*Minimizing Grammar**

J. L. G. ESCRIBANO, *Una Teoría de la Oración*, Servicio de Publicaciones, Universidad de Oviedo, 1991. Pp. 424. I.S.B.N. 84-7468-491-9.

N. CHOMSKY, *The Minimalist Program*, Cambridge, Mass.: MIT Press, 1995. Pp. 420. I.S.B.N. 0-262-53128-3.

Amaya MENDIKOETXEA
Universidad Autónoma de Madrid

0. INTRODUCTION

Generative grammar was developed as a research program seeking to characterize a native speaker's knowledge about his/her language. A central hypothesis of this line of investigation is that there exists a component of the mind/brain which is specifically devoted to language —the Language Faculty— and which interacts with other cognitive systems.[1] In recent years, efforts are concentrating on 'minimizing' the model that seeks to characterize the Language Faculty, in the context of a shift of perspective concerning the correct way to approach the central issues of the study of language thus understood.

Shifts of perspective like the one recently brought about by Chomsky's Minimalist Program (MP) have been, throughout the history of generative grammar, the result of the tension between 'descriptive adequacy' and 'explanatory adequacy' (see Chomsky 1995: Introduction).[2] To attain descriptive adequacy for a particular language L a grammar has to provide an explicit account of all the (relevant) facts and processes of the language L. To attain explanatory adequacy the grammar must provide an analysis of all the (relevant) facts and processes of language L in terms of a highly restricted, maximally general set of universal principles which account for how the system of knowledge that constitutes the language L has arisen in the mind/brain of a native speaker of language L (the general problem of language acquisition). As generative grammars have been enriched in search of descriptive adequacy, the goal of explanatory adequacy has receded into the distance.

Estudios Ingleses de la Universidad Complutense, 4, 265-286, Servicio de Publicaciones UCM, Madrid, 1996

The Principles and Parameters (P & P) model in the 80s was a significant step towards explanatory adequacy in that it postulated the existence of universal principles and a finite array of options (parameters), but no construction-particular and language-particular rules of the type devised in Early Generative Grammar in the 60s and 70s.[3] It led to the discovery of a vast range of empirical materials from a variety of typologically different languages, but as the grammar was enriched to account for language variation and language-particular structures, the tension between descriptive adequacy and explanatory adequacy was brought sharply into focus, in what paved the way for proposals seeking to 'minimize' grammar in search of explanatory adequacy.

Escribano's (1991) *Una Teoría de la Oración* has to be understood within this context. His underlying observation is that the P & P approach is both (i) not restrictive enough, and (ii) too restrictive in that it cannot account for basic facts about clause structure in languages like Spanish. The former leads him to minimize or reduce the grammar, especially regarding the categorial component. The latter leads to the introduction into the grammar of a set of functional/pragmatic principles to do with illocutionary force and the theme-rheme distinction.[4]

The objective is to provide an explicit analysis of the clause in Spanish. Part I shows the deficiencies of previous analyses of the constituent structure of Spanish clauses in traditional grammar (chap. I) and generative grammar (chap. II). The review of the literature is perhaps too extensive, particularly regarding the proposals made by generative grammarians. Thus, the reader gets lost in irrelevant details, especially since the author's own proposal is not outlined until the last chapter in the book (chap.V in Part II) and is not properly advanced throughout the literature review (see e.g. II.2.2). Part II is devoted to presenting a minimized model of the grammar (chaps. III and IV) and applying it to the analysis of the clause in Spanish (chap. V). His proposal regarding the latter is novel, but relatively little space is devoted to it, so many questions are left unanswered (as the author himself admits). Crucially, this proposal rests on a series of assumptions and hypotheses about the mechanisms and processes of the grammar and its overall design, which is where the main appeal of the book lies for the researcher interested in linguistic theory. Thus, while the book does not fully attain its main objective of providing a detailed analysis of the clause in Spanish, Escribano's proposal raises issues that have currently come into focus in linguistic theory, as the development of Chomsky's MP shows.

This paper examines critically the model of the grammar presented in *Una Teoría de la Oración* from the perspective offered by the publication of *The Minimalist Program* (Chomsky 1995). In section 1, conceptual issues concerning explanatory adequacy in grammar are approached by exploring the relation

between language and use in a minimalist theory of language. Section 2 looks at what a model of the grammar must be like under minimalist assumptions by focusing on the categorial component (2.1) and the transformational component (2.2). The implications of a minimalist approach for the place of syntax in a general model of the grammar are examined in section 3. Section 4 is the conclusion. Emphasis is on the conceptual framework adopted and its implementation into a specific grammatical model, rather than on the empirical analysis.

1. THE MODEL OF THE GRAMMAR UNDER MINIMALIST ASSUMPTIONS

1.1. On the relation between language and use in the search for explanatory adequacy

While from an orthodox Chomskyan perspective, the introduction of concepts such as theme, rheme, assertion, command, etc. into the grammar would be seen as a step away from explanatory adequacy, for Escribano (1991) true explanation of why the principles of the grammar are this way or the other is to be found in functional and discourse notions that interact with grammatical principles, under the assumption that the theory of grammar is embedded in a theory of performance/use (see section 2.2.2).

The relation between the theory of language and the theory of use, (i.e. form vs. function) is at the centre of open debate in modern linguistics. In the P & P model the question 'How is language put to use?' is considered to be one of the central questions of the study of language, together with questions about its nature ('What is knowledge of language?') and origin ('How is knowledge of language acquired?') (see Chomsky 1986b). It is explicitely stated that the Language Faculty is embedded into performance systems that enable linguistic expressions generated by the grammar to be used for articulating, referring, interpreting, enquiring and so on, but the formal properties of the theory of language are claimed to be independent from the use the expressions of the language are put to:

> In general, it is not the case that language is usable or «designed for use». The subparts that are used are usable, trivially; biological considerations lead us to expect no more» (Chomsky & Lasnik: 1995: 18)

For Chomsky (1986b) the answer to the question 'How is language used?' involves the elaboration of a theory of language production and a theory of language

processing. A theory of discourse which would concern the use of language in real communication has never been part of the research agenda of generative linguistics.

This position is maintained in the MP, though questions concerning the relation between language and use have become more prominent as the focus has shifted to a minimalist approach to the theory of language. The MP seeks to find an answer to the question 'How perfect is language?', i.e. to what extent its properties are determined by the fact that the Language Faculty interacts with other cognitive systems of the mind/brain (as well as general considerations of conceptual naturalness such as economy, simplicity, symmetry, and so on) (see Chomsky 1995: Introduction). The Language Faculty must interact with at least two systems: (i) an articulatory-perceptual system: the expressions of the language must be interpreted by the motor-sensory apparatus and (ii) a conceptual-intentional system: the expressions of the language must be semantically intepreted. In Chomsky's words:

> While there is no clear sense to the idea that language is "designed for use" or "well-adapted to its functions", we do expect to find connections between the properties of language and the manner of its use (Chomsky 1995: 168)

As an example, a linguistic analysis of questions like *What did you see?* involves accounting for the displacement of a *wh*-phrase out of its internal position as complement of the verb in order to check the formal feature [+wh], as (1) shows:

(1) *what* **[did you see** __**]**?
↑_____ [+wh]_____ T

Such an operation (partly) follows from the fact that the grammar is embedded in performance systems, i.e. the fact that an expression like (1) must receive a phonetic and a semantic interpretation. But this analysis is independent of whether a structure like (1) is used as a question, a suggestion or a command in actual discourse.

In conclusion, the central question of a minimalist approach like that of Chomsky's and Escribano's 'Why is language the way it is?' involves the recognition of notions related to language use which somewhat determine the properties of language, though the notion of use is interpreted in different ways by the two authors. This accounts for differences in the overall design of the grammar which are dealt with in the following section.

1.2. Grammar design

A theory of grammar must inevitably have two distinct components: a lexicon, which must minimally contain a list of all lexical items of a particular

language, and a computational system, which performs operations with the elements listed in the lexicon to form larger structures. Within the P & P model, the elements of the Lexicon enter computation, as a starting point for the derivation of linguistic expressions.[5] For Escribano (1991: III.2), however, this model is inadequate in that it is speaker-oriented: the speaker proceeds from the Lexicon to computation, while for the listener the process is reversed, with the Lexicon as the interface between language and cognition.

The design of the grammar in *Una Teoría de la Oración* appears to be based on an interpretation of the notion 'psychological reality', a notion which has generated a great deal of confusion (see Matthews 1991). For Chomsky, a generative grammar is *not* a model of what speakers and hearers actually *do*, as they produce or interpret sentences; i.e. the grammar is not a *parser:* «when we say that a sentence has a certain derivation ... we say nothing about how the speaker or hearer might proceed, in some practical or efficient way, to construct such a derivation» (Chomsky 1965: 9). Psychological reality in this sense simply refers to grammars as psychological *hypotheses* «in that they specify the conditions that inner psychological mechanisms of the speaker/hearer are alleged to meet» (Matthews: 1991: 193).

As for Escribano (1991:III.1), though committed to a 'neutral' model of grammar like Chomsky's, grammar models must be 'realistic' from the point of view of performance models. The lexicon in this model resembles a database in which certain pre-syntactic operations take place which transform pre-linguistic conceptual structures into rudimentary lexical structures, ready to be used by the computational system, in a way that represents what speakers do in language production. For the listener, the process is reversed. Figure 1 presents roughly the model of grammar defended by Escribano (1991: 207), which is defined as a more 'natural' theory of language, i.e. psychologically real from the point of view of language use in real communication (given the role of pragmatic/ discourse principles in (de)-coding linguistic expressions):

Lexicon <- - -> Computational system
(De)-lexicalization <- - - > (De)-syntactization <- - - > linguistic expressions

Figure 1: *Our interpretation of the model of the grammar in Escribano (1991)*

Naturalness in Chomsky's view is, rather, related to both theory-internal and theory-external notions of simplicity and economy. Questions concerning the actual mechanisms of language processing in real speech situations do not directly influence the design of the grammar, except indirectly, in the sense that

the computational system must generate linguistic expressions that have to be interpreted by articulatory-perceptual systems and conceptual-intentional systems of the mind/brain. Since the language faculty must interact with those two systems (hence the requirements of economy, simplicity, etc.), two interface levels are distinguished as part of the computational system: Phonological Form (PF) and Logical Form (LF), as in Figure 2:[6]

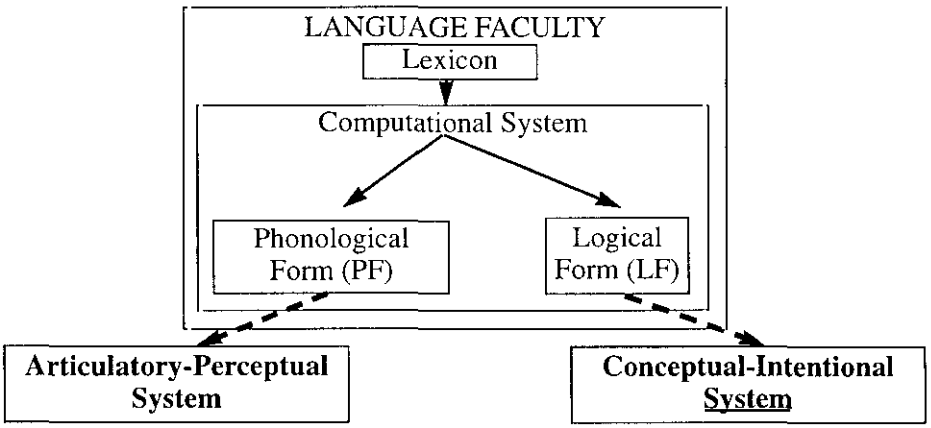


Figure 2: *The model of the grammar in Chomksy's MP*

A crucial difference between this model and the one in Figure 1 concerns the interface language-cognition, which in Chomsky's MP is post-syntactic: at the level of LF in the computational system, while for Escribano (1991) it is pre-syntactic: in the Lexicon. This difference in grammar design is directly related to whether the Language Faculty is characterized solely as a model of grammar (as in the MP) or whether it is also characterized as a model relevant for language processing (Escribano 1991). It follows from this that the Lexicon must have rather different properties in the two models. Though it is an area which is now receiving a great deal of attention (see e.g. Hale & Keyser 1993), the absence of a fully specified lexicon makes it very difficult to establish comparisons at different levels, which could bear on empirical facts. Thus, I will simply concentrate on the properties of the computational system.

2. THE NATURE OF THE COMPUTATIONAL SYSTEM

Computation involves, basically, putting lexical items together. In the P & P model, X-bar theory was the module of the grammar which made the elements

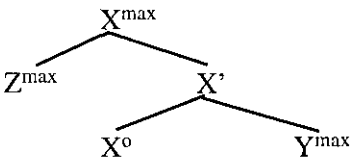
from the lexicon accessible to the computational system. Additionally, the grammar provided movement rules so that elements inserted in certain positions at the level of what was called D(eep)-Structure could be moved to other positions at the level of S(urface)-Structure. In this section, the properties of the computational system are examined under minimalist assumptions by comparing the categorial component and the transformational component in *Una Teoría de la Oración* with the equivalent components in Chomsky's MP.

2.1. The categorial component and the structure of the clause

2.1.1. The elimination of X-bar theory

The introduction of X-bar theory after Chomsky's (1970) 'Remarks on Nominalization' was considered as a significant step towards explanatory adequacy through the elimination the complex construction-specific phrase structure (PS) rules of Early Generative Grammar (see fn 5). X-bar theory provided a uniform way of representing phrases as projections of *lexical* categories and established the domain for basic local relations. PS was heavily constrained: typical X-bar structures were endocentric (projections of the head X^o) and binary, as (2) shows:[7]

(2)



The basic principles of X-bar theory remained practically unchanged throughout the 70s and 80s (see Jackendoff 1977), but in pursuing minimalist goals, it is necessary to see whether the technical complexities of the categorial component can be minimized and derived from other properties of the grammar.

According to Escribano (1991: III.2.3), the principles of X-bar theory are (i) redundant - they need to be simplified - and (ii) too rigid, in conflict with communicative needs in discourse - they need to be more flexible. Simplification can be achieved by limiting the categories that enter computation and the mechanisms that create phrase structure. The principles of X-bar theory are redundant because they can be derived from other properties of the grammar. Escribano assumes 'transparency' in the grammar in that syntactic structures must reflect semantic relations and, in particular, the relation predicate-argument,

expressed in the syntax by mutual c-command. Hence two properties of X-bar theory immediately follow: structures are binary, based on mutual c-command between predicates and arguments, and they are endocentric in the sense that they are asymmetric: only the predicate projects. X^{o} is required because it represents the lexical items drawn from the lexicon. As for X^{max}, its existence is justified on both semantic and syntactic grounds: it represents a thematic domain which is saturated: i.e. a predicate with all its arguments (including the subject in the case of verbal predicates) and it closes the projection, so that new semantic relations (involving adjuncts) can be established outside the X^{max}.[8] From this, it follows that X' has no role in the system.[9] Syntactic relations are simple, trivial; they reduce to predicate-argument relations, inside the X^{max} (verb and arguments) and outside the X^{max} (adjuncts).

Reducing syntax to simple mechanical operations is also the goal of Chomsky's MP. Chomsky (1995: chap. 4) proposes a 'bare' phrase structure in which lexical items enter computation directly, with categories as elementary constructions from properties of those lexical items.[10] Like Escribano (1991), for Chomsky (1995) only minimal and maximal projections are visible for computation and their existence follows from the fact that lexical items and phrases (but not intermediate X' categories) receive an interpretation at LF. Phrase structure is formed through the operation 'Merge' and the basic properties of X-bar theory follow from the fact that Merge proceeds in an asymmetric way: if it targets *eat* and *beans* only *eat* projects so that the result is a category of the type Verb, not of the type Nominal, ensuring endocentricity:[11]

(3) a. eat — eat, beans

b. *beans — eat, beans

The categorial component in Chomsky is essentially 'given' by assuming that categories are clusters of properties of lexical items and that Merge applies in the simplest possible form.

As for flexibility, it is a necessary property of the categorial system in Escribano's model in order to account for the complexity of word order in Spanish. Flexibility is achieved by postulating that the positions in which the arguments of a verb may end up are not pre-established. By contrast, in Chomsky's MP, a specifier-head-complement order is assumed *universally* (though this is a constraint of the phonological component); thus, the system is much more rigid than that of the P & P model which allowed language variation according to the directionality of the head-parameter.

Thus, the categorial component in Escribano's *Una Teoría de la la Oración* is both simpler and more flexible than the categorial component in the P & P model, which it is set against, and than the categorial component of Chomsky's MP. Reduction and flexibility have often appeared as contradictory terms in generative grammar in that reduction has been associated with explanatory adequacy and flexibility with descriptive adequacy. In principle, a flexible grammar is not necessarily further from the goal of explanatory adequacy than a rigid grammar, if it can be shown that flexibility follows from a set of principles whose nature and function is explicitaly stated in minimalist terms. In Escribano (1991), these are conceptual-pragmatic principles: the final ordering (after movement) of the arguments of a verb will depend on concepts such as theme-rheme, focus-presupposition, etc.. We will return to this when we look at the transformational component in section 2.2. First, let us see whether a more radical simplification of the categorial component is possible by reducing the inventory of the categories listed in the lexicon.

2.1.2. Functional categories

With the incorporation of *functional* categories like I(nflection) and C(omplementizer) into the X-bar system after *Barriers* (Chomsky 1986a), clauses also conformed to structures like (2), in what was considered a welcome move towards symmetry. At the same time the introduction of functional categories, including the split of I into Agr(eement) and T(ense), Asp(ect), Neg(ation), etc. was seen as a way of overcoming the restrictions of what has been called the *LGB* model (see fn 3) but when the descriptive powers of the grammar are enriched, the question of explanatory adequacy arises immediately. A minimalist program should seek to identify the features of functional categories and to suppress those that seem to have no role in the syntax.

Functional categories play a crucial role in Chomsky's MP, which has 'morphological features' at its heart like those associated with tense, agreement and case that 'combine' with categorial features like D, N, V, etc. In earlier versions of the MP, functional categories like Agr and T were the locus of those morphological features (see e.g. Chomsky 1989, 1993). Chomsky (1995: 4.5) establishes a fundamental distinction between [+Interpretable] features and [-Interpretable] features; only the former enter computation since only those features receive an interpretation at the LF interface. This leads eventually to the elimination of the functional category Agr, which played a crucial role in earlier versions of the MP, as a category that contains [-Interpretable] features

to do with verbal agreement, but T (former I) and C, with [+Interpretable] features, continue to be central to the theory.

Escribano (1991), crucially, argues in favour of the elimination of I and C from the categorial component. The arguments against these categories revolve around what he considers to be an asymmetry in the categorial component, which now includes categories which are very different in nature: lexical and functional, as well as the difficulty in specifying the bundle of features under I and C. Since functional categories 'combine' with lexical categories, a variety of elements may appear under C and I and in the specifier position of CP and IP. This is for Escribano (1991) a major objection against these categories, especially regarding C, which may contain complementizers (*that, for,* etc.) (4a) and verbs that have undergone movement (4b):

(4) a. I know $[_{CP}\ [_{C}$ *that*$]\ [_{IP}$ Peter likes movies$]]$

b. $[_{CP}$ What $[_{C}$ *have*$]\ [_{IP}$ you __ done$]]$?
↑——————T

As for the specifier position, <Spec,CP>, it may contain *wh*-phrases like *what* in (4), but also focalized phrases as *this car* in structures like *This car, I really like.*

The question is whether the difficulty on specifying the features of C (and I), given the variety of elements which can appear under C (and I) and related positions, can be used as an argument against their existence. It is true that characterizing functional categories might be a more difficult task than characterizing lexical categories in that the former contain grammatical features of a more abstract nature than those of lexical categories, with semantic content. But that simply seems to call for a close examination of the bundle of features that define functional categories like I and C (as opposed to lexical categories), as the one undertaken by Chomsky (1995).[12] Since the features of the categories that appear in the position of the specifier depend crucially on the features of the head, a correct characterization of the features of C (and I) would provide an explanation for the kinds of elements that appear in the specifier position.[13]

Perhaps the most serious objection against functional categories has to do with the categorial nature of a verbal element without I features in a theory where I is an independent head. For Escribano (1991: II.2.1), what makes a verb a verb is the presence of verbal affixes which are represented under I in the standard analysis - an observation that is specially relevant when applied to languages like Spanish in which verbs are always inflected. It also presupposes that affixes are attached to verbs previous to entering the computational system, as has also

been suggested by Chomsky (1995).[14] The problem is, however, the existence of processes in languages like English in which the features of inflection appear on elements rather than the main verb: modals and above all *do*. Does that mean that in constructions like *'did you read the newspaper yesterday*?' the element *read* is not a verb? To say that a verb is only a verb when it has inflectional affixes is to deny verbs (and affixes, as well as other lexical categories) an independent status before they enter the computation, ignoring at the same time derivational processes by which verbs are formed (presumably in the lexicon): attachment of derivational suffixes like *-ify (solid-solidify)* or *-ize (material-materialize)* or, under an analysis such as that of Hale and Keyser (1993a), zero affixes.

In conclusion, there seem to be no conceptual reasons why C and I should be eliminated from the theory. Quite the contrary, if C and I contain features which are interpretable at the interface, the theory demands their presence as independent heads, unless it can be shown convincingly that the features attributed to C and I are actually features of other categories (e.g. V): i.e. that C and I are non-distinct from V (see fn 12). But it is not clear how a feature like [± wh], for instance, can be a feature of V since Vs appear both in questions and statements. As for I, its features are sometimes independent from those of verbal heads. Departure from these (minimalist) assumptions would only be possible if empirical facts showed that a theory without I and C accounts better for the structures of the language than a theory with I and C, which is far from clear at the moment.

2.2. The transformational component

It is obvious that a theory of grammar must provide mechanisms that put lexical items together to form larger structures (e.g. Merge). But should it also make use of movement operations that displace elements out of the position where Merge (or equivalent mechanisms) have placed them? If movement rules are postulated, it is necessary to specify the nature of movement (what exactly do we mean when we say that elements move?), as well as the conditions for movement (what triggers movement?).

2.2.1. The nature of movement

The notion of movement presupposes the existence of different levels of analysis (before and after the application of the rule): i.e. a base structure and a

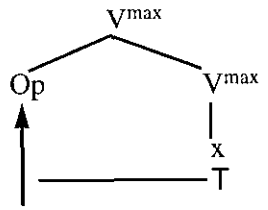
derived structure. In Chomsky's MP, the former is the result of Merge and the latter is the result in Move. These two structures are not to be confused with the two levels of representation of earlier models of generative grammar: D(eep)-S(tructure) and S(urface)-S(tructure). For Chomsky, a minimalist approach to language involves the elimination of those theory-internal levels of representation, once it can be shown that the principles previously held to apply at those levels apply somewhere else (see Chomsky 1993) (see fn 6).

Chomsky's approach to movement is, as in earlier versions of his theory, strictly derivational (unlike other subcomponents of the grammar): computation involves successive operations leading to linguistic expressions. Escribano (1991: III.2.3) however, adopts a non-dynamic approach to computation with one single level of representation which shows the effects of a 'metaphorical' application of movement (though it is possible to isolate principles associated with different levels of representation such as D-S and S-S).

2.2.2. The conditions for movement

Escribano's minimalist analysis and Chomsky's MP differ radically concerning the conditions for movement to apply. In *Una Teoría de la Oración* (chap. IV) movement creates predication structures which cannot be directly created in the lexicon or through the application of the Projection Principle (since the structures of the language must adapt to the pragmatic/discourse context). In the syntax, predication structures involve the existence of a prominent position: operator (Op), which is adjoined to the V^{max}, as in (5) (where x is the variable that Op binds):

(5)



In the unmarked case the element that occupies the position Op is the subject of a clause (6a), but pragmatic and discourse factors may force other elements to move: e.g., the element in Op can be a *wh*-phrase, with the subject in its base position within the V^{max} (6b):

(6) a. [$_{Op}$ **John**] [$_{Vmax}$ likes videos]

b. [$_{Op}$ What] [$_{Vmax}$ does **John** like]

The fact that the position Op is the only landing-site for a variety of movement operations makes the transformational component in Escribano (1991) more flexible than that of the P & P model. Flexibility follows as well from a pervasive use of X^{max} adjunction, like adjunction of N^{max} to V^{max} in (6). But the model is also highly constrained: (i) there is no distinction between NP-movement and *wh*-movement (i.e. no distinction between A- and A'-movement); (ii) Move-α only targets maximal projections (i.e. no distinction between head movement and movement of an X^{max}); (iii) movement is adjunction of X^{max} to Y^{max} (i.e. no distinction between adjunction and substitution).

Several problems arise at once, however, which are not satisfactorily dealt with in *Una Teoría de la Oración*. The model is too constrained in that the distinction A vs. A'-movement is obliterated. Since the publication of *LGB* (Chomsky 1981), there has been extensive literature in generative grammar concerning the differences between both types of movement. A grammar which does not distinguish between them will have to provide additional mechanisms in other modules of the grammar which would, for instance, bar movement of a *wh*-phrase out of certain constructions which allow movement of the subject.

But the main objections, from a Chomskyan perspective, against Escribano's transformational component have to do with the degree of flexibility allowed, especially concerning what triggers movement. This flexibility is essential in order to account for word order in Spanish (see (8) below). But problems arise in relation to the following areas: (i) the nature of pragmatic principles that force movement; (ii) the interaction between discourse principles and syntactic principles and (iii) the role of illocutionary features.

Regarding (i), the theme/rheme distinction is mentioned as a pragmatic principle triggering movement, but this distinction appears to operate in a variety of ways in the syntax. For instance, an element marked as [+R] (rheme) may appear either in the operator position in (5) or in the highest position in the V^{max}.

(7) $[_{V^{max}} [_{Op}\ \mathbf{[+R]}\ ]\ [_{V^{max}} \ldots [\ X^{max}\mathbf{[+R]}\ ]\ ]]$

But Op can also be thematic, e.g. when it is occupied by the subject - the unmarked case. If an element which is thematic is characterized as [-R], how do [+R] and [-R] interact? Can the same syntactic position be available for elements with contradictory features? Additionally, dislocated elements, which are thematic, may occupy a position above Op (adjoined to the higher V^{max}), as the element *tabaco* in the sentence *Tabaco, yo no tengo* (Escribano 1991: 364).

In sum, we have: a position for [+R] (highest in the (lower) V^{max}); a position for the theme (above Op); and a position where both theme and rheme may

appear (Op). Since elements appearing in those positions have been 'moved' there by the transformational component, the grammar would have to specify clearly how Move-α operates in relation to functional principles like those (and others).[15] In the case of movement to Op, statements like 'prevemos...una cierta correspondencia entre la naturaleza ilocucionaria del predicado y los rasgos léxicos del operador respectivo' (Escribano 1991: 280) appear to suggest that the reason for movement could be to establish some sort of a feature-agreement relation Op-V, but they are extremely vague.

As for the interaction between pragmatic and syntactic principles (ii), it accounts for the variety of positions in which the subject *Juan* is found in structures like those in (8) (from Escribano 1991: 326):

(8) a. ¿Cómo pudo **Juan** haber estado sacando dinero a las chicas durante años?
b. ¿Cómo pudo haber **Juan** estado sacando dinero a las chicas durante años?
c. ¿Cómo pudo haber estado **Juan** sacando dinero a las chicas durante años?
d. ¿Cómo pudo haber estado sacando **Juan** dinero a las chicas durante años?
e. ¿Cómo pudo haber estado sacando dinero **Juan** a las chicas durante años?
f. ¿Cómo pudo haber estado sacando dinero a las chicas **Juan** durante años?
g. ¿Cómo pudo haber estado sacando dinero a las chicas durante años **Juan**?

The structures in (8) involve movement of *Juan* to right-adjoin to the V^{max} whose head is *pudo*, in order to be assigned case as in (9):

(9) [¿Cómo [pudo [[haber [estado [sacando dinero a las chicas durante años [t_i]]]]] **Juan**$_i$]?

This corresponds exactly to (8g); the other structures in (8) involve further adjunctions to the right of the elements following *Juan*, as in (10), which is the derivation for (8c) (from Escribano 1991: 328), where the constituent *sacando dinero a las chicas durante años* adjoins to the V^{max} created by adjunction of *Juan* to the V^{max} headed by *pudo* as in (9):

(10)¿Cómo [pudo [[haber estado [t_j]]] **Juan**$_i$]]] [[sacando dinero a las chicas durante años] [t_i]]$_j$?

While case reasons appear to motivate movement of *Juan*, there can be no syntactic explanation for the movement of the categories that appear to the right of *Juan* in (10) (and in ((8a) to (8f)). Additionally, case is also assigned to *Juan* in the position Op as in the affirmative clause in (11):

(11)**Juan** pudo haber estado sacando dinero a las chicas durante muchos años

The theory should specify clearly the structural configuration in which case is assigned to the subject, as well as how case interacts with discourse/pragmatic

principles to force movement this element. Similar questions arise in other modules of the grammar.[16]

Finally, concerning the nature of illocutionary features (iii), the predicative structure in *Una Teoría de la Oración* contains, together with the predicative component, involving Op [V^{max}], as in (5), a pragmatic/ illocutionary component with features such as Tense, Aspect, Person etc. as well as features to do with illocutionary force: assertion, exclamation, command, etc., as Figure 3 shows (from Escribano 1991: 288):

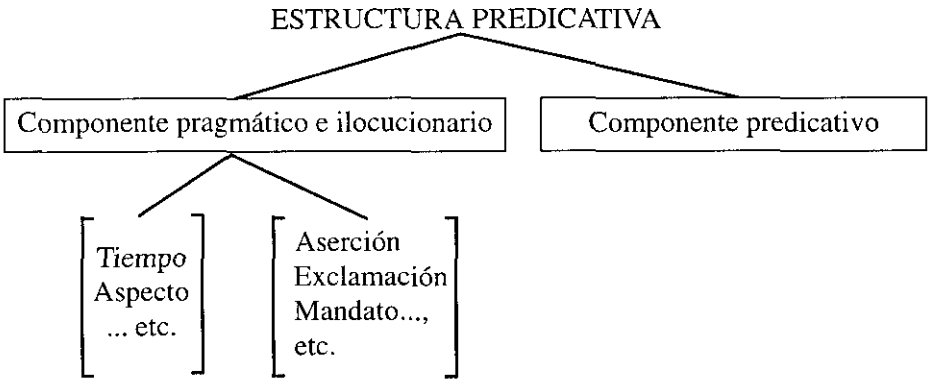


Figure 3: *Predicative Structure in Escribano (1991)*

The claim is made that illocutionary features like those in Figure 3 are associated with the V, but the nature of those features, their role in their grammar and the way they interact with the features of the predicative component are not explicitely stated in *Una Teoría de la Oración*.

These problems illustrate the tension between explanatory and descriptive adequacy mentioned throughout. The flexibility required to account for surface word order in Spanish appears to be incompatible with a minimalist approach. The proposal in *Una Teoría de la Oración* is too vague regarding the nature and role of pragmatic/discourse principles and the variety of processes involved cannot be naturally incorporated into a more restricted and economical theory of movement that the theory requires. Let us see then what the transformational component looks like in Chomsky's MP.

Under the assumption that a movement operation is inescapable, the concern of the MP is 'to determine how spare an account of the operation Attract/Move the facts of language allow' (Chomsky 1995: 317). For Chomsky Move-α is strictly restricted to operations driven by (the checking of) morphological features. A limited inventory of features triggering movement is provided: categorial

features (D, I, etc.), case features, the feature Tense, the feature [+wh] and so on.[17] For instance, in (12) the subject argument may move from its base position in <Spec,V^{max}> to <Spec, IP> to check its case feature against a matching feature in I and V may raise to I to check a Tense feature:

(12) $[_{IP}\ [N^{max}\ (S)]_i\ [I'\ [_I\ V_k\text{-}I]\ [_V{}^{max}\ t_i\ [_{V'}\ t_k\ [N^{max}\ (O)]\ ]]]]$

Limited cross-linguistic variation in word order follows from the fact that movements like those in (12) can be either overt (in the syntax) or covert (at LF). LF-movement has no phonological counterpart. So, in languages like Spanish , where V raises to I overtly, the subject may raise overtly (13a) or at LF (13b), giving two possible surface orderings:

(13) a. $[N^{max}\ (\mathbf{S})]_i\ V_k\ [_V{}^{max}\ t_i\ [t_k\ [N^{max}\ (O)]\ ]]$

b. $V\ [V^{max}\ [N^{max}\ (\mathbf{S})]\ [t_k\ [N^{max}\ (O)]\ ]]$

Thus, the transformational component in the MP is highly constrained where the transformational component in Escribano (1991) is more flexible: regarding what triggers movement. But it is also more flexible where Escribano's is more constrained, regarding the types of movement allowed. The MP distinguishes movement of heads from movement of X^{max} (and within this, A- vs. A'-movement). Head movement involves adjunction (V to I in (12)), and X^{max} movement involves substitution (movement of the subject in (12)). Adjunction of X^{max} to Y^{max} - the only movement type considered by Escribano (1991) - lacks a clear status in the theory. What this suggests is that the right way to approach a comparison of the transformational component in *Una Teoría de la Oración* with that of the MP could be by considering the two proposals as complementing each other, rather than as alternative proposals.

In generative grammar adjunction of X^{max} to Y^{max} has been used mainly to account for 'rearrangement' operations such as extraposition, right-node raising, VP-adjunction, scrambling, etc. The status of these types of operations has been (and continues to be) a controversial issue. Chomsky's position is that they involve 'stylistic' movement rules, as in *A review has been written of Chomsky's latest book.* Within the MP these stylistic rules appear to fall outside the core of the grammar. The core computational operations (see (12)) are driven by morphological features in the derivation from the lexicon to LF. Other types of movement operations, including most of those dealt with in *Una Teoría de la Oración*, are derived by other means, possibly by movement rules in the PF component which may take into account aspects such as focus,

stress, intonation and so on. PF rules like those would account for the variety of word orders in (8).

This is precisely where Chomsky's and Escribano's minimalist approach are radically different. While Escribano extends the range of facts to be covered by the theory of grammar, Chomsky is restricting them more and more (the *core* is getting smaller). Chomsky's MP is restricted to computation to LF; though there is some mention of the restrictions imposed on the grammar by PF interface conditions, a minimalist approach to computation to PF is not offered. If notions such as theme-rheme, assertion, focus and so on are proven relevant at the PF interface, this could be where the approach in *Una Teoría de la Oración* could partly complement the MP. But, of course, this implies, against Escribano (1991), that such operations are not formally or syntactically driven: they are not part of the syntax, unlike operations which move e.g. nominal elements to subject position (for case or categorial checking), i.e. it implies distinguishing two types of rules: syntactic and phonological or stylistic.[18] If both types of movement (morphologically-driven in the syntax and pragmatic/discourse driven at PF) are separated, some of the problems mentioned in this section regarding the transformational component in Escribano (1991) would simply not arise.[19]

In sum, under minimalist assumptions, certain conceptual problems arise for an integrated proposal like the one in *Una Teoría de la Oración* in which movement in the computational system may be driven by syntactic factors or by pragmatic/discourse factors. Such a model is designed to account for word order flexibility in languages like Spanish, but while there is no doubt that word order in Spanish seems to be influenced by the theme-rheme distinction (among other factors), the question is where in the grammar the theme-rheme distinction is relevant. On the other hand, while Chomsky's transformational component is much tighter in that movement is driven only by morphological factors (feature checking), additional mechanisms are needed for languages like Spanish and others that allow a great deal of word order variation. While a minimalist account of computation to LF is provided, there is no attempt at providing a similar account of computation to PF.[20]

3. THE END OF SYNTAX

A minimalist approach to the study of language implies ultimately the end of syntax, with computation reduced to a simple system of composition of elements drawn from the lexicon and explanations emerging at the interface levels (PF and LF) in the case of Chomsky's MP and in pragmatic/discourse

principles in Escribano's *Una Teoría de la Oración*. For Marantz (1995), the only consequence of this for syntacticians is that they will have 'to renew their interface credentials by paying attention to relevant work on phonology and semantics' (Marantz 1995: 381).

This vision of the end of syntax should not be interpreted as an abandonment of two crucial assumptions of Chomsky's generative grammar: the specificity of the Language Faculty and the autonomous syntax thesis. Chomsky's MP, like earlier versions of generative grammar, defends the specificity of the Language Faculty, while emphasizing the fact that it interacts with other systems of the mind/brain, from which many of the properties of it can be derived. Escribano (1991: III), however, remarks that reducing syntax to simple, trivial mechanisms diminishes the poverty of stimulus argument in language acquisition and with it Chomsky's central hypothesis that the Language Faculty has specific properties which are independent from other cognitive systems of the mind/brain.[21] But while it is true that a simpler, more natural computational system may be easier to acquire, the burden of acquisition now falls on the morphological properties of specific languages which are responsible for triggering movement. Thus for a basic SVO sentence like 'John likes this movie', the learner has to know, among other things, whether the D-feature and the case-feature of *John* and *this movie* and the T feature of *likes* must be checked overtly or at LF, as well as what are the features of the target of movement against which categorial, case and Tense features are checked. Since these are abstract, formal features which may or may not have phonetic realization the acquisition process is far from simple.

As for the autonomous syntax thesis, the syntactic component stands between the two interfaces and its nature is neither phonological nor semantic, and as such, it is as autonomous as it ever was. What we observe here is again a shift of focus. As Marantz (1995: 381) points out, the end of syntax is rather to be interpreted as the end of a subfield of linguistics that takes this syntactic component which stands between the interfaces as the main object of study. Thus, Chomsky's vision of syntax at the interface 'encompasses the completion rather than the disappearance of syntax' (Marantz 1995: 381).

4. CONCLUSION

Two proposals to minimize grammar have been examined in this paper: Escribano's (1991) *Una Teoría de la Oración* and Chomsky's MP. Both have to be understood in the context of the search for explanatory adequacy in

generative grammar and it is precisely where explanatory adequacy is to be found that the two proposals radically differ and, as has been suggested here, could even be understood as complementing each other. For Escribano, explanation of why language is the way it is is to be found in functional/pragmatic principles that govern language use. For Chomsky, however, explanation lies at the interface between the Language Faculty and those systems of the mind which are concerned with the articulation and interpretation of structures, independently of how they are used in actual discourse, as was argued extensively in section 1.

Section 2 has looked at specific aspects of language design concerning the categorial component and the transformational component. Many of the differences observed are a direct consequence of the different conceptions of the role of grammar and its relation with language use. Escribano's model has been set against Chomsky's MP, and though his efforts to minimize grammar advance some of the proposals of Chomsky's MP, the discussion has suggested that the system is both too constrained regarding the types of movement allowed and too flexible regarding what triggers movement. One of the major objections has concerned the nature of the interaction between pragmatic principles and syntactic principles. Separating both types of principles as triggering movement at different levels, as in Chomsky's MP, has been considered advantageous for a minimalist approach to language design.

The debate as to whether the core of grammar should be reduced as in Chomsky's MP or expanded, as in *Una Teoría de la Oración* remains open. Nevertheless Chomsky's views are more radical than ever in that the study of language, as he understands it, has become more abstract, more idealized, further away from 'real' data, leading inevitably to a divorce between discourse and syntax, a divorce which is already present in the distinction between stylistic processes and core grammatical operations. Integrated theories of language like that of Escribano (1991) which focus on language in discourse, on the other hand, have difficulty in accounting for basic syntactic facts. It would not be surprising if the shift in perspective brought about by the MP created a new rift in generative grammar as dramatic as the one brought about by the P&P's approach in the late 70s.

NOTES

* I am grateful to Ana Ardid and Carlos Piera for very useful comments and discussion on the content of this paper. The usual disclaimers apply.

[1] For a clear introduction to this particular approach to the study of language see Chomsky (1986b: chap. 1).

[2] The terms 'descriptive adequacy' and 'explanatory adequacy' were first defined by Chomsky (1965).

[3] The P & P model is associated with Government and Binding Theory, after *Lectures in Government & Binding (LGB)* (Chomsky 1981), but the term also includes the developments that led to the MP in the late 80s and beginning of the 90s.

[4] For the relevance of functional/pragmatic functions in characterizing phrasal and clausal structure in generative grammar see Selkirk (1984), Rochemont (1986) and Rochemont & Culicover (1990) and more recently Cinque (1993). Regarding word order in Spanish see Contreras (1978) and Zubizarreta (1994).

[5] This followed the elimination of lexical insertion rules and phrase structure rules of the types used in Early Generative Grammar. In the MP an array of lexical items (a 'numeration' in Chomsky 1995: chap 4) is selected for the computational system to operate with for the derivation of particular linguistic expressions.

[6] PF and LF are the only levels of representation in Chomsky's Minimalist Program, since they are the only levels required by the fact that the Language Faculty interacts with other systems of the mind/brain.

[7] The relevant relations in (2) are established between the head X^o and (i) Z^{max} in the specifier position and (ii) Y^{max} in the complement position, (ii) being more local than (i).

[8] For instance, a saturated V^{max} is the argument of a locative P^{max}, which is an adjunct (Escribano 1991: chap. III).

[9] The elimination of X' is linked to the rejection of a special status for the subject argument, which in standard versions of X-bar Theory occuppied the position of the specifier, outside the X' (Z^{max} in (2)).

[10] The proposal was initially made in Chomsky (1994).

[11] The distinction between maximal and minimal categories follows from the way Merge applies: an X^{max} projects when targeted by Merge.

[12] The fact that verbs appear under C (and I) is no problem for the theory if this is an adjunction movement of V to C (and I), instead of substitution. This possibility does not exist for Escribano (1991) for whom the grammar only allows X^{max} adjunction, as we shall see in 2.2. - a direct consequence of the suppression of functional heads.

[13] Some of the objections against C and I concern the fact that they 1) lack lexical content; 2) cannot be an independent X^{max} by themeselves; 3) do not properly govern their complement (which cannot be extracted) and 4) do not assign a thematic role, etc. (see Escribano 1991: II. 2). But these objections are all related to the the fact that C and I lack lexical content and as such, though they may be phonological independently, they are semantically (and syntactically) dependent on lexical categories. Those objections are no problem in a theory that recognizes two types of categories, functional and lexical.

[14] The mechanisms by which affixes attach to a V previous to the computation are not specified by either Escribano (1991) or Chomsky (1995). In Escribano (1991) this process would have to take place in the lexical structure that precedes syntactic structure. In Chomsky (1995), either (i) verbs are inflected in the lexicon or (ii) verbs are inflected as they enter numeration. But independently, the syntax has to provide checking mechanisms to ensure that affixation has taken place correctly. In the MP those mechanisms involve crucially the presence of I as an independent head (against which V checks its features).

[15] In the case of thematic elements above Op, movement is suggested for arguments, as in topicalized structures, but not for adjuncts.

[16] As pointed out by Escribano (*1991*: V.5) the analysis would have to be adapted to account, e.g. for facts to do with Binding Theory. In a standard finite clause like ***Juan*** *se adora a sí mismo* the element *Juan* is said to c-command the anaphor *si mismo*. But for Escribano an element bearing the feature [+R] c-commands the other arguments in the V^{max}. This would create problems for the Binding Teory when the element with the feature [+R] is other than the subject.

[17] The fact that whole phrases or lexical items are (overtly) moved and not just the feature to be checked is because features lack independent phonetic realization. Thus, movement obeys 'the external requirement that the computational system must adapt to the sensorimotor apparatus' (Chomsky 1995: 265).

[18] Though the question is not really developed, Escribano rejects the notion of two types of rules:

> «Es de señalar que en las versiones GB estandar hay que contar de todos modos con reglas 'estilísticas' asociadas con el componente PF que se encargan de adaptar las configuraciones sintácticas basicas a las necesidades comunicativas. Sin embargo, el *status* de tales reglas nunca ha estado claro, y en particular resulta problemático que en ciertos contextos de discurso deban de actuar. En la presente propuesta monoestratal simplemente ahorramos esa aplicación escalonada de distintos bloques de reglas.» [Escribano 1991: 250]

[19] The obvious disadvantage of this approach is, however, the lack of interrelation of Chomsky's model between PF and LF; the grammar would require some kind of checking mechanism so that the output of PF 'matches' that of LF. A similar mechanism is necessary in the model suggested in *Una Teoría de la Oración,* where the interface between the language faculty and cognition is prior to computation, in the lexicon.

[20] In fact, it is suggested in Chomsky (1995: chap. 4) that such an account may not be possible.

[21] In Escribano's words

> «cuanto más simples, generales y naturales sean las operaciones necesarias, tanto más facil y plausible será atribuírselas a sistemas generales de cognición y procesamiento del cerebro humano en su conjunto» [Escribano 1991: 212]

Departamento de Filología Inglesa
Facultad de Filosofía y Letras
Universidad Autónoma de Madrid
Carretera de Colmenar, km. 15
28049 Madrid
e-mail: mendiko@ccuam3.sdi.uam.es

REFERENCES

Chomsky, N. (1965). *Aspects of the Theory of Syntax*. Cambridge, Mass.: MIT Press.

— (1970). Remarks on nominalization. In R. A. Jacobs & P. S. Rosenbaum (eds.) *Readings in English Transformational Grammar*. Waltham, Mass.: Ginn and Co.

— (1981). *Lectures in Government and Binding*. Dordrecht: Foris.

— (1986a). *Barriers*. Cambridge, Mass.: MIT Press.

— (1986b). *Knowledge of Language: Its Nature, Origin and Use*. New York: Praeger.

— (1993). A Minimalist Program for linguistic theory. In K. Hale & S. Keyser (eds.) (1993b) [Reprinted in N. Chomsky (1995): chap. 3]

— (1994). Bare phrase structure. *MIT Occasional Papers in Linguistics* 5, Dept. of Linguistics and Philosophy, MIT [Reprinted in G. Webelhuth (ed.). 383-440]

— (1995). *The Minimalist Program*. Cambridge, Mass.: MIT Press.

Chomsky, N. & H. Lasnik (1995). The theory of Principles and Parameters. In N. Chomsky *The Minimalist Program*. Chap. 1 [originally published in J. Jacobs, A. von Stechow, W. Sternfield & T. Vennemann (eds.) (1993) *Syntax: An International Handbook of Contemporary Research*. Berlin & New York: Walter de Gruyter].

Cinque, G. (1993). A null theory of phrase and compound stress.*Linguistic Inquiry* 34, 2, 239-297.

Contreras, H. (1978). *El orden de palabras en español*. Madrid: Cátedra.

Escribano, J. L. G. (1991). *Una Teoría de la Oración*. Universidad de Oviedo. Servicio de Publicaciones.

Hale, K. & S. Keyser (1993a). On argument structure and the lexical representation of syntactic relations. In K. Hale & S. Keyser (eds.) (1993b).

— (1993b). *The View from Building 20*. Cambridge, Mass.: MIT Press.

Jackendoff, R. (1977). *$\bar{X}$ Syntax: A Study ot Phrase Structure*. Cambridge: MIT Press.

Marantz, A. (1995). The Minimalist Program. In G. Webelhuth (ed.).349-382.

Matthews, R. J. (1991). Psychological reality of grammars. In A. Kasher (ed.) *The Chomskyan Turn*. Oxford: Blackwell. 182-199.

Rochemont, M. (1986). *Focus in Generative Grammar*. Amsterdam: John Benjamins.

Rochemont, M. & P. Culicover (1990). *English Focus Constructions and the Theory of Grammar*. Cambridge: C.U.P.

Selkirk, E. (1984). *Phonology and Syntax: The Relation between Sound and Structure*. Cambridge, Mass.: MIT Press.

Webelhuth, G. (1995). *Government and Binding Theory and the Minimalist Program*. Oxford: Blackwell.

Zubizarreta, M. L. (1994). Word order and prosody. (ms.) USC.