

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

Aspects of the Syntax of Spanish Nominal Expressions

by

Claudine Raffray

Dissertation submitted in fulfillment of the requirements for the award of the degree of Master of
Arts in Linguistics.

University of Cape Town
2001

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signed by candidate

Claudine Raffray

Abstract

This study deals with aspects of the grammatical structure of nominal expressions in Spanish, examined within the broad frame of notions, principles and assumptions constituting the Minimalist Program (MP). A central concern of the study is the major theoretical reconceptualization of nominal structure known as the DP Hypothesis, an analysis of nominal expressions as being headed by D, rather than by N, as in the traditional analysis. The most important proposals in support of this hypothesis are set out and critically reviewed, and then reinterpreted in minimalist terms where necessary. Two themes are central with respect to nominal structure and these recur throughout the study, namely (i) the empirical motivation for the syntactic parallels between nominal and clausal structure and (ii) the differences between lexical and functional categories.

Chapter 1 provides a brief introduction, outlining the central concerns of generative grammar. Chapter 2 focuses on the theoretical framework, outlining the levels of representation in the derivation of structural descriptions, as well as the formal operations involved in the derivation of nominal expressions: Merge, feature attraction and movement. Chapter 3 deals with the DP Hypothesis and reviews the various proposals in support of this representation of nominal structure. In chapters 4 and 5 the relevant Spanish data is analysed, against the background of a critical review of various proposals appearing in the literature. Four syntactic phenomena are examined. Chapter 4 is concerned with the mechanisms of genitive Case assignment and the structural patterning of APs in Spanish nominal expressions. Chapter 5 examines null nominals and bare nominals. In chapter 6 the findings are set out, and further problems are noted.

The principal findings of the study are as follows. Empirical evidence suggests that it is necessary to distinguish between the processes of subjective and objective genitive Case checking on the one hand, and possessive genitive Case checking on the other. The proposed analysis presented for the paradigm of adjectival modification highlighted a problem in accounting for the scopal effects of adjective-noun word

order differences. With respect to null nominals, it is suggested that the definite and indefinite constructions should not be ascribed the same underlying structure, and that a covert element occupies the empty N of null nominals, accounting for the determiner-noun agreement overtly exhibited in the Spanish inflectional paradigm. As regards problems for further research, the study highlights the importance of clarifying aspects of the syntactic nature of functional categories, given the central role that the syntax-morphology interface plays in MP.

University of Cape Town

Contents	Page
1 Introduction	1
2 The Minimalist Program	4
2.1 Introduction	4
2.2 Levels of representation	5
2.3 Syntactic derivation: Merge and Move	7
2.4 Principles of economy and restrictions on movement	20
2.5 Summary	23
3 The DP Hypothesis	25
3.1 Introduction	25
3.2 Some background	25
3.3 Functional versus lexical categories	27
3.4 Motivation for the DP hypothesis	29
3.4.1 Early proposals	29
3.4.2 Similarities between nominal expressions and sentences	31
3.4.3 Argument structure of nominals	34
3.4.4 The English gerundive	36
3.4.5 AGR in the nominal expression	39
3.4.6 Szabolsci: D parallels C	41
3.4.7 More evidence: Greek and Hebrew	46
3.4.8 Summary	48
3.5 Functional layers in the clause	49
3.6 Functional layers in the nominal expression	51
3.6.1 Ritter and NumP	52
3.6.2 Bernstein on gender and word markers	55
3.6.3 Agreement projections for Case features	57
3.6.4 Summary	57
3.7 PRO and the DP	60
3.8 Conclusion	62
4 Adjectives and genitives in Spanish	64
4.1 Introduction	64
4.2 Argument structure and θ -role assignment	64
4.3 Case checking	68
4.3.1 Previous proposals	71
4.3.1.1 GenP versus PP	78
4.3.2 A possible analysis of Case checking in the Spanish nominal expression ...	79
4.4 Distribution and Interpretation of adjectives in Spanish	83
4.4.1 Distribution	83
4.4.2 Interpretation	84

4.5	Syntactic status of adjectives	86
4.5.1	Previous treatments within generative grammar	86
4.5.2	Connecting syntax with interpretation	92
4.5.3	Two types: adjectival heads and adjoined adjectives	94
4.6	A possible analysis of APs in Spanish nominal expressions	98
4.7	Conclusion	102
5	Empty categories in Spanish nominal expressions	103
5.1	Introduction	103
5.2	Null nominals	104
5.2.1	Indefinite null nominals	105
5.2.1.1	Deadjectival nouns	112
5.2.2	Definite null nominals	115
5.2.2.1	Definite null nominals with complements	118
5.3	Bare nominals	121
5.3.1	The distribution of bare nominals	122
5.3.1.1	Early proposals	122
5.3.1.2	Lois' (1996) typology	123
5.3.2	Interpretation of bare nominals	126
5.3.3	Previous treatments within generative grammar	127
5.3.3.1	Szabolsci's (1994) argument conversion hypothesis	127
5.3.3.2	Types (A), (B) and (C)	130
5.3.3.3	Type (D): proper nouns	131
5.3.5	Summary	133
5.4	Conclusion	133
6	Conclusion	135
	Bibliography	135

Chapter 1

Introduction

Since the start of Chomskyan generative grammar with *Syntactic Structures* (1957), linguists have sought to address fundamental questions about the nature of linguistic knowledge and the cognitive processes whereby this knowledge is acquired. Chomsky (1995: 167) states that “the theory of a particular language is its grammar”. In positing a model of grammar which maps speakers’ underlying competence¹, theorists have long faced the tension between descriptive and explanatory adequacy. A grammar that is *descriptively* adequate is one that accurately describes a native speaker’s knowledge of his/her language. To achieve *explanatory* adequacy a theory must explain why the grammar has the properties that it does (Chomsky 1995: 3). The goals of linguistic enquiry are summarised as follows (Epstein et al. 1996: 2):

- (i) To provide an explicit description of what constitutes knowledge of each natural language.
- (ii) To provide an explanation of how it is that a person P can come to know what they do know.

Generative grammar has undergone a series of major conceptual changes over the last four decades, reflected in several stages in the development of the theory of rules and representations. Over this time, the core research imperative has become to steer clear of language-specific statements and rules. This means that the enormous complexity presented by the structural differences distinguishing the languages of the world is assumed to be reducible to a finite set of principles characterising the human language faculty. These principles, generalized descriptions applicable to all natural languages, are what underlie a theory of knowledge termed Universal Grammar (UG). Thus UG

¹ The distinction between “competence” and “performance” dates back to Chomsky (1965: 4). Competence is “the speaker-hearer’s knowledge of his language”, while performance is “the actual use of language in concrete situations”.

constitutes the common core grammar from which all languages derive. “UG must determine the class of possible languages” (Chomsky 1995: 169). Any variations between languages and language families arise from a finite set of (largely) binary parameters imposed on the base set of universal grammatical and structural principles. This UG is genetically available to children acquiring their mother tongue. Chomsky (1995: 17) states that “(t)he correct theory of the initial state will be rich enough to account for the attainment of a specific language on the basis of evidence available to the child, but not so rich as to exclude unattainable languages.” UG, then, forms part of a genetically determined language faculty. The process of language acquisition involves forming hypotheses on the basis of the principles of UG, which express the minimal necessary requirements for all languages, and arriving at the settings of the points of parametric variation by a trial and error treatment of the input data available. In this way, the internalised core grammar is complemented by the acquired grammar, which is specific to the language in question.

This study focuses on aspects of the syntax of Spanish nominal expressions. One of the core themes of the study is the empirical motivation for the syntactic parallels between nominal and clausal structure. So, while the theoretical scope of the study is at the level of the nominal expression, reference to clausal structure remains a recurring topic throughout. It is with respect to details of internal structure regarding the issues of word order, agreement, case and thematic structure that there exist a wide range of hypotheses on how these similarities are realised in the syntax. The aim of this study is to review the relevant proposals concerning nominal structure and to consider the application of notions underlying current theoretical assumptions to these proposals. The scope of the discussion is limited: I shall attempt to (i) point out the areas that seem to be accounted for by the theory, and (ii) highlight potential problem areas which call for revision of some aspects of the theory.

The study is presented within the theoretical framework known as the Minimalist Program (MP) (Chomsky 1993, 1995). As a theory of grammar, MP is the object of

ongoing research. Lasnik (1999: 6) contends that “there is not yet anything close to a Minimalist theory of language”. Nevertheless, MP is the dominant theoretical framework of formal approaches to language enquiry.

The study is organized as follows. Chapter 2 gives a brief overview of some of the relevant assumptions and mechanisms of MP. The core concepts, including such aspects as phrase structure, movement and licensing and the so-called ‘economy conditions’, are defined and illustrated with reference to English. Chapter 3 traces the development of the syntactic representation of nominal structure couched in terms of what is known as the D(eterminer) P(hrase) Hypothesis, which has its roots in Abney (1987). In chapters 4 and 5 the Spanish data are presented and analysed against the theoretical background given in chapters 2 and 3. Chapter 4 is devoted to the analysis of two aspects of Spanish nominals, namely the realisation of genitival arguments and the mechanisms of adjectival modification. Chapter 5 provides a discussion and analysis of two classes of empty categories in Spanish nominal expressions. Chapter 6 concludes the study, presenting a brief summary of the major findings, and noting potential problems for further investigation.

Chapter 2

The Minimalist Program

2.1 Introduction

This chapter outlines some of the assumptions and devices of the Minimalist Program (MP) that form the theoretical framework of this study. The basic objectives of MP are still in keeping with the umbrella theory of Principles and Parameters (P&P); Government and Binding (GB) Theory, which predates MP, is an earlier version of P&P. Theoretical notions belonging to both GB and MP are used in the accounts of nominal structure discussed in this dissertation. Therefore, where aspects of the former model are relevant to the discussion, I shall set them out briefly.

The Minimalist Program of enquiry is so named because it represents a move from a rule-based model towards an attempt to describe and explain natural language phenomena using minimal means. It is termed a 'program' because it is a theory 'in flux'; rather than a complete set of ideas, it is an experimental approach which continues to evolve, with many notions yet having to find empirical support. Culicover (1997: 347) expresses this as follows (see also Chomsky 1995: 219-225):

Many of the features of this program are not motivated through empirical considerations, but on the basis of intuitive notions of the 'simplicity' or 'naturalness' of the formal system.

Within the broad generative framework the two computational mechanisms that comprise the grammar are phrase structure and movement. Both of these mechanisms have undergone radical reconceptualization within Minimalism. Within the GB framework, phrase structure was couched in the terms of X-bar theory, while movement was characterized by the operations associated with Move α . The core mechanisms of

MP include the operations Merge and Move, morphological feature checking, the operation Spell-Out, and Economy Principles which constrain the workings of the various computations in the course of a derivation. These mechanisms are briefly set out below. The exposition draws primarily on Chomsky (1995), Epstein et al. (1996), Haegeman (1997), Ouhalla (1999) and Culicover (1997).

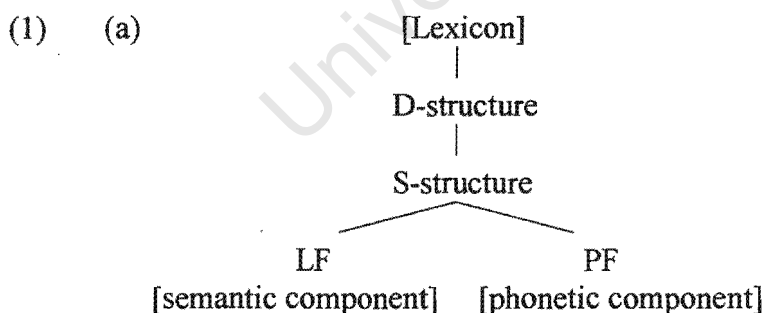
2.2 Levels of Representation

The language faculty comprises a lexicon and a computational system. The lexicon is made up of two classes of elements which together feed into the derivation of structural descriptions (SDs). These are *substantive* (or *contentful*) elements and *functional* elements. Substantive elements are essentially referring (R-) expressions, which denote entities, qualities, events, etc. Examples are *dog*, *man*, *dangerous*, *bit*, and so on. Functional elements do not have descriptive content and serve to carry information about the formal or grammatical properties of SDs. Such information might relate to person, gender, number, Case etc. An example of a functional element is infinitival *to* which serves to mark the (lack of) tense expressed by the verb in a clause. Radford (1997: 45) gives a simple test to determine whether lexical items are substantive or functional: only those with descriptive content have antonyms, so that an adjective like *big*, which has the opposite *small*, must be contentful¹. Likewise, nouns, verbs, adverbs and prepositions typically have antonyms. For example, the noun *success* has the antonym *failure*; the verb *buy* has the antonym *sell*; the adverb *quickly* has the antonym *slowly*; the preposition *on* has the antonym *under*. Syntactic categories whose members typically do not have antonyms are complementizers like *that* in *She thinks that he may come*, determiners like *the* in *the dog*, and auxiliary verbs like *will* in *Will he come?* A distinction can be made, then, between categories which are typically contentful and those which are typically

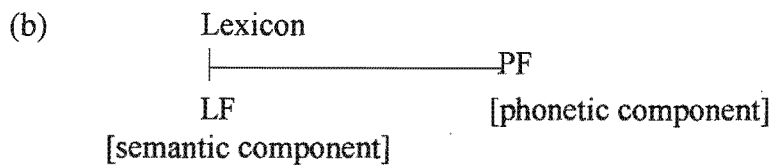
¹ However, Radford (1997: 45) does add that with this test, if a word has no antonym it is not clear whether it is contentful or functional.

functional. The first group are termed ‘lexical categories’ and the second ‘functional categories’. I shall return to this distinction in chapter 3.

The computational system generates linguistic expressions which feed two independent performance systems, the articulatory-perceptual (A-P) and conceptual-intentional (C-I) systems. For a linguistic expression to be pronounced, it must be phonologically interpreted by the A-P system. The representation that feeds this system is called Phonetic Form (PF) and constitutes an abstract representation of sound. The C-I system has as its input Logical Form (LF) representations, abstract representations of meaning. PF and LF are the only two levels of linguistic representation which interface with the external cognitive systems concerned with the pronunciation and interpretation of linguistic expressions. An important difference between MP and its precursors, is that D-structure and S-structure have been completely dispensed with as levels of linguistic representation. These two levels of representation are seen to be superfluous: they are “*internal* representations in the sense that they feed into no system external to the syntactic component” (Epstein et al. 1996: 5). Moreover, D-structure and S-structure represent theoretical constructs which cannot be motivated for independently of theory-internal evidence.² In short, in MP the four-level GB model of grammar illustrated in (1)(a) is abandoned in favour of the conceptually ‘tighter’ two-level version in (1)(b).



² For arguments against D- and S-structure as independent levels of representation, see e.g. Bennis (1994: 175-179) and Chomsky (1992: 27-45).

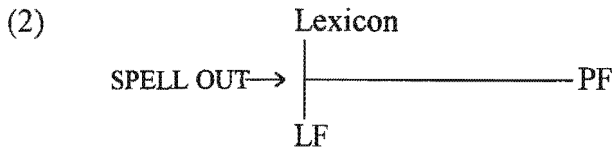


The elimination of the levels of D- and S-structure constitutes a radical move since these had played important roles in the model of grammar up until a decade ago. The consequence of abandoning D- and S-structure is that an array of syntactic phenomena has needed to be re-examined without recourse to these levels of representation and to the mechanisms that are exclusively associated with them. For example, D-structure was the level at which the projection of lexical properties and the assignment of θ -roles took place (Chomsky 1995: 131). This was couched in terms of the Projection Principle. Furthermore, the principles of Binding Theory were taken to apply uniformly at S-structure (Chomsky 1995: 133).

2.3 Syntactic Derivation: Merge and Move

The lexicon represents the start of all derivations. Lexical items are stored as abstract bundles of phonetic, grammatical and semantic features. These items are selected in the form of feature complexes and merged in a series of structure building operations carried out by the computational system. At some point in the derivation those features that serve to make up PF representations are separated from those that make up LF representations by the operation Spell-Out. The grammatical computations that take place prior to Spell-Out are overt in the sense that their effects will be 'visible' in the eventual PF representations that form the input to the A-P system. The computations that continue after Spell-Out, leading to the LF representations, are covert in that their effects will not be phonetically 'visible'. These LF computations are constrained by the fact that they no longer have access to the lexicon. That is, new lexical items may not be selected after Spell-Out. In MP Spell-Out does not occur at a fixed level, for example at the level of S-structure as in GB, but may apply at any stage in the derivation. (2) shows the point of

Spell-Out: the grammatical computations prior to Spell-Out form part of the overt syntax, while those after Spell-Out, leading to LF, form part of the covert syntax.



As pointed out above, lexical items take the form of bundles of abstract phonetic, semantic and grammatical features. Phonetic features are interpretable at the level of PF, since these feed into the output representation of sound. Semantic features are interpretable at the level of LF, since these feed into the output representation of meaning. The principle of Full Interpretation requires that PF representations contain only phonetically interpretable features, and that LF representations contain only semantically interpretable features. PF features must therefore be ‘licensed’ before Spell-Out in order to achieve convergence; if PF features remain visible at LF, this causes the derivation to crash. Radford (1997: 172) informally defines grammatical features as “those features which play a role in grammatical (i.e. morphological or syntactic) processes”.³ Some grammatical features have semantic content and are interpretable at LF. Others are uninterpretable at LF since they do not express meaning. This can be illustrated with the following example:

(3) They will come

The pronoun *they* is morphologically marked for person, number and Case: it is third person, plural, nominative. The first two of these grammatical features have semantic content; they signal that *they* can refer to *the men* or *those people* but not to *the dog* or *Spain*. However, the fact that *they* is marked nominative (i.e. that it has the form *they* rather than *them* or *their*) is a purely formal property, reflecting the syntactic relation between the nominal expression and the tensed verb. Note that in the following two

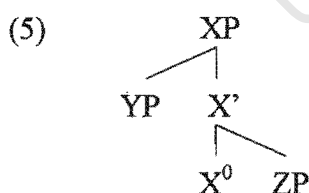
³ See also Chomsky (1995: 230-232).

sentences the subject of the embedded clause has the same semantic content but different Case forms:

- (4) (a) She believes [*they* are idiots]
(b) She believes [*them* to be idiots]

Case is therefore a *formal* grammatical feature, relevant to the phonetic form of the pronoun, but uninterpretable at LF. In contrast, person and number are grammatical features which are semantically interpretable at LF. The Case feature would then have to be checked (and thereby eliminated) before Spell-Out, while person and number could be checked off in the covert syntax.

The structure building procedure carried out by the grammar's computational system is known as the Generalised Transformation (GT). This is a generative mechanism which applies 'from the bottom up', consisting of a series of rule applications termed Merge. Each application joins exactly two objects to form a third. Merge operations follow the structural configuration known as X-bar theory, even though X-bar no longer constitutes an independent module of the grammar.⁴ Therefore, the ultimate projection of a head X will be a maximal projection XP. X' will be the intermediate projection between X and XP. This is illustrated in (5). YP and ZP in (5) respectively represent the specifier and the complement of the head X.



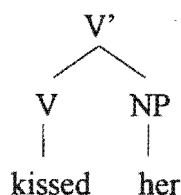
The effects of the GT may be illustrated with the English example in (6):

⁴ For arguments against X-bar theory as an independent module of grammar, see e.g. Bennis (1994) and Cook & Newson (1996: 338-343).

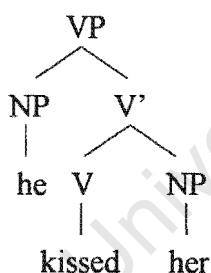
(6) He kissed her

The syntactic derivation of the sentence in (6) begins with the selection of the substantive items, the verb *kissed* and the pronouns *he* and *her*, each fully inflected with the relevant morphological features of Case, tense and agreement.⁵ *Kiss* is a θ -role assigning lexical head which requires two arguments, an internal argument to which it assigns the role of Theme and an external argument to which it assigns the role of Agent.⁶ Thus three independent lexical items are selected from the lexicon and inserted into the computation; the various initial steps of the subsequent derivation are illustrated in (7).

(7) (a) Select and merge the phrase markers V and NP to form V'.⁷



(b) Merge V' with NP to form the maximal projection VP:



In the structure in (7)(b) the NP *her* is the complement and the NP *he* is the specifier of the V *kissed*, which is the head of VP. Thus (7)(b) shows the lexical items *kissed*, *he* and *her* projected into one structure, a VP. These items were inserted from the lexicon as

⁵ Agreement features include the ϕ -features of person, number, gender.

⁶ For background to the terms “internal” and “external” argument, see e.g. Williams (1995: 105-111).

⁷ Two points are worth noting here. Firstly, the term “phrase marker” includes lexical heads, e.g. [_vkiss]. Secondly, phrase markers are not selected from the lexicon but rather built during the course of the derivation. It is for ease of illustration that I take the nominal expressions *her* and *he* to be already projected into NPs at this stage.

fully inflected elements and not bare word stems. For example, *he* and *her* show the forms associated with nominative and accusative Case respectively, while *kissed* is marked for the features of tense and agreement by the suffix *-ed*. But thus far in the derivation there has been no licensing of these elements by way of checking the grammatical features in question.

To facilitate checking, the second of the two computational mechanisms, Move, must be applied. Move raises elements from the *lexical* domain represented in (7)(b) above, moving them to a higher *functional* layer to set up agreement relations. Two kinds of movement are responsible for setting up these agreement relations: XP-movement moves elements to the specifier position of a functional head and head movement moves elements to the functional heads. Here the features associated with the morphological inflections of the lexical items are matched up with the corresponding features associated with the relevant functional heads. In this process of feature checking, the uninterpretable abstract features associated with inflected elements are deleted, so that they are no longer visible in the computation.⁸ At the level of LF all features must be checked. If a feature remains unchecked the derivation will crash. In short, then, it is uniquely morphological requirements, namely the need to license inflected elements, that constitute the trigger for syntactic movement. There is, however, a big difference in the ‘cost’ of movement depending on the lateness that it takes place in the derivation: “overt movement must be licensed by convergence requirements, covert movement can be licensed under freer conditions” (Longobardi 1996: 2). I shall return to this distinction in the discussion of the principles of economy in § 2.4 below.

The abstract features associated with the functional heads are divided into two types, namely N-features and V-features. N-features check the morphological properties of nouns, for example, Case features⁹ and ϕ -features (person, number, gender). The

⁸ For more on feature deletion/elimination see Chomsky (1995: 281, 309).

⁹ Within MP, Case Assignment is replaced by Case Checking analogous to the checking of other grammatical features.

licensing of N-features takes place in a spec(ifier)-head configuration. Spec-head agreement is defined by Epstein et al. (1996: 11) as follows:

- (8) A maximal projection α agrees with a head β only if α is a specifier of β .

V-features check the morphological properties of verbs, for example, tense. The licensing of V-features takes place in a head-head configuration. This is defined by Epstein et al. (1996: 12) as follows:

- (9) A head α agrees with a head β only if α is adjoined to β . Moreover, β must be a functional head.

A further distinction with respect to grammatical features is based on relative 'strength' or interpretability. N- and V-features may be strong/uninterpretable or weak/interpretable.¹⁰ Checking theory holds that strong/uninterpretable features must be licensed prior to the point of Spell-Out, since they are visible at LF and will cause the derivation to crash. Weak/interpretable features need be licensed only at LF, where they are invisible. The same feature may be strong in one language and weak in another, a difference resulting in surface word order variation even though the underlying configuration is identical. This is the case for English and French: the V-features of T in French are strong/uninterpretable while their English counterparts are weak/interpretable (Marantz: 1995: 357). This means that English verbs may wait until LF for the licensing of V-features without problems for the derivation. In the case of French verbs, however, the checking of these strong/uninterpretable V-features must take place before Spell-Out to ensure convergence. As a consequence, English lexical verbs do not raise to T before Spell-Out whereas French verbs do. Thus the feature matrices of functional categories like T account for various surface syntactic variation between languages. If we add the

¹⁰ In Chomsky (1995: 277 ff.) the strong/weak distinction is couched in terms of relative interpretability at the level of LF.

other core functional category AGR to the equation, the following range of possibilities, sixteen in all, may be identified:¹¹

(10)	AGR		T	
	N	V	N	V
	uninterpretable/ interpretable	uninterpretable/ interpretable	uninterpretable/ interpretable	uninterpretable/ interpretable

Within GB, linguistic variation is explained in terms of parameter settings, with each parameter associated with a set of related phenomena. Within MP, differences between languages are reflected in the feature matrices of lexical items. In this way the relative strength or interpretability of the formal features of functional categories results in surface variation, such as difference in word order.¹²

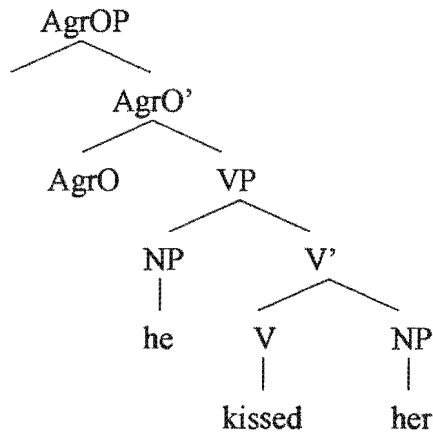
Returning to the derivation of sentence (6), note that the next step in the computation is the projection of the first functional head, AgrO, which takes VP as its complement. The derivation is illustrated in (11):

¹¹ This feature matrix is adapted from Coene (1999: 25).

¹² Culicover (1997: 351), however, points out the shortcomings of attributing movement facts to relative 'strength' of features;

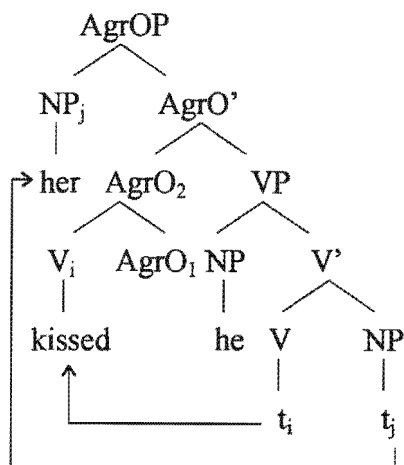
"simply stipulating a feature in order to trigger movement is not a satisfactory answer to the question of why movement occurs in a particular construction. ... Unless it is independently motivated in some way (e.g. through overt inflectional morphology), the feature is nothing more than a formal descriptive device."

(11) (a) VP (cf. (7)(b)) merges with AgrO:



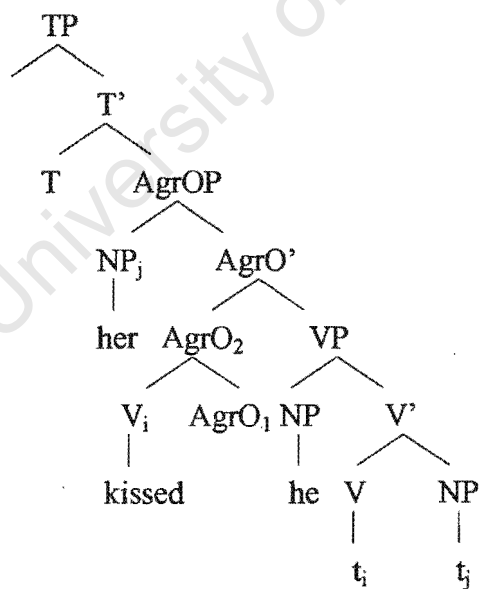
With potential landing sites now available, Move must take place. The first stage of licensing involves the V *kissed* and the NP *her*, which need to have their morphological features checked. *Her*, on the one hand, contains ϕ -features and the ACC(usative) Case feature. Since these are all N-features, they must be checked in spec-head agreement with AgrO. The NP *her* must therefore move to [Spec, AgrOP]. The V *kissed*, on the other hand, must be checked for tense, ACC case and ϕ -features for verb-subject agreement. Movement of V takes place in the form of adjunction to AgrO, creating a head-head configuration which facilitates the checking of its ACC-feature. This can be illustrated as follows:

- (11) (b) [_{NP} her] moves into [Spec, AgrOP] to check off its Accusative Case feature. [_V kissed] moves to AgrO



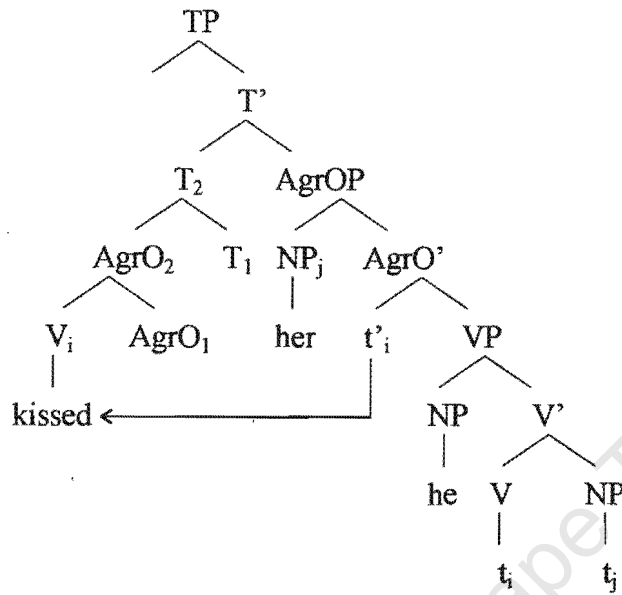
At this point Merge once again applies, for the projection of the functional head T:

- (11) (c) AgrOP merges with T.



T represents a further landing site for [_V kissed], which subsequently head-adjoints to T to check off its tense feature.¹³

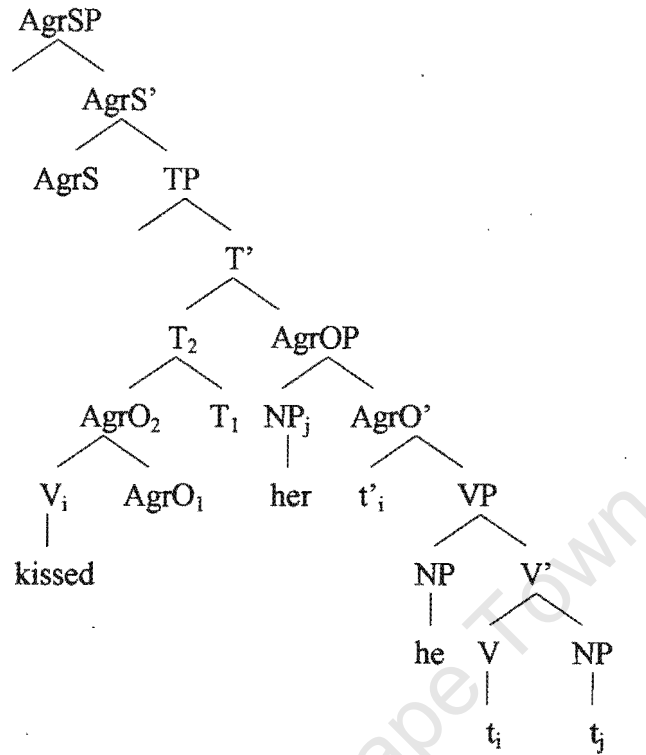
(d) AgrO₂ moves to T.



In the next step, a third layer of functional structure is merged with the TP, illustrated in (11)(e):

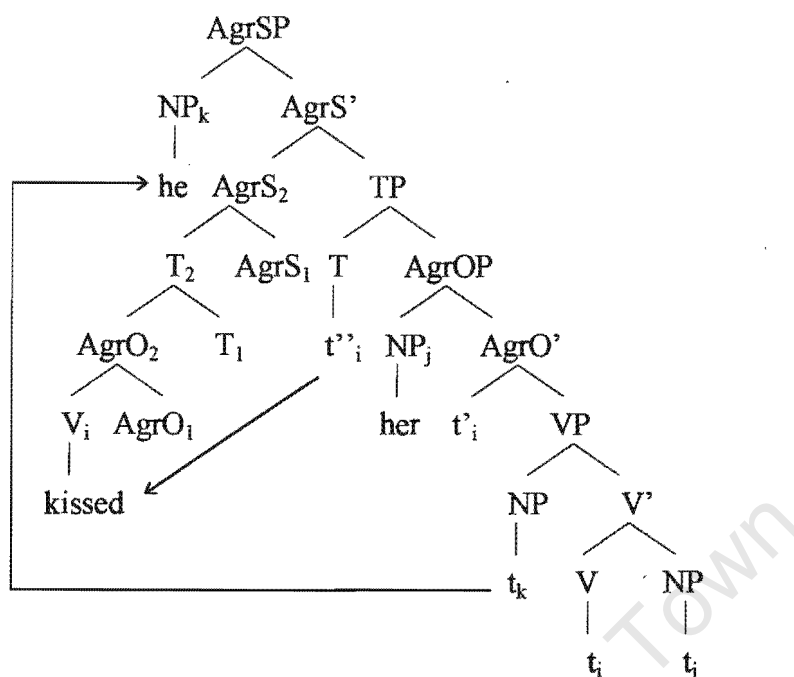
¹³ Movement of lexical verbs in English takes place covertly (Chomsky 1995: 135).

(11) (e) TP merges with AgrS.



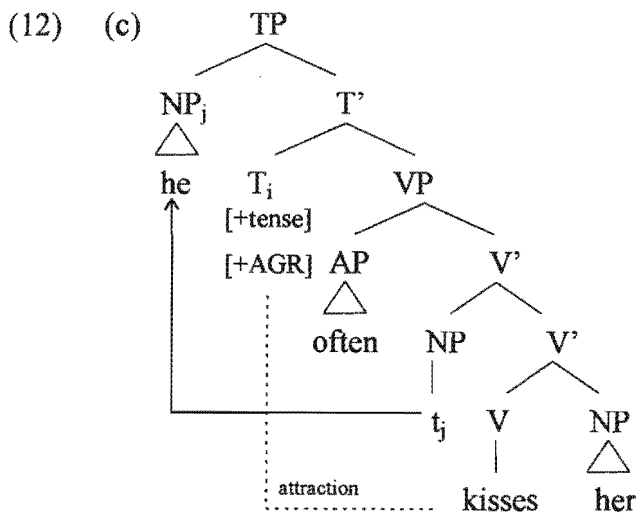
Now T has the abstract Case feature NOM(inative), which is strong/uninterpretable in English. This means that T must move to a position where the Case feature can be checked off via spec-head agreement with a substantive category prior to Spell-Out. T is therefore head-adjoined to AgrS, whose Spec position is a potential landing site for the subject NP *he*. This is an instance of head-to-head movement. A second overt movement also has to take place, namely of the NP *she* into [Spec, AgrSP]. Finite T together with AgrS is then responsible for the licensing of nominative Case in subjects. These movements, and the resulting structure, are illustrated in (11)(f):

- (11) (f) $[_{NP} \text{he}]$ moves into $[\text{Spec}, \text{AgrSP}]$, and T_2 moves to AgrS



So far I have treated movement as an operation which moves whole bundles of features to landing sites in the functional domain. We might call this type of movement ‘full’ movement. Contrasting with this kind of movement is feature attraction, which involves movement of the grammatical features alone, without the corresponding phonetic features of the relevant head. Attraction involves a kind of ‘percolation’ of features from the lexical domain up into the functional domain. The difference between full movement and feature attraction is that with the latter operation the trigger for movement does not reside within the moved constituent, but is rather a feature of its landing site, that is, of the relevant functional category. As noted above, a functional head consists of a bundle of abstract features; when these features are strong/uninterpretable, they *attract* elements with matching features. This may be illustrated with the example in (12)(a), which incorporates an adverb, *often*, into the original example (6). The derived structure of this sentence is given in (12)(c).

- (12) (a) He often kisses her
 (b) *He kisses often her



The structure in (12)(b) illustrates the raising of [_{NP} he]. With respect to [_V kisses], movement will yield an incorrect surface word order (cf. (12)(b)), therefore the features of tense and agreement under T are *attracted* by the verb.

An important point should be noted here with respect to agreement relations for feature checking: the structural relation of government, which was central to several modules of GB, is abandoned in MP (Chomsky 1992: 14).¹⁴ The idea is that the effects of government can be reduced to more fundamental syntactic relationships, specifically specifier-head and head-complement relations. There are a number of core theoretical modules which relied heavily on the notion of government and which therefore needed to be reinterpreted given the abandonment of government as a basic structural relation. Two such modules relevant to this study are Case theory and the module concerning the distribution of empty categories (ECs)¹⁵. Chomsky (1993, in Lasnik 1999: 29) assumes that Case checking uniformly takes place in a Spec-head relationship between an overt DP (NP) and a functional head.¹⁶

¹⁴ For more on the abandonment of government, see e.g. Cook and Newson (1996: 333-338).

¹⁵ Specifically, the Empty Category Principle (Zwart 1996: 311).

¹⁶ Lasnik (1993: 6) points out the uniformity of the minimalist assumptions with respect to Case: both nominative and accusative Case are checked in an identical configuration. Within the GB framework,

In sum, in MP the role of specifiers and complements is crucial for the description of syntactic agreement and checking relations. Chomsky (1992: 8-9) characterizes these positions of specifier and complement, which are each distinct in nature, as follows. Complements and specifiers belong to independent syntactic domains: the specifier of a head X is located within the *checking* domain of X; it is here that Case and agreement relations between a head and a nominal expression are licensed. The complement of a head X lies in the *internal* domain of X; it is here that theta relations between X and an argument are licensed.

2.4 Principles of Economy and Restrictions on Movement

The notion of economy underlies all aspects of the minimalist model of grammar. With respect to the levels of representation, Chomsky (1993) holds that LF and PF representations should only contain the information relevant to the cognitive systems they provide input for, that is, the A-P and the C-I systems respectively. This principle is called Economy of Representation and is summarized in (13) (Zwart 1996: 306):

(13) Economy of Representation

Use as few symbols as possible in the output of a derivation.¹⁷

Chomsky (1991) also assumes a second minimalist principle, which holds that representations should be arrived at in the most economical way. This is termed Economy of Derivation (Zwart 1996: 307):

nominative Case was assigned in [Spec, Agr] position, while accusative Case was assigned by verbs to their objects.

¹⁷ The principle of Full Interpretation may be seen to be a consequence of this condition (Cook & Newson 1996: 313).

(14) Economy of Derivation

Use as few steps as possible in deriving an output representation.

The economy principles have their widest application in the area of movement where they constrain the steps taken in a derivation on the path to convergence. Marantz (1995: 355) points out that Shortest Move, given in (15) below, depends on both the type of constituent moving and the appropriate landing site. Thus a head constituent is prevented by this principle from passing over any available head position between its source and the target landing site. Similarly, movement from A- and A-bar positions must be to the nearest available A- and A-bar positions respectively. The principle is formulated as follows (Coene 1999: 16):

(15) Shortest Move

A moved element can never skip a position of the right kind which it could have reached by a shorter move.¹⁸

(15) is the most technically specific of the economy conditions; it is made up of two theoretical principles, namely *Shortest Derivation* and the *Minimal Link Condition* (Chomsky 1993: 21). The first of these refers to the notion of shortest move, while the second refers to that of fewest steps. Shortest Move is the economy principle which restricts the derivation of the following examples:

- (16) (a) *Have the teacher will *t* spoken
(b) *The teacher is likely for it to seem *t* to have spoken

The strict locality condition on head movement, expressed in Travis' (1984) Head Movement Constraint¹⁹, is closely connected with Shortest Move, as (16)(a) illustrates. The head *have* cannot bypass the head position occupied by *will*, since this is the closest

¹⁸ See Chomsky (1995: 181-4).

¹⁹ In Culicover (1997: 339).

available landing site up from the initial position of *have*. (16)(b) is an example of raising, where the DP *the teacher* cannot skip over the DP *it*, since this constitutes the closest target position of the right kind. Both derivations crash.

A second constraint on movement relates to when - i.e. at what point in the derivation, relative to Spell-Out - a movement takes place. This is termed Procrastinate and is formulated as follows (adapted from Chomsky 1993: 30):

(17) Procrastinate

Movements should take place as late in the derivation as possible.

An important implication of Procrastinate is that covert, LF, movement is 'less expensive' than overt, pre-Spell-Out, movement (Chomsky 1995: 198). The principle of Procrastinate may however be violated if this represents the only way to achieve convergence. Marantz (1995: 357) illustrates this by comparing V-raising in English and French. Recall that T is strong/uninterpretable in French and weak/interpretable in English. Because of this difference, English verbs abide by the Procrastinate principle, while French verbs are forced to violate it to avoid a crash in the derivation.

A third economy condition is Greed. The application of the principle of Greed dictates the priority-value of any given movement, with respect to the motivation for such a move. The principle of Greed is given in (18) (adapted from Chomsky 1993: 33).

(18) Greed

An element should not move unless it has to in order to satisfy some requirement that it has.²⁰

²⁰ Lasnik (1999: 120-145) argues for a revision of Greed referred to as Enlightened Self Interest (ESI) and formulated as follows:

Enlightened Self Interest

Movement of α to β must be for the satisfaction of formal requirements of α or β .

Examples of applications of this principle are difficult to come by because these often seem to be accounted for by other principles. For this reason Marantz (1995: 358) labels it “the most problematic of the economy principles”. Apparently, Greed serves mainly to decide between competing convergent derivations.

A fourth condition is that termed Last Resort. A movement that is not triggered by a requirement of morphological feature checking is not permitted. As expressed by Lasnik (1999: 2), “if there is a leading technical idea in Minimalism, it is that movement is a last resort, taking place only when triggered by a driving force.” This idea is given formally in (19) (Coene 1999: 18).

(19) Last Resort Condition

Any operation which does not meet the economy conditions on movement is disallowed if other operations which meet these conditions exist.

In sum then, Chomsky (1993, 1995) proposes a small set of principles constraining the Merge and Move operations which underly the derivation of an SD.

2.5 Summary

In this chapter I have presented a brief overview of the relevant assumptions and mechanisms of MP. This theoretical program proposes a number of novel approaches to the interface between morphology and syntax in the derivation of SDs. Unlike as in GB, lexical heads are selected from the lexicon together with their inflections and these in turn correspond with bundles of abstract features under the relevant functional heads. Agreement relations for the checking of these features are no longer described in terms of the structural notion of government. Rather, the *dynamic* interaction of the computational mechanisms Merge and Move serve to create spec-head and head-head configurations which are the minimal means for feature-licensing. The notion of economy is

fundamental in the MP model, with a set of constraints directing the path towards convergence.

Having outlined the broad theoretical framework that I assume for this study, the next chapter will examine the structural analysis of nominal expressions within this framework.

University of Cape Town

Chapter 3

The DP Hypothesis

3.1 Introduction

This chapter offers a broad overview of the major theoretical reconceptualization of nominal structure known as the DP Hypothesis. I systematically present and review the the most important proposals in support of this hypothesis, and highlight those differences in the relevant analyses which have bearing on phenomena characterizing the Spanish data to be introduced in the following two chapters.

3.2 Some background

In traditional analyses of nominal expressions¹ the determiner was taken to occupy the specifier position of a head N, as is shown in (1):

(1) [NP *the*/Mary's [N' [N translation [PP of the book]]]]

Note that the determiner *the* in (1) occupies the same position [Spec, NP] as the pronominal genitive phrase *Mary's*. As Coene (1999: 30) points out, the immediate problem with this analysis is that a closed class of functional heads is assumed to occupy the same position as full (genitive) phrases. Note furthermore that, in contrast to *the*, *Mary's* in (1) is an argument which receives a θ -role. A possible solution to this problem would be to propose that the determiner *the* is the head of a DP occurring in the specifier position of the NP in (1). However, this solution is not satisfactory; various theorists²

¹ The term "nominal expression" is used to describe any structure containing a noun or pronoun. The term "traditional generative analyses" refers to analyses presented up to and including the initial stages of GB theory (cf. e.g. Webelhuth (1995), Haegeman (1994) and Culicover (1997)).

² See e.g. Mallén (1988: 20).

have contended that such a DP would only ever contain the head determiner and nothing else, while X-bar theory holds that a head X select a complement and license a specifier position (Jackendoff 1977).

Under the conventional analysis of nominals, [Spec, NP] was assumed to be the position occupied by a number of unrelated syntactic categories, by virtue of their prenominal occurrence in the surface order of nominal expressions (in English at least). Apart from determiners and genitives, adjectives were also assumed to be generated in this position, based on the following type of example:

(2) [the/superb/Mary's] translation of the book

However, as Radford (1997: 46) points out, there exist a number of differences in the distributional patterns of determiners and adjectives; the data suggest that these two categories constitute distinct distributional classes. Firstly, adjectives may be recursive, whereas determiners are not:

(3) (a) pretty yellow daisies
(b) *a that daisy

Secondly, word order constraints hold that determiners must precede adjectives when the two co-occur:

(4) (a) the pretty yellow daisies
(b) *pretty the yellow daisies
(c) *pretty yellow the daisies

Thirdly, adjectives may appear outside of nominal expressions, whereas determiners may not:

- (5) (a) Those daisies are yellow
(b) *Those daisies are the

Fourthly, while number properties form part of the well-formedness conditions of determiners, adjectives are able to modify equally singular or plural count nouns and mass nouns:

- (6) (a) *I saw a daisies
(b) I saw a beautiful yellow daisy
(c) I saw (two) beautiful yellow daisies

Fifthly, there are *semantic* restrictions on the types of nouns that can be modified by adjectives, whereas determiners can be combined with any (semantic) class of noun (Radford 1997: 47):

- (7) (a) a thoughtful friend/?cat/??fish/?!pan!/problem
(b) a/the/another/this/my friend/cat/fish/pan/problem

In short, then, there is both theoretical empirical evidence to suggest that the traditional syntactic analysis of nominal expressions is not adequate, since it presents problems for the X-bar account of the type of categories that can occur in the specifier position, and it also cannot accommodate the distributional differences between adjectives and determiners.

3.3 Functional versus lexical categories

Abney (1987), amongst others, has pointed out important differences between adjectives and determiners. These two categories fall into two types and are classified as lexical (L-)

and functional (F-) categories respectively. A summary of the characteristic features of functional elements is given in (8) (Abney 1987: 64-5):

- (8)
- (i) F-categories constitute a closed class.
 - (ii) F-categories select a unique complement which is not an argument or an adjunct.
 - (iii) F-categories lack descriptive content³.
 - (iv) F-elements are usually unable to be separated from their complement.
 - (v) F-elements are generally dependent morphological and phonological items. They are generally not stressed, often are clitics or affixes, and can also be phonologically null.

The classification of syntactic categories as complexes of grammatical features was first proposed in Chomsky (1972: 48) in an attempt to account for common properties between different categories. Nouns and verbs have long been recognised as the two major syntactic categories, categories which occur in all the world's languages. By classifying categories as [\pm N] (nominal/non-nominal) and [\pm V] (verbal/non-verbal), the following set of lexical (θ -role assigning) categories is derived (Radford 1997: 64):⁴

- (9)
- [+N, -V] = noun
 - [+N, +V] = adjective
 - [-N, +V] = verb
 - [-N, -V] = preposition

³ Mallén (1988: 19) defines this property as marking grammatical or relational features, rather than describing a distinct object from that described by their complement.

⁴ Abney (1987: 62) rejects the feature specification [\pm V] on the grounds that nouns are distinguished from adjectives, and prepositions are distinguished from verbs, but these two distinctions are not necessarily related.

Abney (1987: 63) develops this schema further by adding to the [\pm N] (i.e. nominal) feature the feature [\pm F], such that categories may be classed as functional [+F] or lexical [-F].⁵ These features are used to distinguish the syntactic categories as follows:

(10)

	[-F]	[+F]
[-N]	V, AUX, P	I(NFL), C(OMP)
[+N]	N, A, Q(UAN)	D(ET)

In terms of (10), verbs, auxiliaries and prepositions are non-nominal lexical categories, while nouns, adjectives/adverbs and quantifiers represent their nominal counterparts. Functional categories are made up of non-nominal inflections and complementizers on the one hand, and nominal determiners on the other. The distinction between lexical and functional categories constitutes an important theoretical basis of the DP Hypothesis and the MP in general.

3.4 Motivation for the DP hypothesis

3.4.1 *Early proposals*

Coene (1999: 32) traces the DP hypothesis back to Brame's (1982) head-selector hypothesis, in which he makes the following claim (Brame 1982: 325):

Since DET is the head-selector of DET(N), or to use more traditional terminology, since DET is the head of NP, and not N as customarily supposed, it would be better to abbreviate DET(N) as DP, not as NP, and to speak of determiner phrases, rather than noun phrases.

⁵ Abney uses the term "thematic" for "lexical".

Brame's proposal concerns the base rules of argument selection. He claims that lexical items are specified for the selection of heads rather than maximal projections⁶. The consequence of this for nominal expressions is that verbs are assumed to select D(eterminers) rather than NPs as their arguments. Hence, (11a) is rejected in favour of (11b):

- (11) (a) <V, __ (NP)>
(b) <V, __ (DET)>

Head-selectors (that is Brame's term for "heads") are themselves lexically specified for selection. For example, verbs may select D(eterminers) and the latter in turn select nouns:

- (12) <DET, __ (N)>

The head-selector theory, while proposed for selection of all kinds of arguments, amounts to the content of the DP hypothesis in its application to nominal expressions.

Subsequent motivations underlying the various different proposals for the analysis of nominals as projections of a head D(eterminer) relate to three salient points - one empirical and two theoretical - characterising the syntactic behaviour of nominals. Firstly, when determiners are found alone, as in (13), they have every indication and behaviour of a noun phrase. This would not be expected unless the phrase they project is a noun phrase.

- (13) those are pretty

Secondly, the standard NP analysis does not provide enough specifier positions to account for all the different types of elements that can appear pre-nominally in a phrase.

⁶ Brame (1982: 321) uses the term "coarse categories" for "maximal projections".

(14) her mother's every senseless whim

Thirdly, the DP hypothesis provides a clause-like structure for nominal expressions, accounting for the many parallels which relate these expressions with clauses. The next section focuses on these parallels.

3.4.2 *Similarities between nominal expressions and clauses*

Abney (1987: 30-33) uses the similarities between nominal expressions and clauses as a starting point for his proposals about nominal structure. These similarities are in terms of external distribution as well as internal structure. Nominal expressions and clauses may both function as subject or direct object of a sentence, and may also be passivized. These properties are illustrated by the following three examples respectively:

- (15) (a) [Steven] impresses the teacher
(b) [That Steven studies hard] impresses the teacher
- (16) (a) The teacher understands [Steven]
(b) The teacher understands [that Steven studies hard]
- (17) (a) [Steven] is understood by the teaching staff
(b) [That Steven studies hard] is understood by the teaching staff

Examples (15-17) illustrate parallels in the external distribution of nominal expressions and clauses. But Abney (1987: 32) also argues for a similar internal structure of the two categories, basing his argument on the class of *derived* nominals⁷, i.e. nominals which

⁷ In the literature "derived nominals" are also sometimes termed "deverbal nouns"; see e.g. Mallén (1989: 89).

are formed derivationally from verbs. For example, *examination* in (18)(b) is a nominal expression derived from the verb *examine*.

- (18) (a) [The teacher [examined the students]]
(b) [The teacher's [examination of the students]]

(18)(a) is a clause while (18)(b) is a nominal expression. The lexical head in (18)(a) is the V *examined*, while in (18)(b) it is the N *examination*. These two examples both have the same structural configuration, which can be represented as follows, where X = noun/verb:

- (19) [XP YP [X' X ZP]]

It has often been proposed (see e.g. Chomsky 1972, Lees 1960) that verbs and their derived nominal counterparts are related lexical items. Mallén (1988: 6) shows for Spanish that nominal and verbal heads distinguish between complements and adjuncts in the same ways. He makes a number of generalisations in this regard, illustrated below with English examples.

Firstly, complements may be topicalized more freely than adjuncts:

- (20) (a) On European politics is Mary an expert
(b) *Of average height is Mary a teacher

Secondly, there are more severe restrictions on the selection of complements than on the selection of adjuncts:

- (21) (a) *an exporter of Maths
(b) *a singer of Maths
(c) a teacher of average height

- (d) a giraffe of average height

Thirdly, adjuncts can be stacked on top of each other, while complements cannot:

- (22) (a) a teacher of average height with long hair
 (b) *a teacher of Maths of Music

Fourthly, an adjunct modifier cannot intervene between a head and its complement; (23)(a-b) illustrate this for nominal heads, while (23)(c-d) do so for verbal heads.

- (23) (a) a teacher of Maths with long hair
 (b) *a teacher with long hair of Maths
 (c) Mary translated the book in no time at all
 (d) *Mary translated in no time at all the book

While Lees (1960) attempted to derive nominals transformationally from verbs, Chomsky's (1970) Lexicalist Hypothesis held that the two categories have identical thematic grids and select for a similar range of arguments. Both are subcategorized for internal and external arguments.

- (24) (a) *examine*: verb

THEME NP/DP	AGENT NP/DP
1	2

- (b) *examination*: noun

THEME PP	AGENT NP/DP
1	2

Within GB theory, the Projection Principle defines the relationship between the lexical and syntactic properties of predicates: there must be a one-to-one mapping of arguments and θ -roles at every syntactic level (Chomsky 1986: 84). This principle has important consequences for movement: if an argument is understood in a certain position, it must be there implicitly, even when it is not phonetically realized. This provides support for the claim that in such cases, a covert element or empty category occurs underlyingly.

3.4.3 *Argument structure of nominal expressions*

The issue of how the argument structure of nominal expressions compares with that of verbs has been addressed by various researchers (Grimshaw 1990, Mallén 1989). It is generally accepted that this area presents further possibilities for positing parallels between the syntactic structure of nominal expressions and clauses. As regards deverbal nouns, Grimshaw (1990: 49), amongst others, draws a distinction between event⁸ nominals and result nominals. Apparently, only the former class of nominals have an argument structure parallel to verbs. Event nominals denote an action or event and, like verbs, they obligatorily take grammatical arguments, assigning specific θ -roles (Agent, Patient, Theme etc.). Result nominals denote the output of a process. They do not take real arguments; they may have PP complements that appear to correspond to arguments of the verb, but they are never obligatory.⁹

Many nouns (specifically derived nominals) are ambiguous between the above two interpretations. For example, in (25) the noun *analysis* denotes the event of analysing the text; in (25) it denotes a concrete object and has a result reading.

- (25) (a) analysis of the text will take several days EVENT
 (b) ??analysis will take several days

⁸ Abney's (1987) uses the term "process" nominals for "event" nominals.

⁹ For an account of the distribution and behaviour of event and result nominals, see Grimshaw (1990: chapter 2).

- (26) (a) ?the analysis of the text was printed on pink paper RESULT
 (b) the analysis was printed on pink paper

Grimshaw (1990: 50) notes (for English) that insertion of the modifier *frequent* forces the event reading of singular nouns like *analysis*, thereby distinguishing between the two possible interpretations. The example (27) allows only an event reading:¹⁰

- (27) frequent analysis will take several days

Giorgi & Longobardi (1991) argue that the nominal θ -grids are mapped hierarchically onto syntactic structures. Longobardi (1999: 1) establishes a configurational hierarchy of the possible arguments of nominal expressions. The principal arguments of the head noun are ordered in a way roughly similar to that found in clauses: thematic subjects are higher than direct objects and other complements.¹¹ This hierarchy is given as follows:

- (28) Possessor > Subject > Object

The number of arguments which are overtly realised in the syntax is subject to cross-linguistic variation: while in English there is only one external position syntactically available for a genitive phrase, in Romance both Possessor and Subject may occur simultaneously. Note the contrast between the following Italian and English examples:

- (29) (a) *El libro de Elena de mi autor preferido*
 the book of Elena of my favourite author
 (b) *Elena's book of my favourite author

¹⁰ Support for Grimshaw's claim that event nominals have an argument structure is provided by evidence from Hebrew; for a discussion of tests to disambiguate derived nominals, see Siloni (1997: 168).

¹¹ The parallels concerning θ -role assignment in nominal expressions and clauses are expressed in Giorgi & Longobardi's (1991: 29-32) Thematic Correspondence Hypothesis, which states that verbs and corresponding nouns identify external and internal arguments similarly; the external argument is assigned a θ -role outside of V'/N' , while the internal argument receives its θ -role within V'/N' .

The mapping of argument structure will be examined in chapter 4 when I discuss Case checking in Spanish nominal expressions. The next section deals with further evidence for the DP Hypothesis.

3.4.4 *The English gerundive*

A syntactic phenomenon central in Abney's (1987) proposals about nominal structure is the *poss-ing* construction in English, as illustrated in (30).¹²

(30) The syntactician's attending the meeting

Abney (1987: 171-173) shows that with respect to external distribution, the English gerund behaves like a nominal expression. For example, it occurs in positions where nominal expressions may occur, but not clauses. These include (i) the subject position under Subject-Aux Inversion (SAI), (ii) the subject position of an embedded sentence, and (iii) the position of prepositional object, illustrated by the following three sets of examples respectively.

- (31) (a) *Did [SENTENCE that the syntactician attended the meeting] impress you?
(b) Did [NOMINAL EXPRESSION the syntactician] impress you?
(c) Did [GERUND the syntactician's attending the meeting] impress you?
- (32) (a) *I thought that [SENTENCE the syntactician attended the meeting] was great
(b) She thought that [NOMINAL EXPRESSION the syntactician] was great

¹² Abney (1987: 21) points out that this is a rare construction in the languages of the world. The relevance of this analysis for Spanish, however, is in the latter's [*el* + infinitive] construction, which supports the claim that D can take a clausal complement (Abney 1987: 202). An example of this structure is:

- (i) *el estudiar lenguas es bueno*
the to-study languages is good
"studying languages is good"

- (c) She thought that [GERUND the syntactician's attending the meeting] was great
- (33) (a) *I heard about [SENTENCE the syntactician attended the meeting]
 (b) I heard about [NOMINAL EXPRESSION the syntactician]
 (c) I heard about [GERUND the syntactician's attending the meeting]

However, the English possessive gerund construction does behave like VP with respect to, amongst other syntactic phenomena, Case assignment/checking, raising, Exceptional Case Marking (ECM), double objects and particles (Coene 1999: 39). Examples illustrating each of these properties are given in (34) to (37) respectively. (34) illustrates Case assignment/checking.

- (34) (a) *the syntactician's attendance the meeting
 (b) the syntactician attended the meeting
 (c) the syntactician's attending the meeting

The object phrase *the meeting* is checked for accusative Case in (34)(b) and (34)(c) by the Vs *attended* and *attending* respectively. In (34)(a) *the meeting* is not Case-marked, thereby violating the Case Filter, which holds that all overt nominals receive Case. In GB Case theory, N is not a Case assigner.

In the raising constructions (35), *the syntactician's* can raise to Spec of *appeared* and *appearing*, but not of *appearance*. Here too, then, *appearing* must be analysed as a V:

- (35) (a) *the syntactician's appearance [*t* to be intelligent]
 (b) the syntactician appeared [*t* to be intelligent]
 (c) the syntactician's appearing [*t* to be intelligent]

ECM facts illustrate similar findings. In (36)(a) *Chomsky* cannot be checked for Case.

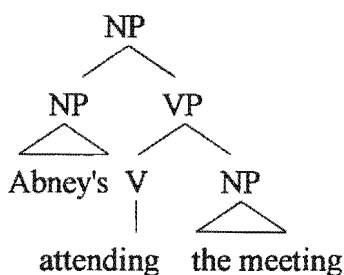
- (36) (a) *the syntactician's belief [Chomsky to be a genius]
 (b) the syntactician believed [Chomsky to be a genius]
 (c) the syntactician's believing [Chomsky to be a genius]

Finally, the *poss-ing* construction can also take double objects, just as a VP does. By contrast, Poss-N, as illustrated in (37)(a), does not allow double objects:

- (37) (a) *the syntactician's gift (of) the student (of) the answer
 (b) the syntactician gave the student the answer
 (c) the syntactician's giving the student the answer

In short, then, with respect to external distribution, the gerund behaves like a nominal expression, but internally it resembles a VP. Abney (1987: 17) points out that an attempt to account for both the nominal and verbal properties of the gerund while assuming that nominal expressions are projections of a head N, will be problematic for the X-bar theory. Specifically, the basic theoretical notion that each maximal projection has a head of the same syntactic category is violated. In the structure below, for example, the highest NP lacks a head of the same kind:

- (38) Abney's attending the meeting

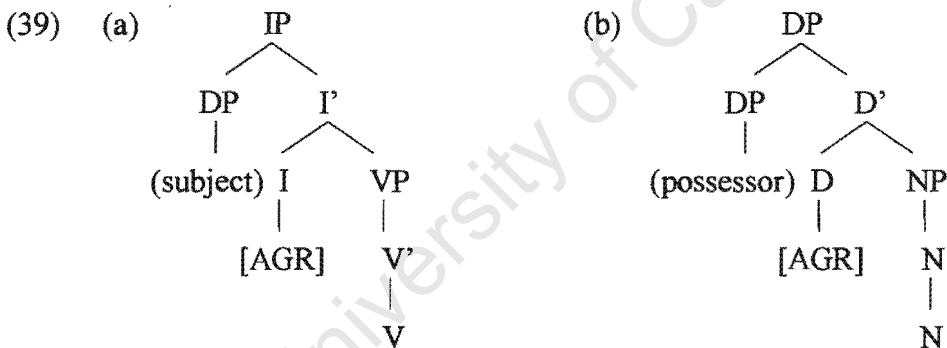


In view of the problems associated with accounting for the internal structure of English gerunds, Abney (1987: 54ff.) proposes a revised representation of the syntactic structure of nominal expressions. He argues that a nominal expression is a projection of a head

D(eterminer), and furthermore claims that such expressions have a syntactic feature previously associated with clauses alone. This feature is Agr(eement), an abstract morphological feature located under the I node in the clause.

3.4.5 AGR in the nominal expression

Abney (1987: 37) proposes that nominal expressions contain an agreement element parallel to I in the clause. This proposal is based on data from languages¹³ which display overt agreement morphology inside nominal expressions, such that the relationship between a “possessed” noun and its “possessive” argument is similar to that between a verb and its subject. In other words, verbal AGR, which occupies a position under I outside of the VP, has an equivalent in the nominal expression.¹⁴ Given this nominal agreement feature-bearing node AGR, the nominal expression will have the derived structure (39)(b):



While I selects VP as its complement in (39)(a), D selects NP.¹⁵ The lexical items occupying [Spec, IP] and [Spec, DP] may be base-generated in these positions or may be moved there.

¹³ Abney (1987: 39-44) names Hungarian, Tzutujil and Yup'ik as displaying such morphological characteristics.

¹⁴ Note that Abney (1987: 25) initially separates the question of whether there is an Inflectional head in the noun phrase from the question of what category this Inflectional head belongs to.

¹⁵ Abney (1987: 77) further argues for *semantic* similarities between the categories D and I. The determiner specifies the reference of a nominal predicate's extension. Similarly, I specifies the (tense) reference of a verbal predicate.

A number of languages show overt agreement morphology in the nominal expression that seems to be parallel to agreement in the verbal paradigm. For example, AGR in the sentence assigns/checks Case in the same way as AGR does in the nominal expression. Support for this is provided by Hungarian, a language in which AGR assigns/checks nominal Case for nominal and sentential subjects alike. In the following examples *Mari* is in “subject” (i.e. specifier) position of the clause and nominal expression respectively and is checked for nominative Case in both cases (Abney 1987: 44).

(40) *Mari-Ø alud-t-Ø*
 Mary_{NOM} sleep_{PAST.3SG.}
 “Mary slept”

(40) *a Mari-Ø vendég-e-Ø*
 the Mary_{NOM} guest_{POSS.3SG.}
 “Mary's guest”

Abney (1987: 39-42) cites further evidence, this time from Yup'ik (a Central Alaskan Eskimo language), in which AGR assigns/checks ergative Case. The subject agreement markers on the verb *kiputa-* (“buy”) are identical to those on the noun *kuiga-* (“river”) in the following two sets of examples (Abney 1987: 20).

(42) (a) *kiputa-a-Ø*
 buy_{OM-SM}¹⁶
 “he bought it”
 (b) *kiputa-a-t*
 buy_{OM-SM}
 “they (dual) bought it”

¹⁶ OM = object agreement marker; SM = subject agreement marker.

- (c) *kiputa-a-k*
 buy_{OM-SM}
 “they (plural) bought it”
- (43) (a) *kuiga-Ø*
 river_{SM}
 “his river”
- (b) *kuiga-t*
 river_{SM}
 “their (dual) river”
- (c) *kuiga-k*
 river_{SM}
 “their (plural) river”

In sum, the evidence from Hungarian, Yup’ik and Mayan points to a parallel process of feature checking (or at least the licensing of Case morphology) between the lexical and functional layers of the clause and the nominal expression.

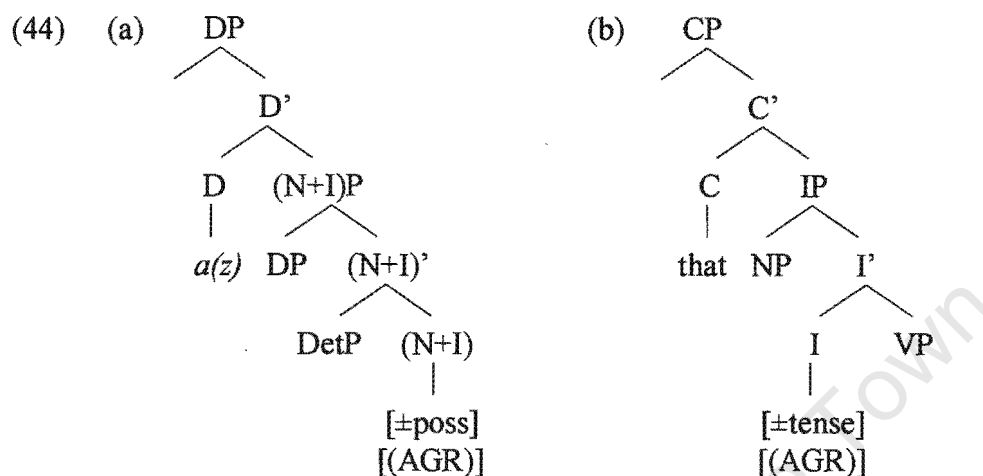
3.4.6 Szabolsci: *D* parallels *C*

Szabolsci (1994)¹⁷, referring to Hungarian data, also points out similarities between nominal expressions and clauses, though her analysis significantly extends on that proposed by Abney (1987). To explain the parallel between the Hungarian possessive morpheme in the nominal expression and the tense morpheme of the clause (cf.(40-41) above), Szabolsci (1994) proposes a nominal node *I*, which carries agreement features for checking, similar to verbal *I* housing the features relevant to the clause. The difference between these two nodes relates to feature specification: sentential AGR is specified for [tense], while nominal AGR is specified for [possessed]. Hence, Szabolsci’s *I*[±tense]

¹⁷ The original proposals concerning the internal structure of nominal expressions appeared in Szabolsci (1987, 1989).

and I[±poss] correspond to Abney's I and D respectively.

In terms of Szabolsci's proposals, the syntactic structures of the examples in (32) and (33) may be represented as in (44)(a) and (b), respectively (Szabolsci 1994: 189).



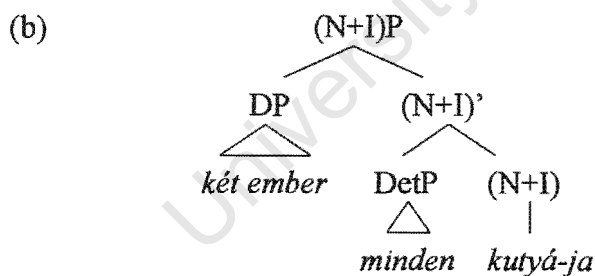
The proposal outlined above, where D at nominal level parallels C at sentential level, is referred to as the 'mere suffixes' analysis. Szabolsci (1994: 196 ff.) argues that inflection constitutes 'mere suffixes' on the noun, which is generated under a composite N+I node; I does not constitute an independent functional projection. 'Mere suffixes' thus contrasts with the (noun) head movement analysis proposed by Chomsky (1986), Abney (1987) and others, whereby inflectional elements are analysed as being heads of their own functional projections, with surface structures deriving from one or more instances of head movement of the lexical head up over the functional layers. N does not move to I, as V does in the clause.

Szabolsci (1994: 192) gives two reasons in support of the 'mere suffixes' analysis, i.e. for the claim that nominal I does not constitute an independent projection. The first concerns the mechanism of θ -role assignment to possessor nominal arguments. Szabolsci (1994: 193) suggests that this is a two-pronged operation, consisting of (i) the *formal* ability to assign a θ -role, and (ii) the ability to specify the content of this role. Functional

categories cannot go further than to assign a θ -role; only lexical categories can specify the content of this role. These claims suggest a composite (N+I) node as a θ -role assigning unit: N assigns the role, while I (specifically [Poss] in I) specifies the content of this role.

The second reason is based on Hungarian evidence of the possessor DP's scopal interaction with quantifiers. In Hungarian possessors may occupy a position higher in the syntactic structure than other determiner elements and have unambiguous scope over the rest of the phrase. This argues against raising for Case checking; the possessor receives its θ -role and is checked for Case in the same position. The structure she proposes is given in (45) (Szabolsci 1994: 197), reflecting the correct scopal order for the possessor and quantifier: “[DP] cannot be lowered into the scope of DetP: only DetP could raise out of the scope of DP”.

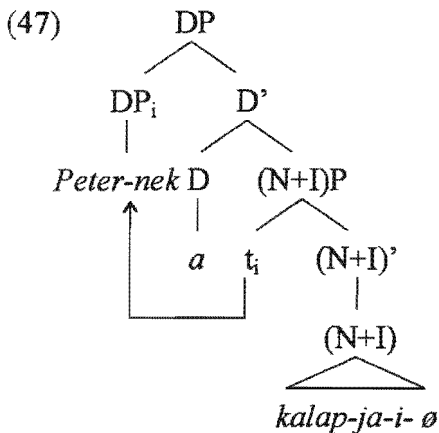
- (45) (a) *két ember minden kutyá-ja*
 two man_(NOM) every dog_{POSS.3SG}
 “two men’s every dog”



There is a further possibility for expressing possession in Hungarian, which involves a dative possessor (rather than the nominative possessor of (40-41) above). This dative possessor, (-*nek* in (44)), precedes the definite article *a(z)*, whereas nominal possessors follow it (cf. (41)).

- (46) *Peter-nek a kalap-i-Ø*
 Peter_{DAT} the hat_{POSS.PL.3SG.}
 “Peter’s hats”

Szabolsci (1994: 198ff.) proposes a movement analysis for cases such as (46), parallel to the raising of sentential subjects to [Spec, CP] in the clause. Extraction facts are cited in support of this argument. The derivation of (46) is illustrated in (47):



The movement illustrated in (45) mirrors the wh-movement and topicalisation which occur in clauses. [Spec, DP] is assigned the status of an operator position, parallel to [Spec, CP].

D is the category that provides the nominal expression with reference, licensing the argument status of its NP complement. Coene (1999: 53) refers to this as the “argument conversion hypothesis”. This analysis extends the functional analogy between D and C, since both license the θ -role bearing properties of the complement (NP and IP respectively) that they head. Szabolsci (1994: 214) points out that there is syntactic evidence that arguments require a subordinator. Typically, embedded finite and infinitival clauses function as arguments. These are understood to be CPs, with or without an overtly realised C. Matrix clauses, in contrast, may not act as arguments, and therefore are ungrammatical when headed by C. Consider the following examples:

- (48) (a) I think [_{CP} that John is a fool]
 (b) I believe [_{CP} John to be a fool]
 (c) * [_{CP} That John is a fool]

Thus Szabolsci (1994: 208) proposes that the Hungarian definite article *a(z)* parallels the complementizer in clauses. Both function as subordinators, enabling clauses or nominals to act as arguments of a higher predicate. She distinguishes between articles and other determiners, based on distributional facts. This difference is reflected in a syntactic distinction between D and Det. The first is the category hosting articles, while Det is the label for all other determiners and it is located inside (N+I)P. Argument nominals must be introduced by an article and where nominals occur in non-argument positions, the article is ruled out. An exception to this is presented by languages and dialects which allow the article before names of people, for example dialects of German and Flemish (Szabolsci 1994: 215, Coene 1999: 54); some varieties of Spanish also show the same phenomenon.¹⁸ Notwithstanding this exception, in the case of the vocative the article is ruled out, as the following Spanish examples illustrate:

- (49) (a) *La Manuela no está*
 The Manuela not is
 “Manuela is not here”
 (b) *¡Manuela, ven aquí!*
 Manuela, come here!
 (c) **¡La Manuela, ven aquí!*

Longobardi (1994: 628) captures Szabolsci’s argument conversion hypothesis in the following generalisation:

- (50) DP can be an argument, NP cannot.

¹⁸ See e.g. Lois (1996: 213).

The role of D with respect to argument status will be examined again in the analysis of bare nominals in chapter 5. The next section deals with further arguments in support of the formal analogy between clausal C and nominal D.

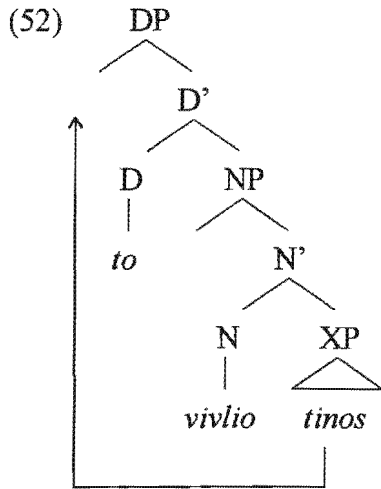
3.4.7 *More evidence: Greek and Hebrew*

In an attempt to account for extraction facts in Greek, Horrocks & Stavrou (1985)¹⁹ also argue for a functional category in nominal expressions analogous to clausal C. Their proposal is that NP is the complement of D and that [Spec, DP] is the landing site for an operator constituent which is base-generated in postnominal position and moves into prenominal position when topicalised. Consider the following examples (from Coene 1999: 49):

- (51) (a) *to vivlio tinos*
the book who_{GEN}
“whose book”
- (b) *tinós to vivlio*
who_{GEN} the book
“whose book”

Thus, for Greek at least, [Spec, DP] is a non-argument position and a host site for moved wh-elements. This is the same function fulfilled by [Spec, CP] at sentential level, hence the analogy between C and D. (52) illustrates how (51)(b) is derived by movement of the wh-phrase *tinós*:

¹⁹ In Abney (1987:47) and Coene (1999: 49).

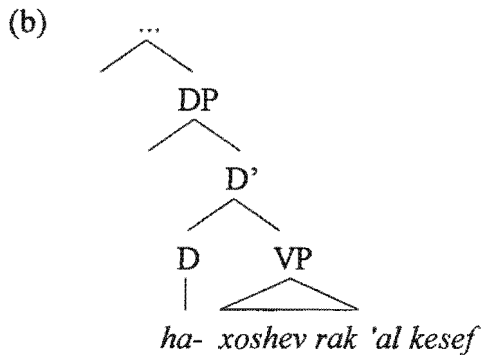


It is from the [Spec, DP] position that further extraction into the sentence is possible, hence this site's designation as an "escape hatch" (Abney 1989: 47). Note the successive cyclic movements by which the wh-phrase is fronted to its final sentence-initial position in the following example from Coene (1999: 49):

- (53) *tinios_i mu ipes pos dhavases t'_i to vivlio t_i*
 who_{GEN} me_{GEN} said_{2.SG.} that read_{2.SG.} the book
 "whose book did you tell me to read?"

Siloni's (1997) analysis of Hebrew participial relative constructions also supports the DP/CP analogy. According to Siloni, Hebrew non-tensed relative clauses (so-called semi-relatives) are headed by an overt D, the definite article *ha-*, in contrast to true relatives, which are introduced by the complementizer *she*. Siloni provides empirical evidence against analysing *ha-* as a complementizer, and instead proposes an underlying structure for such phrases in which DP is the highest constituent, taking VP as its complement. In the following example (from Coene 1999: 51), the semi-relative *ha-xoshev rak 'al kesef* ("who thinks only about money") is projected into a DP, with the definite article *ha-* occupying the head D position.

- (54) (a) *pagash-ti 'ish ha-xoshev rak 'al kesef*
 met-I a man ha-thinks only about money
 "I met a man who thinks only about money"



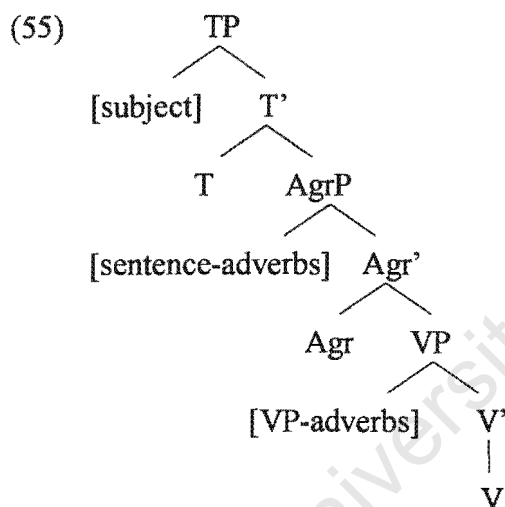
3.4.8 Summary

The evidence from Hungarian, Greek and Hebrew set out above provides support for a functional element heading the noun phrase. However, the two major analyses incorporating such a nominal functional element differ with regard to the syntactic status of this element. The major claims of these two analyses may be summarized as follows:

- (i) Abney 1987: D is the nominal counterpart of clausal I, and thus a functional head hosting nominal agreement features associated with AGR. All determiners are generated under D.
- (ii) Szabolsci 1994, Siloni 1991: D is an operator position in the nominal expression, analogous to clausal C. Only the definite article belongs to this category. Just as the specifier position of C provides an escape hatch for movement associated with subject extraction, so the specifier position of D facilitates possessor extraction in some languages. Nominal expressions also contain a second nominal functional head I, analogous to clausal I.

3.5 Functional layers in the clause

Using evidence from verb-adverb word order, Pollock (1989) proposed an articulated internal structure for the clause, a proposal that has come to be known as the Split-IP Hypothesis. This hypothesis represents a major development in the theory of functional categories. The proposal arose out of an attempt to account for varying word order patterns in French, and more specifically an attempt to create a landing site for moved verbs in between what Pollock calls sentence-adverbs and VP-adverbs.²⁰ Previously, the I node had been the site of both tense and agreement features. Pollock's proposal amounts to splitting this head into two distinct X-bar projections, an agreement projection and a tense projection, as is illustrated in (55) (Webelhuth 1995: 71).²¹



According to Pollock (1989) this articulated clausal structure can account for all the possible word order patterns in the French verb-adverb paradigm.

The theory of independent functional heads²² within the clause was subsequently further

²⁰ For a summary of the relevant French data, see Webelhuth (1995: 69).

²¹ See also Ouhalla (1994: 395), Culicover (1997: 340-344), Haegeman (1997: 34-37) for discussions of the Split IP Hypothesis.

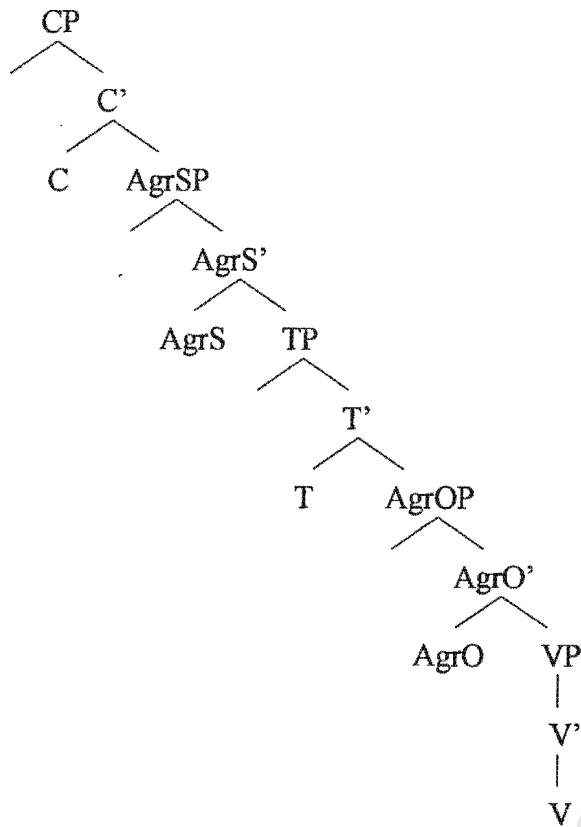
²² Cf. also the Split CP Hypothesis in Rizzi (1997), which identifies, among others, FOCUS and TOPIC as separate functional layers.

extended to account for languages which have independent morphological inflections for subjects and objects. Thus AGR was split into a subject-agreement projection (AgrS) and an object-agreement projection (AgrO) (Marantz 1995: 364). The outcome of the (extended) Split Infl Hypothesis is that the full functional structure of the clause takes the following form (Lasnik 1999: 50):²³

²³ Webelhuth (1995: 76) notes that a host of functional heads have been proposed in recent years, as each class of inflection has been assigned the status of an independent projection in the syntax. I shall be considering some of those which are relevant to nominal structure at a later stage:

Proposed Category	Source
AGR _A	Chomsky (1992)
AGR _{IO}	Mahajan (1990)
AGR _N	Johns (1992)
AGR _V	Johns (1992)
Aspect	Hendrick (1991)
Aux	Mahajan (1990)
Clitic Voices	Sportiche (1992)
Gender	Schlonsky (1989)
Honorific	Kim (1992)
μ	Pesetsky (1989), Johnson (1991)
Neg	Pollock (1989), Benmamoun (1992)
Number	Shlonsky (1989), Ritter (1991)
Person	Schlonsky (1989)
Predicate	Bowers (1989)
Tense	Pollock (1989)
Z	Stowell (1992)

(56)



3.6 Functional layers in the nominal expression

Spencer (1992: 313) lists the following nominal inflection categories: *definiteness, number, Case, possession*. He notes that in addition it is possible to classify *gender* as a further inflectional category, “though this is usually best regarded as a lexical property which happens to find inflectional realization (and which participates in syntactic dependencies, such as agreement)”.²⁴ The implications of these categories for the mapping of syntactic structures are couched in terms of the Full Functional Projection Hypothesis (Spencer 1992: 313).

²⁴ As will be set out below, Bernstein (1991, 1993) regards gender as a feature located under an autonomous functional head.

(57) Full Functional Projection Hypothesis

Any morphophonosyntactic formative which corresponds to a functional category in a given language is syntactically the head of a maximal projection.

Given this hypothesis, it follows that the nominal inflection categories listed above project the following phrasal nodes respectively: DP, NumP, KP²⁵, PossP. It has been suggested by Baker (1985) that the linear order of inflectional morphemes and lexical stem reflects the order of the checking operations in the derivation. This hypothesis is termed the Mirror Principle (Baker 1985, in Spencer 1992: 313):

(58) Mirror Principle

Morpheme order reflects the order of syntactic processes.

Incorporating this principle into a Minimalist framework with a strong lexicalist approach, Chomsky (1993: 28) suggests assuming that morphological features are associated with particular inflectional morphemes and that the features of morphemes closer to the stem are checked first in the derivation.

3.6.1 *Ritter and NumP*

Ritter (1988, 1991) presents evidence from Modern Hebrew for the functional category number as a nominal head. The head of this projection bears the number specification (singular or plural) of the nominal expression. According to Ritter, assuming the existence of this functional category between N and D facilitates a unitary account of Hebrew genitive constructions. Ritter (1988, 1991) contrasts free genitive (FG) constructions with construct-state nominals. The term “construct-state” (CS) refers to a nominal expression whose lexical head immediately precedes a genitive phrase to which it bears some relation, such as possessor-possessed or theme-source. (59) illustrates the CS construction, in which *ahavat* (“love”) is the head N (Ritter 1991: 39).

²⁵ This is the functional projection hosting the features of morphological Case.

- (59) *ahavat Dan et ist-o*
 love Dan ACC wife-his
 “Dan’s love of his wife”

The D position is obligatorily unfilled in CS nominals; insertion of the definite article *ha* renders the structure ungrammatical:

- (60) **ha-ahavat Dan et ist-o*
 the love Dan ACC wife-his

Ritter proposes that CS nominals have an underlying SNO word order and that the surface NSO order is derived by raising of the N to D. This type of noun raising is necessary for Case checking, the argument being that the D is filled with an abstract Case assigner D_{gen} . The derivation of (59), with the trace of movement, is given in (61) below:

- (61) $[DP [D \textit{ahavat}_i [NP \textit{Dan} [N \textit{t}_i [DP \textit{et ist-o}]]]]]$

A second type of genitive construction analysed by Ritter (1988, 1991) is known as the “free genitive” (FG) construction. The FG version corresponding to the CS in (59) is given in (62). Note that here the definite determiner may appear in initial position, contrasting with (60).

- (62) *ha-ahava sel Dan et ist-o*
 the-love of Dan ACC wife-his
 “Dan’s love of his wife”

Since the D position is not empty in (62), it is eliminated as a possible landing site for N-movement. This leads Ritter to posit an intermediate head between DP and NP, a head which she analyses as the functional category Num(ber).

(63) [DP [D [NumP [Num [NP [N]]]]]]

(64) [DP [D *ha* [NumP [Num t_i [NP *sel Dan* [N t_i [DP *et ist-o*]]]]]]]

But then this would mean positing two functional categories for FGs and only one for CS nominals. To achieve a unified account of genitives in Hebrew, Ritter applies the second analysis to CS nominals as well. To illustrate this, the revised structure of the CS nominal in (61) is given in (65):

(65) [DP [D *ahavat* [NumP [Num t_i [NP *Dan* [N t_i [DP *et ist-o*]]]]]]]

Ritter (1993: 795) suggests that there is a difference between the features of number and gender. While the former constitutes an independent functional category and projects into the maximal category NumP consistent with the principles of X-bar theory, the gender feature is realized on an existing syntactic head. Ritter proposes that the site of the gender feature is subject to cross-linguistic variation. She proposes that for Romance gender is a feature base-generated under the Num node, attaching to N as a result of N-raising, while for Hebrew gender is attached to the noun stem in the lexicon, subsequently appearing at all levels in the syntax. This contrast is illustrated in (66).

(66) (a) [DP [D [NumP [Num [GENDER] [NP [N]]]]]] (Romance)
 (b) [DP [D [NumP [Num [NP [N [GENDER]]]]]]] (Hebrew)

Whereas gender is a purely inflectional feature in Romance, Ritter (1993: 796) argues that gender in Hebrew is derivational: gender affixes are productive in deriving new nouns from existing ones.²⁶ According to her, the fact that gender operates in different

²⁶ Ritter (1993: 797) notes that Spanish shows similar patterns of derivation in pairs of nouns with masculine and feminine gender affixes, but holds that the few examples that exist are not representative.

ways in Hebrew and Romance supports the proposal that they are generated at different sites in the syntax.

In the next section I consider the question of whether there is a one-to-one correlation between grammatical features and functional projections in the syntax.

3.6.2 *Bernstein on gender and word markers*

According to Harris (1991: 29), “(b)iological sex, grammatical gender, and declension class are interrelated but autonomous domains of linguistic generalization and as such demand independent formal representation”. Harris proposes that the terminal vowels on Spanish nouns (and adjectives) are morphological word markers, which may or may not correspond with grammatical gender and/or biological sex. To this end Harris distinguishes between three groups of nouns. The nouns of the first group comprise an inner core consisting of prototypical forms where declension class and inherent gender match, as in (67)(a). Nouns of the second group, the so-called outer core nouns, each consists of a noun stem without word markers but with gender, as in (67)(b). The third group, Harris’ “residue”, is made up of deviant cases: adverbs and adjectives like those in (67)(c) also host word markers, though adverbs are not associated with gender and adjectives obtain gender through agreement with nouns.

- (67) (a) *hijo* (m), *hija* (f)
‘son’, ‘daughter’
- (b) *padr-e* (m), *madr-e* (f)
‘father’, ‘mother’
- (c) *dentro* (adv), *alto/a* (adj)
‘inside’, ‘tall’

Masculine is the unmarked gender in Spanish, as illustrated in (68) (Harris 1991: 43): the preposition *para* (“for”) has no gender to transfer through an agreement relation to the

quantifier *demasiados* (“too many”). Yet *demasiados* is marked masculine, thereby signaling this as the default option.

- (68) *Tienes demasiados (m) “paras” en ese párrafo*
 “You-have too-many “paras” in that paragraph”

Bernstein (1993) proposes that Harris’ word marker represents the syntactic head of the maximal functional projection W(ord) M(arker) P(hrase), which in turn is the complement of Num (cf. § 3.5.1), so that a noun is base-generated in N and moves first to WM and then to Num to pick up its inflectional affixes, as is illustrated in (69). Note that each of these moves obeys the locality constraint on head movement (Travis 1984, in Culicover 1997: 339).

- (69) [DP [D *un* [NumP [Num *libr_io_j∅* [WMP [WM *t_i* [NP [N *t_i*]]]]]]]]]

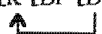
Further evidence in support of Bernstein’s proposal is the treatment of determiner pronominals such as *uno* in the phrase *uno largo* “a long (one)”. She suggests that it is part of the syntactic function of word marker elements to license such null nominal projections. Null nominal constructions are discussed in chapter 5 below.

3.6.3 *Agreement projections for Case features*

Although there is much variation regarding the details and labelling, there does appear to be consensus that Case features are located under the head of some (at least one) independent functional projection generated between D and N, and that the arguments of a head noun interact with the head of such a projection for the licensing of Case features.²⁷

With respect to the licensing of a nominal expression's Case feature, Coene (1999: 60) refers to Giusti's (1993) proposal concerning an additional functional head located between D and the predicate of which that nominal is an argument. This head, labelled K, is then the highest functional head in the nominal structure, situated above D; D raises to K for checking of the selectional features of the next highest lexical category. The proposed structure is given in (68) (Coene 1999: 61):

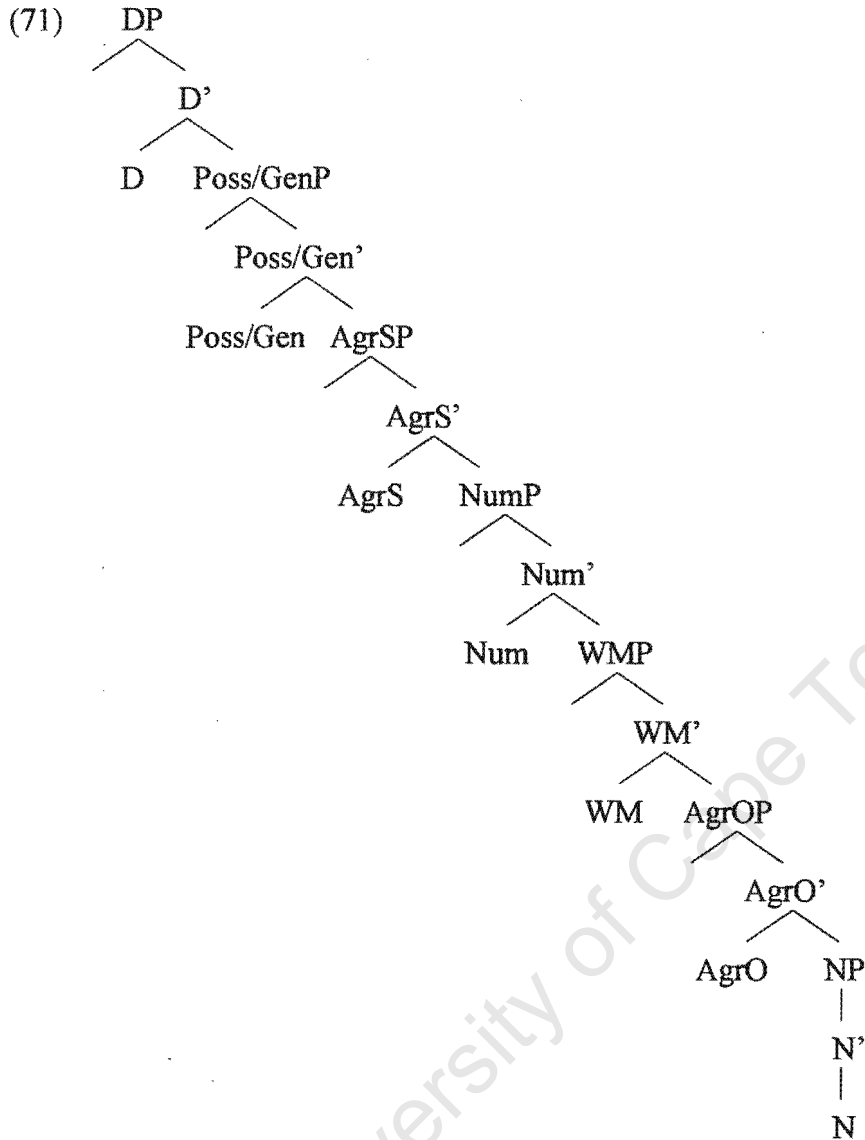
(70) $[_{KP} [K [_{DP} [D \dots]]]]$



3.6.4 *Summary*

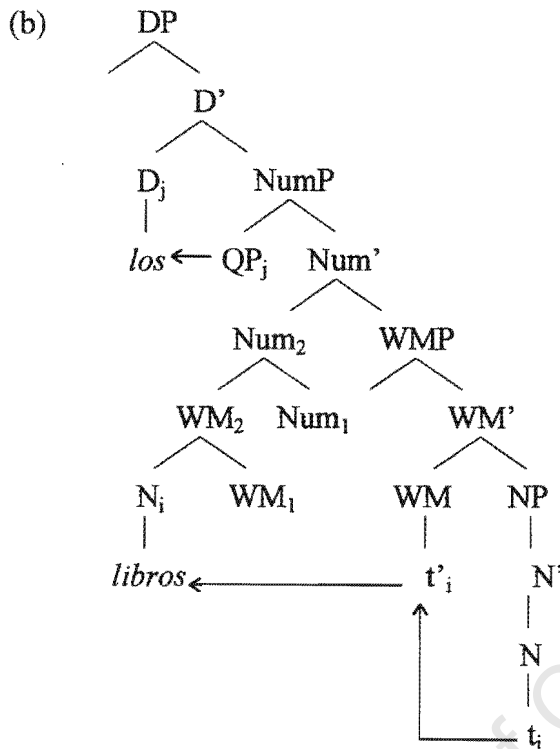
Against the background of the various proposals set out above, the internal structure of the nominal expression may be represented as in (71). DP, PossP, NumP, WMP, AgrSP and AgrOP together constitute the functional domain of a nominal syntactic structure, while NP constitutes the lexical domain.

²⁷ For a summary of the relevant proposals, see (Coene 1999: 99).



Recall that the MP assumes a lexicalist approach to inflectional morphology. This means that items are inserted from the lexicon not as bare stems, but rather already fully inflected. It follows that licensing of inflections is not a process of affixation via syntactic head-adjunction, but checking off of morphological features against matching features of functional heads in the syntactic structure. This approach calls for a reinterpretation of the accounts reviewed in 3.4. This reinterpretation can be illustrated with the following Spanish example:

(72) (a) *los libros*
 the books



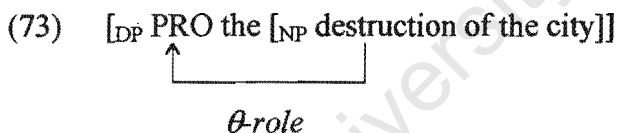
In minimalist terms, then, (72) illustrates how *libros* (“book”), having been inserted from the lexicon as a fully inflected form, head adjoins to WM and Num in successive cyclic movements, checking its gender and number features respectively. The D *los* is marked for agreement with the N *libros*. So far the number and gender features of *libros* have been licensed. However, still missing from the account is how the agreement relation between this noun and its determiner is checked. Valois (1991)²⁸ explains determiner-noun agreement by base-generating the definite article in [Spec, NumP] as QP. When N lands in Num, a spec-head relation is set up and the gender and number inflections on *uno* are licensed. It then raises and cliticises to D, the site of a [\pm definite] feature. This proposal is incorporated into the above analysis.

²⁸ In Bernstein (1993: 128).

3.7 PRO and the DP

Stowell (1989: 236) and Abney (1989: 89) argue that the occurrence of PRO in nominal expressions provides further support for the DP hypothesis. A DP analysis of nominals can accommodate a PRO subject in such expressions. Under the standard GB analysis, the occurrence of PRO in nominals was ruled out by a general constraint, namely that PRO could not be governed (Chomsky 1981).²⁹ The only possible host position for a PRO subject was [Spec, NP], a position necessarily governed by the noun head.

Abney (1987: 92) presents two arguments stemming from θ -theory for the occurrence of PRO in nominal expressions. The first concerns process nominals. Recall Grimshaw's claim that these nominals have identical argument structure to verbs (cf. § 3.4.3 above). Thus in a nominal expression such as *the destruction of the city*, the noun *destruction* - derived from the verb *destroy* - must have an implicit external argument to which it assigns an Agent θ -role. PRO is the covert syntactic realisation of this external argument, so that *the destruction of the city* is assumed to have the following structure (Abney 1989: 92):



Abney's second argument draws on Roeper's (1984) analysis of a particular semantic clause type - *rationale* clauses. The claim is that this type of clause, illustrated in (74)(a), has an *implicit* agent, syntactically realized as PRO:

- (74) (a) the PRO performance of the play [PRO to entertain the audience]
(b) *the play's performance [PRO to entertain the audience]

²⁹ Binding theory specifies this syntactic constraint on the distribution of PRO, based on the classification of PRO as a pronominal anaphor.

In (74)(a) the first PRO receives the Agent θ -role, thereby licensing the rationale clause *to entertain the audience*. In (74)(b) a possessive θ -role is assigned by D³⁰ to *the play*, which now occupies the subject position. PRO therefore cannot occupy [Spec, DP]. The implicit agent is not syntactically present, therefore the rationale clause is not licensed and the sentence is unacceptable. Thus PRO can only be the subject of DP when there is no possessor θ -role assigned by D.

More evidence for PRO in nominal expressions is presented by Stowell (1989). He first notes that in nominal small clause constructions such as those in (75), the verb *elected* governs the subject of the small clause, thereby excluding PRO as a possible constituent occupying this position (Stowell 1989: 238):

- (75) (a) They elected [him president of the class]
(b) He was elected [*t* president of the class]
(c) *They elected [PRO president of the class]

Stowell goes on to present data which suggests that PRO *may* occur as the subject of nominals:

- (76) (a) John disapproves of [the PRO hatred of oneself]
(b) John needs [a PRO talking to *t*]
(c) Bill resented [the PRO destruction of the city [PRO to prove a point]]

In the cases in (76) PRO is not ruled out and may indeed occur as the subject of a nominal, suggesting that this position is not governed by the head noun nor by the matrix verb. The only way to account for this is to posit the existence of a functional category intervening between the NP and the matrix verb.

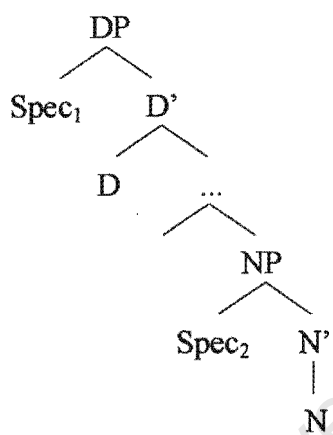
³⁰ Abney's (1987: 90) claims that the possessive θ -role is assigned by D, specifically 's in D.

Furthermore, in (77) PRO accounts for the fact that *the boys* be interpreted as the antecedent of *them* in (b) but not (a).

- (77) (a) The boys_i told [a PRO story about them*_{i/j}]
 (b) The boys_i heard [a PRO story about them_i]

Thus the DP hypothesis allows for the possibility of two subject positions within a nominal expression. Under the DP analysis, which has NP occurring within DP, PRO should be able to occur in [Spec, NP] (i.e. the ungoverned subject position of NP), but not in [Spec, DP], since the latter is a governed position. PRO may occur in Spec₁ of the following configuration, without violating the government constraint on its distribution.

(78)



3.8 Summary

In this chapter I examined the empirical observations and theoretical considerations underlying the justification for the DP Hypothesis. I presented Abney's proposals, as well as subsequent refinements (cf. Szabolsci (1994) and others) in the analogy between clauses and nominal expressions.

I also examined the proposed articulated functional layer between N and D associated

with the DP Hypothesis. I have shown that there exists a fair degree of consensus that inflectional morphology is licensed by independent functional heads corresponding to the relevant affixes on the head noun. To this end I have explained the mapping of number, gender and Case agreement projections between N and D.

Having reviewed the relevant literature it seems that there are at least two questions which remain open with respect to the functional domain of nominal expressions. These are whether (i) the number and (ii) the relative order of functional projections can be determined by universal principles. This calls for further investigation into the Mirror Principle, a hypothesis which I have assumed for the purposes of this study.

University of Cape Town

Chapter 4

Genitives and Adjectives in Spanish

4.1 Introduction

This chapter examines the structural properties of (i) genitive arguments and (ii) adjectival modifiers in the Spanish nominal expression. The main objective in the first part of the chapter is to determine how Case, and specifically genitive Case, can be accounted for in such expressions within MP. The discussion is presented against the background of assumptions drawn from Longobardi (1991, 1999), Mallén (1989), Lasnik (1993, 1999) and Parodi (1996). The discussion is organised as follows: § 4.2 focuses on the syntactic mapping of Spanish nominal argument structure and the mechanisms of θ -role assignment. § 4.3 focuses on Case checking; I first review how Case is checked in the clause and subsequently examine how the relevant mechanisms can be applied to the Spanish DP, taking into account the layers of functional structure between D and N as set out in chapter 3.

The second part of this chapter examines the distribution, interpretation and structure of DP-internal APs in Spanish, drawing on the proposals set out in Cinque (1993), Bernstein (1993) and Coene (1999). § 4.4 focuses on the distribution and interpretation and § 4.5 on the syntactic projection of APs. In § 4.6 I analyse a set of Spanish examples representative of the variable word order patterns that this language exhibits, and attempt to provide an account of Case checking and adjectival modification for each.

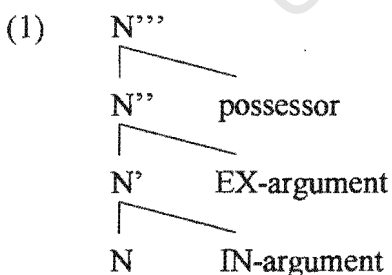
4.2 Argument structure and θ -role assignment

All substantive lexical items are stored in the lexicon with a θ -grid. This contains the information relating to the thematic roles associated with the arguments selected by the

lexical head (L-head). The mapping of this information on phrase structure is mediated by the Projection Principle, which has its roots in GB theory. The Projection Principle requires that syntactic structure reflect lexical information at all levels (Chomsky 1986: 84). θ -roles are assigned to external and internal arguments of the head, the former being subjects and the latter complements of the lexical head. Giorgi & Longobardi (1991: 116) characterize the arguments of a lexical head as follows:

... we make a crucial distinction between subcategorized arguments (i.e. internal arguments, required by the Projection Principle) and elements bearing to the head a semantic relation which may be termed external (not required by the Projection Principle: subjects and, in nominals, possessors and elements predicated of the head).

At the core of the structural parallels proposed for nominal expressions and clauses is the hypothesis that the arguments of a head noun are projected in the same configuration as the arguments of a head verb. In both cases external arguments (e.g. Agents) are higher than internal arguments (e.g. Themes). A third possible argument to be projected in nominal structure, though absent from the clause, is the Possessor argument, which is projected higher than subjects or objects. Thus the thematic hierarchy proposed for nominal expressions by Longobardi (1999: 1) is P>S>O. This is illustrated schematically in (1) (Giorgi & Longobardi 1991: 117):



Interesting from the point of view of Spanish, is that in this language all three arguments

may be overtly realised simultaneously. English can only have one external argument overtly realised. In Spanish a distinction must be made between possessor and agent positions since possessors and external arguments co-occur, unlike in English, illustrated by the example in (2)(a). (2)(b) is an example of a Spanish nominal with three thematic arguments:

- (2) (a) *John's book of George
 (b) *Te gustó el retrato* [THEME *de Felipe IV*] [AGENT *de Velázquez*] [POSSESSOR *del famoso coleccionista*]
 To-you pleased the portrait of Philip IV of Velázquez of-the famous collector
 "You liked the famous collector's portrait of Philip IV by Velázquez"

According to Chomsky (1986), nominal heads assign their θ -roles directly to their complements and specifiers, while verbal heads θ -mark their specifiers through V'.¹ With the reanalysis of nominal expressions as projections of head Ds, argument structure and the mechanisms for θ -role assignment and Case checking in nominals have been brought in line with the corresponding analysis at clausal level. Accordingly, nominal and verbal heads assign θ -roles in identical fashion: the internal θ -role is assigned directly by the V/N head to its complement, while the external θ -role is assigned compositionally by V'/N' to the external argument.

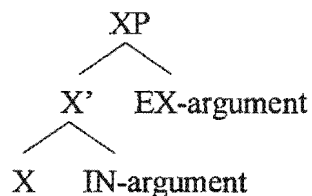
Longobardi (1999: 1-2)² presents a parametric description of nominal expressions in Germanic and Romance within the framework of the hierarchy presented in (1) above. Earlier work by Giorgi & Longobardi (1991: 119) linked cross-linguistic variation in word order phenomena with two parameters relating to the directionality of θ -role assignment. While Romance and Germanic Ns both assign θ -roles rightwards to their

¹ In Mallén (1989: 89).

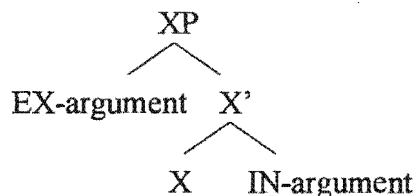
² The page number given here corresponds to the informally distributed copy; see Bibliography for publication details.

internal arguments, external arguments are θ -marked to the right in Romance and to the left in Germanic. These principles, termed the Head-Complement and Head-Subject parameters respectively, are illustrated in the following structural realisations of Romance and Germanic XP, where X is a θ -role-assigning lexical head:

(3) (a) Romance



(b) Germanic

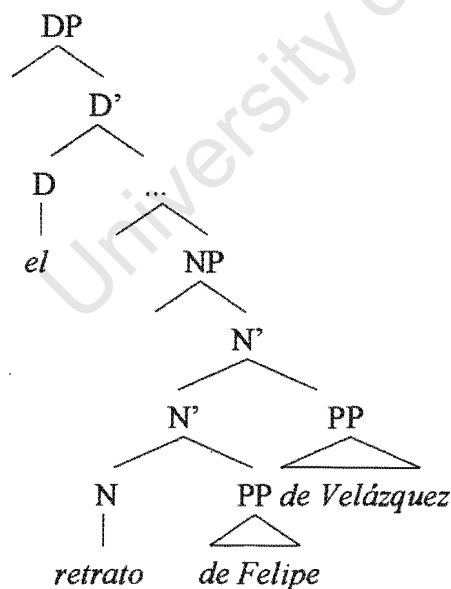


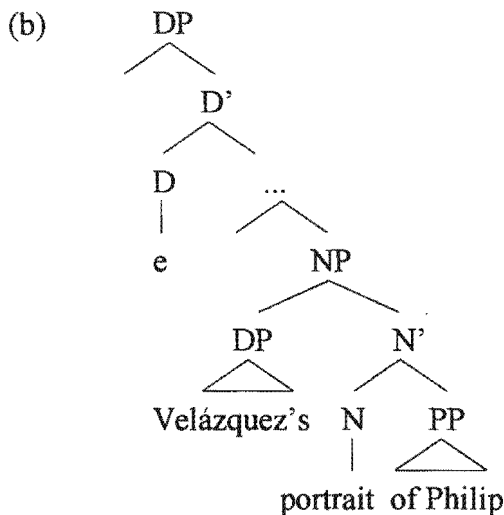
Applying the above schemas to the Spanish example (4)(a) and its English counterpart (4)(b) yields the structures (5)(a) and (5)(b) respectively:

(4) (a) *el retrato* [_{THEME} *de Felipe*] [_{AGENT} *de Velázquez*]

(b) [_{AGENT} *Velázquez's*] *portrait* [_{THEME} *of Philip*]

(5) (a)





Once the arguments of a predicate have been assigned θ -roles, their Case features must be checked. I consider the mechanisms involved in this checking in the next section.

4.3 Case checking

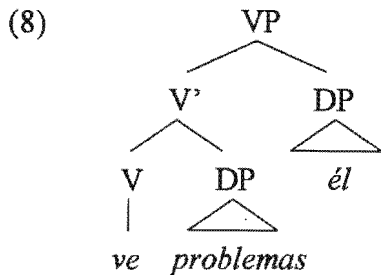
Recall from the discussion in chapter 2 that Case theory is no longer an independent module of grammar within MP; instead, Case is now accounted for in terms of the same mechanisms that hold for other syntactic feature-checking. Thus within MP, Case is a feature (like any other morphological inflection) that needs to be checked in order to be licensed in the derivation of an SD. Items are selected from the lexicon already marked for Case. That is, Case is no longer 'assigned' (under government) to an unmarked DP but rather checked off within a spec-head agreement relation (Lasnik 1999: 29). The GB Case Filter holds that argument NPs unmarked for Case are not permitted. Lasnik (1993: 6) reinterprets the Case Filter in MP terms as follows:

- (6) An NP with an unlicensed Case feature is an ill-formed LF object.

Thus the checking of Case features is crucial for convergence of a derivation. The checking and licensing of Case can be illustrated with the following Spanish example:

- (7) *él ve problemas*
 he sees problems

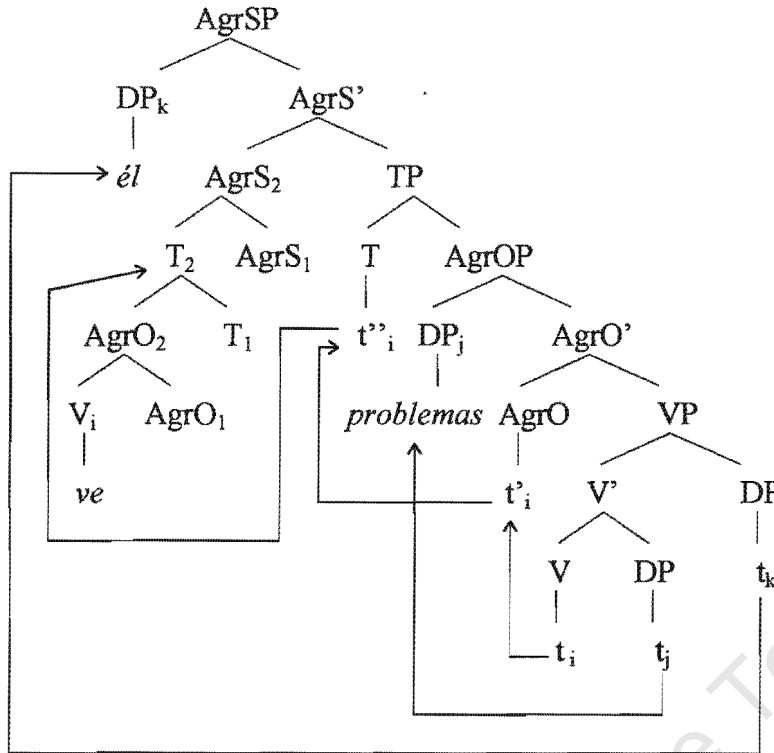
For the purposes of Merge, the number of arguments required by a lexical head reflects the number of levels projected in the syntax. In this case the head V *ve* selects an external and an internal argument, which receive the θ -roles of Agent and Theme respectively. Recall that Romance L-heads θ -mark uniformly to the right, hence the thematic layer of the SD of (7) is as in (8):



The DPs *él* and *problemas* are marked for nominative and accusative Case respectively.³ These Case features, along with other grammatical features, need to be checked off against the corresponding features under the relevant functional heads by way of agreement relations set up by the operation Move. (9) shows the structure after Move.

³ Though there is no overt Case morpheme, the accusative form of *él* is the clitic *le*. Similarly, *problemas* would be ruled out as a nominative subject since it is a bare plural; its nominative form requires an overt determiner. Thus, **Problemas son enormes* ("Problems are enormous").

(9)



In describing the relevant structural relations in (9), I assume Longobardi's (1996: 31) Case Checking Principle, formulated as follows:

(10) Case Checking Principle

A Case feature on a category α is checked by a designated head γ iff

Licensing (relational notion):

- (a) α is a member of the internal domain⁴ of a Chain headed by γ , or
- (b) α shares ϕ -features with γ , and

Identification (expression of the Case relation):

- (c) α is in the Spec of a designated category β , or
- (d) α formally expresses Case

Returning to (9), consider first the DP *él*. This DP is licensed (in Longobardi's (1996)

⁴ The *internal domain* of H is the minimal complement domain of H (i.e. the sister of H) (Epstein et al. 1996: 19). See also Chomsky (1995: 178).

sense) by virtue of being in the internal domain of AgrS; it is in the Spec of AgrSP. The licensing of *problemas* occurs in a parallel configuration: it is in the internal domain of AgrO, its landing site being [Spec, AgrOP]. According to Lasnik (1993: 6), “structural Case licensing then is invariably a spec-head relation with an AGR head”.

So far I have illustrated Case checking at clausal level. Within nominal expressions the Case associated with the arguments of nouns, whose verbal counterparts are marked for nominative and accusative, is uniformly genitive. More specifically, a distinction is made between subjective genitive (nominative in the clause), objective genitive (accusative in the clause) and possessive genitive (Demonte 1987: 271-2). These three types of genitive correspond to the Agent, Theme and Possessor arguments in (2)(b) above. The next section traces the development of proposals concerning genitive Case in nominal expressions.

4.3.1 *Previous proposals*

Exploring the connections between nominative and genitive Case marking on external (subject) arguments, Fukui (1986)⁵ proposes an analysis (for English) within a GB framework. This proposal has two parts. Firstly, a prenominal genitive phrase, base-generated in [Spec, NP], moves into [Spec, DP] to receive Case. The possessive morpheme 's is a head D. This is illustrated as follows:

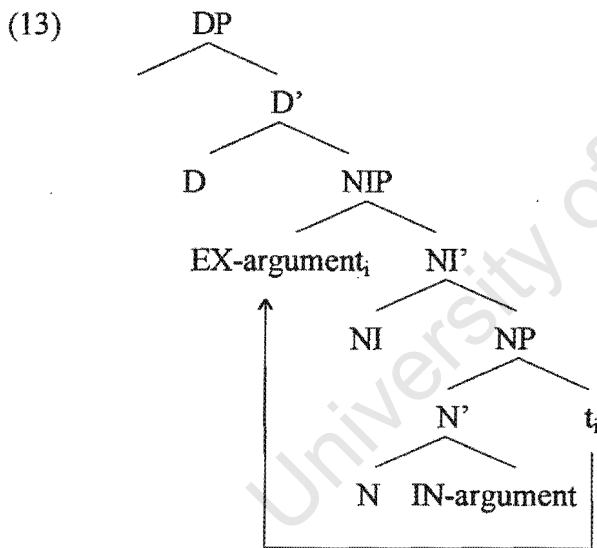
(11) $[_{DP} \text{Noam}_i \underbrace{[_D 's [_{NP} t_i [_N \text{book}]]}]]$

Secondly, genitive Case assignment in nominal expressions parallels nominative Case assignment in clauses. The clausal subject also raises to receive structural Case: it is base-generated in [Spec, VP] and moves to [Spec, IP]. Compare (11) with (12) below:

⁵ In Coene (1999: 36), Mallén (1991: 282).

(12) $[_{IP} \text{Noam}_i [_I \text{-s} [_{VP} t_i [_V \text{read-}]]]]$

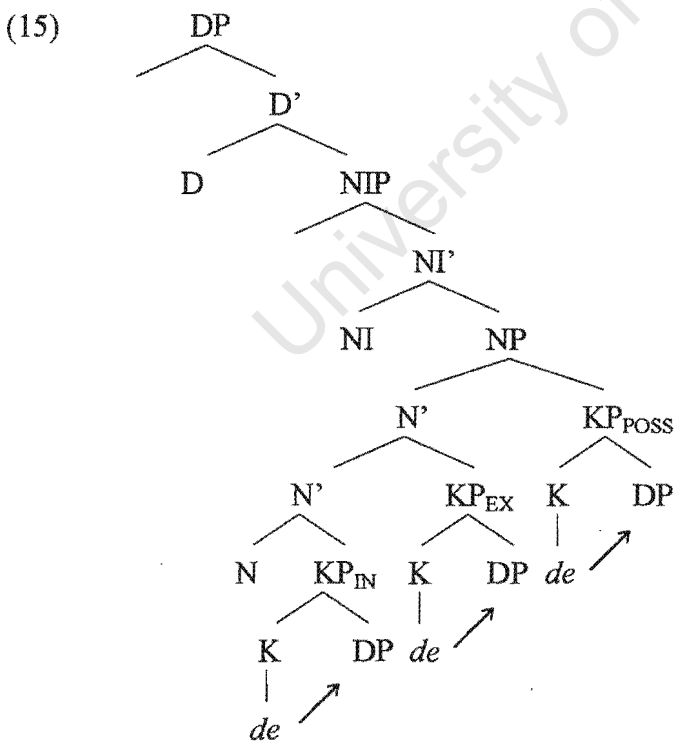
Mallén (1989: 91) adopts Fukui's (1986) assumptions regarding the assignment of (English) nominative and accusative Case, which hold that (i) internal arguments receive Case from the verbal head, and (ii) external arguments, which are generated VP-internally, must raise to [Spec, IP] to receive Case under government by I. Mallén extends this analysis to nominal expressions, so that external arguments of nominal predicates must raise to a higher Spec position to receive (genitive) Case. He (1991: 280) proposes an intermediate functional category NI (nominal I) between D and N, within which genitive Case assignment (or in MP terms, "checking") takes place. Quantifying expressions such as *muchos* ("many") constitute the lexical realization of the head NI. Thus the EX-argument DP raises to [Spec, NIP], as is illustrated below:



Mallén (1989: 98) claims that the IN-argument is assigned (genitive) Case by the head N. This proposal is part of maximally extending the parallels between Case assignment in nominal expressions and clauses: NI assigns Case to an argument in [Spec, NIP], just as I assigns Case to an argument in [Spec, IP]. N furthermore assigns Case to an argument in its complement position, just as V assigns Case to its complement. Thus Mallén extends the set of possible Case assigners. (14) summarizes his proposed set:

(14)	Clause	Nominal Expression
EX-argument	I	NI
IN-argument	V	N
POSS-argument	-	D

The only difference between clausal Case assigners and their nominal counterparts is that the latter set are termed ‘weak’, since they require the presence of a “null preposition *de* to lend support to the Case-assigning properties of the head” (Mallén 1989: 99). This genitive Case-marker *de* is the lexically realized head K of the maximal functional projection KP. Case is assigned jointly by the Case-assigning heads NI, N and D, together with the genitive Case-marker *de*. Under this assumption, there is no longer motivation for raising of the EX-argument to a specifier position since in its base-generated position it can receive Case. The structure of (13) above is accordingly modified to incorporate the full proposal presented by Mallén (1989, 1991):



Prenominal possessive pronouns are not exclusively associated with POSS-arguments. Consider the three DPs in (16). In each case (a) contains a head noun and an argument. The corresponding (b) examples show pronominalisation of the Possessor, Agent and Theme arguments respectively.⁶

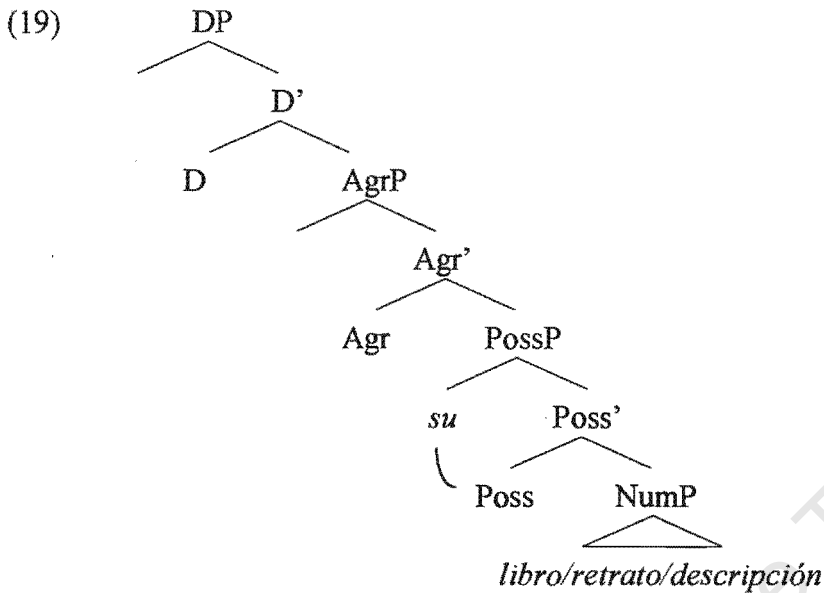
- (16) (a) *ese libro* [POSSessor *de María*]
that book of Mary
(b) *su libro*
her book
- (17) (a) *ese retrato* [AGENT *de Picasso*]
that portrait by Picasso
(b) *su retrato*
his portrait
- (18) (a) *esa descripción* [THEME *de Georgia*]
that description of Georgia
(b) *su descripción*
her description

Parodi's (1996: 407) account of the above structures incorporates the functional projection PossP, which constitutes the domain of Case checking in the DP. It is projected between AgrP and NumP in the functional layer of nominals. An argument of N raises to [Spec, PossP] to check for subjective or objective genitive Case, as in (17) and (18). A POSS-argument, as in (16), does not raise since it is base-generated in this (Case-checking) position. (19) illustrates how, for each of the structures in (16-18), the Possessor, Agent or Theme argument, expressed by the pronominal *su* ("his/her"), is in a

⁶ Giorgi and Longobardi (1991: 145) point out a constraint on this kind of pronominalization. Nouns that cannot be "passivised" may not be pronominalised with the possessive:

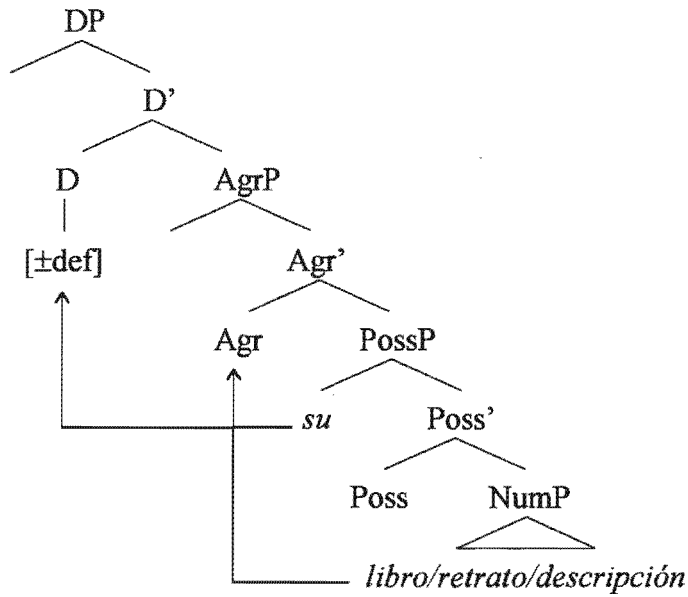
**su deseo (de chocolate), *su necesidad (de chocolate)*
its desire (of chocolate), its need (of chocolate)

spec-head relation with Poss (having raised to this position in the latter two cases). In this way, the argument's possessive, subjective or objective Case feature is checked.



Parodi (1996: 405-407) suggests that in Spanish DPs the N head raises to Agr to check agreement with the determiner, for example the demonstratives *ese/esa* (“that”) in the case of (16)(a), (17)(a) and (18)(a) above. When there is no determiner, the possessive cliticizes to D, the site of a [\pm definite] feature. (20) illustrates this final step in the derivation.

(20)



When the D position is filled, the possessive remains in [Spec, PossP] and its phonetic realisation is the “strong” form *suyo/a*. The following examples illustrate this latter possibility:

- (21) (a) *ese libro suyo*
that book his
“that book of his”
- (b) *ese retrato suyo*
that portrait his
“that portrait of his”
- (c) *la descripción suya*
that description her
“that description of hers”

Although the three kinds of nominal arguments can undergo pronominalization, they

appear not to be of the same syntactic order. One body of evidence relates to word order facts. While the relative order of Agent and Theme arguments satisfies naturalness rather than grammaticality, it is a strict requirement that the possessive genitive appear in final position when it co-occurs with one or both of the other two (Demonte 1987: 273). The following examples illustrate these possibilities:

- (22) (a) ?? *el retrato* [POSSESSOR *del famoso coleccionista*] [AGENT *de Velázquez*]
 (b) * *el retrato* [POSSESSOR *del famoso coleccionista*] [THEME *de Felipe IV*]
 (c) * *el retrato* [POSSESSOR *del famoso coleccionista*] [THEME *de Felipe IV*]
 [AGENT *de Velázquez*]

Further evidence for the difference in syntactic status between the three kinds of nominal arguments is provided by extraction facts. Mallén (1991: 277) illustrates the following constraints on extraction from within Spanish DPs: (i) Agents block extraction of Themes as in (23)(a); (ii) Possessors block extraction of Agents or Themes as in (23)(b-c); and (iii) Possessors themselves may not be extracted as in (23)(d):

- (23) (a) * [THEME *De qué rey*] *te gustó el retrato* [AGENT *de Velázquez*?]
 of what king to-you pleased the portrait of Velázquez
 (b) * [AGENT *De qué pintor*] *te gustó el retrato* [POSSESSOR *del famoso coleccionista*?]
 of what painter to-you pleased the portrait of-the famous collector
 (c) * [THEME *De qué rey*] *te gustó el retrato* [POSSESSOR *del famoso coleccionista*?]
 of what king to-you pleased the portrait of-the famous collector
 (d) * [POSSESSOR *De qué famoso coleccionista*] *te gustó el retrato*?
 of what famous collector to-you pleased the portrait

Demonte's (1987: 275) analysis of wh-movement of elements from within nominal expressions incorporates the claim that the possessive genitive must be analysed as a PP.

She supplies a number of considerations in support of this claim. One consideration is that, unlike the other two types of genitive phrase, the possessive genitive may act as the predicate of a non-restrictive relative. (24) illustrates this. It is acceptable to include the Possessor argument in a relative clause, but not the Agent or Theme:

- (24) (a) *El diccionario [que es de Juan Possessor] está en la estantería*
the dictionary that is of John is on the shelf
- (b) *??El retrato [que es de Velázquez EX-argument] está en el Prado*
the portrait that is (the work of) of Velázquez is in the Prado
- (c) **El retrato [que es de Felipe IV IN-argument] está en el Prado*
the portrait that is of Philip IV is in the Prado

In sum, then, distributional facts seem to indicate that the possessive genitive argument must be distinguished from its subjective and objective counterparts. This raises the question of the corresponding distinction which must be made with respect to the *de* (“of”) introducing these phrases in each case.

4.3.1.1 *GenP versus PP*

There is empirical motivation for distinguishing between *de* as a genitive Case-marker versus a ‘true’ preposition. Diagnostics for prepositionhood set out by Jackendoff (1973: 346-8) include, for example, the observation that “prepositions condition subject-verb inversion under appropriate circumstances”. This is illustrated in (25) (Jackendoff 1973: 348).

- (25) Out of the night appeared the nine black riders

Note that Spanish *de* does not permit subject-verb inversion in (26)(a), but does in (26)(b). In the first instance the *de*-phrase is marked for possessive genitive, while in the second it is not.

- (26) (a) **de María es el libro*
of María is the book
- (b) *de Picasso habíamos hablado toda la noche*
of Picasso had-we spoken all the night
“About Picasso, we had spoken all night”

Thus in the case of possessive genitive, it could be claimed that *de* is not a normal preposition. By analogy to English *to*, which can be the lexical instantiation of P or I and *for* which can be either a P or a C, *de* in (26)(a) is the phonetic realisation of a genitive particle.⁷ In sum, then, the evidence suggests that subjective and objective genitive arguments must be analysed syntactically as PPs, whereas possessive genitive arguments are to be represented as GenPs.

4.3.2 A possible analysis of Case checking in the Spanish nominal expression

Consider again the Spanish example (2) above, with all the potential nominal argument positions overtly realised, repeated here as (24):⁸

- (27) *el retrato* [_{THEME} *de Felipe IV*] [_{AGENT} *de Velázquez*] [_{POSSESSOR} *del famoso coleccionista*]

Let us now examine a possible MP analysis of the internal structure of (27) and the relevant θ -role assignment and Case licensing mechanisms. For this analysis I assume a functional nominal structure comprising the functional projections NumP, WMP, AgrS and AgrO. NumP and WMP provide the means for checking off the ϕ -features of the head noun, while AgrS and AgrO contain the features corresponding to the ϕ -features of the noun's IN- and EX-arguments, Theme and Agent. Once the θ -roles have been

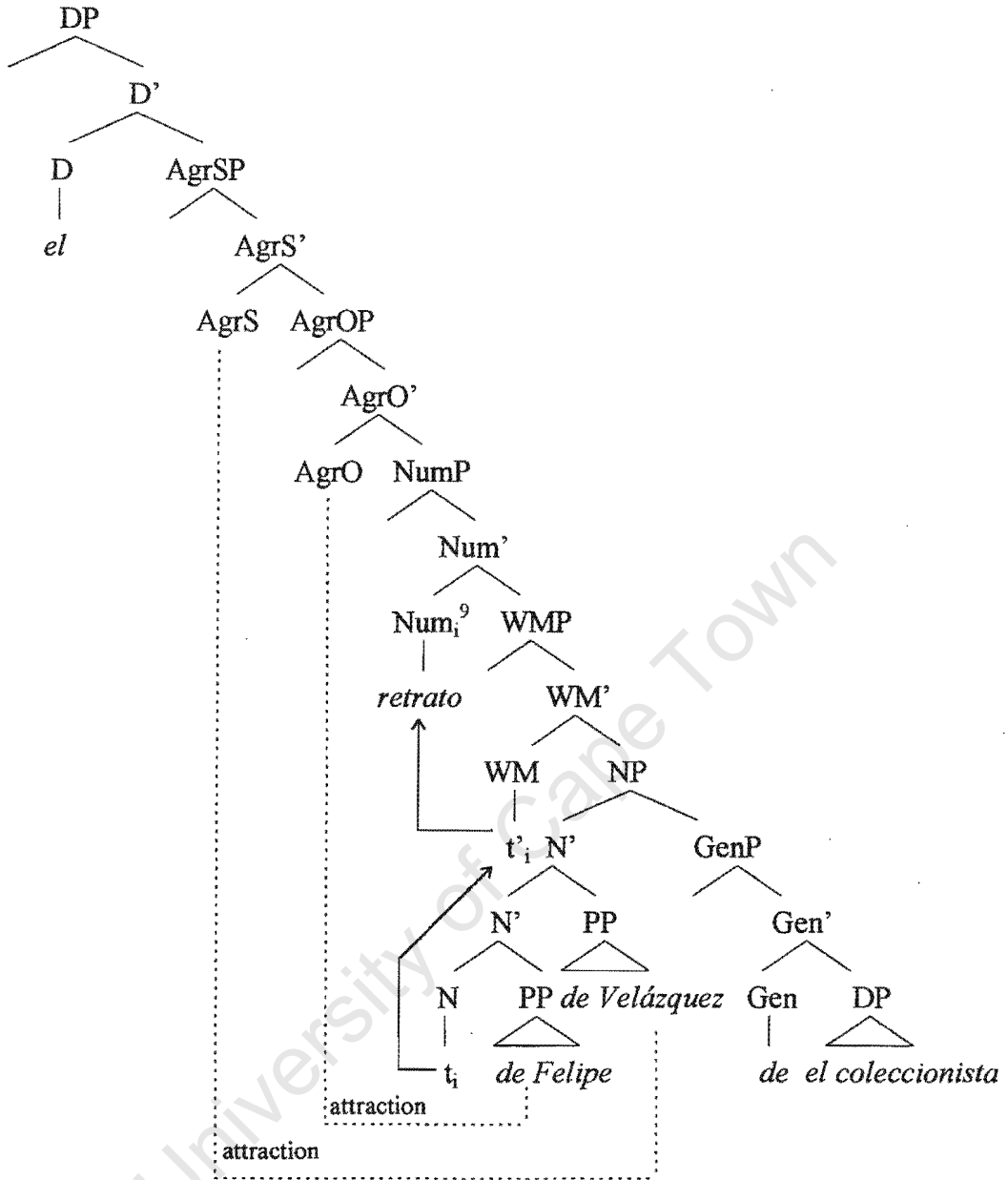
⁷ Recall from § 4.3.1 that Mallén (1989: 99) refers to *de* as a null preposition Case marker.

⁸ The original example was introduced by the phrase *te gustó* (“to-you pleased”).

assigned, the ϕ -features need to be checked, either through movement or feature attraction. However, movement is not possible, since the noun's arguments would raise across the noun, yielding an incorrect surface order. ϕ -features are accordingly attracted and the IN- and EX-arguments stay in their base-generated positions. The underlying structure I propose for the DP in (27) is given in (28), showing the raising of the head N *retrato* for feature checking, as well as the attraction of the ϕ -features of its arguments:

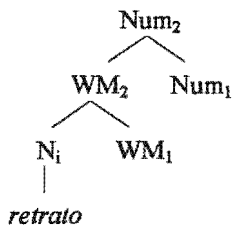
University of Cape Town

(28)



Consider now the the agreement mechanisms for genitive Case checking in (28). The

⁹ I have simplified this representation by eliminating the details of adjunction of N to WM and Num respectively. This part of the structure will be as follows:



word order and extraction facts cited above (cf. § 4.3.1) suggest that the POSS-argument is to be treated differently from its EX- and IN- counterparts. It follows then that the *de* which precedes the latter two is not of the same type as the genitive Case marker. In these instances *de* is to be regarded as a preposition. While all three nominal arguments are checked for genitive Case, the POSS-argument does so in a different structural configuration from the EX- and IN-arguments. The Case of arguments within PPs is not checked outside of PP, but rather within the PP, mediated by the P.¹⁰ The POSS-argument is checked for Case by way of attraction of the Case feature which is held in the head of the Case marker *de*, that is the head of the functional projection GenP. Thus, subjective and objective genitive Case is checked uniformly within PP, and possessive genitive is checked within GenP.

This analysis has two theoretical considerations in its favour. Firstly, there is no overt movement, which is in the minimalist spirit. Secondly, it offers uniformity between the analysis of the clause and the DP, with respect to head-initialness; all relations are rightwards.

¹⁰ See Lasnik (1999: 53) for PP-internal Case licensing; see also Radford (1997: 451–454).

4.4 Distribution and interpretation of adjectives in Spanish

4.4.1 Distribution

The unmarked surface word order in the Spanish nominal expression is D-N-A, as illustrated in (29):

- (29) (a) *la casa blanca*
the house white
(b) *un hombre inteligente*
a man intelligent

However, many adjectives may occur in prenominal as well as postnominal position, as illustrated in (30)(a-b), while a small set can occur prenominally, but not postnominally, as in (30) (c-d):

- (30) (a) *la blanca casa*
the white house
(b) *la casa blanca*
the house white
(c) *la mera sugerencia*
the mere suggestion
(d) **la sugerencia mera*
the suggestion mere

The head noun may also surface between adjectives:

- (31) (a) *las mejores novelas españolas*
the best novels Spanish
“the best Spanish novels”

- (b) *las nuevas camisas azules*
 the new blouses blue
 “the new blue blouses”

4.4.2 Interpretation

There is a great degree of variation in the semantic interpretation of adjectives in Spanish, relative to their positions with respect to the head noun. For example, the attributive adjective’s prenominal versus postnominal position corresponds with a restrictive versus non-restrictive reading in the following pair:

- (32) (a) *la blanca casa* [nonrestrictive]
 the white house
 (b) *la casa blanca* [restrictive]
 the house white

In (32)(a) the adjective *blanca* (“white”) is in prenominal position, while in (32)(b) it occurs postnominally. The reading of *blanca* in the first case is nonrestrictive: the *casa* (“house”) referred to is a member of a class of white houses. In the second phrase the postnominal position of *blanca* (“white”) forces a restrictive interpretation, limiting the reference of the noun *casa* (“house”) to a white member of a class of houses. But one can go further than this distinction. Cinque (1993: 95-101) proposes a more articulated version of the relation between syntactic position and semantic interpretation. His claim is that prenominal attributive APs force a subject-oriented reading, contrasting with the manner interpretation of the postnominal AP as illustrated in the following pair:

- (33) (a) *la loro brutale aggressione all’Albania*
 the their brutal aggression against Albania
 (b) *la loro aggressione brutale all’Albania*
 the their aggression brutal against Albania

According to Cinque (1993: 89) (33)(a) can be paraphrased as *It was brutal of them to attack Albania*, hence a subject-oriented interpretation. The adjective in (33)(b), by contrast, is concerned with the manner of the attack: *They brutally attacked Albania*. The same kind of distinction can be illustrated for Spanish with the following examples:

- (34) (a) *su indiscreto comentario*
 his indiscreet commentary
 (b) *su comentario indiscreto*
 his comentary indiscreet

In (34)(a) the adjective emphasizes the fact that *he* acted inappropriately, whereas in (34)(b) the adjective is concerned with the manner of the act. Thus, *he commented indiscreetly* versus *his commentary was indiscreet*.

Examining all the possibilities that the Italian paradigm allows, Cinque (1993: 96) goes on to derive a more fully articulated hierarchical structure of types of adjectives, given in (35) below. Assuming that all these potential positions are lexically filled would result in a string of several adjectives modifying the head N.¹¹ The adjective readings are reflected in surface strings in the following configuration (Cinque 1993: 96):

- (35) poss>cardinal>ordinal>speaker-oriented>subject-oriented>manner>thematic¹²

Bernstein (1993: 24) identifies a similar pattern whereby the same adjective may appear both pre- and postnominally, but where the difference in interpretation is not related to a [± restrictive] reading. The examples in (36) and (37) illustrate this:

¹¹ For a detailed analysis see Cinque (1993: 95-101).

¹² I have limited the discussion to the serialization of adjectives modifying a noun head expressing an event; Cinque (1993: 96) offers a second hierarchy for object nominals:

poss>cardinal>ordinal>quality>size>shape>colour>nationality

- (36) (a) *la pobre mujer*
 “the cursed woman”
 (b) *la mujer pobre*
 “the needy woman”
- (37) (a) *un simple periodista*
 “a mere journalist”
 (b) *un periodista simple*
 “a simple-minded journalist”

For this (relatively small) class of adjectives the pre- versus postnominal position results in two completely different meanings.

4.5 Syntactic status of adjectives

The literature provides several different proposals concerning the syntactic nature of the adjective as well as its participation and interaction in movement operations and agreement relations within the nominal expression. The next section focuses on various recent proposals in this regard.

4.5.1 *Previous treatments within generative grammar*

In a comparative study of adjective placement in Italian and English, Giorgi & Longobardi (1991: 123) conclude that adjectives are base-generated prenominal in English and postnominally in Italian. This is an extension of their Head-Subject Parameter (cf. § 4.2 above). Leftward movement of the adjective takes place in the case of Italian to derive the surface word order, while in English, rightward movement of the adjective is only licensed under very specific conditions; the unmarked surface order is the same as the base. Taking over the Italian analysis for Spanish as well, the following

examples illustrate the two different treatments of adjectives.¹³

- (38) (a) *una simpática_i chica t_i*
(b) a nice girl
(c) *una chica simpática*
(d) **a t_i girl nice_i*

Within a minimalist framework there are clearly problems with positing movement of the adjective in Spanish (or Italian). Motivation for such movement is not evident; in fact, movement of the adjective would appear to violate the principle of Greed, which holds that elements should only move to satisfy their own requirements. Furthermore, assuming that nominal structure parallels clausal structure, where V moves to I and adverbs stay in place, it follows that it would be more consistent to suggest that N moves to D and adjectives stay in their place (Bernstein 1993: 31).

In short, it could be argued that the parametric variation in the surface word order patterns of adjectives is not related to the position of the adjectives themselves but rather to the position of the noun. To this end, researchers like Cinque (1993) and Bernstein (1993) have made the connection between cross-linguistic variation in word order patterns and a parameter concerning N-raising. Following them, I assume that adjectives in Spanish are inserted preminimally in the base and that the surface order is derived by head raising of the noun over the adjective as illustrated in the following example:

- (39) *el muchacho_i alto t_i*
the boy tall¹⁴

Both Bernstein and Cinque point out that this hypothesis provides a uniform analysis for

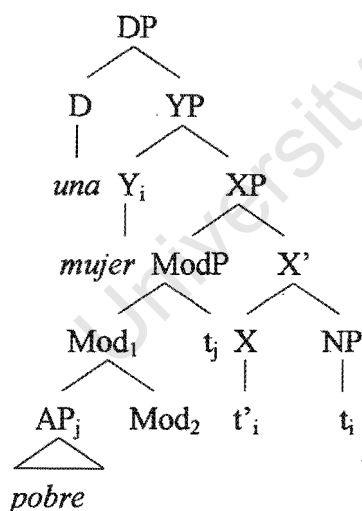
¹³ (35)(a) and (c) illustrate that AP-fronting is optional in this case.

¹⁴ According to Cinque (1993) this N-raising constitutes a parameter distinguishing Romance from Germanic; in Germanic the higher functional head contains weak N-features causing the head N⁰ to remain in its base generated position.

Romance and Germanic, which display surface word order differences.¹⁵ The base order is identical for both language groups but they have different parameter settings with respect to N-movement. A further merit of this analysis is the fact that it adds to the parallels between clausal and nominal structure, in that adjectives are syntactically treated in the same way in nominal structure as are adverbs in clausal structure.

Coene (1999: 136) refines the above hypothesis by arguing for a Modifier Phrase (ModP), an adjective-hosting functional projection generated in a specifier position within the functional layer between N and D. The head of ModP contains the agreement features which need to be checked against the corresponding morphological inflections on the adjective. This is achieved by head adjunction of A to Mod, thereby setting up a head-head agreement relation. N raises to check off its grammatical features against the relevant functional heads (details of which are irrelevant here), in the process crossing over the AP to yield the surface word order with the adjective in postnominal position. This is illustrated in (40) below (adapted from Coene 1999: 137):

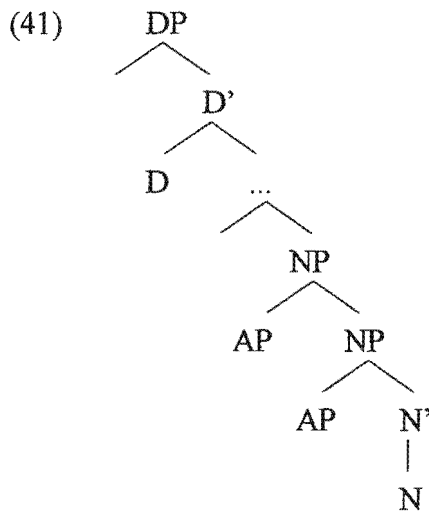
(40)



Cinque (1993: 95) notes that many accounts for the occurrence of multiple APs within DP have assumed that they are elements adjoined to a maximal projection, as illustrated

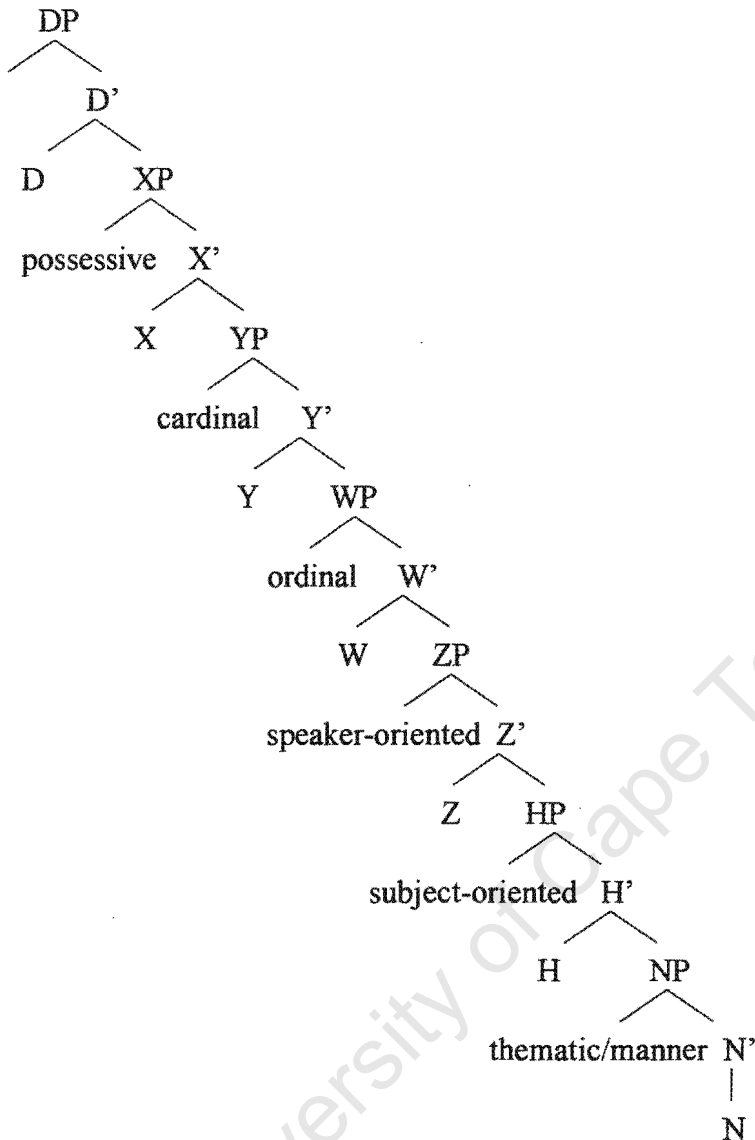
¹⁵ Although postnominal adjectives are permitted in English, as in *a man despised*, this is clearly the marked case.

in (41):



Cinque (1993: 96) presents three considerations against such an adjunction analysis. The first is that adjoined elements “are normally intended to be free”. By implication, then, adjoined elements need not be subject to the hierarchical organisation that Cinque has shown to be evident. The second consideration concerns the limit on the number of attributive APs which can occur in a DP. If these APs have the status of adjoined elements, there should be no limit to the potential number of AP modifiers. The third consideration is that assuming the adjunction hypothesis means that the hypothesis also needs to specify the direction of adjunction, i.e. that the APs are generated to the left of the head. According to Cinque (1993: 96), an analysis in terms of which APs are generated in [Spec, XP] would be more acceptable. Such an analysis would imply that the direction would implicitly be leftwards. Thus Cinque’s representation of APs in nominal expressions is as follows:

(42)



This configuration allows for seven specifier positions to host APs. The hypothesis is that APs that typically appear in prenominal position are generated higher up in the tree. N-raising then is 'partial' for Cinque (1993), in the sense that the noun overtly raises only part of the way up through the functional layers. For Spanish, N would raise as far as the Z head, leaving subject-oriented and thematic/manner APs to surface in postnominal

position.¹⁶

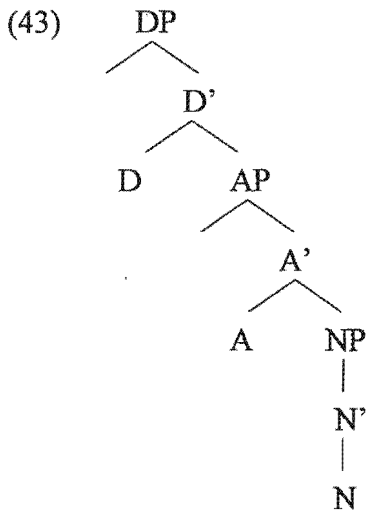
There are a number of problems associated with this analysis. Firstly, the [\pm restrictive] interpretation set out in § 4.4.2 above does not seem to be accounted for. Secondly, Cinque does not specify the categorial content of the functional projections. Thirdly, the number of functional projections must necessarily match the number of APs projected. In this regard, Bernstein (1993: 41) notes that this suggests “creating functional XPs to accommodate the potential number of adjectives”. Clearly, this does not reflect the spirit of minimalism.

Abney (1987: 322) argues for AP as an independent functional projection between D and N. This is illustrated in the following structure:

¹⁶ Bosque & Picallo (1996: 352) distinguish between *thematic adjectives* (Th-adjectives) which absorb θ -roles from the noun, and *classificatory adjectives* (C-adjectives) which have the status of adjuncts. The distinction is illustrated in the following pair of nominals, where the same adjective *automobilística* (“automobilistic”) is interpreted in different ways (Bosque & Picallo 1996: 353):

- (i) *producción automobilística*
production automobilistic
“car production”
- (ii) *excursión automobilística*
tour automobilistic
“car tour”

The reason for identifying these different classes of adjectives on the basis of how they interact with the head noun’s thematic grid is that they are projected differently in the syntax. Bosque & Picallo identify two salient features with respect to the syntactic properties of Th- and C-adjectives: (i) they obey a strict hierarchical organization within the structure of DP, and (ii) they display a fixed surface order in relation to the N^o.



The problem with this analysis is that it does not allow for multiple adjectives modifying N, since A selects N as its complement.

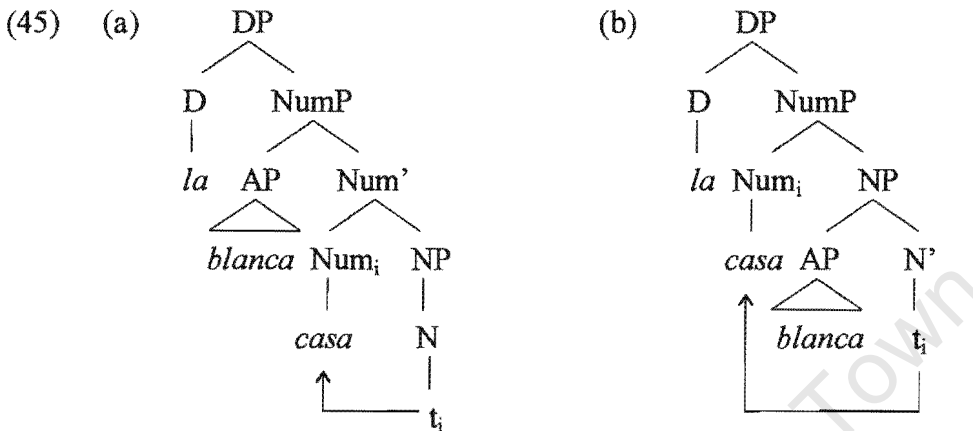
4.5.2 Connecting syntax with interpretation

Recall that some adjectives may appear either prenominally or postnominally, while others are restricted to prenominal position, as illustrated by the examples in (30) above, repeated here as (44):

- (44) (a) *la blanca casa*
the white house
- (b) *la casa blanca*
the house white
- (c) *la mera sugerencia*
the mere suggestion
- (d) **la sugerencia mera*
the suggestion mere

The variation in the interpretation of adjectives suggests positing different syntactic structures for (44)(a) and (44)(b), rather than saying that the raising of N past the AP

position is optional. The evidence suggests that adjectives have different interpretations according to their syntactic position. Bernstein (1991: 55) therefore proposes two distinct derivations for such adjectives, illustrated in (45) below. (WMP has been omitted from these structures.)



Where the AP is generated in [Spec, NumP], as in (45)(a), the reading will be nonrestrictive; where the AP is generated in [Spec, NP], as in (45)(b), the reading will be restrictive.

Adjectives of the type given in (44)(c), which are restricted to prenominal position, seem to be subject to several syntactic constraints with respect to their distribution (Coene 1999: 157, Bernstein 1993: 53): (i) they may not be used predicatively; (ii) they may not be modified by adverbs; and (iii) they may not occur in null nominal constructions. These constraints are illustrated by the examples in (46) (a-c) respectively:

- (46) (a) **la pregunta es mera*
the question is mere
- (b) **una muy mera pregunta*
a very mere question
- (c) **una mera*
a mere (one)

However, the constructions illustrated in (46) are acceptable with adjectives that occur pre- or postnominally:

- (47) (a) *un muchacho alto – el muchacho es alto*
a boy tall – the tall boy
(b) *un muchacho muy alto*
a boy very tall
(c) *un alto*
a tall (one)

Evidence of this kind suggests that a noun-raising analysis is not sufficient to account for at least the class of adjectives illustrated in (44)(c), and that these must be differentiated with respect to where they occur in the syntax. To this end there have been several proposals.

4.5.3 *Two types: adjectival heads and adjoined adjectives*

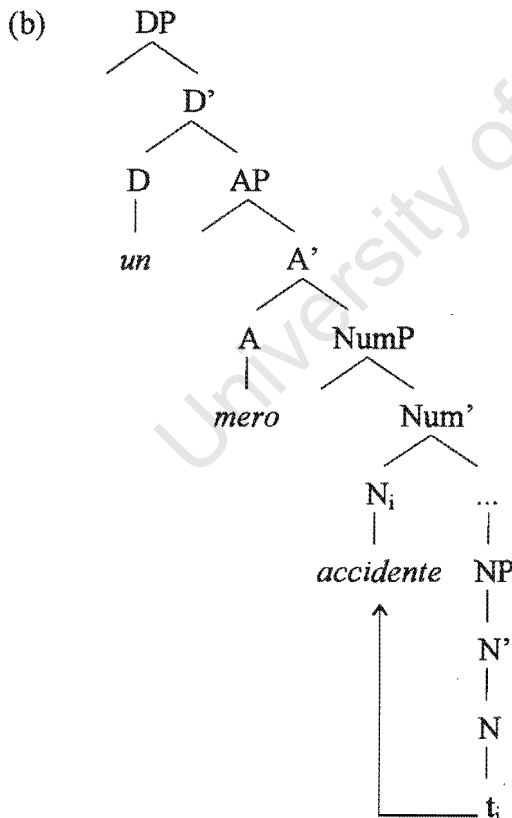
The discussion thus far has shown that adjectives are classified in different ways based on their interpretation. Let us now briefly examine the different statuses that APs have in the syntax, that is, the idea that different classes of adjectives also have different syntactic realizations. This distinction is not unexpected: in analysing the parallels between clausal and nominal structure, Coene (1999: 87) asserts that adverbs and adjectives are “contextual variants of the same abstract category”.¹⁷ At the level of the clause, two classes of adverbs are distinguished, attached at different points in the syntactic structure (Webelhuth 1995: 71). It is possible that the same kind of distinction can be made with respect to adjectives occurring in nominal expressions.

¹⁷ This was already claimed by Abney (1987: 252):

“the notational category ‘adjective’ does not correspond to a single category with a stable syntactic characterization, but rather to two distinct categories, one a subcategory of verbs, the other a subcategory of nouns.”

Bernstein (1993: 30) suggests that a (syntactic) distinction between classes of adjectives is crucial to account for word order facts in Romance, and that the head raising account is not sufficient alone. She proposes a distinction between two syntactic classes of adjectives, a distinction based on their positions in the structure. Adjectives of the first class are adjoined to maximal projections, i.e. XPs, (cf. (45)) while those of the second class have the status of A° heads, a functional category between D and N.¹⁸ Adjectives with the latter structural status are those that are uniquely prenominal; these are projected between Num and D. The N raises to WM and Num to check for number and gender features respectively. This is illustrated in (48) (adapted from Bernstein 1993: 61).

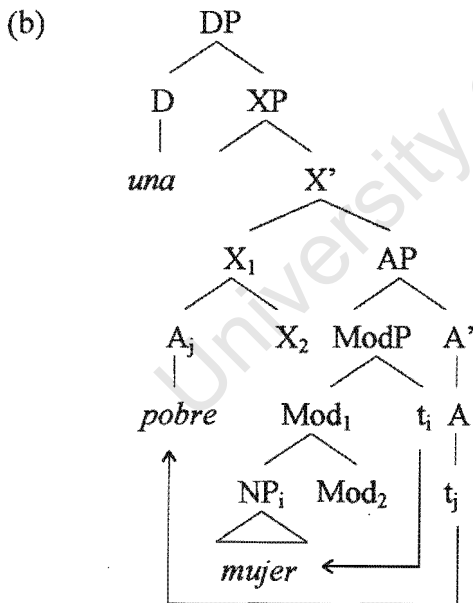
- (48) (a) *un mero accidente*
a mere accident



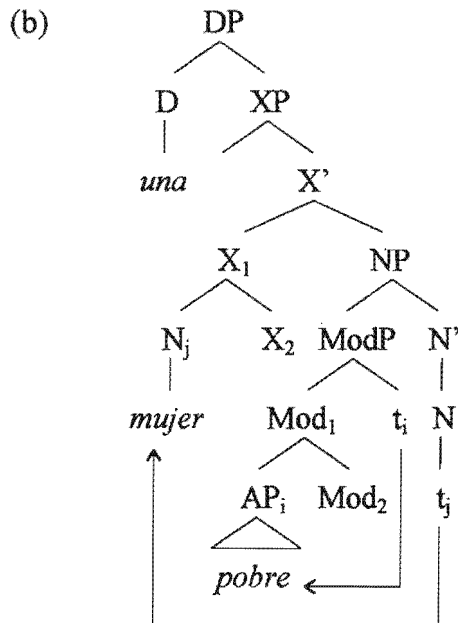
¹⁸ In Bernstein's (1993: 75) words, "these adjectives are functional elements, as compared with regular attributive adjectives, which are lexical".

According to Coene (1999: 155), who argues for a different approach to classifying adjective types, prenominal adjectives are A°-heads modified by an NP, whereas postnominal adjectives are AP modifiers generated in [Spec, NP]. Thus in the first case the lexical head of DP is A, and in the second it is N. The functional domain for the checking of the modifier's agreement features is ModP, irrespective of whether the modifier is AP or NP. Coene (1999: 155) furthermore posits a generalized movement operation whereby both surface orders are the result of raising of the lexical head (A° or N°) to the head of an intermediate functional projection. The representations in (49) and (50) serve to illustrate the structure of nominal expressions containing a prenominal and a postnominal adjective respectively.

- (49) (a) *la pobre mujer* (= (36)(a))
 the poor woman



- (50) (a) *la mujer pobre* (= (36)(b))
 the woman poor



Against the background of the analyses set out above, the base positions proposed for APs¹⁹ in the nominal expression can be summarised as follows:

- (51) (a) adjoined to XPs within DP
 (b) in specifier positions within DP
 (c) independent (lexical or functional) head²⁰

In the next section I present a possible analysis of Spanish nominal expressions modified by adjectives, within the minimalist framework.

¹⁹ Semantic classes of adjectives are not distinguished.

²⁰ Cf. Abney's (1987: 322) analysis of A as a functional head in § 4.5.1, and Coene's (1999:155) proposal concerning A as the lexical head of the nominal expression in § 4.5.3.

4.6 A possible analysis of APs in Spanish nominal expressions

The analysis presented below is based on the assumption that APs have a base position to the left of and higher than the head N, and that the different surface positions in which Spanish attributive adjectives may appear can be ascribed to a parameter of N-raising responsible for cross-linguistic differences (specifically between Romance and Germanic). I furthermore assume that N-raising in Spanish is partial (in Cinque's (1993) sense), with the landing site of N at some functional head between N and D.

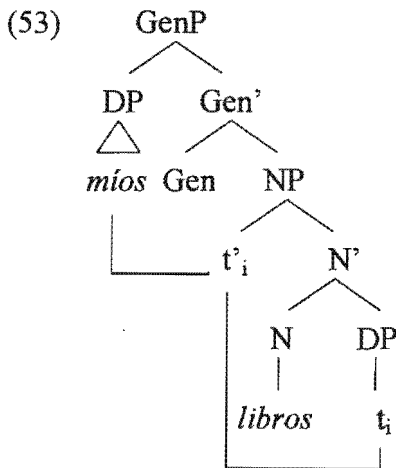
Consider again the proposals summarised in (51) above. Adjunction (51)(a) implies that there is no limit on the number of APs that may occur in a nominal expression. Generating AP in the specifier position of functional categories (51)(b), by contrast, presents problems with respect to the corresponding functional projections hosting these specifiers. The A-as-L-head (of the nominal expression) hypothesis (51)(c) is also problematic, since it cannot account for interpretation facts associated with prenominal versus postnominal AP positions.

The examples in (52) illustrate the various word orders that the Spanish nominal paradigm permits with respect to adjectival and genitival modifiers. In these examples, *libros* is the head N, modified by the adjective *nuevos* and the possessive *míos*. Both the adjective and the possessive show overt (gender and number) agreement with the noun.

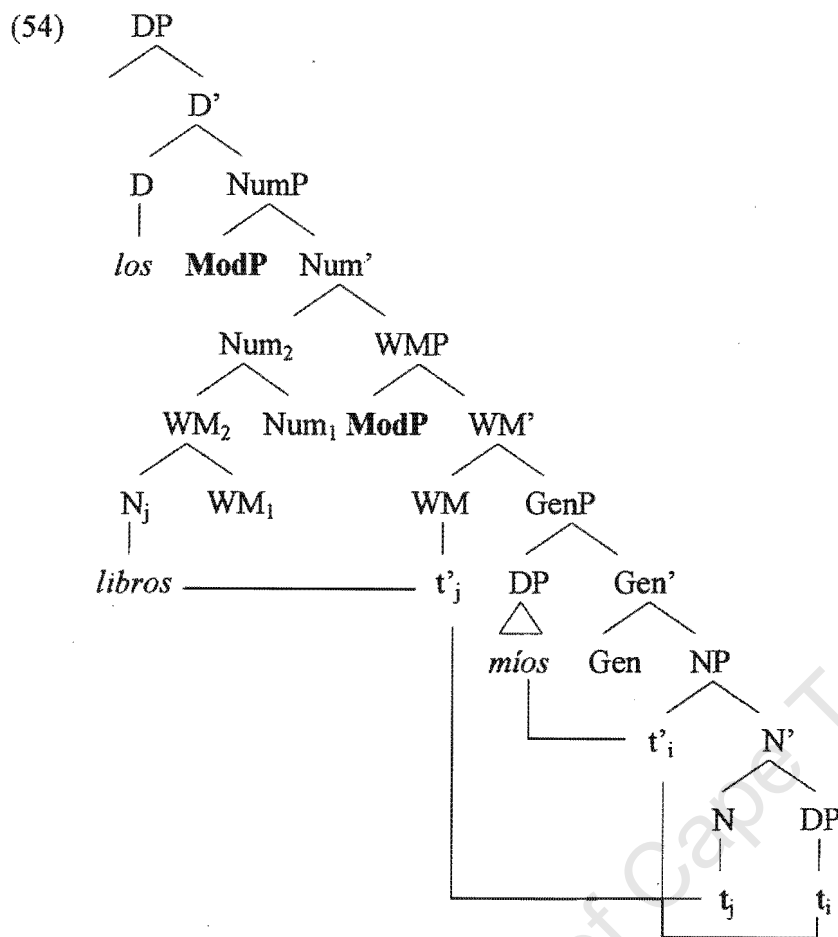
- (52) (a) *los nuevos libros míos*
the new books mine
(b) *los libros nuevos míos*
(c) *los libros míos nuevos*
“my new books/the new books of mine”

Let us now consider a possible account of the facts illustrated in (52). To start, N merges with a DP complement. In this configuration a Poss θ -role is assigned to D. The need for

the DP to check its ϕ -features forces it to move to [Spec, NP] to set up a spec-head agreement relation with the N head. Its Case feature also needs to be checked in order for it to be licensed, and the D raises a second time, this time to [Spec, GenP] where it is checked for genitive Case in spec-head agreement with the functional head Gen. (53) shows the derivation as outlined thus far:



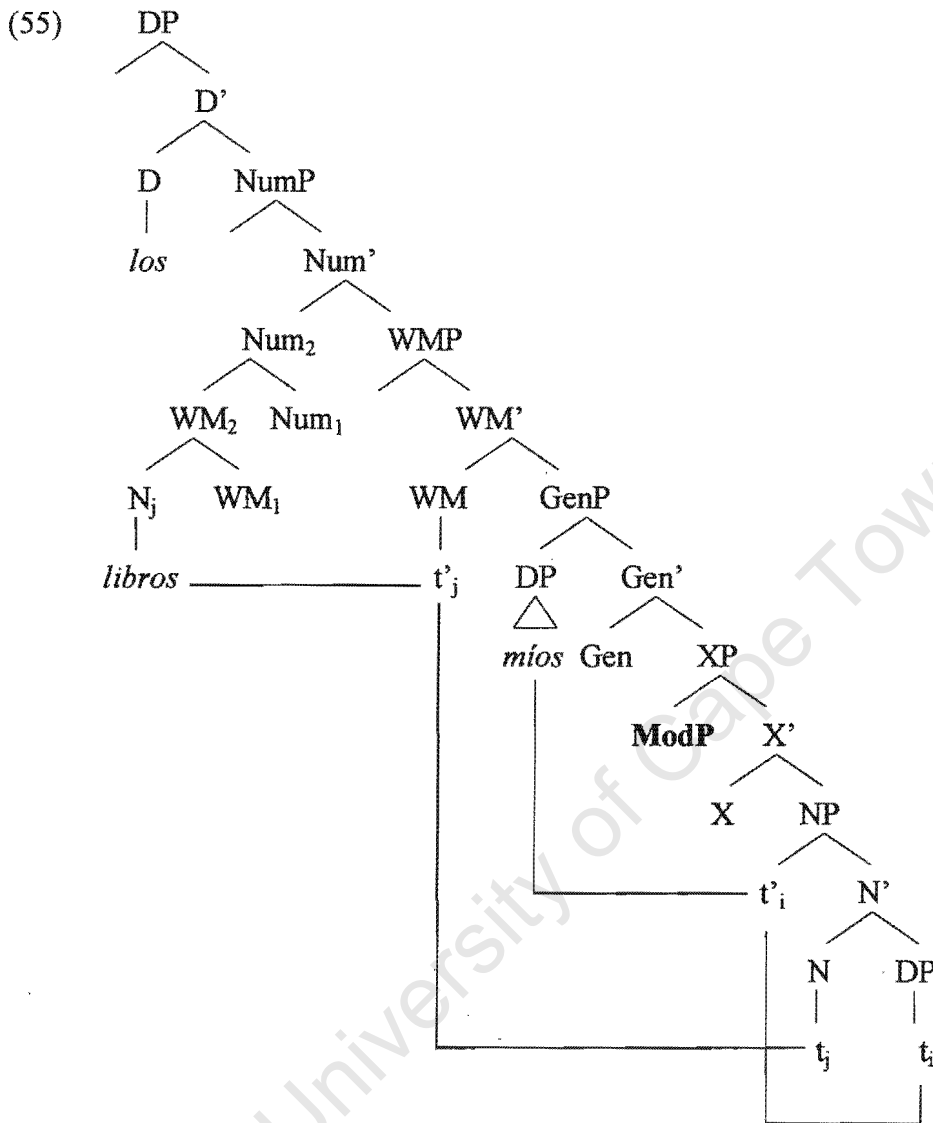
Adopting the generation-in-spec hypothesis (51)(b), I propose that the AP is generated within ModP (cf. (40) above), which is in turn generated either in [Spec, NumP], for (52)(a), or in [Spec, WMP] for (52)(b). The difference between these two cases concerns the scope of the adjective. These two host positions are shown in (54). The N head raises first to WM, and then to Num to check its gender and number features respectively:



There is one major problem with the above analysis. I have taken [Spec, NumP] to be the base-generated position of determiner elements which check for agreement with the raised noun before cliticizing to D (cf. § 3.5.4). In (54) [Spec, NumP] is occupied by ModP, presenting a contradiction for the proposed structure. Yet there appears to be no other way to account for the scopal difference between (52)(a) and (b). I note this inconsistency here, leaving the problem open for further investigation.

The example in (52)(c) cannot be accounted for in terms of the analysis proposed for (52)(a) and (b), as this would incorrectly predict that (52)(c) is ungrammatical. In this case, following Coene (1999: 137) (cf. § 4.5.1 above), I propose a functional projection XP to host the ModP in its spec position, this time occurring as the first of the projected functional layers up from NP. The AP-hosting ModP would be generated in the spec of

this functional projection. The rest of the derivation stays the same.



In sum, then, the analysis presented above integrates various proposals concerning genitive Case assignment and adjectival modification in the nominal expression, within a minimalist framework.

4.7 Conclusion

This chapter focused on (i) the mechanisms of (genitive) Case licensing of nominal arguments and (ii) the system of adjectival modification in Spanish DPs. In the first part of the chapter, I considered how the hierarchical syntactic mapping of argument structure and the directionality of θ -role assignment proposed by Longobardi (1991), applies to the Spanish data. I reviewed early (GB oriented) proposals concerning the parallels between Case assignment at clausal and nominal levels, going on to outline the distinction between *de* as a preposition projecting a PP and *de* as a genitive Case marker heading a GenP. To this end, word order and extraction facts were connected to the analysis of subject and object nominal arguments as PPs and that of the possessive genitive argument as a GenP. Finally, I illustrated the derivation of a Spanish DP with all three arguments overtly realised, showing the mechanisms of movement and attraction for the purposes of checking the ϕ -features and Case features of the Agent, Theme and Possessor arguments respectively.

In the second part of the chapter, I turned to the question of DP-internal APs. I first described the Spanish data in terms of distributional and interpretational facts, and subsequently reviewed various proposals concerning the syntactic mapping of APs, assuming Cinque's (1993: 96) hierarchical distribution of different semantic classes of adjectives. Following Bernstein (1993) I assumed that it is necessary to distinguish between two main syntactic classes of APs, namely those that are adjoined elements and those that are independent functional heads. In my account of adjectival modification presented in § 4.6, I adopted Coene's (1999) functional projection ModP as the domain for adjective agreement licensing and integrated this with Bernstein's generation-in-spec analysis of (pre- or postnominal) attributive APs, noting a problem for the account for the scopal effects of adjective-noun word order differences.

The issue of APs as independent functional heads falls outside the scope of this study and has been left open as a topic for further research.

Chapter 5

Empty Categories in Spanish Nominal Expressions

5.1 Introduction

Spanish typically displays evidence of empty categories (ECs) in nominal expressions. Some examples are given in (1)(a) and (b), illustrating the absence of overt N and D constituents respectively:

- (1) (a) *la de mi madre*
the of my mother
“my mother’s one”
- (b) *como helado todos los días*
I-eat ice-cream all the days
“I eat ice cream every day”

An adequate description of the internal structure of Spanish nominal expressions must include an account of empty categories in such expressions. A specific problem to be addressed is the syntactic nature of the covert constituents and how these interact in the licensing of grammatical features associated with the overt agreement morphology. In this chapter I give a critical review of the relevant proposals concerning the syntactic structure and licensing of null nominals and bare nominals. The main objective is to illustrate the application of the articulated nominal structure outlined in chapter 3 to this class of data. The chapter is organised as follows. § 5.2 deals with null nominals, and focuses specifically on the analyses presented by Bernstein (1993) and Coene (1999). § 5.3 is devoted to the analysis of bare nominals, based on proposals made by Lois (1996) and Longobardi (1994).

5.2 Null nominals

The examples in (2) serve to illustrate the various types of Spanish nominal expressions with no overt noun head:

- (2) (a) *un listo*
a clever
“a clever one”
- (b) *el listo*
the clever
“the clever one”
- (c) *el de ayer*
the of yesterday
“yesterday’s one”
- (d) *la de mi madre*
the of my mother
“my mother’s one”
- (e) *el que vino ayer*
the that came yesterday
“the one who came yesterday”

The fact that the above examples can each be pluralized, as illustrated in (3), indicates that they are indeed nominal expressions.

- (3) (a) *unos listos*
some clever
“some clever ones”
- (b) *los listos*
the clever
“the clever ones”

- (c) *los de ayer*
the of yesterday
“yesterday’s ones”
- (d) *las de mi madre*
the of mi mother
“my mother’s ones”
- (e) *los que vinieron ayer*
the that came yesterday
“the ones who came yesterday”

Bernstein (1993: 110) points out that previous analyses of the type of construction illustrated in (2) and (3) have relied on descriptive notions concerning the rich inflectional agreement paradigms typically evidenced in Romance. According to her, such analyses fail to give an adequate account of the distribution of the covert element *pro* in pro-drop languages (of which Spanish is one). Moreover, there are cases which indicate that the connection between rich morphology and the licensing of elliptical constructions is inaccurate, since Italian, a language which clearly demonstrates such morphological agreement patterns, does not allow definite null nominal constructions.

In the following sections I consider several proposals concerning the licensing mechanisms that are involved in the derivation of the structures in (2).

5.2.1 Indefinite null nominals

The form of the Spanish indefinite article is *un* when it is followed by a noun complement.¹

- (4) *un muchacho*
a boy

¹ This is the form marked [masculine, singular].

Other determiner elements also lack a final vowel when preceding a noun:

- (5) (a) *ningún muchacho*
no boy
(b) *algún sitio*
some place

When it is not followed by an overt noun complement, the indefinite article carries the affix *-o*, a form not permitted when there is a noun complement. This alternation is illustrated in the contrast between (6)(a) and (6)(b):

- (6) (a) *uno alto*
a tall (one)
(b) **uno muchacho alto / un muchacho alto*
a boy tall

From this evidence it seems clear that the underlying form of the (masculine singular) indefinite article in Spanish is *un* and that the occurrence of the terminal vowel *-o* is in some way connected with the licensing of the null nominal construction in (6)(a). Before examining the details of such a licensing mechanism, I briefly consider the nature of this inflectional affix.

Recall Harris' (1991) paradigm of Spanish noun types, outlined in chapter 3. The canonical terminal vowels on Spanish nouns, *-o* and *-a*², are held to be overt morphological markers of declension class or form, a nominal feature which Harris proposes is entirely independent of biological sex and grammatical gender. These so-called 'word markers' are productive in the inner core where declension class and lexical

² For the moment I refer only to the word marker (WM) *-o*.

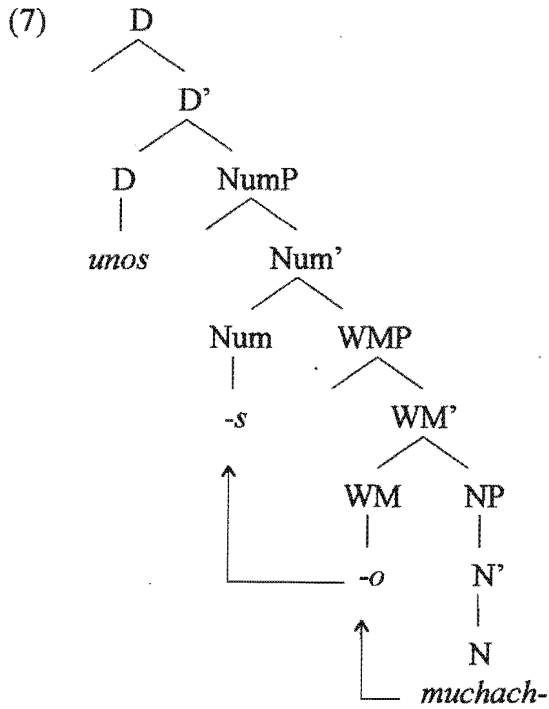
gender coincide.³ The outer core consists of bare stems with gender but no evidence of declension class.

Bernstein (1991, 1993) makes use of Harris' proposal in her analysis of Romance nominals.⁴ She argues that word markers have more than just a morphological role, being active in the syntax as functional heads that undergo movement to 'incorporate' into lexical heads. WMP is an intermediate functional projection between N and D. The word marker *-o* is base-generated under the head of this maximal projection. If the N head is filled, this element will raise and adjoin to WM, and then again to Num, in this way checking for gender and number features respectively. To illustrate, consider the structure in (7) below. In (7) the N-stem *muchach-* is inserted under N, subsequently raising to WM to form *muchacho*. A second movement completes the derivation, yielding *muchachos* after adjoining to the Num head. The respective successive cyclic movements each adheres to Travis' (1984) Head Movement Constraint in its locality.⁵

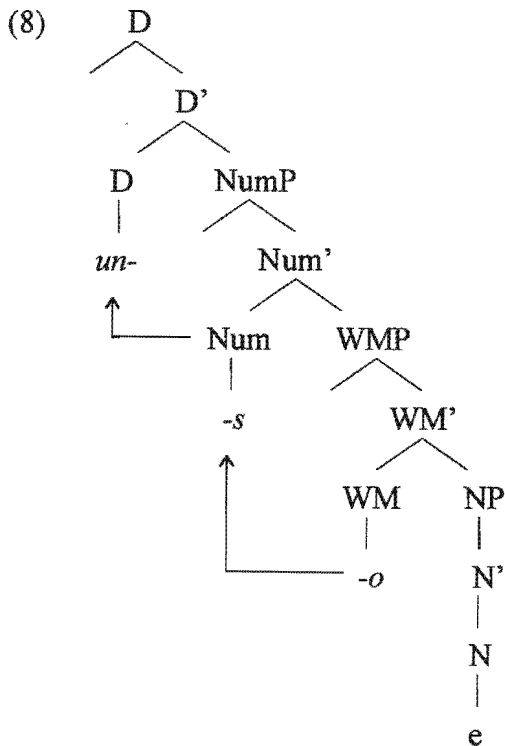
³ The question of biological sex is not relevant to the discussion.

⁴ Bernstein (1993: 152) relates the distribution of word markers to an abstract [+/-N] feature, proposing that categories that are [+N] carry word markers while categories that are [-N] do not. Plann (1985) labels this general [+N] category *substantive*; according to her, the adverbs *dentro* and *fuera* fall within this group.

⁵ See Culicover (1997: 339).



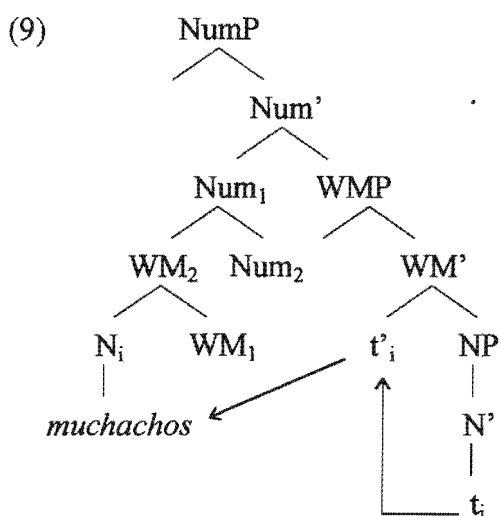
The same analysis can be applied to the pronominal counterpart of (7), where N is empty. The word marker *-o* is still generated under WM. It raises to Num to check off number features, yielding the complex [Num-WM]. The derivation cannot stop there though, since both of these elements are bound morphemes, which require a lexical stem in order to be phonologically interpretable (Bernstein 1993: 125). This principle therefore forces a further movement, whereby [Num-WM] attaches to D. As in (7) above, each of these movements is in keeping with the locality constraints of head movement, and the derivation achieves convergence. The derivation is illustrated in (8):



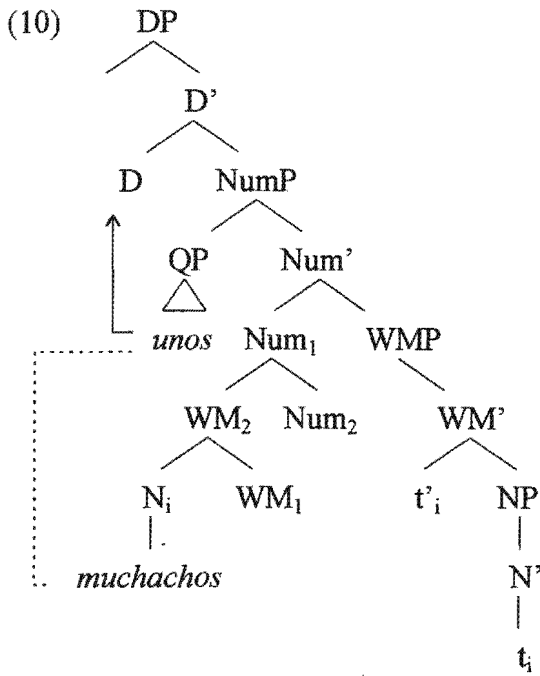
Thus, for the indefinite case at least, the elements occurring under D in null nominal constructions are morphological complexes which have resulted from movement(s) during the derivation. Bernstein (1993: 123) refers to these elements as “determiner pronominals”, while Coene’s (1999: 114) term for the same phenomenon is “complex determiner”. The implications of this difference in terminology will become relevant at a later stage in the discussion.

In the discussion above I adopted Bernstein’s (1993) analysis with respect to the functional categories WM and Num, which enter into the checking of the nominal features of gender and number respectively. However, it is necessary to reinterpret Bernstein’s account within a MP framework. To this end, consider first the derivation of the unmarked case, the DP *unos muchachos*. In this case, the N *muchacho* is drawn from the lexicon fully inflected. It is projected into an NP, which is merged with a WM functional head. The N moves up to this position and head-adjoins with WM, to check off its gender feature. WM projects up to WMP which merges with the functional head Num, the host of the number features which must be checked off against the N. A second

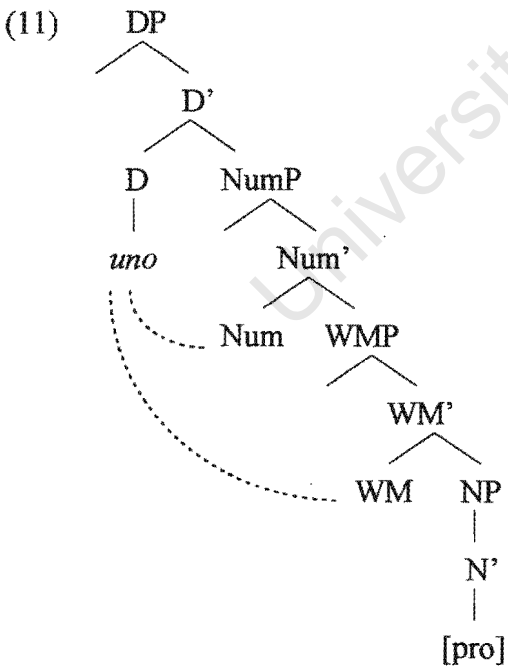
instance of raising occurs, whereby the N head-adjoints to Num. The following representation serves to illustrate these different steps in the derivation:



The D *unos* is marked for agreement with the N *muchachos*. So far the number and gender features of *muchachos* have been licensed, but the agreement relation between this noun and its determiner must still be checked. Recall from § 3.5.4 Valois' (1991) proposal that the definite article is base-generated in [Spec, NumP]. Bernstein (1993: 128) suggests that this is the case for the *indefinite* article, i.e. that it is base-generated in [Spec, NumP] as QP. When N lands in Num, a spec-head relation is set up and the gender and number inflections on *uno* are licensed. It then raises and cliticises to D. This is illustrated in (10):



Turning now to null nominals, where the N head is empty, I propose that rather than overt movement, there is attraction of the features of number and gender up from their respective functional heads to the D *uno*. This is illustrated in (11):



Note that in (11) the N head in the case of the null nominal is not empty, but filled with the covert element *pro*. Evidence of a covert element in N comes from the fact that the determiner *unos* is marked [masculine, plural]. In Spanish, determiner pronominals agree with the nouns they denote. This means that there must be an element under N with which the D can agree; it is not plausible that N be empty, as Bernstein's (1993: 129) analysis suggests. Admittedly, there are problems with positing *pro* as the covert element in N, since (at least sentential) *pro* is typically a DP, rather than an NP. For example, it is generally assumed that the covert subject - a DP, not an NP - in the following example is *pro*:⁶

- (12) *pro están aquí*
 *pro are*_{3,PL} here
 ‘‘They are here’’

I also leave the realisation of determiner-noun agreement in the null nominal construction open for further investigation at this point.

It should also be noted here that Giorgi & Longobardi (1991: 6) claim that covert elements in nominal expressions are similar in nature to those which occur at sentential level; hence the occurrence of *pro* in Spanish null nominals would not be entirely unexpected.

5.2.1.1 Deadjectival nouns

Bernstein (1993: 145) uses the term ‘‘deadjectival noun’’ to refer to adjectives that occur as the complement of a determiner. The distribution of these elements provides further motivation for the WM account of determiner pronominals. An example of a deadjectival noun is given in (13); here an indefinite determiner co-occurs with an adjective and with no interceding noun:

⁶ See e.g Harbert (1995: 221-223).

- (13) *un joven*
a young (“a youth”)

In this construction an element like *joven* behaves more like a noun than an adjective. For example, it may not occur with an adjectival intensifier, it may be pluralized and it may occur in an A-position in a sentence (Bernstein 1993: 146). These properties are illustrated by the following three examples respectively:

- (14) (a) **un muy joven*
a very young
(b) *dos jovenes*
two youths
(c) *Un joven está en la puerta*
A youth is at the door

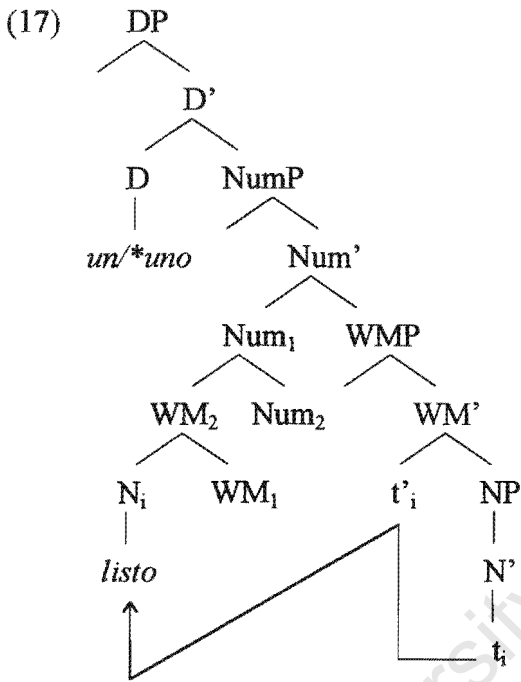
Now note the difference between the readings of the following two examples:

- (15) (a) *un joven* (= (13))
a youth
(b) *uno joven*
a young (one)

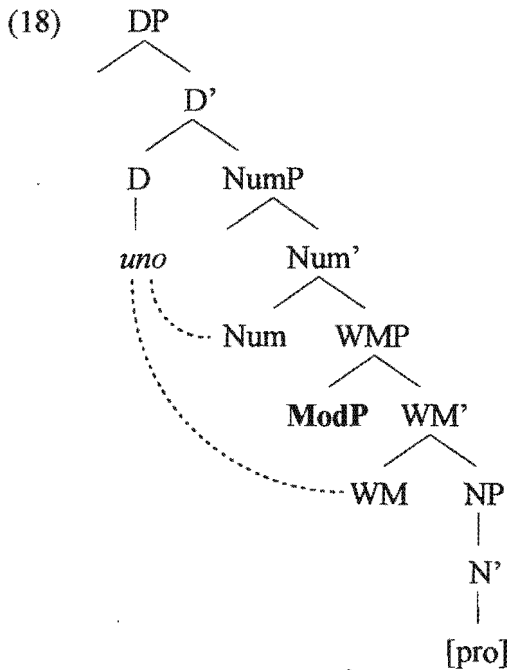
(15)(a) contains a deadjectival noun, while in (15)(b) the adjectival reading is forced: with the determiner pronominal the adjective may be modified by an intensifier, as (16) illustrates.

- (16) *uno muy joven*
a very young (one)

The question now is how the respective interpretations of (15)(a) and (15)(b) can be accounted for. Let us consider an analysis along the following lines. The word marker *-o* is base generated under WM and raises (cyclically) to D to attach to the stem *un-*. WM cannot be double-filled in the base, which is in effect what would be required to license the pronominal interpretation of the adjective. Thus deadjectival nouns may not occur with determiner pronominals. This is illustrated in the following diagram:



I propose that in the case of the determiner pronominal, the AP is generated within ModP in [Spec, WMP] as described in chapter 4. The number and gender features are attracted by the determiner, and this checking then licenses the WM *-o*. The various operations are illustrated in (18).



In the next section I examine an apparently parallel construction, namely null nominals headed by the definite article.

5.2.2 *Definite null nominals*

Bernstein (1993: 170) holds that definite null nominal constructions of the type given in (19)(a) are fundamentally different to their indefinite counterparts of the type given in (19)(b).

- (19) (a) *uno listo*
a clever (one)

- (b) *el listo*
the clever (one)

Definite and indefinite articles do not only differ with respect to a feature setting concerning definiteness, but also in their distributional patterns. Bernstein (1993: 127) points out that the definite article may co-occur with numerals, whereas the indefinite article may not. This is illustrated in (20):

- (20) (a) *los dos muchachos*
the two boys
(b) **unos dos muchachos*
some two boys

Bernstein (1993: 170) cites evidence from Catalan, Italian and Spanish in support of different analyses of the indefinite and definite constructions.⁷ She presents four considerations in this regard. Firstly, the Catalan indefinite/definite constructions are not identical; the former employs a PP complement, whereas the latter may not. Secondly, the definite null nominal does not contain a word marker. Thirdly, the definite construction, but not the indefinite, is ruled out in Italian. Fourthly, while the indefinite pronominal determiner is pronominal regardless of whether it is modified by an adjective, the definite article requires an adjective. Examples illustrating these differences are given in (21) (Bernstein 1993: 170):

- (21) (a) *un de vermell*
a red (one)
(b) **el de vermell*
the red (one)

⁷ These different analyses incorporate the different terms Bernstein uses for the elements; in *uno listo*, *uno* is a determiner pronominal, but in *el listo*, *el* is a determiner. Note that Coene uses the term “complex determiner” instead of “determiner pronominal”.

- (c) *el*_[NO WORD MARKER] *alto*
the tall (one)
- (d) **il grande*
the big (one)
- (e) *uno (listo)*
(a clever) one
- (g) *el *(listo)*
the (clever) one

The fact that an AP complement is obligatory in the definite null nominal construction is the key to Bernstein's distinction between this construction and its indefinite counterpart. The definite article may not occur alone, therefore it is not a determiner pronominal. Bernstein assumes Szabolsci's (1994) analysis of the definite article as a subordinator. In the case of definite null nominals, then, the definite article turns a predicative AP into an argument.

In contrast, Coene (1999: 118) claims that the syntactic analysis is the same for both definite and indefinite null nominal constructions, i.e. that both are derived in essentially the same way. Coene argues that null nominals headed by the definite article in all its forms are derived by a process of morphological fusion whereby the WM head raises to the Num head yielding a complex [Num-WM]. This feature complex in turn raises to D for checking off of the strong/uninterpretable [N]-feature on the functional nominal heads. Thus, according to Coene (1999: 114) *el*, like *uno*, is a morphological complex made up of "a determiner-like element and a nominal functional head". She asserts that the same head-raising analysis applies, with the complex determiner *el* base-generated as /l/ under D and a word marker generated under WM. In this way she derives all four possible complex determiners: *el*, *la*, *los*, *las*. Schematically, this can be illustrated as follows (Coene 1999: 118):

(22)	D	WM	Num
	l	∅	∅
		a	s
		o	

The four possible morphological complexes, together with their respective number and gender features, are given in (23):

- | | | | |
|------|-----|---------------------------------|----------------------|
| (23) | (a) | $l + \emptyset + \emptyset = l$ | [masculine singular] |
| | (b) | $l + a + \emptyset = la$ | [feminine singular] |
| | (c) | $l + \emptyset + s = los$ | [masculine plural] |
| | (d) | $l + a + s = las$ | [feminine plural] |

Coene (1999: 119) suggests that the masculine singular form *el* is derived from the D-stem /l/ with no WM or Num affix: an epenthetic vowel is inserted by an independent phonotactic rule “that inserts *e* to the left of an otherwise unsyllabifiable liquid”, thereby deriving the form *el*. This explanation overcomes the problem that the definite article does not accommodate Bernstein’s (1991, 1993) WM analysis. Thus Coene’s analysis achieves uniformity in the analysis of both definite and indefinite null nominal constructions: all null nominal constructions are headed by a complex determiner which is the combination of a WM and a D stem. Nevertheless, this analysis fails to account for empirical differences between the distribution of the two types, such as that expressed in (21) above.

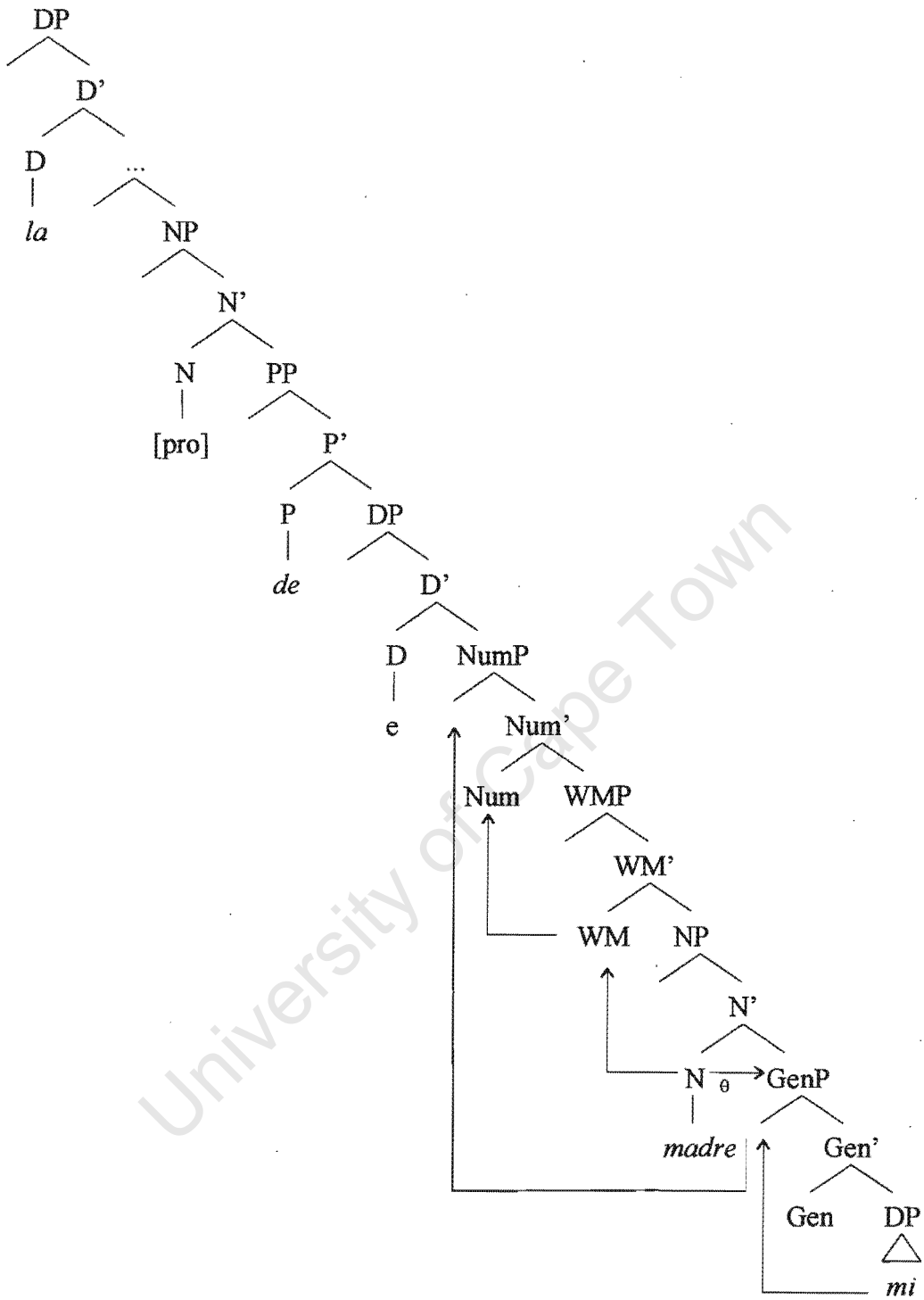
5.2.2.1 Definite null nominals with complements

Examples of null nominals with an array of complements were given in (1) and (2), and are repeated below.

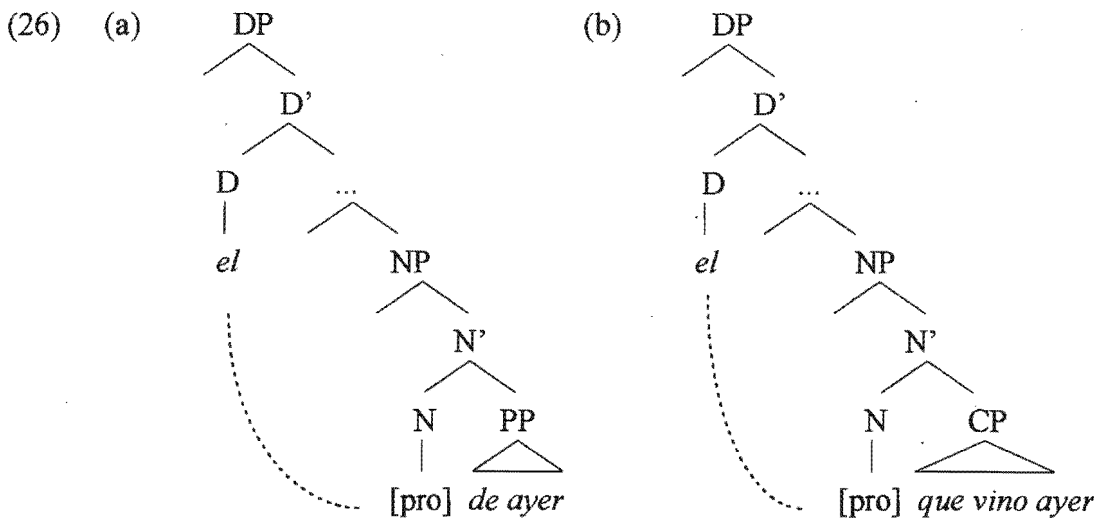
- (24) (a) *la de mi madre*
the of my mother
“my mother’s one”
- (b) *el de ayer*
the of yesterday
“yesterday’s one”
- (c) *el que vino ayer*
the that came yesterday
“the one who came yesterday”

Adopting the assumptions underlying the discussion of indefinite and definite null nominals in § 5.2.1 and § 5.2.2, let us first examine the derivation of (24)(a). Pro is once again posited as the underlying constituent occupying N, based on the fact that *la* is overtly marked [feminine, singular]. The derivation follows the same path as that proposed for (11) above. That is, the word marker is base-generated in WM and undergoes a series of cyclic movements as it raises to D, checking for all the relevant features at their respective functional heads. The complement in (24)(a) is the PP *de mi madre*. The N assigns a POSS θ -role to the GenP containing the DP *mi*, which raises to [Spec, GenP] to check its genitive Case feature in spec-head agreement with the Gen head. The N *madre* raises and head-adjoints first to WM and subsequently to Num to check off its gender and number features. Lastly, *mi* moves a second time to [Spec, NumP], thereby setting up a spec-head configuration with *madre* in Num to facilitate D-N agreement. These operations are illustrated in (25).

(25)



Now consider the remaining two examples in (24), represented syntactically in (26):



Once again the agreement relation holds between the empty N and the D. In these cases the complement domains are occupied by PP and CP respectively.

5.3 Bare nominals

The remaining part of this chapter focuses on proposals dealing with the syntax of so-called bare nominals (BNs) in Spanish, that is nominal expressions which have no overt determiner element, as the example in (27) illustrates:

- (27) *es profesor*
 he-is teacher
 "He is a teacher"

In terms of the DP Hypothesis as outlined in chapter 3 above, the head D of the maximal phrase DP in examples like (27) is not realized in the surface structure. This raises the question of whether there is in fact an empty D category underlyingly. If there is, it needs to be explained what the nature of the licensing mechanism of this empty category is, and how it relates to the semantic features of the head N. An attempt will be made below to

answer these and related questions which arise from an analysis of BNs within the MP framework.

The discussion is organized as follows. In § 5.3.1 a typological summary of the data is presented and the principal facts concerning the distribution of BNs are discussed. § 5.3.2 examines the semantic constraints on the interpretation of BNs. § 5.3.3 presents an overview of previous analyses of the syntax of BNs, specifically Longobardi (1994) and Lois (1996).

5.3.1 *The distribution of bare nominals*

5.3.1.1 *Early proposals*

Suñer (1982) presents one of the first accounts of the distribution of bare nominals within a generative framework. Her Naked Noun Constraint (given in Contreras 1996: 143) concerns the fact that bare nominals may not occur in preverbal subject position. It is this constraint which explains the contrast between (28)(a) and (28)(b):

- (28) (a) *Vienen amigos*
(b) **Amigos vienen*
“Friends are-coming”

When the bare nominal is under focal stress, however, it is allowed in preverbal subject position:

- (29) *aMigos vienen*
“FRIENDS are coming”

Contreras (1996: 143) points out that the Naked Noun Constraint fails to achieve anything above the level of descriptive adequacy, given that it simply describes the problem and is not derived from any independently established principle or parameter.

5.3.1.2 Lois' (1996) typology

In a comprehensive typological description, Lois (1996: 203) distinguishes between four classes of BNs based on the grammatical features of the nominal head.⁸ Her findings are summarised in (30):

(30)	TYPE	FEATURES	EXAMPLE
(A)		N _[SG.COUNT] ⁹	<i>Juan es profesor</i> "John is (a) teacher"
(B)		N _[SG.MASS]	<i>bebo siempre vino</i> "I always drink wine"
(C)		N _[PL.]	<i>come manzanas</i> "He eats apples"
(D)		N _[PROPER] ¹⁰	<i>Juan llamó ayer</i> "John called yesterday"

⁸ This classification does not take into account argument or predicate status.

⁹ Lois (1996: 207) points out a further subgroup of type (A) bare nominals, namely those which, although countable, have a "mass" interpretation.

E.g. *Ayer comí conejo*
Yesterday I-ate rabbit

¹⁰ Lois includes pronouns, but as I have adopted the analysis of pronouns as D(eterminer)s, they are excluded from here.

Longobardi (1994: 612) shows (for Italian) that type (A) bare nominals typically occur in non-argument positions, functioning as predicates, vocatives or exclamations. The following examples illustrate this observation for Spanish:

- (31) (a) *Juan es profesor* [PREDICATIVE]
 John is (a) teacher
- (b) *Hijo de mi alma, háblame* [VOCATIVE]
 child of my soul, speak-to-me
- (c) *¡Diablo!* [EXCLAMATORY]
 Devil

Type (A) BNs are excluded from argument positions, as illustrated in (32):

- (32) (a) **(un/el) profesor de español llega mañana* [SUBJECT]
 a/the teacher of Spanish arrives tomorrow
- (b) *Llega mañana *(un/el) profesor de español* [INVERTED SUBJECT]
 arrives tomorrow a/the teacher of Spanish
- (c) *Compré *(un/el) disco de Iglesias* [DIRECT OBJECT]
 I-bought a/the disc of Iglesias
- (d) *Hablé con *(un/el) primo de Juan* [PREPOSITIONAL OBJECT]
 I-spoke with a/the cousin of John

Longobardi (1994: 612) notes that Italian does in fact permit PPs with singular BN complements, but clearly this type of construction is far more exceptional in Spanish. In describing such cases, Bosque (1996: 50) imposes semantic categories on the data, classing the relevant complements as instrumental, causal, locative or temporal. Examples of these respective types are given in (33):

- (33) (a) *con pluma*
with pen
- (b) *morir de hambre*
to-die of hunger
- (c) *en casa*
in house
- (d) *en invierno*
in winter

Those BNs that do (typically) occur in argument positions are Lois' types (B), (C) and (D). Examples of these are given in (34), where they occur as internal arguments:

- (34) (a) *Quiere agua*
he-wants water
- (b) *Quiere tomates*
he-wants tomatoes
- (c) *Quiere a María*
he-wants María

However, only type (D) may occur as preverbal subject¹¹:

- (35) (a) **Agua me gusta*
water to-me pleases
"I like water"

¹¹ However, Contreras (1986: 29) gives the following Spanish examples, where singular mass nouns and plurals may occur as topicalised or focused elements in preverbal subject position:

- (a) *Café no creo que tengan*
"Coffee I don't think they have." (Topic)
- (b) *ESCLAVOS construyeron las pirámides*
"SLAVES built the pyramids." (Focused preverbal subject)
- (c) **Esclavos construyen pirámides*
"Slaves build pyramids." (Nonfocused preverbal subject)

- (b) **Tomates me gustan*
 tomatoes to-me please
 “I like tomatoes”
- (c) *María me gusta*
 María to-me pleases
 “I like María”

The distribution of BN types (A), (B), (C) and (D) can be summarized as follows:

(36)	Type	Occurrence in Argument Positions	Occurrence as Predicates
	(A)	not permitted ¹²	yes ¹³
	(B)	internal	yes?
	(C)	internal	no
	(D)	internal, external	yes

5.3.2 Interpretation of bare nominals

With the exception of proper nouns which are inherently definite, all Spanish BNs can only receive an indefinite existential interpretation¹⁴ (cf. *agua* and *tomates*, which contrast with *María* in the examples in (35) above). A generic interpretation is not permitted in the case of Spanish BNs. Note the contrast between the following Spanish and English examples:

¹² Except for the cases already discussed.

¹³ Cf. (31)(a).

¹⁴ However, there are bare nominals whose head noun can have specific and definite reference, even without an overt determiner. Lois (1996: 205) points out that such nominals are usually familiar to the participants of the discourse.

Voy a casa

I-go to house

“I am going home”

In this case, *house* refers to the house of the speaker, that is, it is definite and has specific reference.

- (37) (a) Sisters are doing it for themselves
 (b) **Hermanas están haciendolo para ellas mismas*

In (37)(a), *sisters* has a generic interpretation, referring to all women. Clearly then, where the nominal has a generic interpretation, Spanish requires an overt determiner:

- (38) *Las hermanas están haciendolo para ellas mismas*

If bare plurals are to be interpreted as existentially quantified, then it seems that the overt existential quantifier *algunos* (“some”) is the realisation of a D constituent which is phonetically empty, as in, for example, (39)(a).

- (39) (a) *Quiere tomates*
 he-wants tomatoes
 (b) *Quiere algunos tomates*
 He-wants some tomatoes

5.3.3 *Previous treatments within generative grammar*

5.3.3.1 *Szabolsci's argument conversion hypothesis*

Recall Szabolsci's (1994) analysis of the article as a subordinator, converting a following noun into an argument capable of receiving a θ -role (cf. § 3.3.6). Longobardi (1994: 617) makes the connection between the distribution of BN arguments and the existence of an empty D head in the underlying syntactic structure. This D head is assigned a fundamental role in the licensing of BNs, since it is assumed to be the site of the referential and quantificational properties associated with a nominal argument. That is, the D node is necessary for the argument status of a following nominal, hence Longobardi's (1994: 628) generalization in (40):

(40) DP can be an argument, NP cannot.

The role of the D element is to define the meaning of the following nominal with respect to number. Where there is no lexical existential determiner (like *algunos* (“some”), cf. (39) above), empty D is associated with an existential interpretation.¹⁵ This is the content of the following formulation (Longobardi 1994: 641):

(41) [_D e] = default existential interpretation

A potential problem arises at this point, posed by the case of proper nouns which clearly have specific reference. I outline Longobardi’s (1994) N-raising analysis, accounting for this, in § 5.3.3.3.

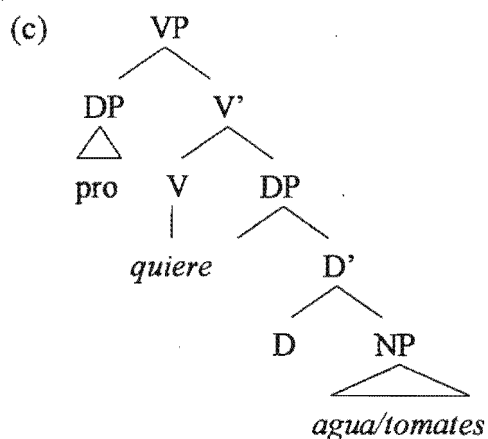
Longobardi (1994: 617) and Contreras (1996: 153) describe the distribution of BNs in Romance in terms of a lexical government requirement of the empty D category, i.e. the empty head must be governed for formal licensing. This principle is given in (42) (Longobardi 1994: 641):

(42) An empty head must be lexically governed.

The positions in which BNs may occur are all positions governed by a lexical head. Types (B) and (C) BNs may occur only as internal arguments; in this position, they meet the lexical government requirement, being governed by the V head, but in external argument position the condition is flouted. In examples (34)(a) and (b) repeated here in (43), the BNs are governed by V in both cases:

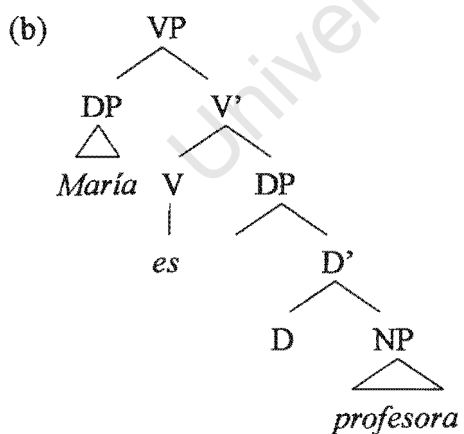
¹⁵ Contreras’ (1996: 143) analysis of argument BNs exploits this feature restriction on interpretation by positing that these elements must be analysed as QPs with an empty head.

- (43) (a) *Quiere agua*
 he-wants water
- (b) *Quiere tomates*
 he-wants tomatoes



Even nonargument type (A) nominals, which typically occur as postcopular predicates, are governed by the V head. This structural relation is illustrated in (44)(b).

- (44) (a) *María es profesora*
 Maria is (a) teacher

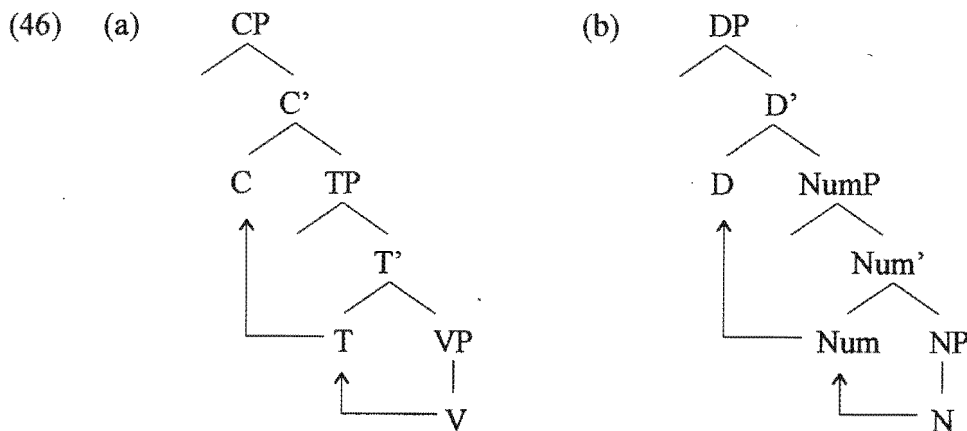


5.3.3.2 Types (A), (B), and (C)

In her analysis of BN structures, Lois (1996) relies heavily on the arguments for the clausal nature of nominals.¹⁶ She adopts Ritter's (1988, 1991) functional category Num, extending its relevance from the grammatical number feature to semantic number. Recall (cf. § 3.6.1) that this is the functional head which carries the number feature associated with the morphological properties of the head noun, for the purposes of checking those features for licensing. Lois' (1996: 233) interpretation is that Num is the nominal equivalent of the category T within IP.

Drawing on Stowell's (1982) claim that T appears in C to determine the scope of the clause, Lois (1996: 216) proposes for nominals that Num raises to D at some point in the derivation, so that the scope of the nominal is defined in this way. Thus I/T-to-C raising is analogous to Num-to-D raising. In both cases there is raising of a functional element with the V or N adjoined, itself having undergone raising from V or N for the purposes of feature checking. Note that the motivation for the first movement in both cases lies with the morphological characteristics of V or N; the second move doesn't involve licensing of verbal or nominal features, but rather the relations between C and I/T, and D and Num respectively. The proposed derivation is represented schematically as follows:

¹⁶ The set of parallels which exist between nominal and sentential syntactic structure is further extended with the connection between BN constructions and infinitival clauses made by Lois (1996: 233). BNs with empty D constitute the syntactic equivalent of infinitival clauses with empty C.



The first of the moves in each case takes place in the overt syntax to check strong/uninterpretable features of the V/N; the second takes place after Spell-Out.

It has already been mentioned that the derivation of proper nouns is different to other determinerless nominal expressions, by virtue of their [+definite] feature. Lois (1996) adopts Longobardi's (1994) *overt* N-to-D raising analysis in this regard. The following section describes this analysis.

5.3.3.3 Type (D): proper nouns

Both in Germanic and Romance names can appear in all argument positions and can equally function as predicates. Longobardi (1994) proposes that, unlike BNs of the types (A), (B) and (C), names/proper nouns cannot be headed by an empty D category because they cannot have a quantified interpretation like common nouns. Furthermore, they can appear in positions that are not lexically governed (in the GB sense), such as that of preverbal subject. If the D position is necessary for argument status, then a proper noun must occupy this position. Thus an empty D position cannot be associated with a proper noun. The raising of the proper noun from N to D cancels out the requirement for lexical government and prevents the existential interpretation of the head noun. Longobardi (1994: 621ff.) points to variation within Romance as to whether proper nouns may appear with definite articles:

5.3.5 *Summary*

Both Lois' (1996) and Longobardi's (1994) accounts propose raising of the head noun up through the functional projections of WMP and NumP to the empty D position, in order to license the grammatical features of the N and to force the relevant scopal interpretations associated with semantic number. The difference between proper nouns and the other classes of BN is that the final move from Num to D takes place overtly in the former case and covertly in the latter.

5.4 **Conclusion**

This chapter has focused on two classes of Spanish DPs containing ECs. The first half of the chapter was devoted to the examination of null nominals. Bernstein's (1993) and Coene's (1999) proposals concerning the internal syntactic structure of null nominals were outlined and compared, and placed in an MP frame. With respect to the indefinite construction, it was found that the former analysis does not account for the agreement relation holding between the so-called determiner pronominal and the empty noun head. Leaving aside the configurational realisation of this agreement relation, I proposed that the N must contain some covert element with which the determiner can agree. I suggested that this element be labelled *pro* ("little *pro*"), acknowledging that there are problems with this idea, in that it does not fit in with the distributional characteristics given for this element in the literature. The question of whether *pro* is syntactically an NP or a DP is relevant here since in this case it is an NP, whereas all accounts in the literature suggest that it must be a DP.

As regards the definite null nominal data, I reviewed Coene's (1999) views concerning the syntactic status of the D head of these elliptical constructions. Coene assimilates the definite paradigm to the indefinite one proposed by Bernstein (1993), so that the raising analysis (from WM through Num to D) derives the D constituents in both cases. The argument that the definite article does not contain a word marker is rejected by Coene

(1999) by way of a phonotactic rule which explains the surface form. The findings of the discussion on null nominals can be summarised as follows:

- (i) The superficially empty N head in indefinite null nominals must be understood to contain some kind of covert element with which the lexically realised D, which is overtly marked for gender and number, agrees.
- (ii) While Coene's explanation of the derivation of definite complex determiners achieves a uniform analysis for both the indefinite and definite construction, this account nevertheless fails to account for the empirical differences in the distribution of the definite versus indefinite articles.

The other class of DP explored in this chapter was bare nominals (BNs). Against the background of a typological description of the distribution and interpretation of various classes of BNs, I presented an exposition of Lois' (1996) and Longobardi's (1994) accounts of the types identified. The analyses were shown to adequately account for the data, therefore the conclusion to be drawn here is simply that the raising account of the derivations supports aspects of the DP Hypothesis discussed in chapter 3, specifically the clausal nature of nominals, the articulated functional layers between N and D, and the hypothesis put forward by Szabolsci (1994) that D converts a following N into an argument.

Chapter 6

Conclusion

This study focused on aspects of the syntactic structure of Spanish nominal expressions. The objectives of the study, as formulated in chapter 1, were (i) to give a critical overview of proposals that have been presented in the literature, (ii) to describe the relevant data within the framework of MP assumptions and mechanisms, and (iii) to point out any areas which do not seem to be properly accounted for by the proposals reviewed. The second objective called for the reinterpretation of several proposed analyses within a framework of MP notions, since many were couched in terms of principles and assumptions belonging to GB theory.

Chapter 2 provided a broad overview of the relevant assumptions and notions of MP, the theoretical framework of this study. In this, attention was given to the levels of representation, the dynamic computational operations of Merge and Move, feature checking, and the economy principles as restrictions on movement.

Chapter 3 was devoted to examining the structural analysis of nominal expressions within the MP framework. Against the background of the empirical and theoretical problems associated with the traditional structural representation of nominal expressions, I traced the development of the general analysis known as the DP Hypothesis, reviewing a broad spectrum of proposals since its earliest roots in Brame (1982). I identified two distinct sets of findings with respect to a nominal inflectional agreement projection, expressed in Abney (1987) and in the extended analysis by Szabolsci (1994) respectively. A substantial part of this chapter focused on various proposals concerning the structural nature of the functional layer projected between N and D, which provides the sites for morphological feature checking as described in chapter 2. It was found that there is consensus among researchers in favour of a one-to-one mapping of grammatical features on independent functional heads. Number, gender and Case are the three most significant

types of inflection for the purposes of this study, though it was pointed out that there exists a wide array of proposed functional heads hosting different morphological features.

Chapter 4 introduced the first of the Spanish data. By way of introduction, I considered the structural patterning of argument structure and θ -role assignment, paying particular attention to Giorgi & Longobardi's (1991) directionality parameters. The first part of the discussion focused on how the mechanisms of Case checking license (subjective, objective and possessive) genitive Case in Spanish nominal expressions. I described Fukui's (1986) and Mallén's (1989) proposals concerning analogies between Case assignment (i.e. MP "checking") at clausal and nominal levels. Empirical evidence involving word order and extraction facts was cited in support of distinct analyses of the different classes of genitive. I proposed that the checking of subjective and objective genitive Case, expressed by the θ -roles of Agent and Theme respectively, takes place PP-internally, mediated by the P *de* ("of"). In the case of the possessive genitive, it was argued that the preposition *de* is not a true preposition, but rather the phonetic realisation of the functional head Gen. It was claimed that possessive genitive Case is checked against the feature under this head.

The second half of chapter 4 was devoted to the analysis of the system of adjectival modification in Spanish nominal expressions. I presented a typological overview of the distribution and interpretation of Spanish adjectives, based on Cinque (1993). I then described various proposals concerning the syntactic status of attributive adjectives, showing how the different semantic interpretations map onto the structural representations. There appears to be consensus among researchers that two syntactic classes of AP must be proposed. In this respect, I compared two analyses of nominal expressions containing adjectival modifiers, viz. Bernstein's (1993) generation-in-spec versus independent functional head analysis and Coene's (1999) lexical N head versus lexical A head analysis. I subsequently proposed an analysis of a representative set of Spanish examples, adopting Coene's (1999) functional projection ModP as the checking

domain for the agreement features on Spanish adjectives, and integrated this with a generation-in-spec analysis of APs which may occur pre- or postnominally. I left open the question of the syntactic analysis of the class of Spanish adjective that is uniquely prenominal for future investigation.

In chapter 5 I examined two constructions in Spanish containing phonetically empty elements. The first type, the null nominal construction, involves an empty N. Adopting Bernstein's (1991, 1993) WM analysis, I reviewed her and Coene's (1999) structural analysis of the indefinite and definite constructions. This review yielded two major findings: (i) it is implausible, given the overt agreement on the D constituent, to represent the lexical head of null nominals as [_N e], and (ii) while there is motivation to assume that the indefinite and definite constructions are similarly derived, there are empirical differences in the distribution of these two constructions that pose problems for a uniform analysis. Both of these findings represent topics for future research.

The remainder of the Spanish data that was considered fell into the class of bare nominals (BNs), i.e. determinerless nominal expressions. I described Lois' (1996) typology in terms of the distribution and interpretation of Spanish BNs, going on to present a description of Lois' (1996) and Longobardi's (1994) analyses within a MP framework.

In the discussion of MP in chapter 2, it was pointed out that in terms of this theory all cross-linguistic variation is reducible to differences in the feature matrices of lexical items. It follows then, that the notion of features and the mechanisms and devices involved in the licensing of such features is a core theoretical concern. Since feature checking takes place in agreement configurations with corresponding functional heads, salient questions for future investigation revolve around the notion of these heads. Issues that need to be resolved include whether they constitute a closed set which operates (overtly or covertly) in all the world's languages. If so, it has to be determined what the heads that make up this closed set are. Furthermore, it needs to be established whether

there are universal principles dictating the *relative order* of these functional projections in the syntax. There is much evidence of the considerable cross-linguistic variation in overt inflectional morphology, thus a connection between inflectional paradigms and functional categories would constrain the possibilities for positing syntactic universals.

University of Cape Town

Bibliography

- Abney, S. 1987. "The English noun phrase in its sentential aspect". PhD dissertation. Cambridge Mass.: MIT Press.
- Abraham, W., S.D. Epstein, H. Thráinsson, & C.J.W. Zwart (eds.). 1996. *Minimal ideas: Syntactic studies in the minimalist framework*. John Benjamins: Amsterdam.
- Bennis, H. 1995. "Waar is het werkwoord? Part I: het minimalistische kader". *Spektator*. 24: 2: 130-146.
- Bernstein, J. 1991. "Nominal enclitics in Romance". MIT Working Papers in Linguistics 14: 51-66.
- Bernstein, J. 1993. "Topics in the syntax of nominal structure across Romance". CUNY: PhD Dissertation.
- Bosque, I. & C. Picallo. 1996. "Postnominal adjectives in Spanish DPs". *Journal of Linguistics* 32 (2): 349-385.
- Bosque, I. (ed.) 1996. *El sustantivo sin determinación: la ausencia de determinante en la lengua española*. Madrid: Visor.
- Brame, M. 1982. "The head-selector theory of lexical specifications and the Nonexistence of Coarse Categories". *Linguistic Analysis* 10 (4): 321-325.
- Chomsky, N. 1965. *Aspects of the theory of syntax*. Cambridge, Mass.: MIT Press.
- Chomsky, N. 1972. *Studies on semantics in generative grammar*. The Hague: Mouton.
- Chomsky, 1981. *Lectures on government and binding*. Dordrecht: Foris Publications.
- Chomsky, N. 1982. *Some concepts and consequences of the theory of government and binding*. Cambridge Mass.: MIT Press.
- Chomsky, N. 1986. *Knowledge of language: its nature, origin and use*. New York: Praeger.
- Chomsky, N. 1992. "A minimalist program for linguistic theory". MIT Occasional Papers in Linguistics, no. 1. Cambridge Mass.: MIT Working Papers in Linguistics.
- Chomsky, N. 1995. *The minimalist program*. Cambridge Mass.: MIT Press.

- Cinque, G. 1993. "On the evidence for partial n-movement in the Romance noun phrase". In Cinque, G., J. Koster, J-Y Pollock, L. Rizzi & R. Zanuttini (eds.). *Paths towards universal grammar. Studies in honor of Richard S. Kayne*. Washington D.C.: Georgetown University Press.
- Coene, M. 1999. "Definite null nominals in Romanian and Spanish". PhD dissertation. University of Antwerp.
- Contreras, H. 1996. "Sobre la distribución de los sintagmas nominales no predicativos sin determinante". In Bosque, I. (ed.): 141-168.
- Cook, V. and M. Newson. 1996. *Chomsky's universal grammar: an introduction*. Oxford: Blackwell.
- Culicover, P. W. 1997. *Principles and parameters. An introduction to syntactic theory*. Oxford/New York: Oxford University Press.
- Demonte, V. 1987. "Rección y minimidad en el Sintagma Nominal" In Demonte, V., M. Fernández Lagunilla (eds.). *Sintaxis de las lenguas románicas*. Madrid: Arquero.
- Epstein, S.D., H. Thráinsson & J.W. Zwart. 1996. Introduction to Abraham, W. et al.
- Giorgi, A. & G. Longobardi. 1991. *The syntax of noun phrases*. Cambridge: Cambridge University Press.
- Giusti, G. 1997. "The categorial status of determiners". In Haegeman L., (ed.): 95-123.
- Grimshaw, J. 1990. *Argument structure*. Cambridge/London: MIT Linguistic Inquiry Monograph 18.
- Haegeman, L. 1994. *Introduction to government & binding theory* (2nd ed.). Oxford UK & Cambridge USA: Blackwell.
- Haegeman, L. 1997. "Introduction: on the interaction of theory and description in syntax". In Haegeman, L., *The New Comparative Syntax*. London: Longman Linguistics Library.
- Haegeman, L. 1997. Introduction to Haegeman, L.(ed.). *Elements of Grammar*. London: Longman Linguistics Library.
- Harbert, W. 1995. "Binding theory, control, and pro". In Webelhuth, G. (ed.): 177-240.
- Harris, J.W. 1991. "The exponence of gender in Spanish". *Linguistic Inquiry* 22 (1): 27-62.

- Jackendoff, R. 1973. "The base rules for prepositional phrases". In Anderson, S.K. & P. Kiparsky (eds.). *A Festschrift for Morris Halle*. New York: Holt.
- Jackendoff, R. 1977. *X-bar syntax: A study of phrase structure*. Cambridge Mass.: MIT Press.
- Lasnik, H. 1993. "Lectures on minimalist syntax". Manuscript, University of Connecticut.
- Lasnik, H. 1999. *Minimalist analysis*. Oxford: Blackwell.
- Lois, X. 1996. "Los grupos nominales sin determinante y el paralelismo entre la oración y la frase nominal". In Bosque (ed.): 201-238. Madrid: Visor.
- Longobardi, G. 1994. "Reference and proper names: A theory of N-movement in syntax and logical form". *Linguistic Inquiry* 25 (4): 609-665.
- Longobardi, G. 1996. "The syntax of N-raising: A minimalist theory". OTS Working Papers. Utrecht University.
- Longobardi, G. 1999. "The structure of DPs: some principles, parameters and problems" informally distributed copy, published in Baltin, M. & C. Collins (eds.). 2000. *Handbook of Contemporary Syntactic Theory*. Oxford/Cambridge: Blackwell.
- Mallén, E. 1989. "The internal structure of determiner phrases". PhD dissertation. Cornell.
- Mallén, E. 1991. "Noun phrase structure, clitic-doubling and extraction". *Linguistische Berichte* 134: 6-309.
- Marantz, A. 1995. "The minimalist program". In Webelhuth, G. (ed.): 343-382.
- Ouhalla, J. 1999. *Introducing transformational grammar. From principles and parameters to minimalism*. (2nd edition). London: Arnold.
- Parodi, C. 1994. "On Case and agreement in Spanish and English DPs: Selected Papers from the Linguistic Symposium on Romance Languages 1993". In Mazzola, M. (ed.). *Issues and Theory in Romance Linguistics*. Washington DC: Georgetown University Press: 403-416.
- Pollock, J-Y. 1989. "Verb movement, universal grammar and the structure of IP". *Linguistic Inquiry* 20: 365-424.

- Radford, A. 1997. *Syntactic theory and the structure of English: A minimalist approach*. Cambridge: Cambridge University Press.
- Ritter, E. 1988. "A head-movement approach to construct-state noun phrases". *Linguistics* 26: 909-929.
- Ritter, E. 1991. "Two functional categories in noun phrases: evidence from modern Hebrew". In Rothstein, S.D. (ed.) *Perspectives on Phrase Structure: Heads and Licensing*. San Diego: Academic Press: 37-62.
- Ritter, E. 1993. "Where's gender?" *Linguistic Inquiry* 24: 795-803.
- Rizzi, L. 1997. "The fine structure of the left periphery". In Hegeman, L. (ed.): 281-337.
- Siloni, T. 1997. *Noun phrases and nominalizations: The syntax of DPs*. Dordrecht: Kluwer Academic Publishers.
- Spencer, A. 1992. "Nominal inflection and the nature of functional categories". *Journal of Linguistics* 28 (2): 313-341.
- Stowell, T. 1989. "Subjects, specifiers, and X-bar theory". In M.R. Baltin & A.S. Kroch (eds.). *Alternative conceptions of phrase structure*. Chicago: University of Chicago Press.
- Szabolcsi, A. 1994. "The noun phrase". In Kiefer, F. & K. Kiss (eds). *Syntax and Semantics* 27: 179-274.
- Webelhuth, G. (ed.) 1995. *Government and binding theory and the minimalist program*. Oxford: Blackwell.
- Williams, E. 1995. "Theta Theory". In Webelhuth, G. (ed.): 97-124.
- Zwart, J-W. 1996. "Shortest Move versus Fewest Steps" In Abraham, W. et al.