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**A Study of the Determiner Phrase of
Spanish, English and Korean**

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**A Study of Determiner Phrase of
Spanish, English and Korean**

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Dedication

I dedicate this dissertation to my parents Eunshik Chang and Oksoon Kim, who encouraged me from an early age to set goals and achieve them.

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I am deeply grateful for the many hands and hearts that have made this dissertation possible. First, I am extremely appreciative of the support I received throughout this process from my supervisor, Dr. Marta Luján. She has been a true source of encouragement since my time in the Spanish Dept. of University of Texas at Austin. Her guidance over the years, as both a mentor and advisor has been invaluable. This dissertation would not have been possible without Dr. Luján's assistance and her example as a linguist.

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A Study of the Determiner Phrase of Spanish, English and Korean

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Following the assumptions of Cinque (1994,1999,2002), Giusti(1999) and Bruge (2002) that there are multiple functional projections in the extended Nominal Projections (DP), and that the Demonstrative base-generates in the specifier position of a FP (Functional Projection), this study presents a minimalist approach to the analysis of the Determiner Phrase of Spanish, English and Korean.

The primary claim of this study is that the cross-linguistic word order variations and the co-occurrence of the modifiers within the extended Nominal Projections in Spanish, Korean, and English can be accounted for in a unified analysis based on the movement of Demonstrative and the head Noun before or

after Spell-Out, and the parameter of strong and weak feature of functional category in the terms of Chomsky(1995).

In respect to the pre- and postnominal positions of demonstrative in Spanish, the selection depends on the types of movement of demonstrative for [+Ref] functional feature checking. In other words, in the case of the postnominal demonstrative, the movement of Demonstrative for [+Ref] feature checking in Spec-Head configuration is after Spell-Out, whereas the movement of Demonstrative in prenominal position is overt. On the other hand, in Korean and English the obligatory prenominal demonstrative results from the movement being before Spell-Out.

According to Chomsky's theory of feature strength, the present study postulates that the [\pm Ref] feature is strong in Korean and English, but can be strong or weak in Spanish.

Likewise the crosslinguistic difference regarding the position of APs in DP is attributed to the parametric variation of N movement. The movement of N to the head of a functional projection which is higher than the FP where the adjective is base-generated derives the postnominal adjective in Spanish, whereas the prenominal adjective in Korean and English is due to the absence of this movement before Spell-Out.

With respect to the variation of structural position of the possessive in Spanish, English and Korean, I claim that the possessive is universally base-generated in the specifier position of an intermediate FP between DP and NP, and then moves up as far as functional projection, the so-called AgrGP(AgrGenitivePhrase) immediately dominated by DP, for [+Poss] feature checking. The postnominal possessive in Spanish can be accounted for by the covert movement of feature checking, whereas the prenominal clitic forms of possessive are derived by the overt movement for the [+Poss] feature checking before Spell-Out. As for the prenominal possessive in Korean and English, I argue that [+Poss] feature checking must be overt.

Regarding the [+Def] feature checking in Korean, I claim that the particle ‘-(n)un’ which functions as a topicality marker is base generated with [+Def] feature. ‘-(n)un’ is a bound morpheme which is always attached to the noun as a suffix. Taking into account the position of attributive adjectives which are always prenominal, I argue that [+Def] feature checking of ‘-(n)un’ against D° in DP takes place covertly after Spell-Out.

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ABBREVIATIONS

AC	Accusative particle
CL	Numeral classifier (counter)
Comp	Complementizer
CP	Complementizer phrase
DC	Declarative sentence-type suffix
Dem	Demonstrative
DET	Determiner
DP	Determiner phrase
LF	Logical form
GN	Genitive particle
MP	Minimalist Program
N	Noun
NM	Nominative case particle
NP	Noun phrase
Past	Past tense and perfect aspect suffix
PL	Plural suffix or particle
PF	Phonetic form
Pres	Present tense suffix
QP	Quantifier phrase
SD	Structural description
TC	Topic-contrast particle

CHAPTER ONE

THEORETICAL PREMISES AND BACKGROUND DATA

1.0. INTRODUCTION

Since the focus of linguistics shifted from the mechanisms of limited aspects of language, which are observed from human behavior, to the mental processes which underlie human behavior in the context of ‘the cognitive revolution’, the purpose of linguistic analysis has been to explain the knowledge or competence that a native speaker has. We believe that this competence, which can be found in any human being regardless of the type of his native language, is a predisposition, as an innate faculty. In other words, this competence is predisposed in the brain for humans to acquire a specific language. In this sense, we assume that the faculty of language of human beings has universal properties that underlie all human languages.

We think these properties that are common to all human languages are determined by general principles, which are applicable to all languages. We, however, accept that each language has its own individual parameters that give rise to language specific properties. So, in the ‘Generative Grammar’ framework we assume that language variations are the things that a child learns from his adult speakers through his experience.

From the point of view of crosslinguistic variation and universal grammar, we assume that the functional category of Determiner, which is a component of the extended nominal projection, has universal syntactic and semantic properties such as $[\pm\text{Def}]$ or $[\pm\text{Ref}]$, which are common to all languages. But its overt realization and syntactic derivations in the sentence might be parameterized with respect to language specific vocabulary.

Based on this assumption, in this comparative study I will examine the syntactic properties of the so-called “determiner” elements, taking into consideration their structural position and movement in the extended nominal projection. In particular, I will look at the crosslinguistic variations regarding syntactic derivations that relate to demonstratives, and the associated feature checking operations. I will also consider the universal properties of $[\text{+Def}]$ functional feature, and its language specific morphological realizations.

In this chapter, we will consider the basic theoretical foundations, which are critical for the analysis that I develop in the generative framework, and an overview of the data which are the object of analysis in this study. In what follows, therefore, I will sketch the theoretical framework, which this study is based on, and review some basic notions of the framework at use, like the ‘economy principles’, ‘PF(Phonetic Form)’, ‘LF(Logical Form)’, ‘Spell-Out’,

‘Least effort and Last resort’, ‘competing derivations’, ‘strong & weak features’ etc.

1.1 THEORETICAL PREMISES

In order to account for the crosslinguistic variations regarding the structural properties of determiner elements in the extended nominal phrases of Spanish, Korean, and English, I develop a descriptive analysis in terms of the Minimalist Program (MP) (Chomsky 1993. 1995; Marantz 1995). Therefore, I will review some important aspects and notions in MP.

1.1.1. Standard Assumptions in MP : Universal Grammar and Language Interfaces

Universal Grammar, considered as the theory of ‘Language’ and of the ‘Structural Descriptions’ which the language generates, specifies some linguistic levels, namely representational system (Chomsky 1993). Each level has its symbolic system that provides systematic representations to ‘Linguistic Expression’. In other words, a ‘Linguistic Expressions’ has a sequence of representations according to each level.

In terms of UG, then, a SD (Structural Description) is a complex of instructions for the various linguistic performance systems, which are used in various actions, such as articulating, interpreting, inquiring, reflecting etc. The

performance systems, in general, falls into two types: Articulatory-Perceptual (A-P) and Conceptual-Intentional (C-I). The interfaces between them and the language faculty use different symbols, and may be identified as the PF(Phonetic Form) and LF(Logical Form) of expressions. PF and LF are conceptually necessary interfaces, and in accordance with an MP simplest language design, they are the only levels of representations.

1.1.2. Movement and Feature Checking for Full Interpretation

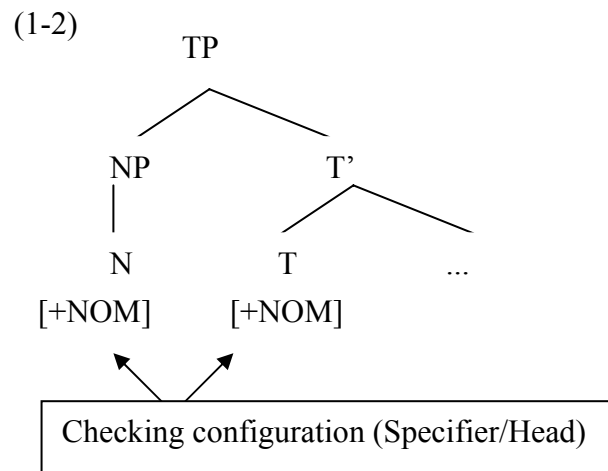
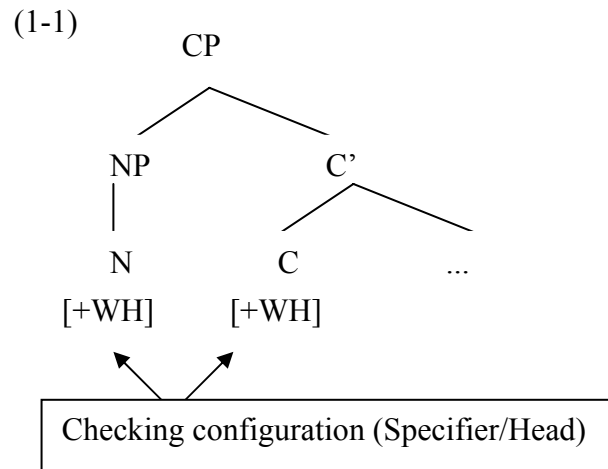
Movement has been an important and general notion for operations in generative grammar. Although various types of movements have been postulated in generative syntax, such as ‘Head movement’, ‘NP movement’ and ‘Wh-movement’, there are common underlying properties to the various kinds. First, movement in the minimalist trend is needed so that the categories that check features can appear close to each other in two checking configurations, namely Spec-Head and Head-Head. Thus, the various movements are locally constrained and required to satisfy appropriate structural configurations for formal feature checking.

Movement is then structurally motivated, but subsidiary to formal feature checking. For example, the category which wh-moves occurs as a wh-phrase needs to be close to the category with the [+WH] feature, and NP movement

occurs so that a NP can check its Case feature against some functional category. Even in the case of head movement, such as movement of V(erb), the movement also answers the need of V to appear next to the verbal inflection. Thus, as we can notice here, if we assume that the motivation for movement is the checking of formal features, it is possible to say that the operation of feature checking takes place in a local configuration. In other words, movement has no independent status. Rather, it is secondary to feature checking needs.

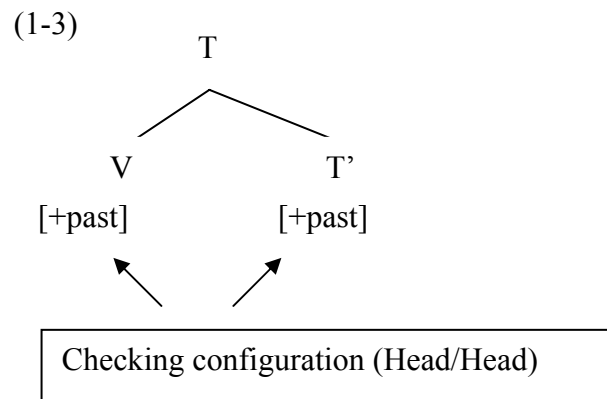
In addition, we have to note that the principle or a motivation that forces movement to occur is ‘Full Interpretation’ (Chomsky 1993, 1995). According to Chomsky, ‘Full Interpretation’ means that all features must be checked and eliminated, leaving no uninterpreted symbol in the expression at the interfaces of Logical Form and Phonetic Form.

Now, I will look at local configuration for formal feature checking. In MP we have two configurations for feature checking, which are Head-Specifier, and Head-Head (Marantz 1995; Carnie 2002). For example, wh-movement, to check [+Wh] feature on C(omplementizer), and NP movement, to check [NOM] feature, are satisfied under the Specifier/Head configuration like in (1-1) and (1-2).



And for the abstract inflectional feature checking, the verb and T(ense) check these feature against one another so that the suffix of tense feature can

surface on the verb. In this case, the relationship is a head-head configuration like in the following diagram (1-3).



As shown in the figures above, the relation in MP for one element to license another is checking off the feature in the licensing domain that includes Head-Specifier and Head-Head. In this sense, feature checking constitutes the basic relation of agreement between Head and its Specifier, and Head and Head.

1.1.3. PF and LF in MP

PF(Phonetic Form) is the interface between the Language faculty and the perceptual system in speech recognition and the articulatory system in speech production. On the other hand, LF(Logical Form) is the interface between speaker's general knowledge and extralinguistic cognitive system. Namely, it is the semantic-conceptual system of cognition. (Marantz, 1995) In terms of the

syntactic function for ‘Full Interpretation’, in the level of PF, any symbol without phonetic realization is eliminated, whereas in LF, any meaningless element, such as an unbound variable or NP without θ -role, is removed. Thus, according to these general conditions of the interfaces, the ungrammatical derivations are ruled out as failing to converge. So, if the derivations satisfy each interface level of PF and LF, the derivation is said to ‘converge’. On the other hand, if the derivation does not meet interface conditions, the derivation is said to ‘crash’. In comparison to the older version of GB framework, the MP conception of the language faculty is simpler, without levels of structural organizations such as DS (Deep-Structure) and SS (Surface-Structure), and with no singularly working principles. What is significant also here is that in MP any principle which constrains syntactic derivation can be applied at any step of PF or LF, if it is relevant.

1.1.4. Economy Principles and Competing Derivations

The Economy Principle is one of the most important concepts in MP. The basic idea of this principle is to compare ‘competing derivations’ and to pick one of them up by an economy principle. In other words, based on the assumption that there exists a set of possible derivations that compete using the same resources of lexical items, one derivation is picked out and submitted to PF and LF. At this

point, the competing derivations mean possible set of derivations that use the same lexical items as resources. (Chomsky, 1992) For the selection of appropriate derivation, the economy principle is applied.

The conceptual issues which derive the 'Economy Principles' in MP are the ideas of 'Least Effort' and 'Last Resort'. The concept of 'Least Effort' means that the principle of economy picks out a least operational effort option comparing all possible options. And the 'Last resort' means that except for the shortest (simple) movement all other options rely on the 'Last Resort' option. The major components of 'Economy Principles' are 'Shortest move' 'Greed' and 'Procrastinate'.

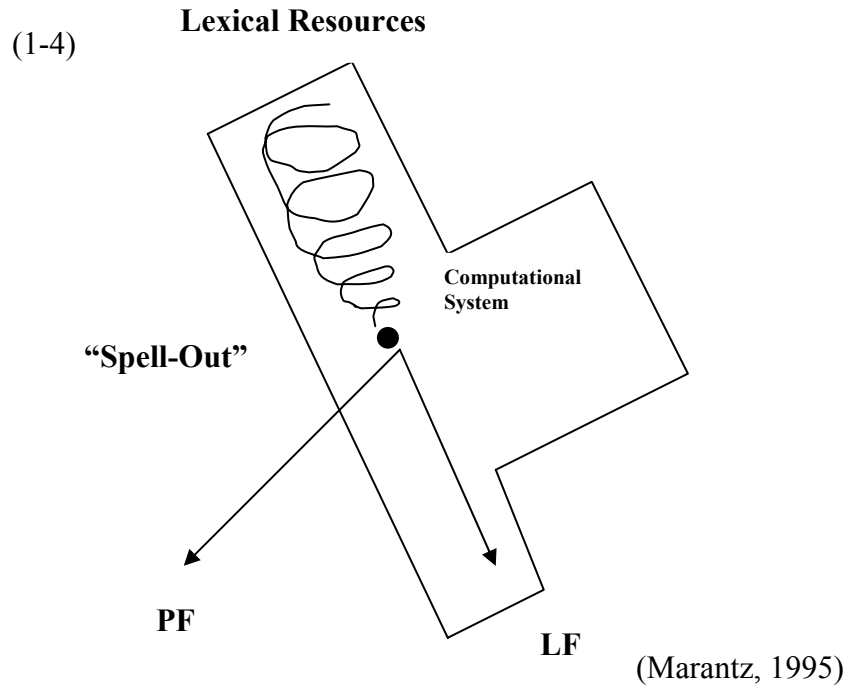
The basic idea underlying 'Procrastinate' is that movement takes place as a last resort. In other words, based on the assumption that the covert operation (LF) is less costly than overt operation, categories move only when they have to, in order to minimize the overt syntax.

The 'Greed' principle is also based on the idea that movement is last resort. The point of the discussion of 'Greed' is that the categories move to satisfy only their own structural needs, not for the requirements of other elements.

1.1.5. Spell-Out

Simply saying, the concept of ‘Spell-Out’ means the moment in which one of the possible constituents selected by ‘Economy Principle’ is submitted to the PF interface. The moment of Spell-Out is important because it serves as the point that separates the overt operations of ‘Before Spell-Out’ and the covert operations of ‘After Spell-Out’. In the level of ‘Before Spell-Out’ the operations are subject to strict cycle conditions, by which constituents expand by computational mechanism, whereas in the stage of ‘After Spell-Out’ the covert movement at LF can violate a strict cycle condition. (Marantz 1995)

Based on the assumption above, the following figure represents the model of the language faculty with the interfaces according to the ‘Minimalist Program’.



In the interface model of MP above, at the level of PF there is no more computational mechanism at work. Also, it is assumed that after Spell-Out there is no more generalized transformations such as an expansion of constituent, adding lexical items to make larger constituents. Virtual movement for feature checking, however, can occur at LF

1.1.6. LF Movement

In the syntactic model which is developed in the Minimalist Program, through all the derivations before Spell-Out and even after Spell-Out, in Logical

Form interface the syntactic operations take place. According to this model, the only difference between covert and overt movement is when they happen in a derivation. The covert movements occur after branching off to the PF interface, in other words after Spell-Out, while the overt movements take place before Spell-Out. Therefore, note that according to the MP model all movements for feature checking with Full Interpretation constraints are possible.

1.1.7. Evidence of Movement after Spell-Out (LF)

In the previous section, it is assumed that the LF Movement for feature checking in appropriate context is true of every language. Now for the better understanding and to derive a unified analysis we will take a look at some evidence of the existence of LF Movement in the languages that are the object of study here. First, one of the most well known pieces of evidence of covert-movement in English is QR(Quantifier Raising) which is argued to account for the difference in scopal relation between two quantified nominal phrases in an example such as (1-5).

(1-5) Everyone loves someone.

This sentence is ambiguous depending on whether ‘everyone’ takes scope over ‘someone’ or the other way around. These two possibilities are represented in the language of predicate logic in (1-6a) and (106b) below:

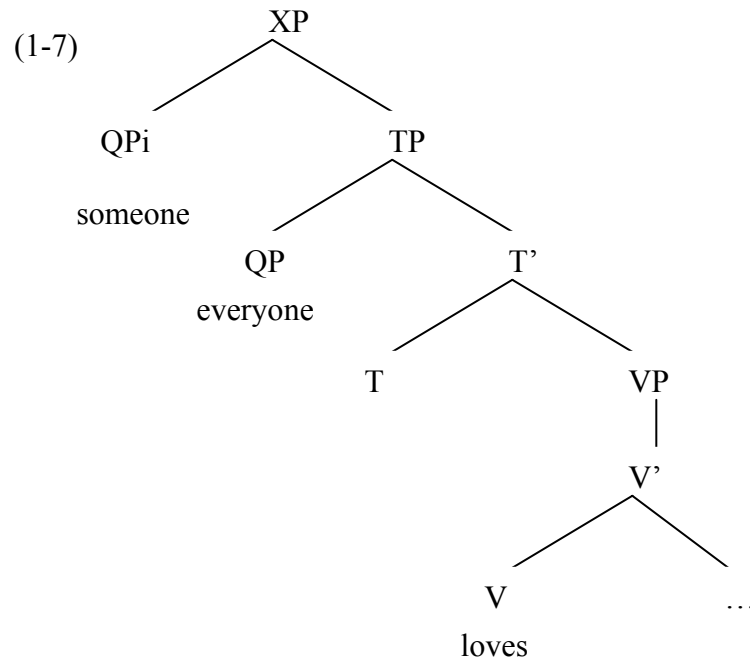
(1-6) a. $\forall x (\exists y [x \text{ loves } y])$

(‘Everyone has someone he/she loves’)

b. $\exists y (\forall x [x \text{ loves } y])$

(‘There is a certain someone everyone loves’)

Thus, if the sentence takes the interpretation as in (1-6b), the universal quantifier is said to have narrow scope in relation to the existential quantifier. This means that the quantifier \exists has scope over the \forall which it c-commands, since the notion that the scope reflects c-command is generally accepted. This scopal difference is represented in the following diagram, corresponding to the interpretation given in (1-6b):



On the assumption of the scope-c-command reflection, the diagram above would represent the interpretation (1-6b). In order to get this representation, one must assume that the existential quantifier ‘someone’ undergoes virtual movement or covert movement at LF.

The argument carries over to the other two languages under study here; Korean and Spanish. For example in the following sentences in Korean and Spanish we can easily observe the same phenomena.

(1-8) K: motunsalam- un etten salam-ul salanghanta.
everyone – NM/TC someone – AC loves
'Everyone loves someone'

S: Todos aman a alguien.
Everyone loves someone.
'Everyone loves someone'

The following tree diagram is the representation of the interpretation with narrow scope for the universal quantifier in the parallel Korean and English examples.



(1-10) Chelswu-nun nwu-ka mwuessttaymwuney hya- lul naynun-
Chelswu-NM/TC who-NM why angry-AC get-

ci al- ki- lul wenhanunya?

NM know- NM- AC want?

Chelswu want-know who why get angry

‘Who does Chelswu want to know why gets angry?’

*For what reason(why)i does Chulsu wonder who gets angry ti?

Subjacency Condition (or Minimal Link Condition:MLC) is the assessments tools for the movement test in Minimalism. As is well known, MLC Effects exist in English because there is overt movement. If there is no movement, no violation exists for subjacency condition. Like other languages of wh-in-situ (e.g Chinese), the Korean sentence above is ungrammatical with the interpretation given with *. This suggests that there is a covert movement that we cannot hear in Korean. In other words, we can conclude that since long movement that violates MLC is not allowed in Korean, there is a covert movement, and it observes MLC or Subjacency Condition.

In this section, we have looked at the universal character of LF Movement in the three languages in question. The basic notions and evidence outlined are an important source for further theoretical developments. Most of all, the idea of LF

or covert movement will be indispensable to formalize the syntactic uniformity of the structure of the Determiner Phrase (DP) common to our three languages.

1.2. DATA LAYOUT

The data for our analysis involve three languages: Spanish, English and Korean. Also, as you can see from the study here, the analysis to be presented will be given from two different perspectives. First, there will be an analysis of the internal structure of the extended nominal structure, which includes determiner elements. Second, based on the analysis, I will discuss the cross-linguistic variations regarding the word order of internal elements such as definite articles and demonstratives within the extended Nominal Projection. Third, I will explain the different position of demonstratives based on the analysis of ‘strong’ and ‘weak’ feature checking. Finally, I will discuss the definite feature checking by the morphological suffix of ‘-(n)un’ in Korean.

1.2.1. Basic structure of Noun Phrase

In the following examples, we see that the determiners in prenominal position are grammatical in Spanish and English. Notice, however, that there is no article in Korean.

(1-11) S(panish):	los	libros
E(nglish):	the	books
K(orean):		chayk-tul
	the	book-(PL)
	‘the	books’

In the following examples (1-12), it turns out that different combinations of determiner elements in pre-nominal position are possible in all three languages. For example, the combination of indefinite determiner and cardinal is possible for Spanish, Korean and English in pre-nominal position.

(1-12) S:	unos	tres	libros
E:	some	three	books
K:	yak	sey-kwen	chayk-tul
	some	three-(CL)	book-(PL)
	‘some	three	books’

Thus, you will notice that the presence of multiple determiner elements is possible in all three languages,

1.2.2. Demonstratives and co-occurrence with adjectives

As mentioned briefly in the previous section, we assume that there are crosslinguistic common properties as well as language specific patterns for the structure of noun phrase and for the relative word orders of determiner elements. Based on this, I will look at the syntactic behavior of demonstratives in terms of the positions and co-occurrence with other elements. As can be seen in the following examples, the syntactic behavior of demonstratives shows very significant crosslinguistic differences regarding their position and also shows a close relationship with the definite articles regarding co-occurrences. These facts are very relevant for the analysis of the internal structure of the noun phrase and for the analysis of the feature of determiners.

As can be seen in the following examples, the sequence of demonstratives plus cardinals is possible in pre-nominal positions for all three languages.

(1-13) S:	estos	tres	libros
E:	these	three	books
K:	i-(tul)	sey-kwen	chayk-tul
	these	three-(CL)	book-(PL)
	‘these three books’		

On the other hand, from (1-14) notice that the presence of demonstratives in postnominal position is grammatical for Spanish but not for English and Korean. Furthermore, from the example (1-15), we can assume that the co-occurrence of definite article and demonstrative in prenominal position is not acceptable for Spanish and English.

(1-14)	S:	los	libros	esos
	E:	*the	books	those
	K:	*	chayk-tul	cu-(tul)
		the	book-(PL)	that-(PL)
		'those books'		

(1-15)	S:	*los	esos	libros
	E:	*the	those	books
	K:	*	cu-(tul)	chayk-tul (PL)
		the	that-(PL)	book-(PL)
		'those books'		

Another crosslinguistic difference regarding the co-occurrence of determiner with other modifiers is found in the examples below. Whereas in

Spanish, as shown in the example of (1-16), the combination of articles in prenominal and possessive in postnominal is possible, this sort of occurrence of possessive in postnominal position is ungrammatical in Korean. In the example (1-17), however, the co-occurrence of articles and possessives in prenominal position is not allowed in Spanish and English. Only prenominal possessive is allowed in Korean.

(1-16) S:	los	libros	mios
E:	the	books	of mine
K:	*	chayk-tul	na-ui
	the	book-(PL)	1a-(GN)
	‘the books of mine’		

(1-17) S:	*los	mis	libros
E:	*the	my	books
K:		na-ui	chayk-tul
	the	1a-(GN)	book-(PL)
	‘my books’		

1.2.3. Constituent order within the extended Nominal Projection

Now we will turn to one of the topic, that we can not ignore for the structural analysis of the noun phrase. There is relatively different word order found in noun phrases crosslinguistically.

(1-18) S:	*la	blanca	casa
E:	the	white	house
K:		hayan	cip
	the	white	house
	'the white house'		

The focus from these examples is mainly on the relative constituent order within the noun phrase. Notice from the examples above that the order of adjectival modifiers in the noun phrase relative to the determiner and noun is different in the target languages.

CHAPTER TWO

PREVIOUS DESCRIPTIONS OF NOUN PHRASE STRUCTURE

2.0. INTRODUCTION

From the point of view of generative grammar, regarding so called ‘determiner’ elements, which are generally found in pre-nominal position in Western languages such as Spanish and English, the various assumptions are developed for the present analysis. Based on the ‘Generative Framework’, research has been pursued to investigate the universal properties as well as language specific parametric variation of the use of ‘determiner’ in recent decades by linguists like Abney(1987), Fukui & Speas (1986), Kayne(1994), Mcmaness(1996), Zagana(2002), Luján(1999, 2000, 2001), Cinque(2002) and Bruge(2002) etc.

The theoretical development of the area in question has attempted to satisfy two goals which seem to exert a pull in opposite directions; descriptive adequacy and explanatory adequacy. According to Chomsky(1965) it is generally accepted that in the theoretical development of a hypothesis we go through three levels of adequacy. In the first level of grammar, we try to make an observationally adequate grammar, just trying to account for the sentences that we can observe in the data. However, this is not a suitable approach for the cognitive

aspect of language. At the second level of grammar, we try to explain the linguistic corpora as well as the linguistic intuitions of native speaker with respect to well or ill-formedness of sentences. At this level of grammar, it is inevitable to involve increasing rule systems which are necessary to describe specific properties of syntax. As a final goal of the development of linguistic analysis, we try to achieve explanatorily adequate grammars which explain the phenomenon of language acquisition or the development of language in early childhood. In this level of grammatical explanation there is a natural attempt to simplify the theory restricting the proliferation of rules. We can, for example, include the theory of parameters in this level. This is the goal which is generally pursued in the generative grammar framework. With the simplicity and explanatory adequacy of this level, we also try to explain how children acquire their languages.

Although these are three steps as different levels of analysis, we can not help having the dilemma between the two goals of descriptive and explanatory adequacy in the process of developing an analysis. If we go a step closer to one objective, we seem to move one step away from the other side. However, in any case finally we try to find a way to satisfy both goals simultaneously. In the same sense, therefore, we can see the motivation for the appearance of a new approach to satisfy these two goals of descriptive adequacy.

In this chapter I review the literature concerning the theoretical assumptions which have been developed about the syntactic properties of the determiner so far. As previously mentioned, those hypotheses have been motivated to satisfy the two goals of descriptive and explanatory adequacy.

2.1. NP HYPOTHESIS FOR DETERMINER (ANALYSIS OF DETERMINERS IN NP HYPOTHESIS)

2.1.1. Two different analyses. (NP Analysis vs. DP Analysis)

In the generative grammar framework, we have two different types of analyses depending on what category is assumed to head to phrase. Traditionally, the N(oun) is taken to be the head of NP. In this view, the determiner system has been considered to be affected by the status of NP, since Determiner has been included in the internal system of NP. In other words, the Determiner has been treated as one of the constituents of Noun Phrase, specifically, in the function of Specifier of NP. Along the theoretical development motivated by the fact that much linguistic data do not fit well in this framework, a new way appeared of treating Determiner with the concept of functional categories. This is the so called “DP Hypothesis”. In this structural approach, the Determiner is considered the head of the nominal phrase, as a functional category head which has NP as its complement.

2.1.2. Definite Determiners and Indefinite Determiners.

First of all, for the analysis of DP in the traditional framework, I need to divide the determiners in two groups according to the syntactic properties of [\pm definiteness]. The group of determiners used with definite interpretation includes the definite article, the possessive determiner and the demonstrative, whereas in the other group, we have the indefinite article, cardinal and quantifier determiners of indefiniteness. Since in the analysis of the NP Hypothesis the uniqueness principle of the prenominal specifier position is important, this division has been necessary to account for the ungrammaticality of the co-occurrence of determiners. In other words, in regards to the ‘Uniqueness of the prenominal specifier position’ we can assume that NPs have a unique Determiner position. In other words, this means that NP has a single specifier position as a daughter of X”, maximal projection and the sister of X’. For example, as we can observe in the following example:

(2-1) *la mi esposa
the my wife

(2-2) *esta mi casa
this my house

The examples above are ungrammatical since they have two determiners. Recall that in the X-bar module, there are three rules like the followings.

Adjunct rule	$X' \rightarrow X'(ZP) \text{ or } X' \rightarrow (ZP)X'$
Complement rule	$X' \rightarrow X(WP)$
Specifier rule	$XP \rightarrow (YP)X'$

We can see that the specifier rule is not recursive. In other words, we have only a single position available for the specifier. In X-Bar theory, each phrase generated by PS rules and configured hierarchically in binary branching has a unique specifier position. The specifier has a daughter relationship with X'' , maximal projection and sisterhood relationships with X' .

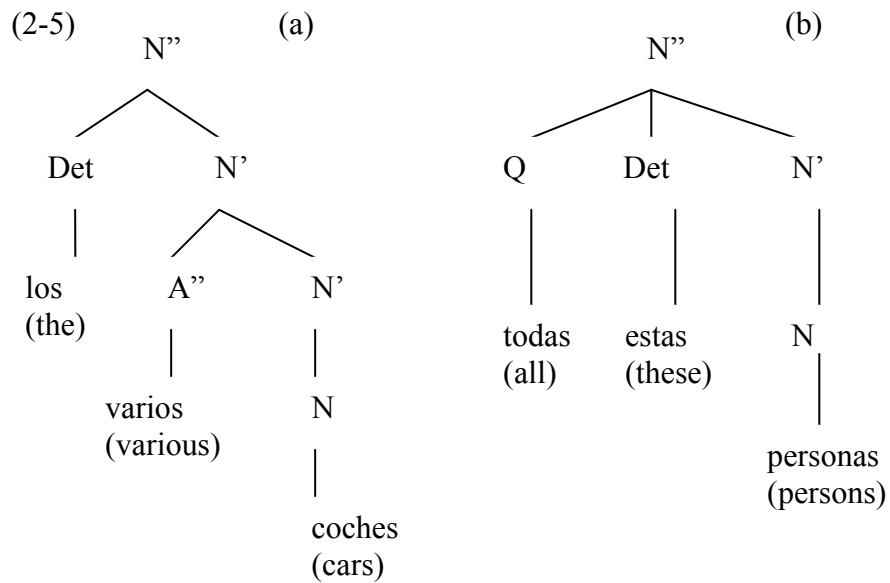
2.1.3. Uniqueness of Pre-Nominal Specifier position in Spanish.

In the Spanish data, however, this traditional framework cannot account for some grammatical sequences of Determiner like elements as regards to the uniqueness of the prenominal specifier position as well as postnominal position.

(2-3)	todas	estas	personas
	all	these	persons
	‘all of these persons’		

(2-4)	los	varios	coches
	the	various	cars
	‘various cars’		

In the examples above, we can see that there are two prenominal determiners. In the example of (2-3), the quantifier ‘todas(all)’ co-occurs with the demonstrative ‘estas(these)’- “todas estas personas”-, and in (2-4) another determiner ‘varios(various)’ appears together with the definite article ‘los(the)’- “los varios coches”. By the nature of the analysis of NP Hypothesis, it cannot avoid the critical conflicts with the “uniqueness of specifier”. In other words, in the position of specifier of X-Bar skeleton, it is impossible to have the co-occurrence of Definite Determiners. Therefore the only solution for this problem is to classify those determiners as Q or Adj as a member of different optional categories like ‘optional modifier’. The following will be the tree diagram of the examples above despite some embedded syntactic problems against binary branching and the ‘uniqueness principle’.



Although we accept 'varios' or 'todas' as optional elements still some questions remain. If we take, for example, a closer look at more Spanish data, it is not so hard to find the cases where those elements considered as Q or Adj, optional modifiers can be used as one of the independent determiners. That is, we have cases in which they act like a separate determiner. Consider the following examples:

- (2-6) Varios coches están en la calle.
 Various cars are in the street
 'Various cars are in the street.'

(2-7) *Coches están en la calle.
 Cars are in the street.

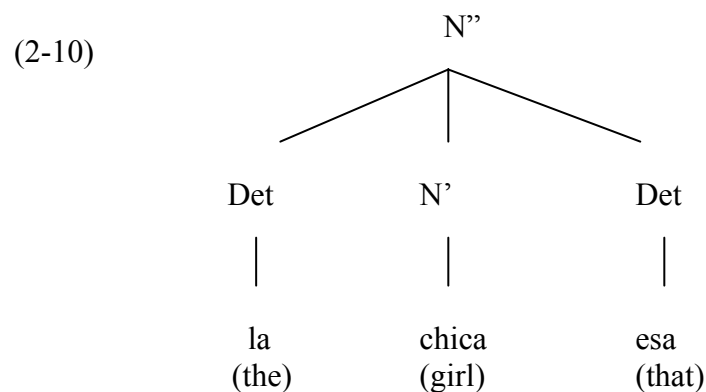
In the example (2-6), ‘varios(various)’ acts like a separate determiner. It is used without any other determiner and is not an optional constituent, unlike in (2-4), where it was accompanied by ‘los’ and was optional. Therefore, in general the elements like Q and Adj also can stand alone in the position of determiner.

In addition to the case mentioned above, there are instances where it is possible for the determiner to appear in the post-nominal position. In that case it is harder to account for the examples in the X-bar framework. These sequences seem to contradict binary branching, and the uniqueness principle for Specifiers. Consider the following examples.

(2-8) la chica esa
 the girl that
 ‘that girl’

(2-9) el coche mio
 the car my
 ‘my car’

In these examples, the demonstrative and possessive determiners which usually come before the noun appear in the postnominal position. Then if we keep the uniqueness principle of specifier, and binary branching of X-bar theory, it becomes hard to explain the syntactic properties of the determiner shown in postnominal position in the following diagrams of the example (2-10).



2.1.4. Genitive NPs in English

There are some other empirical basis on which we can motivate the modification of NP Hypothesis for Determiners. For example, we can take the behavior of ‘s-genitive’ construction in English as evidence. In the NP analysis of the Determiner, the positions of specifiers are the most suitable place to put the determiners in English like *the*, *a*, *that*, *this* etc. Recall, however that one of the basic principles underlying X-bar theory is that ‘all non-head material must be

phrasal'. In this sense the elements in Specifier position should be phrasal categories. But from most of the cases of syntactic behavior of Determiners that we have seen so far, they do not seem to be phrasal, rather, they seem to behave as heads.

The behavior of 's-genitive' in English might provide one piece of evidence for this. Consider the following examples.

(2-11) the boy's toy

(2-12) the boy eating over there's toy

(2-13) *the boy's eating over there toy

(2-14) *the boy eating over there's the toy

(2-15) *the that toy

The fact that the possessive marker -'s attaches after the full possessor NP in (2-11), (2-12) and (2-13), means that it acts as a small separate and independent word which denotes the possessive relation. Also from (2-11) and (2-14), we can note that the possessive marker 's' and the determiner 'the' are in complementary distribution. This means that they are categories of the same kind. In other words, they may be separate instances of the same category. If this holds true, in the NP analysis the whole part of "the boy eating there" with the possessive determiner '-

s' should occupy the specifier position. However, this introduces a conflict with the facts shown in (2-15), since at least in English there can be only one determiner in a noun phrase.

2.1.5. Weakness of the NP Analysis for Determiners

In summary, from all the arguments so far examined, we can see that the traditional framework of the NP analysis, with the Determiner as its specifier constituent does not account for some Spanish grammatical data as well as for some English data, in particular the cases of co-occurrence of prenominal determiners and postnominal determiners in Spanish and the case of –'s genitive construction in English.

Unlike other types of optional modifiers, the determiner in specifier position is not optional. This might mean that it is necessary with a particular function. In this sense, we can assume that determiner elements play an important and indispensable role in the internal licensing of the elements in nominal structure. In addition, we might expect a special role of the DET for the semantic licensing of the noun phrase. Thus, it would be expected that without DET it is hard or impossible to derive an appropriate interpretation of NP regardless of its occurrence in the sentence.

We have seen so far the cases in which the uniqueness principle of specifier position in the X-bar framework conflicts with the co-occurrence of Determiners in prenominal positions. Moreover, some of those which should be considered as optional elements in the NP Hypothesis are not optional in fact. Then, if we can assume that Determiners are not optional in the NP Hypothesis, we can modify some structural assumptions to accomplish the descriptive adequacy in the Spanish data.

However, there are still some residual problems. As we can see in the following examples, the assumption of obligatoriness of specifiers applies not fully but optionally, depending on the position of the NP in the sentence and on the properties of its head noun.

In the following sentences, (2-16) and (2-17), we can see that the specifier cannot co-occur with unmodified proper nouns. So, in this case it is clear that depending on the type of nouns the rules apply differently.

(2-16) *el Juan está en Nueva Jersey ahora.
 the John is in New Jersey now

(2-17) Juan está en Nueva Jersey ahora.

John is in New Jersey now.

‘John is in New Jersey now.’

In (2-18),(2-19) and (2-20), also we can see that obligatoriness of specifier is not consistent since it does not apply when the common noun appears in object function but bare nominals are not allowed in subject function in Spanish.

(2-18) Juan come comidas mexicanas mucho.

John eats foods mexican much.

‘John eats much of mexican foods.’

(2-19) *Comidas mexicanas son muy sabrosas.

Foods mexican are very delicious.

(2-20) Las comidas mexicanas son muy sabrosas.

The foods mexican are very delicious.

‘The mexican foods are very delicious.’

Then, for these cases to achieve descriptive adequacy, it is necessary to modify our assumption. For example, a possible analysis for the sentence (2-20) might be that the specifier position of determiner of ‘comidas(foods)’ is filled with an empty category. If there are empty categories instead of overt determiner it has indefinite interpretation like ‘unos(some)’. If it doesn’t have indefinite interpretation, the Determiner should be realized.

However, as previously mentioned, the linguistic theory has been developed on the basis of maintaining the two aims of ‘Descriptive adequacy’ and ‘Explanatory adequacy’. For the goal of achieving “Explanatory adequacy” it is necessary to constrain the proliferation of the rule system. In this sense, the NP Hypothesis framework of determiner analysis is not appropriate for the explanatory adequacy as well as descriptive adequacy. Then it seems more reasonable to try to find a way out of the dilemma in question by adopting some other alternative.

2.2. DP HYPOTHESIS OF ABNEY (FUNCTIONAL CATEGORY ANALYSIS)

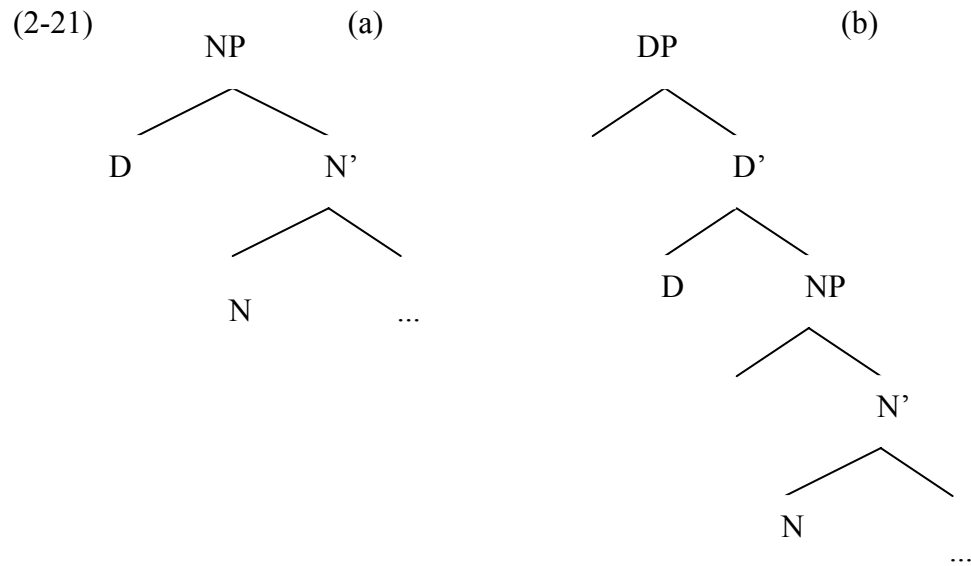
2.2.1. DP vs. NP Structure

We have seen that the analysis of NP specifier for determiners has some serious problems. First, although specifiers are unique in many cases, it is not

hard to find examples of co-occurring determiners. Again, contrary to the NP analysis, specifiers are not strictly obligatory.

In addition, one thing which is generally accepted is that determiners are heads. However, it is also assumed that all constituents in the X-bar schema, except for the head X^0 , are phrasal categories. In this sense, if the determiner occupies the specifier position, it must be a phrasal category. We have a paradox between determiner as a head or determiner as phrase.

It seems more natural that determiner heads its own phrase and is in higher position than NP in terms of hierarchical structure. As a result, it introduces NP as its complement. This view makes the Determiners fit better in X-bar schema. This new structural view is shown in the following tree diagram (2-21b), and in comparison with the traditional structural view represented in (2-21a):.



Furthermore, the Determiner-headed structure, as in (2-21b), is on a par with the clausal CP structure which is headed by the functional category of C(omplementizer).

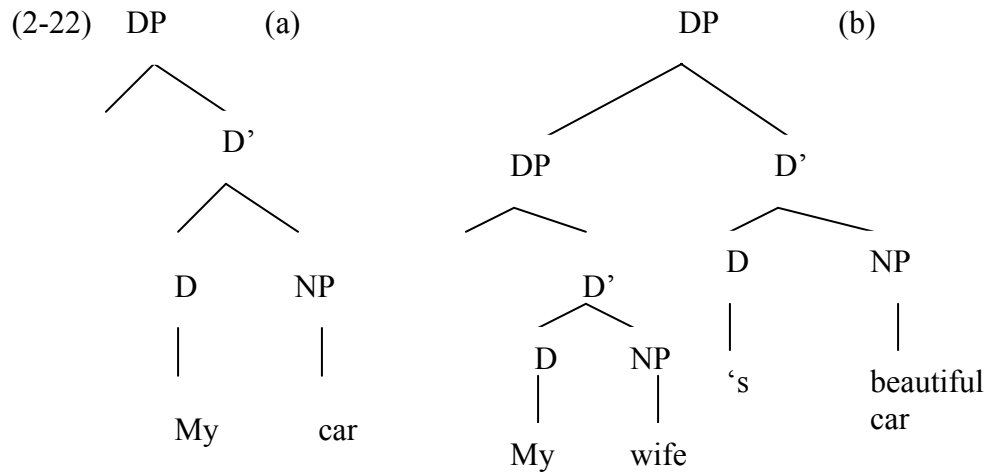
Accordingly, a new analysis was introduced by Abney(1987), among others, which comprises new aspects of the determiner as an element of the functional category class, and as head of its own phrasal category, with NP as its complement. This structural view has come to be known as the DP (Determiner Phrase) Hypothesis.

2.2.2. Determiners as Functional Category

One of the most important and new theoretical changes that we can find in the DP Hypothesis framework is that we classify the Determiner elements as one of the functional category. It means that unlike a lexical or semantic category, Determiners are transparent for the subcategorization especially in the predicative NP position.

This argument of the Determiner as a functional category is based on the idea that there is a semantic parallelism between the Noun phrase with possessor as a determiner and regular sentences. Since in some languages, we can find overt agreement between the possessor and head noun, many others have tried to set up parallel relationships between the agreement found in possessor-head noun and that in subject-verb.

For example, in the following tree diagram, we can say that the possessive element like ‘my’ in (2-22a) and ‘s in (2-22b) introduce the NPs ‘car’ and ‘beautiful car’ respectively.



Abney compared this relationship to the one in which the IP (Inflection Phrase) as a functional category introduces VP (Verb Phrase) in the sentence. In other words in the DP Hypothesis, the determiners that occupy the highest D head position as a functional element introduce the NP. So, in the DP Hypothesis, Abney classified the Determiner as functional categories which lack descriptive content. Thus, their role in the semantic interpretation is strictly functional, regulating the interpretation of definiteness and indefiniteness.

We need to review the motivation for the classification of Determiner as functional category. As we have DPs not only in predicative position but also in argument NP position in subject, if the subcategorization is the critical reason for the functional category classification, it is hard for us to generalize it for all cases

of use of DPs including argument DP(=NP) position. Also, we need to be careful in generalizing the principles of transparency of functional elements like Determiner since not all types of functional category elements are transparent for subcategorization. For example, VP subcategorizes some elements of CP in English like in the following examples, where V, “wonder” subcategorizes the types of complementizer in its complement clause.

- (2-23) a. *I wonder that he wrote the article.
 b. I wonder whether he wrote the article.

It is well known that the concept of functional categories utilized in the DP analysis had previously been applied to the CP. Like the case of Determiner, the Complementizer was one of the elements that does not fit well into X-bar schema, and the CP(Complementizer Phrase) Hypothesis was developed to be in line with X-bar theory. Consequently as a functional category like Determiner, the Complementizer is considered present not only in embedded clauses but also in root and simple sentences, and it plays an important role in wh-movement and sub-aux inversion.

2.2.3. Abney's Ideas

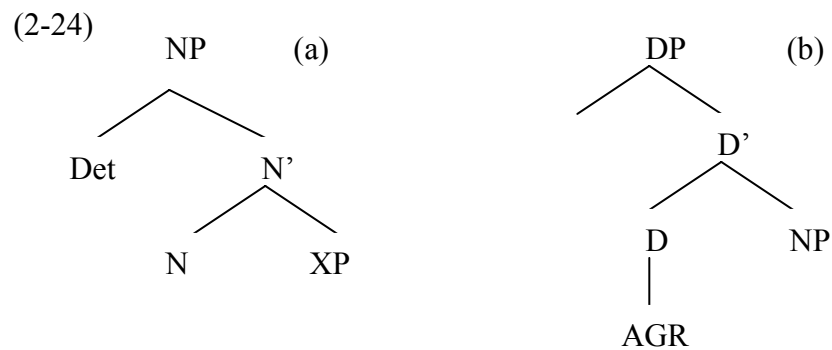
We now review Abney's pioneering ideas, the DP Hypothesis in generative syntax, the motivation for the DP Hypothesis and the distinction between functional and lexical categories in regards to determiner, the main evidence for the hypothesis, and the basic structure of DP proposed by Abney.

First, Abney claimed that the traditional or standard NP Analysis does not account well for all the cases with all possible elements that can appear in the prenominal position. For instance, when a Determiner appears alone in some positions in which NPs can appear alternatively, it can provide all information and features for the indication that NP would present. In addition, the development of DP Hypothesis is mainly motivated by the structural parallelism between nominals and clauses.

The idea of NP and CP parallelism began in early 1960s, from the days of early generativism. In his important study on nominalization in English, Lees(1960), for example, claims that all derivational process of Nominalization can match equally the transformations used for the derivation of sentences. Lees also points out that the Nominalization process can apply to any category which appears in argument positions. In other words, the embedded sentences which can appear in argument position through the Nominalization process, should be dominated by Noun Phrase or even Noun, the head itself which introduces the

embedded clause structure. According to Abney the element in NPs equivalent to the functional elements in the sentence is the Determiner. For him Determiners are the lexical realizations of inflectional elements with functional features.

In this sense, the following diagrams show Abney's conceptual difference between the NP and DP Hypothesis.



As mentioned in the previous section, Abney claims that D(et) heads its own phrase DP, and D selects NP as its complement. One important thing that we have to notice here is that the relationship between the D and its complement NP is functional. Unlike the normal and lexical relationships found between Heads and Complement, in the relationships between D and its complements, D as a head cannot theta mark its complement. In other words, it is not the lexical H-C

relationships in which the Head theta marks its complement. Instead it is a functional H-C relationship. In this relationship, the complement NP is in a relation of predication and the function of Determiner is to regulate the interpretation of NP with definite or indefinite individual reference.

We have to notice that while the verbs are called lexical categories assigner, the Determiners are functional categories assigners. Also Abney mentioned that the functionality of the determiner is supported by the parallel analysis of the role of Inflection in the sentence. In other words, in the Noun Phrases the agreement between possessor and head noun works in a similar way to the agreement between the Subject and Verb's inflection.

2.3. ASYMMETRY PROPERTIES BETWEEN FUNCTIONAL CATEGORIES & LEXICAL CATEGORIES

Fukui and Speas(1986) studied the structure of functional categories and characterized their properties in contrast to lexical items. Based on the Abney's DP proposal, the first asymmetry property that they pointed out is that unlike the lexical categories the functional categories have a unique specifier position which is under the XP (maximal projection) node and ends its projection. This means that the functional categories' projection has only one specifier position available for the head of FP, whereas the lexical one may iterate their specifier position under the X' node which dominates another X' projection with specifier position.

Therefore, in this sense the following examples, (2-25) a, b, and c are ungrammatical since they have more than one functional head (Determiner).

- (2-25) a. *the this good car
 b. *the the very good car
 c. *the my good car

On the other hand, the following examples are possible because the lexical categories can iterate its specifier position.

- (2-26) a. the very very good car
 b. my very good white car
 c. my big white car

Based on this idea, we can notice that Fukui and Speas claim that the functional categories and lexical categories have different structure of X-bar schema. So, they hold that only the specifier of functional categories can close-off the projections. Consequently based on Abney's argument, they claim that the proposal that DET, COMP and INFL constitute a natural class of Functional

Categories makes possible the parallel structure for the phrasal categories of DP, IP and CP.

2.4. SPANISH DETERMINERS AS LEXICAL CATEGORY OF MCMANNESS

In the previous section, we have seen some syntactic characteristic of Determiners as functional Categories. Now we will turn to the problem of Spanish determiners as lexical elements.

Mcmanness (1996) claims that unlike English and Japanese, the Determiners in Spanish are lexical category. Mcmanness points out that most of the data used by Fukui and Speas are from English and Japanese, and the analysis of functional category accounts well for them.

In order to support her assumption that Spanish determiners are lexical categories, Mcmanness argues that Spanish determiners can govern and case mark their complements, and the direction of case assignment of Spanish determiners is rightward. Recall that following Abney's proposal, Fukui and Speas argue that the functional categories cannot govern or case-mark their complement.

As evidence in support of her assumption, Mcmanness mentions the iteration of Determiners in Spanish. The followings are the examples given by Mcmanness.

- (2-27) a. los libros míos
the books of mine
'the books of mine'
- b. estos libros míos
these books of mine
'these books of mine'
- c. estos tres libros míos
these three books of mine
'these three books of mine'
- d. los libros estos
the books these
'these books'
- e. mis tres libros
my three books
'my three books'

However, this argument of Mcmanness about the Spanish Determiners as a lexical category which is based on the iteration of Determiners will be accounted for in chapter three with the analysis of ‘LF movement’ and ‘the elimination of pleonastic elements’, so that we can still maintain the assumption that Spanish determiners are functional categories like English without disparities between them.

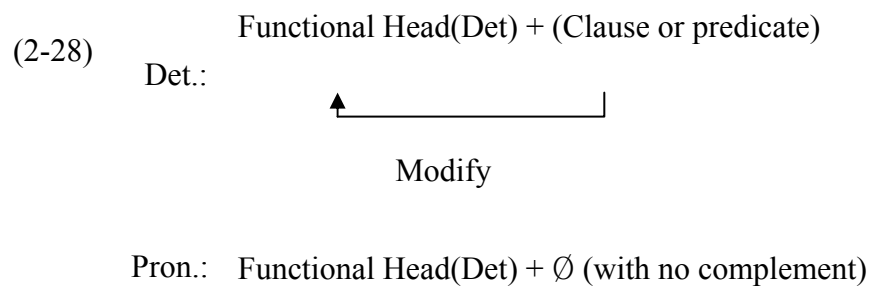
2.5. DETERMINERS AS MODIFIED PRONOUNS

2.5.1 Determiners are Pronouns

One of the most important analyses which influences argument regarding Determiners is the one by Luján(2000), who sees the Determiners from a radically different point of view. Following Bello(1847) Luján considers Determiners as the variant forms of pronouns. This idea is originally based on the assumptions by Postal(1978), Bello(1847) and Jepsen(1924) who took the Determiners to be the same as the third person pronouns.

Luján’s proposal is different from the current DP proposals in the following sense. Some current proposals for Spanish consider the Determiners as a null pronoun like in the case of nominalized adjective or as an abstract operator for the specificity of definite DP. Luján claims that these proposals make the Determiner just a mere locus for agreement and case feature, but Determiner

already has the attributes of a null pronoun. Thus, she argued that the Determiners are modified pronouns, and the references of various uses and interpretations of nominals are to be straightforwardly derived from their pronominal nature. The following will be the basic schemata of her assumption.



The Definite Determiners are equated with the third person pronoun, while Indefinite Determiner is a variant form of the pronoun ‘one’.

Furthermore, it is claimed by Luján that the referential function of Determiner phrases is on the Determiner itself. In other words, we can say that Determiners are semantically described as discourse linking functions. This linking should be between DP and Discourse Antecedents.

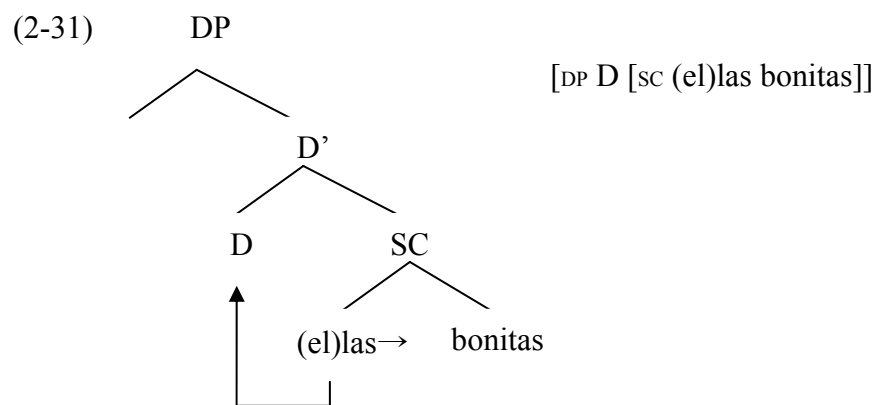
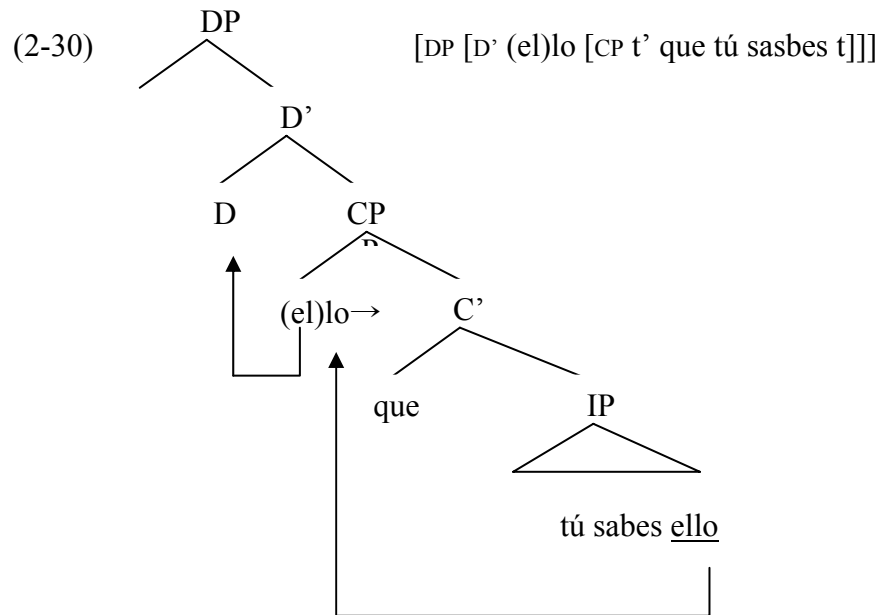
2.5.2. Determiner with CP and with Adjectives

In addition to the basic structure of Determiner Phrase, Luján also tries to account for the case of DP in restrictive relatives as well as the nominalized

adjective in Romance, based on the following structural assumptions, previously proposed by Bello(1847).

- (2-29) a. DET. = bare Pronouns
b. DET. + Mod. = Pronouns + Modifiers

Thus, according to the above assumption, the nominalized sentence like ‘lo que tú sabes’ DP, and ‘las bonitas’, have the following structure.



Luján argues that the lexical pronouns in Spec of SC(Small Clause) or CP in (2-30) and (2-31) respectively, keep its referential and anaphoric functions once it moves to Determiner position where it is cliticized. In other words, it keeps the same denotative capacity as a bare pronoun. Also we can see that there is a creation of operator-variable structure.

What is significant from the analysis of Luján is that we can apply this framework to various types of Determiner related phrases such as D-CP, D-AP, D-NP etc. Lujan's analysis has an important implication for my analysis in the sense that the referential and anaphoric functions are fulfilled between the functional elements, and the operator plays an important role for the reference checking of the bound variable.

In the following chapter, I will define more in detail the universal structure of noun phrase based on the assumption of the existence of functional categories in DP. And it will be supported by the data of the three different target languages of this dissertation.

CHAPTER THREE

MULTIPLE FUNCTIONAL PROJECTIONS IN NOMINAL PHRASE

3.0. INTRODUCTION

In the previous chapter, we have seen the motivations and the general syntactic properties of the Determiner Phrase Hypothesis. We also argued that one of its theoretical motivations is based on the parallelism of structure between DP and CP (i.e. nominals and clauses). Recall that one of the most relevant features of this assumption is based on the existence of functional categories in both kinds of phrasal projections.

In this chapter, I consider the more recent and articulated research about the functional structure of nominal phrases, such as the ones by Cinque(1994, 1999, 2001a, 2002), Bruge(2002) and Giusti(2002).

After Chomsky's(1986) introduction of functional structure, which is the first attempt to extend the X-bar format to the non-lexical categories, Abney(1987) and Pollock(1989) have tried to apply the functional structure to the determiner phrase (DP) and to the sentence level, respectively. Since then, there have been many attempts to set up a systematic mapping of the various functional phrases in different languages.

Among the numerous works following this trend and borrowing from proposals by Cinque(1999), Bruge(2002), and Giusti(2002), I argue that there exist multiple functional phrases(FP) in the extended nominal phrase of the target languages of this study. I also argue that those functional phrases have their own specific features which contribute to referential interpretation. Various elements which function as modifiers occur in the specifier position of functional projection. Furthermore, on the basis of these assumptions, I attempt to provide a unified analysis that can account for crosslinguistic variations regarding word order and co-occurrences of determiner elements in the nominal phrase.

3.1. BASIC ASSUMPTIONS ON FUNCTIONAL CATEGORIES

In this section I will review some of Giusti's(2002) basic assumptions about the functional categories which are more sophisticated than the ones made by Abney. Recall that in general, the functional category is considered as a weak element from the perspective of semantics as well as morphosyntax. In other words, semantically a functional category bears just some features which are common to other elements of the same category such as number, gender, definiteness, deixis etc. Based on this basis, I adopt the following notions advanced by Giusti(2002) about the functional category.

- (1) *The realization of a functional head is a last resort procedure.*
- (2) *If a functional head is realized, then it is either a dependent morpheme or a weak(free) morpheme.*
- (3) *All the functional heads of an extended nominal projection share the same ϕ features.*
- (4) *The interpretation of a noun phrase at LF is done in its higher Specifier position (generally referred to as Spec DP, here which is referred to as SpecFPmax)*

(Giusti 2002)

Among these assumptions, (1) is significant in particular to account for the optionality of the presence of articles as determiners. In other words, if the syntactic information which proceeds from articles is provided contextually or in any other way, the realization of the definite article is not necessary. We will look at this possibility in detail afterwards, in particular, the optional presence of the definite article in Korean. So, in general we can assume that since the presence of an overt functional category is a last resort procedure, less functional elements are to be expected in the sentence.

Also we have to notice from the assumption (3) that there should not be any conflict on the agreement for these ϕ features among modifiers of Noun.

Based on this notion, I assume that while it is not necessary for all the functional heads to share the same ϕ feature but it is possible for an extended nominal projection to have combinations of multiple features of functional categories such as definiteness, gender, number, deixis, person and case etc. However, it is not allowed to have combinations of modifiers which have conflicts in agreement feature. For example, it is impossible to have the number feature of singular and plural in one nominal projection, such as would be the case in “*el dos libro (the two book)” which is ungrammatical due to feature conflict.

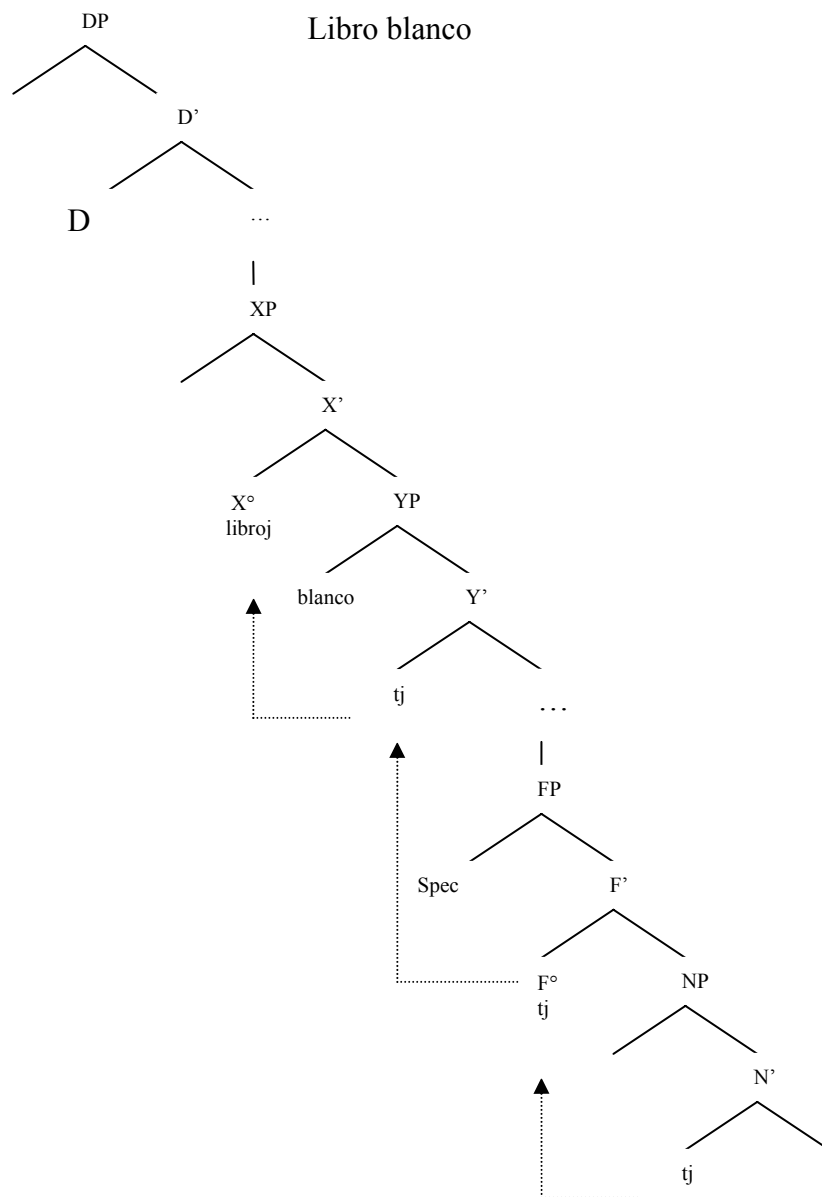
3.2. MULTIPLE FUNCTIONAL PROJECTIONS IN DP

Following Cinque’s (1999) assumption, it is generally assumed that each of the different classes of adjectives is universally base-generated in the specifier position of a functional projection. In other words, Cinque argues that there is a sequence of APs of different classes between DP and NP in the extended Nominal Projections, and that the position of adjectives inside nominal phrase is [Spec, FP]. His assumption is important for the analysis in the present.

In order to account uniformly for the co-occurrence among the modifiers and for their relative order variation across languages, the assumption of Multiple Functional Projections in DP is indispensable. Cinque’s assumption is critically based on the movement of the head noun inside the nominal projection. In

particular, due to the word order of Noun+Adjective, common in Romance languages such as Spanish, he argues that the head noun, which is base-generated in a lower position than an adjective, raises up to the head of an intermediate FP between DP and NP. The following diagram (Bruge 2002) is the sample structure of the nominal structure of “libro blanco”.

(3-1)



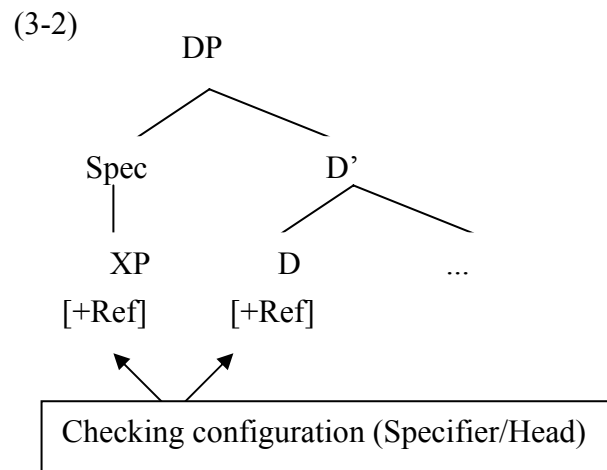
In this structure, for Noun movement to take place, there should be no element which intervenes and blocks this movement in head position in any of the intermediate projections all the way up to the landing site such as the head position of DP(D°) or an intermediate functional head position.

3.3. MOVEMENT OF NP INTERNAL ELEMENTS AND NOTION OF SPEC OF DP

In addition to the basic notion of the DP Hypothesis, we assumed already that some elements including even the head noun can move inside the extended nominal projections. I claim that one of the most important motivations of these movements is feature checking for referential interpretation. In this section, we will look more closely at the feature checking that takes place inside the extended nominal projection.

For this analysis, basically I accept the assumption of the existence of [\pm Ref] feature in D°(Head of DP) argued by Longobardi(1994). Longobardi claimed that all D° positions are universally generated with an abstract feature [\pm Ref] which must be checked with respect to its values. In other words, we assume that the referentiality feature occurs in D° position, and that its value, positive or negative, should be checked by some elements which are found in the extended nominal projection.

Thus according to the assumption above and the Spec-Head feature checking configuration in order to check out the $[\pm\text{Ref}]$ feature in D° position, some elements might move to $[\text{Spec}, \text{DP}]$.



So, in this sense, I believe that the position of specifier of DP plays a very important syntactic role. I claim that as $[\text{Spec}, \text{IP}]$ is reserved for the movement of subject of VP, the $[\text{Spec}, \text{DP}]$ also is the landing site for the movement of some internal elements of NP for $[\pm\text{Ref}]$ feature checking process. I assume that this feature checking is universal, but in terms of types of movement, there are language parametric differences. For example, in some languages this feature checking must be done via movement before Spell-Out, while some languages might do the same process by a movement at LF, after Spell-Out. I will discuss

this feature checking in detail in the next chapter from the prospective of comparative study.

Here, under the structural configuration of the DP Hypothesis and the assumption of [\pm Ref] feature checking, I would like to revise the basic notion of [Spec, DP] in extended nominal projections. I claim that as a subject role of VP in IP or CP structure, the [Spec, DP] of DP(= extended NP) plays an important role for the referentiality of the entity which is defined by the features of determiner such as [\pm Definiteness], [\pm Deixis], [\pm Singular], [\pm Gender] etc. So, NP once being introduced with determiners in the sentence, the D bears the referential features which should be checked out in terms of feature checking process.

CHAPTER FOUR

DEMONSTRATIVES AND ADJECTIVES IN DP

4.0. INTRODUCTION

In this chapter, I sketch the syntactic behavior of demonstratives regarding crosslinguistic variation in their position and co-occurrence with other modifiers, and propose a way to account for it, adopting some ideas from studies in the current literature on DP.

One of the most relevant crosslinguistic variation regarding the word order and co-occurrence within the extended nominal phrase is the syntactic behavior of demonstratives. In particular, it is possible for the demonstratives to appear in post-nominal position in Spanish, whereas English and Korean do not allow it.

(4-1)	S:	estos	tres	libros
	E:	these	three	books
	K:	i-(tul)	sey-kwen	chayk-tul
		these	three-(CL)	book-(PL)
		‘these three books’		

(4-2) S: los libros esos
 E: *the books those
 K: *ku chayk-tul cu-(tul)
 the book-(PL) that-(PL)
 ‘those books’

Also, I discuss the crosslinguistic variations for the relative position of adjectives and possessives which are found in Spanish, English and Korean, as shown in the following examples.

(4-3) S: *la blanca casa
 E: the white house
 K: (ku) hayan cip
 the white house
 ‘the white house’

(4-4) S: los libros mios
 E: the books of mine
 K: *(ku) chayk-tul na-ui
 the book-(PL) 1a-(GN)
 ‘the books of mine’

(4-5) S: *los mis libros
 E: *the my books
 K: (ku) na-ui chayk-tul
 the 1a-(GN) book-(PL)
 ‘my books’

In what follows, I will try to account for this variation in a unified analysis.

4.1. DEMONSTRATIVE IN DP

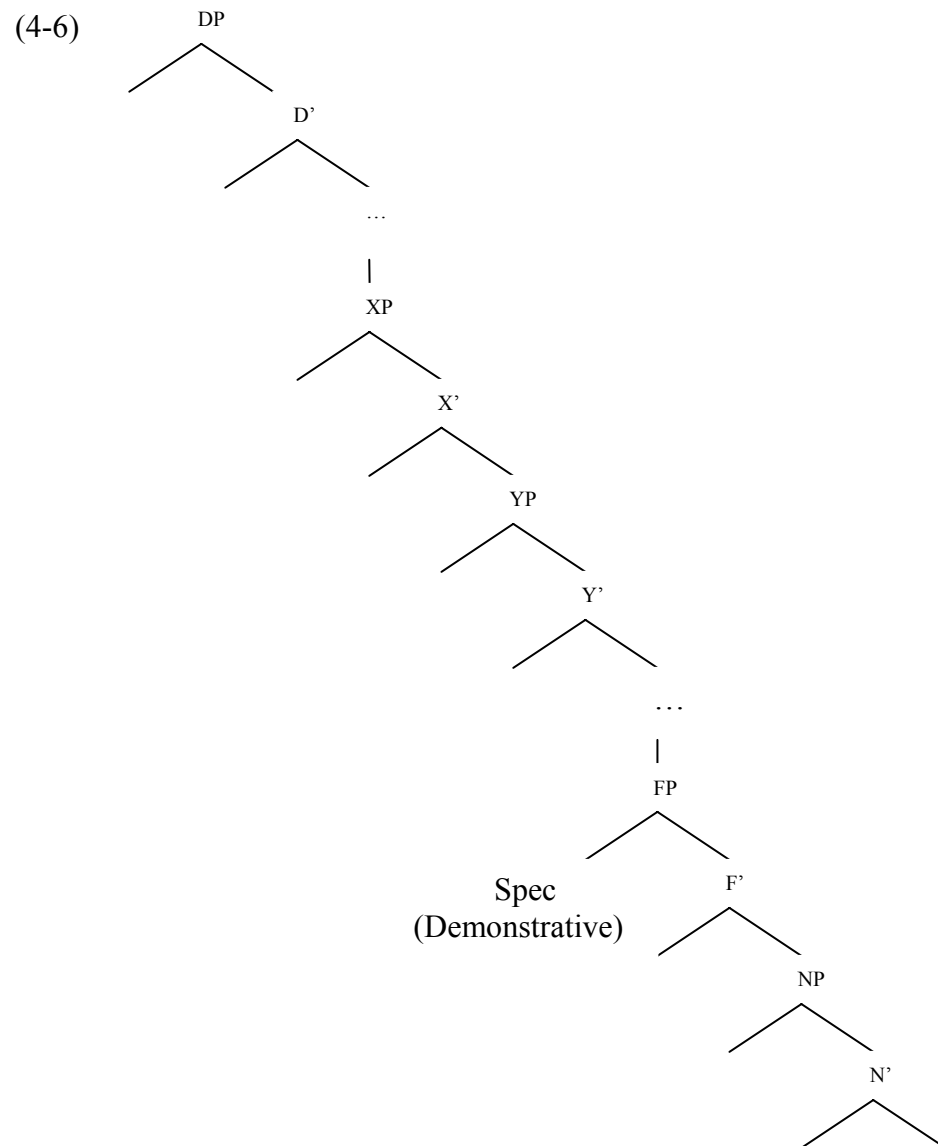
4.1.1. Demonstrative and [\pm Ref] feature

Recall that in Chapter three, following Longobardi(1994), it is assumed that the D position is universally generated with an abstract feature of [\pm Ref] which must be checked with respect to its value. Moreover, based on the fact that

demonstratives are not compatible with existential and partitive interpretation, I assume that the $[\pm\text{Ref}]$ feature is also one of the intrinsic features which the demonstratives have. Also, in most cases in which demonstratives appear, their presence has the function of making the deixis explicit. So, based on these notions, and following Bruge (2002) I assume that the demonstrative is specified for the $[\text{+Ref}]$ and $[\text{+Deixis}]$ features.

4.1.2. Demonstrative as Specifier

For the analysis of the structure of DP, regarding the position of demonstratives, I follow Bruge's(2002) assumption that this category is base-generated in the specifier position of a relatively low functional projection immediately above the N-projection within the extended Nominal Projection. Furthermore, Bruge(2002) claims that this is the unique and cross-linguistic universal base position for demonstratives. So the base position of demonstrative will be as schematically represented in the following.



Moreover, based on the fact that a demonstrative's base position is specifier, we can assume that it is a maximal projection.

The argument for the structural position of Demonstrative is similar to the one made in the previous chapter for the position of the Adjective in the specifier of a functional projection. It is crucially based on the fact that these categories (e.g Adj, Dem) do not block the head movement of Noun. In other words, if we assume that the head Noun moves to the head of higher functional projections, thereby accounting for the sequences of Noun+Adjective and Noun+Demonstrative, then these categories can not be heads, but must be in specifier of a functional projection

4.1.3. Pre- and Post- nominal Demonstrative.

Unlike English and Korean, Spanish allows the demonstratives to appear in the post-nominal position in DP, as illustrated below.

- | | | | |
|-------|----|---------------------|--------|
| (4-7) | a. | esta/esa/aquella | casa |
| | | this/that/that | house |
| | | | |
| | b. | estas/esas/aquellas | casas |
| | | these/those/those | houses |

c. la casa esta/esa/aquella

 the house this/that/that

d. las casas estas/esas/aquellas

 the houses these/those/those

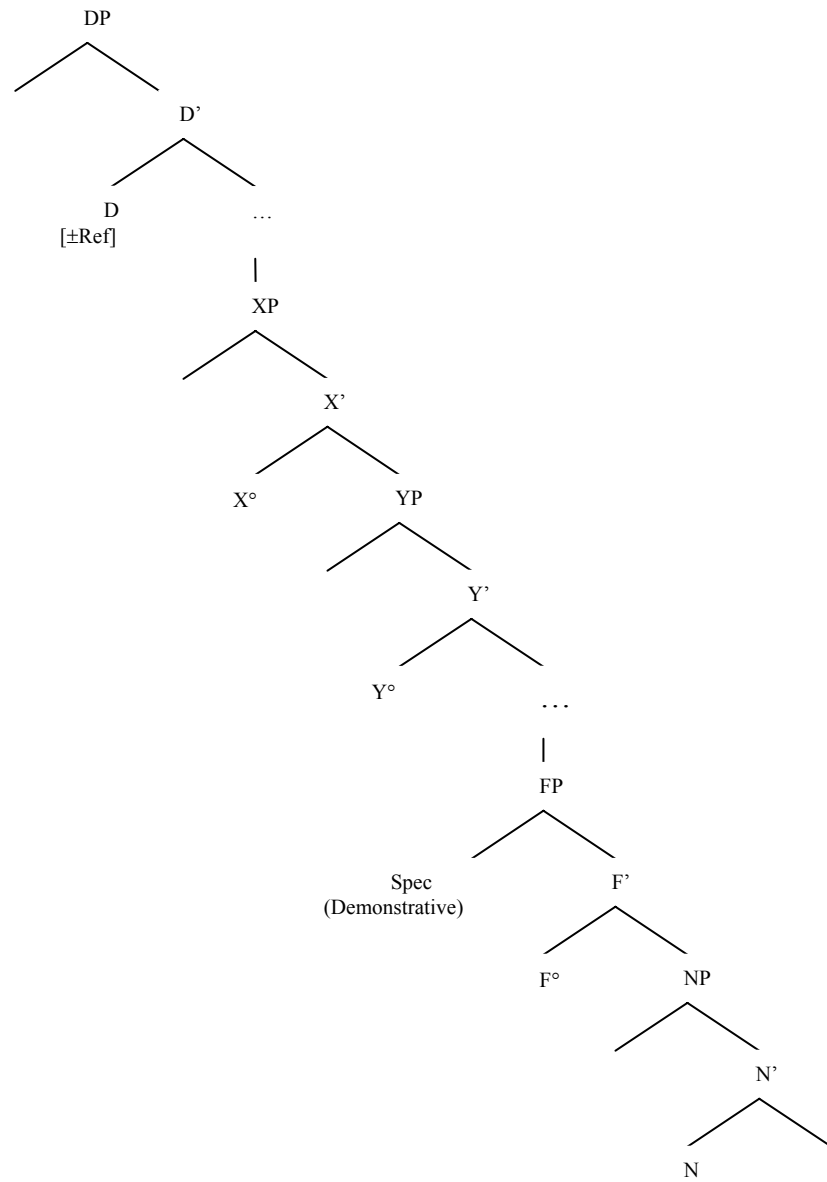
These examples indicate that there are two possible positions for the demonstratives in Spanish DPs. In particular, in order to account for the post-nominal position of demonstrative in Spanish, I adopt Bruge's(2002) notion that "in Spanish the demonstrative can raise to [Spec, DP] optionally before Spell-Out, but it must raise to [Spec, DP] obligatorily after Spell-Out."

4.1.4. Position of Demonstratives in Spanish, English and Korean

In what follows, we will compare the syntactic differences of Determiner Phrases of our target languages according to the position and movement of demonstratives.

To this effect, I assume the following basic structure for the extended nominal projections in (4-8) repeated from Chapter 3 showing multiple functional projections, the [\pm Ref] feature in D° , and the Demonstrative in specifier of an intermediate FP.

(4-8)



On the basis of this DP structure with multiple functional projections, and the movement of Demonstratives for feature checking purposes, we can account for the observed variation regarding the position of Demonstratives.

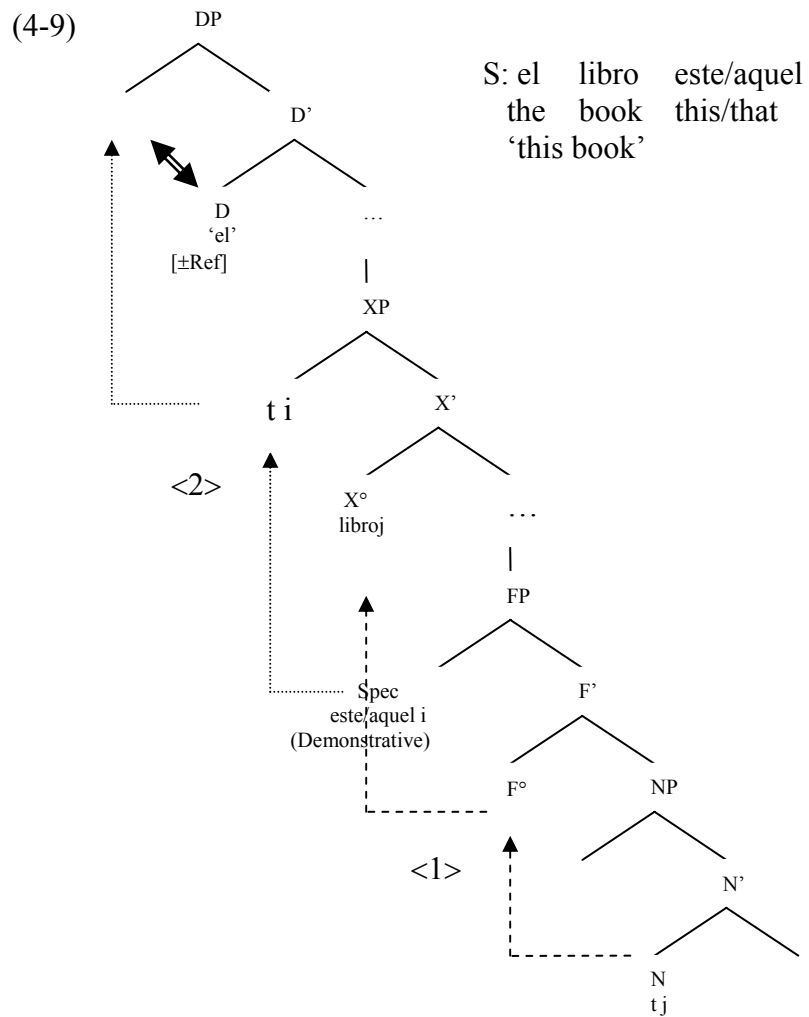
4.1.5. Spanish : Pre- and Post-nominal position of demonstrative

First, as previously assumed, Demonstrative is generated in the specifier of a functional projection, lower than other functional projections but higher than the NP projection. Thus, in its base position, it linearly precedes Noun. The post-nominal demonstrative results from the head Noun raising to the head position of a higher functional projection than the functional projection where the Demonstrative is base-generated. In Spanish this movement is obligatory, and it serves feature checking needs. A Noun must undergo head movement, regardless of its ordering with respect to Demonstrative, and even regardless of the presence of a Demonstrative in the DP projection.

In addition, we assume that the domain for referential interpretation is defined in the D° of DP through feature checking between Spec and D° (Brugge, 2002). To this effect, the demonstrative should move to [Spec, DP] either before Spell-Out via overt movement, or after Spell-Out via covert movement.

4.1.5.1. Post-nominal Demonstrative in Spanish

Now, on the assumption that the movement of the head Noun to a functional projection higher than the FP containing the Demonstrative derives the postnominal demonstrative, we must postulate the virtual movement of Demonstrative from its base position. In other words, while the N moves overtly, i.e. before Spell-Out, the post-nominal demonstrative raises to [Spec, DP] for [\pm Ref] feature checking after Spell-Out. All feature checking is obligatory. The difference lies in whether the category that needs to feature check can delay by the ‘Procrastinate’ principle, doing it after Spell-Out. If it can not, due to the strength of the feature involved, then the associated movement is overt and pre-Spell-Out. Otherwise, ‘Procrastinate’ would dictate that it be post-Spell-Out, involving no apparent movement. The following representation (9) shows the raising movements in DP, of N and Demonstrative;



Now we will turn to the matter of the presence of the definite article 'el' in D° position in co-occurrence with the post-nominal demonstrative. To explain this co-occurrence, I follow notions advanced by Giusti (1998) for functional projections;

- (4-10) *“Economize Functional Heads.”*
(4-11) *“A functional Projection must be visible at all levels of representation: by (a) making the Spec visible and /or (b) making the head visible.”*

The notion in (4-10) means that in general the Functional Projection can be instantiated when there is a feature which should be realized. And by the second notion we can assume that this feature should be visible to be interpreted at LF, and this feature might be realized by one of either Specifier or functional head. So, accordingly, the instantiation of the definite article ‘el’ in the example ‘el libro este’ is a case of last resort, and by this process the relevant feature in D° satisfies the visibility condition in (4-11). To summarize, the presence of the definite article in DP fulfills the visibility condition on functional projection.

A related matter for consideration is that the only possible Determiner in DP in the case of the postnominal demonstrative is the definite article. In other words, we can see that in the prenominal position the demonstrative and the definite article are in complementary distribution, but the postnominal demonstrative requires the co-occurrence of the definite article, as shown by the examples;

(4-12) el libro
the book
'the book'

(4-13) este libro
this book
'this book'

(4-14) *el este libro
the this book

(4-15) el libro este
the book this
'this book'

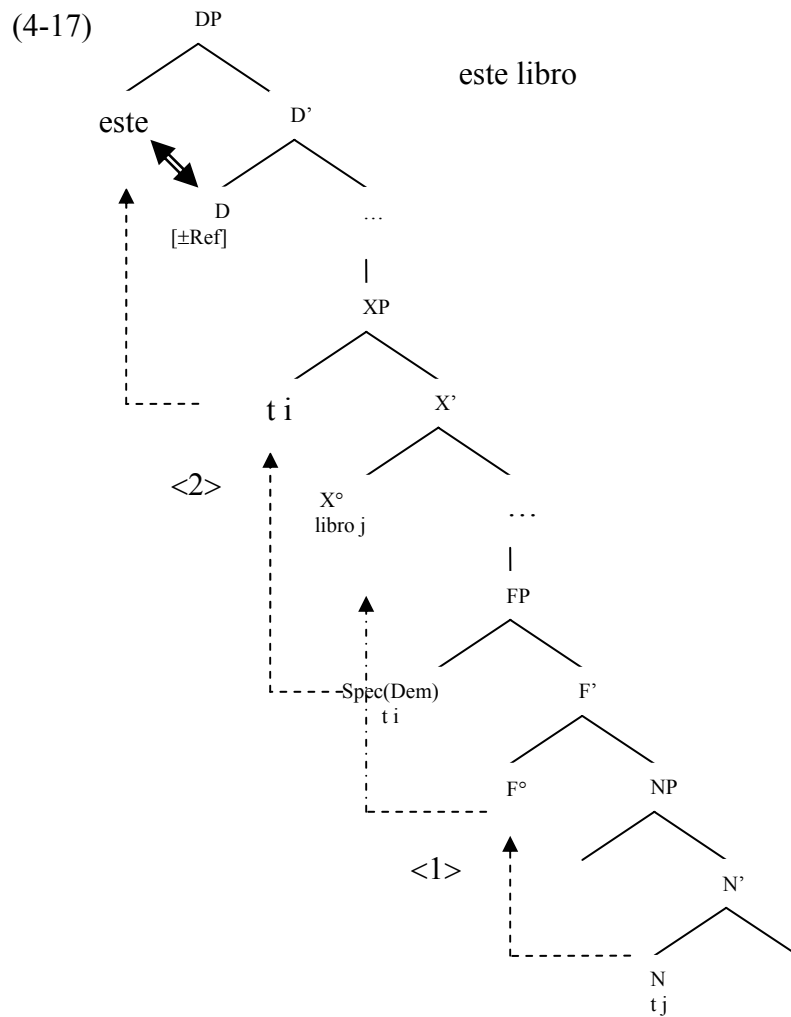
(4-16) *un libro este
a book this

In the next chapter, I will look at this relationship between demonstratives and the definite article in terms of functional features.

4.1.5.2. Pre-nominal Demonstrative in Spanish

Now we will turn to the case of the prenominal demonstrative. Assuming that the basic structure is the same for both post- and prenominal demonstrative, we can account for this variation via the movement of demonstrative at different points in the derivation. For the prenominal demonstrative, unlike the post-nominal demonstrative, the checking movement precedes Spell-Out.

Thus, in order to derive the prenominal demonstrative, it is necessary for the demonstrative to move all the way up to [Spec, DP]. It is obvious that the [Spec, DP] is the landing site for this movement, in order to satisfy the visibility condition of [\pm Ref] feature without the definite article. In other words, for feature checking under Spec-Head configuration, the demonstrative needs to move to [Spec, DP] where a referential interpretation is provided.



To summarize, regarding the movements of demonstratives and the head Noun in the Spanish extended nominal projection, we can notice that there are three kinds of movements. The first is the universal head noun movement to the head of an intermediate functional projection. Now, in addition to this, to derive the prenominal demonstrative, the demonstrative which is base generated in

[Spec, FP] raises up to the [Spec, DP] before Spell-Out at PF, and there it satisfies the referential feature checking process. On the other hand, in the case of the post-nominal demonstrative, the movement of the demonstrative takes place after Spell-Out, at LF.

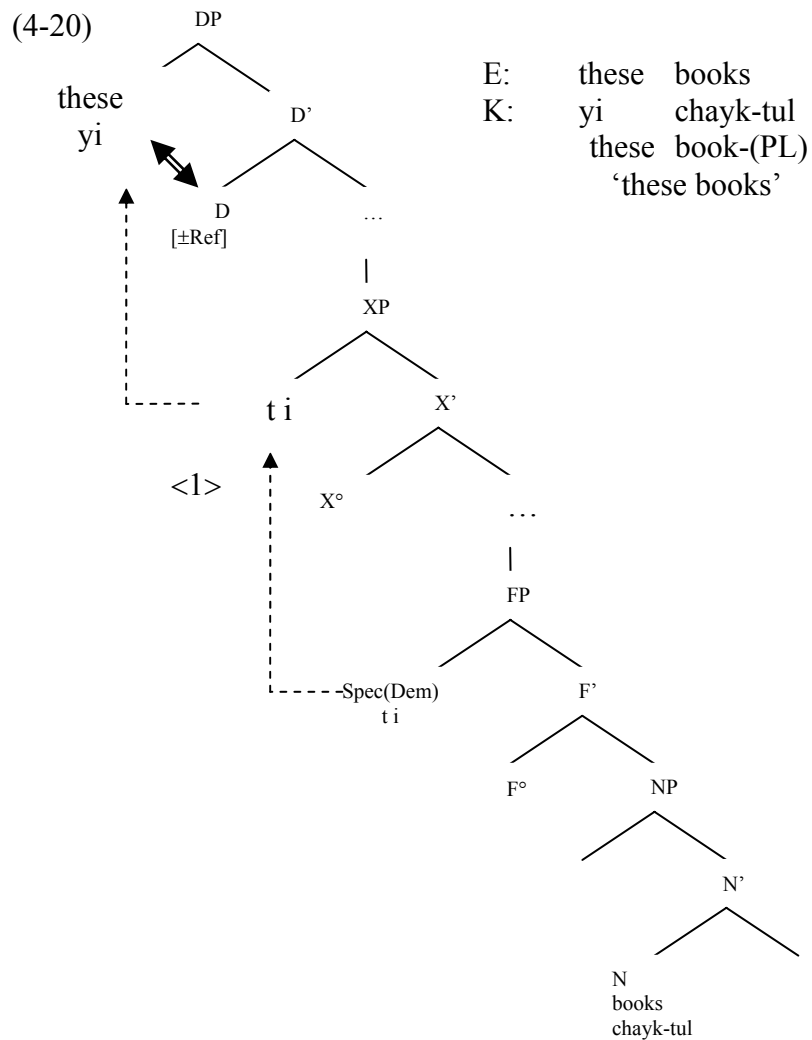
4.1.6. Korean and English : Prenominal Demonstrative

As we can see in the following examples (4-18) and (4-19) repeated from Chapter One, English and Korean do not allow the post-nominal demonstrative in the extended nominal phrase:

(4-18) S:	los	libros	esos
E:	*the	books	those
K:	*ku	chayk-tul	cu-(tul)
	the	book-(PL)	that-(PL)
	'those books'		

(4-19) S: estos libros
 E: these books
 K: yi chayk-tul
 these book-(PL)
 ‘these books’

First, the same basic structure of DP is assumed as for Spanish. However, unlike Spanish, there is no presence of N movement in Korean and English. This movement was necessary before Spell-Out to derive the postnominal demonstrative construction in Spanish, but in Korean and English we have seen that the postnominal demonstrative is not allowed. So, we can assume that the movement of N, as a parametric variation takes place post-Spell-Out. As presented in the following diagram, only the demonstrative moves up to the [Spec, DP] before Spell-Out for [+Ref] feature checking.



On the basis of this common structure, the prenominal ordering of demonstratives in English and Korean, in contrast to Spanish, results from the Demonstrative moving for feature-checking purposes before Spell-Out. This

means that in English and Korean, the $[\pm\text{Ref}]$ feature checking is always done before Spell-Out, whereas this operation process may be done at LF as well as at PF in Spanish.

4.2. STRONG AND WEAK FUNCTIONAL FEATURES

Recall that according to Chomsky(1995), crosslinguistic variation regarding functional feature checking depends on whether the relevant features of a specific language are strong or weak. In other words, if a language has a strong functional feature, the movement for feature checking should be done before Spell-Out, at PF. On the other hand, if the features are weak, the feature checking takes place after Spell-Out, at LF by ‘Procrastinate’ and ‘Least effort’ principles.

On the basis of the above assumption, I claim that $[\pm\text{Ref}]$ feature of English and Korean is always strong so that the movement of the Demonstrative is always done at PF. This means that in English and Korean the obligatoriness of prenominal Demonstrative is due to the strong character of $[\pm\text{Ref}]$ feature.

On the other hands, the $[\pm\text{Ref}]$ feature of Spanish can be strong or weak. As we observed above, Spanish has the optionality for the selection of pre- and post-nominal demonstratives. This gives rise to both PF and LF movement for $[\pm\text{Ref}]$ feature checking in Spanish.

Also, with respect to the parametric variation of N movement we can assume that in Spanish there is a strong feature in the intermediate functional heads which must be checked off before Spell-Out, whereas this is not the case in Korean and English.

4.3. ADJECTIVES IN DP

Following Cinque (1994), we assume that the different classes of APs are base-generated universally in the specifier position of Functional Projections between DP and NP. However, as seen in the following examples, in Spanish the attributive adjectives are in postnominal position, whereas they are in prenominal positions in Korean and English.

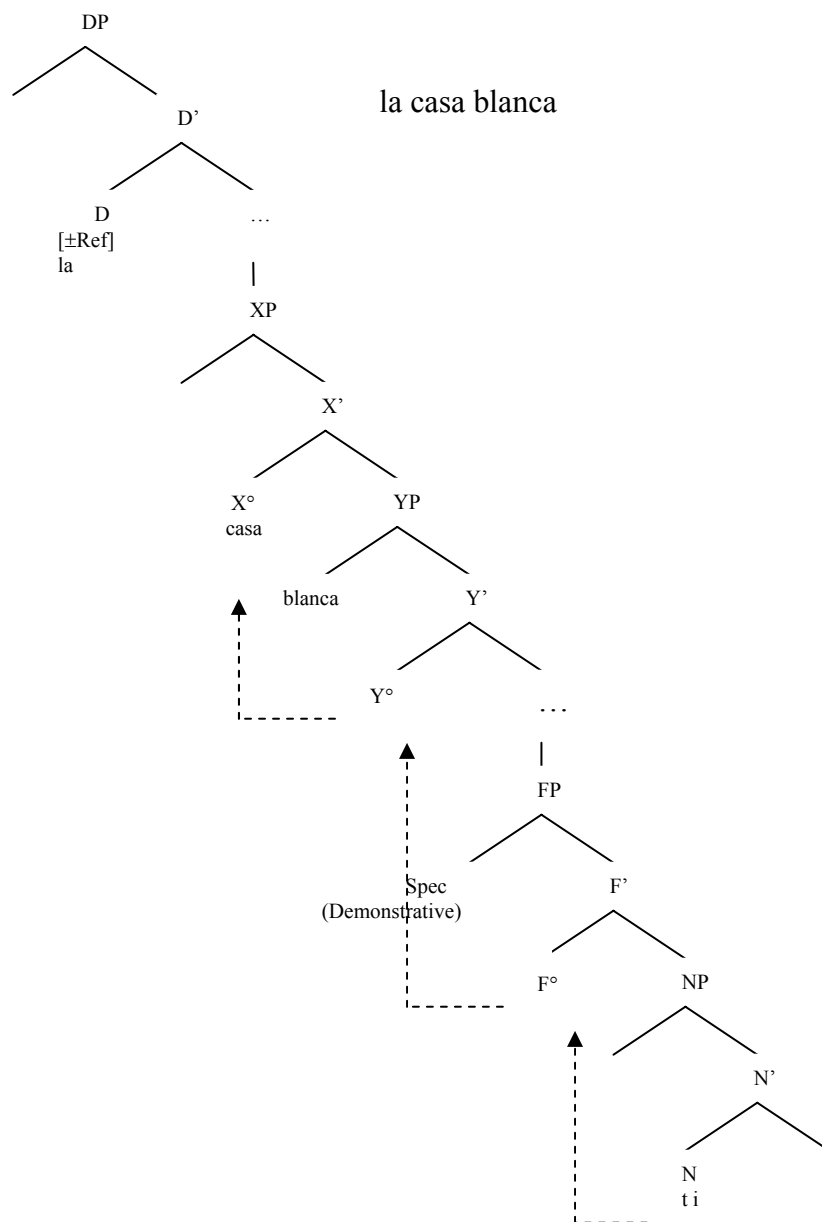
(4-21) S:	*la	blanca	casa
	la	casa	blanca
E:	the	white	house
K:	(ku)	hayān	cip
	the	white	house
	‘the white house’		

This crosslinguistic difference regarding the position of APs is also due to the parametric variation of N movement as presented in the following diagram

4.3.1. Postnominal adjectives in Spanish

As seen in the following diagram, in Spanish, the head N moves to the head of Functional Projection which is higher than the Functional Projection where the adjective is base generated in specifier position.

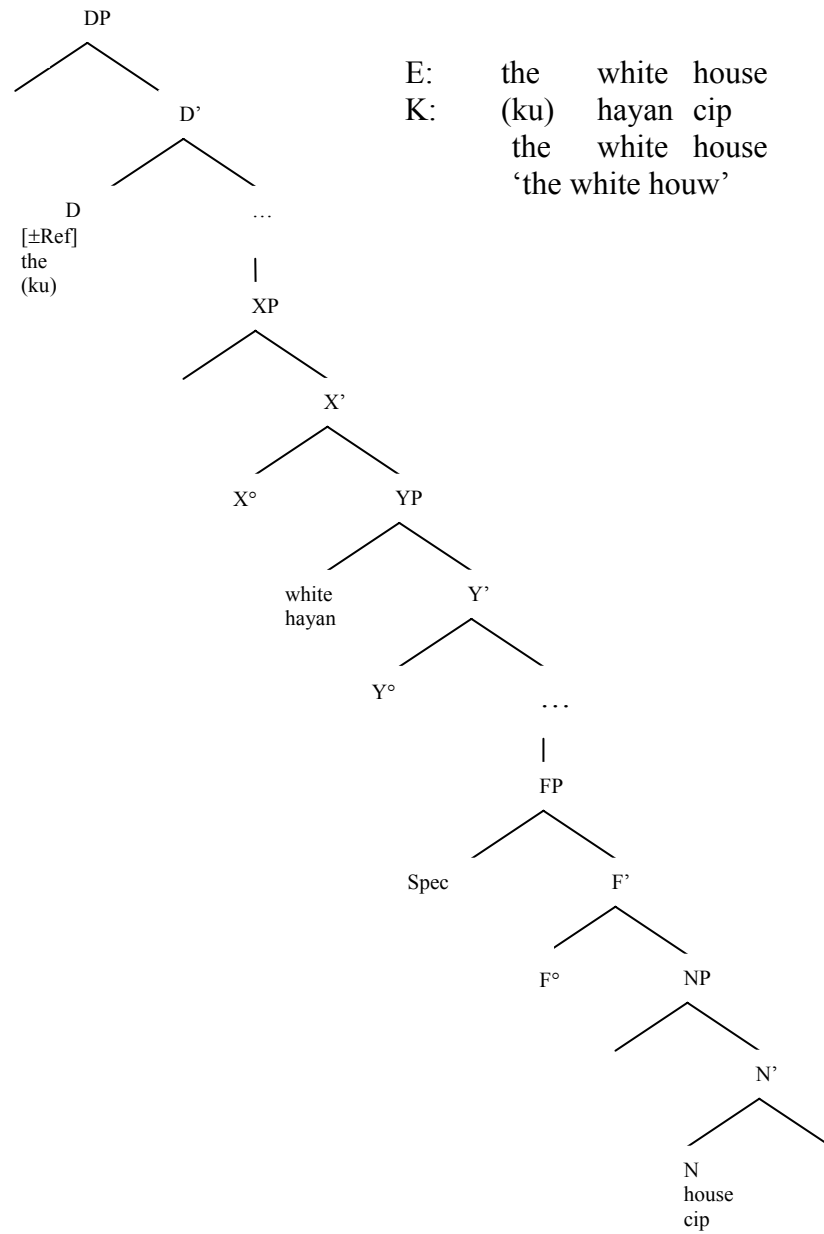
(4-22)



4.3.2. Prenominal adjectives in Korean and English

On the other hand, in Korean and English due to the absence of this N movement, the adjectives must be in prenominal position as seen in the following diagram. In other words, due to the absence of the movement of head noun, base position without movement is the position for Spell-Out.

(4-23)



4.4. POSSESSIVE IN DP

As seen in the following examples, as for the possessive forms in Spanish it is generally accepted that there are two paradigms, namely clitic forms (*mi*, *tu*, *su* etc.) and strong forms (*mio*, *tuyo*, *suyo* etc.). (Bruge, 2002) The clitic forms occur only prenominal position and are morphologically poorer, whereas the strong forms only appear in the postnominal position. Also we see that the clitic forms of the possessive are in complementary distribution with the article, as shown in (4-25), but the postnominal possessive can co-occur with the definite article as in (4-24). In Korean and English, this postnominal strong possessive form is not found, but there are only prenominal possessives.

(4-24) S:	los	libros	mios
E:	the	books	of mine
K:	*(ku)	chayk-tul	na-ui
	the	book-(PL)	1a-(GN)
	'the books of mine'		

(4-25) S: *los mis libros
 E: *the my books
 K: (ku) na-ui chayk-tul
 the 1st-(GN) book-(PL)
 ‘my books’

(4-26) S: mis libros
 E: my books
 K: na-ui chayk-tul
 1st-(GN) book-(PL)
 ‘my books’

For the unified analysis of variation across languages for the possessives, I follow Picallo’s (1994) assumption that the possessive moves as far as the functional projection immediately dominated by DP. I assume that like other adjectives, the possessive is also universally base generated in the specifier position of an intermediate FP between DP and NP, more specifically in a position lower than all the functional projections like demonstrative (Cinque, 1994; Bruge 2002), and raises to the specifier of AgrGP (AgrGenitivePhrase) which is the position for [\pm Poss] feature and immediately dominated by DP

(Siloni, 1994 ; Longobardi, 1995) for the [+Poss] feature checking). Then, again the selection of the pre- or post-nominal possessive in Spanish depends on the type of movement.

As for the base position of the possessive and the relative order between the postnominal demonstrative and the postnominal possessive, based on the following data, Bruge (2002) and Cinque (1994) argue that the postnominal possessive occupies a position lower than the position of the postnominal demonstrative.

(4-27) El libro (viejo) este suyo de sintaxis no me convence.

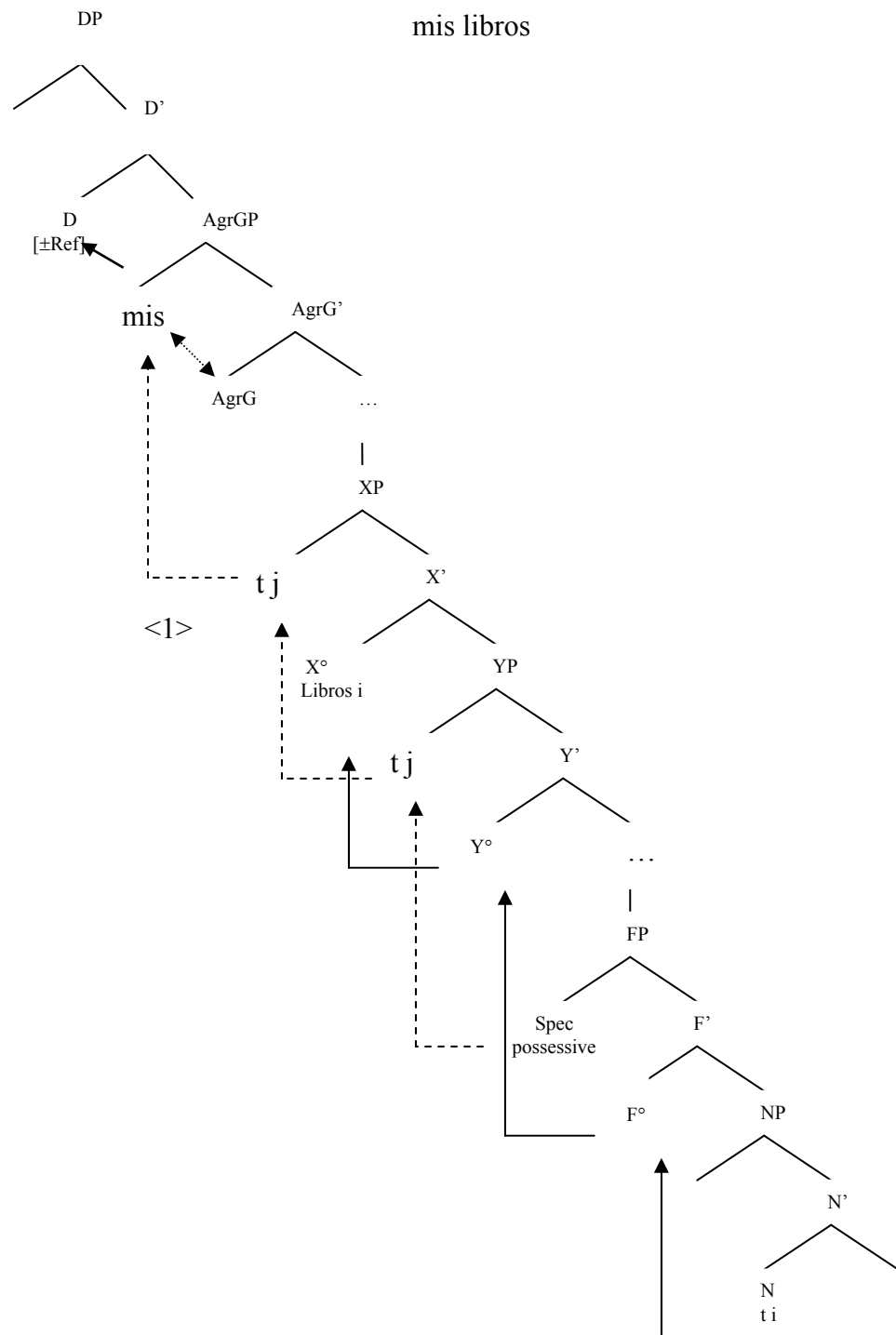
The book (old) this his/her of syntax not me convince.

‘This (old) book of syntax of his/hers does not convince me.’

4.4.1. Pre- and Post- nominal possessive in Spanish

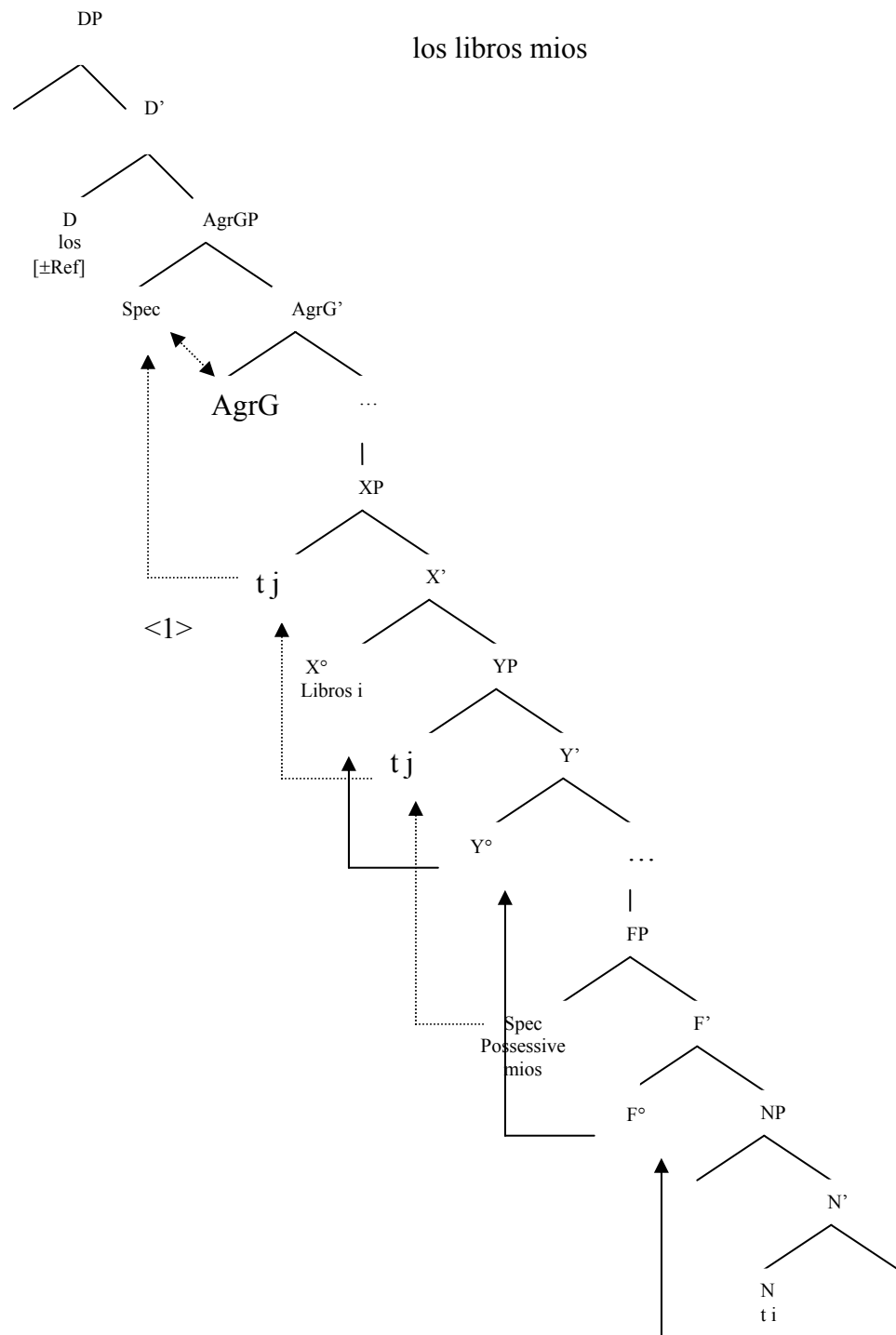
In the case of prenominal possessives in Spanish, this movement <1> is overt, before Spell-Out as shown in the following diagram. This movement undergoes the cliticization of the possessive, and finally moves further to D° as a head element. According to Picallo(1994) and Bruge(2002), this last movement is justified by the clitic nature of the possessive. Recall that in Spanish the head N always moves to the intermediate Functional Projection between NP and DP.

(4-28)



On the other hand, the case of strong forms of possessive in the postnominal position can be accounted for by the covert movement <1> of possessive for the [+Poss] feature checking under Spec-Head configuration like in the following diagram.

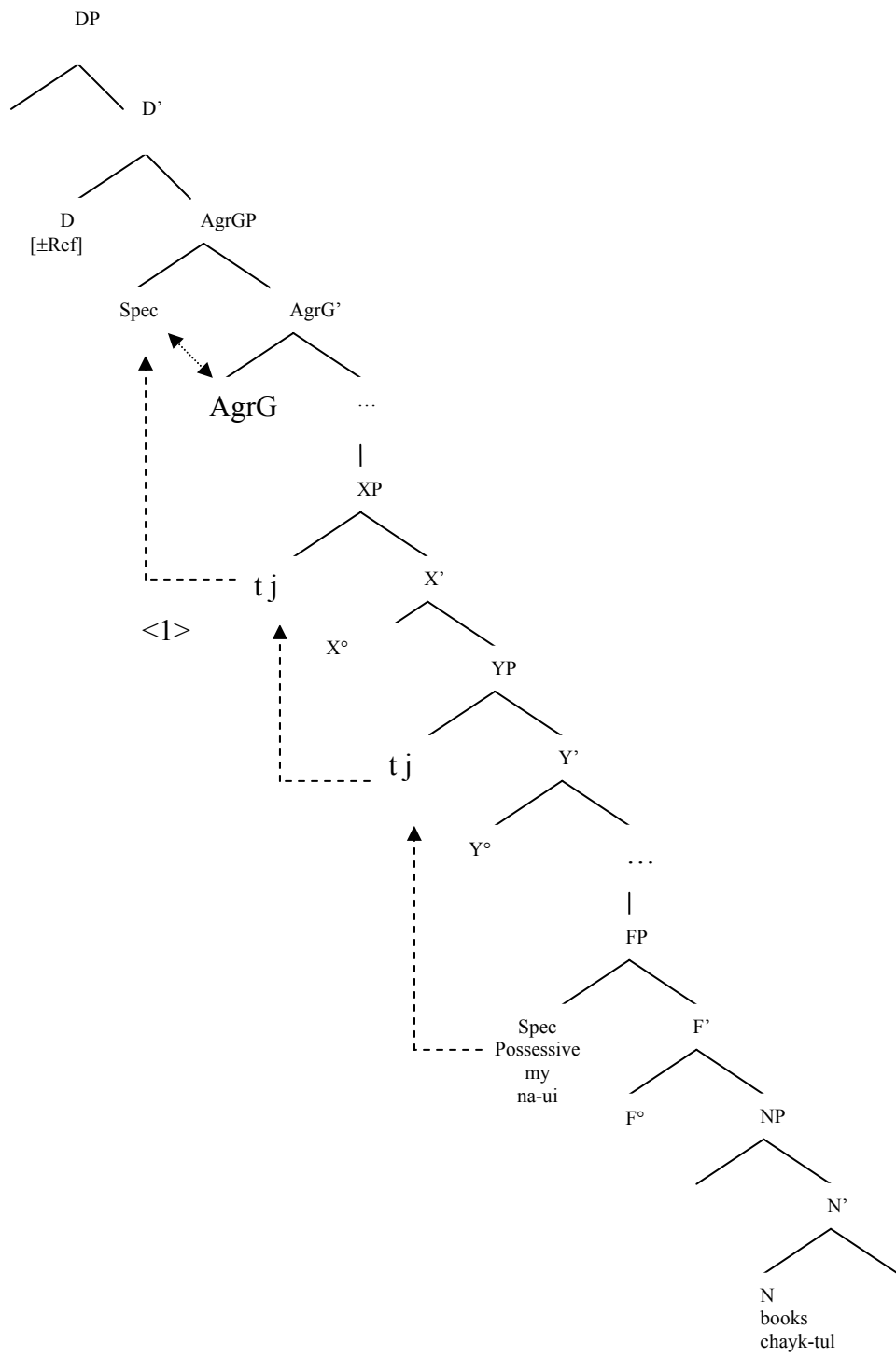
(4-29)



4.4.2. Pre-nominal possessive in Korean and English

Unlike Spanish, in Korean and English as seen (4-23) above, the possessive appears only in prenominal position. So, assuming the universal base position of possessives in the specifier of intermediate FP lower than other functional projections between NP and DP, we can say that the [+Poss] feature checking in Korean and English must be overt as in the following diagram.

(4-30)



CHAPTER FIVE

DETERMINERS AND FEATURES

5.0. INTRODUCTION

In this chapter, I discuss the co-occurrence of the definite article and the demonstrative in the extended nominal projections as determined by feature properties. In the previous chapter, we have briefly mentioned that the only element which can co-occur with the demonstrative in postnominal position is the definite article

Recall that as shown in the following examples repeated from Chapter four, we have mentioned that the co-occurrence of the definite article and the demonstrative is not allowed in the prenominal position in Spanish or English, whereas in the case of the postnominal demonstrative in Spanish the only possible determiner element which can co-occur in the prenominal position in DP is the definite article, e.g.:

- (5-1) el libro
 the book
 ‘the book’

(5-2) este libro
this book
'this book'

(5-3) *el este libro
the this book

(5-4) el libro este
the book this
'this book'

(5-5) *un libro este
a book this

Notice that the indefinite article is not allowed to co-occur with the Demonstrative. So it is necessary to account for variations of co-occurrences according to the different types of determiners. To this effect, it is necessary to look at the feature properties of the definite article and demonstrative.

To account for the observed differences, I claim that there is a feature principle for the co-occurrence among the elements within DP. This is closely

related to the following assumption of Giusti (2002) which is repeated from chapter three..

(5-6) *All the functional heads of an extended nominal projection share the same ϕ features.*

Also, I will look at the definiteness feature and its realization in Korean. As we have seen before, in Korean there is no exclusive lexical form of the definite article which is exactly equivalent to the definite article ‘the’ in English, but the form ‘ku’ can function as either a definite article or as a demonstrative. The one thing that we have to notice here is that the use of ‘ku’ as a demonstrative is obligatory whereas the use of ‘ku’ as a definite article is optional. Thus, assuming that [+Def] feature and the visibility condition of functional projections given by Giusti (2002), one question arises at this point. How is the [+Def] feature realized in Korean? Is the ‘ku’ as definite article, optional? In what follows I attempt to give an answer to this question.

5.1. DEMONSTRATIVES AND DEFINITE ARTICLES

The only possible element that can appear in D° with the post-nominal demonstrative is the definite article. Also, notice that in many languages such as

Spanish, these two elements; demonstrative and definite articles show complementary distribution in pre-nominal position. In other words, the co-occurrence of demonstrative and definite articles in the pre-nominal positions is not allowed as the following examples, repeated from the previous section;

(5-7) *el este libro
 the this book

(5-8) el libro este
 the book this
 ‘this book’

(5-9) *un libro este
 a book this

Furthermore, the following examples show that the presence of the definite articles in DP with the postnominal demonstrative is obligatory.

(5-10) *libro este
 book this

(5-11) el libro este
 the book this
 ‘this book’

Given these data, it is reasonable to assume that in Spanish the D° projection must be lexically overt. This means that lexical insertion into D° is necessary. However, since the demonstrative occurs in the postnominal position, the interpretation of the element in D° which is supposed to share the same feature with Demonstrative, should not be an existential. In other words, according to the Giusti’s ‘visibility condition’ for functional projections, the presence of an overt element in Specifier or Head of DP is necessary, and its semantic interpretation should be acceptable with the demonstrative in postnominal position.

In what follows, I will sketch the reason that only the definite article is compatible with postnominal demonstrative in terms of features. As a basic assumption, I argue that the possibility of co-occurrence of the definite article and the postnominal demonstrative is due to the compatibility of features. Recall that in the previous chapter, we motivated the movement of demonstratives for feature checking of $[\pm\text{Ref}]$ located in D° position. Now, also note that the feature which is specified by the definite article is the feature, $[\pm\text{Def}]$, and in fact referentiality

implies definiteness (Bruge, 2002). Therefore, if [+Ref] is selected in the head D° of DP, and the postnominal demonstrative checks its feature by LF movement, the definite article which is feature compatible with the demonstrative should be inserted to satisfy the visibility condition. In addition to this, I claim that as a language specific parameter Spanish does not allow empty D° when [+Ref] feature is selected in D°.

5.2. DEFINITE ARTICLE AND DEMONSTRATIVE IN KOREAN

In the previous section, we assumed that due to the compatibility between [+Ref] and [+Def], the definite article co-occurs with the postnominal demonstrative. Now, in what follows, I will look at the case of the definite article in Korean. As I mentioned in Chapter one, the presence of definite articles is optional as shown in the following examples.

- (5-12) S: el libro
 K: (ku) chayk
 E: the book
 ‘the book’

(5-13) S: ese libro
 K: ku chayk
 E: that book
 'that book'

However, if 'ku' is used as a demonstrative as in (5-13), it must be lexically overt. In other words, 'ku' in Korean can be used as either a definite article or a demonstrative. The difference is that when it is used as a definite article its presence is optional whereas when it functions as a demonstrative, its presence is obligatory. This means that 'ku' in Korean is a demonstrative originally, but it can optionally be used as a definiteness marker like 'the' in English. Thus, there is no exclusive or separate form for the definite article. The absence of the definite article in Korean has been the principal reason for assuming that there is no definiteness feature in Korean. However, it is widely accepted that the definiteness feature for referentiality is a universal cross linguistic property. Then, a question that arises at this point is how [+Def] feature is marked in Korean. In this sense, in the next few sections I will consider the properties of 'ku' in detail and propose an alternative process of definiteness marking in Korean.

5.2.1. Definiteness in Korean

In general, as previously mentioned briefly, since there are no specific forms for the definite article, it has been assumed that there are no functional feature categories in Korean. Martin(1969, 1992) has claimed that there are no functional categories such as singular/plural, definite/indefinite in Korean NPs. So, he has argued that the Korean NPs only express the general and universal concepts.

However, assuming that the [\pm Def] feature is one of the universal cross-linguistic properties, there has been an alternative approach for feature analysis, based on the various comparative studies on discourse analysis between English and Korean. There has been an attempt to consider ‘-(n)un’- NP topical marker in Korean- as an equivalent to English definite article ‘the’. H. S Kim (1991) based on his data of comparative discourse analysis between English and Korean has argued that there is a very high level of similarities between the use of Korean topic particle ‘-(n)un’ and English definite article ‘the’. Kim presents the following schemata of his analysis.

Within a topic boundary in Korean:

(5-14) boy(s) – ka/i(Ø) boy(s)-(n)un

Within a discourse boundary in English:

(5-15) a(n) one boy (he) the boy.....
 Ø/three boys (they) the boys.....

In the examples (5-14) above, in discourse in which referents are established, the use of ‘ka/i/ is to establish new referents, whereas ‘-(n)un’ is used to maintain the identity of the referents which are previously established.

In other words, comparing discourse structures in (5-14) and (5-15) of English and Korean, Kim (1991) claims that as indefinite articles, zero article, or numerals introduce new entities, and definite article represents identifiable entities after its first introduction in English, in Korean ‘-ka/i’ and ‘-(n)un’ have the same functions equivalent to ‘indefinite article’ and ‘definite article’ respectively.

5.2.1.1. ‘-(n)un’ and ‘-ka/i’ : Functional Category as well as Case Marker

Based on the parallelism between DP and CP, Szabolcsi (1987, 1994) claims that the Determiner of DP is an element equivalent to the Complementizer

in CP. In other words, as the Complementizer has the function of subordinating a clause, the Determiner serves as a subordinator that closes off a NP argument. Furthermore, Szabolcsi argues that this function can be realized by different types of functional categories across languages.

Since Korean is one of the articleless languages, we can assume that there exists other forms of functional category which carry out the function of subordinating an argument NP, parallel to what articles and other determiners do in Spanish and English. This assumption is very plausible for Korean, whose argument NPs are not closed off by determiner functional categories, as shown in the following Japanese examples from Fukui (1986):

- (5-16) J:
- a. a-no hon
 that book
 ‘that book’
 - b. John-no a-no hon
 John-Poss that book
 ‘John’s that book’

- K:
- a. ku chayk
 that book
 ‘that book’

- b. ku John-uy chayk
 that John-Poss book
 ‘John’s that book’

Jo (2000) also makes an argument, on the basis of the typology of functional categories, that there must be an expected parallelism as to the location of the elements that function as subordinator relative to the clause and to the noun phrase. In other words, if a language has a determiner or determiner-like element in the phrase initial or final position, the complementizer should observe the same initial or final position in the sentence respectively.

Accordingly, in Korean we can expect the occurrence of the subordinator of a NP argument in the phrase final position, just as the complementizer appears in the clause final position, as can be seen in the following example:

- (5-17) Bill-i [John-i wa- ss- ta]- ko sayngkakha -n – ta.
 Bill-Nom John-NM come-Past-Dec-Comp think- pres- Dec
 ‘Bill thinks that John came.’

The examples shows that, unlike Spanish and English, the Complementizer ‘-ko’ must appear in the clause final position in Korean. On the

basis of the previous argument, we can assume that the demonstrative ‘ku’ in Korean does not function as a NP subordinator, since it appears in the phrase initial position. This would mean that it is not in fact a determiner with a subordinator function for argument NPs as equivalent to the definite article in Spanish and English.

Among other elements, in Korean the most feasible candidates for NP subordinator which may be equivalent to articles are the phrase markers such as ‘-ka/i’, ‘-(l)ul’ and ‘-(n)un’. According to Jo (2002), ‘-ka/i’ are the default forms of Nominative case marker for nonargument (=predicative) NPs. However, it can be attached to both argument and nonargument NPs as shown in the following examples:

- (5-18) a. Nonargument NP
- Kildong-i kyosu- ka toe- ess-ta
- Kildong-NM professor-NM become-past-Dec
- ‘Kildong has become a professor’

b. Argument NP

Kildong-i Simcheng-eykekkoc- ul cu-ess- ta

Kildong-NM Simcheng-Dat Flower-Acc give-past-Dec

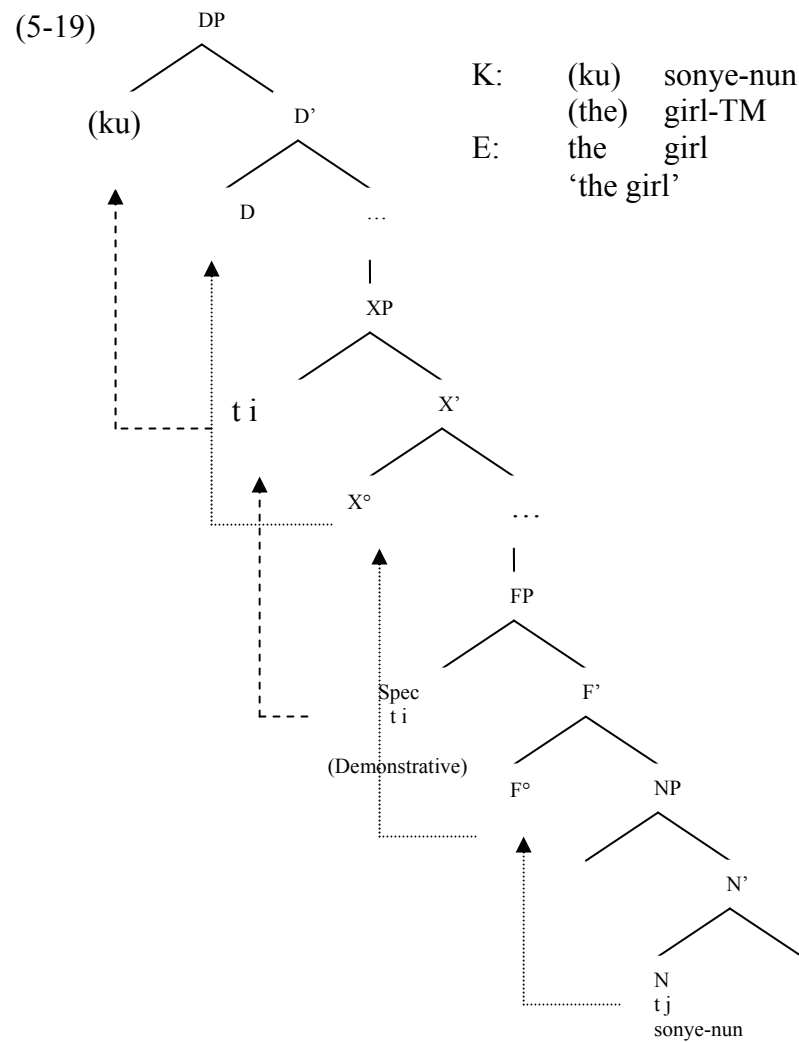
‘Kildong gave flowers to Simcheng’

And ‘-(l)ul’ as Accusative case marker can be attached to the NPs which are in a lexically governed position as objects, as seen in the example (b) above. Jo (2000) points out that these elements, in addition to case marker, have the properties of closing off a nominal projection. In other words, they serve as subordinator of NPs. So, in Korean the case marker categories, or postpositions, carry out the function of specifying Case as well as acting as subordinator of NP.

In particular, I argue that the particle ‘-(n)un’, traditionally considered as a topic marker, has multiple functions. It can be used as topicality marker, Nominative case marker with the preference for subject position as a sentence topic, and as a subordinator for NP argument with definite reading in particular. Thus, among other case makers, ‘-(n)un’ is a subordinator of argument NP that acts like a functional category equivalent to the definite article in the languages with articles.

5.2.2. Korean NP Structure for $[\pm\text{Def}]$ feature checking

Now, based on the major assumptions above about the use of the Korean demonstrative and topical marker ‘-(n)un’, I postulate the following structure for the $[\pm\text{Def}]$ feature checking for Korean.



In the diagram above, the demonstrative ‘ku’, which can optionally function as the definite article is base generated in the [Spec, FP], the same position for the demonstrative in Spanish and English. And it can raise up to [Spec, DP] to do feature checking by Spec-Head agreement. Recall, however, that the presence of demonstrative with the function of definite determiner is optional.

One important thing that we have to notice here is the presence of NP topical marker ‘-(n)un’ attached to the N. I argue that D° is the position where this NP topical marker ‘-(n)un’ must raise up to D° to check its [+Def] feature, since it is assumed that [+Def] is an intrinsic feature of ‘-(n)un’. Thus, as in the case of the Spanish definite determiner which is base-generated in D° position with [+Def] feature (Bruge, 2002), I argue that in Korean the NP topicality marker which is always base-generated with [+Def] feature must check its feature in D° position too. Although, in Korean syntax, it is considered that in addition to the function of NP topicality marker with [+Def] feature, the particle ‘-(n)un’ has the function of contrast marker (Lee, 1997) in some special cases, the major function of ‘-(n)un’ is still the topicality marker with [+Def] feature. Thus, checking the same feature in the same position D° , actually the particle ‘-(n)un’ in Korean has the same function of the definite article in Spanish and English.

Now, as we can see, the form of particle ‘-(n)un’ is a dependent morpheme which should be always attached to NP. So, in order to determine

whether the movement of N is covert or overt, we need to see the co-occurrence with other modifiers within DP. In the following example repeated from Chapter one, In Korean, the modifier ‘hayna’(white) precedes the ‘N+un’. Thus, I argue that in Korean, the movement of ‘-(n)un’ to check the [+Def] feature is covert.

- (5-20) S: *la blanca casa es bonita.
 E: the white house is pretty.
 K: (ku) hayan cip-**un** yebbu-ta.
 the white house-(TM) pretty-(DEC)
 ‘the white house is pretty.’

Regarding the co-occurrence of demonstrative ‘ku’ and the [+Def] NP particle ‘-(n)un’, I assume that it is a crosslinguistic parameter of Korean. The difference of feature checking of these two elements in Korean is that the [+Ref] feature checking of Demonstrative takes place before Spell-Out, namely overtly, whereas, the [+Def] feature checking of ‘-(n)un’ occurs after Spell-Out, covertly.

CHAPTER SIX

CONCLUSIONS

6.0. INTRODUCTION

This chapter summarizes the general findings of the present study, and concentrates on the formal strong and weak features that determine the various DP sequences and derivations for the three target languages, as described in the preceding chapters. It reviews in detail the mechanisms of formal feature checking that involve the categories Noun, Demonstrative, and Possessive, discussing their particularities and differences. There are advantages as well as potential problems in the theory of formal feature strength; they will be briefly discussed along with some implications of this approach in the context of the economy principles of the Minimalist Program (MP).

6.1. STRENGTH OF FORMAL FEATURES

The formal features that are involved in the DP derivations postulated in this study are [\pm Ref] (Referential feature), [\pm Def] (Definite feature), [$+$ Poss] (Possessive feature), [\pm Pl] (Number feature) and [\pm Masc] (Gender feature). Each one of the features, in whatever value they occur in the functional heads D° or F° , must be checked, or matched in feature value, by a lexical category that is

similarly specified in the extended nominal phrase, for the derivation to converge at both LF and PF interfaces. If a formal feature remains unchecked, it is not erased; hence, it becomes an illegible symbol at either interface, causing the derivation to crash, or to fail to converge. Ungrammatical sequences or combinations of elements in DP are thus characterized as instances of nonconvergent derivations in this system of formal feature checking.

Just as the DP structure with multiple functional projections is universal, the derivations that are driven by formal feature checking, and that give rise to the various category movements that produce the different sequencings in DP, are also much the same crosslinguistically. Thus, the main difference resides on whether the operations are pre- or post-Spell-Out. And this in turn depends on whether the formal features that must be checked and erased in the functional heads are either weak or strong. The strength of formal features, therefore, defines the parameters that must account for crosslinguistic differences in the MP framework assumed for this study.

The [+Ref] feature which is specified in D° may be checked and eliminated against a matching specification in Demonstrative. In terms of feature strength, Spanish has a choice between strong or weak [+Ref] feature in D° , since Demonstrative, may procrastinate until LF, giving the preceding or the following ordering in relation to the head Noun. By contrast, for Korean and English, the

[+Ref] feature must be strong, as the derivation must yield only the prenominal option for the Demonstrative.

The [\pm Def] feature is located in D° . This feature can be checked and erased against a compatible feature in Demonstrative, Possessive, or Noun. The two different article forms are realizations of the two values of this feature. The [\pm Def] feature is strong or weak in Spanish, as formal feature checking can take place before or after Spell-Out. For instance, the checking of [+Def] against a postnominal Demonstrative is invisible, taking place after Spell-Out, indicating that the feature is weak, and invisible at PF. But the [+Def] feature checking against a prenominal Possessive is overt, before Spell-Out, suggesting that the feature is strong, visible at PF, and the checking procedure cannot be delayed until LF.

English and Korean also have the choice between strong and weak [\pm Def] feature. In English, for example, [+Def] feature checking against a compatible lexical feature in Possessive and Demonstrative takes place before Spell-Out, whereas the same feature checking against the Noun is invisible, occurring after Spell-Out. In Korean, the [+Def] feature must be checked and erased against a prenominal Demonstrative, overtly before Spell-Out, whereas it may be checked against N° plus postposition, such as ‘-(n)un’, ‘-ka/y’, in a procrastinating manner, after Spell-Out.

In the cases involving optional strength of a two-valued feature, such as $[\pm\text{Def}]$, the pairings of formal feature strength in the functional categories and the checking features in the lexical categories may seem paradoxical and abstruse. However, it may be easily seen that the postulated feature combinations correctly define the expected convergent derivations, as well as the nonconvergent strings that crash at the interfaces.

The $[\text{+Poss}]$ feature is specified in the functional head AgrG° of AgrGP (Genitive or Possessive Phrase), which is directly, dominated by the functional projection DP . This feature must universally be checked and erased against Possessives. In terms of feature strength, Spanish has the choice between strong and weak $[\text{+Poss}]$ feature; the strong $[\text{+Poss}]$ feature must be checked off against a prenominal Possessive, overtly before Spell-Out, whereas the weak $[\text{+Poss}]$ feature does so against a postnominal Possessive that procrastinates after Spell-Out. By contrast, Korean and English select only strong $[\text{+Poss}]$ feature in the functional head AgrG° , and check it off against a prenominal Possessive, overtly before Spell-Out.

$[\pm\text{Pl}]$ is the Number feature and is located in the functional head ($=\text{F}^\circ$) position of FP which is found between AgrGP and the XP functional projection whose specifier position contains the Demonstrative. The $[\pm\text{Pl}]$ feature must be checked off and erased against a matching feature in the lexical Noun. Spanish

has strong $[\pm\text{Pl}]$ feature in F° , and checks it off overtly by the head Noun before Spell-Out. By contrast, Korean and English have a weak $[\pm\text{Pl}]$ feature, and the feature checking operation is invisible, taking place after Spell-Out.

The Gender feature $[\pm\text{Masc}]$ is also found in the functional head F° of FP between AgrGP and the XP functional projection containing Demonstrative in its specifier. Like the Number feature, the Gender feature must be checked and eliminated against a similar feature specification in the lexical Noun. The $[\pm\text{Masc}]$ feature in Spanish is strong, so that it must be checked off visibly before Spell-Out for the derivation not to crash at PF. On the other hand, Korean and English have a weak $[\pm\text{Masc}]$ formal feature, which is invisible at PF, hence allowing the derivation to converge at that interface before the formal feature is checked. So in Korean and English the lexical category Noun that checks this feature in F° may procrastinate, checking it off covertly after Spell-Out.

The following chart summarily shows the strength of each feature of Spanish, English and Korean. It also indicates the functional categories that host the formal features on the left of the table, and the lexical categories that may check and erase the formal features on the right of the chart.

Formal Feature	Functional Categories (Host of feature)	Spanish	English	Korean	Lexical (Checking) Categories
[±Ref]	D°	Strong/Weak	Strong	Strong	Demonstrative
[±Def]	D°	Strong/Weak	Strong/Weak	Strong/Weak	Noun Demonstrative Possessive
[+Poss]	AgrG°	Strong/Weak	Strong	Strong	Possessive
[±Pl]	X° (Head of Functional XP)	Strong	Weak	Weak	Noun
[±Masc]	Y° (Head of Functional YP)	Strong	Weak	Weak	Noun

CHART 1

6.2. FORMAL FEATURE COMPATIBILITY

There are two different types of mechanisms of formal feature checking which are used in this analysis. The first one is the regular feature matching procedure which involves sameness of features. For example, the possessive has a [+Poss] feature, and it must check its [+Poss] feature in Specifier of AgrGP against the same valued feature as marked in its head, AgrG°. In this case, the checking operation involves identical feature specification. Similarly, the checking of the Gender and Number features on functional heads involves the matching of [±Masc] and [±Pl] features on the lexical Noun. This is also parallel to the well-known checking mechanism of the formal features of Person and

Number in Inflection against identical specifications in the DP that also checks off the Nominative case feature. Again, the Verb checks its finite tense specifications against matching ones in Tense or Inflection head.

The other feature checking procedure utilized in the present analysis is based on ‘feature compatibility’, which is adapted from Brugge (2000). Unlike feature matching, this mechanism does not rely on sameness of features, but it is based on the notion that a formal feature can also be checked and erased against a category that has a compatible lexical hetero-feature. This is particularly the case with the checking of $[\pm\text{Def}]$ in D° , since no lexical category has a matching feature of this kind. Therefore, this formal feature must be checked some other way, as by feature compatibility, against $[\text{+Ref}]$, $[\text{+Poss}]$ or $[\text{+Deixis}]$ in the lexical categories of Noun, Possessive or Demonstrative, respectively. These lexical features are said to be compatible or incompatible with $[\pm\text{Def}]$, and their differing capacity to check off $[\pm\text{Def}]$ in the Determiner head yields the various combinations and sequencings found in DP when the lexical categories co-occur.

To expound on the checking procedure by compatible features, I will examine some Spanish illustrative data. For example, it is generally assumed that the indefinite article is a realization of $[-\text{Def}]$ feature, whereas the definite article is an element specified for $[\text{+Def}]$ feature, as shown in the following examples.

(6-1) el libro [+Def] in D°
the book
'the book'

(6-2) un libro [-Def] in D°
a book
'a book'

These DPs, however, have different possibilities for further combinations with a postnominal Possessive or Demonstrative, as shown by the following examples:

(6-3) un libro suyo
a book of yours/his/hers
'a book of yours/his/hers'

(6-4) el libro suyo
the book of yours/his/hers
'the book of yours/his/hers'

(6-5) *un libro este
 a book this

(6-6) el libro este
 the book this
 ‘this book’

The difference in grammaticality between (6-3) and (6-5) is due to a difference in feature compatibility, which the categories Possessive and Demonstrative have in relation to the indefinite Determiner. In other words, the [+Poss] feature in the Possessive *suyo* ‘yours/his/hers’ is compatible with [-Def] feature in the Determiner; hence, the [-Def] feature in D° can be checked off against [+Poss], giving the convergent string in (6-3).

However, the [+Deixis] feature in Demonstrative is not compatible with [-Def] in the indefinite article, as seen in (6-5), so in this case the [-Def] feature in the Determiner clashes with [+Deixis] specified in the Demonstrative *este* ‘this’, and cannot be checked off. This accounts for the ungrammaticality, or failure to converge at LF, of examples that involve the co-occurrence of the indefinite Determiner and a Demonstrative. In this regard, I depart from Brugge(2000), who holds the [+Ref] feature in Demonstrative as responsible for checking [+Def]

in the Determiner, while claiming that the [+Ref] feature fails to check off the opposing [-Def] valued feature due to incompatibility.

On the other hand, I assume that in (6-6) it is the Deixis specification in the Demonstrative that is compatible with the [+Def] feature in the Determiner *el* ‘the’ and can check it off at LF. Furthermore, (6-4) shows that the [+Def] feature is compatible with [+Poss], and can also be checked and erased by the procrastinating postnominal Possessive *suvo* ‘yours/his/hers’.

To sum up, in addition to the feature compatibility between [\pm Def] and the ϕ features of Number and Gender specified in Noun, as seen in (6-1) and (6-2), I assume that [+Deixis] in Demonstrative is compatible with [+Def], but not with the [-Def] in D°, whereas [+Poss] is a compatible feature with [\pm Def] in the Determiner. The following chart shows the postulated feature compatibility between the [\pm Def] feature, which is universally generated in D°, and other relevant features in the analysis of DP.

	[+Def]	[-Def]
[+Deixis]	Compatible	Incompatible
[+Poss]	Compatible	Compatible
ϕ features: [Case], [\pm Pl], [\pm Masc]	Compatible	Compatible

CHART 2

6.3. FEATURE CHECKING AND THE ECONOMY PRINCIPLES OF MP

The analysis of DP across the different languages in terms of feature strength confirms the principle of ‘Procrastinate’ (Chomsky 1993, 1995). Weak features are not ‘visible’ at the PF, so that a derivation that includes them does not crash, but converges at PF. However, weak features will be visible at LF. In other words, they need to be checked off after Spell-Out, for a derivation to converge at LF. Chomsky’s (1995) theory of feature strength is a way of executing ‘Procrastinate’, one of the economy principles embodying the notion of Least Effort as an essential attribute of the language faculty in the Minimalist Program (MP).

Thus, the present study supports ‘Procrastinate’ as a universal principle across languages. This analysis also favors the idea that languages have the same DP structure with similar derivations and checking procedures, in parallel with CP and IP structures. This is consonant with the notion that Universal Grammar, in addition to accounting for linguistic diversity, also provides an answer to the problem of language acquisition by the child on the basis of scanty and imperfect experience. Accordingly, it is assumed that the parametric differences across languages, which are also relevant in language acquisition, reside in the different settings of strength for each formal feature.

The assumption of Feature Compatibility is an important notion used in this study, which accounts for the grammaticality of some specific co-occurrences among elements within the extended Nominal Projection. However, it seemingly violates the ‘Greed’ principle, another economy principle of the MP (Chomsky 1993). ‘Greed’ constrains categories to carry out operations for strictly self-serving purposes, that is to say, to fulfill their own needs, rather than those of another category.

However, in some of our DP derivations, lexical categories seem to be subservient to the checking needs of functional categories. In other words, in the analysis on the basis of feature compatibility, some lexical categories appear to fail to be greedy, i. e. to check off their own features. Rather, they appear to be motivated by the need to erase a formal feature in a functional category higher up in the structure of DP.

As Chart 2 indicates, the constituents with [+Deixis] or [+Poss] features can move and check off the [\pm Def] formal feature in the Determiner. So in these cases, the categories of Demonstrative and Possessive, specified as [+Deixis] and [+Poss], respectively, seem to act altruistically rather than with greed and self-interest.

Similarly, in the course of my exposition the various checking procedures by regular feature matching were also described as motivated by the need to erase

the formal features in the functional categories. In this regard, too, the lexical checking categories internal to DP would not act in accordance with the Greed principle of Chomsky's (1993,1995) MP, which is an economy principle that works in combination with 'Procrastinate' and 'Shortest Move' to express the essential Least Effort nature of the operations in the design of the language faculty.

However, it is very likely that the violation of the Greed principle is only apparent in our DP derivations. Notice that the lexical checking categories are also specified for Gender and Number features, and these need to be matched against the formal ϕ features in D° , so as to exclude, by nonconvergence, the ungrammatical combinations with nonagreeing elements. These may be clearly observed in a Spanish example, such as **los libros estas* 'those books', where the Determiner shows the masculine form, but the Demonstrative does not.

Thus, the checking of the compatible [+Ref] or [+Deixis] features in Demonstrative against the formal [+Def] feature in the Determiner, may be assumed to take place as a 'free-ride' procedure, while Demonstrative is actually checking its own lexical ϕ features, as required for convergence of agreeing elements in DP. Seen in this light, the lexical checking categories, such as Demonstrative in this instance, is not in violation of 'Greed'.

As other authors have found ‘Greed’ to be the most problematic of the economy principles in MP (cf. Marantz 1995, Lasnik 1999), it would be safe to further explore the true nature of the conflict between ‘Greed’ and Checking theory, either by feature compatibility or feature matching, before reaching any conclusions as to the MP legitimacy of the checking procedures postulated for the derivations of the various DPs in the target languages. Therefore, I leave this important question open for future research.

Finally, I consider a small set of examples from Spanish to show how the assumptions embedded in the proposed DP derivations square off with the remaining MP economy principle, ‘Shortest Move’. This principle blocks any movement that is not the shortest possible move, allowing only movements that require the least effort. It is the most specific economy principle, which takes over the work of three separate conditions, among them Subjacency, of the earlier Principles-and-Parameters model (Marantz 1995).

‘Shortest Move’ plays a crucial role in the derivation of DPs that include the co-occurrence of Demonstrative and Possessive. First, let us consider the examples (6-7) and (6-8), which involve the sequence of postnominal Demonstrative and Possessive. The question arises of how the co-occurrence of the indefinite article is to be ruled out in a principled manner:

(6-7) el libro este mío
the book this my
'this book of mine'

(6-8) *un libro este mío
a book this my

Observe that in (6-7) the Demonstrative checks the [+Def] feature in the Determiner, but it procrastinates until LF. The Possessive, on the other hand, cannot do the checking procedure, even if it has a compatible feature, as it would violate 'Shortest Move'. Recall that Possessive is in a functional projection lower than that of Demonstrative. In the example (6-8), on the other hand, the [+Deixis] feature in Demonstrative is not compatible with the [-Def] feature in the Determiner, while Possessive, whose feature is compatible with [-Def], cannot move over Demonstrative on account of 'Shortest Move'. Thus, the [-Def] feature in the determiner remains unchecked, and the derivation crashes.

Now, consider the following pair of examples showing the difference as to which of the two categories, Demonstrative or Possessive, can be in prenominal position if the other occurs postnominally. The question now is of how to account

for the impossibility of having a prenominal Possessive with a co-occurring postnominal Demonstrative:

(6-9) este libro mío
this book my
'this book of mine'

(6-10) *mi libro este
my book this

It is reasonably seen that the derivations of (6-9) and (6-10) must be the two possible outcomes of a configuration much like that of (6-7), *el libro este mío* 'this book of mine', but with a nonovert D-head. The convergent derivation of (6-9) results from the overt formal feature checking carried out by the Demonstrative, in accordance with 'Shortest Move', while (6-10) is the illegitimate or nonconvergent derivation that results from the overt feature checking by Possessive, in violation of 'Shortest Move'. It is obvious that this economy principle in conjunction with the other premises of the present analysis provides a good explanation for the observed Spanish data.

6.4. SUMMARY

This chapter has endeavored to show in detail the formal and lexical features involved in the proposed DP derivations. The theory of feature strength and two procedures for formal feature checking have been favorably examined against the context of the three economy principles of MP, which embody the central notion of least effort in the design of language. Despite some problems, it can be safely asserted that the proposed derivations give a principled account of the data considered in the three target languages. Although significant ground has been covered, it is evident that much work is still left open for further detailed investigation.

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