases move to [Spec, CP] at S-structure; we assume that analogously Chinese *wh*-constituents move to [Spec, CP] at LF (cf. 1.3.2.1). But in (12c) the *wh*-phrase is reconstructed in full, thus undoing the licensing of the interrogative force and destroying the parallel between English and Chinese LF representations. A more complex type of reconstruction is needed, which does lower the argument but preserves the LF position of *which*, the interrogative operator. (12d) is a rough representation. We decompose the *wh*-phrase into its component parts, with the constituent carrying the *wh*-feature in the scope position and the reflexive in a lower position, where it can be interpreted.

(12) d. [$_{CP}$ [which$_k$] does [$_{IP}$ John$_i$ think
[$_{CP}$ [t$_k$ pictures of himself$_i$]$_j$ that [$_{IP}$ Jane will sell t$_j$]]]]

In (12d) *pictures of himself*, which was pied piped by *which*, is reconstructed now to a lower position.

2.2. *Some Notes on the Minimalist Program*

Over the last 5 years, and keeping within the main tenets of the Principles and Parameters framework, Chomsky (1995) has been developing a novel approach to syntax referred to as the Minimalist Program. It is not feasible, at this stage, to provide a complete introduction to this program, which is in the process of being elaborated. In the present discussion I will briefly present some of the concepts developed in the Minimalist approach. It seems to me that for many of these issues discussed in the Minimalist literature a polarization of the two approaches, which we might refer to as the "classical GB approach" and the "Minimalist approach", is not necessarily the optimal way of looking at things and that many of the concepts which were introduced in the Minimalist Program can be integrated into the classical model. The points introduced below are related to the papers in this volume. The issues discussed in sections 3, 4 and 5 below are of relevance both to a Minimalist and a "classical" generative approach.

2.2.1. *Merge and Move: A Dynamic Approach to Clause Structure*

Chomsky (1993, 1995) proposes that the linguistic computational model links two levels of representation, "LF" and "PF", the so-called interface levels. Chomsky no longer postulates the language-internal levels of representation S-structure and D-structure. The static multi level approach to syntactic representations is replaced by a more dynamic conception of the build up of clauses. I will give a rather intuitive outline of the Minimalist approach to clause structure, simplifying the technical complexities and leaving out of the discussion the differences between the successive concrete implementations of the core ideas.

In Minimalist theory, the construction of a clause consists of picking items from the lexicon, the inventory of morphemes of the language, and building up structure by combining these items or their projections. Let us assume that we start from the following array of elementary units, the lexical items, taken from the lexicon.

(13) *John, left*, I[+Tense, +AGR][7]

The array of items in (13) constitutes what Chomsky (1995: 225–227) refers to as the Numeration; these components will be the building blocks for a sentence. Roughly, the construction of the sentence *John left* will proceed as follows (see Collins 1994, Fujita 1996 for accessible discussions). First, we select the elements *John* and *left* from the Numeration (13).

(14) a. Select *John*
b. Select *left*