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Summary in English

**THE ARGUMENT STRUCTURE OF
THE NOUN PHRASE IN SPANISH**

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0. Introduction

The aim of this dissertation is to analyze the thematic, argument and hierarchical structure of the Noun Phrase in Spanish. In the same way that verbs have a network of thematic roles that project into syntactic arguments, certain nouns can select arguments due to morphological inheritance or to internal lexical properties. Thus, the well-known distinction between complements and adjuncts is not only valid for the clausal domain but also for the nominal domain.

I will delve into the organization of these networks of nominal thematic roles (θ -roles) in Spanish and their realization as arguments in the form of Prepositional Phrases (PP) functioning as Noun Complements, as well as their replacement by a prenominal possessive. Taking the parallelism between the internal structure of the Noun Phrase (NP) and that of the Verb Phrase (VP) as a starting point, I will examine the mechanisms of argument selection in nouns, putting special emphasis on the relationships between the nominal head and its arguments, the lexical nature of such heads, the hierarchical disposition of these arguments according to semantic and syntactic criteria, the type of preposition that introduces them and the conditions on their extraction and movement.

Most studies on the argument structure of the NP in Spanish and other languages (Cinque 1980, Demonte 1985, Abney 1987, Escandell 1995, Ticio 2010, Peris 2012, Fábregas 2014, among many others) are fundamentally based on the parallelism with the VP and therefore focus almost exclusively on deverbal nouns, which inherit their thematic properties from the verbs of origin. However, since not all nouns project their arguments through verbal parameters, it is necessary to propose new principles of argument selection that are valid for all NPs with argument structure.

This summary of the dissertation is divided into four sections. Section 1 describes the relevant thematic and syntactic theoretical assumptions; section 2 presents the analysis of the NP from a thematic, structural and hierarchical perspective; section 3 offers a new proposal for argument selection within the NP; finally, section 4 briefly summarizes the conclusions of the dissertation.

1. Theoretical framework

This project adopts a framework that is essentially generative, under the models of Government and Binding (Chomsky 1981, 1986) and the Minimalist Program (Chomsky 1995), but also incorporates important elements of both traditional and functional grammar.

1.1. Thematic assumptions

The thematic theory and ARGUMENT STRUCTURE (Grimshaw 1990) state that verbs have a network of thematic roles (θ -roles) —such as agent, theme, experiencer, beneficiary, etc.— that realize into syntactic arguments — such as subject, object...— in a process known as *linking*. The theta-criterion (Chomsky 1981) establishes a biunivocal correspondence between θ -roles and arguments and the thematic hierarchies (Jackendoff 1972) determine which θ -role is assigned to each argument according to their degree of prominence.

Since there are many thematic hierarchies and there is no agreement on which specific one applies for linking, I adopt the THEMATIC PROTO-ROLES approach (Dowty 1991), which suggests that all θ -roles can be reduced to two prototypes with several semantic entailments:

- (1) *Proto-Agent*
 - a. volitional involvement in the event or state
 - b. sentience (and/or perception)
 - c. causing an event or change of state in another participant
 - d. movement (relative to the position of another participant)
 - (e. exists independently of the event named by the verb)
- (2) *Proto-Patient*
 - a. undergoes change of state
 - b. incremental theme
 - c. causally affected by another participant
 - d. stationary relative to movement of another participant
 - (e. does not exist independently of the event named by the verb)

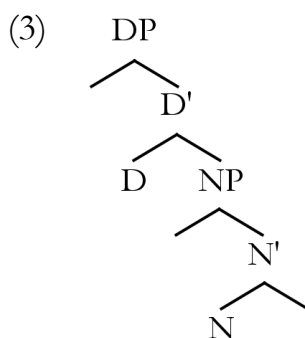
The problems posed by the multiple proposals of thematic hierarchies are then solved: the argument for which the predicate entails the greatest number of Proto-Agent properties will be lexicalized as the subject or external argument; the argument having the greatest number of Proto-Patient entailments will be lexicalized as the direct object.

The THEMATIC CORRESPONDENCE HYPOTHESIS (Giorgi & Longobardi 1991: 29), inherited from the lexicalist approach initiated by Chomsky (1970), suggests that verbs and corresponding nouns have a similar thematic network that selects the same argument as the external one. Thus, the idea that both clausal and nominal arguments are essentially regulated by the same rules is one of the underlying hypotheses adopted throughout this dissertation. Assuming that both the nominal and the clausal domain experience the same processes means that the syntactic projection principles of lexical categories are unified in some way.

The UNIFORMITY OF THETA-ASSIGNMENT HYPOTHESIS (Baker 1988: 46) states that identical thematic relationships between items are represented by identical structural relationships between those items. Therefore, thematic hierarchies must also be reflected in the syntactic representation: if a Proto-Agent is hierarchically more prominent than the Proto-Patient, the Proto-Agent must also be syntactically higher than the Proto-Patient.

1.2. Syntactic assumptions

I assume the well-known generative DP-HYPOTHESIS (Abney 1987), which states that determiners are the head (D) of their own functional projection, the Determiner Phrase (DP), and take an NP as their complement:



The DP in generative linguistics can be related to the famous distinction in Spanish functional syntax between the two types of NPs (Rojo & Jiménez Juliá 1989): the *frase nominal* is the NP headed by a determiner, whereas the *frase sustantiva* is the bare NP without a D.

Following the economizing trend of Minimalism, I will work only with FUNCTIONAL CATEGORIES that are semantically well motivated within the nominal domain: the DP, as a parallel to CP (Complementizer Phrase, within the verbal domain); the AgrP (Agreement Phrase), as a parallel to TP (Tense Phrase); and the nP, as a parallel to vP. For extraction purposes, I will also consider the FocP (Focus Phrase).

For preposition marking within the NP, I assume TRANSFER THEORY applied to Spanish (Gutiérrez Ordóñez 1997), which divides prepositions into *translatives*, which allow for a constituent to behave as a different category and, therefore, to have another syntactic function, and *functional indexes*, whose purpose is simply to mark the syntactic function of the constituent they head. Prepositions modifying verbs are mostly functional indexes, whereas those modifying nouns can be both.

2. The structure of the Spanish NP

2.1. Thematic and argument structure

Two main types of nouns can develop an argument structure: nominalizations and relational nouns. Nominalizations are nouns that derive morphologically from verbs (called *deverbal*) or adjectives (called *deadjectival*), and, therefore, inherit the arguments from their categories of origin. Relational nouns, on the other hand, have intrinsic arguments due to their internal lexical properties and can be divided into “pure” relational nouns, which express a relationship between two entities, and representation nouns, also known as “picture” nouns, whose peculiarities make them closer to deverbal nouns. Hence, four specific types of nouns with argument structure can be defined: deverbal (4a), deadjectival (4b), relational (4c) and representation nouns (4d).

- (4) a. la destrucción de la ciudad
‘the destruction of the city’
- b. la inteligencia de Tiffany
‘Tiffany’s intelligence’
- c. el hermano de Laura
‘Laura’s brother’
- d. la foto del paisaje
‘the photo of the landscape’

Therefore, considering the origin of the argument structure, we can distinguish two classes of NPs:

- (5) a. NPs with inherited argument structure. They are headed by deverbal and deadjectival nouns, from which they inherit their arguments.
- b. NPs with inherent argument structure. They are headed by relational and representation nouns, whose internal lexical properties allow them to project arguments.

Since deverbal nominalizations are the NPs that show a greater parallelism with the verbal domain, most studies on nominal argument structure use them as a reference (see, among many others, Chomsky 1970, Cinque 1980, Milner 1982, Demonte 1985, Abney 1987, Giorgi 1987, Grimshaw 1990, Giorgi & Longobardi 1991, Escandell 1995, Zamparelli 2000, Giusti 2006, Recio 2010, Ticio 2010, McIntyre 2014). Picture nouns, thanks to their semantic relationship with a verbal predicate, have a similar behavior because they seem to accept verbal arguments such as agent or theme. Nevertheless, as will be shown later, deadjectival and relational nouns show completely different patterns of argument selection, with no relationship with verbs whatsoever.

2.1.1. Parallelism between NP and VP

There are four shared characteristics between the argument structure of NPs and that of sentences: the equivalence of the thematic network, the possibilities on ellipsis, the restrictions imposed by the head, and the allowance for predicative modifiers. These are obviously more evident in nominalizations from verbs.

First, verbal θ -roles can be preserved in the equivalent nominalization. For example, a deverbal NP can maintain the same two θ -roles of the original sentence it derives from:

- (6) a. Ana_{AG} tradujo la canción_{THEME}.
‘Ana translated the song’
b. la traducción de Ana_{AG} de la canción_{THEME}
‘Ana’s translation of the song’

However, the inheritance is sometimes partial, since certain aspectual properties of the verbs are not always transmitted to the derived nouns. Thus, as an example, a verb that can be either transitive or intransitive may be nominalized as an intransitive nominal that does not allow for a theme; verbs that can have either eventive or resultative readings may nominalize and only maintain one of the readings

Second, arguments can be elided in both NPs and VPs, but the ellipsis is much more frequent in the nominal domain. Thus, nominal PP arguments are always optional, whereas verbal arguments can be either obligatory or optional:

- (7) a. La profesora_{AG} decidió revisar el examen_{THEME}.
‘The teacher decided to revise the exam’
b. la decisión de la profesora_{AG} (de revisar el examen_{THEME})
‘the teacher’s decision (to revise the exam)’

Hence, the argument structure of the NP is more lax than that of the VP and the ellipsis of nominal arguments seems to be systematically optional.

Third, the lexical head, whether it is a verb or a noun, imposes selectional restrictions of many types on the equivalent nominalization. Categorical selection conditions can be seen in (8), where both the noun and the verb select a sentential complement. Semantic selection can be seen in (9), where lexical aspect restrictions apply in both cases.

- (8) a. Los físicos afirmaron que la Tierra es redonda.
 ‘The physicists claimed that the earth is round’
 b. La afirmación de los físicos de que la Tierra es redonda
 ‘the physicists’ claim that the earth is round’
- (9) a. *Ana llegó durante tres semanas.
 ‘Ana arrived for three weeks’
 b. *la llegada de Ana durante tres semanas
 ‘Ana’s arrival for three weeks’

One specific and very interesting type of semantic selection in Spanish is mood selection. Both verbs and derived nouns can select indicative or subjunctive in the sentence they take as a complement. For example, since the verb *intentar* triggers subjunctive, the deverbal noun *intento* selects also subjunctive:

- (10) a. Intentan que ENTENDÁIS/*ENTENDÉIS sus ideas.
 ‘they try that you understand-SUBJ/*IND their ideas’
 b. el intento de que ENTENDÁIS/*ENTENDÉIS sus ideas
 Lit. ‘their attempt that you understand-SUBJ/*IND their ideas’

Furthermore, this type of mood selection extends beyond the cases of deverbal nouns and argumental sentences, as it also affects adjunct sentences or non-derived nominal heads.

Finally, only arguments, not adjuncts, allow secondary predication within both VPs and NPs. This happens not only with deverbal heads (11b) but also with representation nouns (12):

- (11) a. Ernesto_i llegó *borracho*_i.
 ‘Ernesto arrived *drunk*’
 b. [La llegada de Ernesto_i *borracho*_i] me sorprendió.
 Lit. ‘The arrival of Ernesto *drunk* surprised me’
- (12) el retrato del rey_i *sentado*_i
 ‘the portrait of the king *seated*’

As has been shown, most of the points of contact between the thematic structure of the VP and that of the NP are based on deverbal nouns or representation nouns, since they are the ones that seem to accept verbal θ -roles and arguments.

2.1.2. Linking in the VP and NP in Spanish

Despite all these similarities, the main difference between the argument structure of VPs and NPs continues to be the linking algorithm that transforms θ -roles into syntactic arguments. See the next sentence and its corresponding nominalization:

- (13) a. El comité_{AG} concedió la beca_{THEME} a 100 alumnos_{BEN}.
 ‘the committee granted the scholarship to 100 students’
 b. la concesión de la beca_{THEME} a 100 alumnos_{BEN} por parte del
comité_{AG}
 ‘the granting of the scholarship to 100 students by the committee’

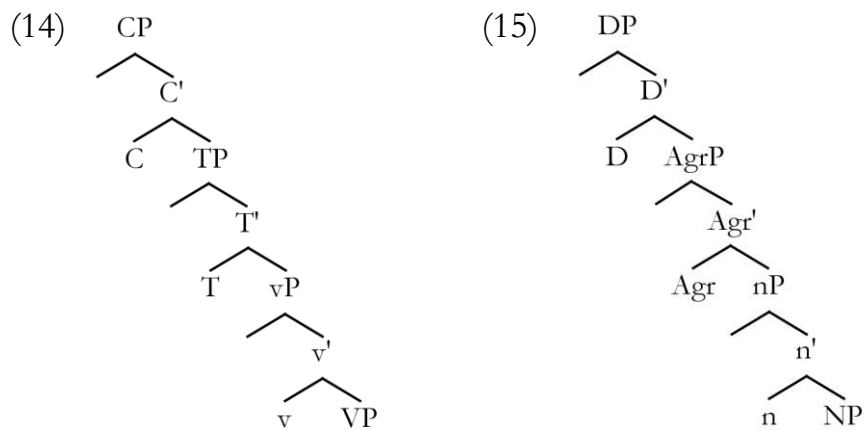
The formal mechanisms for the realization of arguments in the sentence domain in Spanish are fundamentally three (13a): relative position of constituents (preverbal subject), morphological agreement (between subject and verb) and preposition-marking (dative *a*). On the contrary, the compact structure of the nominal domain makes preposition-marking the main resource for linking θ -roles and arguments (13b): *de* marks the theme, *a* keeps marking the beneficiary and *por parte de* marks the agent. Since adjuncts are also headed by prepositions, these play an essential role as elements that introduce the different constituents in the Spanish NP.

Following the well-known transfer-theory-based functionalist dichotomy that opposes translatives to functional indexes, I postulate a new dichotomy for prepositions in Spanish: *argumental markers* introduce arguments and *adjunction markers* introduce adjuncts, not only in sentences but also in nominal structures. In the latter, the prototypical argumental marker is *de*, whereas the adjunction marker can vary widely.

2.2. Internal structure

A clear parallelism can be traced between the syntactic structure of the Spanish VP and that of the NP, with similar functional projections in the syntactic tree and analogous relationships between the different arguments and the head.

Assuming the *Split VP Hypothesis* (Larson 1988) applied to the NP (Adger 2003), and the functional categories of CP and TP for the verb, and DP and AgrP for the noun, I assume the following parallel structure of sentences and NPs:



As can be seen in the trees, there are three distinct levels of structural analysis: the level of argument relations (vP and nP), the level of agreement (TP and AgrP) and the level of connection to discourse (CP and DP).

The most prominent argument of the sentence is the subject, higher in the structure, selected as the first θ -role in a thematic scale, and showing morphological agreement with the verb. In the NP there is an argument that

satisfies the same “subject” conditions due to its structural prominence, its semantic properties and its morphosyntactic features: the possessive.

The prenominal possessive occupies a prominent position as the head D of the DP, allowing it to c-command over the whole AgrP and the rest of the projections. This position is demonstrated by its distribution in Spanish, where prenominal possessives are incompatible with other determiners, but also in Germanic languages, where the Saxon genitive marker ‘s applies to the whole possessor and not only to the head N.

As for its semantic properties, the prenominal possessive provides reference to the whole DP but keeps its own at the same time. This allows it to behave as an autonomous referential expression and, consequently, satisfy argument positions:

- (16) a. *[su_i amigo]_i
‘her friend’
b. *[el amigo de Ana]_i
‘Ana’s friend’
- (17) a. [su_i amigo]_k
‘her friend’
b. [el amigo de Ana]_k
‘Ana’s friend’

As shown in the referential indexes of the examples, the same reference for *su* and for *su amigo* makes the sequence ungrammatical (16), but distinct reference for each results in grammatical DPs (17).

Lastly, the possessive shows morphological agreement with the nominal head. In Spanish and other Romance languages, this agreement is manifested in gender and number features, but in other languages, such as Hungarian or Yupik, there is also agreement in person and case, making the similarities between the subject of the VP and the subject of the NP even more evident.

2.3. Hierarchical structure

The PP arguments of the Spanish NP are organized in a hierarchical way around the head noun. The evidence for this hierarchy comes from *wh*-movement or extraction facts: only certain PP arguments can be extracted out of the NP under very specific circumstances (Roca 2012).

2.3.1. Movement and prolific domains

Assuming the conditions on locality (Manzini 1994, Rizzi 2013) and anti-locality (Grohmann 2003) of movement, the previous three levels of representation within the sentence can be reinterpreted as PROLIFIC DOMAINS (Grohmann 2003) or local domains for syntactic movement:

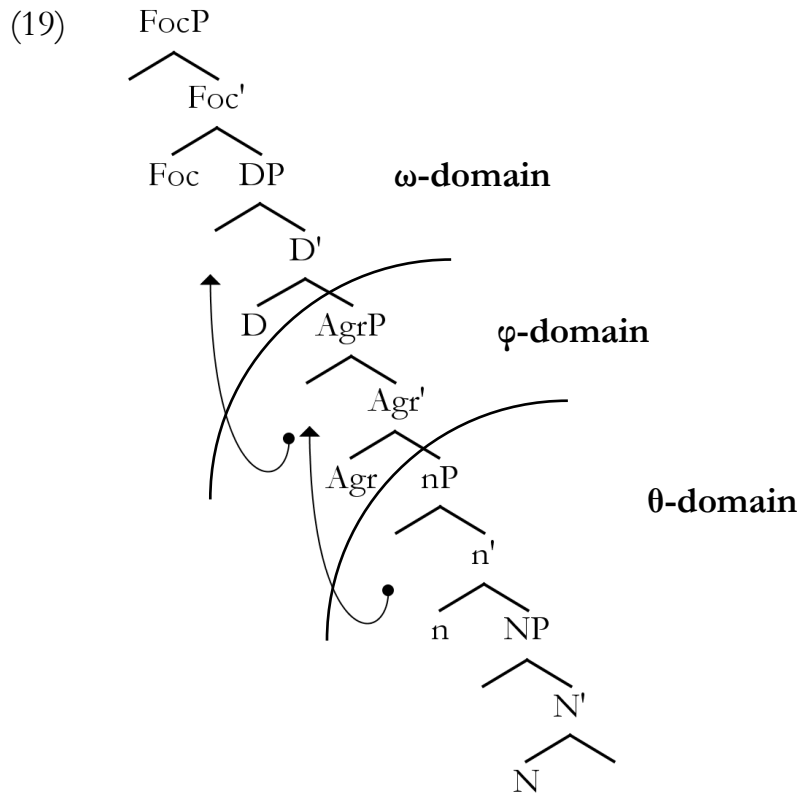
- (18) a. θ -DOMAIN: part of the derivation where thematic relations are created.
b. φ -DOMAIN: part of the derivation where agreement properties are legitimized.
c. ω -DOMAIN: part of the derivation where discourse information is encoded.

A movement from the θ -domain to the ω -domain is not allowed because it violates locality, whereas a movement within the same domain is in principle ungrammatical because it violates anti-locality¹. Hence, movement must go from a prolific domain to the next higher prolific domain without crossing more than one maximal projection, as shown below in (19).

The transfer of these three verbal domains to nominal expressions gives rise to the basic structure for the Spanish NP (Ticio 2010)²:

¹ It is *in principle* ungrammatical because we will see later that there are some cases of movement within the same domain, but it must be from complement to specifier.

² As previously suggested, a FocP (Focus Phrase) is necessary because it is the position where elements extracted out of the NP land.



The prototypical arguments of nominal expressions are located in different places of the structure. The possessor, a purely nominal argument that obviously does not appear in sentences, is the highest³: it generates in the specifier of AgrP. The agent, a verbal argument, generates in the specifier of nP, the projection that works as a locus of agentivity. The theme, another verbal argument, is generated as the complement of the head N. This structural hierarchy {Possessor > Agent > Theme} can be easily demonstrated through binding and quantifier variable tests.

2.3.2. Extraction of PP arguments

Any PP argument is extractable out of a non-specific Spanish NP, whether it is a theme (20), an agent (21) or a possessor (22), as long as it is the only argument present in the structure:

³ The presence of a possessor in the argument structure of the NP obviously breaks the thematic parallelism between the VP and the NP. For more details on the semantic notion of 'possessor', see RAE & ASALE (2009: 1362).

- (20) a. He visto varias películas de aventuras_{THEME}.
Lit. 'I have seen several movies of adventures'
b. ¿*De qué*_{THEME} has visto varias películas ~~*de qué*~~_{THEME}?
Lit. 'Of what have you seen several movies?'
- (21) a. He visto varias películas de Almodóvar_{AG}.
Lit. 'I have seen several movies of Almodóvar'
b. ¿*De quién*_{AG} has visto varias películas ~~*de quién*~~_{AG}?
Lit. 'Of whom have you seen several movies?'
- (22) a. He visto varias películas de mi hermano_{POSS}.
Lit. 'I have seen several movies of my brother'
b. ¿*De quién*_{POSS} has visto varias películas ~~*de quién*~~_{POSS}?
Lit. 'Of whom have you seen several movies?'⁴

However, if there is more than one PP argument, only one of them can be extracted according to the thematic hierarchy {Possessor > Agent > Theme}. If there is a possessor, it is always extractable, since it blocks the extraction of both agents and themes; if there is no possessor, the agent can be extracted, but it blocks the extraction of the theme, which can only move when it is the only PP argument, as shown in (20).

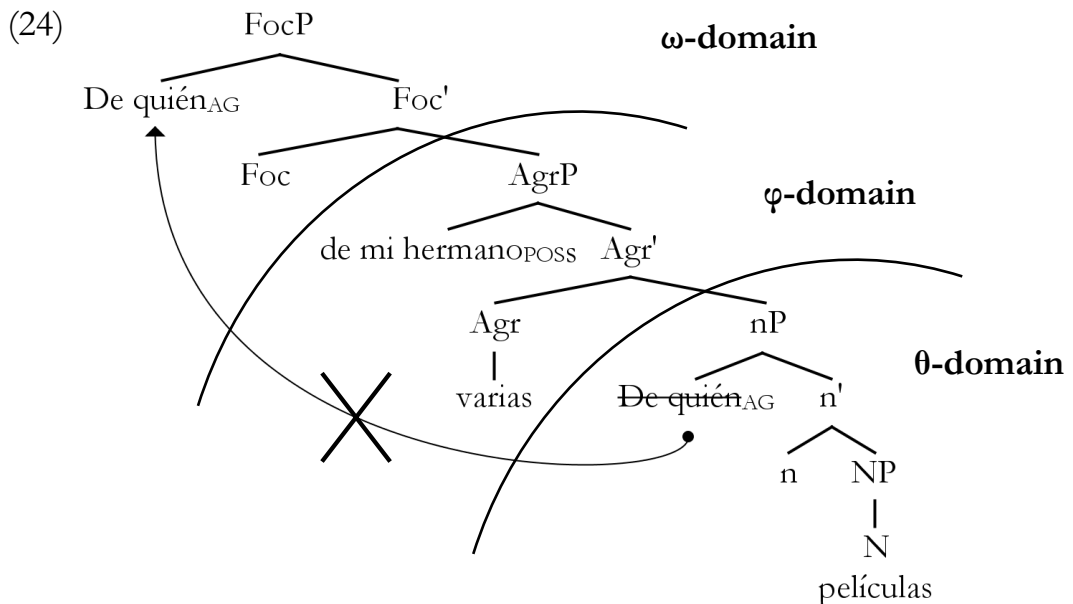
These blocking effects are explained by the conditions of movement across the prolific domains. The following example shows the impossibility of extraction of an agent in presence of a possessor:

⁴ On the contrary, extraction out of specific NPs is always banned in Spanish, whether the element extracted is the theme, the agent or the possessor:

- (i) a. *¿*De qué*_{THEME} has visto estas películas ~~*de qué*~~_{THEME}?
Lit. 'Of what have you seen these movies?'
b. *¿*De quién*_{AG/POSS} has visto estas películas ~~*de quién*~~_{AG/POSS}?
Lit. 'Of who have you seen these movies?'

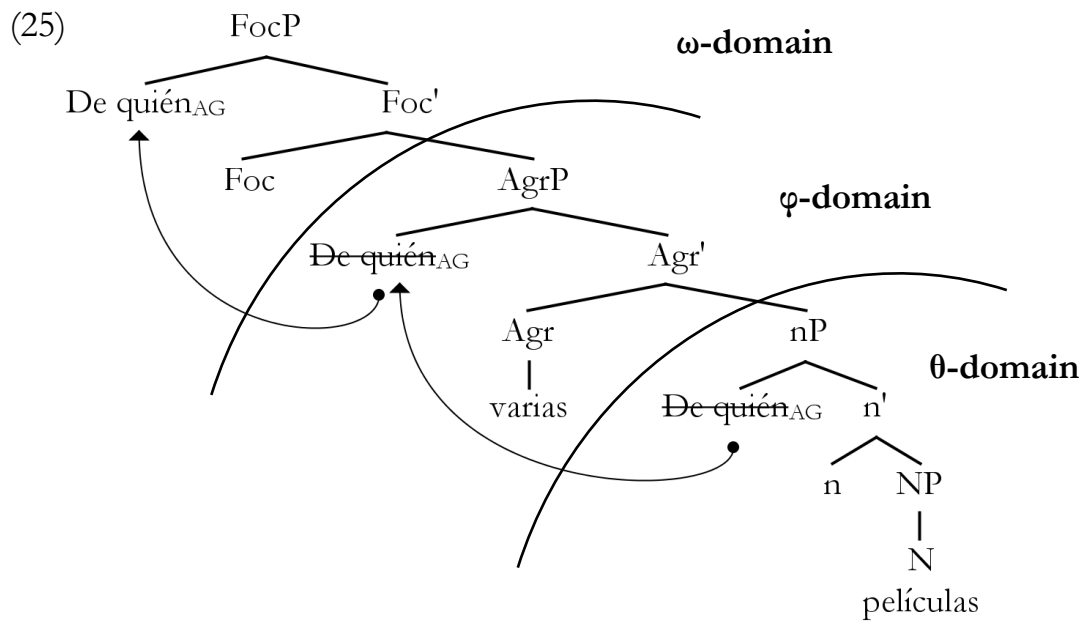
- (23) a. He visto varias películas de Almodóvar_{AG} de mi hermano_{POSS}.
 Lit. ‘I have seen several movies of Almodóvar of my brother’
 b. *¿*De quién*_{AG} has visto varias películas ~~*de quién*~~_{AG} de mi hermano_{POSS}?
 Lit. ‘Of who have you seen several pictures of my brother?’

There is a clear structural explanation for this ungrammatical movement of the agent. The possessor, in Spec AgrP in the φ -domain, blocks the extraction of the agent, in Spec nP, because the latter would need to cross from the θ -domain to Spec FocP in the ω -domain, violating locality conditions⁵:



On the contrary, if there is no possessor, the position of Spec AgrP becomes available for the agent to land and respect the locality conditions of movement from one prolific domain to the next one:

⁵ The lack of a DP projection in these trees is due to the lack of specificity, since they are headed by the weak determiner *varias* ‘several’. For more evidence, see Ticio (2010: 105).



The same blocking effects and subsequent syntactic explanations apply to the extractions of themes in presence of an agent or a possessor. However, as mentioned above, extraction from specific NPs is not allowed, since it involves the projection of a DP in the ω -domain. This creates a new specifier position that blocks any movement to Spec FocP, since it would violate locality and anti-locality conditions.

2.3.3. The possessivization test

The prenominal possessive has been proven to be the most prominent argument or subject of the NP. The possessivization test consists of replacing a postnominal PP argument by a prenominal possessive (26) and, therefore, determines which argument is the most prominent or the subject of the NP. It can only be applied to PPs introduced by the genitive preposition *de* (27), the prototypical argumental marker in Spanish:

- (26) a. el libro de Chomsky_{AG}
 ‘Chomsky’s book’
 b. su_{AG} libro
 ‘his book’
- (27) a. la confianza en el gobierno_{THEME}
 ‘the trust in government’

b. *su_{THEME} confianza

Lit. 'its trust'

Similarly to extraction, when there is more than one PP argument, only one of them can be possessivized according to the same thematic hierarchy {Possessor > Agent > Theme}. The following example shows that the agent blocks the possessivization of the theme:

(28) a. la descripción de María_{AG} del paisaje_{THEME}

'María's description of the landscape'

b. su_{AG} descripción del paisaje_{THEME}

'her description of the landscape'

c. *su_{THEME} descripción de María_{AG}

Lit. 'its description of Mary'

Consequently, the possessivization test can also be understood as a peculiar type of syntactic movement that follows the same restrictions, prolific domain conditions and thematic hierarchies as *wh*-extraction, as we will prove in the next section.

3. Argument projection within the Spanish NP

We have distinguished two classes of NPs (see 5 above): NPs with inherited argument structure (headed by deverbal and deadjectival nouns) and NPs with inherent argument structure (headed by relational and representation nouns). Following the relevant studies on the argument structure of the NP (Chomsky 1970, Cinque 1980, Demonte 1985, Abney 1987, Giorgi 1987, Grimshaw 1990, Giorgi & Longobardi 1991, Escandell 1995, Picallo 1999, Zamparelli 2000, Giusti 2006 and Ticio 2010), most of the analyses so far have used deverbal and representation nouns, since their argument structure is similar to that of verbs, with θ -roles such as agent or theme. Nevertheless, deadjectival and pure relational nouns have consistently been ignored in the literature, despite the fact that they also select arguments.

The problem is that their argument structure seems to follow completely different patterns.

In this section, I will formulate a principle of argument projection that accounts for all NPs with argument structure (deverbal, deadjectival, relational and representation nouns) under the thematic proto-roles approach and possessivization based on the three prolific domains for syntactic movement.

3.1. Theoretical proposal

The thematic proto-roles (Dowty 1991) solve the problems raised by the numerous thematic hierarchies for the ordering of θ -roles. Thus, the Proto-Agent and the Proto-Patient are the only two necessary θ -roles and the number of semantic entailments (see 1 and 2 above) is the responsible for their conversion into syntactic arguments. These “verbal” proto-roles, inherited from the verb domain, can be translated to NPs headed by deverbal nouns, following the *Thematic Correspondence Hypothesis* (Giorgi & Longobardi 1991):

- (29) a. el diseño del nuevo puente_{P-PAT} de Calatrava_{P-AG}
‘the design of the new bridge by Calatrava’

Also, the Proto-Agent and the Proto-Patient, due to their semantic connection to a verbal predicate, seem to work perfectly for NPs headed by representation nouns (30a), where, as mentioned above, they can even co-appear with a Possessor, a strictly nominal argument (30b):

- (30) a. el retrato del rey_{P-PAT} de Goya_{P-AG}
‘the portrait of the king by Goya’
b. el retrato de Goya_{P-AG} del coleccionista_{POSS}
‘the collector’s portrait by Goya’

Nevertheless, they do not work with NPs whose nominal head is deadjectival (31) or purely relational (32), which only have one PP argument:

- (31) la inteligencia de Susana_{i?}
 ‘Susana’s intelligence’
- (32) el hermano de Pablo_{i?}
 ‘Pablo’s brother’

Consequently, we need a new set of θ -roles that can be assigned for the arguments of these NPs. For this purpose I adopt the nominal proto-roles (Barker & Dowty 1993):

- (33) *Proto-Part*
 a. located at or defines a boundary of the other relatum
 b. is a property of the other relatum
- (34) *Proto-Whole*
 a. entirely contains the other relatum as a proper part
 b. is a concrete entity

The argument having the greatest number of Proto-Whole properties will be the PP argument, whereas the argument having the greatest number of Proto-Part properties will be the head noun. Thus, in the examples above, *de Susana* and *de Pablo* will be the Proto-Whole, while *inteligencia* and *hermano* will be the Proto-Part.

Therefore, we can differentiate two classes of proto-roles that work for two classes of nouns each: verbal proto-roles (Proto-Agent and Proto-Patient) apply to deverbal and representation nouns; nominal proto-roles (Proto-Whole and Proto-Part) apply to deadjectival and relational nouns. The subject of the NP will be the highest argument according to the corresponding hierarchy of proto-roles.

We can now propose our reformulation of the argument projection within all types of NP:

- (35) GENERAL PRINCIPLE OF NOMINAL ARGUMENT SELECTION:
- a. In NPs with argument structure inherited from or linked to verbs, the genitive argument corresponding to the Possessor will

be lexicalized as the subject of that NP; in absence of a Possessor, the subject will be the genitive argument for which the predicate entails the greatest number of Proto-Agent properties; in absence of a Proto-Agent, the genitive argument having the greatest number of Proto-Patient entailments will be lexicalized as the subject.

b. In NPs with argument structure of relational type or inherited from adjectives, the genitive argument for which the predicate entails the greatest number of Proto-Whole properties will be lexicalized as the PP argument; the argument having the greatest number of Proto-Part entailments will be lexicalized as the head noun.

Therefore, the relevant criterion for explaining the argument structure of the NP is not its inherited or inherent character (see 5 above), but rather its “verbal” or purely “nominal” nature: deverbal and representation nouns follow the verbal θ -roles of Proto-Agent and Proto-Patient⁶, whereas deadjectival and relational nouns follow the nominal θ -roles of Proto-Whole and Proto-Part.

The underlying idea to this principle is that argument structure cannot be explained only from parallelism with the VP, translating the organization patterns of verbal arguments to the nominal domain. There exist, in fact, two classes of argument structure, verbal and nominal, as summarized in the following table:

⁶ As said above, the presence of a Possessor, a nominal argument, breaks the absolute parallelism with the verb domain; nonetheless, the idea is that the other arguments are actually shared.

(36) *Classes of argument structure*

Argument structure	Inherited	Inherent
Verbal <i>Proto-Agent / Proto-Patient</i>	Deverbal nouns	Representation nouns
Nominal <i>Proto-Whole / Proto-Part</i>	Deadjectival nouns	Relational nouns

This proposal keeps the validity of the *Thematic Correspondence Hypothesis* (Giorgi & Longobardi 1991), which predicts that verbs and corresponding nouns have the same thematic structure and select the same θ -role as the external one. The change is to consider that “corresponding nouns” are not only deverbal, but also, due to semantic connection, representation nouns. On the contrary, deadjectival and relational nouns are excluded from this hypothesis: their argument structure does not have any relationship to verbs, so they require strictly nominal principles of argument selection.

Finally, the possessivization test, which determines which of the PP arguments is the most prominent or the subject of the NP, needs to be revised to accommodate this new proto-role approach:

(37) POSSESSIVIZATION PRINCIPLE

A possessive can replace:

- a. in deverbal or representation NPs, the genitive argument according to the thematic hierarchy {Possessor > Proto-Agent > Proto-Patient}.
- b. in deadjectival or relational NPs, the genitive argument having the greatest number of Proto-Whole entailments, that is, the PP argument.

Only one PP argument accepts possessivization according to one of the two hierarchies, behaving as the subject on the NP.

3.2. Analysis

The *General Principle of Nominal Argument Selection* can be tested through possessivization tests, similar to the extractions mechanisms applied earlier. In fact, I propose that possessivization can be understood as a peculiar type of syntactic movement that follows the parameters of locality and anti-locality across the three prolific domains in the NP: θ -domain, φ -domain and ω -domain. Each argument that is possessivized needs to raise from its base-generation site to its final position in D, in the ω -domain, and its movement must be from a prolific domain to the next higher prolific domain without crossing more than one maximal projection.

3.2.1. General structure

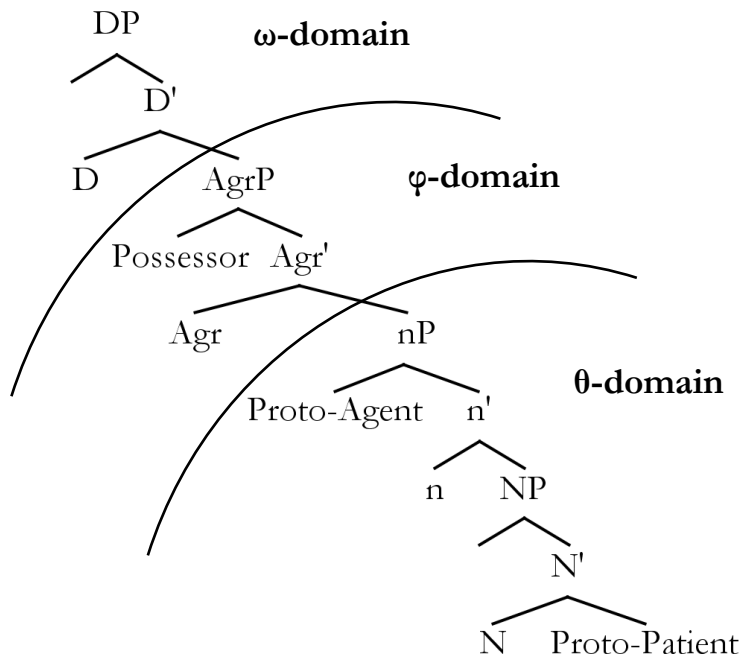
As presented above, NPs can contain two classes of PP arguments according to the nature of their argument structure:

- (38) a. Arguments of “verbal” argument structure: Possessor, Proto-Agent and Proto-Patient.
b. Arguments of “nominal” argument structure: Proto-Part and Proto-Whole.

Each of these proto-roles-based arguments occupies a structural position in the syntactic derivation. The organization of the arguments is therefore hierarchical. The tree in (39) represents the general argument structure of all NP with “verbal” argument structure in Spanish, that is, headed by deverbal and representation nouns⁷:

⁷ Since I do not analyze extractions facts here, I will not consider FocP in this general structure nor in the following cases of possessivization. Nevertheless, a FocP is obviously projected in cases of *wh*-movement out of the NP.

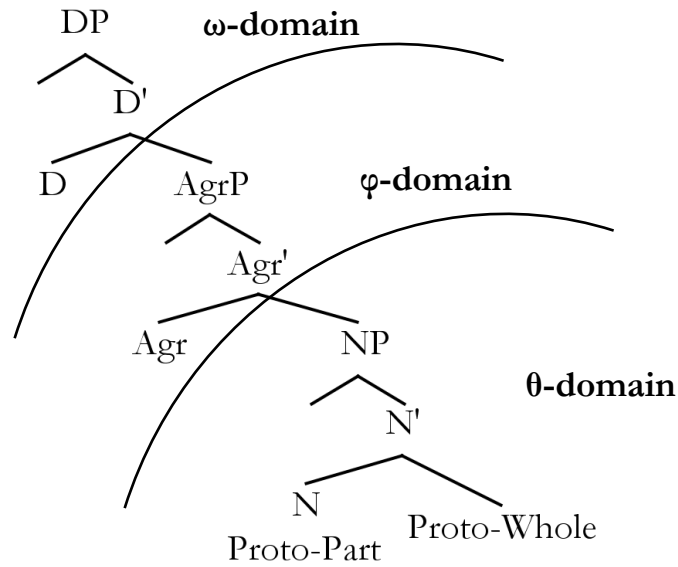
(39) *Noun Phrase with “verbal” argument structure*



In these NPs, the possessor occupies the highest structural position, in Spec AgrP in the φ -domain, whereas the other two arguments are in the θ -domain: the Proto-Agent is in Spec nP, and the Proto-Patient is the complement of the head N. The functional category of nP, locus of agentivity, is only projected when there is an argument assigned to the Proto-Agent; otherwise, the θ -domain contains only the lexical category of NP.

On the other hand, the tree of (40) represents the general argument structure of all NP with “nominal” argument structure in Spanish, that is, headed by deadjectival and relational nouns:

(40) *Noun Phrase with “nominal” argument structure*



As can be observed, in these NPs the Proto-Part is always the head noun, whereas the Proto-Whole is always the PP argument, generated at the complement of N. Both are located in the θ -domain. Furthermore, the functional category of nP is never projected due to the permanent lack of agentivity, since these nouns follow strictly nominal parameters of argument structure and there is no place for a Proto-Agent θ -role.

The three prolific domains work as local domains for movement according to locality and anti-locality conditions: movement must be from a prolific domain to the next higher prolific domain without crossing more than one maximal projection. As shown above, these conditions apply to the extraction of *wh*-elements out of the NP, but I suggest that the same conditions operate in possessivization tests, which can be considered a specific type of syntactic movement. Nevertheless, some clarifications need to be made in order to account for the differences between extraction and possessivization.

The first one is related to functional projections. *Wh*-movement requires the projection of a FocP, and in non-specific NPs there is not a DP category, since weak determiners generate in Agr and not in D. Possessivization, on the other hand, does not require a FocP and always needs the projection of a DP, since the possessive is a strong determiner that

generates in D. Consequently, given that all possessives are specific, all NPs with possessivization are specific.

The second one is about the landing site of the movement. An extracted *wh*-element lands in Spec FocP, whereas a possessivized argument lands in the head D. This implies that the final movement of an extraction (to a specifier) has to be different from the final movement of a possessivization (to a head). This makes possessivization a peculiar movement, since it does not follow the three prototypical patterns of movement (head to head, complement to specifier, or specifier to specifier).

Applying the general conditions on movement presented above to the phenomenon of possessivization, I formulate a preliminary version of what I coin the DOMAIN LEGITIMIZATION FOR POSSESSIVIZATION:

- (41) In order to possessivize, a given nominal argument must move from a prolific domain to the immediately following prolific domain without crossing more than one maximal projection.

The following sections show analytical evidence for the general structures of (39) and (40) through possessivization data according to the domain legitimization for possessivization (41).

3.2.2. NPs with verbal argument structure

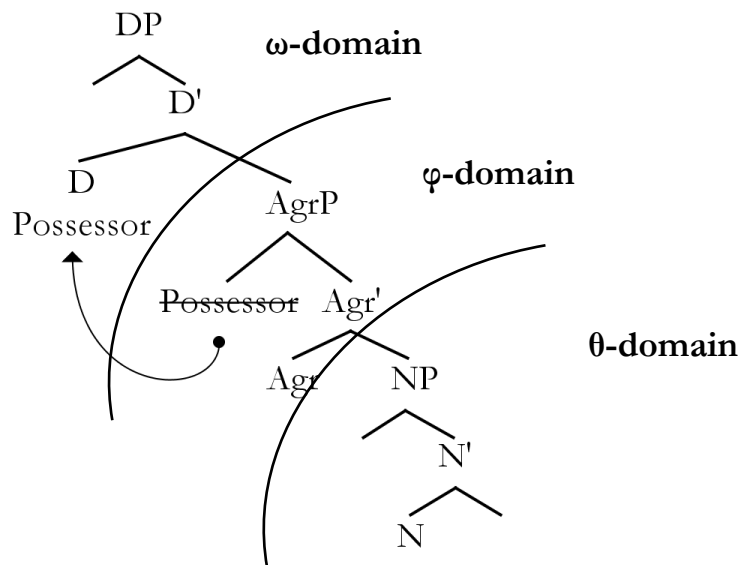
Deverbal and representation nouns give rise to NPs with verb-like arguments organized through the hierarchy {Possessor > Proto-Agent > Proto-Patient}. The three roles can be possessivized as long as they are the only PP present in the NP:

- (42) a. el cuadro del coleccionista_{POSS}
‘the collector’s painting’
b. su_{POSS} cuadro
‘his painting’
- (43) a. la intervención de la presidenta_{P-AG}
‘the president’s intervention’

- b. $\underline{\text{su}}_{\text{P-AG}}$ intervención
 ‘her intervention’
- (44) a. la foto $\underline{\text{de Salamanca}}_{\text{P-PAT}}$
 ‘the photo of Salamanca’
- b. $\underline{\text{su}}_{\text{P-PAT}}$ foto
 Lit. ‘its photo’

Let us now analyze the movement of each of them. The possessor is the argument that makes the shortest movement, since it is the most structurally prominent. Thus, from its base-generation site in Spec AgrP in the φ -domain, it rises to D, in the immediately following prolific domain, the ω -domain, respecting the domain legitimization for possessivization:

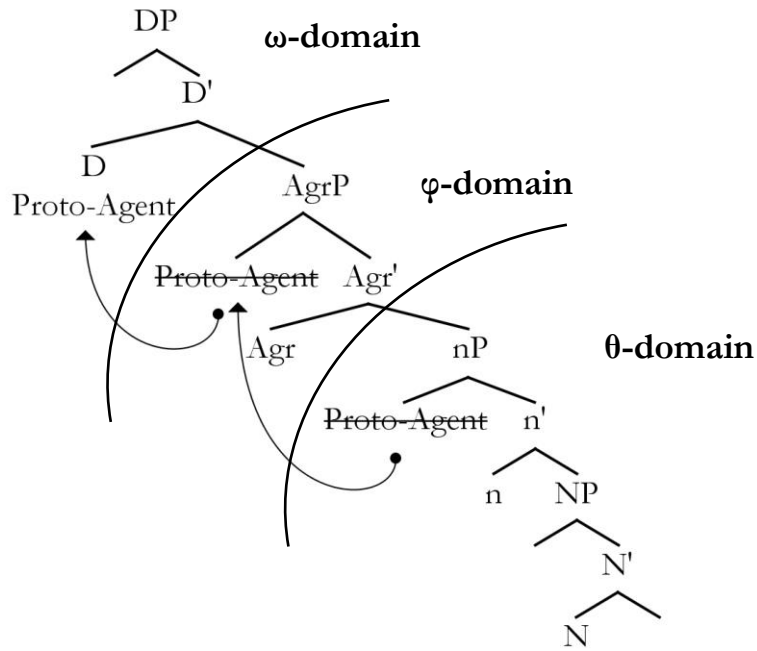
- (45) *Possessivization of the Possessor*



The Proto-Agent departs from Spec nP in the θ -domain⁸, raises first to Spec AgrP in the φ -domain, and later moves to D in the ω -domain. Therefore, it also observes the domain legitimization for possessivization:

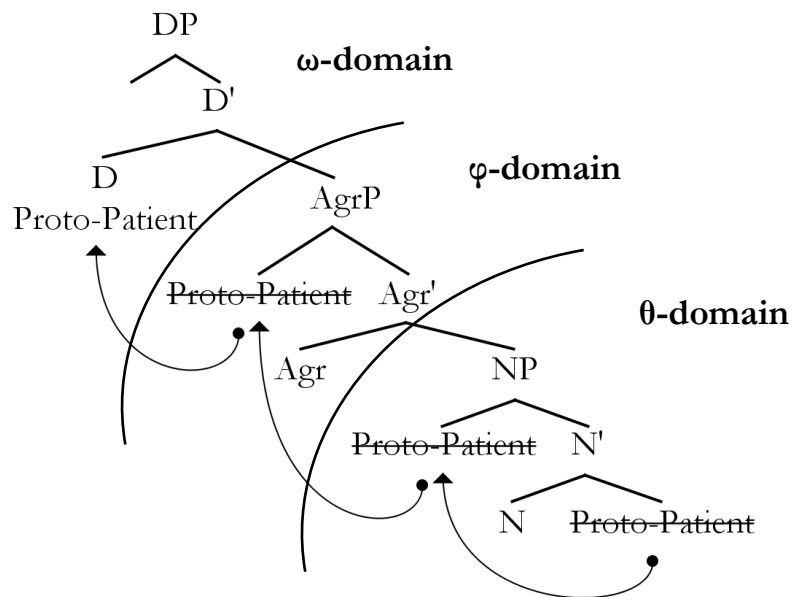
⁸ Unlike above in the possessivization of the Possessor, the notion of agentivity is present here, so a nP is projected.

(46) *Possessivization of the Proto-Agent*



Finally, the Proto-Agent is the argument that undergoes the longest movement. Generated as the head sister of N, it must make an internal movement within the θ -domain to land in Spec NP, from which it moves to Spec AgrP in the φ -domain, and then raises to D in the ω -domain:

(47) *Possessivization of the Proto-Patient*



As can be seen, the first movement of the Proto-Patient has two special features: first, it is a movement from complement to specifier; second, it is domain-internal. This second feature contravenes our domain legitimization for possessivization, which states that movement must be to the next higher prolific domain. It seems that, in fact, what is banned within a prolific domain is not any type of movement, but only specifier to specifier movement. This forces us to formulate a revised version of the DOMAIN LEGITIMIZATION FOR POSSESSIVIZATION:

- (48) In order to possessivize, a given nominal argument in specifier position must move from a prolific domain to the next higher prolific domain without crossing more than one maximal projection.

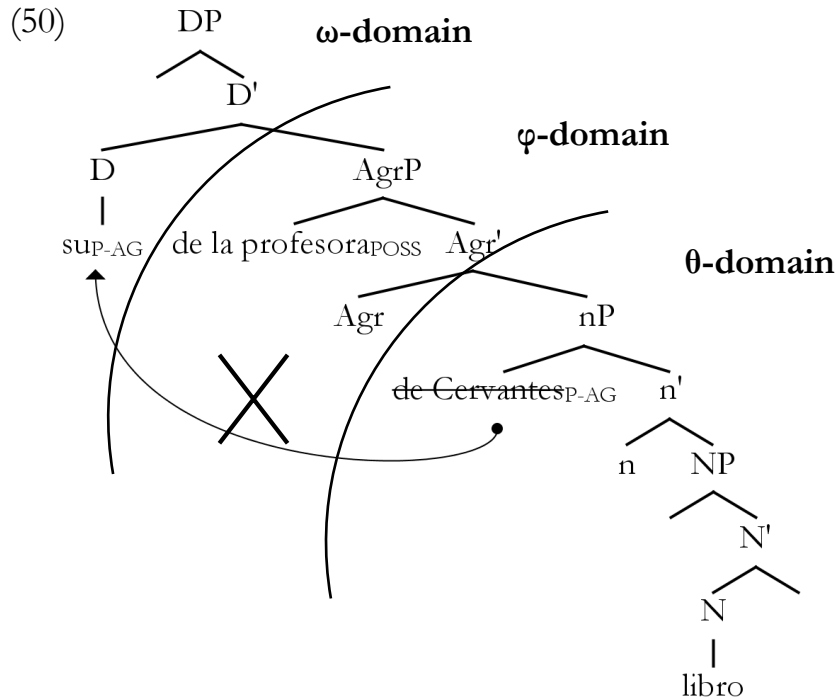
Actually, the initial movement of the Proto-Patient within the θ -domain is legitimized because it is a movement from complement to specifier. However, once in specifier position, the Proto-Patient needs to meet the requirements of the domain legitimization for possessivization, raising to the next higher prolific domain.

Similarly to extraction facts, when there is more than one PP argument, only one of them can be possessivized according to the hierarchy {Possessor > Proto-Agent > Proto-Patient}: the possessor can always be possessivized; the Proto-Agent can only be possessivized if there is no Possessor and the Proto-Patient can only be possessivized if it is the only PP argument present.

Thus, if a Possessor and a Proto-Agent co-appear, only the first one accepts possessivization:

- (49) a. el libro de Cervantes_{P-AG} de la profesora_{POSS}
 ‘the teacher’s book by Cervantes’
 b. su_{POSS} libro de Cervantes_{P-AG}
 ‘her book by Cervantes’
 c. *su_{P-AG} libro de la profesora_{POSS}
 Lit. ‘his book of the teacher’

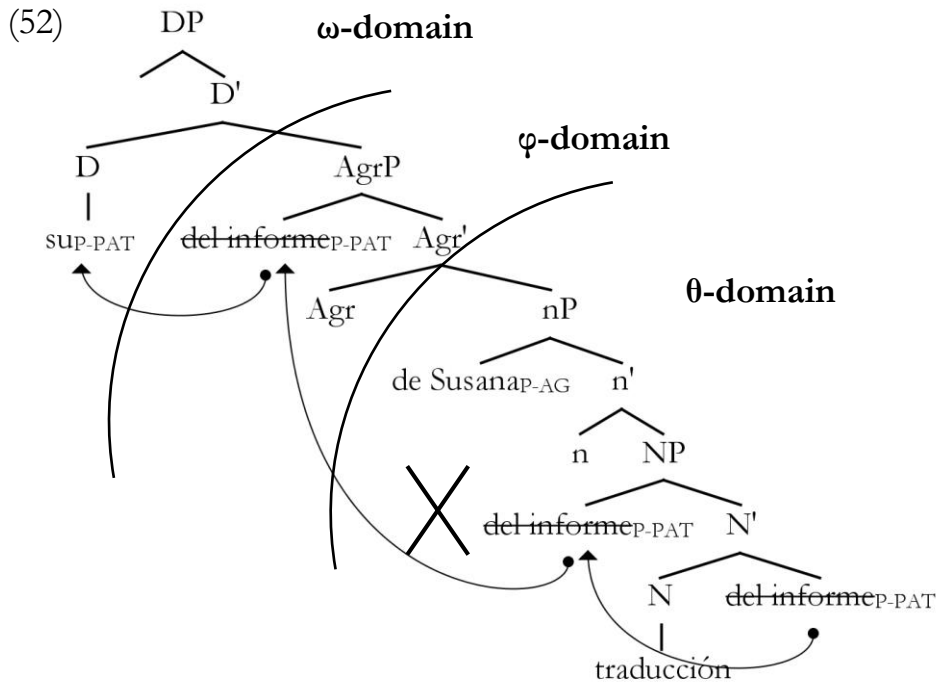
The ungrammaticality of (49c) is due to the structural hierarchy. The presence of a Possessor in the φ -domain blocks the movement of the Proto-Agent, which would have to rise from Spec nP in the θ -domain to D in the ω -domain, violating the domain legitimization for possessivization:



A similar blocking effect applies to the co-appearance of Proto-Agent and Proto-Patient. Only the first one can be possessivized:

- (51)
- a. la traducción de Susana_{P-AG} del informe_{P-PAT}
‘Susana’s translation of the report’
 - b. su_{P-AG} traducción del informe_{P-PAT}
‘her translation of the report’
 - c. *su_{P-PAT} traducción de Susana_{P-AG}
Lit. ‘its translation of Susana’

The NP of (51c) is ungrammatical because it also violates the domain legitimization for possessivization. The Proto-Patient, in its movement from Spec NP in the θ -domain to Spec AgrP in the φ -domain, must cross the nP projection, where the Proto-Agent is generated:



In summary, all NPs with verbal argument structure allow possessivization of (1) the PP argument —whether it is Possessor, Proto-Agent or Proto-Patient— if there is only one PP present or (2) the highest PP argument, according to the hierarchy {Possessor > Proto-Agent > Proto-Patient}, if there is more than one PP argument present. The blocking effects are due to the structural position that arguments occupy in the syntactic tree and to the domain legitimization for possessivization.

3.2.3. NPs with nominal argument structure

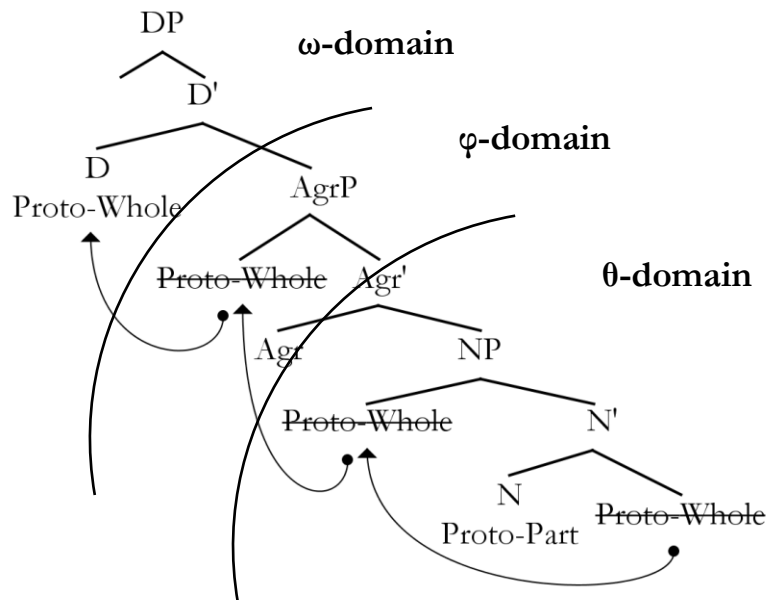
Deadjectival and relational nouns give rise to NPs with a strictly nominal argument structure. They contain only two arguments: the Proto-Part, lexicalized as the head noun, and the Proto-Whole, lexicalized as the PP argument. As a result, only one argument admits the possessivization test: the Proto-Whole, the only PP argument. The following examples show possessivization of NPs headed by relational (53) and deadjectival nouns (54):

- (53) a. la hermana_{P-PART} de Gael_{P-WHOLE}
 ‘Gael’s sister’
 b. su_{P-WHOLE} hermana_{P-PART}
 ‘his sister’

- (54) a. la paciencia_{P-PART} de Manu_{P-WHOLE}
 ‘Manu’s patience’
 b. su_{P-WHOLE} paciencia_{P-PART}
 ‘his patience’

The operating hierarchy in these NPs is therefore {Proto-Whole > Proto-Part}. The movement of the Proto-Whole in NPs with nominal argument structure is similar to that of the Proto-Patient in NPs with verbal argument structure:

- (55) *Possessivization of the Proto-Whole*



The Proto-Whole makes a long trajectory from its generation site as the complement of N in the θ -domain. Its first movement is domain-internal, but legitimized because it is from complement to specifier. Once in Spec position, it rises to Spec AgrP in the φ -domain and finally up to the head D in the ω -domain. A nP is not projected because these purely nominal NPs lack the notion of agentivity whatsoever. Given the impossibility of co-appearance of more than one PP argument, there is no blocking of possessivizations like in NPs with verbal argument structure.

4. Conclusions

This dissertation proposes a new principle of argument selection valid for all NPs with argument structure in Spanish, which I name the GENERAL PRINCIPLE OF NOMINAL ARGUMENT SELECTION. To do so, I assume the thematic proto-roles approach, which reduces all θ -roles to two basic prototypes, and the *Thematic Correspondence Hypothesis*, which suggests that verbs and corresponding nouns have a similar argument disposition.

The analytical evidence for this principle comes from possessivization tests, which I argue to be a peculiar type of syntactic movement across the three prolific domains in which NPs can be divided: the θ -domain (where thematic relations are established), the φ -domain (where agreement properties are legitimized) and the ω -domain (where discourse information is encoded).

Two types of argument structure can be distinguished for NPs: verbal and nominal. On the one hand, NPS WITH VERBAL ARGUMENT STRUCTURE are somehow related to verbs, since they are headed by deverbal (morphological relationship) or representation nouns (semantic relationship). They have verbal arguments, the Proto-Agent and the Proto-Patient, as well as a Possessor. All of them can be possessivized if they are the only PP argument present in the structure, but if they co-appear, only one of them accepts possessivization according to the hierarchy {Possessor > Proto-Agent > Proto-Patient}.

On the other hand, NPS WITH NOMINAL ARGUMENT STRUCTURE, with no relationship to verbs whatsoever, are headed by deadjectival and relational nouns. They have strictly nominal arguments: the Proto-Part, lexicalized as the head noun, and the Proto-Whole, lexicalized as the PP argument. Only the Proto-Whole can be possessivized.

All possessivization processes meet the requirements of movement across the three prolific domains in what I have called the DOMAIN LEGITIMIZATION FOR POSSESSIVIZATION: in order to possessivize, a PP argument in specifier position must move from a prolific domain to the next higher prolific domain without crossing more than one maximal projection.

In conclusion, this dissertation provides an analysis of the mechanisms of argument projection by nouns in Spanish beyond the traditional parallelism

with the verb domain and from a new and more precise thematic and structural approach.

I hope that it opens new lines of research in the fields of argument structure and the organization of noun complements, not only in Spanish syntax but also in syntactic theory, and can therefore serve as a small contribution to the understanding of the gears of universal grammar.

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