On the Internal Structure of Spanish Verbless Clauses

Dissertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
Melvin González-Rivera, B.A., M.A.

Graduate Program in Spanish and Portuguese

The Ohio State University
2011

Dissertation Committee:
Dr. Javier Gutiérrez-Rexach, “Advisor”
Dr. John Grinstead
Dr. Fernando Martínez-Gil
Copyright by

Melvin González-Rivera

2011
Abstract

In this dissertation I discuss several aspects of the syntax, semantics and discourse properties of what I call Spanish verbless clauses -i.e. non-finite utterances with clausal properties: Spanish PredNP *muy listo este tío* ‘very intelligent this guy’, Spanish PP complement clause *me sorprende lo caro del piso* ‘it amazes me how expensive this apartment is’, and Spanish Qualitative Binominal Noun Phases (QBNPs): comparative QBNP *el tonto del alcalde* ‘the idiot of the mayor’ and attributive QBNP *un tonto de alcalde* ‘an idiot of a mayor’. In each of these clauses there is a subject-predicate relationship. The analysis advanced here is that Spanish PredNP, PP complement clauses and comparative QBNP can be analyzed in terms of predicate inversion. Movement of the predicate in each case is due to a strong semantic feature [+X] that needs to be discharged in the course of the syntactic derivation. It is argued that in Spanish PredNP the strong feature *evaluativity* [+E] is responsible for predicate inversion, while in PP complement clauses and comparative QBNP the strong feature *gradability* [+G] triggers movement of the predicate over its subject.

In addition, it is argued that a copula or RELATOR lies between the understood subject and predicate of the clauses under analysis. In PP complement clauses and comparative QBNP this RELATOR is the nominal copula *de* ‘of’, which is a meaningless element whose presence in the structure is forced by syntactic constraints. In Spanish PredNP the RELATOR is not empty -i.e. it accommodates the tense feature. This proposal is
based on an insight by Benmamoun (2008), who has argued that tense is universally projected even though it does not need to co-occur with a verbal head.

The syntactic analysis of attributive QBNP, on the other hand, is different from the previous analysis - i.e. these clauses do not involve predicate inversion. If syntax determines semantics and syntax-semantics interface is a function from syntax (Pollard 2006), then the most natural hypothesis is to assume that the syntax of comparative and attributive QBNPs is different, given that the interpretation of both clauses is not the same.

The syntactic analysis developed here is couched within a Generalized Minimalist Grammar (GMG), as developed by Gutiérrez-Rexach (1997, 1998). The rationale for a generalized minimalist grammar analysis lies on the assumption that this grammar provides logical formulation to current generativist grammar (e.g. Chomsky 1993, 1995, 2000, 2001; and other authors). In other words, GMG formalizes minimalist ideas. This is by no means a unique enterprise. Lecomte (2005, 2008), for example, seeks a categorial embodiment of Chomsky’s minimalist ideas in what he calls Categorial-Minimalist Grammars (CMGs). The goal of such approaches (i.e. GMG, CMGs, etc.) is to emphasize the role played by the lexicon and by very general operations, like e.g. Merge and Move in the minimalist framework, or Application and Abstraction in Categorial Grammars (Lecomte 2005).
Dedication

Dedicado a mis padres, Johnny González Báez y Carmen L. Rivera Cruz.
Acknowledgments

I wish to thank my academic adviser Javier Gutiérrez-Rexach for EVERYTHING: his insightful comments, patience, extraordinary help, guidance, intellectual advice, friendship, great conversations, cookies and many other etceteras… I cannot imagine having a better advisor. Gracias Javier.

I also want to thank the other members of my dissertation defense committee John Grinstead and Fernando Martínez-Gil for their patience, generosity, and for discussing with me various aspects of the dissertation that greatly helped me to improve the final document; and professors Dieter Wanner and Carl Pollard for their help and all the knowledge I gained from their classes and advice over these years at The Ohio State University.

To all my friends here in the US, Puerto Rico and elsewhere: Luis Canting, Abdil Javish, Luis Ortiz, Dimaris Barrios, Luis González, Alma Kulhemann, Michaele Dosier, Manuel Delicado, Lorena (Lore) Andueza, Pilar (Pili) Chamorro, Daniela (Dani) Salcedo and Don O’Lone; Thanks!!!
Y a mi familia: mis padres Johnny y Carmen, mis abuelos Carmelo y Josefina, mi hermano Johnny, mis sobrinas Génesis del Mar y Cristina del Mar y mi sobrino Alejandro Sebastian, y mi cuñada Verónica; mi eterno e infinito agradecimiento. Hasta aquí llegó el barco, se los prometo…
Vita

2000.................................................. B.A. Hispanic Studies, University of Puerto Rico

2005.................................................. M.A. Linguistics, University of Puerto Rico

2005-2009........................................... Graduate Teaching Associate, Department of Spanish and Portuguese, The Ohio State University

2009-2010........................................... Visiting Lecturer, Graduate Program in Linguistics, University of Puerto Rico

2010 to present ................................... Visiting Assistant Professor, Department of Spanish, The College of Wooster

Fields of Study

Major Field: Spanish and Portuguese
Table of Contents

Abstract ................................................................................................................................. ii

Dedication ........................................................................................................................... iv

Acknowledgments .............................................................................................................. v

Vita ........................................................................................................................................ vii

Table of contents ............................................................................................................... viii

Chapter 1: Introduction ................................................................................................. 1

1.1. The objective of this dissertation ........................................................................ 5

1.1.1 Purpose .................................................................................................................. 5

1.1.2 Outline ................................................................................................................... 9

Chapter 2: Theoretical Framework ................................................................................. 13

2.1. Introduction ............................................................................................................. 13

2.2. Generalizing Minimalist Grammars .................................................................... 14

2.2.1 Merge .................................................................................................................. 16

2.2.2 Move .................................................................................................................... 18

2.3. Semantics in Generalized Minimalist Grammars .................................................. 24

Chapter 3: Predication ................................................................................................... 30

3.1. Introduction ............................................................................................................. 30
3.2. Predication

3.2.1 Pre-Fregean predication theories

3.2.1.1 Plato’s theory of predication

3.2.1.2 Aristotle’s theory of predication

3.2.1.3 Leibniz’s theory of predication

3.2.1.4 Summary

3.2.2 Post-Fregean predication theories

3.2.2.1 Frege’s theory of predication

3.2.2.2 Tarski

3.2.2.3 Frege-Tarski

3.2.3 Summary

3.3. Types of predicates

3.3.1 The i-level and s-level distinction

3.3.1.1 i-level and s-level predicates: Previous accounts

3.3.1.1.1 Milsark (1974)

3.3.1.1.2 Carlson (1977)

3.3.1.1.3 Diesing (1992)

3.3.1.1.4 Kratzer (1989/1995)

3.3.1.1.5 Chierchia (1995)

3.3.1.2 Summary

3.3.2 i-level / s-level predicates in Spanish

3.3.2.1 s-level predicates and pseudo-copular verbs in Spanish
3.3.2.1 Ir, venir, andar…………………………56
3.3.2.1.2 Llevar, quedarse…………………………56
3.3.2.1.3 Continuar, seguir…………………………57
3.3.2.1.4 Parecer, permanecer, mantenerse, hallarse,
encontrarse……………………………………57
3.3.2.2 i-level / s-level predicates and the Spanish copular variation:
ser and estar…………………………58
3.3.2.2.1 The ser/estar paradox………………61
3.4. Predication and the copula……………………………62
3.4.1 The nature of the copula in the philosophical tradition…………62
3.4.1.1 Aristotle and the medieval tradition…………62
3.4.1.2 Frege and copular constructions……………63
3.4.2 The nature of the copula in the linguistic tradition…………66
3.4.3 Taxonomy of copular clauses……………………68
3.4.3.1 Equitative clause…………………………69
3.4.3.2 Specificational clause……………………69
3.4.3.3 Identificational clause……………………69
3.4.3.4 Predicational clause……………………70
3.4.4 Partee’s theory of noun phrase interpretation……………70
3.4.4.1 Generalized quantifier……………………70
3.4.4.2 Referential……………………………71
3.4.4.3 Predicative……………………………71
3.5. Summary………………………………………………….72
Chapter 4: Copula and copula-less clauses

4.1. Introduction

4.2. Syntactic derivation of copular clauses

4.2.1 Small clauses

4.2.1.1 Symmetric small clause

4.2.1.1.1 Heggie (1988a, 1988b, 1989)


4.2.1.1.3 Rothstein (2001)

4.2.1.1.4 Breaking the symmetry

4.2.1.2 Asymmetric small clause

4.2.1.2.1 Bowers (1993, 2001)

4.2.1.2.2 Adger and Ramchand (2003)

4.2.1.2.3 den Dikken (2006)

4.2.1.2.4 Citko (2008)

4.2.1.3 Summary

4.3. Verbless clauses

4.3.1 Modern Standard Arabic

4.3.1.1 Pron in Modern Standard Arabic

4.3.2 Modern Hebrew

4.3.2.1 Pron in Modern Hebrew

4.3.3 Russian

4.3.3.1 Pron in Russian

4.3.4 Mauritian Creole
4.3.5 Mina

4.3.6 Hdi

4.3.7 Summary of the data

4.4. The syntax of verbless clauses in generative grammar

4.4.1 Arguments for a functional projection in verbless clauses

4.4.1.1 TP projection in verbless clauses

4.4.2 Arguments against the null copula analysis

4.4.3 Conclusion

4.5. The syntax of verbless clauses in model-theoretic grammars

4.5.1 Lexical-functional grammar

4.5.2 Head-driven phrase structure grammar

4.6. Summary

Chapter 5: Spanish PredNPs

5.1. Introduction

5.2. Spanish PredNP’s: general facts

5.2.1 The XP predicate

5.2.2 The DP subject

5.2.3 The structure of Spanish PredNP’s

5.2.4 The information structure of Spanish PredNP’s

5.2.5 Remaining issues

5.2.6 Summary

5.3. The syntax of Spanish PredNP’s

5.3.1 Possible analyses
5.3.1.1 Right-dislocated DP.................................139
5.3.1.2 Subject/Predicate movement......................141
5.3.1.3 Two independent clauses........................143
5.3.1.4 Small clause........................................145
5.3.1.5 Summary.............................................146
5.3.2 On the internal structure of Spanish PredNPs........147
5.3.3 Conclusion..............................................151
5.4. Spanish PredNPs and exclamatives....................152
5.5. Summary..................................................155

Chapter 6: Spanish PP complement clauses..........................156
6.1. Introduction..............................................156
6.2. PPCCs and DNCs: general facts:........................158
  6.2.1 Degree Neuter Construction..........................161
    6.2.1.1 lo + Adjective..................................162
    6.2.2 PP Complement Construction........................168
      6.2.2.1 Relevant properties............................168
        6.2.2.1.1 High degree quantification...............169
        6.2.2.1.2 The preposition............................170
        6.2.2.1.3 The subject................................171
        6.2.2.1.4 The predicate..............................172
        6.2.2.1.5 Information structure.....................173
        6.2.2.1.6 Other properties..........................174
          6.2.2.1.6.1 S-selection............................174
7.3.2 Syntactic derivations of QBNP’s………………………………………………198

7.3.2.1 Some problems……………………………………………………………..201

7.3.2.1.1 González-Rivera and Delicado Cantero (2010)…202

7.3.2.1.1.1 Spanish c-QBNP’s and the definiteness effect……………………………205

7.3.3 Toward a GMG analysis…………………………………………………………211

7.4 Spanish attributive QBNP’s……………………………………………………………213

7.4.1 The internal structure of Spanish a-QBNP’s……………………………………214

7.4.1.1 Not all a-QBNP’s are in effect a-QBNP’s………………………………………214

7.4.1.2 Relevant properties…………………………………………………………..216

7.5. Conclusion………………………………………………………………………..220

Chapter 8: Conclusion………………………………………………………………222

References…………………………………………………………………………….228
Chapter 1: Introduction

A sentence can be defined as a statement that consists of three elements: a subject, a predicate and a nexus between them (Butts 2006). The nexus, or RELATOR in den Dikken’s (2006) terms, between the subject and the predicate is expressed by a finite verb in tensed clauses. Following den Dikken (2006), this relationship can be instantiated as in (1a), with (1b) having the syntactic representation of (1c). In this syntactic configuration the YP projected by beautiful serves as the complement of the RELATOR and the poem is seated in the specifier position of the RELATOR’s projection (1d):

(1a) \[[RP [XP SUBJECT] [R' RELATOR [YP PREDICATE]]]\]
(1b) The poem is beautiful.
(1c) \[[RP [The poem] [RELATOR=be [beautiful]]]\]
(1d)

\[
\begin{array}{c}
\text{XP} \\
\text{R'} \\
\text{the poem} \\
\text{R} \\
\text{YP} \\
\text{be} \\
\text{beautiful}
\end{array}
\]

There are some languages, however, in which the verbal element is not needed nor permitted in be clauses. In other words, these clauses involve nonverbal predication. This is
the case for Standard Arabic, Hebrew and Russian, among other world languages, where the predicate does not require the copula. In these cases the phrase that acts as predicate YP (AP/NP/PP) provides the main predication for the clause -i.e. the AP/NP/PP phrase is the syntactic head of the predicate phrase selecting for an appropriate subject. The only difference between these languages and English and Spanish, for example, is that the latter do not allow canonical *be*-less sentences in tensed environments. Some examples of verbless clauses from Hebrew (2), Standard Arabic (3), and Russian (4) are given below.

(2a)  
\begin{verbatim}
   dani more  ba-universita
   Dani teacher in-the-university
   ‘Dani is a teacher at the university.’
\end{verbatim}

(2b)  
\begin{verbatim}
   dani nesmad ad meod
   Dani nice very
   ‘Dani is very nice.’
\end{verbatim}

(2c)  
\begin{verbatim}
   dani al ha-gag
   Dani on the-roof
   ‘Dani is on the roof.’
\end{verbatim}

(3a)  
\begin{verbatim}
  ʕaliy-un muʕallimun
   Ali-NOM teacher
   ‘Ali is a teacher.’
\end{verbatim}

(3b)  
\begin{verbatim}
   al-ʕurfat-u kabiiratun
   the-room-NOM big
   ‘The room is big.’
\end{verbatim}

(3c)  
\begin{verbatim}
   l-kitaab-u ʕalaa l-maktabi
   the-book-NOM on the-desk
   ‘The book is on the desk.’
\end{verbatim}

(4a)  
\begin{verbatim}
   Dima pisatel
   Dima-NOM writer-NOM
   ‘Dima is a writer.’
\end{verbatim}

(Benmamoun 2008: 106)

(Markman 2008: 188)
The behavior of verbless clauses among the world’s languages is quite puzzling. For example, in Hebrew, Standard Arabic and Russian the past and future tenses always require a verbal predicate (5-7). However, present tense indicative mood does not.

(5a) ha-yeladim hayu babayit
    the-children were at home
    ‘The children were at home.’

(5b) dan yihye recini miday
    Dan will be serious too
    ‘Dan will be too serious.’

(Berman 1978: 183)

(6a) kana al-jaww-u harr-an
    was the-weather-NOM hot-ACC
    ‘The weather was hot.’

(6b) sa-takuunu al-samaaʕ-u saafijat-an
    will be the-sky-NOM clear-ACC
    ‘The sky will be clear.’

(7a) On byl durak
    He-NOM was fool-NOM
    ‘He was a fool.’

(7b) On budet durak
    He-NOM will be fool-NOM
    ‘He will be a fool.’

(Abdel-Ghafer 2003: 8)
In Mauritian Creole, on the other hand, the copula appears empty in declaratives in the past, present or future, even though the traditional view has established that the copula is required to carry tense marking (Lyons 1968). Past and future tenses in Mauritian Creole are expressed through an overt marker *ti* (8a) and *pou* (8b) respectively, which express aspect and mood. In other words, Mauritian Creole does not require a verb in the past or future tense. In this respect, it differs from Standard Arabic, Hebrew and Russian:

(8a)  
zan ti en profeser  
John TNS a teacher  
'John was a teacher.'

(8b)  
zan pou en profeser  
John TNS a teacher  
'John will be a teacher.'

(Henri and Abeillé 2007: 134)

In short, in verbless clauses the nexus that connect both the subject and the predicate is empty. While most languages make use of a ‘light’ or bleached version of a lexical verb in a range of (canonical) copula or predicative constructions (e.g. English and Spanish), others convey the same proposition without a verbal copula. Nevertheless, the distribution of such empty copula and its presence or absence in the syntactic string is highly constrained by the grammar of the given language. While in Hebrew, Standard Arabic and Russian the verbal copula must show up in the past and future tenses, its presence is not necessary and not allowed in some cases, at least in the present tense. Contrary to this, in Mauritian Creole the copula does not need to show up in any of the mentioned contexts.
1.1 The objective of this dissertation

The aim of this dissertation is to study the internal structure of (some) Spanish verbless clauses. The study of verbless clauses in general raises many interesting questions for most syntactic and semantic frameworks, since they appear to involve main clause structure without overt verbs. Some of the questions are the following:

1. Are these clauses a projection of T(ense), or some sort of another functional category (e.g. AgrP)?
2. Do verbless clauses have an overt or null verbal head - i.e. a copula?
3. Are verbless clauses small clauses?
4. Can verbless clauses be interpreted as something of Montagovian type <t>?

Even though Spanish does not have what we might call ‘real verbless clauses’ (e.g. Hebrew, Standard Arabic, Russian), there are a set of sentences that technically can be classified as such given that a form of the copula does not show up.

1.1.1 Purpose

In this dissertation several aspects of the syntax and semantics of Spanish non-verbal clauses are examined. I focus my attention on three apparently non-related constructions: Predicative NP (PredNP) (9), lo-de Construction (10), and Qualitative Binominal Noun Phrases (QBNPs). QBNPs come in two types: attributive Qualitative Binominal Noun Phrase (11), and comparative Qualitative Binominal Noun Phrase (12). In the former the predicate applies to the subject in his or her capability as an x, in this case as a governor. In the latter the predicate applies directly to the subject not only in his or her capability as an x but also as a human being (den Dikken 2006):
(9a) Un pelotudo este chiquillo.
   ‘A jerk this boy’

(9b) Muy oportuna su respuesta.
    ‘Very suitable her response.’

(10a) Me sorprende lo hermoso del poema.
      ‘It amazed me how beautiful the poem is.’

(10b) Pepe no entendió lo hermoso del poema.
      ‘Pepe did not understand how beautiful the poem was.’

(11a) Un idiota de gobernador
      ‘An idiot of a governor’

(11b) Una bestia de profesor
      ‘A beast of a professor’

(12a) El idiota del gobernador
      ‘The idiot of the governor’

(12b) El rata del doctor
      ‘The stingy of the doctor’

Even though these clauses seem to have different syntactic structure on the surface, a
detailed analysis demonstrates that at least three of them involve predicate movement to the
left of the NP subject: PredNP, PP Complement Clause, and comparative QBNP (cf.
Villalba and Bartra-Kaufmann 2010). Attributive QBNP can be explained in other terms: the
two noun phrases are base-generated and the predicate precedes its subject. This follows
from the fact that its semantics is clearly different from the other clauses, as we will see in
Chapter 7. In addition to this, each of these constructions involve at some level of
abstraction noun phrase internal predication. In other words, each sentence in (9-12) can be
paraphrased as follows:

(9a’) Este chiquillo es un pelotudo.
      ‘This boy is a jerk.’
(9b') Su respuesta fue muy oportuna.
‘Her response was very suitable.

(10a') …el poema era hermoso.
‘…the poem was beautiful.’

(10b') …el poema fue hermoso.
‘…the poem was beautiful.’

(11a') El gobernador es un idiota como gobernador.
‘The governor is an idiot as a governor.’

(11b') El profesor es una bestia como profesor.
‘The professor is a beast as a professor.’

(12a') El gobernador es un idiota.
‘The governor is an idiot.’

(12b') El doctor es una rata
‘The doctor is a rat.’

(10b) admits another interpretation, one in which we obtain a partitive reading, roughly paraphrased as *Pepe did not understand the beautiful part of the poem* (cf. Gutiérrez-Rexach 1999).

Two hypotheses will be defended here: On the syntactic side I will sustain that given the similarities between PredNP, PP Complement Clause, and comparative QBNP, a unified analysis is tenable in terms of Predicate Movement. Attributive QBNP can be analyzed in terms of Predicate Movement too, but a base-generated analysis seems more suitable (den Dikken 2006). On the semantic side, the following two claims will be defended. First, verbless clauses in Spanish, such as the one analyzed here, involve referent identifiability, that is to say that the DP subject must be specific. According this proposal, in Spanish verbless clauses the entity of which a property is predicated must be identifiable. We will see that this same pattern is reproduced in Standard Arabic, Russian, and Mina and Hdi. The former is a language spoken in the western part of Northern Cameroon, and the latter is
spoken in Tourou and surroundings settlement in Far North Province of Cameroon, on the border with Nigeria. Second, verbless clauses in Spanish involve personal and temporal deixis. Personal deixis entails the presence of someone making a judgment and the speaker is the judge by default. Temporal deixis requires that the effect evoked by the verbless construction must hold at speech time, whether or not the denoted situation also holds at speech time (Michaelis and Lambrecht 1996). This second condition will allow us to consider some instance of PredNP and PP Complement Clause as pertaining to the set of Spanish exclamatives, contra Alonso-Cortés (1999), Paul (2006), and Paul and Stainton (2006), which do not consider PredNP to be exclamatives, among other things. Also, in this dissertation I argue that movement in syntax can be triggered by an interpretable feature (INT.F). This is in effect one of the basic tenets of the syntactic framework adopted here.

In sum, the aim of this dissertation is to give a unified syntactic (and semantic) account of the Spanish verbless clauses just described above. In order to do so, the discussion will be limited to predicative sentences. According to the general view, this sentence type ascribes properties and relations to particulars (Newman 2002). In short, predicative verbless sentences (or copular sentences) in the present study refer to constructions that consist of a nominal subject and a non-verbal predicate that could be a noun phrase (NP) or an adjective phrase (AP) without an overt copula. In other words, these constructions would be analyzed syntactically as consisting mainly of an XP predicate and an XP which is an NP that is interpreted as the subject of this predicate. The notion of predication will play a fundamental role in this analysis. In chapter 3 I discuss this notion in more detail.
1.1.2 Outline

This dissertation is organized as follows: in chapter 2 the theoretical framework used here is developed. I am adopting a Generalized Minimalist Grammar (GMG), as developed by Gutiérrez-Rexach (1997, 1998). GMG seeks to formalize current Chomsky’s minimalist ideas, an enterprise that is by no means unique - i.e. Lecomte (2005), for example, propose a categorial embodiment of minimalist’s ideas in his Categorial Minimalism. GMG can be characterized mainly as a generative-enumerative syntactic framework (transformational grammar, the minimalist program and categorial grammars). However, its architecture is similar to some model-theoretic frameworks (HPSG) - i.e. lexical items in GMG are represented through a lexical entry. GMG can be considered an intersection of model-theoretic syntax and generative-enumerative syntax.

In chapter 3 I discuss the notion of predication. The chapter starts with a discussion on some previous theories of predication from Plato and Aristotle to the post-Fregean view, and it is emphasized that predication determines the most basic structure of a clause. The distinction between individual-level predicates and stage-level predicates is discussed as well. As it will be seen, this distinction plays a fundamental role in the analysis of verbless clauses - i.e. verbless clauses appear most of the times with individual-level predicates. This is possible because individual-level predicates describe atemporal properties of an individual. Henceforth, no verb is necessary. As we will see, not every predicate is allowed in the Spanish verbless clauses considered here. Spanish PredNPs, for example, are only possible with individual-level predicates (cf. chapter 5). Thus, the notion of predicate is of central interest for the understanding of Spanish verbless clauses. Predication with the copula *ser/estar* ‘to be’ in Spanish is also examined in this chapter. And the chapter concludes with a
discussion of the nature of the copula in the linguistic tradition, i.e., the syntax of predication and the taxonomy of copular clauses.

In chapter 4 previous syntactic analyses of copula clauses are discussed. I focus my attention mainly in the distinction between symmetric and asymmetric small clauses. Following den Dikken’s (2006) analysis and to a lesser extent Citko (2008) proposal, I assume that a functional projection lies between the DP subject and the XP predicate of a given copula clauses. Thus, this chapter argues in favor of a asymmetric small clause analysis of verbless clauses, a proposal also assumed by Benmamoun (2008) for Arabic. A survey of verbless clauses in other languages is provided in this chapter as well. Specifically, I focus my attention on Modern Standard Arabic, Hebrew, Russian, Mauritian Creole, Mina and Hdi. The presence of a pronominal element between the subject and the predicate in verbless clauses in Modern Standard Arabic, Hebrew and Russian are strong evidence for den Dikken’s (2006) and Citko’s (2008) claim, that is to say a functional projection lies between the subject and the predicate of a sentence. Mina and Hdi provide further evidence for the analysis developed here. In both languages, only individual-level predicates are allowed in verbless clauses. The other characteristic of these languages is that the subject of verbless clauses carries high tone, i.e. it must be highly topical, referential (cf. Hdi). Finally, the chapter concludes by examining the analysis of verbless clauses within the generative and non-generative syntactic frameworks.

In chapter 5 I examine several aspects of the syntax, semantics and discourse properties of Spanish PredNPs, e.g. *un gilipollas este chaval* ‘an asshole this boy’. These are clauses that are non-verbal in nature but nonetheless exhibit clausal properties. Previous syntactic analysis of Spanish PredNPs are examined as well: right-dislocated DP,
subject/predicate movement, two independent clauses and small clause analysis. All four analyses are rejected and a new analysis in terms of predicate inversion is proposed. As mentioned, the analysis is elaborated within GMG.

In chapter 6 the PP Complement Clause is examined. I call these clauses Spanish PP complement clauses, following Gutiérrez-Rexach (1999), because there is a DP that is a complement of the preposition heading the PP e.g. …lo idiota de su respuesta ‘…how idiot his answer is’. Following an insight by Gutiérrez-Rexach (1999) and Villalba and Kaufmann (2010), I analyze Spanish PP complement clauses in terms of predicate inversion (cf. den Dikken 2006). Movement of the predicate in the analysis developed here is different from the one suggested by Villalba and Kaufmann (2010). I propose that the inversion of the predicate in these constructions is due to a strong interpretable feature that needs to be discharged in the course of the syntactic derivation. Also I provide a lexical entry for the operator of exclamatory force associated with these clauses and which is responsible for the high degree interpretation we find in Spanish PP complement clauses.

In chapter 7 the syntax and semantics of Spanish Qualitative Binominal Noun Phrases (QBNPs) are examined. These clauses come in two types: attributive un imbécil de doctor ‘an idiot of a doctor’ and comparative el idiota del doctor ‘the idiot of the doctor’. Some salient features of this construction are the following. First, QBNPs involve a subject-predicate relationship. Second, the preposition de ‘of’ between the predicate and the subject is not a true preposition, but rather a nominal copula -i.e. de behaves as a dummy P or a meaningless element whose presence in the structure is forced by syntactic constraints. Like ser ‘to be’ in Spanish, the nominal copula can serve as a lexicalization of the RELATOR-head (den Dikken 2006). The preposition in PP complement clause can be considered also a
dummy P. And third, the predicate in QBNPs must have an evaluative/appreciative, typically negative (although not necessarily) interpretation. Following an insight by Jäger (2000), I propose also the following neo-Carlsonian semantic analysis for Spanish QBNPs: Spanish comparative QBNPs express properties of total objects, while Spanish attributive QBNPs denote properties of partial object. In other words, while the former expresses propositions that are true only in big situations –i.e. world size situations, the latter denotes propositions that may be true in small or localizable situations. In other words, what the predicate of Spanish attributive QBNPs expresses is that the subject or object of predication has a property, and that property is true in small or localizable situations. In Spanish comparative QBNPs, on the other hand, the property denoted by the predicate applies directly to an individual. As it will be seen, comparative QBNPs can be analyzed in terms of predicate inversion, while attributive are better understood as base-generated with the XP predicate preceding the DP subject.

Finally, in chapter 8 I summarize the proposal for verbless clauses in Spanish discussed in this dissertation.
Chapter 2: Theoretical Framework

2.1 Introduction

The aim of this chapter is to lay down the technicalities of the linguistic framework adopted in this dissertation, but specifically the analysis developed in chapters 5 through 7. Here we develop a syntactic derivation of Spanish verbless clauses within a Generalized Minimalist Grammar (GMG), as developed by Gutiérrez-Rexach (1997, 1998). The rationale for a generalized minimalist grammar analysis lies on the assumption that this grammar provides logical formulation to current generativist grammar (e.g. Chomsky 1993, 1995, 2000, 2001; and other authors). In other words, GMG formalizes minimalist ideas. This is by no means a unique enterprise. Lecomte (2005, 2008), for example, seeks a categorial embodiment of Chomsky’s minimalist ideas in what he calls Categorial-Minimalist Grammars (CMG’s). The goal of such approaches (i.e. GMG, CMG’s, etc.) is to emphasize the role played by the lexicon and by very general operations, like e.g. Merge and Move in the minimalist framework, or Application and Abstraction in Categorial Grammars (Lecomte, 2005).

A Generalized Minimalist Grammar consists of the following:

1. A non-empty set of strings (i.e., the vocabulary of the Language).
2. A set of categorial features: noun (n), determiner (d), preposition (p), adverb (a), and verb (v).
4. A set of non-interpretable features: +NOM, +ACC, +nom, +acc.


There are two syntactic operations allowed in GMG: Merge and Move. While Merge applies to two expressions in its domains and concatenates their string part, Move applies to a constituent with a strong feature and prefixes the associated string part (Gutiérrez-Rexach 1998). A strong feature, represented by +x (e.g. +NOM), attracts all the features in the moved subtree. A weak feature, represented by +x (e.g. +nom), attracts all the features, except the phonetic ones (Stabler 1997; cf. Lecomte 2005). If the value of a feature is changed, then the word order of a given syntactic object changes too. In Chomsky’s system, a strong feature must be removed before Spell-Out, whereas weak features must be checked in covert syntax. In GMG, movement cannot apply to expressions that carry weak features.

2.2 Generalizing Minimalist Grammars

In the nineties some authors proposed independently grammatical models that were monostratal and lexically driven (Gutiérrez-Rexach 1998). Some of those authors were Dowty (1992), Keenan and Stabler (1991, 1995, 1996), and Chomsky (1994, 1995). Dowty (1992), for example, argues that a minimalist grammar should consist only of a tectogrammatical and a phenogrammatical structure. While the former is “the derivation tree of the sentence, minus the specification of what the derived expressions at each step might look like”, the latter is “the actual linguistic forms produced at the various steps” (Dowty 2007). The phenogrammatical structure is captured by language-specific Linear Precedence principles. Tectogrammar and phenogrammar are often referred to as abstract syntax and concrete syntax, respectively. Versions of this distinction have been carried over into some
forms of Categorial Grammars (CGs) and Head-Driven Phrase Structure Grammar (HPSG). The tecto vs. pheno distinction is explicitly adopted in current frameworks such as Abstract Categorial Grammar (ACG), Lambda Grammar (LG), Grammatical Framework (GF), and High Order Grammar (HOG) (Pollard, 2006). GMG, for instance, captures the tectogrammatical structure of the expressions.

For Keenan and Stabler, on the other hand, the grammar is the closure of a lexicon under syntactic operations, and Chomsky, in “Bare Phrase Structure” (1994) and “Categories and Transformations” (1995, Ch. 4), develops a minimalist theory of syntax. This theory is monostratal for the purposes of syntactic computation (Gutiérrez-Rexach 1997).

Gutiérrez-Rexach (1997, 1998) develops these ideas further and proposes a grammatical analysis in which the following assumptions are made:

1. Lexical items are conceived of as sets of features.
2. Syntax is projected from the Lexicon.
3. There are no conditions on representations.
4. Syntactic structure is an emergent property of feature-driven computation.
5. There is a rejection of the “Autonomy of Syntax” hypothesis.
6. There are no covert syntactic operations.

GMG is defined as follows:

A Generalized Minimalist Grammar is a 4-tuple \( \langle V, F, \text{Lex}, O \rangle \) where:

- \( V \) is a non-empty set of strings (i.e., the vocabulary of the Language).
- \( F = \text{CAT} \cup \text{SEL} \cup \text{NINT} \cup \text{INT} \), where
  - \( \text{CAT} \) is the (finite) set of categorial features (i.e., \( \text{CAT} = \{n, d, p, a, v\} \));
  - \( \text{SEL} \) is the set of selection features (i.e., a collection of lists of the following
form: \( \text{SEL} = \{< c_1, \ldots, c_n > | c_i \in \text{CAT}, \text{for } 1 \leq I \leq n \} \); 

- NINT is a collection of sets on non-interpretable features (i.e., NOM, ACC).
- INT is a collection of sets of interpretable features (i.e., ±definite, ±specific).

- \( \text{LEX} \subseteq V^* \times \text{CAT} \times \text{SEL} \times \text{NINT} \times \text{INT} \)
- \( O = \text{MERGE}, \text{MOVE} \)

In GMG, a given language can be described as the closure of the lexicon under syntactic operations, or generalized transformations, as Chomsky calls them.

Some comments are in order here. First, the sets of non-interpretable and interpretable features specify the phonological, morphosyntactic and semantic properties of the lexical items. Second, in some circumstances an expression requires that the expression it combines with have certain syntactic or semantic requirements. In GMG these requirements are encoded in the selection feature of the expression. The operations \textit{Merge} and \textit{Move} are discussed in the following sections.

### 2.2.1 Merge

In Chomsky’s system, given a numeration the \textit{Computational System} (\( C_{HL} \)) can take Lexical Items A and B from the said numeration and merge them together. This is known as \textit{Merge} or \textit{External Merge} in recent terminology (Ortega Santos 2008). This can be represented in the following way, leaving aside irrelevant details:

\[(1) \quad \text{a. Numeration: } \{A, B\}\]
GMG captures this intuition in the following way:

- Dom (MERGE) =
  \{< \alpha, \beta > \in (V^* \times \text{CAT} \times \text{SEL} \times \text{NINT} \times \text{INT})^2 \mid \text{SEL}(\alpha)_1 = \text{CAT}(\beta)\}

- MERGE(\alpha, \beta) =
  \langle V(\alpha) \circ V(\beta), \text{CAT}(\alpha), \text{SEL}(\alpha) - \{\text{SEL}(\alpha)_1\}, \text{NINT}(\alpha) \cup (\text{NINT}(\beta) - \{+x \mid +x \in \text{SEL}(\alpha)_1\}), \text{INT}(\alpha) \cup \text{INT}(\beta) \rangle

Merge applies to any two expressions \(\alpha\) and \(\beta\) if and only if the first selection feature of \(\alpha\) is the categorial feature of \(\beta\). Consider the expression \textit{the president}: Numeration \{\text{the, president}\}. The determiner \textit{the} will have the selection feature \(n\). Then, it may merge with an expression \(\alpha\) s.t. \(\text{CAT}(\alpha) = n\). The lexical items \textit{the} and \textit{president} are specified as follows:

(2a) \(V: \text{the}\)

(2b) \(< \text{the, }d, n, d, [\text{nint} + \text{nominative}], [\text{int} + \text{definite}] >\)

(3a) \(V: \text{president}\)

(3b) \(< \text{president, }n, 0, 0, [\text{int} + \text{animate}, + \text{singular}, + \text{count}] >\)

Since the lexical item \textit{the} is of category \(d\) its selection feature is \(n\) which in turn returns an expression \(d\). \([+\text{nominative}]\) and \([+\text{definite}]\) are the members of the set \(\text{NINT}(\text{the})\) and \(\text{INT}(\text{the})\) respectively. The lexical item \textit{president}, on the other hand, is of category \(n\) and its selection feature is 0. In other words, \textit{president} does not select for any other expression. \([+\text{animate}], [+\text{singular}]\) and \([+\text{count}]\) are the members of the set \(\text{INT}(\text{president})\) and there are not \(\text{NINT}\) features. \textit{The} and \textit{president} can merge because they are in the domain of the
Merge operation. Merge applies to these lexical items and yields a new expression $\gamma$ with the following properties (Gutiérrez-Rexach 1998):

1. The string part of $\gamma$ is *the* president.
2. The categorial feature of $\gamma$ is $d$.
3. The selection feature of $\gamma$ is the list that results from removing the first coordinate from the selection list of $\alpha$.
4. The non-interpretable and interpretable features of $\gamma$ are the union of the features of *the* and *president* except for any non-interpretable feature of *president*.

The merger of *the* president will be as follows:

\[
\begin{array}{cc}
\text{V} & \text{the president} \\
\text{CAT} & d \\
\text{SEL} & 0 \\
\text{NINT} & [+\text{nom}] \\
\text{INT} & [+\text{sg, +def, +count, +anim}] \\
\end{array}
\]

The resulting expression *the* president does not subcategorize for any other expression. In this sense, Merge is just an instantiation of Forward Application.

### 2.2.2 Move

Before a formal treatment of Move can be provided, we need to provide a formal
definition of a notion in which Merge is built in: the notion of syntactic constituenthood. In minimalist terms, an expression $\alpha$ is a constituent of an expression $\beta$ if $\alpha$ and $\beta$ are in a certain structural configuration. In GMG, $\alpha$ is a constituent of $\beta$, $\text{CONS}(\alpha, \beta)$ if the following holds (Gutiérrez-Rexach 1998):

- **Definition CONS**
  Let $\text{CONS}_0(\alpha, \beta)$ iff $\alpha = \beta$. Then, for all $n \geq 0$, $\text{CONS}_{n+1}(\alpha, \beta)$ holds iff for $F \in \{\text{MERGE}, \text{MOVE}\}$, $\beta = F(\gamma)$ for some tuple $\gamma \in \text{Dom}(F)$ and $\text{CONS}_n(\alpha, \gamma_i)$ where $\gamma_i$ is an element of $\gamma$. $\alpha$ is a constituent of $\beta$, $\text{CONS}(\alpha, \beta)$ iff for some $n$, $\text{CONS}_n(\alpha, \beta)$.

We say that $\alpha$ is a proper constituent of $\beta$ iff $\alpha$ is obtained by successive applications of the operations MERGE and MOVE to expressions $\gamma_i \in \times \text{CAT} \times \text{SEL} \times \text{NINT} \times \text{INT}$ and $\text{CONS}_n(\alpha, \gamma_i)$, for some $\gamma_i$. In the sentence *the president bought a house*, *the president*, *a house*, *bought a house*, etc. are constituents of (5), but *the president bought*, *a house*, etc. are not, as the derivation tree shows:

(5)

\[
\begin{array}{c}
\text{MERGE:} \\
\text{CAT} \quad v \\
\text{SEL} \quad 0 \\
\end{array}
\]

\[
\begin{array}{c}
\text{MERGE:} \\
\text{CAT} \quad d \\
\text{SEL} \quad 0 \\
\end{array}
\]

\[
\begin{array}{c}
\text{MERGE:} \\
\text{CAT} \quad v \\
\text{SEL} \quad d \\
\end{array}
\]

\[
\begin{array}{c}
\text{MERGE:} \\
\text{CAT} \quad v \\
\text{SEL} \quad d \\
\end{array}
\]
We can proceed now to discuss the operation *Merge*.

*Move or Internal Merge* in Chomsky’s system refers to the operation of merging from within - i.e. given a syntactic object already formed SO, we can displace one of its elements and merges it to SO. Informally,

(6a) Numeration: \{A, B, C, D\}

(6b)

\[
\begin{array}{c}
A \\
\downarrow \\
B & A \\
\downarrow \\
A & D \\
\downarrow \\
D & C \\
\downarrow \\
C & B
\end{array}
\]

In GMG, movement checks a strong feature [+X] of the moved constituent; this feature then becomes weak [+x]. In Chomsky’s terms, the strong feature is deleted but not erased. *Move* is formally defined in GMG as follows:

\begin{itemize}
  \item Dom (MOVE) = \\
\{ < \beta, \alpha > \in (V^* \times CAT \times SEL \times NINT \times INT)^2 | CONS(\beta, \alpha) \land \exists [+X] \in NINT(\alpha) \cup INT(\alpha) \text{ such that Index}(+[X]) = < I_1, \ldots, k > \land V(\beta) = V(\alpha)_1 \circ \ldots \circ V(\alpha)_k \} \}
\end{itemize}
Movement consists of copying the displaced constituent and deleting it from its original position. In short, while Move depends on the interpretable feature (INTF) and non-interpretable feature (NINTF) of the expression in its domain, Merge depends on the categorial and selection features of the expressions in its domain (Gutiérrez-Rexach, 1997).

Finally, movement is seen as a variety of merger. Formally:

- \( \text{Dom (MOVE/MERGE)} = \{ < \alpha, \beta > \mid \text{SEL}(\beta) = \text{CAT}(\alpha) \land \exists \gamma \text{ such that CONS}(\gamma, \beta) \land \alpha = \text{Copy}(\gamma) \} \)

- \( \text{MOVE/MERGE}(\alpha, \beta) = < V(\beta) \circ (V(\alpha) - V(\beta)), \text{CAT}(\beta), \text{SEL}(\beta) - \{\text{SEL}(\beta)\}, (\text{NINT}(\beta) - \text{NINT}(\gamma)) \cup \text{NINT}(\alpha), (\text{INT}(\beta) - \text{INT}(\gamma)) \cup \text{INT}(\alpha) > \)

In minimalist terms, the derivation of the sentence *Barack hates Iran* will be as follows:

(7a)

\[
\begin{array}{c}
\text{TP} \\
\end{array}
\]

\[
\begin{array}{c}
\text{T'} \\
\end{array}
\]

\[
\begin{array}{c}
\text{T} \\
\end{array}
\]

\[
\begin{array}{c}
\text{vP} \\
\end{array}
\]

\[
\begin{array}{c}
[\phi] \\
\end{array}
\]

\[
\begin{array}{c}
\text{Barack} \\
\end{array}
\]

\[
\begin{array}{c}
v' \\
\end{array}
\]

\[
\begin{array}{c}
v \\
\end{array}
\]

\[
\begin{array}{c}
\text{Iran} \\
\end{array}
\]

\[
\begin{array}{c}
hate \\
\end{array}
\]

21
Movement is triggered by the non-interpretable feature +NOM in Barack. Barack needs to valuate its NINT Case and this is possible if its move to Spec, TP. This valuation procedure is accomplished via the operation Agree. According to Agree a Probe, or a head with unvalued interpretable feature, identifies a Goal, or the closest YP in its c-commanding domain with the relevant set of visible matching interpretable features, and uses the interpretable features of YP to value its own uninterpretable features (Ortega Santos 2008).

In (7a) the head T has unvalued or uninterpretable phi-features, while Barack has valued or INT phi-features and unvalued Case features -i.e. +NOM. Agree results in the phi-features of T and the Case features of Barack being valued, and as a result the derivation converge (7b).

Notices that this valuation is independent of movement because of the EPP feature in T that forces Barack to move to Spec, T. On the other hand, Probes and Goal can enter in the Agree relation iff they have unvalued or interpretable features.

(7b)

```
TP

Barack  T'

T  vP
[+phi]  

Barack  v'

v  Iran
hate
```
In GMG, the syntactic derivation of the sentence *Barack hates Iran* would proceed among the following lines. The initial multiset of lexical resources is given below, where *Barack* has multiplicity 2. Irrelevant details have been left aside:

\[
\begin{align*}
\text{(8)} & \quad [V \quad \text{Iran} \quad \text{CAT} \quad d \quad \text{SEL} \quad 0 \quad \text{NINT} \quad [+\text{nom}]] \quad [V \quad \text{Barack} \quad \text{CAT} \quad d \quad \text{SEL} \quad 0 \quad \text{NINT} \quad [+\text{nom}]] \\
\text{(9a)} & \quad \text{MERGE} \quad [V \quad \text{hates Iran} \quad \text{CAT} \quad v \quad \text{SEL} \quad d[+\text{nom}]] \\
\text{(9b)} & \quad \text{MERGE} \quad [V \quad \text{hates Iran Barack} \quad \text{CAT} \quad v \quad \text{SEL} \quad d[+\text{nom}]] \\
\end{align*}
\]

In this first step, *hates* and *Iran* merge and the first selection feature of *v* is deleted.

\[
\begin{align*}
\text{(9b)} & \quad \text{MERGE} \quad [V \quad \text{hates Iran Barack} \quad \text{CAT} \quad v \quad \text{SEL} \quad d[+\text{nom}]] \\
\end{align*}
\]

In the second step, *hates Iran* and *Barack* merge. However, the second selection feature of *v*
cannot be deleted because *Barack* carries a strong NINT feature: +NOM. This feature triggers movement:

\[
(9c) \quad \text{MOVE/MERGE} \quad \begin{array}{c}
\text{V Barack hates Iran} \\
\text{CAT v} \\
\text{SEL 0}
\end{array}
\]

In the third, and last step, the copy of *Barack* get its NINT weak +nom feature checked. Hence, the derivation converges.

Even though I am not dealing with the semantics of Spanish verbless clauses directly in this dissertation, the flexibility of GMG provides for such analysis. In the following section I discuss briefly how a semantic analysis can be elaborated in GMG.

### 2.3 Semantics in Generalized Minimalist Grammars

There are several ways in which a compositional semantics can be built into a theory of grammatical analysis. For example, the syntactic string *Barack hates Iran* can be modeled semantically through Kratzer’s (1994) VoiceP analysis. According to Kratzer (1994) External Arguments are generated in Spec,VoiceP and direct object in Spec,VP thus leading to the following syntactic analysis of *Barack hates Iran*. The semantic interpretation is given in (10b):
(10a) VoiceP
   \hline
   DP    Voice’
   Barack \hline

   Voice   VP
   Agent \hline

   DP    V’
   Iran \hline

   V
   hate

(10b) 1. hate’ = \lambda x, \lambda e, hate(x)(e)

2. Iran’ = Iran

3. (Iran hate)’ = \lambda e, hate(Iran)(e)

4. Agent’ = \lambda x, \lambda e, Agent(x)(e)

5. (Agent (Iran hate))’ = \lambda x, \lambda e, Agent(x)(e) \land hate(Iran)(e)

6. Barack’ = Barack

7. (Agent (Iran hate)) Barack’ = \lambda e, Agent(Barack)(e) \land hate(Iran)(e)

Semantics in a Generalized Minimalist Grammar is based on a Type calculus. TYPES can be defined recursively as follows:

* **Definition:** Let \( \alpha \in L(G) \). Then,

1. If CAT(\( \alpha \)) = n, then TYPE(\( \alpha \)) = (e, t)

2a. If CAT(\( \alpha \)) = a, then TYPE(\( \alpha \)) = ((e, t), (e, t))

2b. If CAT(\( \alpha \)) = n and SEL(\( \alpha \)) = n, then TYPE(\( \alpha \)) = ((e, t), (e, t))

3. If CAT(\( \alpha \)) = d and SEL(\( \alpha \)) = 0, then TYPE(\( \alpha \)) = ((e, t), t)
4. If \( \text{CAT}(\alpha) = d \) and \( \text{SEL}(\alpha) = n \), then \( \text{TYPE}(\alpha) = ((e, t), ((e, t), t)) \)

5. If \( \text{CAT}(\alpha) = v \) and \( \text{SEL}(\alpha) = 0 \), then \( \text{TYPE}(\alpha) = t \)

6. If \( \text{CAT}(\alpha) = v \) and \( \text{SEL}(\alpha) = < d, \ldots, d > \), where the number of coordinates in \( \text{SEL}(\alpha) \) is \( n \), then \( \text{TYPE}(\alpha) = (e, \ldots, (e_n, t)) \)

7. If \( \text{CAT}(\alpha) = p \) and \( \text{SEL}(\alpha) = 0 \), then \( \text{TYPE}(\alpha) = ((e, t), (e, t)) \)

8. If \( \text{CAT}(\alpha) = p \) and \( \text{SEL}(\alpha) = d \), then \( \text{TYPE}(\alpha) = (((e, t), t), ((e, t), (e, t))) \)

9. For any arbitrary type, if \( \text{CAT}(\alpha) = x \in \text{CAT} \) and \( \text{SEL}(\alpha) = < x, x > \), then \( \text{TYPE}(\alpha) = < \text{TYPE}(x), \text{TYPE}(x), \text{TYPE}(x) > \)

10. For \( x, y \) arbitrary types, if \( \text{TYPE}(\alpha) = x \) and \( \text{TYPE}(\beta) = y \), then \( \text{TYPE}(\text{MERGE}(\alpha, \beta)) = y \)

11. For \( x, y \) arbitrary types, if \( \text{TYPE}(\alpha) = x \) and \( \text{TYPE}(\beta) = y \), then \( \text{TYPE}(\text{MOVE}(\alpha, \beta)) = \text{TYPE}(\text{MOVE/MERGE}(\alpha, \beta)) = y \), and for the \( \gamma, \delta \) s.t. \( V(\gamma) = V(\beta) - V(\alpha) \) or \( \alpha = \text{Copy}(\delta) \) and \( V(\gamma) = V(\beta) - V(\delta) \), \( \text{TYPE}(\gamma) = < x, y > \)

In the above definitions a \textit{noun} has type \((e, t)\). A \textit{determiner} that does not select anything has type \(((e, t), t)\) and a \textit{determiner} that selects a \textit{noun} has type \(((e, t), ((e, t), t))\), and so on. Notice that \textit{determiners} are conceived as generalized quantifiers, which denote functions from a set to a function from a set to a truth-value. Also, the above definition allows us to associate grammatical categories with semantic types. For example, proper names have type \((e)\), intransitive verbs have type \((e, t)\), transitive verbs have type \((e, (e, t))\) and adverbs have type \(((e, t), (e, t))\). Formally:

1. If \( \text{CAT}(\alpha) = \text{Proper name} \), then \( \text{TYPE}(\alpha) = (e) \)
2. If \( \text{CAT}(\alpha) = \) Intransitive verb, then \( \text{TYPE}(\alpha) = (e, t) \)

3. If \( \text{CAT}(\alpha) = \) Transitive verb, then \( \text{TYPE}(\alpha) = (e, (e, t)) \)

4. If \( \text{CAT}(\alpha) = \) Adverb, then \( \text{TYPE}(\alpha) = (e, (e, t)) \)

Predicates such as *to be tall, to be intelligent* have type \((e, t)\) - i.e. a one-place predicate of individuals. Formally:

5. If \( \text{CAT}(\alpha) = \) Predicate, then \( \text{TYPE}(\alpha) = (e, t) \)

Another consequence of this analysis is that syntactic categories need not correspond one-to-one with semantic types (cf. van Benthem 1991). For example, *nouns* are similar to *verbs*, *intransitive verbs* are similar to *predicates, adjectives, adverbs, prepositions* that do not select anything and *nouns* that select *nouns* (modifiers) share the same semantic type.

On the other hand, it follows from the definition in 10 that *Merge* corresponds semantically to function application. *Merge* can be instantiated as follows:

(11a) \( \text{the} \text{president} \)

(11b) For \( x, y \) arbitrary types, if \( \text{TYPE}(\text{the}) = < d, n > \) and \( \text{TYPE}(\text{president}) = n \), then

\[ \text{TYPE}(\text{MERGE}(\text{the, president})) = \text{the president} \]

Once we have established the semantic TYPEs we can proceed to assign denotations to expressions in the language. Recall that such denotations are assigned in a model \( M \) by an interpretable function \([ [ . ] ]_M\). The definition of the denotational domains is as follows:

• **Definition:** Denotational Domains

\[ D_e = E \]

\[ D_t = \{0, 1\} = 2 \]

If \( a \) and \( b \) are types, then \( D_{<a,b>} = [D_a \rightarrow D_b] \)
Thus, a model for L(G) is a pair \( M = < E, [[ . ]] > \), where E is the universe of the model, and \([ [ . ]] \) is an interpretation function which maps expressions to denotations (Gutiérrez-Rexach 1998). The denotations for some expressions of L(G) are the following:

- **Definition**: Let L(G) be the language generated by a generalized minimalist grammar G, let \( M \) be a model, \( A, B \subseteq E, R \subseteq E^2 \) and \( \alpha \) and \( \beta \in L(G) \). The function \([ [ . ]]_M \) can be recursively defined as follows:

1. If \( \text{TYPE}(\alpha) = (e, t) \), then \([ [\alpha]]_M \subseteq E \)
2. If \( \text{TYPE}(\alpha) = ((e, t), (e, t)) \), then \([ [\alpha]]_M \in [\mathcal{P}(E) \rightarrow \mathcal{P}(E)] \)
3. If \( \text{TYPE}(\alpha) = ((e, t), t) \) and \([+\text{propn} + \text{nom}] \subseteq \text{INT}(\alpha) \), then \([ [\alpha]]_M \) is that function \( F \in [\mathcal{P}(E) \rightarrow 2] \) s.t. \( \exists a \in E \) and \( F(A) = 1 \) iff \( a \in A \).

4. For x, y arbitrary types, if \( \text{TYPE}(\alpha) = < x, y > \) and \( \text{TYPE}(\beta) = x \), then \([ [\text{MERGE}(\alpha, \beta)]_M = [ [\alpha]]_M ([ [\beta]]_M) \)

5. For x, y arbitrary types, if \( \text{TYPE}(\alpha) = x, \text{TYPE}(\beta) = y \), and \( \text{TYPE}(\gamma) = < x, y > \), then \([ [\text{MOVE}(\alpha, \beta)]_M = [ [\gamma]]_M ([ [\alpha]]_M) \)

\text{Merge} \ can be instantiated as follows:

(12a) the president
(12b) For x, y arbitrary types, if \( \text{TYPE}(\text{the}) = < n, d > \) and \( \text{TYPE}(\text{president}) = n \), then

\[ [ [\text{MERGE}(\text{the, president})]]_M = [ [\text{the}]]_M ([ [\text{president}]]_M) \]

The above definitions tell us that adjectives denote a function from set to sets and that nouns denote a subset of the universe.

In sum, given a L(G) a compositional semantics can be provided for complex expressions. In GMG, the syntactic computation from an initial multiset of lexical resources mirrors the semantic computation of the interpretation of the sub-expressions (Gutiérrez-Rexach-
Rexach 1998). A complex expression is said to converge semantically if all the interpretable features have been interpreted in the course of the syntactic derivation.
Chapter 3: Predication

3.1 Introduction

Predication has played a fundamental role in the study of human languages. Perhaps the most notable topic that has been addressed by many authors, from both a philosophical and linguistic standpoint, is the relationship that exists between a subject and a predicate in a sentence. In general, combining a predicate with an argument of n-arity forms a simple predicative statement. Such statements are said to express a complete thought or proposition. Here are some examples of predicative statements (where $\alpha$, $\beta$ and $\gamma$ are arguments, $\Phi$ and $\Psi$ are monadic and dyadic predicates, respectively, and pr is some preposition) (Meixner 2009):

(1a) John runs. $\alpha \Phi s.$
(1b) John is tall. $\alpha$ is $\Phi$.
(1c) John is a pilot. $\alpha$ is a $\Phi$.
(1d) John loves Mary. $\alpha \Psi s \beta$.
(1e) John is in Paris. $\alpha$ is+pr $\beta$.
(1f) John is married to Mary. $\alpha$ is $\Phi$+pr $\beta$.
(1g) John is a descendant of William. $\alpha$ is a $\Phi$+pr $\beta$.
(1h) John is between William and Mary. $\alpha$ is+pr $\beta$ and $\gamma$. 

The general form of predicative sentences is as follows: \( \Phi(\alpha_1, \ldots, \alpha_n) \). In this sequence \( \Phi \) is a predicate that selects for \( (\alpha_1, \ldots, \alpha_n) \) arguments or singular terms without any syntactic structure—i.e., it selects for \( n \) arguments in the order they follow each other in the statement. Keenan and Timberlake (1985) and Keenan and Stabler (2003) have provided syntactic rules for combining grammatical categories of different sorts: \( P1 \) or monadic predicates and \( P2 \) or dyadic predicates combine with categories \( P01/12 \) or singular terms to form \( P0 = \text{Sentence} \) (or a 0-place predicate):

\[
\begin{align*}
P0 &= \text{Sentence} \\
P1 &= \text{Monadic (or one-place) predicates (e.g., run, laugh, sleep)} \\
P2 &= \text{Dyadic (or two-place) predicates (e.g., buy, love, kiss)} \\
P01/12 &= \text{Singular terms or arguments (e.g., John, Mary, William)}
\end{align*}
\]

One of such rules is more or less similar to function application in categorial grammars, and it is known as Merge: a \( Pn \) combines or merges with an appropriate argument category and give back as a result a \( Pn - 1 \). A simple predicative statement such as (1d) will have the following syntactic structure:

\[
\text{Merge: (John loves Mary, P0)}
\]

\[
\text{(John, P0/P12)} \quad \text{Merge: (loves Mary, P1)}
\]

\[
\text{(Mary, P0/P12)} \quad \text{(loves, P2)}
\]

In this sense what an argument does is reduce the arity of a predicate. Only when a predicate has reached \( P0 \) we have a complete proposition or thought.
In the rest of this chapter I focus my attention on the notions of predication that are central to the linguistic analysis of non-verbal predication that are developed in this dissertation. The chapter is organized as follows: in Section 2 I discuss the main paradigms and theories of predication in the Western tradition, including those of Plato, Aristotle, Leibniz, Frege and, Tarski. In Section 3, I discuss the traditional distinction between individual and stage-level predicates and show how this distinction is related to the analysis of linguistic data. Finally, in Section 4 I examine the aspect of predication more central to this dissertation, namely, its relation to the copula *ser/estar/tener* ‘to be/to have’. A caveat needs to be stated here: *tener* ‘to have’ will be treated as a copulative verb in this dissertation. As argued by Hoekstra (2004), *tener* is the semantic inverse of *ser/estar* ‘to be’. In both cases, however, what is involved is the inclusion of the subject referent in the denotation of the predicate.

3.2 Predication

It is a well-known dictum in the philosophical tradition (and perhaps in the linguistic tradition) that prior to the German mathematician and philosopher Gottlob Frege there was not sufficient formulation of a theory of predication. This assumption is true in part although the articulation of a theory of predication can be traced back to Plato and Aristotle, as well as Gottfried Leibniz. Thus, the history of the notion of predication can be partitioned, broadly speaking, into two periods: pre-Frege (-1879) and post-Frege (1879+).

3.2.1 Pre-Fregean predication theories

In the pre-Frege era there was no philosophically adequate theory of predication.
However, Plato, Aristotle and Leibniz, among others, lead the way in presenting the first explicitly formulated theory of predications (Meixner 2009).

3.2.1.1 Plato’s theory of predication

In a series of dialogues (Symposium, Phaedo, the Republic), Plato outlined his theory of predication: “Φ(α)” is true just in case α is sufficiently similar to the Φ itself. The proposition in (1c) is true, for example, if ‘John’ is sufficiently similar to the pilot itself. One of the advantages of Plato’s theory is the introduction of a new order of objects, or separate forms, that serve as predicates: the pilot itself, the tall itself, and so on. Given that Φ itself is sufficiently similar to the Φ itself then the following logical consequence should follow: the tall itself is tall, the pilot itself is pilot, and the like.

Plato’s idea on the notion of predication varies throughout his philosophical writings, but the essence of his proposal can be explained as follows: the subject of predication participates somehow in the object of predication. In his view, a proposition is formed by combining a subject and a predicate, Φ(α), and this is interpreted as α participating in some Φ. The ontological subject and the ontological predicate in Plato’s theory are external to each other, but the ontological predicate is the dominant partner in predication –i.e. it is the entity that searches for an argument (Meixner 2009). As presented, however, his proposal cannot be extended to relational predicates (e.g., love).

3.2.1.2 Aristotle’s theory of predication

Aristotle departs from Plato in assuming that the ontological subject is the dominant partner in predication and that the ontological predicate is included –i.e. is the property, in
some respects, of the ontological subject. Thus, his theory of predication can be interpreted roughly as follows: “Φ(α)” is true just in case the α-particular form of being Φ is in α. (1c) will be true if, and only if (iff), the John-particular form of being a pilot is in John. There are two options for arriving at this conclusion: either the α-particular form of being Φ exists is true iff the α-particular form of being Φ is in α, or the form of being Φ is in α is true iff the α-particular form of being Φ is in α (Meixner 2009).

In Categories, Aristotle clarifies his proposal by saying that the ontological predicate is in the ontological subject, but rather that it is something that is said about the ontological subject i.e., for Aristotle the statement John is a pilot is true, although the form of being a pilot is not in John (the existence of pilots is independent from the existence of John).

3.2.1.3 Leibniz's theory of predication

Leibniz formulates his theory of predication in Section 8 of his Discours de Métaphysique: “Φ(α)” is true just in case the Φ-concept is in the α-concept. It follows from this conception that for Leibniz, like Aristotle, the relationship that holds between a subject and a predicate is that of the inclusion of the predicate into the subject. Furthermore, the relationship between a subject and a predicate is a relation between the predicate-concept and the subject-concept.

3.2.1.4 Summary

Almost every pre-Fregean predication theory considered so far fails to give an adequate account of relational predications (e.g., α Ψs β). These theories can be reduced to two different approaches: in the first approach, assumed by Plato, the subject of predication
participates in, or is a member of, the object of predication; in the second approach, advocated by Aristotle and maintained by Leibniz, the object of predication is included or is a property of the subject of predication. The theory of predication that we have today is due to the work of G. Frege.

### 3.2.2 Post-Fregean predication theories

The pre-Fregean theory of predication, but mainly, Aristotle’s conception remains stable until the nineteenth century, when G. Frege developed a new theory: Due to his work in this field, Frege revolutionized the philosophical (and linguistic) study of predication.

#### 3.2.2.1 Frege’s theory of predication

Frege treated predicates as referring to functions from objects to truth-values. In this respect, “Φ(α₁, …, αₙ)” will be true just in case the functional value of the Φ-concept for <α₁, …, αₙ> is true. Notice here that Frege conceived concepts as being functions whose functional values are either true (commonly represented by 1) or false (commonly represented by 0), and of functions as entities that are in themselves unsaturated, but that are saturated by their functional arguments, thus producing their functional values (Meixner 2009). This can be represented through the calculus of saturation.

#### 3.2.2.1.1 The calculus of saturation

The calculus of saturation can be represented as follows:

(2a) John kisses Mary.

(2b) \( \lambda y \lambda x [\text{kiss}'(y)(x)] (m)(j) \)
The logical translation in (2b) shows the semantic composition of (2a): the verb is given a function of type \((e, (e, t))\) that represents it as semantically incomplete. Semantic incompleteness corresponds to the argument roles assigned by the predicate. In Montague’s framework, for instance, semantic completeness is represented by two types: \(e\) (for entities or type of individuals) and \(t\) (for truth values). The type of the expression in (2) is \(t\). This composition achieves semantic completeness by resolving the two degrees of incompleteness in the predicate by combining the two semantically complete objects –i.e., \(p\) and \(j\) with the predicate’s semantic content (Chung and Ladusaw 2004).

The mode of composition by which a predicate achieves its semantic completeness is known as function application. Function application is the mode of combining a functor and its arguments. An intransitive verb, such as \(kiss\), combines with the subject by function application and returns a truth-value that will be either true 1 or false 0 depending on the situation \(V\). In the case of transitive verbs, they combine with direct objects by function application and return a characteristic function of a set:

\[(2c) \quad [[kiss]]^V ([[Mary]]^V) = \text{the function } f \text{ from individuals to truth-values s.t.: } f(x) = 1 \text{ if } x \in \{x : x \text{ kiss Mary in } V\}, \text{ and } f(x) = 0 \text{ otherwise.}\]

Applying function application to (2c) will lead us to the logical formula in (2d) and its simplification in (2d):

\[(2c) \quad \text{FA } (\text{FA } \lambda y \lambda x \ [kiss'(y)(x)], \ m), \ i), \text{ where the boldface portion represents the first function application, whose value is a function of type } (e, t).\]

\[(2d) \quad \text{KISS(MARY)(JOHN)}\]

(2d) tells us that \(kiss\) selects for two NP-arguments. Once both arguments are provided we achieve semantic completeness.
The saturation of a predicate removes semantic incompleteness, yielding a complete thought or proposition (*Gedanke* in Frege’s view). As a consequence, the following principle holds:

**Principle of Saturation**

A saturated argument position is no longer available to semantic composition (Chung and Ladusaw 2004: 3).

In sum, predication determines the most basic structure of a clause. A clause is formed by putting together a predicate and an argument and it is derived by applying function application to an argument. As highlighted by Rothstein (1983), a predicate is a structurally open syntactic constituent, and hence is unsaturated. While saturation derives from the combinatorial properties of expressions, unsaturated expressions have information about how they are to be combined with other expressions (Abdel-Ghafer 2004).

### 3.2.2.2 Tarski

For the Polish logician and mathematician Alfred Tarski, the distinctive semantic contribution of predicates is to be true of objects —i.e. to be satisfied by objects. If “Φ(α)” is a one-place predicate (e.g., run, laugh, sleep), then, assuming α denotes some object denotation(α), “Φ(α)” will be true iff “Φ(α)” is true of denotation(α) (Rescorla 2009).

### 3.2.2.3 Frege-Tarski

Frege –Tarski’s theory of predication has the following similarities: first, predicates contain open positions that can be filled by singular terms —i.e. they contain argument-places; second, to convert a predicate into a truth-evaluable formula, one must fill all its
argument-places with denoting terms (calculus of saturation); third, a predicate’s saturation induces a function from objects to truth-values; and fourth, to some extent, predication is a by-product of a functional application (Rescorla 2009). In this dissertation every time mention the notion of predication we will be speaking of the “Frege-Tarski” conception of predication.

3.2.3 Summary

The notion of predication lies at the heart of linguistic inquiry. Its origin can be traced back to Plato for whom the sentence was the conjunction between a subject and a predicate. Predication can be defined as the application of a predicate to an appropriate number of arguments, where the predicate specifies a relation or a property (Hengeveld 1992). During the 19th century, Frege developed this notion further and suggested that objects or particulars are complete, while concepts or universals are incomplete or unsaturated (Strawson 1959). In other words, this author recognizes the existence of two distinct classes of things: the members of the first class, the particulars or saturated things (gesättigt in Frege’s terminology), were capable of combining with members of the second class, namely, the universals or unsaturated things, without mediation; however, the members of the first class were not capable of combining with each other without the member of the second class as an intermediary (Newman 2002). Furthermore, Frege was first among mathematicians and logicians to reduce predicates to functions. In other words, in his view an n-ary first level predicate is a function from n objects to truth-values \{1, 0\}, and similarly for higher-level predicates, and by doing this he develops a countable first-
order language L, with names, functions signs and primitive predicates, the latter having any (finite) number of arguments (Tennant 2003).

Nowadays, the general semantics view considers predicates to be unsaturated (to various degrees) objects. This semantic incompleteness is made complete by composing the unsaturated predicates with semantically complete terms (or entities in Montague’s framework) of appropriate types (Chung and Ladusaw 2004). The underlying assumption of semantic composition of predicates and their arguments can be characterized as the calculus of saturation. Therefore, the verb by itself, since it is syncategorematic, is unsaturated, and it is completed by its arguments; whereas, nominal arguments (e.g. names) are categorematic or saturated objects. Thus, only when a syncategorematic expression is saturated we have a genuine categorematic expression –i.e., the proposition. It is important to stress here that predicates need to be saturated by semantically complete terms with an appropriate type. In other words, it is not the case that each term removes semantic incompleteness.

3.3 Type of Predicates

Predicates come in different forms and the interpretation of a given sentence depends on the type of predicate the sentence contains plus the particular subject the predicate selects. As to the notion of predication, elucidations on the nature of predicates can be found in the philosophical tradition. For instance, the distinction between essential and accidental properties has played an important role for characterizing the type of properties that are attributed to a given subject –i.e. to determine the kind of predication and interpretation of such predication. An essential property of an object is a property the object must have (3a), while an accidental property of an object is a property the object happens to
have but that it could lack (3b).

(3a) A triangle has three sides.

(3b) A boat has a motor.

The proposition in (3a) expresses necessity, i.e., a triangle must have three sides, because if one of the sides is removed the triangle ceases to exist. (3b), on the other hand, expresses possibility: a boat does not need to have a motor to be characterized as a boat. The motor is just a contingent property of boats. Thus, the basic idea is that when we think of a meaning of a word like triangle the property of having three sides seems more fundamental to us, than when we think of boats and motors. In fact, there are properties that can be modified without altering identity (e.g., hair color, having a beard), while other features seem more substantial and less accidental (Violi 2001).

In the analysis of linguistic data there has been another distinction that seems to be more important for the interpretation of propositions: the distinction between individual-level (i-level) and stage-level (s-level) predicates.

3.3.1 The i-level and s-level distinction

Broadly speaking, predicates can be divided into two categories: those that denote properties of individuals and those that do not denote properties of individuals. Carlson (1977) calls the first ones i-level predicates and the second ones s-level predicates. For example, if a speaker utters (4a) he or she is asserting that the individual denoted by the proper name John has the property of being intelligent; however, if the same speaker utters (4b) he or she is not attributing necessarily the property of being tired to John, but describing instead a state of affairs: a situation in which a particular individual has a transitory or
temporal property, that of being tired in \( s \).

(4a) John is intelligent.

(4b) John is tired.

This constitutive distinction plays a fundamental role in the licensing of some grammatical structures: for instance, in existential *there* constructions in English i-level predicates cannot serve as the predicate of the subject, whereas s-level predicates can (5).

The same restriction holds for depictive (6), and other constructions.

(5a) *There is a clerk tall.

(5b) There is a clerk available.

(6a) *We ate the meat organic.

(6b) We ate the meat raw.

The distinction between i-level and s-level predicates has proven to be relevant for the analysis of a number of grammatical phenomena, such as the licensing of secondary predicates, absolute clauses and verbless clauses, the interpretation of bare plurals and indefinites, adjunct predicates, the formation of passives, and the distinction between *ser* and *estar* in Spanish (Milsark 1974; Carlson 1977; Stump 1985; Rapoport 1991; Jelinek 1992; Diesing 1992; Kratzer 1995; Escandell-Vidal and Leonetti 2002; among others).

In languages other than Spanish and English, this distinction plays a fundamental role as well: in standard Arabic when the predicate cannot be interpreted as either IL or SL in copular constructions, a copula is not generated structurally (Abdel-Ghafer 2003). Also, non-verbal copular constructions in the present tense in Standard Arabic may appear with a verbal copula in sentences with generic interpretation that contain s-level predicates. These
sentences describe situations that are usually true in the past, are true in the present and will be true in the future:

(7) ya-kuun 1-zawwu haarran fi s-sayfi
be the-weather-NOM hot-NOM in the-summer

‘The weather is usually hot in the summer.’

(Benmamoun 2000: 47; cf. Moutaouakil 1987)

However, sentences containing i-level predicates cannot contain a copula. These sentences express states of affair that are permanent or, when used with s-level predicates, situations that are true in the present moment only (Benmamoun 2000). In other words, they involve temporal deixis. The intuition behind the absence of the copula is the following: in copular constructions involving i-level predicates, the copula has no semantic function and therefore denotes just the identity map on properties of individuals (Jäger 2001). Thus, the translation of (8a) would be (8b):

(8a) Lions are brave.

(8b) BRAVE(LIONS)

In Russian, on the other hand, the predicate of canonical be-less construction must bear NOMINATIVE case, as the contrast in (9) shows. This is so because the instrumental predicate denotes a temporary, transient or changeable property, whereas nominative predicates denote a property that is inherent or permanent (Jakobson 1936; Wierzbicka 1980; Bailyn and Rubin 1991; Fowler 1997; Timberlake 2004; Pereltsvaig 2007). In other words, nominative predicates denote i-level properties, while instrumental predicates denote s-level properties:

(9a) Dima pisatel
Dima-NOM writer-NOM
‘Dima is a writer.’
More will be said about standard Arabic and Russian verbless clauses in chapter 4. In the following section, I discuss the most important accounts of the contrast i-level / s-level predicates and then I examine how this distinction applies to Spanish.

3.3.1.1 i-level and s-level predicates: Previous accounts

From the previous section it was acknowledged that the distinction between i-level and s-level predicates has some important syntactic and morphological effects on the distribution of different elements in the syntactic string. We saw also that i-level predicates attribute properties to individuals. In other words, they express properties of individuals that are permanent or tendentially stable. Milsark (1974), for example, argues that these predicates express qualities that cannot be removed without causing any changes in the essential qualities of the individual. Stage-level predicates, on the other hand, denote transitory properties and therefore can be removed without altering the essential qualities of the individual. Pollard and Sag (1993) provide syntactic tests that differentiate between i-level and s-level predicates: pseudocleft (10-11), topicalization (12) and it cleft (13):

(10a) What I really want is that man off my ship.
(10b) *What I really consider is Mary loyal to her friend.
(11a) All we need now is this mess cleaned up.
(11b) *All we found was our in-laws unbearable.

(12a) Dogs in the house, they hate.

(12b) *The allegation false, they proved.

(13a) It was Leslie in complete control of the situation that we feared most.

(13b) *It was Leslie in complete control of the situation that we believed.

What these facts indicate is that small clause complements that contain s-level predicates can be displaced. However, a small clause containing i-level predicates cannot be displaced. In the sections that follow I examine some of the most important approaches to the distinction between i-level and s-level predicates.

3.3.1.1 Milsark (1974)

Milsark (1974) developed a general theory about how predicates and subjects combine. He split the predicates into two types, namely, predicates that denote properties and predicates that denote state descriptions. The former will be known later as i-level predicates, while the latter will be known as s-level predicates. One-place predicates such as tired, drunk, available are considered state descriptions, and intelligent, tall, a lawyer are considered to denote properties of individuals. Also, according to Milsark’s proposal, the NP subjects are split into two categories as well: strong or quantificational NPs (e.g., every, each, all), and weak or cardinal NPs (sm, a, bare plurals). Weak NPs are cardinal NPs because they express the cardinality of the entity denoted by the NP. Milsark argues that properties cannot be predicated of weak NP:

(14a) The doctor is intelligent.          (Strong + Property)
(14b) The doctor is available.          (Strong + Stage)
Thus, the following generalization holds:

Milsark’s (1974) generalization

Properties may only be predicated of strong NPs.

This generalization establishes that i-level predicates must have strong subjects. Milsark’s analysis leaves other issues aside like, for example, the interpretation of bare plurals with i-level predicates and s-level predicates. Milsark’s NP proposal can then be extended to include not only weak and strong NPs, but also generic and ambiguous NPs. This analysis is carried out by Carlson (1977).

3.3.1.1.2 Carlson (1977)

Carlson (1977) was among the first to recognize the difference in meaning of sentences containing bare plural subjects. For example, the bare plural subject in (15a) can be interpreted either generically (15b) or existentially (15c), but the bare plural subject in (16a) can only admit a generic interpretation (16b). Carlson attributes this difference to the nature of the predicate:

(15a) Philosophers are nervous.

(15b) Generally x, philosophers x (nervous x)

(15c) There exists an x, philosophers x and nervous x

(16a) Philosophers are neurotic.

(16b) Generally x, philosophers x (neurotic x)

Thus, this author conceives of the set of entities relevant for natural language
semantics divided in three sorts: kinds, objects and stages. Kinds and objects are considered the property of the individual, while stages are thought of as space-slices of individuals (Jäger 2001). These sortal distinctions leave us with the distinction between i-level and s-level predicates; while the former denotes properties of individuals, the latter denotes properties of stages. For example, in a Carlsonian analysis, a sentence containing a s-level predicate, such as (17a), will receive the translation in (17b), where superscripts on variables \( x^s \) indicate the sort of respective variable as ranging over properties of stages or individuals and \( R \) is a constant that is to be read as "is a stage of" and relates stages to individuals (Jäger 2001). These sentences introduce an existential quantification over stages. (17b) needs to be understood as 

there is a stage of firemen in which they are available.

(17a) Firemen are available.

(17b) \( \exists x^s (R(x^s, FIREMEN) \land AVAILABLE(x^s)) \)

Notice that the existential quantifier \( \exists \) in Carlson’s (1977) proposal originates in the lexical meaning of the copula. That is, if a verbal s-level predicate is combined with a subject, the operation corresponding to the meaning of the copula is applied to the meaning of the VP without syntactic configuration. This is not the case for i-level predicates: i-level can be combined with their subject directly. It follows then that in copular constructions involving i-level predicates, the copula does not have any semantic function and just denotes the identity map on properties of individuals. The only possible Carlsonian’s translation for a sentence containing i-level predicates would be (18b). This can explain why the copula does not surface in verbless constructions with i-level predicates.

(18a) Firemen are altruistic.

(18b) ALTRUISTIC(FIREMEN)
It follows, then, from the distinction between i-level and s-level predicates the existence of two homonymous copulas: one for s-level predicates and another one, “semantically empty”, for i-level predicates. In sum, Carlson develops a sorted type of intensional semantics to distinguish i-level predicates from s-level predicates. He also introduces two functions, namely, R and Gen(erally) to produce the existential and generalizing interpretations of bare plurals with s-level predicates (Kornack 1998).

3.3.1.1.3 Diesing (1992)

For Diesing (1992), the difference between i-level and s-level predicates is primarily a syntactic one. In other words, i-level and s-level predicates represent two different types of predicates in terms of how the subjects are mapped into the Logical Form representation (LF). Diesing identifies two subject positions: inner position and outer position, and ties these positions to [Spec, VP] and [Spec, IP] respectively. Subjects sitting in [Spec, IP] may be base-generated in that position or have being moved to that position. S-level and i-level subjects differ with this respect: i-level subjects are based-generated in the outer position and, therefore, they cannot be lowered into the VP. The inner subject position [Spec, VP] is filled with PRO. S-level subjects, on the other hand, are base generated inside the VP and may be optionally raised to [Spec, IP]. Subject of s-level predicates might be available to appear in either [Spec, IP] or [Spec, VP] at LF representation, while subject of i-level predicates can only appear in [Spec, IP].
a) i-level subjects

\[ \text{IP} \]
\[ \quad \text{NP}_i \quad \text{I} \]
\[ \quad \text{I} \quad \text{VP} \]
\[ \quad \text{PRO}_i \quad \text{V'} \]

b) s-level predicates (two syntactic structures)

\[ \text{IP} \quad \text{IP} \]
\[ \quad \text{I'} \quad \text{NP} \quad \text{I'} \]
\[ \quad \text{I} \quad \text{VP} \quad \text{I} \quad \text{VP} \]
\[ \quad \text{NP} \quad \text{V'} \quad \text{t}_i \quad \text{V'} \]

Diesing assumes a further two types of Infl for each predicate: s-level predicates have an unaccusative Infl (the subject is based generated in [Spec, VP]), and Infl does not assign a theta role to [Spec, IP]. At s-structure the subject can raise to [Spec, IP] to get case, leaving a trace in [Spec, VP].

(19a) [\text{IP Linguists, are [VP it swarming the libraries]}].

(19b) \( \exists x \text{ (x is a linguist } \land \text{ x is swarming the libraries)} \)

This type of predicate allows clause-internal lowering of the subject from [Spec, IP] into [Spec, VP] at LF representation.

(20a) Firemen seem to the mayor to be available.
In contrast, i-level predicates have an Infl that assigns a theta role to [Spec, IP]. The lexical NP controls a PRO subject in [Spec, VP] which is assigned a theta role by the verb.

(22a) \[\text{IP Linguists [VP PRO know French]}\].

(22b) Gen\(\_\) (x is a linguists) x knows French.

The syntactic configurations in the following page are obtained, according to Diesing (1992).

In summary, Diesing assumes two syntactic configurations to explain the difference between i-level predicates and s-level predicates. In each case, the theta-role assignment is different. The theta-role assignment of the inflections determines where the subject is generated: i-level subjects are generated outside the VP in [Spec, IP], whereas s-level subjects are generated inside the VP and may be raised to [Spec, IP]. The IP of i-level predicates assign the thematic role of \textit{having the property x} to [Spec, IP]. When the subject is generated in [Spec, IP], [Spec, V] is occupied by a PRO co-indexed with the subject. This PRO receives the thematic role assigned by the verb to the subject position (Mejías-Bikandi 1992).

**Types of Infl**

\begin{align*}
\textbf{a) i-level predicates} & \quad \textbf{b) s-level predicates} \\
\text{IP} & \quad \text{IP} \\
& \quad \text{Spec I'} \\
& \quad \text{Spec I'} \\
& \quad \text{NP}_i \quad \text{NP} \\
& \quad \text{I VP} \quad \text{I VP} \\
& \quad \text{theta role} \quad \text{NO theta role} \\
& \quad \text{Spec V'} \quad \text{Spec V'}
\end{align*}
Like Diesing, (1992) Kratzer (1989) argues that the grammatical subject of i-level predicates generates outside the VP, while the grammatical subject of s-level predicates is generated within the VP. However, contrary to Diesing, Kratzer (1995) argues that the distinction between i-level and s-level predicates is a matter of semantics: s-level predicates are associated with a spatio-temporal (in a Davidsonian sense (1967)) variable, while i-level predicates are not. In other words, s-level predicates have an extra argument position for events or spatio-temporal locations. I-level predicates lack this position. This explains the difference between (23) and (24):

(23a) Always when Mary speaks French, she speaks it well.

(23b) $\text{ALWAYS}_x [\text{SPEAK} (M, \text{FRENCH}, x)] [\text{SPEAK\_WELL} (M, \text{FRENCH}, x)]$

(24a) *Always when Mary knows French, she knows it well.

(24b) $\text{ALWAYS} [\text{KNOW} (M, \text{FRENCH})] [\text{KNOW\_WELL} (M, \text{FRENCH})]$

The difference between (23) and (24) can be explained as follows: i-level predicates do not project a time variable –i.e., they are not associated with a spatio-temporal variable. If i-level predicates do not project a time variable $x$, and adverbs of quantification such as *always* quantify over situations or occasions, then there won’t be any variable that the adverb can bind. Under this perspective, the ungrammaticality of (24) is accounted for by means of the following principle:
Prohibition against vacuous quantification:

For every quantifier Q, there must be a variable x such that Q binds an occurrence of x in both its restrictive clause and its nuclear scope. (Kratzer 1995: 131)

In the case of s-level predicates, the insertion of an adverb of quantification gives the predicate a generic reading, that is, a meaning of homogeneity. It follows then that s-level predicates need to be anchored in space and time, and this is why they denote stages (Escandell-Vidal and Leonetti 2002). I-level predicates do not trigger necessarily the search for spatio-temporal locations and therefore denote properties of individuals. As a consequence, the following two principles hold (Ogawa 2001): (1) Only s-level predicates can be modified by spatio-temporal modifiers and (2) only s-level predicates can introduce a variable to be bound by adverbs of quantification.

In sum, for Kratzer (1995) i-level and s-level predicates differ only in argument structure. She couches her analysis within a Davidsonian event semantics and argues that s-level predicates have an extra argument that explains why they can combine e.g. with locative modifier – i.e., they can be located in space:

(25a) John is tired in his car.
(25b) *John is a linguist in his car.

I-level predicates lack such an extra event argument, that is, they do not project a time variable x. I-level and s-level adjectives will receive in Kratzer’s model the following logical translation:

(26a) tired: $\lambda x \lambda e [\text{Tired}(x, e)]$
(26b) linguist: $\lambda x [\text{Linguist}(x)]$

Combining a s-level adjective with a locative modifier would yield a semantic representation
like (27a). However, any attempt to add a locative modifier to an i-level adjective would fail (27b). In other words, a compositional semantics cannot be given to i-level with a locative modifier. Thus, i-level and s-level predicates differ in their ability to be located in space and time (Maciborn, 2004; cf. Fernald 2000).

\[(27a) \exists e [\text{TIRED} (\text{john}, e) \land \text{LOC} (e, \text{IN (his car)})] \]

\[(27b) *[\text{LINGUITS} (\text{john}) \land \text{LOC (IN (his car))}] \]

3.3.1.1.5 Chierchia (1995)

Like Kratzer, Chierchia (1995) provides an event-based explanation for the distinction between i-level and s-level predicates. However, Chierchia departs from Kratzer by assuming that all predicates, and not only s-level predicates, introduce event arguments. To explain the difference between i-level and s-level predicates he introduces a crucial distinction between the two types of predicates: i-level predicates refer to location-independent events, whereas s-level predicates refer to location-dependent events. The ungrammaticality of i-level predicates with locatives follows from the fact that location-independent events cannot be located in space –i.e. if one is intelligent, one is intelligent nowhere in particular.

In addition, Chierchia (1995) proposes the following six key properties for i-level predicates:

1. I-level predicates are aspectually stative.
2. They cannot be modified by a locative.
3. I-level predicates do not occur felicitously within the small clause complement of perception verbs.
4. They do not appear in existential sentences.

5. They select the universal reading of bare plurals.

6. They sound strange with an adverb of quantification.

According to condition 1 i-level can be characterized as statives, since they share the typical characteristics of stative predicates: e.g., they are ungrammatical in the progressive, have the subinterval property, etcetera; 2 and 3 rule out sentences like (28):

(28a) *John is a linguist in his car.
(28b) *I saw John tall.

However, 3 does not rule out sentences like (28c):

(28c) I consider John tall (for his age).

The only context in which i-level predicates occurs felicitously within a small clause is when they are embedded under consider-type verbs. Thus, consider-type verbs require a property denoting i-level predicates predicate within their complement small clause (Park 1997). 4. bans example (29):

(29a) *There is a clerk tall.
(29b) *There is a taxi driver intelligent.

5 guarantees a universal (only generic) reading of sentences such as (30):

(30a) Firemen are altruistic.
(30b) Human are mammals.

Finally, 6 tells us that adverbs of quantification (Q-adverbs, e.g. always, sometimes, often) are incompatible with i-level predicates.
3.3.1.2 Summary

The distinction between i-level and s-level predicates has proven to be useful to a number of linguistic theories. I-level predicates describe situations that have no temporal boundaries (e.g., statives predicates), and express more or less permanent or inherent properties; whereas s-level predicates describe a temporary or accidental characteristics – i.e. situations that are delimited in time and space, which have beginnings and endpoints. On Kratzer’s (1995) account, this distinction boils down to the presence or absence of an extra event argument: i-level predicates lack such extra argument, whereas s-level predicates are taken to have an additional event argument. The difference in argument structure has a syntactic consequence, namely, i-level subjects are generated outside the VP, while s-level subjects are generated within the VP.

3.3.2 i-level / s-level predicates in Spanish

In Spanish the distinction between i-level and s-level predicates seem to play a fundamental role in the licensing of a number of grammatical constructions: e.g. copular constructions with estar (31), small clauses with perception verbs (32), predicative absolute constructions (33), predicative complement (34), and lexical verbs such as tener and dejar (35-36) require the predicate to be s-level:

(31a) Estar cansado.
     ‘to be tired’

(31b) ¿Estar inteligente.
     ‘to be intelligent’

(32a) Veo a Juan cansado.
     ‘I see John tired.’
(32b) *Veo a Juan inteligente.
   ‘I see John intelligent.’

(33a) El cerdo, hambriento, murió.
   ‘The pig, hungry, died.’

(33b) *El cerdo, inteligente, murió.
   ‘The pig, intelligent, died,’

(34a) Juan llegó a su casa cansado.
   ‘John arrived at his house tired.’

(34b) *Juan llegó a su casa inteligente.
   ‘John arrived at his house intelligent.’

(35a) Juan tiene enfermo a su padre.
   ‘Juan has his father sick.’

(35b) *Juan tiene inteligente a su padre.
   ‘John has his father intelligent.’

(36a) Juan dejó perplejo a los estudiantes.
   ‘John left the students perplexed.’

(36b) *Juan dejó inteligente a los estudiantes.
   ‘John left the students intelligent.’

There are also a group of Spanish verbs that can only combine with s-level predicates. Following Marín (2007), we labeled some of these verbs pseudo-copular verbs. These verbs behave identically to estar in their selection of s-level adjectives.

3.3.2.1 s-level predicates and pseudo-copular verbs in Spanish

Pseudo-copular verbs in Spanish can combine only with s-level predicates. These are verbs that have lost (part of) their lexical meaning, and function more as auxiliary verb or copular verbs: e.g., parecer ‘to seem’, permanecer ‘to remain’, mantenerse ‘to maintain oneself’, hallarse ‘to find oneself’, encontrarse ‘to find oneself’, sentirse ‘to feel’, llevar ‘to carry’, quedarse ‘to
remain’, and *seguir* ‘to continue’. Other verbs that have lost their lexical meaning and behave more like auxiliary verbs are *ir* ‘to go’, *venir* ‘to come’, and *andar* ‘to walk’.

### 3.3.2.1 Ir, venir, andar

When used as pseudo-copulas, these verbs have lost their motion meaning. In terms of their aspectual constraints, they combine naturally with s-level predicates but not with i-level predicates:

(37a) Pepe va borracho.
     ‘Pepe goes drunk.’

(37b) *Pepe va inteligente.
     ‘Pepe goes intelligent.’

(38a) Pepe viene borracho.
     ‘Pepe comes drunk.’

(38b) *Pepe viene inteligente.
     ‘Pepe comes intelligent.’

(39a) Pepe anda borracho.
     ‘Pepe walks drunk.’

(39b) *Pepe anda inteligente.
     ‘Pepe walks intelligent.’

### 3.3.2.2 Llevar, quedarse

*Llevar* and *quedarse* have lost their meaning of movement when used as pseudo-copulas, and can select only s-level predicates as complements, but not i-level predicates:

(40a) Pepe lleva borracho una hora.
     ‘Pepe has been drunk for an hour.’

(40b) *Pepe lleva inteligente una hora.
     ‘Pepe has been intelligent for an hour.’

56
(41a) Pepe se ha quedado borracho.
    ‘Pepe has remained drunk.’

(41b) *Pepe se ha quedado inteligente.
    ‘Pepe has remained intelligent.’

3.3.2.1.3 **Continuar, seguir**

*Continuar* and *seguir* combine only with s-level predicates, but not with i-level ones.

These adjectives convey the meaning that a given situation has remained the same –i.e. it has not changed:

(42a) Pepe continúa borracho.
    ‘Pepe continues to be drunk.’

(42b) *Pepe continúa inteligente.
    ‘Pepe continues to be intelligent.’

(43a) Pepe sigue borracho.
    ‘Pepe continues to be drunk.’

(43b) *Pepe sigue inteligente.
    ‘Pepe continues to be intelligent.’

3.3.2.1.4 **Parecer, permanecer, mantenerse, hallarse, encontrarse**

*Parecer, permanecer, mantenerse, hallarse, encontrarse* accept s-level adjectives as predicates.

In this sense, they behave like *estar*.

(44a) Pepe parece borracho.
    ‘Pepe seems to be drunk.’

(44b) *Pepe parece inteligente.
    ‘Pepe seems to be intelligent.’

(45a) Pepe permanece borracho en su casa.
    ‘Pepe remains to be drunk in his house.’
Spanish has two forms of the English copula be: ser and estar. Typically, ser has been characterized as indicating identification or predication when used with nouns (49a), pronouns (49b), and prepositional phrases (49c), and indicating general properties when used with adjectives (49d) (Green 2000).

(49a)  Pepe es gobernador.
       ‘Pepe is a governor.’

(49b)  Pepe es él. (pointing)
       ‘Pepe is he.’

(49c)  Pepe es de lo más inteligente.
       ‘Pepe is very smart.’

(49d)  Pepe es inteligente.
       ‘Pepe is smart.’
Estar, on the other hand, occurs with locations (50a), the progressive (50b), and some adjectives (50c). It expresses a change in a state, or describes temporary properties of individuals.

(50a) Pepe está en la biblioteca.
     ‘Pepe is at the library.’

(50b) Pepe está corriendo.
     ‘Pepe is running.’

(50c) Pepe está cansado.
     ‘Pepe is tired.’

As noted above, in Spanish s-level predicates are required in estar contexts. Contrary, i-level predicates appear in ser contexts. However, the occurrence of an i-level predicate such as inteligente in an s-level predicate context does not result necessarily in ungrammaticality:

(51a) Pepe es alegre.
     ‘Pepe is happy.’

(51b) Pepe está alegre (hoy).
     Pepe is happy (today).

From a pre-theoretically and purely descriptive point of view we can classify the Spanish predicates into three classes (cf. Luján 1981; Fernández Leborans 1999): predicates that combine only with ser (52), predicates that allow only estar (53), and predicates that are compatible with both copulas (54):

(52b) Pepe es argentino.
‘Pepe ES Argentinean.’

(52c) *Pepe está argentino.
‘Pepe ESTA Argentinean.’

(53a) absorto ‘absorbed’, angustiado ‘anguished’, asombrado ‘astonished’, ausente ‘absent’,
callado ‘quiet’.

(53b) *El vaso es vacío.
‘The glass ES empty.’

(53c) El vaso está vacío.
‘The glass ESTA empty.’


(54b) El libro es grande.
‘The book ES big.’

(54c) El libro está grande.
‘The book ESTA big.’

According to Leonetti (1994), the difference in meaning between (54b) and (54c) can
be explained as follows: with ser one is classifying the mentioned entity within the class of big
books, comparing it to other books whose qualities may be different. But with estar one is
presenting the entity according to the norm which one supposes that it usually possesses,
and the variation in these differing stages restricts that very entity.
3.3.2.2.1 The ser/estar paradox

From the previous section we found out that certain adjectives in Spanish may combine with both *ser* and *estar* (54). This evidence challenges the hypothesis that associates i-level predicates to *ser* and s-level predicates to *estar*. However, this is not necessarily the case. When an ambiguous predicate such as *hermoso* appears with *estar* another element besides *estar* needs to show up, or at least it is interpreted covertly:

55a) María está hermosa hoy.
   ‘María is beautiful today.’

55b) María está hermosa últimamente.
   ‘María is beautiful lately.’

In (55) the adverbs of time *hoy* ‘today’ and *últimamente* ‘lately’ are present. This contributes to the anchoring of the i-level predicate in a temporal stage (Marín 2009). Escandell and Leonetti (2002) explain this apparent paradox as a consequence of what they call *coercion*:

Coercion:

Coercion is a reinterpretation process set up to eliminate the conflicts between the semantic content of a constituent and the requirements of other elements in the same construction (Escandell and Leonetti 2002; cf. Pustejovsky, 1995; Fernald, 2000). Coercion produces some sort of conceptual adjustment and, as a consequence, the syntactic and semantic derivation of the expression converges. Otherwise, the derivation would fail. This mechanism also explains why i-level predicates with *ser* and adverbs of quantification are possible in Spanish (56): they are temporally anchored, and therefore the predicate
ascribes a characteristic to the subject in a particular situation –i.e., the predicate is bounded to some situation.

(56a) En ocasiones, Pepe es inteligente. ‘Occasionally, Pepe is intelligent.’

(56b) A veces, Pepe es republicano. ‘Sometimes, Pepe is a Republican.’

3.4 Predication and the copula

In this dissertation, one particular aspect of predication will be investigated, namely, its relation to the notion of copula. Following den Dikken (2006), I will assume that not only the presence or absence of the verb be counts as a copula, but also any placeholder that intervenes between a subject and its predicate will count as a copulative element.

3.4.1 The nature of the copula in the philosophical tradition

Typically, the copula has been treated as a placeholder that carries inflectional information, which cannot be expressed (in some languages) on the predicate.

3.4.1.1 Aristotle and the medieval tradition

For Aristotle, the copula has two basic functions: first, its presence is required to form a statement when a non-verbal predicate is added to the subject; and second, the copula carries time. In this sense, the copula shares with other verbs the ability to carry time. However, it is deprived from any categorical status –i.e., of any predicative content (Lenci 1998). Thus, the copula does not signify any predicate, but serves only as a union between a subject and a predicate. As Lenci (1998) highlights, the role of the copula is just a
grammatical one, with no effect on the semantic relation between a subject and a predicate. It is only a verbaliser, or relator in den Dikken's terms (2006), whose necessity is induced by the grammar rather than by logic. As a consequence we may consider the structure of a copulative sentence to be tripartite –i.e. SUBJECT-COPULA-PREDICATE.

In the medieval tradition, philosophers like Abelard considered the copula deprived of any predicative content as well. *Be*, for itself, cannot express or signify events –i.e., it has no lexical content at all, and its function is reduced only to the capability of conjoining predicates that belongs to any linguistic category (e.g., NPs, APs, PPs). Thus, a copulative function can be defined as follows:

**Copulative function**

A verbal expression is copulative if and only if it is able to conjoin a predicative term that is not part of its lexical content (Lenci 1998: 245).

### 3.4.1.2 Frege and copular constructions

In Frege’s view, the copula is necessary only to satisfy syntactic requirements, but it does not have any semantic role, because semantic composition is the result of the functional application of the predicate to its arguments. Frege also showed the existence of at least four distinct meanings of the copula *be*: first, it can express *existence* as in (57):

(57a) God is.

(57b) ⇒ God exists.

This seems to be the first sense of the copula in the Indo-European tradition and it is a sense that has little connection with the synchronic use of the copula. Non Indo-European languages e.g. Sanskrit, on the other hand, developed the copula at a relatively late stage and
chose the verb that designates existence for this role; while Ancient Greek originally
hesitated between six different verbs (Gardies 1985):

(58) γίγνεσθαι, ὑπάρχειν, τυγχάνειν, χυρεῖν, πέλεσθαι, εἶναι

Second, the copula can express identity between two terms, as Frege’s example shows:

(58a) The morning star is Venus (where is means the same thing as –i.e., is identical to)

(58b) ⇒ The morning star is the same thing as/is identical to Venus.

Third, be can express the fact that an object belongs to a class; or in Frege’s view, it can
express the fact that an object falls under a concept (das Fallen eines Gegenstandes unter einen
Begriff):

(59a) The morning star is a planet.

(59a) does not mean that both terms are identical. It means, rather, that the morning star
belongs to the class of objects to which the concept planet applies:

(59b) the morning star ∈ planet

Finally, the copula can be used to express the relation of inclusion –i.e. the inclusion of one
class in another or in Frege’s view, the subordination of one concept to another
(Unterordnung eines Begriffes unter einen Begriff):

(60) Man is a mammal.

(60) expresses the inclusion of the class of men in the class of mammals. The difference
between the third and fourth meaning is non-trivially –i.e., while the inference in (61)
follows, the one in (62) does not hold or constitutes a fallacy (Gardies 1985: 97-98):

(61a) Premise: Men are mortal

Premise: The Andorrans are men

Conclusion: The Andorrans are mortal
The difference between (61a) and (62a) has to do with the distinction between inclusion and membership respectively. If we make use of the transitivity of inclusion (61b) follows:

(61b) Premise: The class of men is included in the class of mortals
Premise: The class of Andorrans is included in the class of men
Conclusion: The class of Andorrans is included in the class of mortals

However, this does not follow for the relation of membership, that is, (62b) constitutes a fallacy:

(62b) Premise: The class of men belongs to the class of classes which are numerous
Premise: The class of Andorrans is included in the class of men
Conclusion: The class of Andorrans belongs to the class of classes which are numerous

Even though there are different meanings of the copula, the meaning of inclusion and relationship, for example, can be reduced to a relation of inclusion in which the relation of membership occurs. Let’s consider the following sentence:

(63a) Socrates is mortal.

If we use the letter $S$ to designate the individual Socrates, the letter $m$ for the class of mortals and the symbol $\in$ for membership, then the proposition in (63b) will have the following representation:

(63b) $S \in m$
The individual Socrates belongs to the class of mortals. However, if we want to formalize the expression in (64a), we will use $b$ to designate the set of mortals, and the expression will have the representation in (64b), which signifies that the class of men is included in the class of mortals.

(64a) Man is mortal

(64b) $m \subset h$

But (64b) can be expressed through the notion of implication since that ‘the class of men is included in that of mortals’ means that it is true of everything that ‘if it is a man then it is mortal’:

(64c) $(x \in h) \subset (x \in m)$

Whence, the following conclusion follows: the relation of inclusion between two classes can be reduced to an implication between two propositions each of which expresses a relation of membership (Gardies 1985). However, we can dispense with the notion of membership and simply represent (65) as follows:

(65) is-mortal (Socrates), where is-mortal is the functor and Socrates the argument.

3.4.2 The nature of the copula in the linguistic tradition

In the linguistic tradition the most influential theory of predication is perhaps that of the Chomskyan approach. In the P & P model, for example, the copula does not have any semantic role in the predication, but only inflectional information –i.e., the copula plays only a syntactic role. Syntactic predication is thus a derived notion, defined in terms of tree structures independently built according to syntactic principles (e.g., X’ theory). As Aristotle, Chomsky (1981) assumes a tripartite syntactic structure for main clauses by stating the Extended Projection Principle (EPP):

66
Extended Projection Principle

Any constituent of category S(entence) has the basic structure NP IP VP, where INFL is the node that dominates inflection.

a) Syntax of predication (1st version)

```
IP

   (subject) NP  I'

   I°  XP  (predicate)
```

\[ X = \{V, A, N, P\} \]

In a more recent version of P & P, syntactic predication is taken to be a primitive relation — i.e. as a condition of a well-formedness of syntactic representation. Predication is therefore represented as a coindexing of two maximal projections.

b) Syntax of predication (2nd version)

```
IP

   (subject) NP₁  I'

   I°  XP₁  (predicate)
```

From a linguistic standpoint, the copula is just a link that serves to establish a connection between a predicate and a subject. This link carries tense information. In other words, the copula anchors non-verbal predicates to tense. Non-verbal predicates, in turn, are not able to bring tense features — i.e. temporal information, and therefore need the support of a copula (Lenci 1998). Thus, the copula takes a non-verbal predicate and changes it to a
verbal predicate that can be predicated of a subject. It follows from this that every clause containing a non-verbal predicate must have a copula overtly or covertly. This condition, which we call condition 1, can be stated as follows:

**Condition 1**

a. Every clause containing non-verbal predicates must have a (functional) copula.

b. The copula can be interpreted overtly or covertly.

c. The copula is just a linker between the subject and the predicate.

Condition 1 specifies that every clause containing a non-verbal predicate requires the presence of a copula to establish the mode of predication. It also specifies that a copula needs to be interpreted either overtly or covertly. Den Dikken (2006) calls RELATOR this nexus between the subject and the predicate, which he takes to be a functional projection. In this sense, small clauses (66), depictives (67) and resultatives (68) need to be interpreted as having a covert copula or a RELATOR.

(66a) John considers [small clause Pepe intelligent].

(66b) $\Rightarrow$ Pepe is intelligent.

(67a) [Pepe], left the room [resultative angry].

(67b) $\Rightarrow$ Pepe is angry.

(68a) Pepe painted [resultative his car blue].

(68b) $\Rightarrow$ Pepe’s car is blue.

### 3.4.3 Taxonomy of copular clauses

Higgins (1979) suggested a formal semantic taxonomy of copular clauses. He distinguishes four kinds of copular constructions: equitative (identity) clause, specificational,
identificational, and predicational. They are discussed below (cf. Mikkelsen 2005).

3.4.3.1 Equitative clause

Equitative clause corresponds to Frege’s notion of identity – i.e. they express identity between two terms. They involve two expressions denoting the same individual, or entities, and the function of the copula is to equate the referents of the two expressions. These sentences select a subject of type (e) and a complement of type (e, t).

(69a) He is Obama.
(69b) She is Mary.

3.4.3.2 Specificational clause

Specificational clauses do not tell us something about the referent of the subject NP, instead it says who or what the referent is:

(70a) The winner of the 2008 presidential campaign is Barack Obama.
(70b) The president of the US is Barack Obama.

Higgins (1979; cf. Mikkelsen 2005) argues that the subject of this clauses introduces a variable (x), and the post-copular expression serves to provide a value for that variable: the x such that x is the winner of the 2008 presidential campaign (70a). The subject of these clauses is of type (e, t), and the complement is of type (e).

3.4.3.3 Identificational clause

Mikkelsen (2005) argues that these clauses behave as specificational and equitative copular clauses:
(71a) That is Barack Obama.

(71b) That candidate is Barack Obama.

While (71a) selects a subject of type (e, t), and a complement of type (e), both arguments of (71b) are of type (e).

3.4.3.4 Predicational clause

Predicational clauses describe the subject – i.e. they tell us something about the referent of the subject.

(72a) Barack Obama is the junior United States senator from Illinois.

(72b) Barack Obama is a lawyer.

These sentences select a subject of type (e) and a complement of type (e, t).

3.4.4 Partee’s theory of noun phrase interpretation

Partee (1987) adopts a type-theoretic account of noun phrase interpretation to characterize the differences in noun phrase interpretation. Thus, according to this author, noun phrases can receive three different interpretations: generalized quantifier, referential, and predicative.

3.4.4.1 Generalized quantifier

The semantic type of a generalized quantifier is ((e, t), t) – i.e. a set of sets of individuals. In (73), for example, every politician denotes the set of properties that every politician has, and not the set containing every politician.

(73) Every politician is corrupt.
Thus, (73) is true if and only if the set of corrupt people is a member of the set of sets of individuals that are politician.

### 3.4.4.2 Referential

The semantic type of a referential clause is \((e)\) (for entities or individuals), and is the one we ascribe to most noun phrases —i.e. they denote individuals and other entities in our surroundings (Mikkelsen 2005; cf. Strawson 1950):

\[(74)\] The whale struck the ship.

In (74), a particular whale and a particular ship are mentioned, and this sentence is true iff the former struck the latter.

### 3.4.4.3 Predicative

The semantic type of predicative is \((e, t)\) —i.e. a function from entities to truth values, and they denote a set of individuals:

\[(75)\] Barack Obama is a lawyer.

In this framework, proper names are considered generalized quantifier; therefore, the semantic type of Barack Obama is \(((e, t), t)\), that is, a function from entities to truth value to truth value, and the semantic type of lawyer is \((e, t)\). The semantic type of the expression when combining both noun phrases is \((t)\), that is, a proposition that will be either true or false modulo a given model. Partee (1987) suggests that every kind of noun phrase has one of the three types just mentioned by default, but we can change the semantic types of the noun phrases by ‘type-shifting’ them iff the result of this shift results in the formation of a well-formed expression.
3.5 Summary

In this chapter I have outlined the fundamental aspects of predication, and we have also seen how predication is related to the notion of copula. I discussed the distinction between individual and stage-level predicates and how this distinction is useful to analyze a wide range of linguistic data. Finally, I have proposed that every clause with non-verbal predicate needs to have a copula, and this copula may be interpreted either overtly or covertly. In the chapters that follow I discuss the syntactic structure of copula and copula-less clauses, as well as the syntactic properties of non-verbal predication.
Chapter 4: Copula and Copula-less Clauses

4.1 Introduction

At the end of the previous chapter I introduce the relationship between predication and the copula *be*. Based mainly on Higgins’ (1979) taxonomy, I highlighted that several copulas have been proposed in the linguistic literature. This taxonomy, however, is far from complete: *be* displays a wide range of usages. These usages are summarized below (Hockstra 2004; cf. Déchaine 1995):

(1a) John is intelligent. Predicative or copulative be

(1b) John is Mr. Smith. Equitative be

(1c) That guy (over there) is John. Identificational be

(1d) The winner is John. Specificational be

(1e) John thinks, therefore he is. Existential be

(1f) John is in the library. Main verb or locational be

(1g) John was beaten. Passive be

(1h) John is playing the guitar. Progressive be

Examples (1c)-(1h) are out of the realm of this dissertation. In the case of equitative *be*, I will demonstrate that its presence is not allowed in Spanish verbless clauses –i.e. only predicative or copulative clauses allow a missing copula in Spanish.

The copula in predicative clauses serves only to establish a connection between the subject and the predicate, as was mentioned in the previous chapter. In other words, the
The thematic role in this construction is assigned by the predicate. This is not the case for equitative be where the thematic role is assigned by the copula itself since a non-predicate DP cannot assign a thematic role.

In this chapter, I examine specifically the syntactic structure of copula and copula-less constructions in predicative clauses, and discuss some of the more relevant and recent theories of copular constructions. In the following section I examine the two fundamental theories of copular constructions: the symmetric small clause analysis and the asymmetric small clause analysis. In Section 3 I look cross-linguistically at the general facts of verbless clauses –i.e. its behaviors among different languages from around the World. I base the discussion in four well-known languages with verbless sentences that exhibit clausal properties: Modern Standard Arabic (MSA), Modern Hebrew (MH), Russian, and Mauritian Creole (MC). Mina and Hdi are other two languages that will also be examined. In Section 4 I discuss the generativist account of verbless sentences and in Section 5 I compare the generativist account to other two non-transformational syntactic frameworks: Lexical-Functional Grammar (LFG) and Head-Driven Phrase Structure Grammar (HPSG).

4.2 Syntactic Derivation of Copular Clauses

In this section, I examine the syntactic derivation for predicative be clauses. One of the central issues for the derivation of predicative be clauses concerns the position where the subject and the predicate originate. Two approaches have been proposed. Firstly, the small clause type analysis –i.e. the subject and the predicate are contained within a small clause, similar to (2).
The syntactic representation in (2) is an example of a symmetric-type structure (Rothstein 2001, Heggie 1988a, 1988b, 1989, and Moro 1991, 1997, 2000, among others), and it is assumed that in this type of structure the copula takes a bare small clause as its complements in which there is a symmetrical relationship between the two constituents within the small clause (den Dikken 2006). The second approach is known as the asymmetric-type structure. According to this structure, between the subject and the predicate lay a functional projection that renders the small clause bigger than the representation in (2) might suggest (Adger 2003, den Dikken 2006, and Citko 2008, among many others).

4.2.1 Small clauses

The notion of small clause (SC) has been applied to a wide range of constructions for which such an analysis is not immediately evident (Hockstra 2004; cf. Kayne 1984). Some examples of small clauses are given below:

(3a) I consider [sc John intelligent].  
(3b) The committee found [sc John’s proposal unacceptable].  
(3c) John painted [sc the wall blue].  
(3d) John gave [sc Peter a book].  
(3e) There is [sc John in the car].  
(3f) John left the room [sc PRO happy].  
(3g) [sc With John sick], we will never get to the party.  
(3h) Which student did you see [sc t reading]?
Each of the syntactic nodes labeled SC in the previous examples can be analyzed as containing a light or semantically empty verb (e.g., be or have), as the following sentences demonstrate:

(4a) ⇒ John is intelligent.
(4b) ⇒ John’s proposal was unacceptable.
(4c) ⇒ The wall is blue.
(4d) ⇒ Peter has a book.
(4e) ⇒ John is in the car.
(4f) ⇒ John is happy.
(4g) ⇒ John is sick.
(4h) ⇒ Which student is reading?

Since it first appears in the linguistic literature (Williams 1974), the notion of small clause has played a fundamental role in the linguistic analysis of sentences such as (3). The debate has been whether or not the syntactic node labeled SC is indeed a syntactic constituent. This is the position argued by Stowell (1981, 1983), Chomsky (1981, 1986), Kitagawa (1985), Radford (1988), Aarts (1992), among many others, and it is the approach assumed here. There is another approach to SC-type structures, based mainly in the theory of predication advocated by Williams (1980, 1983), which argues a contrary view to the Small Clause theory claiming that the SC element does not constitute a syntactic constituent. Leaving this issue aside and assuming the existence of small clauses it can concluded that all the syntactic nodes labeled SC are XPs containing a subject and a predicate; this is to say, that the elements contained in the bracketed sentences in (3) are in a subject-predicate relationship in which the predicate is the syntactic head of the clause, the subject is in the
specifier position and there is no element between the subject and the predicate (Alhorais 2007). In other words, predication is possible in the absence of a verb. A small clause, then, can be defined as follows:

**Small clause**

A small clause is a subject-predicate structure lacking tense (den Dikken 2006: 60)

It has been argued that copulative sentences have a small clause-type structure. A canonical copular sentence such as (5a) will have the syntactic structure in (5b). In this sense, the copula *be* is treated like a raising verb (e.g. *seem*) – i.e. *be* is a raising verb context.

(5a) John is intelligent.

(5b) John, is [t, intelligent].

The structure in (5b) is similar to (2) and it is known as the symmetric small clause structure. This is the topic of the following section.

### 4.2.1.1 Symmetric small clause

For those who defend the symmetric small clause type derivation of copular constructions, the predicative *be* selects bare small clause complements (6). In other words, copular clauses start out of small clauses where the predication relationship is established (Abdel-Ghafer 2003).

(6)  

\[
\text{SC}  
\text{subject} \quad \text{predicate}
\]

The structure in (6) exemplifies cases of copula clauses such as (7), in which a predication relationship is established. Notice that the predicate can be a DP, an AP or a PP.
(7a) John is a student.
(7b) John is smart.
(7c) John is in the office.

In what follows, I discuss the most prominent proposal for the symmetrical approach.

4.2.1.1.1 Heggie (1988a, 1988b, 1989)

Heggie (1988a, 1988b, 1989), following Jackendoff (1972), Emonds (1975) and Stowell (1978, considers *be* to be a raising verb –i.e. the copula is a raising verb which takes a small clause complement (Mikkelsen 2005). In this syntactic configuration (8), the DP subject of the small clause is left adjoined to the maximal projection of the small clause DP predicate (cf. Stowell 1983). In canonical copulative constructions, the subject of the small clause raises across the copula to the subject position of the main clause (Spec,IP). Finally, the copula moves to I, as in (8b) (Mikkelsen 2005).

(8a) is John the student

```
  VP
     \/
    V  DP
      is
```

```latex
\begin{center}
\begin{tikzpicture}
  \node (V) {is};
  \node (DP) [below left of=V] {John the student};
  \node (V) [below left of=DP] {VP};
  \node (V) [above left of=DP] {V};
  \node (V) [above left of=V] {is};
  \node (V) [above left of=V] {DP};
  \node (V) [above left of=V] {John the student};
\end{tikzpicture}
\end{center}
```
The copula, thus, is base generated within the VP and then raises to I to support I’s tense features. Predicative *be* clauses, therefore, start out as small clauses in which a predication relation is established (Abdel-Ghafer 2003). As in Rothstein’s (2001) analysis, for example, the XP subject raises to Spec,IP to receive nominative Case. One of the advantages of Heggie’s analysis is that it deals with predicate inversion:

(9a) John is the student.

(9b) The student is John.

Both sentences in (9) have the underlying structure depicted in (8a). The difference between (9a) and (9b) is that the latter is derived by raising the DP predicate *the student* to Spec,CP. This movement forces the copula *be* to move to C.
(10) The student is John.

\[
\begin{align*}
\text{CP} \\
\text{DP} & \quad \text{C'} \\
\text{C} & \quad \text{IP} \\
\text{IP} & \quad \text{I'} \\
\text{I} & \quad \text{VP} \\
\text{V} & \quad \text{DP} \\
\end{align*}
\]

\text{the student}_i \quad \text{is}_k \quad \text{John}_j \quad \text{t}_k \quad \text{t}_k \quad \text{t}_i \quad \text{t}_i

4.2.1.1.2 \quad \textbf{Moro (1991, 1997, 2000)}

Moro (1991, 1997, 2000) assumes that the predicative *be* selects a bare small-clause complement. Evidence from this comes from the ungrammaticality of examples in (11): if predicative *be* takes a bare small clause complement, then it will be impossible for *as* or *for* to appear between *be* and the small clause predicate (Moro 2000; cf. den Dikken 2006).

(11a) *John is as/for professor.*

(11b) *John is as/for intelligent.*

As Heggie’s analysis, Moro’s proposal can accommodate predicate inversion as well. So, we are left out with the following two syntactic configurations:
(12) Moro’s analysis

a) The syntactic configuration of predication in canonical predicative *be* clauses

```
TP
   /
  /  
DP_{Subject} T'  
 /  
T  Small clause
  be 
    /
   t_i  DP
```

b) The syntactic configuration of predication in predicate inversion

```
TP
   /
  /  
DP_{Predicate} T'
   /
T  Small clause
  be 
    /
   DP  t_i
```

Raising the subject yields a predicational or canonical copular sentence, while raising the predicate yields a specificational or inverse copular sentence. This analysis, however, does not explain the ungrammaticality of (13b) and (14b) —i.e. the analysis fails to account for some basic restrictions on what kinds of DP can occur in the subject position of inverted copular clauses.

(13a) John is a student.

(13b) *A student is John.
(14a) John is honest.

(14b) *Honest is John.

Notice that raising the DP-subject or XP-predicate in Moro’s analysis is quite different from Heggie’s: for Moro (2000), the underlying structure –i.e. symmetrical small clause- must be broken in the course of the syntactic derivation in order to comply with the Linear Correspondence Axiom (Kayne 1994), defined as follows:

**Linear Correspondence Axiom (LCA)**

Let X, Y be nonterminals, and x, y terminals such that X dominates x and Y dominates y. Then if X asymmetrically c-commands Y, x precedes y (Nunes 2004: 15)

Since the symmetrical small clause cannot survive as it stands, either the DP subject or the XP predicate must raise out of the small clause to a higher specifier position. Spec,TP is a good candidate for a landing site. So with the DP subject raising to Spec,TP the canonical copular sentence is derived, whereas raising the XP predicate yields an inverse copular sentence (den Dikken 2006). Hence, either DP or XP can raise and this will break the symmetry. The trigger of raising is therefore the resolution of symmetry.

4.2.1.1.3 Rothstein (2001)

Rothstein (2001) assigns to (14a) a structure similar to (14b), where the DP subject and the AP predicate are contained within a small clause. In this syntactic position, the DP subject receives a thematic role from the AP predicate, and then moves to Spec,IP to check nominative Case against I. His analysis is parallel to that of Heggie and Moro. Rothstein, however, argues that equative sentences involve an asymmetric small clause (cf. Carnie 1995,
Heycock and Kroch 1999, and Rapaport 1987), departing therefore from the symmetric-type analysis for copular clauses:

(15a) [IP John, [VP is [small clause t_i intelligent]]]

(15b) IP
    /\            
   /   \          
 John,   VP
    /\        /\  
   /   \    /   
  is   small clause
       /\       
      /   \     
     t_i   intelligent

4.2.1.4.4 Breaking the symmetry

Even though the symmetric small clause approach has been widely assumed, there have been recent attempts to break the symmetry of small clauses. Those who advocate for an asymmetric small clause analysis have based their claims both on empirical and theoretical grounds. Den Dikken (2006), for example, has demonstrated that Moro’s argument concerning the impossibility of *as or *for in bare small clauses in not entirely true –i.e. as and for can appear indeed in canonical copular clauses:

(16a) John is short for an American.
(16b) John is popular as an athlete.

He goes on and provides examples where a functional category is required in the small clause:

(17a) John treats him *(like) an idiot.
(17b) John takes him *(for) an idiot.

(17c) John regards him *(as) an idiot.

(17d) John considers him (as) an idiot.

This is in fact strong evidence in favor of considering small clauses as carrying functional heads, which can be realized as like, for, as or ultimately as null (e.g., 17d). Evidence for this comes not only from English, but from other languages as well. For instance, in Scottish Gaelic a particle 'na may appear in tenseless absolutive constructions when the clause consists of two nominals, but it is not necessary when the predicate is an AP. The particle 'na consists of a preposition ann, which incorporates a possessive pronoun that agrees in φ-features with the subject. The following examples illustrate this and are take from Adger and Ramchand (2003).

(18a) Chunnaic mi Calum agus e 'na thidsear.
see-Past I Calum and him in-3ms teacher

‘I saw Calum while he was a teacher.’

(18b) Chunnaic mi Calum agus e uamhasach toilichte.
see-Past I Calum and him terribly happy

‘I saw Calum while he was really happy.’

In many other languages (e.g., Welsh, Edo, and Chichewa, for example) a functional element appears between the subject and the predicate (cf. Baker 2003, Rouveret 1996).

Others arguments contra the existence of symmetric small clauses come from (i) the coordination of dissimilar categories in predicative positions (19) –i.e. it is not possible to determine the label of the constituent formed by the coordination of different categories, which suggests that a functional head must be present in the small clause (Bowers 1993, 2001).
(19a) John is intelligent and a Democrat.

(19b) *Intelligent and Democrats displease Rush.

(ii) Case-valuation (e.g. instrumental case in Polish and Russian) —i.e. a functional head must be present to assign case (Bailyn 2001, 2002; Bailyn and Citko 1999; Bailyn and Rubin 1991); and (iii) interpretative differences in the same AP predicates with different Case —i.e. instrumental case vs. nominative case in Russian (see Bowers 1993, Bailyn 2001, Contreras 1995, Chomsky 1995, Guerón and Hoekstra 1995, Adger and Ramchand 2003, Harves 2002, among others, for arguments against the symmetric small clause analysis).

4.2.1.2 Asymmetric small clause

The asymmetric-type small clause analysis assumes that all predication relationships are necessarily asymmetrical —i.e., small clauses always contain a functional head. If this is true, then the following holds:

Small clauses’ Principle

All small clauses are projections of a functional head (den Dikken 2006: 60)

Some of the more recent proposals for the asymmetrical approach are discussed below.

4.2.1.2.1 Bowers (1993, 2001)

For Bowers (1993, 2001), all small clauses contain a functional head Pred\(^0\). Hence, all small clauses are a projection of this head (PredP). A sentence such as (20a) will have the syntactic representation in (20b). In this sense, the XP complement of Pred\(^0\) does not denote predicates, but rather must be converted into predicates. Pred, therefore, creates a predicate that could be combined with an appropriate subject.
(20a) John considers Paul intelligent.

(20b) VP

  V      PredP
consider

  DP     Pred'
Paul

  Pred   AP
∅      intelligent

4.2.1.2.2 Adger and Ramchand (2003)

Adger and Ramchand (2003) assumes a much richer syntactic structure for predicative clauses. The representation is as follows:

(21) Adger and Ramchand’s representation

  FP

  F'

  F

  F' FP

  F' F

  F PredP

  subject PredP'
In their view clauses consist of a predicational core where thematic relations are licensed and which is delimited by a syntactic head or Pred. Pred contains an articulated functional domain with heads that check formal features, trigger displacement, and mediate other important grammatical properties of the clause (Adger and Ramchand 2003).

According to these authors, there is syntactic evidence for the presence of a functional head in small clause construction. Their claims are made on the basis of data from Scottish Gaelic which, as mentioned in 2.1.1.4, requires the particle ’na in some tenseless absolutive constructions (e.g. a two nominals construction). Example (18) is repeated here as (22) for convenience’s sake:

(22a) Chunnaic mi Calum agus e ’na thidsear.
sse-Past I Calum and him in-3ms teacher
‘I saw Calum while he was a teacher.’

(22b) Chunnaic mi Calum agus e uamhasach toilichte.
sse-Past I Calum and him terribly happy
‘I saw Calum while he was really happy.’

The data from Scottish Gaelic allow us to conclude that some small clauses may require a functional category to operate as predicates. This functional category renders the syntactic structure of small clauses asymmetric, with the argument of the predicate constructed by the head and its complement sitting in the specifier position of the predicate phrase (Adger and Ramchand 2003).

4.2.1.2.3 den Dikken (2006)

Den Dikken (2006) assumes a simpler, but more powerful, syntactic representation
for clauses involving predication (e.g., copulative constructions). His main argument is that the predication relationship requires a connective, or RELATOR, that sits between the predicate and the subject. This RELATOR is a functional category, which makes possible the asymmetrical small clause, and creates an asymmetrical c-command relationship between the predicate and the subject. This proposal explains both the canonical and the inverse copular constructions. It is represented as follows:

(23) den Dikken’s analysis

a) The syntactic configuration of predication in canonical predicative be clauses

```
        RP
       /   \
      /     \
    Subject  R'
        /     \
       /       \
      Relator  Predicate
```

b) The syntactic configuration of predication in predicate inversion

```
        RP
       /   \
      /     \
    Predicate  R'
        /     \
       /       \
      Relator  Subject
```

In a nutshell, den Dikken’s (2006) proposal is that all small clauses include a projection of a functional head or RELATOR, which takes the subject and the predicate as its dependents. Hence, the subject-predicate relationship in syntax is purely asymmetrical. Two comments are in order here: first, the RELATOR is an abstract functional head –i.e. it is not a specific functional element such as T or D. In other words, a RELATOR is just any
placeholder for any functional head in the structure that mediates a predication relationship between two terms. Unnacusative, transitive and copulative constructions contains all the RELATOR, as the following examples demonstrate:

(24a) \([\text{TP} [\text{John}], [\text{T} = \text{RELATOR} [\text{VP} \text{fell t}]]]\)

(24b) \([\text{TP} [\text{John}], [\text{T} [\text{v} \text{t} [\text{v} = \text{RELATOR} [\text{VP} \text{hates Paul}]]]]]\)

(24c) \([\text{RP} [\text{John}] [\text{RELATOR=be [intelligent]]}]\)

It should be clear then that anything can be a RELATOR, as long as it is a functional element (e.g. T in (24a), v in (24b), and be in (24c)) that finds itself in between the predicate and its subject (den Dikken 2006). Second, since the RELATOR is a functional head, it is not a theta-role assigner. Thus, in copulative constructions (24c) the thematic role is assigned by AP/NP/PP.

4.2.1.2.4 Citko (2008)

Citko (2008) present her case for the asymmetric small clause based on data from Polish. As Adger and Ramchand (2003) and den Dikken (2006), she argues that a functional head or πP mediates the relationship between the subject and the predicate. The structure Citko proposes for verbal copular clauses containing two DPs is as follows:

(25) Citko’s representation for verbal copular clauses

\[
\text{TP} \\
\Big/ \text{\textquoteleft T'} \Big/ \\
\text{\textquoteleft\text{T_{up,EPP} πP}}
\]
Notice that $\pi$ has the following set of features: uninterpretable $\varphi$-features, and an optional EPP feature. Thus, the $\pi$ head values the uninterpretable Case feature on its DP complement in the course of the syntactic derivation, and the $T$ head values the uninterpretable Case feature on the subject DP. Also, the DP subject values the uninterpretable $\varphi$-features on $T$ and, since $T$ also has an EPP feature, the subject needs to raise to Spec,TP, resulting in the structure in (26) (Citko 2008):

(25) Raising of the subject to Spec,TP

```
TP

/\_____________________
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
```

```
DP_{\omega,\varphi} \pi' T'
```

```
\pi_{\omega,\varphi} \text{EPP} \piP
```

```
T_{\omega,\omega} \piP
```

```
t \pi'
```

```
\pi_{\omega} \text{be} \text{DP}_{\omega,\varphi}
```

90
4.2.1.3 Summary

Since Stowell (1981, 1983) has been assumed that not only verbs have subjects – i.e. predication is possible without the presence of a verb.

(26a) John found [sc Paul in the library].
(26b) ⇒ Paul was in the library.
(27a) There is [sc Paul in the library].
(27b) ⇒ Paul is in the library.

The bracketed constituents in (26) and (27) have been labeled Small Clauses in the linguistic literature – i.e. they constitute a minimal unit of non-verbal predication. In recent year there has been a debate concerning the internal structure of SCs. Two structures have been assumed: the symmetrical-type small clause, and the asymmetrical-type small clause.

The symmetric small clause analysis of copular constructions treats the copula be as a raising verb – i.e. similar to seem. Thus, the basic intuition is that the subject is base generated in an embedded position or small clause. Then, it raises to its surface position leaving a trace behind. Movement is triggered by the checking of a formal feature (e.g. case). In some languages, for example, the nominative Case of the subject needs to be checked against T. The asymmetric small clause analysis, on the other hand, assumes the existence of a functional head between the predicate and its subject – i.e. predication must be mediated by a functional head. In this syntactic configuration the subject can occupy the Spec position of the functional projection. In the following section I examine copular clauses that do not have a verb. These clauses have been known in the literature as verbless clauses, and are common in Arabic, Hebrew, Russian, among other languages.
4.3 Verbless clauses

A sentence can be defined as a statement that consists of three elements: a subject, a predicate and a nexus between them, as already stated in the introduction. The RELATOR (den Dikken 2006) or πP (Citko 2008) between the subject and the predicate is expressed by a finite verb in verbal clauses. In Modern Standard Arabic, Modern Hebrew, Russian, Japanese, Guarani, among other languages, the predicate does not require necessarily the presence of a copula (cf. chapter 1) In these cases the phrase that acts as predicate (AP/NP/PP) provides the main predication for the clause –i.e. the AP/NP/PP phrase is the syntactic head of the predicate phrase selecting for a subject, as stated in Chapter 1. The only difference between these languages and English and Spanish for example is that the latter do not allow canonical be-less sentences in tensed environments.

In short, in verbless clauses the nexus that connect both the subject and the predicate is empty. While most languages make use of a light or bleached version of a lexical verb in a range of (canonical) copula or predicative constructions (e.g. English and Spanish), others convey the same proposition without a verbal copula. I examine some of these languages in the sections that follow. The data from Modern Standard Arabic, Modern Hebrew, Russian and Mauritian Creole come mainly from Abdel-Ghafer (2003), Doron (1983), Avgustinova and Uszkoreit (2006), and Syea (1997), respectively. The data from Mina and Hdi come from Frajzyngier, Johnston and Edwards (2005), and Frajzyngier and Shay (2001). Unless indicated otherwise, the examples in this chapter are from these authors.

4.3.1 Modern Standard Arabic

Modern Standard Arabic is a variety of Arabic spoken in many Arab countries and
some other countries like Somalia and Mauritiana. Today’s Modern Standard Arabic is not much different from its ancestor language in its phonology, morphology and syntax (Al-Shamrani 1994). For example, both varieties mark a verb-subject-object structure with an alternate structure of subject-verb-object. In addition to this, most of the times negative particles and questions occur in sentence-initial position in both varieties. On the level of phrase structure, the adjectives follow its head-noun, the possessed noun precedes the possessor noun, and the preposition precedes its object noun. As for copula or predicative constructions, MSA makes use of a verbal copula in the future and the past tenses. In other words, the future and the past require the copula to be present:

(28a) kana al-jaww-u harr-an
w.as.3MS the-weather-NOM hot-ACC
‘The weather was hot.’

(28b) sa-takuunu al-samaa?-u saafijat-an
will-F.be.3S the-sky-NOM clear.F-ACC
‘The sky will be clear.’

(28c) al-awlaad-u kaanu fil-madrasat-i
the-boys-NOM were-them in.the-school-GEN
‘The boys were at school.’

In verb-subject order (28a-b), the verb agrees with the subject in gender, and (presumably) in person, and the complement has to bear accusative case. In subject-verb order (28c), the verb agrees with the subject in gender, number, and (presumably) person (Abdel-Ghafer 2003). These constructions can be negated by using three negative markers, which are tense-oriented: ‘ma’ (past, perfective form), ‘lam’ (past, imperfective form), and ‘lan’ (future form).

(29a) ma kana samir-un taalib-an
not was.3MS Samir-NOM student-ACC
‘Samir was not a student.’
In present-tense copular constructions MSA does not have a verbal copula. However, as we will see later, a lexical element can intervene between the subject and the predicate. These clauses exhibit the following patterns: 1. a subject NP and a predicate NP/AP/PP (30a-c); 2. a subject NP, a pronoun, and a predicate NP/AP (30d); 3. a subject NP, and a predicate NP/AP (30e). In all three cases the subject must be [+definite]. If not, a sentential reading is not available (30f). In other word, a verbless sentence in MSA must have as its subject a definite nominative. Also, the subject and the predicate tend to agree in Case, number, gender, and sometimes in definiteness:

(30a) samir-un talib-un
Samir-NOM student-NOM
‘Samir is a student.’

(30b) samir-un latiif-un
Samir-NOM nice-NOM
‘Samir is nice.’

(30c) samir-un fil-bait-i
Samir-NOM in.the.house-GEN
‘Samir is in the house.’

(30d) samir-un huwa t-taalib-u
Samir-NOM 3MS the.student-NOM
‘Samir is the student.’

(30e) samir-un t-taalib-u
Samir-NOM the.student-NOM
‘Samir is a student.’
Another difference between sentences in the past and the present tense is the distribution of sentential negation. In the present tense the three negative markers ‘ma’, lam, and ‘lan’ cannot be used. Instead, a non tense-oriented negative marker needs to be used: ‘laysa’ (not). ‘laysa’ is only compatible with the present tense interpretation and exhibits a behavior similar to that of verbs: it agrees with the subject in number and gender –i.e., ‘laysa’ bears agreement, and its complement carries accusative case:

(31a) laysa samir-un lattif-an  
Neg.3MS Samir-NOM nice-ACC  
‘Samir is not nice.’

(31b) laysat al-bint-u lattifat-an  
Neg.3FS the.girl-NOM nice.F-ACC  
‘The girl is not nice.’

However, when the pronoun ‘huwa’ is present, the complement bears either accusative or nominative case:

(32a) laysa samir-un huwa lattif-an  
Neg.3MS Samir-NOM 3MS nice-NOM  
‘Samir is not the nice (one).’

(32b) laysa samir-un huwa lattif-an  
Neg.3MS Samir-NOM 3MS nice-ACC  
‘Samir is not the nice (one).’

Finally, in MSA under certain circumstances the copula might show up in present tense: for example, in sentences with generic interpretation that contain stage-level predicates describing situations that are usually true in the past, are true in the present, and will be true in the future (Benmamoun 2000; cf. Moutaouakil 1987), as we mention in chapter 3.
Sentences containing individual-level predicates, on the other hand, do not have a copula. These sentences express state of affairs that are permanent. When they are used with stage-level predicates, they express propositions that are true in the present moment only (Benmamoun 2000). In the section that follows I discuss the properties and distribution of the pronoun, also known as Pron.

4.3.1.1 Pron in Modern Standard Arabic

Verbless clauses may use some mechanisms to express INFL in the absence of the element that assign Case (and θ-role in some cases). Thus, in the absence of a copula in present-tense copular constructions MSA may use a pronoun to perform copula functions (Eid 1983). For example, Pron is used in Modern Standard Arabic to disambiguate between a phrasal and sentential reading in equitative constructions. Pron will be optional in predicative clauses since ambiguity does not arise.

(34)  jamil-un (huwa) t-taalib-u
      Jamil-NOM 3MS the.student-NOM
     ‘Jamil is the student.’

4.3.2 Modern Hebrew

Modern Hebrew develops as an independent linguistic system, as the result of deliberate efforts to modernize the classical tongue. These efforts were carried out by the Jewish response to the processes of modernization. Thus, MH is not a direct extension of
the previous stages of that language, namely, Biblical Hebrew, Rabbinic Hebrew and Medieval Hebrew but a diverse selection of constituents from all the linguistic systems preceding it, supplemented by innovations (Reshef 2003). Contemporary or Modern Hebrew is a pro-drop language, and has a subject-verb-object word order. However, verb-subject-object is possible as well, as a result of verb fronting, and objects can appear in the front of the sentence deriving the object-subject-verb and object-verb-subject word orders (Doron 1983).

Copular constructions in MH display an interesting set of properties. Like Modern Standard Arabic, in Modern Hebrew a form of the copula appears obligatorily in past and future copular constructions –i.e. the verbal root ‘h.y.y’ (be) must show up. This copula agrees in number, gender and person with the subject.

(35a) dani yihye more ba universita  
Dani will teacher in.the university  
‘Dani will be a teacher at the university.’

(35b) dani haya nexmad ad meod  
Dani was nice very  
‘Dani was very nice.’

(35c) dani yihye al ha gag  
Dani will on the roof  
‘Dani will be on the roof.’

(35d) dani haya ha more le matematika  
Dani was the teacher to math  
‘Dani was the math teacher.’

The negative marker ‘lo’ is used to negate ‘h.y.y’ in the past and future tenses. ‘Lo’ must always precede the copula or else the sentence will be ungrammatical (Abdel-Ghafer 2003). Doron (1983) argues that this is strong evidence in favor of considering ‘h.y.y’ as part of the predicate.
In the present tense four different forms are used in lieu of the verbal root ‘h.y.y’, namely, zero (37a), the pronominal form Pron (37b), the pointer ‘ze’ (this) (37c), and the existential ‘yeš’ (37d). The examples are taken from Doron (1983).

(37a) dani nexmad ad meod
Dani nice very
‘Dani is very nice.’

(37b) dani hu nexmad ad meod
Dani Pron nice very
‘Dani is very nice.’

(37c) ze dani
this Dani
‘This is Dani.’

(37d) yeš ba sifria harbe sfarim
in.the library many book
‘There are many books in the library.’

There are some important aspects of these constructions. First, zero usually appears with indefinite predicate nominals, while Pron selects definite one. Second, ze ‘this’ is not a pronoun and, according to Doron (1983), needs to agree with the predicate in number and gender and third, yeš can also be used in locative sentences (38). When this happens a clitic that agrees with the theme of the clause may appear attached to yeš.

(38) dani yeš+no ba sifria
Dani CL-3rdMS in.the library
‘Dani is in the library’.

Present-tense copula constructions in MH are negated either with the negative marker ‘lo’ or
‘eyn’. The difference between ‘lo’ and ‘eyn’ is that the latter and not the former inflects for number, gender, and person.

(39a) dan lo recini
Dan not serious
‘Dan is not serious.’

(39b) dan eyno recini
Dan not serious
‘Dan is not serious.’

(Berman 1978: 221)

As Modern Standard Arabic, Modern Hebrew uses a pronoun, Pron, in some copula-less constructions; but contrary to MSA, in MH Pron is optional in predicative sentences.

4.3.2.1 Pron in Modern Hebrew

It has been assumed that Pron in Modern Hebrew is not the suppletive form of ‘h.y.y’ in present tense sentences. Instead, Pron is taken to be a realization of agreement features (Berman 1978, Doron 1983, Shlonsky 1997). Doron (1983) argues that the hypothesis of Pron as the realization of ‘h.y.y’ can be refuted just on distributional ground: while ‘h.y.y’ may appear in construction with verbal present participles, Pron cannot:

(40a) dani haya yošev ba kafeteria leitem krovot
Dani was sitting in.the cafeteria often
‘Dani often used to sit in the cafeteria.’

(40b) *dani hu yošev ba kafeteria leitem krovot
Dani he sitting in.the cafeteria often
‘Dani often used to sit in the cafeteria.’

Another reason for not considering Pron as the present tense of ‘h.y.y’ is the fact that ‘lo’ which typically precedes tensed verbs, including the present tense, cannot precede Pron. Instead, ‘lo’ must be placed before Pron in verbless sentences.
Pron consists of all nominative third person pronouns: ‘hu’ (he), ‘hi’ (she), ‘hem’ (they.MASC), ‘hen’ (they.FEM), may show up in present tense nominal sentences, and never appears in sentences that have a verb.

Doron (1983) argues that Pron is a clitic – i.e. the phonological realization of a feature bundle [person, number, gender, Case], which is not an independent node and therefore has some of the properties Zwicky (1977) lists as characterizing clitics, namely:

(i) Pron does not carry contrastive stress, unlike ‘h.y.y’.
(43a) dani HAYA more
Dani be-Past teacher
‘Dani WAS a teacher.’

(43b) *dani HU more
Dani he teacher
‘Dani IS a teacher.’

(ii) Pron cannot occur in isolation, not even as an answer to a question:

(44) Speaker A: dani hu o haya more
Dani he or be-Past teacher
‘Is Dani a teacher or was a teacher?’

Speaker B: Haya
be-past
‘He was.’

Speaker B: *Hu
He
‘He is.’

The last two properties of Pron that will be discussed are that of the agreement
between Pron and the predicate and the obligatoriness of Pron. First, Pron usually agrees
with the subject (45a). However, Pron may agree with the predicate only when the predicate
is a referring NP/DP (45b) -i.e. when the sentence has an identity reading:

(45a) ma še dekart katav (hu) hoxaxa le kiyumo
what that Descartes wrote he proof-Fem to his existence
‘What Descartes wrote is a proof of his existence.’

(45b) ma še dekart katav hi hoxaxa le kiyumo
what that Descartes wrote she proof-Fem to his existence
‘What Descartes wrote is a proof of his existence.’

Second, Pron is obligatory when the predicate is referring:

(46a) dani hu moše
Dani he Moshe
‘Dani is Moshe.’
(46b) *dani moše
    Dani Moshe
    ‘Dani is Moshe.’

Doron (1983) establishes the following generalization on the obligatoriness of Pron:

**Doron’s Generalization**

Pron is obligatory in order for the predicate to be interpreted as referring. Hence, Pron must show up in cases where the predicate is unmistakably a referring NP/DP: a name, a demonstrative, or a personal pronoun.

In sum, even though there are good reasons for not treating Pron as the present tense of the verbal root ‘h.y.y’, it is clear that Pron may function as the present tense: Pron agrees with the subject in person, gender and number, and according to Doron (1983) is located in Infl, the head of IP. The latter proposal is also assume by Rapoport (1987), Rothstein (1995, 2001) and Greenberg (1994, 1995).

**4.3.3 Russian**

The Russian language differs from other Slavic and Indo-European languages in that it has a large number of sentences without a finite verb (Kopotev 2007). One of these constructions is the copula-less construction, comprising not only of ascriptive and identificational predication (47), but also existential, locative, and possessive constructions (48):

(47a) On gord rezul’tatami
    He-NOM.S.M proud-S.M results-INSTR.PL
    ‘He is proud of the results.’
(47b) On durak
He-NOM.S.M fool-NOM.S.M
‘He is a fool.’

(47c) On brat Ivana
He-NOM.S.M brother-NOM.S.M Ivan-GEN
‘He is Ivan’s brother.’

(48a) Za uglom magazin
Behind cornerINST.S.M (is) store-NOM.S.M
‘There is a store around the corner.’

(48b) On sobranii
He-NOM.S.M at meeting-LOC
‘He is at a meeting.’

(48c) U kati samovar
At Katia-GEN (is) samovar-NOM.S.M
‘Katia has a samovar.’

Russian does not allow for an overt copula in the present tense indicative mood. However, an overt copula shows up in the past and future tense, as in Modern Standard Arabic and Modern Hebrew. The Russian copula is in agreement with the subject in number (Future and Past Tense), person (Future Tense) and gender (Past Tense) (Soschen 2003):

(49a) *On est’ gord rezul’tatami.
He-NOM.S.M be-PRES proud-S.M results-INSTR.PL
‘He is proud of the results.’

(49b) On byl gord rezul’tatami.
He-NOM.S.M be-PAST proud-S.M results-INSTR.PL
‘He is proud of the results.’

(49c) On budet gord rezul’tatami.
He-NOM.S.M be-FUT proud-S.M results-INSTR.PL
‘He is proud of the results.’

Another characteristic of Russian (canonical) be-less constructions is that the predicate must bear NOM case, as the contrast in (50) shows. The Instrumental case in

1 - is the Null Pronominal copula.
Russian denotes a temporary, transient or changeable property, whereas the Nominative case denotes a property that is inherent or permanent (Jakobson 1936; Wierzbicka 1980; Bailyn and Rubin 1991; Fowler 1997; Timberlake 2004; Pereltsvaig 2007) – i.e. the Nominative case can be used to express individual-level properties, while the Instrumental case stage-level predicates in Russian.

(50a) Dima pisatel
Dima-NOM writer-NOM
‘Dima is a writer.’

(50b) Dima byl pisatelem
Dima-NOM be-PAST writer-INSTR
‘Dima was a writer.’

(50c) Dima budet pisatelem
Dima-NOM be-FUT writer-INSTR
‘Dima will be a writer.’

(Markman 2008: 188)

It is interesting to note that the difference in case assignment is similar to the Spanish opposition between ser and estar – i.e. ‘ser’ denotes i-level properties, while ‘estar’ denotes s-level properties:

(51a) Pepe es inteligente
Pepe is intelligent
‘Pepe is (acting) intelligent (today).’

(51b) Pepe está inteligente.
Pepe is intelligent
‘Pepe is intelligent.’ (i.e., Pepe has the property of being intelligent)

Thus, Russian prohibits the appearance of instrumental predicates in present tense copular constructions; nevertheless, the presence of instrumental case is obligatory in small clauses with null predicators.
Markman (2008) argues, following Adger and Ramchand (2003), that copular constructions with instrumental predicates (e.g., small clauses) involve an eventive predicate, which he calls PredEv. This predicate introduces an event argument and checks the Instrumental case on the predicate. On the other hand, constructions with the NOM case (e.g. canonical) copula-less constructions involve a non-eventive Pred that has no case to check. He argues further that Asp must license the event argument introduced by PredEv. However, the present tense indicative mood form of the Russian verb est ‘be’ lacks the relevant aspect features. Hence, the instrumental predicates are impossible in present tense copular-less constructions. In contrast, the Asp of the matrix verb licenses the event argument in small clauses (e.g., ‘sčitaet’ (to consider) in (52a)). This makes the instrumental predicate possible. Markman (2008) introduces the following generalization:

**Markman’s Generalization**

Predicate NP/APs in Russian receive instrumental case if embedded under PredEv.

Negation in Russian copular sentences is expressed by means of a negative marker ne or net. When ‘ne’ is used the subject bears Nom case, whereas ‘net’ triggers Gen case in the subject (see Borschev, Paducheva, Partee et. al (2005) for a detail discussion of Russian
negation). Thus, the negation of (53a) can be either (53b) or (53c):

(53a) Kolja v Londone
    Kolja-NOM in London
    ‘Kolja is in London.’

(53b) Kolja ne v Londone
    Kolja-NOM not in London
    ‘Kolja is not in London.’

(53c) Kolja net v Londone
    Kolja-GEN not in London
    ‘Kolja is not in London.’

(Borschev, Paducheva, Partee et al., 2005: 1)

Finally, similar to Modern Standard Arabic and Modern Hebrew Russian has a Pronominal Copula Construction (PCC). The pronoun in the PCC can be either null or the demonstrative ‘eto’ (this). But contrary to MH, in Russian e.g. the null (or silent) pronoun does not carry Agreement features, as the following example shows:

(54) Marija (-) krasivaja.
    Marija-NOM N-Pron beautiful-NOM.FEM
    ‘Marija is beautiful.’

(Soschen 2003: 66)

4.3.3.1 Pron in Russian

Copular constructions in Russian may have a pronominal element. This Pron can be either overt or covert, and obligatory or optional. Null Pron e.g. is optional in predicative constructions. However, it must show up in equative sentences where the second NP/DP is referential. Phonologically, Null Pron is equivalent to a pause.

(55a) Marija - grazdanka Ivanova
    Marija-NOM N-Pron Ms. Ivanoff-NOM.FEM
    ‘Marija is Ms. Ivanoff.’
Even though Null Pron is optional in predicative constructions (55a), there is a class of predicates that cannot appear alongside this marker. For instance, stage-level predicates do not allow the Null Pron.

Null Pron is obligatory also in sentences that are considered general truths (56), and in sentences that show ambiguity between a referential and a predicative reading Null Pron is optional (57):

(56)  Sobaka - drug čeloveka
dog-NOM N-Pron friend man-NOM
‘A dog is a man’s friend.’

(57a)  On - student
He-NOM N-Pron student-NOM
‘He is a student.’

(57b)  On student
He-NOM student-NOM
‘He is a student.’

To negate a copula-less clause with Null Pron the negative marker ‘ne’ (not) must be placed obligatorily after the pause:

(58a)  On - ne student
He-NOM N-Pron not student-NOM
‘He is not a student.’

(58b)  *On ne - student.
He-NOM student-NOM
‘He is a student.’

Soschen (2003), following Rothstein (1991), has argued that the Null Pron is required in
Russian equative sentences to establish predication relations between two NP/DPs, the second of which cannot function as a predicate because it is referential. Russian has another copula-less construction in which the demonstrative pronoun *eto* 'this' surfaces between the subject and the predicate.

(59a) Misha *eto* nash doctor
Misha-NOM this our doctor-Nom
‘Misha is our doctor.’

(59b) Cookie *eto* tolstaja koshka
Cookie-NOM this fat cat-NOM
‘Cookie is the fat cat.’

(Markman 2008: 366)

The overt Pron *eto* disallows Instrumental case on the nominal predicate (60a) and cannot be embedded under Exceptional Case marking verbs such as e.g. *believe* (60b), and disallows any agreeing adjectives in the predicate position (61a vs. 61b):

(60a) *Misha *eto* doctor-om
Misha-NOM this doctor-INSTR
‘Misha is a doctor.’

(60b) *Misha schitajet Dimu *eto* doctor
Misha-NOM considers Dimu this doctor-NOM
‘Misha considers Dimu a doctor.’

(61a) Misha *eto* mal’chik
Misha-NOM this boy
‘Misha is a boy.’

(61b) *Misha *eto* krasiv-yj
Misha-NOM this pretty-3rd.SG.M

(Markman 2008: 366-367)

Markman (2008) argues that constructions involving the Overt Pron *eto* entails a Topic / Comment discourse structure where the constituent preceding the pronoun is topicalized and the constituent following it is focused. We will carry this idea to account for the
occurrence of Spanish verbless clauses.

4.3.4 Mauritian Creole

Mauritian Creole (MC) is a French-based Creole spoken in Mauritius. Like many other Creole languages (e.g., Haitian Creole), in MC the copula is severely constrained since it only appears in contexts where the predicate is affected (e.g., interrogatives (62a), relatives (62b), topics (62c), clefts (62d), and comparatives (62e)), but never in declaratives (62f vs. 62g), whether the predicate is adjectival, prepositional or nominal.

(62a) ki zan (ete)?
what John be-Pres
‘What is John?’

(62b) sa kamarad ar ki liv la ete
that friend with whom book DEF be-PRES
‘That friend with whom the book is.’

(62c) en voler zan ete
a thief John be-PRES
‘A thief John is.’

(62d) dan lakaz ki zan ete
in house that John be-PRES
‘It is in the house that John is.’

(62e) zan pli male ki to ete
John more clever than you be-PRES
‘John is more clever than you are.’

(62f) zan en profeser
John a teacher
‘John is a teacher.’

(62g) *zan ete en profeser
John be-PRES a teacher
‘John is a teacher.’

What is more striking about Mauritian Creole is that, contrary to Modern Standard Arabic,
Modern Hebrew and Russian, MC has an empty copula in declaratives in the past, present or future, even though the traditional view has established that the copula is required to carry tense marking (Lyons 1968). Past and future tenses in MC are expressed through an overt marker *ti* (63a) and *pu* (63b) respectively, which expresses the aspect and the mood. In other words, Mauritian Creole does not require a copula verb in the past and future tenses. In this respect, it differs from MSA, MH and Russian which, even though without a copula when the tense is present, do require one -i.e. when the tense is past:

(63a) zan *ti* en profesor
     John TNS a teacher
     ‘John was a teacher.’

(63b) zan *pu* en profesor
     John TNS a teacher
     ‘John will be a teacher.’

Negation of predicative clauses in Mauritian Creole is through the negative marker *pa* ‘not’, located between the subject and the predicate:

(64a) zan *pa* en profesor
     John NOT a teacher
     ‘John is not a teacher.’

(64b) zan *pa* dan lakaz
     John NOT in house
     ‘John is not in the house.’

(64c) zan *pa* malad
     John NOT ill
     ‘John is not ill.’

The copula does not surface in embedded clauses (65). Thus, predicative constructions in Mauritian Creole do not have a surface copula regardless of whether they are present, past or future, affirmative or negative, root or embedded.
(65a) mo kone zan malad
    I know John ill
    ‘I know that John is ill.’

(65b) mo kone zan pa malad
    John know John NOT ill
    ‘I know that John is not ill.’

Working within Principles and Parameters theory, Syea (1997) argues that the copula in MC surfaces only in the context of a following trace (e.g. \( wh \)-extraction) since the trace requires a visible head governor – i.e. a head that is phonetically overt or bears the index of the antecedent of the trace through being in a Spec-Head relation with it. In other words, the copula follows from the condition of proper government in Phonetic Form (PF). This in turn satisfies the Empty Category Principle (ECP) that establishes that a trace must be properly governed.

Interestingly, Mauritian Creole behaves like African American Vernacular English (AAVE) and Haitian Creole in that all three languages require an overt form of the copula in front of a trace, while the copula never surfaces in front of a lexical predicate.

A. African American Vernacular English

(66a) She the first one started us off
(66b) *She is the first one started us off
(66c) I don’t care what you are t
(66d) * I don’t’ care what, you t
    (Syea 1997: 37; cf. Labov 1972)

B. Haitian Creole

(67a) Mari yon doktè
    Mary a doctor
    ‘Mary is a doctor.’
A similar pattern is found in English’s auxiliary contraction, that is, the copula in English alternates between two phonetic forms, namely, a reduced and a non-reduced form. Both forms are possible in the context of the following lexical element but only the non-reduced form is found in the contexts of a following trace.

(68a) John’s tall.

(68b) John is tall.

(68c) *I wonder what John is tall.

(68d) *I wonder what John is.

These data show that in English the copula can be reduced except in the context of a following trace.

Syea (1997) argues that this can be explained if we assume two forms of the copula: a weak (or unstressed) form and a strong (or stressed) form. She assimilates this dichotomy to the null and overt form of the copula in Mauritian Creole, African American Vernacular English and Haitian Creole by establishing that the null form is the weak form while the overt form is the strong form. The following generalization follows:
Syca’s Generalization

The copula has the weak form in the environment of a following overt constituent and the strong form in the environment of a following trace. Thus, the distribution of the two forms in the languages mentioned can be represented syntactically as follows:

(69)

<table>
<thead>
<tr>
<th>Language</th>
<th>Weak Form</th>
<th>Strong Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>weak/strong</td>
<td>strong</td>
</tr>
<tr>
<td>AAVE</td>
<td>weak</td>
<td>strong</td>
</tr>
<tr>
<td>HC</td>
<td>weak</td>
<td>strong</td>
</tr>
<tr>
<td>MC</td>
<td>weak</td>
<td>strong</td>
</tr>
</tbody>
</table>

The weak form is realized as either a phonologically null form or zero in Mauritian Creole, Haitian Creole, and African American Vernacular English, or a reduced form in English.

4.3.5 Mina

Mina is spoken in the western part of Northern Cameroon. Word order in Mina is Subject-Verb-Object – i.e., the subject typically precedes the predicates and the object follows the verb, and the language makes a clear structural distinction between the categories subject and object, and between the indirect object and other objects. On the other hand, some tense, aspect and mood markers occur before the verb, while others occur after the verb (Frajzyngier, Johnston and Edwards 2005). Mina does not have a verb in clauses whose time is identical with the time of speech. In other words, copula-less constructions in this language are limited to the Present tense. There are two salient properties of Mina verbless
First, in non-finite clauses when the subject is pronominal, unlike pronominal subjects of verbal clauses, the pronoun has a high tone:

(70a) há skuláh nàn
definite 2-SG son-in-law 1-SG
‘You are my son-in-law.’

(70b) há và nàn
definite 2-SG father 1-SG
‘You are my father.’

The second property of Mina verbless clauses has to do with predicate. These constructions have two types of predicates, namely, inherent predicates (or individual-level predicates) and non-inherent predicated (or stage-level predicates). Inherent predicates follow the subject without any markers, while non-inherent predicates are reduplicated for the predicative function:

(71a) gôdô ngôn fès ngà-cín
ejar definite 3-SG little like-that
‘Her jar is small like that.’

(71b) cicélém zidík zidík
wood heavy heavy
‘The wood is heavy.’

4.3.6 Hdi

Hdi is a Chadic language spoken in Tourou and surroundings settlement in Far North Province of Cameroon, on the border with Nigeria. The language has a relatively free word order, e.g. in constructions that do not involve topicalization or focus the predicate whether nominal or verbal, precedes the subject, if any. When the predicate is verbal, the word-order is Verb-Subject-Preposition-Object –i.e. the subject follows the verb and the

2 (`) indicates high tone in Mina, while (’) indicates low tone.
object is marked with the preposition ‘tà’ (Frajzyngier and Shay 2001). Copula-less clauses in Hdi include clauses with nominal, pronominal, or adjectival predicates, and they cannot be marked for aspect, but can be marked for tense. One important feature of Hdi verbless clauses is that the NP/DP that functions as the subject of the expression is marked with high tone on the syllable preceding it, as in Mina. In these clauses the distinction between subject and predicate is marked through word order. Thus, the predicate is the first NP/AP/PP and the subject the NP/DP that follows:

(72)  mnd-á  ráyá  mbítsá
man-GEN  hunt  Mbitsa
‘Mbitsa is a hunter.’

Another important feature of Hdi verbless clause is that the subject in predicative constructions with a property concept predicate, or i-level predicate, must be definite or generic. If the subject is a noun, it must be modified e.g. by a demonstrative or other modifiers:

(73a)  dágálá  tsá  gù  yá
large  DEM  goat  DEM
‘The goat is large.’

(73b)  kiyá  tsá  hlà  yá
small  DEM  cow  DEM
‘The cow is small.’

4.3.7 Summary of the data

As we have seen from the previous discussion, there seems to be many languages that do not make use of a copula in predicative contexts – i.e., predication in this context is just the reflex of putting together two syntactic functions related to each other without the intervention of a verb (Rosén 1996). These clauses have received in the linguistic literature
the name of verbless clauses or non-verbal predication. The following characteristics on verbless clauses can be mentioned: (1) the distribution of verbless clauses is restricted in certain languages (e.g., Modern Standard Arabic, Modern Hebrew, and Russian) to the present tense; (2) in some languages a syntactic object, or Pron, may appear between the subject and the predicate of verbless constructions. Pron, however, is not to be interpreted necessarily as the realization of the copula; (3) the distinction between i-level and s-level predicates seems to be at work in verbless constructions—i.e., verbless constructions are restricted mainly to i-level predicates. In other words, they denote inherent properties; and (4) the subject of verbless clauses must be definite/specific—i.e., these clauses involve referent identifiability.

4.4 The syntax of verbless clauses in generative grammar

In mainstream generativist grammar the locus of study of verbless clauses has been whether or not these clauses contain a functional projection similar to TP or CP. From a minimalist point of view, these functional projections will be held responsible for agreement, Case, the distribution of expletives, and some cases of displacement such as NP and wh-movement (Benmamoun 2008; cf. Chomsky 1995, 2000, 2001). Verbless clauses have raised another question—i.e. whether these clauses contain a (silent) copula. Benmamoun (2000, 2008), based on data from Arabic, argues against this second view, while suggesting that verbless clauses have indeed a functional projection. This proposal keeps with den Dikken’s hypothesis that between the subject and the predicate lies a functional projection or RELATOR.
4.4.1 Arguments for a functional projection in verbless clauses

Some linguists have assumed a small clause analysis for verbless clauses (Mouchaweh 1986, Rapaport 1987) –i.e., these authors have suggested that verbless clauses are small clauses and there is no functional projection above the lexical projection. According to this view, the subject and the predicate of verbless clauses are contained within a small clause, and this small clause can be a projection of AP’s, NP’s or PP’s (74).

(74) \[ \begin{array}{c}
    \text{AP/NP/PP} \\
    \text{NP} \quad \text{A’/N’/P’} \\
    \end{array} \]

\[ \text{A/N/P} \]

Benmamoun (2000, 2008) has proven this to be false. Based on data from Arabic, he provides several syntactic arguments for a TP projection in verbless clauses. Thus, instead of having (74) we will have something like (75):

(75) \[ \begin{array}{c}
    \text{TP} \\
    \text{NP} \quad \text{T’} \\
    \end{array} \]

\[ \begin{array}{c}
    \text{T} \\
    \text{A/N/P} \\
    \end{array} \]

4.4.1.1 TP projection in verbless clauses

In this section I point out the syntactic argument provided by Benmamoun for assuming a TP projection in verbless clauses. The examples are from Arabic and comes from
Benmamoun (2000, 2008). The first argument in favor for a TP projection in verbless clauses in Arabic is the fact that these clauses can contain a temporal adverb, which indicates that they must be anchored by tense (Eisele 1988).

(76) Omar f-d-dar daba
       Omar in-the-house now
‘Omar is in the house now.’

The second argument comes from the fact that verbless clauses embedded under a matrix sentence need not have necessarily the same temporal reference as the verb in the matrix sentence – i.e. in (77) the matrix sentence has a past tense interpretation, while the embedded or verbless clause has a present tense interpretation. This is strong evidence against treating verbless clauses as small clauses without a functional projection since tenseless small clauses depend on the temporal reference of the matrix sentence:

(77) qal bellı Omar f-d-dar
       say.Past.3ms that Omar in-the-house
‘He said that Omar is in the house.’

Notice that the verbless clause in (77) is dominated by the complementizer ‘bellı’, which selects tensed clauses (Benmamoun 2000). There is a general assumption also which suggests that the presence of C signals the presence of T.

Another argument has to do with Case assignment: the subject of verbless clauses in Arabic bears nominative Case – i.e., the subject is assigned nominative Case, and the only head that can assigned or checked nominative Case is T:

(78) t-taalib-u fii l-maktabati
       the-student-Nom in the library
‘The student is in the library.’
Finally, the presence of NPIs and sentential negation suggests that there is functional projection headed by T (Benmamoun 2000, 2008). Thus, this syntactic evidence demonstrates that, at least in Arabic, verbless sentences contain a functional projection, and this functional projection is headed by T.

4.4.2 Arguments against the null copula analysis

Others authors suggest that verbless clauses contain a silent or null copula (Bakir 1980; Fassi Fehri 1982, 1993). So we are left with the following syntactic representation in which there is a null or silent copula between TP and the main predicate –i.e., there is a lexical category VP between TP and the main predicate projection:

(79)  
 TP  
    /\  
   NP  T’  
      /\  
     T  VP  
        /\  
       V A/N/P

Examples from Arabic prove this to be false since, for instance, when the copula is overt in this language it assigns accusative Case to the predicate (80a); however, when there is no copula the predicate carries nominative Case (80b) (Benmamoun 2008):

(80a) kana  l-waladu  mariid-an  
     be.Past.3ms  the-boy  sick-Acc

(80b) l-waladu  mariid-un  
       the-boy  sick-Nom

119
Thus, it is not clear why the overt copula assign a different Case from the overt copula (cf. Déchaine 1993).

Another problem for the null copula analysis is the fact that in most languages, as seen in the previous section, the copula is absent in the present tense only. Then, if we assume the null copula analysis we will be forced to assume the presence of a copula in the present tense that becomes deleted in the course of the syntactic derivation. In other words, a deletion rule must be assumed, one that deletes the copula only in the present tense. This fact however does not follow from any property of the present tense. Therefore, one can conclude that a verbal copula is not present in verbless clauses, and that these types of clauses are indeed configurationally verbless (Benmamoun 2008).

4.4.3 Conclusion

In mainstream generative grammar the predominant assumption has been that verbless clauses contain a functional projection that may be specified for tense (TP), but need not occur necessarily with a verbal projection or a copula. This is strong evidence against the view that tense need to co-occur with a verbal head –i.e. tense may be universally projected but not need to co-occur with a verbal head (Benmamoun 2008). This proposal departs from Chomsky (2001) where the category tense may be specified for categorial verbal or nominal features. In general, verbless clauses may be considered TPs that dominate a nonverbal predicate.

4.5 The syntax of verbless clauses in model-theoretic grammars

Most of model-theoretic grammars differ from mainstream generativist grammars
(e.g. Government and Binding, Minimalist Program, etc.) in basically the following assumption: some non-mainstream grammars assume that the grammar is a system of constraints that govern the relation between form and meaning. In other words, there are no operations within the grammar other than constraints (Pollard 2006). This in turn prevents transformation or another movement operations (Ginzburg and Sag 2001).

The analysis of verbless clauses (and of clauses in general) in non-mainstream generativist grammars is quite different from (mainly) Chomsky’s grammar since most of these grammars do not believe in syntactic movement of constituents as the mechanism by which the surface realization of arguments is determined and other formal features are checked off. Lexical-functional Grammar (LFG) and Head-Driven Phrase Structure Grammar (HPSG) for example possess an enriched lexicon that determined the syntactic structure of a given sentence. Thus, lexical items are conceive of as a set of features (e.g., PERSON, NUMBER, CASE, GENDER, etc.). Instead of using syntactic trees, these grammars represent the feature specification of the expressions of a language through Attribute Value Matrixes (AVMs).

4.5.1 Lexical-Functional Grammar

In Lexical-Functional Grammar verbless clauses may have two syntactic representations (Nordlinger and Sadler 2006). The intuition however behind the two representations is that the non-verbal predicate is the syntactic head of the expression, selecting for a subject. In the first syntactic representation the non-verbal predicate NP/AP/PP is itself the clausal predicate. The representation is as in (81). Notice that in this representation the subject and the predicate bear the same Case. This constraint specifies
that in languages such as Russian there may be Case-agreement between the NP subject and the NP predicate:

(81)

\[
\begin{array}{c|c}
\text{PRED} & 'ψ\langle\text{SUBJ}\rangle' \\
\hline
\text{CASE} & \eta \\
\text{NUM} & \gamma \\
\end{array}
\]

\[
\begin{array}{c|c}
\text{PRED} & \omega \\
\text{NUM} & \gamma \\
\text{GEN} & \phi \\
\text{PERS} & \mu \\
\text{CASE} & \eta \\
\end{array}
\]

In the second syntactic representation the verbless clause has a more hierarchical functional structure (f-structure). Thus, the f-structure of the non-verbal predicate functions as an argument within a higher f-structure that has itself a PRED (Nordlinger and Sadler 2006):

(82)

\[
\begin{array}{c|c}
\text{PRED} & '\text{BE}\langle\text{SUBJ, Grammatical Function (GF)}\rangle' \\
\hline
\text{PRED} & \omega \\
\text{NUM} & \gamma \\
\text{GEN} & \phi \\
\text{PERS} & \mu \\
\text{CASE} & \eta \\
\end{array}
\]

\[
\begin{array}{c|c}
\text{PRED} & 'ψ' \\
\text{CASE} & \eta \\
\text{NUM} & \gamma \\
\end{array}
\]

...
In LFG the predicate in non-verbal predication categorizes for a subject in order to achieve the appropriate role assignment. The XP predicate provides the main PRED for the clause and the selection of the appropriate subject ultimately licenses the occurrence of PRED (Dalrymple, Dyvik and Holloway King 2004).

### 4.5.1 Head-Driven Phrase Structure Grammar (HPSG)

In HPSG verbless clauses may be analyzed as having a silent copula, following the silent-copula-phrase approach advocated by Sag and Wasow (1999). The silent copula has the following lexical entry:

(83)

\[
\begin{align*}
\text{silent copula phrase} & \\
\text{CAT} & [\text{Tense } \alpha, \text{Mood } \beta] \\
\text{HEAD} & [\text{assembling operator}] \\
\text{VAL} & [\text{SUBJ}(), \text{SPR}(), \text{COMPS}()] \\
\text{NON HD DTRS} & (A, B, \text{non verbal}[\text{EXT ARG } A])
\end{align*}
\]

Notice the introduction of an external argument (EXT ARG). The EXT ARG for non-verbal categories allows us to identify the predicate with its subject and models the intuition that there is an opening slot that needs to be filled (Avgustinova and Uszkoreit 2003). The representation is as follows:
As in LFG, the intuition behind (84) is that verbless clauses are an instantiation of non-verbal predicative categories –i.e. PRED+. The predicate is the legitimate syntactic head of the expression and it subcategorizes for (selects) an appropriate subject.

4.6 Summary

In this chapter several aspects of the syntax of copula and copula-less clauses were examined. Copula clauses have been analyzed under two approaches: the symmetric small clause analysis and the asymmetric small clauses analysis. In the latter it is assumed that a functional projection, or RELATOR, lies between the DP subject and XP the predicate. The syntactic evidence presented so far tends to favor this type of analysis for copula clauses. In the case of copula-less clauses, several facts of non-verbal predication in Arabic, Hebrew, Russian, Mauritian Creole, Mina and Hdi were analyzed. Finally, the syntactic derivation for verbless clauses was examined. Three different approaches were discussed: the mainstream generativist account, and the LFG and HPSG approach.
Chapter 5: Introduction

5.1 Introduction

In this chapter several aspects of the syntax, semantics and discourse properties of Spanish Predicative NPs (henceforth, PredNPs) are analyzed. Spanish PredNP is a non-verbal or verbless construction that exhibits clausal properties - i.e. each of the sentences in (1a-3a) may be interpreted as containing a semantically empty or light verb (e.g. *ser/estar* ‘to be’). In other words, these clauses involve predication and clearly denote a proposition or $<t>$ in Montague’s terminology (1b-3b):

(1a) Muy inteligente$_{AP}$ el profesor este.
   ‘Very intelligent this professor.’

(1b) $\Rightarrow$ Este profesor es muy inteligente
   ‘This professor is very intelligent.’

(2a) Un verdadero idiota$_{NP}$ aquel camarero.
   ‘A real idiot that waiter.’

(2b) $\Rightarrow$ Aquel camarero es un verdadero idiota.
   ‘This waiter is a real idiot.’

---

3 It has been assumed without discussions that PredNPs have a null copula. However, some authors have argued that in verbless clauses there is no copula whatsoever (Benmamoun 2000, 2008). I am not assuming the presence of a null copula, but rather the existence of a RELATOR head (den Dikken 2006). The interpretation of the copula is (1) a by-product of the context, and (2) due to the fact that only the copula can be elided in such context because it does not assign a thematic role.
(3a) Encima de la mesa, el libro de sintaxis.
‘On the table the syntax book.’

(3b) ⇒ El libro de sintaxis está encima de la mesa.
‘The syntax book is on the table.’

Spanish PredNPs consist of two expressions: an initial XP predicate and a XP that is a DP interpreted as the subject of that expression. The predicate or head phrase of the expression can either be an AP (1a), a NP (1b), or a PP (1c). Following an insight by Paul (2006), I will argue that these clauses involve predicate inversion à la den Dikken (2006) (also Vinet 1991 for French). Thus, their internal structure comprises an asymmetric small clause with a RELATOR head. Contrary to Paul (2006), however, I will show that the clause head is not a missing copula, but rather the feature T(ense). The remains of this chapter are organized into three sections. In section 2 I discuss the general facts of Spanish PredNPs. In Section 3 I examine possible syntactic derivation for this clause type, and elaborate a syntactic analysis for these clauses. Finally, in Section 4 I present evidence in favor of considering PredNPs as pertaining to the set of Spanish exclamatives (contra e.g. Alonso Cortés 1999; cf. Paul and Stainton 2006).

5.2 Spanish PredNP: General Facts

Spanish PredNPs behave alike other similar constructions in other languages, such as French (4a), Serbian (4b), and English (4c).

(4a) Un génie, ce Charlie. (Vinet 1991)
‘A genius, this Charlie.’

---

4 Spanish PredNPs with PP predicates are mainly used in elliptical contexts. Here we focused our attention in examples (1-2).
In these examples we have a predicate (mostly with an evaluative/appreciative reading) followed by a DP with a deictic determiner. Utterances such as (1a-3a) and (4) have several distinct properties:

- PredNPs involve a subject-predicate relationship -i.e. in (1a) the property denoted by the adjective is predicated of the DP subject.
- PredNPs typically have a predicate with an evaluative reading interpretation followed by a DP with a deictic determiner.
- PredNPs express a categorical predication -i.e. the subject is singled out from the event itself and the predicate ascribe a property to this subject (Basilico 2003).
- PredNPs cannot be constructed with stage-level predicates, but rather with individual-level predicates.
- The subject must be a definite and a specific nominal. Thus, there is a referentiality constraint affecting the subject of the clause.

This last property plays a fundamental role in the licensing of these sentences, as will be seen in the following sections. However, a comment is in order here. Even though the distinction between definiteness and specificity is a problematic one, as it can be seen in the vast literature on this topic, von Heusinger’s (2002) distinction between definiteness and specificity will be adopted in this dissertation -i.e. while definiteness is defined as discourse bound and it identifies discourse items with each other, specificity is defined as sentence bound and links a new discourse item to an already discourse item or the speaker of that
sentence. In what follows the specific properties of Spanish PredNPs will be discussed. The discussion will be limited to PredNPs with a DP/AP predicate.

5.2.1 The XP predicate

The DP/AP predicate of this clause imposes some restrictions, which have been discussed by Vinet (1991) for French, and Hernanz and Suñer (1999) for Spanish. First, the predicate may be stative -i.e. *ser/estar* ‘to be’ or *tener* ‘to have’. In other words, verbs that do not assign a thematic role may be interpreted in PredNPs. Thus, (5a) cannot be interpreted as (5b):

(5a) Un idiota tu padre
    ‘An idiot, you dad.’

(5b) ≠ Tu padre se comporta como un idiota.
    ‘Your dad acts like an idiot.’

Second, only predicative adjectives are allowed in these constructions (6). This restriction explains why equitative clauses are not permitted in PredNPs -i.e. they cannot be used predicatively (7):

(6a) *Solar este sistema.
    ‘Solar, this system.’

(6b) *Numerable este conjunto.
    ‘Countable, this set.’

(7a) *Pepe Mario. = Pepe es Mario. ‘Pepe is Mario.’
    ‘Pepe, Mario.’

(7b) *Ella María. = Ella es María. ‘She is María.’
    ‘María, she.’
Third, non-evaluative adjectives are excluded (e.g. professional names, relational adjectives, nouns of relationship, etc.). Thus, it is a general fact about Spanish PredNP constructions that the predicative XP must be evaluative:

(8a) *Padre mi hermano.
    ‘Father, my brother.’

(8b) *Chileno este vino.
    ‘Chilean, this wine.’

This same restriction applies to complements since they are classifying, referential and are not modifiers:

(9a) *De McCain esta derrota.
    ‘McCain’s, this defeat.’

(9b) De Estados Unidos el embargo a Cuba.
    ‘United States’, Cuba’s embargo.’

Fourth, whereas individual-level predicates are allowed, stage-level predicates are not (10). However, adverbs of quantification or Q-adverbs such as siempre ‘always’ and nunca ‘never’, for example, license stage-level predicates (11). Individual-level predicates do not allow Q-adverbs (12):

(10a) *Cansado Pepe.
    ‘Tired Pepe.’

(10b) *Disponible el profesor.
    ‘Available, the professor.’

(11a) Siempre cansado Pepe.
    ‘Always tired, Pepe.’

(11b) Nunca disponible el profesor.
    ‘Never available, the professor.’

(12a) *Siempre inteligente Pepe.
    ‘Always intelligent, Pepe.’
(12b) *Nunca idiota el profesor.
‘Never idiot, the professor.’

Following Kratzer (1995), this restriction can be explained as follows: individual-level predicates do not project a time variable - i.e. they are not associated with a spatio-temporal variable, while stage-level predicates are. If individual-level predicates do not project a time variable $x$, and Q-adverbs quantify over situations or occasions, then there won’t be any variable that the adverb can bind. In the case of stage-level predicates, the insertion of a Q-adverb gives the predicate a generic reading - i.e. a meaning of homogeneity.

Finally, predicates in PredNPs must correspond to a personal opinion. Usually, the speaker mentions something outstanding about some individual or event (15-17). It follows then that adjectives in these clauses are not merely evaluative adjectives, but also appreciative ones - i.e. the XP predicate must denote something extraordinary about the subject

(15a) *Normal este vino.
‘Normal, this wine.’

(15b) *Muy normal este vino.
‘Very normal, this wine.’

(16a) Riquísimo este vino.
‘Delicious, this wine.’

(16b) Muy rico este vino.
‘Very delicious, this wine.’

(17a) Espectacular la victoria de Obama.
‘Spectacular, Obama’s victory.’

(17b) Increíble la última peli de Almodóvar.
‘Incredible, Almodóvar’s last film.’

In sum, the predicate in Spanish PredNPs is a modifier with an evaluative/appreciative interpretation. Also, individual-level predicates are preferred in this
construction. Recall that individual-level predicates attribute properties to individuals -i.e. they express properties of individuals that are permanent or tendentially stable (Chierchia 1995). In this sense, PredNPs denote properties or states of affair that are permanent. In the following section the DP subject of Spanish PredNP is analyzed.

5.2.2 The DP subject

Like the XP predicate, the DP subject in these constructions imposes some restrictions as well. First, the subject must be definite or strong in Milsark’s (1974, 1997) terminology. This can be seen as a direct consequence of the XP predicate: individual-level predicates select strong determiner -i.e. weak subjects cannot have a state predication. Thus, nonspecific or specific indefinite DPs and bare plurals are ruled out:

(18a) Muy simpática está tía.
   ‘Very nice, this girl.’

(18b) *Muy simpática una tía cualquiera.
   ‘Very nice, any girl.’

(18c) *Muy simpática alguna chica.
   ‘Very nice, some girl.’

(18d) *Muy simpáticas chicas.
   ‘Very nice, girls.’

Second, most quantified DPs are disallowed from the subject position (e.g. monotone decreasing quantifiers). In this sense, the DP subject of PredNP behaves like right-dislocated subjects:

(19a) *Un genio ningún estudiante.
   ‘A genius, none of the students.’

(19b) *Unos genios pocos estudiantes.
   ‘Genius, few students.’

(20a) *Un genio todo estudiante.
‘A genius, all student.’

(20b) *Unos genios todos los estudiantes.
‘Genius, all of the students.’

(21a) Muy sabio, el decano.
‘Very clever, the dean.’

(21b) Interesante la solución al problema.
‘Interesting, the problem’s solution.’

However, sentence (20b) is improved if the quantified DP is modified (Paul and Stainton 2006). This is so because the DP subject becomes now specific rendering the whole phrase grammatical -i.e. the modifier forces a partitive reading of the expression:

(22a) Unos genios todos los estudiantes de física.
‘Genius, all students of physics.’

(22b) Unos genios todos los estudiantes allí sentados.
‘Genius, all students setedover there.’

Fourth, most of the time a deictic determiner is present in the DP subject:

(23a) Maravilloso el piso este.
‘Marvelous, this apartment.’

(23b) Siempre averiado, este maldito ascensor.
‘Always broken, this damn elevator.’

Summarizing, the subject DP in Spanish PredNPs must be definite and a specific nominal -i.e. nonspecific DPs, bare plurals and monotone decreasing quantifiers are ruled out. The majority of the time a deictic determiner is present. Notice that the definite/specific constraint on Spanish PredNP is not necessarily a language-specific constraint -i.e. as in Spanish, non-verbal or verbless clauses in Modern Standard Arabic may require the subject to be definite. Furthermore, in Mina and Hdi the subject of verbless clauses carries high tone. In other words, it must involve referent identifiability, as in Spanish PredNP.
5.2.3 The structure of Spanish PredNPs

Spanish PredNP may only appear in root context (24) - i.e. they show a lack of embedding. There are, however, some PredNP constructions that seem to be complement of a small clause type predicate (25):

(24a) *Pienso que inteligente el profe.  
‘I think smart the professor.’

(24b) *Sé que un malandro este chiquillo.  
‘I know a thief this boy.’

(25a) He visto siempre averiado el ascensor.  
‘I have seen always broken the elevator.’

(25b) Considero increíble su peli nueva.  
‘I consider incredible his new movie.’

(25c) ?Considero un tarado este chico.  
‘I consider a jerk this guy.’

(25d) Encuentro maravilloso tu piso.  
‘I find marvelous your apartment.’

A closer look at examples (25) reveals nonetheless that their structure is not necessarily that of a PredNP: the predicate DP surfaces with Acusative case, whereas in PredNP the subject bears Nominative case. The DP subject in each of the examples in (25) can be replaced by an ACC clitic pronoun:

(26a) Lo he visto siempre averiado el maldito ascensor.  
‘I have seen it-ACC always broken (the damn elevator).’

(26b) La considero increíble su peli nueva.  
‘I consider it-ACC incredible (his new movie).’

(26c) Lo considero un tarado a este chico.  
‘I consider him-ACC a jerk (this guy).’
(26d) Lo encuentro maravilloso tu piso.
     ‘I find it-ACC marvelous (your apartment).’

Notice also that (25c) would be better if we add the personal ‘a’ (27) which Case-mark the subject DP. Predicative clauses in Spanish do not co-occur with the personal ‘a’ (28), and the subject DP must bear NOM case (29) (Zagona 2002):

(27a) Considero un tarado a este chico.
     ‘I consider a jerk this guy.’
(27b) *Considero un tarado Pepe.
     ‘I consider Pepe a jerk.’
(27c) Considero un tarado a Pepe.
     ‘I consider Pepe a jerk.’
(28a) *Pepe es un a tarado.
     ‘Pepe is (to) a jerk.
(28b) Pepe es un tarado.
     ‘Pepe is a jerk.’
(29a) *Soy mí.
     ‘It’s me.’
(29b) Soy yo.
     ‘It’s I.’

Another characteristic of Spanish PredNPs is the fact that these constructions license anaphors in predicate position. The subject, however, cannot be coindexed with a pronoun in predicate position (Condition A and B of Chomsky’s Binding Theory). This seems to be strong evidence in favor of considering the XP predicate as originating to the right of the DP subject:

(30a) Orgulloso de sí mismo, este chiquillo,
     ‘Proud of himself this boy.’
(30b) *Orgulloso de él, este chiquillo,
     ‘Proud of him, this boy.’
Finally, while positive polarity items (PPIs) are possible in the predicate position (31a), a negative subject does not license a negative polarity item (NPI) in that same predicate position (31b):

(31a) Bastante incrédulas estas chicas.
     ‘Quite incredulous, these girls.’

(31b) *Santo de mi devoción ningún estudiante de pragmática.
     Lit.: ‘Saint of my devotion none of the pragmatic students.’
     ‘I don’t like any of the pragmatic students.’

The ungrammaticality of (31b) can be explained as follows: ningún estudiante de pragmática ‘none of the pragmatic students’ is a nonspecific or weak DP, henceforth its presence is banned from the subject position of Spanish PredNP. However, this conclusion is inadequate since the partitive de pragmática ‘of pragmatics’ makes the DP specific. Another solution is based on the monotonicity of the quantifier: monotone decreasing quantifiers are not allowed in PredNP clauses:

(32a) *Muy sabios, pocos estudiantes.
     ‘Very clever, few students.’

(32b) *Muy sabios, menos de cinco estudiantes.
     ‘Very clever, less than five students.’

(32c) *Muy sabios, como máximo cinco estudiantes.
     ‘Very clever, at least five students.’

Recall that NPIs occur within arguments of monotonic decreasing functions but not within arguments of monotonic increasing functions (Keenan 1996; cf. the Ladusaw-Fauconnier Generalization). If monotone decreasing quantifiers are not allowed in the subject position of PredNPs, then it follows that NPIs cannot be licensed in the predicate position.

---

A monotone decreasing quantifier denotes a function F from properties to truth values such that for all properties A, B if A ⊆ B and F(B) = 1 then F(A) = 1 (Gamut 1991). E.g., if ‘No man walked’ is true, then it follows that ‘No man walked rapidly.’ must be true either.
5.2.4 The information structure of Spanish PredNPs

The DP subject in Spanish PredNPs is a background topic or presupposed information in Zubizarreta's (1998) terminology and the predicate XP is focus - i.e. the predicate presents new information and the subject is old information and must be salient (Paul and Stainton 2006). The subject, in other words, must be linked to the context:

(33a) Speaker A: Qué piensas del tío este?
    ‘What do you think of this guy?’

Speaker B: Un idiota el tío este.
    ‘An idiot, this guy.’

(33b) Un idiota el tío este

The topic nature of the subject of the PredNP clause has important consequences for the strong referential constraint on the subject, namely that the subject must be specific. It follows then that when a quantifier shows a specific/non-specific alternation, the more specific the better the quantifier will be in the subject position. This is confirmed by the following contrast:

(34a) *Inteligente todo estudiante.
    ‘Intelligent, every student.’

(34b) ?Inteligentes todos los estudiantes.
    ‘Intelligent, all of the students.’

5.2.5 Remaining issues

There remain some important properties that have been left unexplained since they are not necessarily relevant to the topic of this dissertation. The first one deals specifically with the nature of the construction. Spanish PredNPs come in different guises. Here I have
only discussed those examples relevant to the analysis, namely those PredNPs that may be interpreted as having a missing copula. Following den Dikken (2006), I have called this missing copula a RELATOR. There are however other clauses that can be classified as PredNP. Even though they are out of the scope of this dissertation (I leave them for future research), I have listed some below:

• AdvP PredNPs:

(35a) Rápidamente el tiro a tercera.
‘Very quickly, the throw to third base.’

(35b) ⇒ El tiro a tercera se hizo rápidamente.
‘The throw to third base was made quickly.’

• Wh- question PredNPs:

(36a) A qué hora el bus.
‘At what time the bus.’

(36b) ⇒ El bus llega a qué hora.
‘At what time does the bus arrive?’

• Wh- exclamative PredNPs:

(37a) Qué bella la tía esta.
‘What a beauty, this girl.’

(37b) ⇒ La tía esta es bella.
‘This girl is beautiful.’

• Non-copulative PredNPs:

(38a) Siempre tarde el profe.
‘Always late, the professor.’

(38b) ⇒ El profe siempre llega tarde.
‘The professor always arrive late.’
These examples demonstrate that this set of PredNPs is by no means limited to the ones being discussed in this dissertation. They show also that the missing verb is not restricted to the copula -i.e. there are other lexical verbs that can be interpreted in Spanish PredNPs.

The other property that has not been discussed is the obligatory presence of a prosodic break (e.g. comma intonation, marked orthographically by the comma in the English translation) between the initial XP predicate and its subject. The high tone over the predicate may suggest that when a PredNP clause is uttered the speaker reflects an emotional qualification towards the entity that is being described. However, more works on the phonology-syntax interface need to be done.

5.2.6 Summary

Spanish PredNPs is a type of non-verbal or verbless predication with a fixed syntactic order. An initial XP predicate precedes the DP subject of the clause and there is no verb between the two expressions. The most salient properties of this construction are the following: (i) they typically have a predicate with an evaluative reading interpretation followed by a DP with a deictic determiner; (ii) the predicate constitutes new information (focus); (iii) the subject needs to be definite and specific; and (iv) the subject needs to be interpreted as a background topic. In the following section some possible syntactic analyses for these clauses are investigated.

5.3 The syntax of Spanish PredNPs

In this section I examine four possible syntactic analyses for the derivation and interpretation of Spanish PredNPs, and then elaborate a proposal that seeks to explain the
basic properties these clauses have.

5.3.1 Possible analyses

The syntactic analyses proposed so far for the study and derivation of PredNPs are the following: the right-dislocated DP analysis, the subject/predicate movement analysis, the two independent clauses analysis and the small clause analysis.

5.3.1.1 Right-dislocated DP

In a right-dislocated DP analysis, a sentence such as (39a) would have the underlying structure in (39b) and the tree representation of (39c):

(39a)   Bellísima aquella mina.
         ‘Very beautiful, that girl.’

(39b)   aquella mina es bellísima aquella mina.
         ‘It’s beautiful, that girl.’

(39c)

```
XP
  /
 /  
/   
XP   DP
aquella mina es bellísima aquella mina
```

This analysis has some disadvantages, some of them noted first by Vinet (1991) for French: first, the semantic distinction between individual and stage-level predicates cannot be captured in this analysis -i.e. this analysis will license sentences such as (40):

(40a)   *Cansado este chico.
        ‘Tired, this guy.’
Second, this analysis will force us to interpret the missing verb as a stative (copula) verb and not as an eventive verb or any other type of verb. As far as we know, there is nothing in the grammar of Spanish (and presumably in other languages) that prevents the occurrence of another verb in these constructions. That is the case of example (38) above, where the missing verb is interpreted as the eventive-punctual verb llegar ‘arrive’. Third, in this analysis we need to introduce a verb only to delete it in the course of the syntactic derivation. Perhaps, the only piece of evidence for assuming that the missing verb is in fact the copula is that only this verb can be deleted because it does not assign a thematic role. However, there seems to be no reason to introduce an underlying verb, whether contentful or semantically empty, only to delete it afterward. Fourth, we must explain why the deletion affects a non-constituent -i.e. the subject and the verb undergo ellipsis (Paul and Stainton 2006); Fifth, this analysis cannot account for the fact that these sentences cannot be embedded in Spanish (41a), but also in English (41b) and French (41c):

\[ (41a) \quad *Yo sé que este es inteligente este estudiante. \]

\[ (41b) \quad *I know that this student is intelligent this student. \]

\[ (41c) \quad *Je sais que cet étudiant est intelligent cet étudiant. \]

The right-dislocated DP analysis has nevertheless some advantages: it explains why the subject DP cannot contain a restrictive operator like solo ‘only’ (42a). Notice that a right dislocated subject in a finite sentence in Spanish cannot contain solo either (42b). In this sense, right dislocated subject and the subject DP of PredNP behaves alike:

\[ (42a) \quad *Muy guapa sólo María. \quad \text{‘Very handsome, only María.’} \]
Right-dislocated subjects in Spanish cannot be quantified determiner phrases (43a). This pattern is reproduced partially in PredNPs, as we mentioned before:

(43a) *Ellos son inteligentes todos los niños.
     ‘They are intelligent, every kid.’

(43b) ¿Inteligentes todos los niños.
     ‘Intelligent, every student.’

5.3.1.2 Subject/Predicate movement

In this analysis, there are two possible syntactic derivations for Spanish PredNP (Paul and Stainton 2006). In the first one, known as the subject movement analysis, the DP subject is adjoined to the right of the Tense Phrase (TP). Afterwards, the verb is elided: (44a) will have the representation in (44b-c):

(44a) Extremadamente alto tu hijo.
     ‘Extremely tall, your son.’

(44b) t,es extremadamente alto [tu hijo],

(44c) 

Another possible derivation consists of assuming that the predicate and the subject have been both fronted, followed by TP ellipsis -i.e. first we have movement and then deletion of
the main verb (cf. Merchant 2004). Thus, a sentence like (45a) would have the representation in (45b-c):

(45a) Un bastardo ese sacerdote.  
‘A bastard, that priest.’

(45b) [un bastardo]i [ese sacerdote]i t_i \epsilon i

(45c)

XP

<table>
<thead>
<tr>
<th>DP_i</th>
<th>YP_i</th>
</tr>
</thead>
<tbody>
<tr>
<td>un bastardo</td>
<td>DP_i</td>
</tr>
<tr>
<td></td>
<td>TP</td>
</tr>
<tr>
<td>tu hijo</td>
<td>t_i \epsilon i</td>
</tr>
</tbody>
</table>

As the right-dislocated DP analysis, this analysis does not explain why we need to assume an underlying, lexical verb, just to delete it in the course of the syntactic derivation. Furthermore, in this analysis the missing verb needs to be the copula. We have just seen above that this is not necessarily the case. However, the movement analysis has its advantages as well: it can explain the semantic restriction on the predicate. If we assume that the moved predicate carries a strong semantic feature (+F), then it follows that the movement of the XP predicate is due to checking reasons. In a GMG framework this can be explained by saying that the XP predicate needs to discharge its strong feature. Vinet (1991) reaches a similar conclusion for French PredNPs, but with just one difference: she analyzes PredNPs as exclamative sentences. If we assume that PredNPs are in fact a type of exclamatives, as I will argue at the end of this chapter, then the following conclusion follows:
the moved predicate can be considered an exclamatory operator and, under this assumption, only predicates that may be interpreted as operators at Logical Form (LF) may be moved to an adjoined position at surface-structure.

5.3.1.3 Two independent clauses

As noted by Shopen (1972), English and non-English speakers including Spanish, Catalan and French produce a wide range of non-sentential utterances like those in (46):

- Single-word utterances:
  (46a) Hello!
- PP with NP!:
  (46b) Off this head!
- NP, NP:
  (46c) A good talker, your friend Bill.
- NP Pred!:
  (46d) Everyone in the car!
- (What), NP + Acc VP/Pred?:
  (46e) What me, worry?; Him in an accident?
- Salutation, Vocative NP:
  (46f) Hey, Phil!; Yoohoo, Mrs. Goldberg!
- NP and S:
  (46g) One more beer and I’m leaving.
- Expletive (P) NP:
  (46h) Shit on semantics!
• Scores:

(46i) The Red Sox four, the Yankees three.

• How about NP/AP/Gerundive VP/S:

(46j) How about a cup of coffee?; How about a little shorter?; How about going to the movies?; How about we have a little talk?

(Culicover and Jackendoff 2005)

Notice that Culicover and Jackendoff (2005) call NP, NP what I am calling here PredNP (ex. 46c). Those examples in (46) can be considered phrases other than TP. Thus, the equivalent in Spanish for (46c) would have the syntactic representation in (47b):

(47a) Un buen hablador tu amigo Bill.

(47b) \[
\begin{array}{c}
\text{XP} \\
\hline
\text{YP} \\
\hline
\end{array}
\]

\text{un buen hablador} \quad \text{tu amigo Bill}

Using this analysis, the non-verbal clause is made up of two independent clauses. Even though this analysis does not face some of the problems encountered in the previous two analyzes (e.g. the ellipsis problem), it wrongly predicts the occurrence of sentential adverbs, such as \textit{probablemente} 'probably', between the two clauses (48). This is possible since sentential adverbs are possible with non-sentential clauses (49):

(48) *Un buen hablador probablemente tu amigo Bill.

(49) Speaker A: Quién viene?
   ‘Who’s coming?’

Speaker B: Probablemente tu amigo Bill.
   ‘Probably, your friend Bill.’
Furthermore, this analysis does not recognize that these clauses carry T(ense), even though a lexical verb does not appear. Thus, whereas (50a) can be interpreted in the present tense, (50b) may be interpreted either in the present or past tense. (50b) can have a past tense reading in a context where the writer is dead (e.g. Cervantes).

(50a) Muy sabio este escritor
     ‘Very clever, this writer.’

(50b) Muy sabio aquel escritor
     ‘Very clever, that writer.’

Finally, the independent clause analysis says nothing about the restrictions over the predicates or the specificity/definiteness constraint on the subject DP.

5.3.1.4 Small clause

According to this analysis, the subject DP and the predicate in PredNP clauses form a syntactic constituent. If we assume den Dikken’s (2006) hypothesis about the RELATOR PHRASE (RP), then there seems to be a strong argument for analyzing PredNPs as sentences involving a predicate in the specifier of the RELATOR and the subject as its complement. (51) demonstrates the syntactic representation for this analysis:

(51a) Un cobarde el sargento.
     ‘A coward, the sergeant.’

(51b) 

\[ \text{Predicate} \quad \text{R'} \]
\[ \text{un cobarde} \quad \text{Relator} \quad \text{Subject} \]
Recall from the previous chapter that a RELATOR mediates the relationship between a predicate and its subject in the base representation of predication structures (den Dikken 2006). In the case of (51b), the RELATOR is empty -i.e. does not have a phonological representation. Again, even though this analysis is structurally attractive it says nothing about the nature of the predicate and the subject in PredNP constructions.

5.3.1.5 Summary

The analyses discussed so far seem to explain some properties of the PredNP clause, but fail to explain others. The right-dislocated analysis predicts correctly the nature of the subject DP, but fails to explain the restriction over the predicate. The subject/predicate movement analyzes appropriately the nature of the XP predicate, but forces us to assume an underlying copula verb. The right-dislocated analysis faces this same problem. Furthermore, neither approach succeeds in explaining how a non-constituent needs to be elided in the course of the syntactic derivation. The two independent clauses analysis does not block the occurrence of sentential adverbs between the subject and the predicate and cannot explain the interpretation of T. Finally, the small clause analysis reveals nothing about the nature of the predicate and the subject -i.e. the specificity/definiteness restriction over the DP subject. In the following section I build upon these analyses and present a syntactic derivation for Spanish PredNP.
5.3.2 On the internal structure of Spanish PredNP

In order to explain the internal structure of Spanish PredNP I will assume that the XP predicate moves to the left of the subject -i.e. predicate inversion. The predicate moves in order to discharge (or check in Chomsky’s generative grammar) the strong semantic feature *evaluativity*. This feature in turn blocks the occurrence of stage-level predicates since evaluative adjectives have the strong tendency to be individual-level predicates. In this case the individual and stage-level distinction in Spanish PredNP can be reduced entirely to the feature *evaluativity*, which is a property of these constructions. Thus, only those predicates that carry this semantic feature are allowed in PredNP clauses. Notice that in this derivation movement is not triggered by a formal feature (Chomsky 1995), but rather by a semantic property -i.e. an interpretable feature. Paul (2006), following den Dikken (2006), invokes a similar strategy of predicate inversion for the interpretation of PredNP, but for a different reason: for her, the predicate moves to Spec,TP in order to license the null copula head. If the copula is overtly realized then movement is blocked. In Paul’s proposal, (52a) would have the syntactic representation in (52b):

(52a) Beautiful, your girlfriend.

(52b) \[
(\text{TP} \ [p_{\text{pred}} \ [\text{beautiful}]], \ T \ [\text{RP} \ [\text{DP} \ your \ girlfriend] \ R^0 \ t_0])
\]

There are problems with Paul’s account because predicate inversion is possible even when the copula is overtly realized:

(53a) John is the tallest man in this building.

(53b) The tallest man in this building is John.

(54b) Mary is a good professor.

(54b) A good professor is (in fact) Mary.
Predicate inversion will only be possible only when the clause is interpreted predicatively (55-56):

(55a) Mary is beautiful.
(55b) *Beautiful is Mary.
(56a) Mary is a woman.
(56b) *A woman is Mary.

Thus, according to Paul (2006) only predicative adjectives are allowed in PredNP clauses. However, this is not true since stage-level adjectives can be used predicatively, but still are not allowed in PredNP, as we have seen in this chapter:

(57a) *Available, the doctor.
(57b) *Tired, your friend.

Furthermore, Paul’s (2006) argument suggests that if the copula were non-null then predicate inversion would not apply. This prediction is not borne out. For instance, in Spanish we may find the following:

(58a) Muy inteligente es ese profesor.
     ‘Very intelligent is that professor.’
(58b) Es muy inteligente ese profesor.
     ‘It is very intelligent that professor.’

Of course, it can be argued that (58a-b) are different kinds of constructions, but even if this is argued, there is still the fact that predicate inversion can happen in the absence of a null copula. In fact, Moro (1997) does not link predicate raising to null copula. Thus, Paul’s argument seems ill-motivated. However, more importantly, the idea that predicate inversion serves precisely to license the null copula is diametrically opposed to the central argument in
den Dikken (2006), which the author follows. According to den Dikken (2006), predicate inversion leads precisely to the obligatory overtness of the RELATOR (or copula in this case):

(59a) I consider John (to be) the best candidate for the job.

(59b) I consider the best candidate for the job *(to be) John.

In turn, I will assume that what motivates predicate inversion in PredNP clauses is not the absence of the copula, but a strong semantic feature that needs to be discharged in the course of the syntactic derivation. This strong feature is *evaluativity* and will be represented as [+E]. I will assume furthermore that there is a RELATOR between the DP subject and the XP predicate, but contrary to the small clause analysis (3.1.4), this RELATOR is not empty -i.e. it will accommodate the tense feature. The default tense in Spanish PredNP is the present tense, but a past tense interpretation is also possible. Recently, Benmamoun (2008) has argued that tense is universally projected but does not need to co-occur with a verbal head. He provides evidence from Hebrew and Arabic, two well-known languages with verbless clauses, as we saw in the previous chapter. This is the case for Spanish PredNP: even though there is no verbal head, tense can be interpreted.

In a generalized minimalist grammar, the derivation of Spanish PredNPs would proceed as follows: first, we start from an initial multiset of lexical resources (60b):

(60a) Muy guapa esa mina.
     ‘Very beautiful, that girl.’

(60b)

<table>
<thead>
<tr>
<th>Lexical item</th>
<th>muy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorial features:</td>
<td>Pred'</td>
</tr>
<tr>
<td>Selectional features:</td>
<td>Pred</td>
</tr>
<tr>
<td>Interpretable features:</td>
<td>[+intensifier]</td>
</tr>
<tr>
<td>Non-interpretable features:</td>
<td>...</td>
</tr>
</tbody>
</table>
The syntactic computation of (60) is as follows: in the first step, the Pred’ *muy* and the Pred *guapa* merge and the selection feature of Pred’ is deleted. Notice that adverbs can be assigned the category Pred’ since they denote a one-place operation on predicates. In the next step, the RELATOR and *muy sabio* merge to satisfy the first selection requirement of the RELATOR. In the third step, *esa* and *mina* merge and the selection feature of the determiner is

---

1. \( \text{Lexical item :} \; \text{guapa} \)
   - Categorial features: Pred
   - Selectional features: d
   - Interpretable features: [+E]
   - Non-interpretable features: ...

2. \( \text{Lexical item :} \; \text{relator} \)
   - Categorial features: T
   - Selectional features: \( \langle \text{Pred}, \text{d}[^+\text{nom}] \rangle \)
   - Interpretable features: [+present]
   - Non-interpretable features: ...

3. \( \text{Lexical item :} \; \text{esa} \)
   - Categorial features: d
   - Selectional features: n
   - Interpretable features: [+definite,+specific,+singular,+femenine]
   - Non-interpretable features: ...

4. \( \text{Lexical item :} \; \text{mina} \)
   - Categorial features: n
   - Selectional features: 0
   - Interpretable features: [+singular,+femenine,+count,+animated]
   - Non-interpretable features: [+nom]
deleted. Finally, _esa mina_ and RELATOR _muy guapa_ merge and the second selection requirement of the RELATOR is satisfied. So far we have the following syntactic object: _esa mina_ RELATOR _muy guapa_. The strong semantic feature [+E], however, needs to be discharged. This requirement triggers predicate inversion. Thus, move/merge applies and we get the Spanish PredNP structure: _muy guapa esa mina_ RELATOR <_muy guapa_>. Now the strong feature has been discharged and has become weak [+e]. In (60c) I provide the syntactic representation.

Recall that the RELATOR = T<sub>present</sub>:

(60c) Move/Merge: < Muy guapa esa mina … >

ₖ < muy guapa > Merge: < esa mina R muy guapa >

ₖ < esa mina > Merge: < R muy guapa >

ₖ < R > Merge: < muy guapa >

Finally, an analysis of Spanish PredNPs based on predicate inversion explains why the DP subject needs to be definite and specific. The DP subject is highly topical in predicate fronting constructions (cf. Malagasy).

### 5.3.3 Conclusion

In this section I have provided a syntactic derivation for Spanish PredNPs. The most relevant aspects of this analysis are the following: Spanish PredNPs can be analyzed in terms of predicate inversion. This movement of the predicate is obligatory since the XP predicate needs to get rid of its strong semantic feature [+E]. This movement in turn explains why the DP subject is obligatorily definite and specific - i.e. predicate fronting requires the DP subject
to be topical. In sum, this analysis supports the hypothesis that movement in syntax is driven not only by the checking of some formal features but also for the interpretation of interpretable features. This is strong evidence in favor of one of the basic tenets of GMG, namely, that syntactic structure is an emergent property of feature-driven computation. In the following section I analyze Spanish PredNPs as exclamative sentences.

5.4 Spanish PredNPs and Exclamatives

In this section I argue contra Alonso-Cortés that Spanish PredNPs may be analyzed as exclamative sentences. The main argument against considering PredNPs has been that these clauses are not associated with a scalar implicature, a property that Zanuttini and Portner (2003) have proposed for exclamative sentences (Paul and Stainton 2006). Thus according to these authors, exclamatives convey that something is surprising or noteworthy in some way. In this sense, exclamatives introduce a conventional scalar implicature to the effect that the message they denote lays at the extreme end of some contextually given scale - i.e. exclamatives generate a characteristic conventional scalar implicature by which an individual, for example, is placed on the extreme of a determined scale. For instance, an exclamative such as (61a) would have the implicature in (61b), where d’ is a degree that exceeds the speaker’s expectations of beautifulness (Gutiérrez-Rexach 1996):

(61a) How beautiful Keira Knightley is!

(61b) Keira Knightley is beautiful to degree d’.

(61b) can be considered an implicature because it goes beyond the sentence’s truth conditional meaning. However, the implicature must be a conventional implicature, rather than a conversational one, since the former is nondefeasible and nondetachable.
There are at least two problems for not considering Spanish PredNPs as exclamatives based only in the scalar implicature property. First, in Spanish there are exclamatives that do not trigger such scalar implicature, but are still considered exclamative sentences. The following is a short list of such exclamatives (Gutiérrez-Rexach 2001):

(62a) ¡Por supuesto que sí voy a ir al cine!
‘Of course, I'll be going to the movies!’

(62b) ¡Claro que te va a salir bien el examen!
‘Of course, you'll do fine in the exam!’

(62c) ¡Sí que tienes mala suerte tú!
‘You really have bad luck!’

The second problem that faces the argument against treating Spanish PredNPs as exclamatives is even more important than the first one, namely, these clauses may indeed trigger a scalar implicature. Consider (63):

(63a) ¡Extremadamente preciosa Keira Knightley!
‘Extremely gorgeous Keira Knightley!’

(63b) ¡Ridículamente preciosa Keira Knightley!
‘Ridiculously gorgeous Keira Knightley!’

When uttering (63) the speaker expresses an attitude (surprise or admiration) toward the fact that Keira Knightley is $d$-gorgeous, where $d$ is Keira Knightley’s degrees of gorgeousness. Following Gutiérrez-Rexach (1996), this idea can be formally represented as follows:

$$\text{EXC}(a)(w)(tp \exists d [p(w) \& p = \lambda w'[d = \text{MAX}(\lambda d'[\text{gorgeous}(w')(K,d')])]) \iff \exists P \in \text{EMOT} [P(w)(tp \exists d[p(w) \& p = \lambda w'[d = \text{MAX}(\lambda d'[\text{gorgeous}(w')(K,d'))])(a)]]$$

where $a$ is the agent, $w$ a world, $p$ a proposition, and $P \in \text{EMOT}$ –i.e. the set of emotive properties.
Spanish PredNPs not only may trigger a scalar implicature, but also express the speaker’s strong feeling or emotive attitude toward something, and this is a property of exclamatives (Bosque 1984).

Spanish PredNPs and exclamatives share other properties: for example, both clauses involve referent identifiability - i.e. the entity of whom something is predicated must be identifiable. So in exclamatives and PredNPs the entity that something has been predicated of must be part of the common ground between hearer and speaker. Lambrecht (1994) for example defines identifiable referent as a shared representation that exists in the minds of speaker and hearer at speech time. It follows from this definition that this referent must be a pronominal or a definite DP.

This analysis resembles Sadock and Zwicky’s (1985) proposal about exclamative sentences in which exclamatives are differentiated from declaratives. For Sadock and Zwicky exclamations have an expressive force, whereas declaratives are informatives. Both clauses represent a proposition as being true, but in exclamative constructions, the speaker emphasizes his strong emotional reaction or feeling to what he takes to be a fact, while in a declarative, the speaker emphasizes his intellectual appraisal that the proposition is true. PredNPs do just that: they are not only informatives, but may express a strong emotional reaction toward some fact.

Finally, the last property exclamatives and PredNPs share is that of deixis - i.e. personal and temporal deixis. The notion of personal deixis entails the presence of someone making a judgment, and the speaker is the judge by default, whereas temporal deixis requires that the effect evoked by these clauses must hold at speech time, whether or not the denoted
situation also holds at speech time. We have seen that these are properties not only of exclamatives, but of verbless clauses in general.

5.5 Summary

This chapter was devoted primarily to the analysis of the syntactic, semantic and discourse properties of PredNPs in Spanish. The main purpose was to investigate the internal structure of these clauses. I mentioned that previous analyses -e.g., right-dislocated DP, subject/predicate movement, two independent clauses, and small clause, cannot account for some of the basic properties of Spanish PredNPs. I suggest a syntactic analysis based on predicate inversion, similar to the one proposed by Vinet (1991) and Paul (2006) for French and English respectively. However, in my proposal what motivates the movement of the predicate is a strong semantic feature [+E]. Finally, I have argued that PredNPs in Spanish might be considered as exclamative sentences.
6.1 Introduction

In this chapter I examine several aspects of the syntax and semantics of the so-called Spanish PP Complement Clause (henceforth, PPCC) (Gutiérrez-Rexach 1999). The following examples illustrate this construction:

(1a) No te imaginas [DP lo lindo del atardecer en San Juan].
     ‘You can’t imagine how beautiful the sunset in San Juan is.’

(1b) Es increíble [DP lo infantil de su comportamiento].
     ‘It is incredible how childish she is behaving.’

Notice that in PPCCs, the DP complement of the preposition heading the PP is the main argument of what I am going to assume is the inverted predicate. Thus, the bracketed portion in (1) may be interpreted as follows:

(2a) ⇒ El atardecer en San Juan es lindo.
     ‘The sunset in San Juan is beautiful (to some extent).’

(2b) ⇒ Su comportamiento es infantil.
     ‘Her behavior is childish (to some extent).’

A related construction exists in Spanish, the Spanish degree neuter construction (DNC), but with a relative pronoun and a covert ‘be’ verb in the subordinate clause:

(3a) No te imaginas [CP lo lindo que es el atardecer en San Juan].
     ‘You can’t imagine how beautiful the sunset in San Juan is.’

(3b) Es increíble [CP lo infantil que es su comportamiento].
     ‘It is incredible how childish she is behaving.’
Despite their similarity -i.e. both constructions have a neuter determiner \textit{lo}, and both denote a maximality function on degrees, there is enough empirical evidence to distinguish between the two constructions (Bartra-Kaufmann and Villalba 2006a, 2006b; Villalba and Bartra-Kaufmann 2010; Gutiérrez-Rexach 1999), as we will see in section 2. In this dissertation I will focus on Spanish PPCCs since these constructions are non-verbal in nature. Thus, in this chapter I will argue, following Villalba and Bartra-Kaufmann (2010), that PPCCs involve a small clause XP headed by an abstract functional category, a relator in den Dikken’s (2006) terms, which articulates the subject-predicate relation. (1a-b) will have the initial structures in (4a-b), respectively:

\begin{align*}
\text{(4a)} & \quad [\text{XP} [\text{DP el atardecer en San Juan}] [\text{X'} \text{X} [\text{AP lindo}] Frag]] \\
\text{(4b)} & \quad [\text{XP} [\text{DP su comportamiento}] [\text{X'} \text{X} [\text{AP infantil}] Frag]]
\end{align*}

The mediation of X is necessary for complying with the Linear Correspondence Axiom (LCA) (Kayne 1994). Villalba and Kaufmann (2010) derive the final syntactic structure of PPCCs as follows: once a Degree OPerator, responsible for the exclamatory force of PredNP and lo-AP-de-DP, is merged then we will have a syntactic configuration similar to (5). My syntactic derivation, stated in GMG, will be more simplified that the one suggested by these authors, but will be capable of deriving the internal structure of PPCCs:

\begin{align*}
\text{(5a)} & \quad [\text{DegP OP+lo} [\text{XP [Foc [AP lindo]]}, [\text{X+FOC+de [RP [DP el atardecer en San Juan] R° t]}]]] \\
\text{(5b)} & \quad [\text{DegP OP+lo} [\text{XP [Foc [AP infantil]]}, [\text{X+FOC+de [RP [DP su comportamiento] R° t]}]]]
\end{align*}

On the semantic side I will argue that PPCCs involve high-degree quantification. This explains why adverbs like \textit{muy ‘very’} and \textit{extremadamente ‘extremely’} are possible in these constructions (6).
No te imaginas lo extremadamente lindo del atardecer en San Juan.
‘You can’t imagine how extremely beautiful is the sunset in San Juan.’

Es increíble lo muy infantil de su comportamiento.
‘It is incredible how very childish she is behaving.’

The high degree quantification can be explained by positioning the existence of an operator of exclamatory force á la Gutiérrez-Rexach (1996, 2001, 2008). The idea is that PPCCs have both a degree operator and an exclamatory force. Given the similarities between Spanish PredNPs and PPCCs, it will be argued that a unified analysis looks tenable since both clauses have similar syntactic structures e.g. predicate focus fronting and they share similar semantic properties e.g. reference to degrees.

The rest of the chapter is structured as follows. In the following section, I discuss some general properties of Spanish PPCCs and DNCs. In Section 3, I discuss previous accounts of Spanish PPCCs. In Section 4, I provide a syntactic derivation for PPCCs and in Section 5 I discuss the degree reading of PPCCs.

### 6.2 PPCCs and DNCs: general facts

In the previous section I mentioned that Spanish PPCCs and DNCs show striking similarities that may lead to a unified analysis. Some of the similarities are as follows (Barta-Kaufmann and Villalba 2006):

- The neuter determiner *lo* ‘the-neut’ may be associated with an abstract meaning: e.g. quantity, value, place or part. (7a) for example may have a partitive reading and be interpreted like (7b):

(7a) A Pepe le gustó lo hermoso de la novela.
‘Pepe liked the beautiful part of the novel.’
(7b) A Pepe le gustó lo que era hermoso de la novela.  
‘Pepe liked the beautiful part of the novel.’

- A qualifying or gradable predicative adjective precedes a CP or a PP:

(8a) *Me sorprende lo normal de su propuesta.  
‘It surprises me how normal his proposal is.’

(8b) *Me sorprende lo normal que es su propuesta.  
‘It surprises me how normal his proposal is.’

- The adjective is the predicate of the CP complement or the DP inside the PP -i.e. (8a-b) can be paraphrased as (8c):

(9a) *Me asusta lo tonto de mis estudiantes.  
‘It frightens me how idiots my students are.’

(9b) *Me asusta lo tonto que son mis estudiantes.  
‘It frightens me how idiots my students are.’

(9c) ⇒ Mis estudiantes son tontos.  
‘My students are idiots.’

- The lo + Adjective may bear a quantificational value. In my case, this lo will be considered an operator of exclamatory force, which denotes the quantificational value. Thus, in the following examples lo denotes the extent or degree of dangerousness that frightens me.

(10a) Me atemoriza lo peligroso de la situación.  
‘It frightens me how dangerous the situation is.’

(10b) Me atemoriza lo peligrosa que es la situación.  
‘It frightens me how dangerous the situation is.’

Nevertheless, there are some clear differences between PPCCs and DNCs. First, PPCCs may show agreement mismatch between the predicate and the subject. This is not the case in DNCs:
Second, PPCCs have a nominal and dependent behavior (12), while DNCs do not show that behavior -i.e. they pattern like degree wh-exclamative sentences (13):

(12a) Me asusta lo absurdo de su propuesta.
     ‘It frightens me how absurd his proposal is.’

(12b) *¡Lo absurdo de su propuesta!
     ‘How absurd his proposal is!’

(13a) Me asusta lo absurda que es su propuesta.
     ‘It frightens me how absurd his proposal is.’

(13b) ¡Lo absurda que es su propuesta!
     ‘How absurd his proposal is!’

(13c) ¡Qué absurda que es su propuesta!
     ‘How absurd his proposal is!’

And finally, PPCCs may only be used with i-level predicates, whereas DNCs do not show that same restriction:

(14a) No me sorprende lo inteligente de Pepe.
     ‘It does not surprise me how intelligent Pepe is.’

(14b) *No me sorprende lo cansado de Pepe.
     ‘It does not surprise me how tired Pepe is.’

(15a) No me sorprende lo inteligente que es Pepe.
     ‘It does not surprise me how intelligent Pepe is.’

(15b) No me sorprende lo cansado que está Pepe.
     ‘It does not surprise me how tired Pepe is.’

This data clearly suggests that PPCCs and DNCs are two different, although semantically related, constructions -i.e. the semantic interpretation of PPCCs and DNCs is
identical, but their syntax seems to be different. In what follows, I discuss the properties of both constructions.

6.2.1 Degree Neuter Construction

There have been several attempts to analyze and explain the syntax and semantics of Spanish DNCs and its properties (Alarcos 1970; Contreras 1973; Plann 1980; Rivero 1981; Ojeda 1982; Gutiérrez-Rexach 1999; among others). Consider (16) for example:

(16a) No te imagina lo hermosa que es la novela.  
“You can’t imagine how beautiful the novel is.’

(16b) Pepe no entiende lo hermosa que es la peli.’  
‘Pepe does not understand how beautiful the film is.’

These sentences have two salient properties. First, there is an agreement mismatch between the neuter determiner *lo* and the adjective - i.e. *lo* may combine with an adjective in the feminine form in Spanish DNC’s; and second, (16) has a degree reading that may be paraphrased as:

(16a’) ⇒ You can’t imagine the extent of the beauty of the novel.

(16b’) ⇒ Pepe doesn’t understand the extent of the beauty of the film.

The second property can be carried out to Spanish PPCCs without major difficulties but the first property, the agreement mismatch between the determiner and the adjective, proves something about these constructions and about the nature of *lo*: (1) the string *lo* + adjective does not form a single constituent and (2) *lo* is responsible for the high degree quantification.
6.2.1.1 *lo + Adjective*

Previous analysis of Spanish DNCs have treated *lo* + adjective as a single constituent. Alarcos (1970), for example, treats *lo* as a nominalizer that makes the adjective a noun (Gutiérrez-Rexach 1999). In other words, what *lo* does is changing the categorial status of a lexical item, an operation known as *transposition* in the terminology of European structuralism. The sequence in (17) is treated then as a noun phrase:

(17a)  lo bello  

‘the beautiful’

(17b)  

\[
\begin{array}{c}
\text{NP} \\
\text{Det} \quad \text{N’} \\
\text{lo} \quad \text{N} \\
\text{bello}
\end{array}
\]

If *lo* + adjective is a single NP -i.e. a standard definite, then we would expect it to behave as regular NPs behave. However, this is not the case. Consider the following examples (Gutiérrez-Rexach 1999: 39):

(18a) *Juan vio lo contenta, que estaba María.*  

‘John saw how happy, Mary was.’

(18b) *No sabes lo tontos, que son mis estudiantes.*  

‘You don’t know how stupid, my students are.’

(18c) *Juan vio al estudiante, que estaba corriendo.*  

‘John saw the student, who was running.’
NPs such as *el estudiante* `the student` in (18c) allows the attachment of a non-restrictive relative clause. In DNCs this is not possible (18a-b). This is strong evidence for not considering the sequence *lo* + Adjective to be an NP.

Contreras (1973) and Rivero (1981), on the other hand, treat *lo* + Adjective as DPs, and assign a syntactic structure similar to (19b):

(19a)  
```
lo bello
```

`‘the beautiful’`

(19b)  
```
DP
```

```
D’
```

```
D  NP
```

```
lo  N’
```

```
N
```

```
Adj
```

```
bello
```

This analysis runs into problems as well though. It cannot account for the impossibility of non-restrictive relative clauses, like in (17a-b) it does not explain which syntactic operation is responsible for inserting an adjective under N and why this insertion is only restricted to DNCs. Also it cannot account for the agreement effect between the predicate and the subject -i.e. the adjective *bella* in (20a) agrees with the María and not with *lo*.
Me sorprende lo bella que es María.
'It surprises me how beautiful María is.'

*Me sorprende lo bello que es María.
'It surprises me how beautiful María is.'

Gutiérrez-Rexach (1996, 1999) argues that the syntactic string lo + adjective does not form a single constituent but rather the adjective has moved from its initial position to check the features [+deg] and [+focus] -i.e. movement of the adjective is driven by an INT feature. This explains why the adjective and the subject agree. Lo, in turn, agrees with a null degree operator occupying the specifier of the DP, which is responsible for the degree reading we find in Spanish DNC’s. Thus, this author treats lo as a neutral determiner head that selects a whole CP. A partial lexical entry for lo in GMG will be as follows:

The neutral determiner lo selects for an expression of category c (or CP) with the selectional features [+def], [+foc] and it has the interpretable feature of a definite determiner. In GMG, the derivation of (22a) will start with the initial multiset of lexical resources in (22b):

(22a) lo bella que era
‘how beautiful she/he was’
The syntactic computation of (22) is as follows. In the first step, the adjective *bella* ‘beautiful’ and the verb *era* ‘was’ merge and the selection feature of *v* is deleted. In the next step, *era bella* ‘was beautiful’ and *que* ‘that’ merge and the selection feature of *c* is deleted. Now we end up with the following structure: *que era bella* ‘that was beautiful’. Notice that the
adjective \textit{bella} has two strong features, namely DEG and FOC. In GMG strong features need to be removed somewhere in the syntactic derivation. The syntactic operation responsible for discharging strong features is MOVE. Thus, in the following step MOVE/MERGE needs to apply, so we may end up with the following: \textit{bella que era} ‘beautiful that he/she was’:

\begin{center}
\begin{tabular}{c|c}
Lexical item & \textit{bella} \\
Categorial features & \textit{a} \\
Selectional features & 0 \\
Interpretable features & \{+fem,+sg,+deg,+foe\} \\
Non-interpretable features & ... \\
\end{tabular}
\end{center}

Finally, \textit{lo} ‘the’ and \textit{bella que era} merge and the selection feature of \textit{lo} is discharged. In (22c), I provide the syntactic representation:

(22c) \hspace{1cm} \text{Merge}: < lo bella que era >

\hspace{2cm} \text{Move/Merge}: < bella que era >

\hspace{4cm} \text{Merge}: < era bella >

\hspace{6cm} \text{lo} < era > \hspace{1cm} \text{lo} < bella >

From a semantic standpoint, the determiner \textit{lo} has an interpretable content -i.e. it has a degree reading and denotes a maximality function (Ojeda 1993; Gutiérrez-Rexach 1996, 1999). Lack of agreement between the adjective and the determiner \textit{lo} follow from the fact that they are not in a Spec-Head relation, as is shown in (23c). Notice that in this syntactic representation there is a null operator occupying the Specifier position of the DP. This null
operator is the maximality operator corresponding to \( lo \) and is responsible for selecting the maximal set of degrees in the denotation of a gradable property. Recall from Section 2 that only gradable adjectives are allowed in both DNCs and PPCCs. Thus, (23a) may be interpreted as *the greatest or maximal degree of beauty\( d \) such that Cat\( e \) is beauty to degree \( d \):*

(23a)  \( \text{Me sorprende [} _{lo} \text{bella que es Cat}]. \)

‘It surprises me how beautiful Cat\( e \) is.’

\[
(23b) \quad D^{\text{max}}
\]

\[
\text{Op}_1 \quad D
\]

\[
D^{\text{min}} \quad C^{\text{max}}
\]

\[
\text{lo} \quad A^{\text{max}} \quad C
\]

\[
bella_i \quad t_j \quad C
\]

\[
c^{\text{min}} \quad l^{\text{max}}
\]

\[
\text{que es } [\lambda t_i [t_j]]
\]

That Spanish DNCs denote a maximality function can be easily demonstrated by the following examples in which only lexical items that denote maximal degree are allowed in such constructions. Notice that in (24b) *poco* ‘lit. little’ denotes the maximum degree of unintelligent -i.e. Mario is dumb to degree \( d \).

(24a)  \( \text{Me sorprende lo extremadamente bella que es Cat}. \)

‘It surprises me how extremely beautiful Cat\( e \) is.’
(24b)  Me sorprende lo poco inteligente que es Mario.
‘It surprises me how unintelligent Mario is.’

(25a)  *Me sorprende lo normalmente bella que es Cate.
‘It surprises me how normally beautiful Cate is.’

(25b)  *Me sorprende lo razonablemente inteligente que es Mario.
‘It surprises me how reasonably intelligent Mario is.’

In sum, \(\lambda\) takes the denotation of the whole CP as its argument and may be associated with a maximality degree operator which is responsible for the maximal degree reading we find in Spanish DNCs. In the following section I discuss some relevant properties of Spanish PPCCs.

### 6.2.2 PP Complement Construction

DNCs and PPCCs are semantically related. However, there are some clear differences between the two constructions - e.g. a clear difference between the two constructions is the agreement between \(\lambda\) + adjective. In this dissertation I am going to argue that their syntax is similar, but the inversion of the predicate in PPCCs is due to a strong semantic feature on the predicate that is not necessarily present in DNCs. As in DNCs, \(\lambda\) will be associated with a maximality degree operator. But first it is necessary to review the relevant properties of this construction.

#### 6.2.2.1 Relevant properties

Gutiérrez-Rexach (1996, 1999) and Bartra-Kaufmann and Villalba (2006a, 2006b) and Villalba and Bartra-Kaufmann (2010) have observed the following properties in Spanish.
PPCCs: high degree quantification, restrictions on the preposition and DP subject. These properties are discussed in the paragraphs that follow:

6.2.2.1.1 **High degree quantification**

Spanish PPCCs involve high degree quantification - i.e. in these constructions we find an implicature of quantity, which makes possible the appearance of top scale lexical items like *muy* ‘very’, *extremadamente* ‘extremely’ and other lexical items are disallowed:

(26a)  *Me sorprende lo muy profundo de su pensamiento.*
      ‘It surprises me how very deep his thought is.’

(26b)  *Me extraña lo extremadamente estúpida de su pregunta.*
      ‘It strikes me how extremely stupid his question is.’

(27a)  *Me sorprende lo algo profundo de su pensamiento.*
      ‘It surprises me how some deep his thought is.’

(27b)  *Me extraña lo más o menos estúpida de su pregunta.*
      ‘It strikes me how more or less stupid his question is.’

Notice that quantification structures are incompatible with high degree interpretation (Villalba 2004; Bartra-Kaumann and Villalba 2006). PPCCs however admit superlative or elative modifier (30):

(28a)  *Me sorprende lo más profundo de su pensamiento.*
      ‘It surprises me the most deep of his thought.’

(28b)  *Me extraña lo más estúpido de su pregunta.*
      ‘It strikes me the most stupid of his question.’

(29a)  *Me sorprende lo superior de su pensamiento.*
      ‘It surprises me how superior his thought is.’

(29b)  *Me extraña lo inferior de su pregunta.*
      ‘It strikes me how inferior his question is.’
Thus, the only quantificational element allowed in Spanish PPCCs is the intensifying superlative.

6.2.2.1.2 The preposition

PPCCs are only possible when the PP complement is headed by the preposition de (Gutiérrez-Rexach 1999). Other prepositions are not allowed:

(31a) *Me maravilla lo hermoso para su voz. ‘It astonishes me how beautiful for her voice.’

(31b) *Me asombra lo bello desde su apartamento. ‘It amazes me how beautiful from his apartment.’

On the other hand, the preposition de between the subject and the predicate in Spanish PPCCs is not a true preposition - i.e. it behaves as a dummy P or a meaningless element whose presence in the structure is forced by syntactic constraints. Like the verbal copula, this nominal copula can serve as a lexicalization of the RELATOR-head (den Dikken 2006). That de is not a true preposition follows from the fact that it fails standard constituency tests: de + DP cannot be subject to wh-movement (32a), nor focalized (32b) and also de + DP cannot be pronominalized by a possessive pronoun (33) nor gapped (34) (Villalba and Bartra-Kaufmann 2010):

(32a) *¿De qué estudiante te sorprende lo bello? ‘Of which student it surprises you how beautiful’

(32b) *DE CATE me sorprende lo bello ‘Of Cate it surprises me how beautiful’
(33a) Me sorprende lo bello del atardecer en San Juan.
‘It surprises me how beautiful the sunset in San Juan is.’

(33b) *Me sorprende lo bello suyo.
‘It surprises me how beautiful it’

(34) *Me sorprende lo bello del atardecer en San Juan, pero no brillante.
‘It surprises me how beautiful the sunset in San Juan is, but not how shining.’

These data seem to support the following generalization: the preposition de in Spanish PPCCs (1) is not a true preposition and (2) does not form a maximal projection with the DP.

In GMG terms, it does not select the DP subject.

6.2.2.1.3 The subject

The DP subject of Spanish PPCCs must be specific and referential, as in Spanish PredNPs. Thus, non-specific DPs (35a), bare plurals DPs (35b), downward monotone quantifiers (35c), and generic DPs (35d) are all banned from this construction:

(35a) *Me asombra lo caro de algunas casas.
‘It amazes me how expensive some houses are.’

(35b) *Me molesta lo caro de casas.
‘It bothers me how expensive houses are.’

(35c) *Me sorprende lo caro de ninguna casa.
‘It surprises me how expensive no house is.’

(35d) *Me maravilla lo caro de una casa en general.
‘It astonishes me how expensive a house in general is.’

In this respect, PPCCs differ from DNCs since the latter may only impose such restriction on the bare plurals DP (36b):

(36a) Me asombra lo cara que son algunas casas.
‘It amazes me how expensive some houses are.’
(36b) *Me molesta lo cara de casas.
'It bothers me how expensive houses are.'

(36c) No me sorprende lo cara que es ninguna casa.
'It does not surprise me how expensive no house is.'

(36d) Me maravilla lo caro que una casa en general.
'It astonishes me how expensive a house in general is.'

The DP subject in PPCCs cannot be a strong pronoun, in clear contrast with DNCs that allow such pronouns. PredNPs show the same restriction -i.e. they do not allow strong pronouns, as seen in the previous chapter:

(37a) Me asombra lo caro de las casas.
'It amazes me how expensive the houses are.'

(37b) *Me asombra lo caro de ellas.
'It amazes me how expensive hers.'

(38a) Me asombra lo caro que son las casas.
'It amazes me how expensive the houses are.'

(38b) Me asombra lo caro que son ellas.
'It amazes me how expensive hers.'

6.2.2.1.4 The predicate

The AP predicate in Spanish PPCCs needs to be gradable. Thus, non-gradable adjectives like classificatory adjectives (39a), colour adjectives (39b) and adjectives of nationality (39c) are not permitted in these constructions. Interestingly, this same pattern is found in PredNPs:

(39a) *Me asombra lo financiero de esta situación.
'It astonish me how financial this situation is.'

(39b) *Me sorprende lo negro del cielo.
'It surprises me how black the sky is.'
(39c) *Me fastidia lo americano de la invasión.’
‘It bothers me how American the invasion is.’

(40a) seems to be a counterexample to this restriction. However, in this example the adjective Cuban ‘cubano’ has been coerced and may express gradability, as the insertion of extremadamente ‘extremely’ shows in (40b):

(40a) Me sorprende lo cubano de tu acento.
‘It surprises me how Cuban your accent is.’

(40b) Me sorprende lo extremadamente cubano de tu acento.
‘It surprises me how extremely Cuban your accent is.’

Finally, as mentioned previously, PPCCs are possible with i-level predicates. This is in fact what was found in PredNPs:

(41a) Me fastidia lo estúpido de su pregunta.
‘It bothers me how stupid his question is.’

(41b) Me sorprende lo cansado de tu amigo.
‘It surprises me how tired your friend is.’

6.2.2.1.5 Information structure

As in PredNPs, the DP subject of PPCCs is a background topic and the predicate is focus. It has been claimed, however, that the subject is the focus in construction with an inverted predicate (Lagae 1994; den Dikken 2006; den Dikken and Singhapreecha 2004). That the subject is not the focus follows from the impossibility of associating the subject DP in PPCCs with constative focus particles such as sólo ‘only’:

(42) *Es increíble lo bello de sólo esta estudiante.
‘It is incredible how beautiful only this student is.’

On the other hand, the fact that only specific quantifiers are possible in Spanish PPCCs seems to be strong evidence for considering the DP subject to be a background topic. As
pointed out by von Heusinger (2002), specificity is defined as sentence bound and links a new discourse item to an already existing discourse item or the speaker of that sentence -i.e. in PPCCs the DP subject has been introduced in the discourse. Thus, non-specific quantifiers such as todo 'every’ and cualquier ‘any’ are banned from PPCCs:

(43a) *Es increíble lo idiota de toda propuesta.
     ‘It is incredible how stupid every proposal is.’

(43b) *Me sorprende lo hermoso de cualquier país.’
     ‘It surprises me how beautiful any country is.’

When a quantifier shows a specific/non-specific alternation, then the more specific the interpretation the better the quantifier in the DP subject position will be (Villalba and Bartra-Kaufmann 2010):

(44a) Es increíble lo exquisito de muchos de los vinos.
     ‘It is incredible how tasty many of the wines are.’

(44b) *Es increíble lo exquisito de muchos vinos.
     ‘It is incredible how tasty many wines are.’

6.2.2.1.6 Other properties

So far some salient features of Spanish PPCCs clauses have been discussed. These properties are strictly related with its internal structures and interpretation -e.g. high degree interpretation, DP subject as the background topic, etc. There are, however, other features that differentiate this construction from DNCs. They are: s-selection, factivity, and the partitive lo. These will be discussed below.

6.2.2.1.6.1 S-selection

PPCCs need to be selected by a predicate that conveys an exclamatory meaning, such
as *sorprender* ‘surprise’, *asombrar* ‘amaze’, *extrañar* ‘strike’, *molestar* ‘bother’, etc. (Bartra-Kaufmann and Villalba 2006). If a verb does not have such feature, then it cannot select a PPCCs phrase. Examples (45) are possible in DNCs:

(45a)  *Sé lo estúpido de tu pregunta.
I know how stupid your question is.’

(45b)  *Dices lo lindo de su cara.
‘You says how beautiful her face is.’

(46a)  Sé lo estúpida que es tu pregunta.
‘I know how stupid your question is.’

(46b)  Dices lo linda que es su cara, (pero no su cuerpo).
‘You says how beautiful her face is, (but not her body).’

There seems to be examples of PPCCs not selected by a predicate with an exclamatory meaning (47). In these constructions, however, the quantificational high degree value of the phrase is preserved. *Lo* in these cases have been called *lo intensivo/pendorativo* and can be considered a subtype of PPCC’s. Thus, even though this is not a defining characteristic of Spanish PPCC’s, it can be used as a diagnostic test:

(47a)  Comprendí lo inútil de tu esfuerzo.
‘I understood how useless your effort was.’

(47b)  He aguantado lo triste de tu condición.
‘I have resist how sad your condition is.’

6.2.2.1.6.2 Factivity

PPCCs have a factive interpretation. This explains why assertive or volitional verbs do not admit such constructions (Bartra-Kaufmann and Villalba 2006):

(48a)  *Sospecho lo triste de la situación.
‘I suspect how sad the situation is.’
(48b) Temo lo desfavorable del resultado.
   ‘I fear how adverse the outcome is.’

Again, there seem to be counterexamples to this assertion. Consider the following examples:

(49a) No te imaginas lo hermoso del atardecer en San Juan.
      ‘You cannot imagine how beautiful the sunset in San Juan is.’

(49b) Desconoces lo dulce de su voz.
      ‘You ignore how sweet her voice is.’

Although these are not factive predicates, the high degree interpretation is preserved. Notice that DNCs do not appear only in factive contexts:

(50a) Sospecho lo triste que será la situación.
      ‘I suspect how sad the situation will be.’

(50a) Me temo lo desfavorable que será el resultado.
      ‘I fear how adverse the outcome will be.’

6.2.2.1.6.3 Partitive lo

PPCCs may receive a partitive interpretation, as the following examples demonstrate:

(51a) Lo interesante de esta novela es el final.
      ‘The interesting part of this novel is the ending.’

(51b) Lo interesante de esta novela es que es corta.
      ‘The interesting aspect of this novel is that is short.’

(Gutiérrez-Rexach 1996: 300)

The syntax of this type of construction is quite different from the examples we have been considering. First, contrary to PPCCs with high degree interpretation, the adjective in the partitive lo clause may be modified by a comparative quantifier (e.g. más ‘more’), but not by an intensive modifier (e.g. muy ‘very’):

(52a) Lo más interesante de esta novela es el final.
      ‘The most interesting part of this novel is the ending.’
Second, the preposition is not restricted to de ‘of’:

(53a)  Lo esencial desde una perspectiva kantiana es la determinación de la categorías.
‘What is essential from a kantian perspective is the determination of categories.’

(53b)  Lo más interesante para Pedro sería poder ir a Oxford.
‘The most interesting thing for Pedro would be the chance to go to Oxford.’

(Gutiérrez-Rexach 1996: 301)

And third, in the partitive lo there is not a subject-predication relation between the predicate and the DP subject. Thus, (54a) does not entail (54b). In PPCCs, however, there is a subject-predicate relationship (55). This evidence supports the idea that the adjective is base generated in situ, contrary to PPCCs, and does not raise from the embedded PP.

(54a)  Lo interesante de esta novela es el final.
‘The interesting part of this novel is the ending.’

(54b)  ≠ Esta novela es interesante.
‘This novel is interesting.’

(55a)  Me sorprende lo bello de su sonrisa.
‘It surprises me how beautiful her smile is.’

(55b)  ⇒ Su sonrisa es bella.
‘Her smile is beautiful.’

Not much more will be said about this construction. The reader is referred to Gutiérrez-Rexach (1996, 1999) for more insights on this construction.

6.2.2.1.7 Summary

In this section I have discussed some general properties of Spanish PPPCs and DNCs. These constructions share the following properties.

(1) the neuter determiner lo can be associated with an abstract meaning -e.g. quantity.
(2) a qualifying or gradable predicative adjective precedes a CP or a PP.

(3) the adjective is the predicate of the CP complement or the DP inside the PP - i.e. there is a predicate-subject relationship.

(4) /o + adjective may bear a quantificational value.

However, there are striking differences between the two constructions:

(1) while in PPCCs there is agreement mismatch between the predicate and the DP subject, in DNCs agreement mismatch is between /o and the adjective.

(2) PPCCs have a nominal and dependent behavior, while DNCs do not show that behavior.

(3) PPCCs may only be used with i-level predicates, while DNCs do not show that same restriction.

(4) PPCCs may be selected by a predicate that bears an exclamatory reading and have factive interpretation. This is not the case in DNCs.

Relevant properties of Spanish PPCCs have also been discussed - e.g. they involve high degree quantification, the DP subject must be a specific nominal and is the background topic and the preposition de ‘of’ between the subject and the predicate is a meaningful element whose presence in the structure is forced by syntactic constraints. In the following section previous analyses of Spanish PPCCs will be discussed.

6.3 Previous analyses

Previous syntactic analyses of Spanish PPCCs have analyzed this clause in pair with Spanish DNCs - i.e. they have the same syntactic derivation (Gutiérrez-Rexach 1996, 1999), while others have argued against such an analysis.
6.3.1 Gutiérrez-Rexach (1996, 1999)

Gutiérrez-Rexach (1996, 1999) develops an analysis of Spanish PPCCs following Kayne’s (1994) proposal for relative clauses. For this author, the determiner *lo* is the head of a DP which takes a PP as complement - i.e. *lo* takes a small clauses headed by a PP (56b). Then, the predicate rises from its position, deriving (56c):

(56a)  
\[ \text{lo bello de la novela} \]  
‘how beautiful the novel is’

(56b)  
\[ [\text{DP lo } [\text{PP de } [\text{SC la novela bell-}]]] \]

(56c)  
\[ [\text{DP lo } [\text{PP bello-i de } [\text{SC la novela tj}]]] \]

The adjective does not agree with the DP subject because its agreement features are not checked against the noun, but rather against the operator on degrees Op (57). Thus, the predicate exhibits the abstract neuter form:

(57a)  
\[ \text{Me sorprende } [\text{PP lo bello de Cate}.] \]  
‘It surprises me how beautiful Cate is.’

(57b)  
\[ \text{D}_{\text{max}} \]

\[ \text{Op}_j \]

\[ \text{D}_{\text{min}} \]

\[ \text{Agr}_{\text{max}} \]

\[ \text{lo } A_{\text{max}} \]

\[ \text{Agr} \]

\[ \text{bello-i } t_j \]

\[ \text{Agr}_{\text{min}} \]

\[ \text{P}_{\text{max}} \]
Even though the analysis is on the right track - i.e. in fact there is predicate inversion in Spanish PPCC’s, this analysis does not give a satisfactory account of PPCC’s. First, it does not explain the referential restriction on the DP subject. Second, the relation between the predicate and the operator on degrees Op is not a Spec-Head relation. Third, it does not explain why we find noun-adjective agreement in DNC’s, but not in PPCC’s. Fourth, it does not explain the nature of the preposition de ‘of’ (Bartra-Kaufmann and Villalba 2006). This analysis however maintains the high degree interpretation that PPCCs have - i.e. although there is some problem with the syntactic analysis, the semantic interpretation of these sentences remains intact.

6.3.2 Villalba and Bartra-Kaufmann (2010)

Villalba and Bartra-Kaufmann (2010) develop an interesting analysis of Spanish PPCCs, which they call lo-de construction. The crucial points of their analysis are the following.


2) The quantificational value of PPCCs relies on a nominal DEGREE head hosting a null operator in its specifier, a proposal similar to Gutiérrez-Rexach (1996, 1999). This null operator will be responsible for the lack of agreement between the DP
subject and the predicate since it will count as a closer checking goal for the uninterpretable $\phi$-features of the adjectives.

(3) the predicate in PPCCs moves to a DP-internal focus position. Thus, according to these authors, (58a) will have the initial structure in (58b):

\begin{align*}
\text{(58a)} & \quad \text{lo bello de la novela} \\
& \quad \text{‘how beautiful the novel is’} \\
\text{(58b)} & \quad [X P [D P \text{la novela}] [X' X [A P \text{bell-}]]]
\end{align*}

This syntactic configuration makes possible the predication relationship - i.e. it breaks the symmetric structure of the small clause containing the DP and the AP. The agreement mismatch between the DP subject and the predicate is explained as follows: since PPCCs require the adjective to be gradable, this is strong evidence for assuming a null degree operator (DegP), which selects the adjective (59a). Moreover, these authors assume a more complex structure than the one in (59a). Following Kayne (2005), they suggest the presence of a null DEGREE noun as the head of the DegP (59b). This DEGREE noun will host a null operator over degrees in its specifier. In this syntactic position, the null operator can bind the degree variable of the adjective:

\begin{align*}
\text{(59a)} & \quad [X P [D P [\text{la novela}] [X' X [D e g P \text{Deg} [A P \text{bell-}]]]]] \\
\text{(59b)} & \quad [X P [D P [\text{la novela}] [X' X [D e g P \text{Deg} [A P \text{bell-}]]]]]
\end{align*}

Deg is responsible for the agreement mismatch between the subject and the predicate: the unspecified phi-features of DEGREE will be active and function as a probe. Once the probe finds the matching unvalued phi-features of the adjective, the unspecified phi-features of DEGREE value those of the adjective. As a result, the unspecified phi-features of the adjective become inactive and invisible to further probing until Spell-out. After Spell-
out, the phi-features of the adjective received morphological value -i.e. masculine singular, which yield the agreement mismatch between the DP-subject and the predicate (Villalba and Bartra-Kaufmann, 2010).

6.4 Toward a Generalized Minimalist Syntax

In this section I will argue that what motivates predicate inversion in Spanish PPCCs is a strong feature on the XP predicate. This strong feature is gradability and will be represented as [+G]. Notice that in Spanish PredNPs predicate inversion was driven by the strong feature evaluativity. Evaluative predicates are by nature gradable. This explains why lexical items like muy and extremadamente are possible in both PPCCs and Spanish PredNPs.

Also, I will assume that the preposition de is a realization of the RELATOR (den Dikken 2006; Villalba and Bartra-Kaufmann 2010; among others). In this sense, lo will not be selecting a small clause headed by a PP, but rather a clause with a strong feature that need to be discharged in the course of the syntactic derivation. Thus, in a generalized minimalist grammar, the derivation of Spanish PredNPs would proceed as follows. First, we start from an initial multiset of lexical resources (60b):

(60a) lo caro del coche
     ‘how expensive the car is’

(60b)

\[
\begin{array}{ll}
\text{Lexical item :} & \text{lo} \\
\text{Categorial features :} & d \\
\text{Selectional features :} & \text{sc\{Pred [+deg, +foc]\}} \\
\text{Interpretable features :} & [+\text{definite, +singular}] \\
\text{Non-interpretable features :} & \ldots
\end{array}
\]
The syntactic computation of (60) is as follows. In the first step, the determiner *el* ‘the’ and the noun *coche* ‘car’ merge < *el coche*> and the selection feature of the determiner is deleted.

In the second step, the *de* ‘of’ and *el coche* ‘the car’ merge < *del coche*> and the selection feature of the RELATOR P is deleted. Notice that since the RELATOR in PPCCs is a dummy P, it will take a determiner as an argument and return as a value a determiner as well, not a PP.
Thus, the categorial feature of \(<\text{del coche}\)> will be d, instead of P. In the third step, the adjective \textit{car-} ‘expensive’ enters the syntactic derivation and merges with \textit{del coche} ‘of the car’ \(<\text{del coche car-}\>). Given the asymmetric nature of predication, agreement between the DP subject \textit{del coche} ‘of the car’ and the predicate \textit{car-} ‘expensive’ is not possible in this syntactic configuration -i.e. the sequence \textit{del coche car-} ‘of the car expensive’ will not survive as stands.

In the following step, the adjective \textit{car-} ‘expensive’ moves/merge to discharge the strong feature [+G] and we obtain \(<\text{car- del coche}\>\), which implies ‘the car is expensive’ -i.e. predication holds in this syntactic configuration. Finally, the neuter determiner \textit{lo} selects the small clause \(<\text{car- del coche}\>\) and agreement between the determiner and the adjective holds.

In (60c) I provide the syntactic representation:

\begin{center}
(60c) Merge: <\text{lo caro del coche}> \\
\hspace{1cm} k < \text{lo} > \\
\hspace{2cm} Move/Merge: <\text{car- del coche}> \\
\hspace{3cm} k < \text{car-} > \\
\hspace{4.25cm} Merge: <\text{del coche car- …} > \\
\hspace{5.5cm} k < \text{car-} > \\
\hspace{6.75cm} Merge: <\text{del coche} > k < \text{car-} > \\
\hspace{7.9cm} k < \text{de} > \\
\hspace{9.1cm} Merge: <\text{el coche}> \\
\hspace{10.35cm} k < \text{el} > k < \text{coche} >
\end{center}

6.5 High degree reading

PPCCs may have a high degree interpretation. This interpretation licenses lexical
items such as *extremadamente* ‘extremely’ or *muy* ‘very’, but disallows lexical items like *normalmente* ‘normally’:

(61a)  Me sorprende lo extremadamente caro del coche.
       ‘It surprises me how expensive the car is.’

(61b)  Me asombra lo muy estúpida de tu pregunta.
       ‘It amazes me how stupid your question is.’

(61c)  *Me sorprende lo normalmente profundo de su conocimiento.
       ‘It surprises me how normally deep his knowledge is.’

Following Gutiérrez-Rexach (1996, 1999) and Villalba and Bartra-Kaufmann (2010), it will be assumed that the responsible for this high degree interpretation is an operator of exclamatory force (OP<sub>excl</sub>):

\[
\begin{array}{c}
\text{Lexical item:} \quad \text{Op} \\
\text{Categorial features:} \quad \emptyset_{D_{\text{MAX}}} \\
\text{Selectional features:} \quad d \\
\text{Interpretable features:} \quad [+\text{Exclamative}, +\text{High Degree}] \\
\text{Non-interpretable features:} \quad \ldots
\end{array}
\]

Thus, (63a) will have the following interpretation (cf. Gutiérrez-Rexach 1996):

(63a)  Me sorprende lo caro del coche.
       ‘It surprises me how expensive the car is.’

(63b)  \(\exists t [\text{Present}(t) \land \text{Surprise}'(w)(t)\langle\text{To me}\rangle(x) \land x \text{ Max } (\lambda\delta [\text{Caro'}(\delta)\langle\text{Coche}\rangle])]\)

The degree \(x\) such that \(x\) is the maximal degree \(\delta\) and *the car is expensive* to degree \(\delta\).

6.6 Conclusion

In this chapter I have discussed some relevant features of Spanish PPCCs -e.g. the nature of the predicate and the high degree interpretation theses clauses exhibits, among others. It has been argued that the responsible for predicate inversion in PPCCs is a strong
feature that needs to be discharged in the course of the syntactic derivation. I have called this feature *gradability* \([+G]\). Like in the previous chapter, movement has been triggered by an interpretable feature. In the chapter that follows another example of Spanish verbless clauses, namely, the Qualitative Binominal Noun Phrases (QBNPs), which seem to pattern like Spanish PPCCs and PredNPs will be discussed.
Chapter 7: Spanish Qualitative Binominal Noun Phrases (QBNPs)

7.1 Introduction

In this final chapter I examine what has been called Qualitative Binominal Noun Phrases (henceforth, QBNPs) (den Dikken 2006). QBNPs display the following syntactic pattern: NP of NP - i.e. two NPs are juxtaposed with the intervention of the preposition of (den Dikken 2006):

(1a) an idiot of a doctor
(1b) a jewel of a city

As will be demonstrated, this preposition will turn out to be a nominal copula, a RELATOR in den Dikken’s (2006) terms, just as the Spanish nominal copula de ‘of’ that we examined in the previous chapter. This chapter is organized in the following way. In section 2, I examine the nature of QBNPs in general, but with a special emphasis on Spanish. As in other languages, Spanish QBNPs come in two types: attributive and comparative QBNPs (García and Méndez 2002; Casillas Martínez 2003; den Dikken 2006; Villalba and Bartra-Kaufmann 2010; González-Rivera 2009; González-Rivera and Delicado-Cantero 2010; among others).

In section 3, I examine the comparative QBNPs type and finally in section 4 the attributive QBNPs clause. The proposal I will defend here is that a unifying account for both constructions, namely, attributive and comparative QBNPs is not possible, but rather they display different syntactic structures (den Dikken 2006). As in the previous chapters, at the end of sections 3 and 4 I formalize the syntactic analysis in GMG.
7.2 QBNPs: General facts

QBNPs come in two different types: attributive (1) and comparative (2) (den Dikken 2006). The syntactic difference between the two clauses can be explained as follows: c-QBNPs are headed by a definite determiner and must contain a second definite second constituent, whereas a-QBNPs are headed by an indefinite determiner and require an indefinite bare noun as their second constituent. Español-Echevarría (1997, 1998) refers to the former as *Def-Def contexts (2), while the latter exemplifies cases of *Indef-Indef contexts (3):

(2a) el idiota del decano
    ‘the idiot of the dean’

(2b) *el idiota de decano
    ‘the idiot of dean’

(3a) un idiota de gobernador
    ‘an idiot of governor’

(3b) *un idiota del gobernador
    ‘an idiot of the governor’

However, the distinction between c-QBNPs and a-QBNPs is not merely structural -i.e. there are semantic and syntactic differences that force us to tease them apart. For example, (4a) ascribes a property to its subject in *his capability as a governor, and not necessarily as a human being, whether it is or not the case. Thus, (4b) can be roughly paraphrased as (4c). Notice that we can easily apply another predicate to the subject without contradiction (4d):

(4a) un idiota de gobernador
    ‘an idiot of a governor’

(4b) Pepe es un idiota de gobernador.
    ‘Pepe is an idiot of a governor’
(4c) Pepe es un idiota como gobernador.
‘Pepe is an idiot as a governor’

(4d) Pepe es un idiota como gobernador, pero no como abogado.
‘Pepe is an idiot as a governor, but he is not (an idiot) as a lawyer.’

In c-QBNPs, on the other hand, the property denoted by the predicate applies directly to an individual that happens to have a profession or, in the case of (5), an academic position:

(5a) Pepe es el idiota del decano.
‘Pepe is the idiot of the dean.’

(5b) Pepe es un idiota y es decano.
‘Pepe is an idiot and he is a dean (also).

Notice also that (5a) cannot be paraphrased with the particle como ‘as’. This is strong evidence for considering the predicate as applying directly to the DP-subject in Spanish c-QBNPs (6):

(6) *Pepe es el idiota como el decano.
‘Pepe is the idiot as the dean’

In sum, a-QBNPs involves two level of predication -i.e. un idiota de gobernador ‘an idiot of a governor’ does not only predicate that x is a governor, but it says that x as a governor is an idiot. Contrary, c-QBNPs involve only one level of predication: el idiota del gobernador ‘the idiot of the governor’ entails that x, the governor, is an idiot.

On the other hand, syntactic evidence for the difference between a-QBNPs and c-QBNPs comes not only from Spanish (Indef-Indef vs. Def-Def distinction), but also from other languages, such as Italian and English. In Italian, as in Spanish, a-QBNPs require a naked NP in the position following the preposition di ‘of’ (7a), while c-QBNPs may show up with a definite article (7b), as shown by Napoli (1989; cf. den Dikken 2006: 163):

189
(7a)  aquell’ ignorante di dottore
      ‘that ignorant of a doctor’

(7b)  quell’ ignorante del dottore
      ‘that ignorant of the doctor’

In English, there is a variant of a-QBNP that has the two noun phrases juxtaposed without
the intervention of any lexical material between them (8a-b). This is not possible, however,
in English c-QBNPs -i.e. (9a) cannot be paraphrased as (9b) (den Dikken 2006: 162-163):

(8a)  an idiot of a doctor
(8b)  an idiot doctor
(9a)  a jewel of a village
(9b)  *a jewel village

Den Dikken (2006) calls clauses like (9a) comparative QBNPs because a comparison is
established between the subject of the predication ‘village’ and the predicate ‘jewel’. Thus,
(10a) may be interpreted as (10b):

(10a)  a jewel of a village
(10b)  the village is like a jewel

This author takes the indefinite article preceding the subject of predication to be a spurious
article. His main empirical evidence comes from the Dutch data: Dutch allows number
disagreement between the article enn ‘a’ preceding the subject and the subject itself -i.e. the
subject can be either singular or plural (Villalba 2007: 122).

(11a)  die idiot van een doktor
       ‘those idiot of a doctor’

(11b)  die idioten van een doktoren
       ‘those idiots of a doctors’
Another property of c-QBNPs, according to den Dikken (2006), is that the subject shows number disagreement with respect to the whole DP (12) (Villalba 2007: 122):

(12) die twee ramp van een feiten
‘the two disaster of a facts

If this is the case, then the subject of c-QBNPs must be big enough to accommodate a Number Phrase (NumP), independent of the whole DP. However, NumP is not big enough to accommodate e.g. a quantifier phrase. This explains why quantifiers are banned from c-QBNPs, as the ungrammaticality of the Dutch examples in (13) demonstrates:

(13a) *die ramp van (een) alle feiten
‘the disaster of all facts’

(13b) *die ramp van (een) ieder feit
‘the disaster of every fact’

This proposal, nonetheless, cannot be applied to Spanish c-QBNPs, as Villalba (2007) has convincingly demonstrated. Consider the following examples:

(14a) los idiotas de algunos de los estudiantes
‘the idiots of some of the students’

(14b) los idiotas de muchos de los vecinos (que tenemos)
‘the idiots of many of the neighbors (that we have)’

Spanish c-QBNPs allow the presence of partitive/specific quantifiers in the DP-subject position.

So far we have seen that there are semantic and syntactic differences between a-QBNPs and c-QBNPs, which have been pointed out by other researchers. These differences not only arise in Spanish, but are also present in others languages such as Italian and English. In what follows I provide further differences between a-QBNPs and c-QBNPs in Spanish.
7.2.1 a-QBNPs versus c-QBNPs

In Spanish there are substantive differences, both in their meaning and structure, between a-QBNPs and c-QBNPs. These differences support the claim against a unifying analysis of QBNPs in Spanish contra García and Méndez (2002).

7.2.1.1 Subject position

c-QBNPs can appear as subjects in a sentence, whereas a-QBNPs headed by the indefinite *un* ‘a’ cannot. Notice that in Spanish a DP headed by an indefinite D is possible in subject position (15c). Thus, the indefinite *un* ‘a’ is not responsible for this restriction on a-QBNPs in Spanish:

(15a) El idiota de Pepe vino a verme.
‘The idiot of Pepe came to see me.’

(15b) *Un idiota de Pepe vino a verme.
‘An idiot of Pepe came to see me.’

(15c) Un idiota vino a verme (esta mañana).
‘An idiot came to see me this morning.’

7.2.1.2 Recursion

While c-QBNPs allow recursion to apply to its predicate, a-QBNPs do not necessarily allow recursion:

(16a) el pichón de abogado del gobernador
‘the pigeon of a lawyer of the governor’

(16b) *un pichón de abogado de gobernador
‘a pigeon of a lawyer of the governor’
7.2.1.3 Referentiality/Specificity

c-QBNPs require a referential/specific DP to sit in the subject position (17) - i.e. non-specific/referential DP’s and bare NP’s are ruled out. This is not the case for a-QBNPs, which impose a ban on referential DP’s, and require bare NP’s (17). This may be due to the fact that the whole construction is headed by an indefinite D, and therefore the second NP/DP in the linear order must be indefinite. This agreement between the two DP’s is known as the *(in)definiteness agreement effect*, a point first made by Español-Echevarría (1997, 1998), who claims that an NP headed by an (in)definite D must contain a second (in)definite D - i.e. when an (in)definite determiner appears in initial position, the post-prepositional nominal has to be (in)definite. This same effect has been noticed in the literature for other languages (cf. Napoli (1989) for Italian, and Danon (2008, 2009) for Hebrew) (González-Rivera and Delicado-Cantero 2010). However, as will be demonstrated, this restriction must be reinstated in terms of specificity, that is to say, specificity is the relevant interpretable feature in Spanish c-QBNPs:

(17a) el gilipollas de Fortuño
     ‘the asshole of Fortuño’

(17b) *el gilipollas de algún gobernador
     ‘the asshole of some governor’

(17c) *el gilipollas de gobernador
     ‘the asshole of governor’

(18a) *un gilipollas de Fortuño
     ‘an asshole of Fortuño’

(18b) un gilipollas de gobernador
     ‘an asshole of a governor’

However, Spanish admits the following syntactic configuration: [+def] -- [-def] in (19):

González-Rivera and Delicado-Cantero (2010) account for this unexpected configuration, as will be demonstrated in section 3.

7.2.1.4 A ban against possessive pronouns

c-QBNPs allow a possessive pronoun in the (understood) subject of the clause, in clearly contrast with a-QBNPs, which do not allow possessive pronouns:

(20a) el idiota de tu primo
‘the idiot of your cousin’

(20b) *un idiota de tu primo
‘an idiot of your cousin’

7.2.1.5 Modifiers

Lexical items such as muy ‘very’ are permitted in c-QBNPs, but not in a-QBNPs:

(21a) el muy idiota de tu primo
‘the very idiot of your cousin’

(21b) *un muy idiota de tu primo
‘a very idiot of your cousin’

These differences support the claim that in effect what is being dealt with are two different clauses, both in their meaning and structure, of QBNPs. Thus, the most natural hypothesis is to assume that the internal structure of a-QBNPs and c-QBNPs is different -i.e. the basic predication relation is not similar in both constructions (cf. Hulk and Tellier 2000). The proposal advanced so far, and the one assumed here, is that c-QBNPs can be analyzed in terms of predicate inversion (García and Méndez 2002; den Dikken 2006; Bartra and Villalba
while in a-QBNPs the AP-predicate has to be base-generated -i.e. it does not raise from an embedded position.

7.3 Spanish Comparative QBNPs

Spanish comparative QBNPs (c-QBNPs) have the following syntactic structure: Def-N/A de Def:N, and involve at some level of abstraction DP-internal predication -i.e. (22a-b) can be roughly paraphrased as (23a-b) respectively (Español-Echevarría 1997, 1998; Casillas Martínez 2003; den Dikken 2006; Villalba-Bartra-Kaufmann 2010):

(22a) el idiota del decano
‘the idiot of the dean’

(22b) el idiota de Juan
‘the idiot of John’

(23a) el decano es (un) idiota
‘The dean is (an) idiot.’

(23b) Juan es (un) idiota
‘John is (an) idiot.’

Spanish c-QBNPs show several restrictions in their syntax (Villalba 2007; Villalba-Bartra-Kaufmann 2010). These are discussed in the following sections.

7.3.1 Syntactic restrictions

In this section I discuss the most relevant properties of Spanish c-QBNPs for the analysis developed in this dissertation. First, the DP-subject of Spanish c-QBNPs must be strongly referential and definite/specific. Second, the AP-predicate is highly evaluative. Third, the preposition between the DP-subject and the AP-predicate is a dummy element.
7.3.1.1 The DP-subject

As Villalba (2007) points out, the DP subject, that is to say, the second DP in the linear order must be (normally) specific, as we saw in examples (17b-c). The following examples demonstrate the ban against non-definite/non-specific DP’s:

(24a) *el gilipollas de alcalde
the asshole of mayor

(24b) *el idiota de aquel médico
the idiot of that doctor

Another important characteristic of the DP subject concerns the occurrence of non-universal quantifiers in c-QBNPs. As Villalba (2007) has shown, non-universal monotone increasing quantifiers are fine (25), whereas non-universal monotone decreasing quantifiers yield ungrammatical results (26). Interestingly, non-universal quantifiers are banned from Spanish PredNPs and Spanish PPCCs:

(25a) los idiotas de algunos (de los) vecinos
‘the idiots of some (of the) neighbors’

(25b) los idiotas de muchos (de los) vecinos
‘the idiots of many (of the) neighbors’

(26a) *los idiotas de menos de tres (de los) vecinos
‘the idiots of less than three (of the) neighbors’

(26b) *los idiotas de pocos (de los) vecinos
‘the idiots of few (of the) neighbors’

Notice that non-universal increasing quantifiers are most easily interpreted partitively.

7.3.1.2 The XP-predicate

Non-evaluative predicate are not allowed in Spanish c-QBNPs (27). This is the same restriction that we find in Spanish PredNPs and the Spanish PP complement clauses (as we
saw in chapter 5 and 6 respectively):

(27a)  *el americano del doctor
       ‘the american of the doctor’

(27b)  *el muy cansado de tu tío
       ‘the very tired of your uncle’

In this sense, the XP predicate in Spanish c-QBNPs must be amenable to degree quantification. However, the set of degree quantifiers allowed in the predicate of c-QBNPs are those that denote high degree quantification (e.g., extremadamente ‘extremely’, muy ‘very’, etc.) (28). Mid-degree quantifiers are ruled out (29):

(28a)  el extremadamente idiota de tu amigo
       ‘the extremely idiot of your friend’

(28b)  el muy inocente de Juan
       ‘the very innocent of John’

(29a)  *el algo idiota de tu amigo
       ‘the some idiot of your friend’

(29b)  *el bastante inocente de Juan
       ‘the quite innocent of John’

7.3.1.3 The P de ‘of’

Villalba and Bartra-Kaufmann (2010) show how the preposition de ‘of’ fails standard constituency tests. Thus, the sequence de+DP ‘of+DP’ is not truly a Prepositional Phrase (PP). First, P de ‘of’ in c-QBNPs is not subject to wh-movement (30a), nor can be focalized (30b):

(30a)  *¿De qué estudiante, conocí al idiota t?,
       ‘Of which student did you meet the idiot?’

(30b)  *DEL ESTUDIANTE, conocí al idiota t,
       ‘OF THE STUDENT I met the idiot’
Also, P in Spanish c-QBNPs cannot be pronominalized by a possessive pronoun (31), nor gapped (32):

(31a) Conocí al idiota de Pepe.
     ‘I met the idiot of Pepe.’

(31b) *Conocí al idiota suyo.
     ‘I met that idiot of him.’

(32) *Conocí al idiota de Pepe, pero no al imbécil.
     ‘I met the idiot of Pepe, but not the fool.’

These facts seem to support the idea that P in c-QBNPs is not a true preposition, but rather a dummy element, whose presence is required by syntactic constraints. In this sense, it can be considered a RELATOR/LINKER in den Dikken’s term (2006). In the following section, some previous analyses of c-QBNPs are provided, mainly den Dikken (2006) and Villalba (2007).

7.3.2 Syntactic derivations of c-QBNPs

Den Dikken (2006) suggests a syntactic derivation of c-QBNPs in which the predicate inverts with its subject in the course of the derivation, so an empty predicate head can be licensed, which this author assumes to be the predicate-head SIMILAR (33a). This representation gives us the semantics of comparison. Thus, the syntactic derivation of (33a) proceeds among the following lines: First, a functional projection is created headed by the nominal copula ‘of’ —i.e. a LINKER in den Dikken’s terms. Second, the RELATOR ‘a’ incorporates to F for checking some formal features (33b). Third, the FP is selected by a nominal functional head (33c) (Villalba 2007).
This proposal can be summarized as follows: (i) the existence of a spurious indefinite article, (ii) the NumP hypothesis and (iii) predicate inversion. However, den Dikken’s solution runs into problems when we apply it to Spanish c-QBNPs, specifically the NumP hypothesis, since in Spanish for example partitive/specific quantifiers are possible (34), as we saw previously (Villalba 2007). The NumP hypothesis, as argued by Villalba (2007), is inadequate for the analysis of c-QBNPs.

(34a) los idiotas de muchos de los gobernadores
‘the idiots of many of the governors’

(34b) los idiotas de todos los gobernadores
‘the idiots of all of the governors’

Regarding the internal syntax of Spanish c-QBNPs, Villalba (2007) argues, following den Dikken’s Predicate Inversion work, that the underlying structure of a c-QBNP is as reflected in (35): the DP subject el doctor ‘the doctor’ stands in a predication relation with the DP predicate idiota ‘idiot’:

(35) [RP [DP el doctor] [R’ [DP idiota]]]

The mediation of the small clause is necessary in order to comply with the Linear Correspondence Axiom (LCA) (Kayne 1994), and is done by means of the RELATOR head R, a functional head that takes the predicate and its subject as its dependents, with one sitting in the specifier position of the RELATOR PHRASE and the other occupying the RELATOR’s complement position (den Dikken 2006), as we have already mentioned.
Villalba argues further that the predicate inverts around its subject in the course of the syntactic derivation and lands finally in Spec,FocP where the interpretable φ-features of the DP predicate can probe the interpretable φ-features of the DP subject, match and agree hold and valuation of the φ-features of the DP predicate takes place. Information structure is responsible for the inversion of the predicate. Finally, the D head, which is the D for the whole construction, is merged and the final DP is constructed (36):

\[(36) \quad [\text{DP el } [\text{FocP } [\text{DP imbécil} ] [\text{Foc’ } R+Foc=de ] [\text{RP } [\text{DP el doctor} ] [R’ tR tDP]]]]\]

Once more, the uninterpretable φ-features of the D head probe the interpretable φ-feature of the DP subject, without the intervention of the inverted predicate, which has become inactive after the Agree operation. Therefore, valuation takes place and the determiner ends up agreeing with the subject and the predicate (Villalba 2007: 131). Villalba crucially argues against den Dikken’s analysis of the DP subjects in c-QBNPs projecting only up to NumP. As he shows, in Spanish subject DP’s must project above NumP since they admit the presence of Qs, which merge above NumP (Villalba 2007: 126-7):

\[(37) \quad \text{los idiotas de muchos de los decanos} \quad \text{‘the idiots of many deans’}\]

To sum up, Villalba (2007) shows that den Dikken’s analysis for Germanic languages cannot be completely extended to Spanish c-QBNPs. According to his analysis, we obtain the following agreement configuration:

\[(38) \quad \text{el idiota del médico} \quad \text{‘the idiot of the doctor’}\]

\[ a. \text{Agree 1: Pred/DP in Spec,FocP & DP subject}\]

\[ [\text{FocP } [\text{DP idiota} ] [\text{FOC’ } R+Foc=de ] [\text{RP } [\text{DP el médico} ] [R’ tR tDP]]]]\]

\[ b. \text{Agree 2: D head } el \text{ & DP subject}\]
This agreement between the definite features of both DP’s is known as the *definiteness agreement effect* (DAE), a point first made for Spanish by Español-Echevarría (1997, 1998), who claims that an NP headed by a definite D must contain a second definite D – i.e. when a definite determiner appears in initial position, the post-prepositional nominal has to be definite:

(39a) el tonto del alcalde  
‘the idiot of the mayor’

(39b) *el tonto de un alcalde  
‘the idiot of a mayor’

This same effect has been noticed in the literature for other languages; cf. Napoli (1989: 205) for Italian or Danon (2008a,b) for Hebrew CSNs.

### 7.3.2.1 Some problems

The *definiteness agreement effect* (DAE) is quite puzzling because it is not always the case – i.e. a definite article does not show up necessarily in the DP subject position (Villalba 2007: 125-126; cf. also Casillas Martínez 2003 and Español-Echevarría 1998):

(40a) el idiota de vecino (que tengo)  
‘That stupid neighbor I have’

(40b) los idiotas de unos vecinos que tengo  
‘Those stupid neighbors I have’

We obtain an unexpected configuration  [+def] – [−def]. The semantics still depends on the subject DP, as the semantic interpretation (definite, specific) is controlled by the DP subject. A syntactic analysis along the lines of Villalba (2007) cannot account for the agreement between the features inside the predicate AP/DP and those of the subject D below because
the former do not c-command those of DP subject. Therefore, no Agree should be possible, contrary to fact. In González-Rivera and Delicado-Cantero (2010), a possible solution is given for this problem. We will see in the next section that feature sharing (FS) allows for such operation.

7.3.2.1.1 González-Rivera and Delicado-Cantero (2010)

Working within the Minimalist Program (MP), González-Rivera and Delicado-Cantero (2010) try to solve the paradoxes raised in the previous section. The Minimalist Program distinguishes between valued and unvalued features: valued features are those that possess a value of the feature, while unvalued features are those which await valuation. The Agree operation is conceived as the result of processes which do not necessarily require movement but just a configurational feature valuation/deletion mechanism (Chomsky 2000, 2001):

(41) Operation Agree

A probe lacking feature specification searches for a local –i.e. c-commanded goal (inside its domain) to undergo agreement (Chomsky 2000: 101, 134; Chomsky 2001: 12, 15)

(42) Valuation/Interpretability biconditional (Chomsky 2001):

1. Uninterpretable features are unvalued.
2. Interpretable features are valued.
3. Uninterpretable features must be valued and deleted.

Interface requirements mandate the elimination of all uninterpretable features by the end of the derivation (Chomsky 2000: 95, Chomsky 2001: 12, Chomsky 2007: 18). However, recent
studies (Frampton and Gutmann 2000; Pesetsky and Torrego 2007) have argued for a notion of agreement consisting of ‘feature sharing’, reminiscent of agreement as feature unification, common in HPSG (Pollard and Sag 1994). Within the probe-goal theory of the syntactic computation, the operation Agree can be formally defined as follows:

(43) \textit{Agree} (Pesetsky and Torrego 2007:4)

(i) An unvalued feature F (a probe) on a head H at syntactic location α (F_α) probes its c-command domain for another instance of F (a goal) at location β (F_β) with which to agree.

(ii) Replace F_α with F_β, so that the same feature is present in both locations.

If a goal is valued for F, replacing the token-value of the probe with the value of the goal results in an instance of valued F substituting for the specification of the unvalued probe. A valued F may now serve as the goal for some ulterior operation of Agree triggered by an unvalued, higher instance of F serving as a new probe. The result is that a single feature F will be shared by several positions, and the process could iterate further. Crucially, FS allows for indirect agreement without constant c-command. Unvalued probe 1 may probe and find goal 1. If goal 1 is also unvalued, both unvalued features become instances of the very same feature. Once any of the probes later on find an appropriate c-commanded goal 2, all of the instances of the feature in question will be instantaneously valued, even those for which no c-command relation continues to hold. Consider the following tree for \textit{el tonto del médico} “the idiot of the doctor”: 
In the previous tree, first D probes and finds a feasible goal inside AP/NP; both carry unvalued $\varphi$-features and consequently agree. D probes a second time and finds a suitable goal in the DP subject $\text{el médico}$ ‘the doctor’. This DP carries valued features. D agrees with the features of the DP subject. Given that there was a previous Agree relationship established between D and AP/NP, once D agrees with a goal with valued features –DP subject-, the features in AP/NP get automatically valued as well. Notice that at no time in the derivation does the A/N inside AP/NP c-command the DP subject and yet its $\varphi$-features are indirectly valued. In fact, all these scattered $\varphi$-features become one and the same.
7.3.2.1.1 Spanish c-QBNPs and the definiteness effect

Contrary to Español-Echevarría (1997, 1998), González-Rivera and Delicado-Cantero (2010) found that an upper definite article does not require another one in the lower DP (cf. the examples in (40) above). In such cases, while the external D is indeed definite, the subject DP’s are actually indefinite. Thus, we obtain an unexpected configuration of the type [+def] -- [-def], which contradicts the DEA. However, the “agreement” relation is not totally lost. Note that, while the upper D is definite, the indefinite internal DP determines the final interpretation of the whole QBNP. Given that the lower DPs are indefinites, but clearly specific, their corresponding QBNPs are indefinite, specific as well.

This apparently “incorrect” agreement can be extended to all QBNPs in reality. As indicated by Villalba (2007: 129), Spanish c-QBNPs require specificity rather than definiteness. In agreement with Lyons (1999) and, in particular, von Heusinger (2002), González-Rivera and Delicado-Cantero (2010) assume that indefinites and definites can both be specific and unspecific. Consider the following contexts:

(45a)  Speaker A:  ¿Quién te ha llamado al móvil?
        ‘Who called your cell?’

        Speaker B:  El tonto del vecino
        ‘That stupid neighbor’

(45b)  Speaker A:  ¿Quién te ha llamado al móvil?
        ‘Who called your cell?’

        Speaker B:  El tonto de (un) vecino que tengo
        ‘That stupid neighbor I have’

In (45a), El tonto del vecino is semantically interpreted as [+def], [+spec]. Both the speaker and the hearer can locate the referent, which is unique or inclusive (von Heusinger 2002). In (45b), on the other hand, El tonto de (un) vecino que tengo is semantically interpreted as [-def] but
still [+spec]; referential, the interpretation of the referent is anchored to the speaker, the referent is not unique and not inclusive (von Heusinger 2002). However, crucially both QBNPs have in common their specificity. Therefore, all c-QBNPs turn out to be easily accounted for once we reformulate the “Definiteness Agreement Effect” and its true nature is unveiled, that is, it is actually agreement in terms of specificity, and not definiteness, that matters; that is to say, we must speak of “Specificity Agreement Effect” (in keeping with Villalba 2007).

On the other hand, the previous revision of the DAE does not solve the paradox deriving from the fact that a QBNP with an external definite D is nevertheless interpreted as an indefinite in (45b). Thus, while the external D may be syntactically definite, the QBNP can still be semantically indefinite; the indefiniteness of the lower DP spreads up to the whole construction. A language where a similar effect takes place is Hebrew, where “Definiteness Spreading” is attested in Construct States (Danon 2008a). Consider the following examples from Danon (2008a):

(46a) Mapat ha-ʔir
Map the-city
‘The city map’

(46b) Tosav ha-staxim neʔecar la-xakira
resident the-territories arrested to-interrogation
‘A resident of the territories was arrested for interrogation’

(46c) Sefer (*ha-)zasuv ze
book (*the-)important this
‘This important book’

In (46a) there is only one definite article and it appears with the embedded noun, not with the higher one in the tree. However, notice that the definiteness of the embedded article spreads and applies to the higher noun, which is also interpreted as definite. Thus, both
“map and “city” are definite. Syntactically and semantically, both nominal are definite. In (46b), on the contrary, no definiteness spreading takes place, even though the syntactic structure is exactly the same as in (46a). The embedded noun “territories” has its own D, but the external noun, resident, is semantically indefinite even though the CS is syntactically definite nevertheless. The opposite is found in (46c), where the presence of a definite article yields ungrammatical results, despite the presence of a demonstrative, which forces a definite semantic interpretation of the CS. In this case, then, semantic definiteness is not expressed in syntactic terms.

The previous situation led Danon (2001, 2008a,b) to conclude that there is no correspondence between syntactic definiteness and semantic definiteness. Therefore, the syntactic valuation of [+def] does not immediately correlate with a definite interpretation: “[s]emantic definiteness is not simply the interpretation of a formal [def] feature” (Danon 2001: 31). Additional support for the differentiation between syntactic and semantic definiteness comes from German, as pointed out by Andreas Blümel (p.c.). Prenominal adjectives show strong agreement when the determiner is indefinite (47a), while a definite determiner brings about weak agreement (47b) (Leu 2008: 58):

(47a) ein gut-er Wien
     a good-strong wine
     ‘a good wine’

(47b) der gut-e Wein
     the good-weak wine
     ‘the good wine’

However, prenominal adjectives combining with a possessive determiner, which is semantically definite, show strong agreement, that is, while the possessive will turn the DP semantically definite, the adjective evidences that the DP remains syntactically indefinite.
This fact is further supported by Leu’s (2008) decomposition of possessive determiner such as *mein* (‘my’) in a silent possessive morpheme [POSS], a person morpheme *m*, and an indefinite article –*ein* (Leu 2008: 150):

\[(48) \quad [\text{POSS}] + [m] + \text{ein}\]

Again, while semantically definite in principle, the possessive contains a (morpho)syntactic indefinite. Therefore, *semantic* definiteness need not correspond with *syntactic* definiteness.

The preceding discussion sheds light on the syntax of Spanish C-QBNPs, in that it solves the paradox: if syntactic and semantic definiteness need not go hand in hand, then we can account for the fact that an external definite D can nevertheless be overridden by an internal indefinite DP. Let us observe how the derivation for *El tonto del médico* ‘the idiot of the doctor’ would proceed. First, the internal DP, the DP subject, contains an N that moves up to Num. The D probes and values its φ-features against those in N. D carries two syntactic and semantic features: [+definite] and [+specificity]:

\[(49) \quad \begin{array}{c}
\text{DP} \\
\mid \quad \text{D'} \\
\mid \quad \text{D} \\
\mid \quad \text{tonto} \\
\mid \quad \text{el} \\
\mid \quad [\text{uφ}] \\
\mid \quad [\text{val: } +\text{def}] \\
\mid \quad [\text{val: } +\text{spec}] \\
\mid \quad \text{Num} \\
\mid \quad \text{médico} \\
\mid \quad \text{NP} \\
\mid \quad \text{t} \\
\end{array}\]
As mentioned above, [+spec] is the relevant feature. Thanks to Specificity spreading/agreement, [+spec] from the embedded DP (the DP subject) is shared by the higher D, thus accounting for the definite and specific syntactic and, in this case, semantic interpretation of the c-QBNP:

(50)

```
  DP
    |
   D'
    /
   D  FP
  el  

  AP/NP  F'
  tonto  

  LINKER+R  RP
    de
```

Features are only interpreted once since there is only one referent (Alexiadou et al. 2007: 73); that is to say, double valuation but one interpretation. At the same time, González-Rivera and Delicado-Cantero (2010) also showed that syntactically overt [+def] does not necessarily correlate with semantic [+def], which is exactly what we find in *El tonto de vecino que tengo* ‘the idiot of the neighbor that I have’. Consider the following tree:
In this case, the syntactic and semantic indefiniteness of the internal DP spread up to the whole construction. While the outer D is syntactically [+def], it nevertheless does not carry a semantic definite feature, similarly to the Hebrew example (46c) above. Both Ds do, however, agree in [+specificity].

In sum, the analysis carried out in González-Rivera and Delicado-Cantero (2010) treats the agreement we find in Spanish c-QBNPs as a consequence of feature sharing. Furthermore, they argue for a modification of the (traditional) DEA in terms of Specificity spread/agreement. Thus, what is relevant in the analysis of c-QBNPs is the interpretable
feature [specificity]. However, this analysis faces a shortcoming: it still makes use of the NumP hypothesis. In the following section I provide a syntactic derivation in GMG.

7.3.3 Towards a GMG analysis

The syntactic analyses discussed in the previous section do not explain why the predicate of Spanish c-QBNPs inverts around its subject in the course of the syntactic derivation. Following García and Méndez (2002), I will argue that inversion of the predicate is necessary to discharge a strong semantic feature, namely, [+G]. Recall that the feature [+specificity] plays a crucial role in the interpretation of Spanish c-QBNPs, as argued by González-Rivera and Delicado-Cantero (2010). Thus, the derivation of sentence (52) would proceed among the following lines. The initial multiset of lexical items is as follows:

(52a)   el idiota del vecino
         'the idiot of the neighbor'

(52b)

1. Lexical item: el
   Categorial features: d
   Selectional features: n
   Interpretable features: [+definite, +specific, +singular, +masculine]
   [Non-interpretable features: ...]

2. Lexical item: idiota
   Categorial features: Pred
   Selectional features: d
   Interpretable features: [+G]
   [Non-interpretable features: ...]
3. Lexical item: vecino
   Categorial features: n
   Selectional features: 0
   Interpretable features: [+singular, +masculine, +count, +animate]
   Non-interpretable features: ...

4. Lexical item: relator
   Categorial features: P
   Selectional features: ⟨d⟩
   Interpretable features: P_{dummy}
   Non-interpretable features: ...

5. Lexical item: el
   Categorial features: d
   Selectional features: n
   Interpretable features: [+definite, +specific, +singular, +masculine]
   Non-interpretable features: ...

The syntactic computation of (52) is as follows. First, the determiner el ‘the’ and the noun vecino ‘neighbor’ merge < el vecino > and the selection feature of the determiner is deleted. In the second step, the de ‘of’ and el vecino ‘the neighbor’ merge < del vecino > and the selection feature of the RELATOR P is deleted. Notice that since the RELATOR in Spanish c-QBNPs is a dummy P, it will take a determiner as an argument and return as a value a determiner as well, not a PP, just as in PPC’s clauses. Thus, the categorial feature of < del vecino > will be d, instead of P. In the third step, the adjective idiota ‘idiot’ enters the syntactic derivation and merges with del vecino ‘of the neighbor’ < del vecino idiota >. In the fourth step, the adjective idiota ‘idiot’ moves/merge to discharge the strong feature [+G] and we obtain < idiota del vecino >. Finally, in the fifth step, the determiner el enters the syntactic derivation and
selects the small clause \(<\text{idiota del vecino}\>\) and agreement between the determiner and the small clause holds. In (52c) I provide the syntactic representation:


to

(52c) \[
\begin{align*}
\text{Merge: } & <\text{el idiota del vecino}> \\
\hspace{1em} & k <\text{el}> \hspace{1em} \text{Move/Merge: } <\text{idiota del vecino}> \\
\hspace{2em} & k <\text{idiota}> \hspace{2em} \text{Merge: } <\text{del vecino idiota}> \\
\hspace{3em} & \text{Merge: } <\text{del vecino}> \hspace{3em} k <\text{idiota}> \\
\hspace{4em} & k <\text{de}> \hspace{4em} \text{Merge: } <\text{el vecino}> \\
\hspace{5em} & k <\text{el}> \hspace{5em} k <\text{vecino}> 
\end{align*}
\]

In the following section, I discuss the syntax of Spanish a-QBNPs.

### 7.4 Spanish Attributive QBNPs

In Spanish, a-QBNP has the following syntactic structure: \(\text{NP}(AP) \ de \ \text{NP}\) \(\text{NP}(AP)\) of NP' and involves at some level of abstraction NP-internal predication -i.e. (53a) can be paraphrased roughly as (53b):\(^6\)

(53a) \ un idiota de gobernador \\
\‘an idiot of a governor’

\(^6\) There are examples of a-QBNPs that do not admit such interpretation: e.g., the most natural interpretation for \(\text{un asco de ponencias}\) ‘some disgusting presentations’ is that \text{the presentations are disgusting}. This interpretation arises when the DP-subject does not name a professional occupation. Based on this interpretation one may suggest that these examples have the syntax of a-QBNPs but the semantics of c-QBNPs.
(53b) un idiota como gobernador
‘an idiot as a governor’

In (53a) we have a DP-subject *gobernador* ‘governor’ being modified by a AP-predicate *idiota* ‘idiot’. As highlighted above, the most natural hypothesis is to assume that a-QBNPs are base generated, with the predicate preceding its subject. Thus, a-QBNPs do not involve predicate inversion.

7.4.1 The internal structure of Spanish a-QBNPs

Den Dikken (2006: 162) claims that a-QBNPs support a derivation based on predicate inversion, but these clauses are better understood as the two NPs based-generated in their surface order. However, this author does not discuss in detail why a based-generated analysis is more suitable for a-QBNPs. García and Méndez (2002: 103-104), on the other hand, claim that a-QBNPs may receive a syntactic interpretation based on predicate inversion. Their claim is that adjectives in QBNPs have a strong modal feature, namely, [M<sub>valorative</sub>] that needs to be discharged in the course of the syntactic derivation. While this is true -i.e. adjectives in a-QBNPs are highly valorative/evaluative, as we will see), no answer is provided for the different semantic interpretation that c-QBNPs and a-QBNPs receive, plus their syntactic distribution. It turns out to be that both den Dikken (2006) and García and Méndez (2002) are on the right track if some distinction of a-QBNPs are assumed.

7.4.1.1 Not all a-QBNPs are in effect a-QBNPs

In note 1 I advanced the idea that some a-QBNPs share the semantics of c-QBNPs: they involve one level of predication. Thus, the most natural interpretation of (27a) is (27b):
(54a) una mierda de ponencias
‘a shit of talks’

(54b) The talks were a shit (bad).

The most natural interpretation (or at least one possible interpretation) of (55a) is (55b):

(55a) un idiota de decano
‘an idiot of a dean’

(55b) As a dean, x is an idiot.

However, the difference between (54) and (55) is not merely one of interpretation, but they show structural discrepancies -i.e. examples such as (54) may be left-dislocated, but (55) cannot. Notice that c-QBNPs can be left-dislocated (58):

(56) Una mierda de ponencias las que escuché hoy.
‘A shit of talks the one I heard today.’

(57) *Un idiota de decano al que vi hoy.
‘An idiot of a dean the one I saw today.’

(58) Al idiota del decano lo vi hoy.
‘It was the idiot of the dean that I saw today.’

These differences seem to support the hypothesis that not all cases of a-QBNPs considered so far in the literature (e.g., una mierda de ponencias ‘a shit of talks’) are in effect a-QBNPs, but rather they may be considered special cases of c-QBNPs, or other type of constructions. If this proposal is on the right track, then a-QBNPs are those in which the subject names a professional occupation. Some relevant properties and the internal structure of this clause are discussed below.

7 Examples like una mierda de ponencias ‘a shit of talks’ not only show number disagreement between the subject and the predicate, but they also may allow lexically frozen attributes that do not agree with the subject, e.g. una bazoña de arroz ‘a distaste of rice’ (Villalba and Bartra-Kaufmann 2010; see also Casillas Martinez 2003). Those adjectives that do not agree with the subject are inherently gendered lexeme -i.e., they come from the lexicon with a fixed gender value (Casillas 2003).
7.4.1.2 Relevant Properties

With the above discussion in mind, we can discuss the relevant properties of what I consider a-QBNPs, namely, those clauses that involve two levels of predication and the subject names a professional occupation. First, these clauses show up mainly after the copula in canonical \textsc{subject-copula-predicate}. Hence, a-QBNPs are used predicatively (59), in clear contrast with c-QBNPs, which may receive an equitative interpretation when appearing after the copula (60):

(59) Fortuño es un idiota de gobernador.
    ‘Fortuño is an idiot of a governor.’

(60) Fortuño es el idiota del gobernador.
    ‘Fortuño is the idiot of the governor.’

In (59) the a-QBNP clause tells us something about the referent of the subject, namely, that he is a governor and an idiot (as a governor). In other words, it describes the subject. In (60), however, what is said is that there exists a (unique) \(x\), which is governor, and that such \(x\) is equal to \textit{Fortuño}: \(\exists x \ [P(x) \ & \ x = \text{Fortuño}]\). Second, the subject of a-QBNPs has to be a bare nominal, either singular or plural, though bare plural are not common in present-day Spanish:

(61a) un imbécil de abogado
     ‘an idiot of a lawyer’

(61b) unos imbéciles de abogados
     ‘an idiots of lawyers’

Third, the subject and the predicate may not agree in gender (62a); however, the meaning is preserved as (62b) shows:

(62a) Pepe es una bestia de profesor.
     ‘Pepe is a beast of a professor’ (= Pepe is a good/extraordinary professor.)
Fourth, the N predicate must have an evaluative/appreciative (typically negative, although not necessarily; see example (62a)) interpretation. However, non-evaluative/non-appreciative adjectives may be licensed when modified by appreciative and elative morphology:

(62b)  Pepe, as a professor, is a beast (but as a friend, is a jerk).

(63a)  *un abogado de estudiante
       ‘a lawyer of a student’

(63b)  *un argentino de profesor
       ‘an Argentinean of a professor’

(64a)  un abogaducho de estudiante
       ‘a shyster of a student’

(64b)  un argentinísimo de profesor
       ‘an argentinism of a professor’

Fifth, the preposition de ‘of’ between the subject and the predicate may be considered a nominal copula -i.e. a meaningless element whose presence in the structure is forced by syntactic constraints. Like ser ‘to be’, the nominal copula can serve as the lexicalization of the RELATOR-head (den Dikken 2006). (65a), for example, can be paraphrased without the presence of the preposition (65b), just as its counterpart in English (66a), but with the predicate following its subject (66b). Thus, copular elements in the Spanish nominal domain are realized as de ‘of’.

(65a)  un idiota de gobernador
       ‘an idiot of a governor’

(65b)  un gobernador idiota
       ‘an idiot governor’

(66a)  an idiot of a governor
(66b)  an idiot governor
Finally, as I have mentioned previously, both NPs must be indefinite in Spanish a-QBNPs. We can now summarize the basic properties of Spanish a-QBNPs as follows:

1. a-QBNPs must be interpreted predicatively, hence, they seem to be restricted to the position following the copula in canonical SUBJECT-COPULA-PREDICATE clauses.
2. The subject is a bare noun, either singular or plural; though in present-day Spanish bare plurals are not common.
3. The subject names a professional occupation.
4. The predicate must have an evaluative/appreciative interpretation. Adjectives that do not receive this interpretation may be licensed by elative morphology.
5. The preposition *de* is a nominal copula -i.e. an element whose presence in the structure is forced by syntactic constraints.
6. The subject and the predicate must be both indefinites.
7. a-QBNPs involve two levels of predication.

Thus, following an insight by den Dikken (2006), the internal structure of canonical a-QBNPs can be represented as follows:

(67a) Fortuño es un idiota de gobernador.
‘Fortuño is an idiot of a governor.’

(67b) [ki Fortuño [RELATOR=ser [kn un idiota] [RELATOR=de [kn gobernador]]]]

(67a) may be paraphrased as (68a), with both having the semantic interpretation of (69a):

(68a) Fortuño es un gobernador idiota.
‘Fortuño is an idiot governor.’

(68b) [ki Fortuño [RELATOR=ser [kn un gobernador] [RELATOR=∅ [kn idiota]]]]
(69a) Fortuño es un idiota como gobernador.
    ‘Fortuño is an idiot as a governor.’

(69b) \[ [[np \text{Fortuño} [\text{RELATOR=ser} [\text{np \un idiota} [\text{RELATOR=como} [\text{np \gobernador}]]]]]] \]

In GMG, the syntactic derivation of *un idiota de gobernador* ‘an idiot of a governor’ will proceed among the following lines. The initial multiset of lexical items is as follows:

(70a) un idiota de gobernador
    ‘a idiot of a neighbor’

(70b)

<table>
<thead>
<tr>
<th>Lexical item:</th>
<th>un</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorial features:</td>
<td>d</td>
</tr>
<tr>
<td>Selectional features:</td>
<td>n</td>
</tr>
<tr>
<td>Interpretable features:</td>
<td>[+indefinite, ± specific, +singular +masculine]</td>
</tr>
<tr>
<td>Non-interpretable features:</td>
<td>...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lexical item:</th>
<th>idiota</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorial features:</td>
<td>Pred</td>
</tr>
<tr>
<td>Selectional features:</td>
<td>d</td>
</tr>
<tr>
<td>Interpretable features:</td>
<td>[+modal]</td>
</tr>
<tr>
<td>Non-interpretable features:</td>
<td>...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lexical item:</th>
<th>gobernador</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorial features:</td>
<td>n</td>
</tr>
<tr>
<td>Selectional features:</td>
<td>0</td>
</tr>
<tr>
<td>Interpretable features:</td>
<td>[+singular, +masculine, +count +animate]</td>
</tr>
<tr>
<td>Non-interpretable features:</td>
<td>...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lexical item:</th>
<th>relator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorial features:</td>
<td>P</td>
</tr>
<tr>
<td>Selectional features:</td>
<td>\langle d \rangle</td>
</tr>
<tr>
<td>Interpretable features:</td>
<td>P_{dummy}</td>
</tr>
<tr>
<td>Non-interpretable features:</td>
<td>...</td>
</tr>
</tbody>
</table>
The syntactic computation of (70) is as follows: first, the preposition de ‘of’ and gobernador ‘the governor’ merge \(< de gobernador >\) and the selection feature of the RELATOR P is deleted. The categorial feature of \(< de gobernador >\) is d. In the second step, the adjective idiota ‘idiot’ enters the syntactic derivation and merges with de gobernador ‘of governor’ \(< idiota de gobernador >\). Finally, the determiner un enters the syntactic derivation and selects the small clause \(< idiota del gobernador >\). In (70c) I provide the syntactic representation:

\[(70c) \quad \text{Merge: } < \text{un } \text{idiota de gobernador }> \]

\[
\text{<un> } \quad \text{Merge: } < \text{idiota de gobernador }> \\
\text{<idiota> } \quad \text{Merge: } < \text{de gobernador }> \\
\text{<de> } \quad \text{Merge: } < \text{gobernador }> 
\]

7.5 Conclusion

In this chapter I have discussed the syntax and semantics of the so-called Qualitative Binominal Noun Phrase constructions (QBNPs). These clauses can be broadly classified in two classes: comparative QBNPs and attributive QBNPs (den Dikken 2006). I have argued for a non-unifying account for both constructions based on their syntactic distribution and semantic properties. While c-QBNPs involve predicate inversion, a-QBNPs are better understood as based-generated with the predicate preceding its subject. I have also highlighted that some examples considered as a-QBNPs by some researchers e.g. \textit{una mierda de ponencias} ‘a shit of talks’ are not a-QBNPs, but c-QBNPs or other constructions. If this
proposal is correct, then a-QBNPs are those in which the subject names a professional occupation. This proposal is far from conclusive and more research needs to be done in this direction.

There are other cases of QBNPs in which the clause is headed by a demonstrative, as the example in (71) shows. Demonstratives are by nature [+def]:

(71) Ese idiota de gobernador
‘that idiot of a governor’

The question that arises is whether or not we should consider those examples as instances of c-QBNPs or a-QNBPs. If we apply the properties of a-QBNPs listed toward the end of Section 4, particularly (6) -i.e., the subject and the predicate must be both indefinites, then we are forced to conclude that QBNPs headed by a demonstrative are not examples of a-QBNPs, but rather of c-QBNPs. In these clauses the feature [+def] of N₁ spreads to the whole clause. But again, more research needs to be done in this direction.

Finally, the semantics of QBNPs in general is still unresolved. In González-Rivera (2010), I try to account for the semantics of QBNPs following a neo-Carlsonian approach. Further research must tackle the semantics of such clauses. A comprehensive semantic analysis of such clauses will help us to better understand the different types of QBNPs.
Chapter 8: Conclusion

In this dissertation several aspects of the syntax and semantics of Spanish verbless clauses have been examined. I have focused my attention on three apparently non-related and non-finite constructions that exhibit clausal properties: Spanish PredNPs, PPCCs and QBNPs. The latter has two types: attributive and comparative (cf. den Dikken 2006). In each of the clauses examined there is a subject-predicate relationship -i.e. the YP predicate is a structurally open syntactic constituent searching for an appropriate argument, or XP subject in this case. In GMG, an open constituent is one with the following SEL specification: n > 0, whereas an argument is of SEL 0. The discussion has been limited to predicative or copulative be sentences. The analysis advanced here is that Spanish PredNPs, PPCCs and comparative QBNPs can be analyzed in terms of predicate inversion. Movement of the predicate in each case is due to a strong semantic feature [+X] that needs to be discharged in the course of the syntactic derivation. It was argued that in Spanish PredNPs the strong feature evaluativity [+E] was responsible for predicate inversion, while in PP complement clauses and comparative QBNPs the strong feature gradability [+G] triggers movement of the predicate over its subject. It was suggested also that evaluative predicates are by nature gradable. This proposal is based on and supports one of the basic tenets of GMG, namely, that syntactic structure is an emergent property of feature-driven computation.

In addition to this, it was argued that a copula or RELATOR lies between the understood subject and predicate of the clauses under analysis. In PPCCs and comparative
QBNPs this RELATOR is the nominal copula *de* ‘of’, which is a meaningless element whose presence in the structure is forced by syntactic constraints. The lexical entry provided for this dummy P was the following:

<table>
<thead>
<tr>
<th>Lexical item:</th>
<th>relator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorial features:</td>
<td>P</td>
</tr>
<tr>
<td>Selectional features:</td>
<td>⟨d⟩</td>
</tr>
<tr>
<td>Interpretable features:</td>
<td>P_{dummy}</td>
</tr>
<tr>
<td>Non-interpretable features:</td>
<td>...</td>
</tr>
</tbody>
</table>

In Spanish PredNPs the RELATOR is not empty -i.e. it accommodates the tense feature. It was argued that the default tense in this construction is the present tense, but a past tense interpretation is also possible, as the following examples demonstrate:

(1a) Muy brillante este escritor.  
    ‘Very clever this writer.’

(1b) ⇒ Este escritor es muy brillante.  
    ‘This writer is very clever.’

(2a) Muy brillante aquel escritor.  
    ‘Very clever that writer.’

(2b) ⇒ Aquel escritor es muy brillante.  
    ‘That writer is very clever.’

(2c) ⇒ Aquel escritor era muy brillante.  
    ‘That writer was very clever.’

(2a) admits two interpretations. The first one is in the present tense and the second one is in the past tense. This is evidence that supports the hypothesis that tense is projected in Spanish PredNPs. This proposal was based on an insight by Benmamoun (2008), who has argued that tense is universally projected even though it does not need to co-occur with a
verbal head. This is the case with Spanish PredNPs: tense can be interpreted but there is no verbal head. Tense can be considered the RELATOR.

The lexical entry provided in chapter 5 was the following:

```
[Lexical item: relator]
Categorial features: T
Selectional features: ⟨Pred, d[+nom]⟩
Interpretable features: [+present]
Non-interpretable features: ...
```

Thus, the syntactic derivation of (1a) is as follows:

Move/Merge: < Muy brillante este escritor … >

```
<r < muy brillante > Merge: < este escritor r muy brillante >

<r < este escritor > Merge: < r muy brillante >

<r < r > Merge: < muy brillante >
```

It was also posited that Spanish PredNP’s could be analyzed as exclamative sentences. The main argument for this was the following: PredNPs express the speaker’s strong emotional reaction toward some fact. Spanish PPCCs receive this same interpretation, but the responsible of such reading is an operator of exclamatory force (OP_{excl}). I provide the following lexical entry for OP_{excl}:

```
[Lexical item: Op]
Categorial features: ∅
Selectional features: d
Interpretable features: [+Exclamative, +High Degree]
Non-interpretable features: ...
```
The previous lexical entry tells us that Spanish PPCCs select a syntactic string of category d - i.e. headed by a determiner, as seen in chapter 6. This is what we found in such clauses: PPCCs are small clauses headed or selected by the determiner lo. The following lexical entry was provided for lo:

<table>
<thead>
<tr>
<th>Lexical item:</th>
<th>lo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorial features:</td>
<td>d</td>
</tr>
<tr>
<td>Selectional features:</td>
<td>sc{Pred [+deg, +foc]}</td>
</tr>
<tr>
<td>Interpretable features:</td>
<td>[+definite, +singular]</td>
</tr>
<tr>
<td>Non-interpretable features:</td>
<td>...</td>
</tr>
</tbody>
</table>

The syntactic derivation of *lo estúpido de tu comentario* ‘how stupid you comment is’ will be the following:

Merge: < lo estúpido de tu comentario >

\[ k < lo > \quad \text{Move/Merge: }< \text{estúpido de tu comentario}> \]

\[ k < \text{estúpido} > \quad \text{Merge: }< \text{de tu comentario estúpido} \ldots > \]

\[ \text{Merge: }< \text{de tu comentario} > \quad k < \text{estúpido} > \]

\[ k < \text{de} > \quad \text{Merge: }< \text{tu comentario} > \]

\[ k < \text{tu} > \quad k < \text{comentario} > \]

In both, Spanish PredNPs and Spanish PPCCs the DP subject must be specific, as seen in chapters 6 and 7. This is what was also found also in verbless clauses in general, as the discussion in chapter 4 suggests. This follows from the fact that verbless clauses allow
only individual-level predicates and according to Milsark’s (1979) generalization only inherent properties can be predicated of strong determiners, as seen in chapter 3.

The feature specificity plays a fundamental role in the analysis of comparative QBNPs, the last verbless clause that was analyzed in terms of predicate inversion. These clauses require the DP subject to be specific. Examples such as (3a) and (3b) motivate this restriction (cf. González-Rivera and Delicado-Cantero 2010):

(3a) *el tonto de vecino
‘the idiot of neighbor’

(3b) el tonto de vecino que tengo
‘the idiot of neighbor I have’

Even though in (3b) there is no definite article, the construction is still grammatical due to the specificity restriction or *Specificity Agreement Effect* (cf. chapter 7).

As highlighted earlier, comparative QBNPs admit an analysis based on predicate inversion. The syntactic string el tonto del vecino ‘the idiot of the neighbor’ will have the following syntactic derivation:

```
Merge: < el idiota del vecino >

  k < el >       Move/Merge: < idiota del vecino >

  k < idiota >       Merge: < del vecino idiota >

    Merge: < del vecino >       k < idiota >

      Merge: < del vecino >       k < de >

        Merge: < el vecino >
```
The syntactic analysis of attributive QBNPs is different from the previous analysis -i.e. these clauses do not involve predicate inversion. If syntax determines semantics and syntax-semantics interface is a function from syntax, then the most natural hypothesis is to assume that the syntax of comparative and attributive QBNPs is different, given that the interpretation of both clauses is not the same, as seen in chapter 7. The analysis assumed here is that the XP predicate of attributive QBNPs is base-generated -i.e. it does not raise from an embedded position. The syntactic derivation of *un idiota de vecino* ‘an idiot of a neighbor’ is as follows:

```
Merge: < un idiota de gobernador >
```

```
k < un >
```

```
Merge: < idiota de gobernador >
```

```
k < idiota >
```

```
Merge: < de gobernador >
```

```
k < de >
```

```
Merge: < gobernador >
```

In sum, this dissertation addresses the syntactic and semantic properties of non-finite sentences that exhibit clausal characteristics. It provides a unified account of (apparently) nonsentential constructions in Spanish: PredNPs, PPCCs and QBNPs, specifically, comparative QBNPs. It was argued that such clauses involve predicate inversion and the syntactic analysis was developed within a Generalized Minimalist Grammar.


Formal approaches to Slavic linguistics: The Indiana meeting (pp. 144-165). Ann Arbor, MI: Michigan Slavic Publications.


238


from the First Nordic Conference on Syntactic Freezes, Joensuu, May 19-20, 2006, (pp. 177-192). Joensuu: Joensuu University Press.


Stowell, T. (1978). What was there before there was there?. In D. Farkas, W. M. Jacobsen & K. W. Todrys (Eds.), Papers from the Fourteenth Regional Meeting of the Chicago Linguistics Society (pp. 457-471). Chicago: Chicago Linguistics Society.


247


