



# Nominalized Infinitive Clauses in Spanish

Inaugural dissertation to complete the doctorate from the  
Faculty of Arts and Humanities of the University of Cologne

in the subject  
**Linguistics**

presented by

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Born on 26.08.1995

In Tijuana, Mexico

Cologne, 04.09.2024



# Foreword

My research on Nominalized Infinitives started back in 2020 as a suggestion from Prof. Roberto Zamparelli in Trento. In 2021 I decided to continue with this topic under the guidance of Prof. Marco García García in Cologne, whom I thank first and foremost.

Infinitives are fascinating: they are old nouns turned verbs that nowadays can be nominalized again. As verbs, they are stripped of the main properties of that can be considered verbality, such as tense and person features. Yet, they can head full clauses which can then be also nominalized.

However, if I had to summarize what this research has taught me, outside of the framework of linguistics, is the multidimensional interplay between form and function, and the cyclicity of processes in all aspects of life.

This work would not have been possible without external help. In this regard, I thank Prof. Malte Rosemeyer, as my second supervisor, for his advice and suggestions. I also thank Prof. Martin Becker, Javier Caro, Ellen Le Foll, Tiago Duarte, and all the colleagues (linguists or not) that I came across throughout the development of this work for their valuable feedback. For the help with the data in foreign languages, I thank Giulia Omezzolli (Italian) and Areti Michalopoulou (Modern Greek). For the unconditional emotional support, I thank Ines Kasner and my family in Mexico. Lastly, I thank anyone who has willingly taken the time to read this work.



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# List of Abbreviations

Abbreviation	Definition
ASN	Argument-supporting noun (see Borer 2005).
BN	Bare noun.
CDH	Complementary Distribution Hypothesis (see Chapter 2).
ConP	Concealed proposition. Proposition-denoting derived nominals (see Frana & Moulton 2017).
CP	Complementizer Phrase.
DP	Determiner Phrase.
HI	Hybrid infinitive (term used in classic works on Spanish nominalized infinitives for structures that combine internal nominal and verbal properties).
N-DP	Noun-headed DP (as opposed to DPs headed by a nominalized verbal structure).
NFP	Nominal functional projection. Extended projection of a noun.
NI	Nominalized infinitive (any nominal structure headed by an infinitive).
NIC	Nominalized infinitive clause (must contain an overt determiner, e.g., <i>el no haberte visto</i> ).



NOMI	Nominal infinitive (fully nominal, event-denoting nominal, e.g., <i>el pasar del tiempo</i> ).
PWS	Possible world semantics.
QUD	Question under discussion (see Roberts 1996).
SI	Sentential infinitive (term that correspond to NICs used in classic works on Spanish nominalized infinitives).
SOA	State of affairs.
VFP	Verbal functional projection. Extended projection of a verb.



# Introduction

## 1.1. Study Subject

As in other European languages, the infinitive in Spanish is a non-personal form of the verb characterized by its absolute lack of tense, aspect, mood, person and number features. For this reason, infinitive clauses predominantly appear in subordinate roles within complex sentence structures. In some of these cases, infinitive clauses alternate with DPs, such as when they function as prepositional complements – illustrated in (1).

- (1) [...] es confundir el sentimentalismo con el no tener miedo de mostrar los sentimientos.  
'[...] is to confuse sentimentality with not being afraid to show one's feelings.'

(CORPES XXI)

Infinitive clauses may also serve as arguments of verbs, occupying positions that structurally receive case (see Baker 2015). In these environments, infinitive clauses can hence be considered functionally nominalized by virtue of their external distribution, comparable to that of DPs. Nominalization in these cases can be overtly marked by the presence of a definite article (as in (2)-(3) below), thus rendering these clauses formally nominal. These clauses, which I will group under the label of Nominalized Infinitive Clauses (NICs) and are illustrated in (2)-(3), constitute the study subject of this dissertation.

- (2) El no saber qué pasará me está volviendo loco.  
'Not knowing what will happen is driving me crazy.'
- (3) Su falta de preparación explica el no haber obtenido buenos resultados.  
'Their lack of preparation explains their failure to achieve good results.'

NICs can be studied either as a type of nominal infinitive or as a variety of sentential nominal. From both perspectives they display unique properties. As nominalized infinitives, they possess a fully verbal internal syntax and a factive

interpretation, which sets them apart from event-referring infinitives like (4). The latter are distinguished by their compatibility with adjectives and the expression of the event's subject within a prepositional phrase.

- (4) El estruendoso tronar del cañón se oyó en todo el pueblo.

Within the domain of sentential nominals, NICs are distinguished by their non-finiteness and by the presence of an overt determiner. These properties limit their distribution when compared to nominalized finite embedded clauses and determinerless infinitive clauses, as illustrated below.

- (5)
- a. Me sorprende el que siguieras despierto a esa hora.
  - b. Me sorprende ??el seguir tú despierto a esa hora.  
I'm surprised you were still awake at that hour.'
- (6)
- a. Quiero empezar a ir al gimnasio.
  - b. Quiero \*el empezar a ir al gimnasio.  
'I want to start going to the gym.'

## 1.2. Focus and aim

As in all scientific endeavors, the resolution of previous questions often leads to the emergence of new ones. Research on NICs is no exception, and so despite the great progress in this field several issues remain unresolved. In a broad sense, this dissertation investigates the nominal properties of NICs in Spanish. More concretely, it aims to provide answers to some of the questions regarding their syntactic structure and semantic properties. In this regard, it pursues two objectives.

The first objective is descriptive in nature and concerns the identification of the properties that distinguish NICs from other embedded clauses –which can always be functionally nominal– and from other nominalized infinitives.

Looking at their external distribution, NICs are a non-finite –and hence restricted– variety of sentential nominals that combine with a defective determiner, comparable to *el que*-clauses and *to oti*-clauses in Greek.

(7)

Chairomai            to oti eísai            edó.  
Be-glad.PRS.1SG the that be.PRS.2SG here  
'I am glad you (the) that you are here.' (cf. *me alegra el que estés aquí.*)

Indeed, embedded clauses are licensed in nominal environments without requiring any sort of overt marking. NICs, in this sense, are distinguished from argument infinitive clauses by the presence of an overt determiner.

In the literature on embedded clauses in Spanish, the facultative presence of the definite has often been associated with factivity. This relationship essentially rests on the preference displayed by NICs to occur as arguments of factive verbs and their inability to combine with event-selecting predicates, such as perception verbs. Consequently, these works claim that NICs refer to facts (e.g., Hernanz 1982; De Miguel 1995; Pérez Vázquez 2002).

Recent research on *el que*-clauses, however, has cast doubt on the propositional character of these nominals by appealing their unacceptability with truth value predicates (e.g., Serrano 2015; Moulton 2020) – which also applies to NICs – suggesting instead that they denote States of Affairs.

The meaning of NICs, indeed, has not been thoroughly explored. For this reason, I will offer a discussion on the ontological status of embedded clauses and sentential nominals in Spanish and demonstrate that in line with Serrano and Moulton, there are reasons to maintain that NICs refer to states of affairs, which does not rule out their 'factive' character.

(8)

- a. Lo de que se han agotado las entradas es cierto/verdadero/falso.
- b. #El que se han agotado las entradas es cierto/verdadero/falso.
- c. \*El haberse agotado las entradas es cierto/verdadero/falso.  
'That tickets are sold out is true/false.'

Additionally, I will make a case for a different type of NIC, previously undescribed, characterized by its generic denotation, e.g., (1) and (9) below.

- (9) Ganar la lotería significa/implica el no tener que preocuparse nunca más por deudas.

‘Winning the lottery means/implies never having to worry about debt again.’

The second objective of this dissertation is explicative and consists in approaching the form and meaning of NICs from a perspective in the essence of the Functional Nominalization Thesis (Kornfilt & Whitman 2011; see also Borsley & Whitman 2000; Iordachioaia 2020, among others). In short, this view assumes that all deverbal nominalizations are composed of an outer nominal layer – where the definite article is hosted – dominating over an inner verbal structure.

I will also draw on the analysis of *el que*-clauses presented by Serrano (2015), which aligns with the approach outlined above. Accordingly, D may only occur on top of an embedded clause under verbs that select for definite (extensional) complements, which notably include factives. This perspective thus draws a parallel with the extensionality conveyed by the definite article to noun phrases.

This work shall therefore address the question as to what the restrictions on the occurrence of the definite article with infinitive clauses are. As will be seen, NICs, like *el que*-clauses, have a more restricted distribution compared to their determinerless counterparts. However, unlike the latter, the former also allow generic interpretations (e.g., (1)).

To explain these facts, I will propose to extend the presence of the D layer to all embedded clauses and argue that it is only under certain contexts that the definite article may arise, namely, in generic and definite (referential) predicates.

On the one hand, this analysis is consistent with the requirement that all arguments in Spanish must be DPs. On the other hand, it entails that the definite article is not a requisite for the expression of definiteness, which in turn calls for a re-examination of the function of the definite article. In this vein, I will explore alternative hypotheses regarding its role, for example, as a marker of familiarity.

The correlation between the presence of the definite article in infinitive clauses and definite and generic matrix clauses will be empirically assessed by examining

usage patterns through the use of questionnaires on native speakers. If the hypothesis that the definite article is used to express reference to specific and generic sentential referents – much as it occurs with noun-headed DPs – is true, a preference for the determiner in these environments should be observed.

### 1.3. Contribution

NICs, as a variety of sentential nominals, exhibit an intriguing bivalence. In their core, they are headed by a verb that may combine with all sorts of complements, adjuncts and extended projections, reaching the clausal domain. Externally, however, they are functionally nominal. These structures are further characterized by their lack of finiteness, which makes them strongly dependent on external elements (chiefly the matrix predicate). An analysis of NICs, therefore, touches several specialized fields of research. Thus, the insights provided by this dissertation are therefore valuable not only for research on nominalized infinitives on Spanish but contribute to the study of sentential nominalization in general.

The claims made in this work also engage with various discussions in syntax and semantics. For example, the proposal that all embedded clauses project DP contributes to the debate on the CP-DP parallel (see, e.g., Haegeman & Ürögdi 2010, which will be discussed in Chapter 3). Concretely, this proposal challenges the notion that CP can be argumental and referential on its own.

Furthermore, the discussion on the semantics of embedded clauses sheds light on a previously unexplored terrain, providing a clear characterization of facts, propositions and states of affairs on the one hand, and how they are syntactically encoded on the other. With regards to the latter issue, the claim that NICs are limited to expressing states of affairs connects with research that shows that argument-supporting and sentential nominals are not limited to an event/fact dichotomy, as some of the classic works on Spanish NIs often assume (see, e.g., Moltmann 2014; Moulton 2020).

Lastly, the investigation of the definite article offers a novel perspective to the literature on NICs in Spanish by evaluating the article's function through experimental means. Surprisingly, this study reveals that this determiner is not as common as could be assumed, thus challenging the notion that it serves a syntactic or semantic function. These results, moreover, highlight the importance of testing hypotheses with empirical data.

## 1.4. Structure of the Dissertation

Chapter 2 presents a description of nominalized infinitives in Spanish from a perspective in terms of the Functional Nominalization Thesis. In this description, I discuss the main distinctive properties of NICs in relation to other nominalizations of the infinitive, which are consistent with the properties of sentential nominals.

Following this, chapter 3 analyzes NICs as sentential nominals. I review previous proposals with respect to these structures in Spanish and other languages, such as English and Modern Greek. As will be seen, the presence of a D layer in sentential nominals across languages is often associated with factivity, which in turn stems from the semantic properties of the predicate under which they are embedded. Centering on Spanish, I present a syntactic-semantic comparison between NICs and the description of *el que*-clauses as per Serrano (2015). In this vein, I offer a discussion of the ontological categories (facts, proposition, situations) that *el que*-clauses and NICs in Spanish can express.

In chapter 4 I study the differences between NICs that denote specific situations and those that refer to generic situations. I depart from Serrano's (2015) *Frase Limite* hypothesis and present an alternative approach to account for the definite article in "definite" NICs. Similarly, I offer an analysis of the definite article in generic NICs.

Chapter 5 presents an empirical investigation on the role of the definite article, which tests the hypotheses brought forward in Chapter 4. An overall low preference for the definite article is attested in a corpus search and an acceptability judgment task with native speakers. These results suggest that the definite article is not an



independent operator, but that its presence is determined by the selection properties of the matrix predicate that dominates the NIC. These findings, however, need not rule out the presence of a DP-layer.

Lastly, in Chapter 6 I provide a summary of the dissertation and discuss its main contributions. I outline the implications of this work for linguistic theory (particularly research on nominalization) and Spanish grammar and provide suggestions for future research.

## 2. The Nominalizations of the Infinitive in Spanish

In this chapter, I present a critical review of the previous literature on the nominalization of the infinitive in Spanish.

I begin by examining the development and evolution of nominalized infinitives (NIs) from Latin. Following this, I address the syntactic properties of the two traditional types of NIs recognized in the literature: proper nominalized infinitives (NOMIs) and nominalized infinitive clauses (NICs), or sentential infinitives (SIs<sup>1</sup>), which are the focus of the remainder of this dissertation. I argue that the traditional classification fails to adequately capture the co-occurrence of nominal and verbal properties within the internal syntax of NIs. Drawing on contemporary research on deverbal nominalization, I will propose a characterization of NIs based on the presence of a nominal head (*n*) and an eventive denotation. As will be seen, contrary to common assumptions, these properties are not incompatible with the projection of verbal properties; however, their absence is a distinctive property of NICs. Lastly, I will introduce two key discussions for the following chapters: the role of the definite article in NICs and whether they denote facts, propositions or something else.

In 2.1, I look at the evolution of the infinitive since Latin. In 0, I offer a review of contemporary descriptions of NIs and argue, in the first place, for a general syntactic model in which an external nominal shell dominates an internal verbal structure (V-in-N model). Secondly, based on corpus data, I oppose the claim that nominal and verbal properties are in complementary distribution. In 2.3, I focus on literature on nominalization and advance a classification of NIs that allows accounting for combinations of nominal and verbal properties not previously considered, while

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<sup>1</sup> I will use the terms ‘Sentential Infinitive’ (SI) and ‘Nominal Infinitive Clause’ interchangeably for the remainder of this work.

maintaining the essence of the V-in-N model. Throughout this chapter, I raise several questions that will be answered in the following two chapters.

## 2.1. The development of Nominalized Infinitives in Romance

### 2.1.1. From Latin to Romance

The Romance infinitive originates in the Latin present infinitive, which in turn originated from the locative singular of an *s*-stem (Palmer 1954, p. 278; Disterheft 1980, p. 9; Coleman & Clackson 2018, p. 161).

(10) *dicere* < \**deikesi* ‘to say’ (cf. Spanish *decir*)

Despite its nominal origin, the Latin infinitive belongs to the verbal paradigm. In fact, compared to other ancient Indo-European languages<sup>2</sup>, the Latin infinitive exhibits a wider range of verbal properties that were inherited by Romance languages, e.g., their ability to encode aspect (*avere* + infinitive) and (active infinitive: loc. *s*-stem + *-re* vs. passive infinitive: dative root noun + *-i*/dative *s*-stem + *-ri*).

In Late Latin (3<sup>rd</sup>-5<sup>th</sup> centuries A.D.), the *-re* infinitive can be observed to occur as a verbal complement (e.g., *uenerat aurum petere* ‘he came to search for gold’), as a NI (e.g., *dolere malum est* ‘to suffer is bad’) or as a fully lexicalized noun (e.g., *sapere* ‘knowledge’) (Fruyt 1996).

Two kinds of nominalizations can already be distinguished during this period. On the one hand, we find infinitives that act like neuter action nouns and may only appear in the nominative and accusative case, e.g., *sapere* (‘knowledge’) for *scientias* and *velle* (‘will’) for *voluntas*. On the other hand, there are infinitive-headed phrases whose nominal character is reduced to their syntactic function (i.e., by serving as arguments of a larger clause) (11). In this respect, the latter resemble SIs. While these

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<sup>2</sup> Ancient Greek being a notable exception.

nominalizations were already available in Classical Latin, in Late Latin the infinitive allowed an ever-growing number of nominal features, most notably a determiner (12).

(11) *Errare humanum est.* ‘To err is human.’

(12) *Hoc, ipsum, tuum amare.* ‘This is yours to love.’

Vanvolsem (1983) posits that the evolution of this particular type of infinitive can be attributed to a convergence of developments in the cult and popular registers of Latin. The introduction of a determiner facilitated the conceptualization of the idea expressed by the verb as a concrete object for uneducated speakers, whereas cult speakers found in this type of infinitive a device to represent abstract concepts typically employed in scientific and philosophical discussions. The infinitive was thus effectively ‘objectified’. This objectification signified the completion of the noun-infinitive-noun cycle, a phenomenon that has been repeatedly observed in the diachrony of Indo-European languages (Disterheft 1980, p. 198).

Of the two types of nominalized infinitives mentioned above, all contemporary Romance languages possess the second one. These can only be considered infinitives due to their etymology, as they behave like proper nouns in their respective languages – allowing all sorts of nominal inflections, derivations, and complements. The second type, in turn, only remains in use in a few languages, most notably Spanish, Italian, and Portuguese. In Romanian, it was never adopted, while in French, the use of these structures declined around the 15<sup>th</sup> century (Schäfer 1911; Vanvolsem 1983).

### **2.1.2. Early descriptions and diachrony up to the XIX century**

The dual nature of the infinitive –alternating between a noun and a verb– has been a topic for grammarians since the earliest descriptions of Spanish. For instance, Nebrija (1492/1980) remarks in his grammar that, despite being a verbal mood, “all the presents of the infinitive can be verbal nouns” (Book III; Chapt. V). These infinitives consist of cases like (13), where the infinitive combines with an article and an adjective. As mentioned above, these constitute fully lexicalized nominals and were already available to Latin.

(13)

Después que miré este nuestro triste vivir. (= nuestra triste vida)  
'After I saw our sad living (sad life).'

Three centuries later, in the first edition of the grammar of the *Real Academia Española* (1771), the infinitive is unequivocally defined as a verbal form, being described as “[that mood] which does not adhere to any tense, person, or number, and requires another verb for its sense to be determined”. Only a brief comment is found with regard to nominal infinitives, which are simply characterized by taking a definite article (p. 61; Cap. VI. Art. III).

By contrast, in the 19<sup>th</sup> century, Bello (1847) analyzes the infinitive as a fully nominal deverbal noun based on its syntactic distribution –comparable to that of nouns phrases– and its semantics –comparable to that of abstract nouns (Sects. 419-422). Consequently, in contrast to previous accounts, he argues that infinitive clauses like (14) are instances of nominal infinitives. Additionally, he designates infinitives as an instance of *sustantivos neutros* (‘neuter nouns’), along with the neuter pronouns *esto*, *eso*, *aquello*. Infinitives are nonetheless distinguished from neuter pronouns by their ability to occur with a definite article.

(14)

Cosa muy agria parece a los malos comprar bienes futuros con daños presentes.  
'buying future goods with present damages seems very sour to the bad guys.'

Cuervo (1874/1954), for his part, sees the infinitive as some sort of a hybrid that cannot “be placed definitely among nouns nor verbs” (pp. 56-57). Nevertheless, in his view, nominal infinitives always carry a subject, either overt or covert, which distinguishes them from other deverbal nouns.

Moving away from ancient descriptions, contemporary diachronic data reveals that the distribution of verbal and nominal properties has not remained constant over time. Concretely, we observe an increased verbality, as observed in a corpus study ranging from the 12<sup>th</sup> to the 20<sup>th</sup> century by Torres Cacoulllos (2006). This increased verbality is concretely manifested in the decrease of genitive internal arguments in

favor of accusatives (compare (15)-(16)), and in the increase of adverbials. 43% of the NIs observed in the texts from the 12<sup>th</sup>-14<sup>th</sup> centuries contain a genitive direct object, while in the 19<sup>th</sup>-20<sup>th</sup> centuries, no instance is found. By contrast, the frequency of accusatives increases from 14% to 59% in the same period.

The use of possessive and demonstrative determiners has also decreased over time, making the definite article the dominant element. In a different direction, however, the frequency of genitive subjects has increased in the last centuries, as well as the productivity in argument positions, particularly subject NIs, which in the 19<sup>th</sup>-20<sup>th</sup> centuries make up 53% of the cases, compared to 24% in the 12<sup>th</sup>-14<sup>th</sup> centuries, where, on the other hand, adnominal and adverbial NIs are far more common.

(15)

Fuye comer e beber sumptuoso de grandes e preciosas viandas.

‘(He/she) escapes sumptuously drinking and eating great and precious food.’

(El Corbacho, 1438)

(16)

Mis passiones y enfermedades han impedido mi visitar tu casa como era razón.

‘My passions and illnesses have kept me from visiting your house, as I should have.’

(La Celestina, 1499)

Interestingly, Vanvolsem (1983) observes a similar evolution in Italian. Using a diachronic corpus composed of texts ranging from the 14<sup>th</sup> to the 19<sup>th</sup> century, he reports a decrease in the frequency of lexicalized infinitives and an increase in the presence of overt arguments (mostly genitive subjects) and verbal adjuncts (e.g., adverbials).

All in all, aside from the rise in genitive subjects, the internal syntax of NIs has become more verbal over time, whereas their external syntax has increasingly exhibited nominal features.

## 2.2. Contemporary Descriptions of NIs

As observed in the previous centuries, the nominalizations of the infinitive available to contemporary Spanish have diversified, allowing a greater variety of mixed nominal-verbal projections. I will now look at descriptions of NIs in contemporary Spanish and center on the syntactic properties of each of the available structures.

### 2.2.1. Distribution of Nominal and Verbal properties

Most contemporary research stemming from formal theories of language (most notably Generativism) recognizes two main nominal structures headed by an infinitive: Nominal Infinitives (NOMIs) (17)-(19) and Sentential infinitives (SIs) (20)-(22)). The former are often assumed to be lexeme-level nominalizations, while the latter corresponds to clause-level nominalizations (Plann 1981; Hernanz 1982; De Miguel 1995).

(17)

[...] entonces, por vez primera, escuchó el suave batir las de olas del lago. (CORPES XXI<sup>3</sup>)

‘[...] then, for the first time, he heard the gentle lapping of the lake's waves.’

(18)

Un día, cuando se encontraba en el jardín más singular de su padre, oyó un batir de tambores que surgía de debajo de un arbolillo. (C21)

‘One day, when he was in his father's most unique garden, he heard a beating of drums emerging from under a sapling.’

(19)

Desde su llegada a Mineros de Guayana, César Farias se ha caracterizado por su corto hablar. (C21)

‘Since his arrival at Mineros de Guayana, César Farias has been characterized by his short speaking.’

(20)

Verdún se consolidó en el espíritu popular, que otorgó a la zona un elemento sistemático, el darse cita grandes multitudes todos los 19 de abril. (C21)

‘Verdun was consolidated in the popular spirit, which gave the area a systematic element, the gathering of large crowds every April 19.’

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<sup>3</sup> From now on C21.

(21)

El haber perdido Magnolio un tiempo precioso en estas reflexiones y el haber en aquella zona céntrica de nuestra ciudad transeúntes y árboles añosos que sortear casi le habían hecho perder el rastro de la señorita Ivet. (C21)  
'Magnolio's having lost precious time in these reflections and [the presence of passers-by and old trees to negotiate in that central area of our city] had almost caused him to lose track of Miss Ivet.'

(22)

[...] el grupo recalca la intención de expandir sus horizontes a nivel internacional y aún más el dejar de pertenecer únicamente a la red y pasar a otros medios como la televisión. (C21)  
'[...] the group stresses its intention to expand its horizons internationally and even more to move away from the network to other media such as television.'

All NIs are functionally nominal, as manifested by their ability to alternate with DPs as arguments and complements of prepositions, among other functions. Aside from the presence of an overt determiner, which constitutes the only shared formal property, these two kinds of infinitives combine with distinct sets of syntactic properties. NOMIs exhibit nominal internal syntactic properties, while SIs, being clausal nominalizations, only allow verbal properties. For this reason, the latter is often said to be a “verbal infinitive” (e.g., Hernanz 1999, Ramirez 2003, Alexiadou et al. 2011). A comprehensive list of the internal syntactic properties of NOMIs and SIs/NICs is provided in Table 1.

Given the division of verbal (V) and nominal (N) properties into distinct structures with separate interpretations—and building on the longstanding notion of the infinitive’s ‘double nature’—a common approach to Spanish NIs has been to analyze the infinitive as two separate lexemes, each appearing in a noun phrase with different internal syntactic properties. In some of these proposals, the infinitive in NOMIs is treated as a noun, while in SIs it functions as a verb. I will refer to this view as the Complementary Distribution Hypothesis (CDH).



Table 1: Properties of Spanish NOMIs and SIs

	<b>NOMI</b>	<b>SI / NIC</b>
<b>Determiner</b>	Def. article; Indef. article; Possessive; Demonstrative (De Miguel 1995, Hernanz 1999, Ramírez 2003)	Def. article only (De Miguel 1995, Hernanz 1999, Ramírez 2003)
<b>Subject</b>	Prepositional/Genitive (De Miguel 1995, Hernanz 1999, Ramírez 2003)	Nominative (De Miguel 1995, Hernanz 1999, Ramírez 2003)
<b>Direct Object (V complement)</b>	No (Hernanz 1982, Ramírez 2003) Bare NP only (Demonte & Varela 1997, Fábregas & Varela 2006)	Accusative DP (De Miguel 1995, Hernanz 1999, Ramírez 2003)
<b>Modification</b>	Adjectival (De Miguel 1995, Hernanz 1999, Ramírez 2003)	Adverbial (De Miguel 1995, Hernanz 1999, Ramírez 2003)
<b>Negation</b>	No (De Miguel 1995)	Yes (De Miguel 1995)
<b>Auxiliaries (Periphrases)</b>	No (De Miguel 1995)	Yes (De Miguel 1995)

An early analysis of NIs that adopts the CDH from a (Transformational) GG perspective can be found in Hernanz (1982). Crucially, this description is that it recognizes two different nominalization processes, each yielding a unique set of syntactic properties.

Dos procesos de nominalización claramente diferenciados; en el primer caso, existe una auténtica transformación de una estructura verbal en una estructura nominal, de modo que la secuencia resultante en ES se asimila al máximo al funcionamiento de los sustantivos. Al igual que un nombre, no pasivizada admite matizaciones aspectuales, no puede ser ni negada, no tolera complementos directos ni modificaciones adverbiales, etc.

En el segundo caso, por el contrario, la secuencia nominalizada mantiene una relativa independencia con respecto a su valor nominal: si bien se asemeja a los sustantivos desde punto de vista funcional y distribucional, conserva sus propiedades verbales (aspecto, negación, pasiva, complementos verbales, adverbios, etc.) (Hernanz 1982, p. 480)

‘Two distinct nominalization processes can be identified. In the first case, a real transformation occurs, whereby a verbal structure is transformed into a nominal structure. The resulting sequence in ES is as similar as possible to the functioning of nouns. Like a noun, non-passivized admits aspectual nuances, cannot be negated, does not tolerate direct complements nor adverbial modifications, and so forth.

In contrast, in the second case, the nominalized sequence maintains a relative independence with respect to its nominal value. Although it resembles nouns from a functional and distributional point of view, it retains its verbal properties (aspect, negation, passive, complements, adverbs, etc.)’

NOMIs are in this sense similar to lexicalized infinitives in that they are syntactically and semantically comparable to action nouns, as evidenced by the fact that they are interchangeable in several contexts. Unlike lexicalized infinitives, however, contemporary analyses posit that NOMIs denote “dynamic activities” (Hernanz 1982, 1999; De Miguel 1995), as evidenced by their ability to combine with event-related adjectives.

(23)

- a. [...] sólo se escuchaba el monótono cantar de las cigarras que llegaba desde la arboleda vecina. (C21)  
‘[...] only the monotonous chirping of cicadas could be heard coming from the neighboring grove.’
- b. Se escuchaba el monótono canto de las cigarras que llegaba desde la arboleda vecina.  
‘One could hear the monotonous song of the cicadas coming from the neighboring grove.’
- c. Se escuchaba el constante cantar/canto de las cigarras que llegaba desde la arboleda.  
‘One could hear the constant singing of the cicadas coming from the neighboring grove.’

(24)

- a. A tu lado no me angustiaba el ocioso pasar de los días. (C21)  
‘At your side I was not distressed by the idle passing of the days.’
- b. A tu lado no me angustiaba el ocioso paso de los días.  
‘At your side I was not distressed by the idle pass of the days.’

- c. A tu lado no me angustiaba el interminable pasar de los días.  
'At your side I was not anguished by the endless passing of the days.'

In a recent empirical study, Schirakowski (2021) has further revealed that infinitives as event nominals are greatly restricted to expressing their external arguments (as genitives). As a result, they prefer generic interpretations. In contrast, action nouns yield higher acceptability scores with overt (genitive) internal arguments and with concrete event interpretations. See (25) below.

(25)

- a. El cocinar del chef/#de las setas.
- b. La cocción \*del chef/de las setas.  
'The cooking of the chef/of mushrooms.'

The restriction appears to apply also to genitive objects, which have been previously claimed to be barred in these constructions. Nonetheless, they can be found in corpus data, as evidenced by (26) below (in bold), although their frequency is low.

(26)

- a. [...] me indica con un girar de la muñeca hacia la mesa contigua. (C21)  
'He points me with a flick of the wrist to the next table.'
- b. Y de nada valdrán las lamentaciones a posteriori o ese inútil barajar de hipótesis que en tu caso constituye una verdadera adicción. (C21)  
'And there will be no point in a posteriori regrets or that useless shuffling of hypotheses that in your case constitutes a real addiction.'

SIs, in turn, can be seen as an instance of sentential (or clausal) nominals. On this matter, Hernanz (1999) observes that the presence of the definite article also occurs with nominalized embedded clauses (*el que*-clauses). In fact, as seen in (27), the latter can stand in place of NICs. A more in-depth comparison of these two structures is presented in the next chapter.

(27)

- a. El habérmelo dicho tú me sorprendió.
- b. El que me lo hayas dicho tú me sorprendió.  
'I was surprised to hear it from you'

Drawing on these facts, De Miguel (1995) establishes a clear-cut characterization of NIs by positing a further aspectual restriction for NOMIs. Accordingly, the contrast

between these two NIs is not limited to the split of N and V properties but also includes the selection of lexemes that can head these structures. Thus, she claims that all kinds of verbs can head SIs (28)-(29), while only verbs denoting atelic events (i.e., Activities in Vendler 1957) can appear in NOMIs (30)-(31). Furthermore, like Hernanz (1982), she assumes that NOMIs are headed by a NI, whereas in SIs it is the whole clause that is nominalized.

(28)

El morir Juan tan repentinamente nos sorprendió.

‘Juan's sudden death surprised us.’

(29)

El andar el niño tan tarde por esa zona nos preocupa.

‘We are concerned about the child walking so late in that area.’

(30)

\*El llegar tardío de Juan nos sorprendió.

‘Juan’s late arrival surprised us (lit. Juan’s late arriving surprised us).’

(31)

El andar errabundo del niño acabó en la comisaría.

‘The child's wandering ended up at the police station.’

On the semantic plane, it is typically claimed that NOMIs are eventive whereas SIs refer to facts. This is evidenced in the predicates that each of these NIs can combine with. SIs cannot occur with eventive predicates (32), while NOMIs cannot occur with modal and truth-value predicates such as *es cierto* ‘is true’, which select propositions or facts (cf. Vendler 1967).

(32)

\*El morir Juan tan repentinamente ocurrió ayer.

‘Juan's sudden death occurred yesterday (lit. Juan’s dying so suddenly occurred yesterday).’

(33)

\*El andar errabundo del niño es cierto.

‘The child's wandering is true.’

Based on these observations, NOMIs are analyzed as nominals formed with the derivational suffix *-r*, which conveys a meaning of activity, or more precisely, a [-telic] event. Accordingly, this suffix is the preferred nominalizer for intransitive,

non-perfective verbs (e.g., *andar*, *trabajar*, *correr*), much like *-ción* and *-miento* typically occur with perfective verbs.

Thus, in De Miguel’s view, Spanish has two homonym infinitive suffixes, one derivational – found in NOMIs – and one inflectional – which occurs in NICs and all other instances of verbal infinitives. The co-occurrence of nominal and verbal properties is restricted to the presence of bare direct objects, which are allowed insofar as they do not bind the event and preserve the atelic interpretation. Therefore, (34)a is deemed acceptable as it yields a habitual reading, while (34)b is barred because the definiteness of the object bounds the event. However, it is not explained whether these cases constitute a separate type of nominalization, or instead, *r*-nominals are able to license direct objects.

(34)

- a. Ese constante beber cerveza de los adolescentes.  
‘That constant beer drinking of teenagers.’
- b. Ese constante beber \*la cerveza de los adolescentes.  
‘That constant drinking \*the beer of teenagers.’

The eventive nature of NOMIs and particularly their atelic specification is also claimed to be responsible for the manner-of-event interpretation that is often available in these cases (see also Demonte & Varela 1997). In this sense, for instance (*Ese constante beber cerveza de los adolescentes* and *ese constante ir y venir de la gente*) can refer to the manner of drinking beer or to a habitual activity.

The CDH finds further support in research on similar cases of “verbal” and “nominal” pairs of nominals. For instance, in Alexiadou et al. (2011), where Spanish NOMIs/SIs are compared to the English gerund (25), the German infinitive (26), and the contrast between infinitives and supines in Romanian (27). In all these cases, the “nominal” nominalization is characterized by the presence of nominal functional projections, which are absent in the “verbal” counterpart.

(35)

- a. His/John’s prompt answering of the question. (Nominal Gerund)
- b. Pat disapproved of John’s quietly leaving the room. (Verbal Gerund)

- (36)
- a. Das häufige Beobachten der Sterne macht Spaß. (nominal Infinitive)  
'The frequent observation of the stars is fun.'
  - b. Häufig die Sterne Beobachten macht Spaß. (verbal Infinitive)  
'Stargazing frequently is fun.'
- (37)
- a. Cititul constant al ziarelor.  
'Constant newspaper reading.'
  - b. Constanta omiterea a unor informații.  
'Constant omission of information.'

In a similar direction, Pérez Vázquez (2002), who also follows a CDH approach, compares Italian and Spanish infinitives and argues that only the former allow the co-occurrence N and V properties. More concretely, she notes that in Italian a demonstrative (a nominal property) can co-occur with a direct object and an auxiliary (verbal properties), whereas in Spanish these properties are ungrammatical.

- (38)
- a. Quel (disperato) aver lamentato i fatti.  
'That (desperate) complaining about the facts.'
  - b. Il suo ossessivo non accettare i premi.  
'His obsessive non-acceptance of awards.'
- (39)
- a. \*Ese desesperado lamentarlo.  
Lit. 'That desperate lamenting it.'
  - b. \*Su obsesivo no aceptar los premios.  
Lit. 'His obsessive not accepting the prizes.'

Despite the clearcut description of NIs offered by the CDH, this approach is ultimately incomplete in descriptive terms, as it fails to account for structures with mixed properties, which are documented diachronically (in Torres Cacoullos) and in contemporary corpora, as evidenced below. Concretely, (40) combines an indefinite article with a direct object and an adverbial modifier, whereas (41) combines an indefinite article and an adjective with a direct object. I highlight these combinations in bold letters.

- (40)
- Un cambio de emisora, una música suave, un locutor que anuncia el último éxito de un baladista de moda y **un pasar la peinilla por última vez**, antes de guardarla en el bolsillo trasero del pantalón, te hace olvidar [...] (C21)

(41)

[...] lo importante, en cualquier caso, no es un mero poseer el amuleto o la marca, sino qué es lo que puede conseguirse con él. (C21)

To account for these data, it is therefore necessary to reject the CDH and adopt a view that recognizes the grammaticality of NIs with mixed properties, as it has been proposed in languages like English and Italian. In this vein, I will opt for a classification of NIs in terms of the functional layers in their internal syntactic structure (in the essence of Alexiadou 2001, van Hout & Roeper 1998, Borsley & Kornfilt 2000, Iordachioaia 2020, among others). More specifically, I will distinguish between NIs that project nominal functional layers – aside from D - and those that do not.

## 2.2.2. Mixed Properties

One of the earliest non-binary descriptions of NIs, presented in Skydsgaard (1977), recognizes six structures ranked along a scale of verbality (32). The high end of the scale is occupied by infinitives with a nominative subject, which correspond to SIs. On the opposite end of the scale, the bare infinitive is argued have the lowest degree of verbality. This contrasts with later proposals, for which the presence of nominal complements and adjuncts entails a reduced verbal character.

(42)

- a. Infinitives with a subject: *sonar la voz* ('sounding the voice')
- b. Infinitives with a direct object (excluding *se*): *comprar la casa* ('buying the house')
- c. Infinitives with *se* and a complement: *hallarse aquí* ('being here')
- d. Infinitives with *se*: *agitarse* ('to agitate oneself')
- e. Infinitives with a complement: *estar aquí* ('being here')
- f. Bare infinitive: *crujir* ('to crackle')

Posterior analyses assume a verbal head with a set of verbal functional projections inside an outer nominal "shell" (henceforth, the V-in-N model), in the essence of Abney (1987) (e.g., Hernanz 1999, Ramirez 2003). Accordingly, the event and argument structure properties of nominalizations are the result of a verbal component inside a nominal structure, as seen in (43) (see also Alexiadou et al. 2008). This

analysis, in fact, has been productively pursued in research on nominalization in several languages (e.g., van Hout & Roeper 1998, Alexiadou 2001, Borsley & Kornfilt 2000, Borer 1993, Alexiadou & Grimshaw 2008).

(43)

V-in-N model: [DP [NP [VP]]]<sup>4</sup>

In Italian, NIs have been analyzed from a V-in-N approach at least since Salvi (1982). Although initially adopting the CDH, this account nonetheless suggests that a limited set of N features, namely a possessive or indefinite article and a (facultative) adjective can combine with any set of V features, except for nominative subjects and auxiliaries. The adjective, moreover, must appear before the infinitive and modify the event.

This leads to a threefold classification of HIs: NOMIs (44)a are analyzed as nominalizations of V with a fully nominal syntax. HIs are headed by a verbal infinitive and can project combinations of properties like those seen in (44)b and (44)c. Lastly, NICs (44)d-e, are clausal nominalizations, which, like in Spanish, only allow V properties. Additionally, according to this proposal, the presence of an overt nominative subject is not necessary (cf. Zucchi 1993). As can be observed below (data from Salvi 1982), all the Italian NIs possess a Spanish counterpart.

(44)

- a. NOMI: [DP L' [NP [V<sub>→N</sub> avviarsi] lento del treno]]  
Cf. lit. *El lento arrancar del tren* 'the slow start of the train'
- b. HI: [DP Il [NP continuo [VP → N' ricercare la verità]]]  
Cf. lit. *Su continuo buscar la verdad* 'his continuous search(ing) for the truth'
- c. HI: [DP Il [NP tuo [VP → N' credergli incondizionatamente]]]  
Cf. lit. *Tu creerle incondicionalmente* 'your believing him unconditionally'

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<sup>4</sup> It must be noted that what I call the V-in-N model is not a well-defined research program or hypothesis, but simply a loosely articulated model of the syntactic-semantic structure of nominals that has been operationalized in different ways by several works in research on nominalization.



- d. SI: [DP II [TP→NP *ricercare incessantemente la verità*]]  
Cf. lit. *El buscar incesantemente/sin cesar la verdad* ‘searching constantly for the truth’
- e. SI: [DP L’ [TP→NP *aver Piero ricercato la verità*]]  
Cf. lit. *El haber Pietro buscado la verdad* ‘(The fact that) Pietro has searched for the truth’

The acceptability of infinitives with mixed properties is further supported by Ramirez (2003), who recognizes structures combining determiners with accusative direct objects and adverbials (45)-(46). Drawing on Zucchi (1993), he proposes a threefold classification of NIs, consisting of D+NP (NOMIs), D+AgrP (HIs) and D+CP nominalizations (SIs).

(45)

Su escribir novelas explica su fama.  
‘His writing novels explains her fame.’

(46)

Aquel conducir camiones imprudentemente representa un peligro.  
‘That reckless truck driving represents a danger.’

Data in line with these two examples suggest a distribution of NIs comparable to that observed Italian (contra Pérez Vázquez 2002). Nonetheless, as the examples in (39) suggest, not all V and N co-occurrences are allowed<sup>56</sup>. Accepting this proposition evidently raises the question as to which V properties can actually occur in NOMIs. In what comes next, I provide a qualitative answer supported by corpus data. A quantitative answer is to be found in a future large scale corpus study.

The first property to analyze is the presence of direct objects. In 2.1 it was briefly mentioned that, according to De Miguel, NOMIs only allow bare noun complements. This restriction at first sight suggests that the infinitive is barred from assigning unaccusative case, as bare NPs in Spanish are non-referential (cf. Espinal 2010, 2013). However, Demonte & Varela (1997) and Fábregas & Varela (2006), who adopt the

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<sup>5</sup> According to native Italian speakers, the data in (28) is extremely marked, and hence borderline unacceptable.

<sup>6</sup> It is worth noting that accounts that assume the CDH tend to be based on limited data. This leads to the overgeneralized barring of mixed properties.

CDH, argue that DPs can indeed occur as direct objects, although, in the spirit of De Miguel, they are allowed only in so far as they preserve the atelic reading, as in (47)-(48).

(47) Presencí ese afanoso barrer **toda la habitación**.

(48) Ese mirar **el color actual** con ojos del pasado.

(Fábregas & Varela 2006, p. 31)

Accounting for these data, Fábregas & Varela propose a *vP* layer for NOMIs to account for the assignment of accusative case in these cases, as in Figure 1 below.

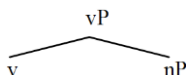


Figure 1: structure of NOMIs with accusative objects. nP measures the event.

Indeed, corpus data attests that singular (49) and plural (50) DPs, as well as prepositional complements (51) and complement clauses (52)-(53) can co-occur with N properties. These data, moreover, suggests that direct objects are licit even when the resulting phrase does not express an atelic event. Thus, while (50) and (51) yield non-telic interpretations due to the number of the direct object, in (49) and (52) the definite direct object bounds the event, resulting in an accomplishment reading. Furthermore, (53) and (54) reveal that state NOMIs are actually allowed, contra De Miguel.

Aspectual modifiers also play a role in the event interpretation. In this sense, the presence of *continuo* ('continuous') in (51) reinforces the atelic reading. By contrast, *progresivo* in (52) is compatible with a telic interpretation. Note however, that if the latter is substituted by *continuo* or *constante* the whole NI acquires an iterative (atelic) interpretation.<sup>7</sup>

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<sup>7</sup> The literary tone of some phrases makes translation difficult. Preserving meaning often results in a considerable change of syntactic structure, while preserving syntax often results in unnatural English structures. This applies to the rest of the work.

(49)

[...] y se sabía durante años que habría bastado un simple gesto de ella, un simbólico extender la mano (una llamada, una carta) [...] (C21)

(50)

Está del todo convencido de que este perseguir los oídos ajenos, y abusar de los oídos ajenos para la justificación de las propias desgracias, no puede traer nada bueno. (C21)

(51)

[...] ya nada podía ocurrir en Atenas ni en su corazón, más que un continuo toparse con fantasmas. (C21)

(52)

La película llega a sugerir que buena parte de la vida creativa del actor fue un progresivo despojarse de la carga y la mística impuestas sobre él desde sus primeras actuaciones [...] (C21)

(53)

[...] la voz se transforma en un puro querer decir, que es sólo lenguaje, en abierta oposición a la lengua, entendida como gramática. (C21)

(54)

Nos dejamos llevar y en ese dejarnos llevar incluimos a quienes están con nosotros [...] (C21)

Direct objects, however, rarely combine with genitive subjects. This can be attributed in part to the ambiguity that arises from this combination. In this regard, (55) can be interpreted as referring to Juan's routine of taking out the trash or to the activity (performed by an unknown agent) of taking out Juan's trash every day. Although the first interpretation comes more readily, the second one cannot be ruled out as ungrammatical.

(55)

El tirar la basura de Juan.  
'Juan's garbage disposal.'

Indeed, when no structural ambiguity can arise, e.g., when the genitive appears before the object or when the infinitive takes a clause as its complement, the genitive subject interpretation improves, as the data in (56)-(57) suggest. Ambiguity is avoided when a possessive pronoun is used, as demonstrated in (58)-(59). The latter examples moreover reveal that possessives and accusatives can in fact co-occur in Spanish.

(56)

[...] pudiera pensarse en la existencia de una especie de nexo entre palabra y objeto más allá del que propone el puro nombrar de aquella a éste.

(57)

[...] el querer **ser feliz de Juan Campos** [...]

(58)

Como explica Jesús Marchamalo en su gozoso tocar los libros, el poeta Joseph Brodsky [...] encontró consuelo en la lectura de Auden [...]

(59)

Natalia lo dejaba aventurarse, perderse, regresar feliz de sus renovadas búsquedas y su constante meter la cabeza en el agua para que las líneas del cuerpazo que se le ondulaban debajo de la superficie correspondieran exactamente con las que estaban en el mundo mejor [...]

Back to (34)b above, we also observe that interpretation seems to improve if *la cerveza de los adolescentes* is understood as a particular kind of beer (say, a brand, *La Cerveza de los Adolescentes*). Still, the genitive subject remains unacceptable.

The definiteness of the direct object appears to influence the acceptability of genitive subjects. Indeed, in (55) *la basura* is non-referential *tirar la basura* can be analyzed as a collocation (cf. *extender la mano* in (39)), unlike *beber la cerveza*, which in the present context is referential.

As the data below suggest, this contrast is preserved when a demonstrative is used instead of a PP-subject.

(60)

Presenciamos \*su beber la cerveza todos los fines de semana.

Lit. 'We observed his drinking the beer every weekend.'

(61)

Oímos su tirar la basura todas las mañanas.

Lit. 'We heard his taking out the trash every morning.'

The acceptability of generic direct objects therefore supports the idea of NOMIs being unbounded (Jackendoff 1991). However, given the evidence of telic and state NOMIs, this characterization should be rather put in terms of a preference and not a categorical restriction. I will come back to this discussion and provide a more detailed analysis of these cases in 2.3.2.

Beyond these complements, these infinitives can also contain attributes (62) and allow predicative constructions (63). None of these properties are described by previous accounts.

(62)

Este sufrimiento del que hablo, ese sentirse abandonado de todo, no significa que efectivamente no podamos alcanzar la deidad. (C21)

‘This suffering of which I speak, this feeling of being abandoned from everything, does not mean that we cannot effectively attain deity.’

(63)

[...] y los suaves vientos de la tarde comenzaron su fluctuante soplar refrescando el ambiente. (C21)

‘[...] and the gentle afternoon winds began their fluctuating blowing, refreshing the atmosphere.’

Let us now move on to modification. While according to the CDH adjectives and adverbs cannot coincide in Spanish, Salvi (1982) accepts the co-occurrence of preposed adjectives and adverbials in Italian. These adjectives, accordingly, are comparable to adverbs as they are restricted to aspectual and event-oriented modifiers (64). Consequently, he claims that they originally occupy an adverbial slot that is sister to VP and subsequently shift their category when they move to the outer nominal structure.

(64)

Il continuo/costante/\*probabile/\*vero ricercare la verità.

‘The continuous/constant/likely/true search for truth.’

Zucchi (1993), however, disagrees with this analysis by noting that these adjectives always have scope over VP (cf. Zwart 1987). As a result, the only interpretation available to (65) is that the person referred to by the possessive constantly leaves without warning, and not that he suddenly leaves in repeated occasions. Therefore, preposed adjectives are only dependent of the N structure.

(65)

Il suo continuo partire improvvisamente.

‘His continuous sudden departure (lit. His continuous leaving suddenly).’

Ramirez draws on these proposals and argues that adjectives and adverbs do co-occur in Spanish; although only when the latter are morphologically derived by the *-mente* suffix, e.g., (46) above. The corpus data (66)-(68) shown below confirms this and reveals that phrasal adverbials can also co-occur with adjectives.

(66)

[...] se trata de un operar científicamente sin que las cosas cambien realmente, sin el auténtico y peligroso afán buscador que, paradójicamente, produjo a la ciencia moderna [...] (C21)

(67)

[...] la Semana santa con la obligada visita del jueves santo a los siete sagrarios, los ayunos y el lento peregrinar detrás de las procesiones. (C21)

(68)

El gobierno de Evo Morales comenzó a cristalizar todas las nuevas demandas de una Bolivia justa y soberana, en aras del vivir bien de todos en detrimento del exclusivo vivir mejor de unos pocos. (C21)

These data also demonstrate that, like with direct objects, the presence of adverbials does not cancel the event interpretation. Thus, the infinitival in (66) yields a manner interpretation, which, as discussed above, is available only to atelic NOMIs (De Miguel 1995). In (67) an event-related adjective coincides with a locative adverbial that contains a plural referent (*las procesiones* ‘the processions’), which in turn yields an iterative/atelic interpretation. (68), for its part, is particularly interesting as an adverb co-occurs with a qualitative adjective and a genitive subject; nevertheless, a state interpretation is obtained.

The corpus data in (69)-(70) further reveals that adjectives are not restricted to preposed positions when coinciding with adverbs. In my opinion, however, they are enabled by the strong literary register of the texts in which they appear. This remains out of the scope of this work.

(69)

Los dos cuerpos, blandos e inmensos, tiemblan con un temblar despacio y sosegado que nace con cada exhalación y los recorre de pies a cabeza. (C21)

(70)

Todo se le iba en temores, en tristezas, en ese envejecer tan suyo y sin retorno. (C21)

Lastly, adverbials can appear both before and after the direct object (Ramirez 2003).

(71)

Con esta Sinfonía de las Sirenas, se asiste al cruce entre ese entonar sabiamente los sonidos que colaboran en el trabajo y una presentación espectacular de los mismos. (C21)

Ramirez analyzes all the HIs discussed so far as AgrP nominalizations, which stand between N-level nominalizations (NOMIs) and CP-level nominalizations (SIs). While in Italian HIs can be analyzed as VP-nominalizations (Zucchi 1993), Ramirez posits AgrP to account for the fact that adverbials can occur both after (72) and before (73) the direct object. The proposed structure for HIs is shown in Figure 2.

(72)

El cesar repentinamente las hostilidades. (Ramírez 2003, p. 124)

(73)

En todos estos conceptos hay implicada la idea de un exceso, de un asumir demasiado seriamente temas sin importancia. (C21)

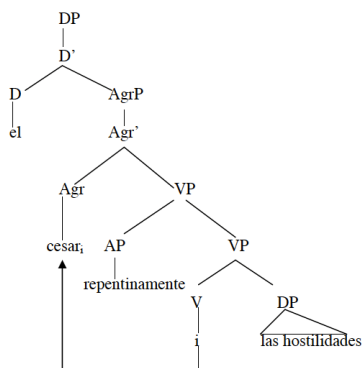


Figure 2: Ramirez's D+AgrP nominal (2003, p. 125)

Further V properties, namely auxiliaries (63), negation (64), and nominative subjects, are barred from co-occurring with N properties in Spanish for the most part according to Ramirez and other descriptions, e.g., Bosque (1989).

(74)

\*Su infatigable haber tomado el rábano por las hojas.

(75)

\*Su supuesto no esperar al tío Álvaro.

Hernanz (1999), however, remarks that determiners (concretely demonstratives and indefinite articles) combine with V properties with more ease than other N properties, as evidenced in (76)- (77), where demonstratives and adjectives co-occur with negation (see also Skydsgaard 1977).

(76)

Y de Manolita [...] se decía que, sin su decisión de casar por segunda vez a Ramiro, sin **aquel haberle obligado a redimir su pecado** [...] no viviría el pálido y frágil botoncito. (Unamuno)

(77)

Y en **este no poder dar un nombre exacto y bello a su situación**, hay algo más que decencia, pudor, sensatez.

Indeed, corpus data reveal further combinations of N properties with auxiliaries. In this regard, (78) and (79) show that causatives and progressive periphrases also co-occur not only with determiners, but also with adjectives. Notably, genitive subjects appear to be barred.

(78)

Utilizar a un enfermo -sea quien sea- para hacer chistes y decir pavadas, con tal de ser filmado y fotografiado, representa **un ansioso hacerse ver**, a costa de un hombre que seguramente no está sano. (C21)

(79)

[...] porque esto no ha sido amistad, sino **un eterno estar esperando el minuto en que la confianza nos lleve a la cama**. (C21)

This limited data suggests that the presence of genitive and nominative subjects are properties that tend to occur with the most and least nominal instances of NIs, respectively. Ramirez, in this sense, tacitly assumes that an overt nominative subject is a necessary and sufficient condition for a NI to be “sentential” (i.e., D+CP). I disagree with this analysis, however. In his vein, I will claim that the NI in (72), characterized as a HI by Ramirez, is in fact a SI headed by a nominative PRO subject. A comparable case is observed in (80), where PRO is coreferential with *el humorista*.



The SI status of the infinitive in (72) is further evidenced by the fact that it can be paraphrased by an *el que*-clause.

Similarly, NOMIs may lack a genitive subject and preserve their event reading, as evidenced in

(80)

El humorista; destacó el haber PRO<sub>i</sub> dado vuelta (a) “algo que se venía muy mal” durante su cuarta participación, de la que dijo haber “salido herido, pero triunfante”.

(cf. *destacó el que haya dado vuelta a algo que se venía muy mal*).

(81)

a. El cesar repentinamente las hostilidades tomó a todos por sorpresa.

b. El que cesaran repentinamente las hostilidades tomó a todos por sorpresa.

(82)

Se oye un suave suspirar.

‘A soft whispering is heard.’

In sum, HIs allow the projection of all the V properties listed in Table 1, in addition to prepositional complements, attributives and secondary predications –not previously described. The presence of higher V layers, however, is correlated with a reduction of N properties. In this sense, genitive subjects can only occur with adverbials and direct objects, which are located under *vP*, but not with negation or auxiliaries. This distribution is consistent with the V-in-N model.

The wide range of concurrent nominal and verbal properties is not exclusive of Spanish but can also be found, for instance, in English gerunds, whose internal syntax varies along a nominal-verbal cline. On this point, Grimm & McNally (2015) propose the following typology.

(83)

- a. PRO raking the leaves. (VP-ing/PRO-ing)
- b. Al raking the leaves. (ACC-ing)
- c. Al’s raking the leaves. (POSS-ing)
- d. The raking of the leaves. (-ing of)
- e. Al’s taking of the leaves. (POSS-ing of)

Semantically, HIs seem to side with NOMIs in yielding an eventive reading. What is more, contrary to previous descriptions (De Miguel 1995; Demonte & Varela 1997), it has been observed that telic and event state readings can also arise. NICs, for their part, are the odd one out among NIs, having an interpretation closer to that of *el que* clauses.

The situation that arises in light of these findings calls for revisiting the characterization of NIs. Concretely, two issues must be addressed. First, it is important to account for the fact that, although atelic interpretations are preferred, telic event and state readings are nonetheless licit. Secondly, it must be specified at which point the event interpretation ceases in favor of clause-like interpretations. Indeed, based on the data reviewed so far, it is evident that the event (and corresponding manner of event) reading, found in NOMIs and in action nouns, is not an exclusive property of morphologically derived nominals but can be found more generally in nominalized event-bearing phrases. This interpretation is crucially absent in SIs and therefore constitutes a central property for the distinction I will propose next.

## 2.3. NIs as *n*- and D-nominals

### 2.3.1. Preliminaries

Drawing on the V-in-N hypothesis, the syntactic structure of NIs can be accounted for in terms of the combination of an outer nominal structure, represented by the presence of a determiner, and an inner verbal structure, with varying functional categories. The semantics of these structures (i.e., whether they denote events, states, propositions or something else) is associated with the layers contained in the latter<sup>8</sup>. NIs can be accounted for syntactically and their interpretation is determined by the verbal projections embedded under the nominal structure (Abney 1987; Zucchi 1993;

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<sup>8</sup> The internal syntactic structure of NIs and deverbal nominals in general does not determine their semantics, however. Instead, as will be seen in the next pages and chapters, in the case of clausal nominals, their semantics are influenced by the selection properties of the verbs under which they are embedded.

selects for arguments with particular properties, it determines their semantics.

van Hout & Roeper 1998; Borsley & Kornfilt 2000; Alexiadou 2001; Borer 2003; 2013; Alexiadou & Grimshaw 2008; Kornfilt & Whitman 2011, among others). The essence of this approach is succinctly expressed in Kornfilt & Whitman (2011) as The Functional Nominalization Thesis (84).

(84)

Nominal properties of a nominalization are contributed by a nominal functional projection. The nominalization has verbal properties below the nominal functional projection, nominal properties above it. (p. 1298)

From this view, all NIs are essentially sentential nominalization with more or less functional verbal layers. NOMIs, which rank lowest on the verbality scale, are restricted to verbal categories associated with an event structure (i.e., up to vP). In contrast, SIs contain more advanced verbal projections, enabling them to include nominative subjects and auxiliary verbs.

While at first sight this appears to contradict the internal nominality of NOMIs (i.e., their true noun status as claimed by De Miguel), for this view this is only evidence of a rich nominal outer shell, that nonetheless projects on top of the inner verbal structure, where most heads are phonologically null.

Positing an underlying verbal structure for NOMIs –and deverbal nouns in general– is not controversial. In fact, it is an analysis that has been entertained even in works that adhere to the CDH, such as Hernanz (1982). Following Lees' (1960) analysis of English gerunds, she explains the formation of NOMIs from clauses via transformations (85), therefore recognizing their underlying event and argument structure.

(85)

El modo de zumbar de las abejas es monótono →  
El monótono zumbar de las abejas.

Beyond the scope of research on NIs, the presence of Verbal Functional Properties (VFP) has been proposed to account for the characteristics of Argument-Supporting nouns (ASNs). For instance, van Hout & Roeper (1998) propose a series of VFP for

nominals, ranging from VP, to vP/EventP, AspP and TP (Figure 3). Accordingly, the event structure of deverbal nouns is determined by their derivational affix (cf. Grimshaw 1990), which in turn allows the projection of arguments and licenses different kinds of verbal adjuncts. This explains the contrast between argument-selecting and non-argumental nouns, e.g., gerundives (*-ing*) and *-ee* nouns, respectively (seen in (86) below). Furthermore, the availability of VFPs allows to account for the fact that, like Spanish NIs, English nominal gerunds typically denote atelic events. Concretely, in this case, van Hout & Roeper propose a [-telic] feature heading Aspect, as seen below.

(86)

- a. The consumption of drugs to go to sleep.
- b. The mowing of the lawn in a house.
- c. An employee *\*by Mary*. (p. 177)

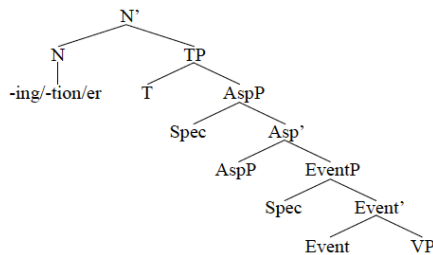


Figure 3: Van Hout & Roeper's (1998) deverbal noun structure

In Alexiadou's (2001) model – which also assumes a V-in-N approach – VoiceP (Kratzer 1996) and AspectP play a central role in determining the syntactic properties of event nouns. Accordingly, much like in declarative clauses, VoiceP licenses the interpretation of external arguments and hosts case features for the object, while Aspect contains features related to the semantic properties of the event in question, like perfectivity. The availability of VFPs and the configuration of feature specifications varies among nominals. Thus, as seen in Figure 4 and Figure 5, the differences between *-tion* nominals and gerunds in English reflect distinct syntactic structures. The former take accusative internal arguments, receive adverbial

modification and express atelic events, while the latter take genitive arguments, receive adjectival modification and can be inflected for number (i.e., *destructions*).

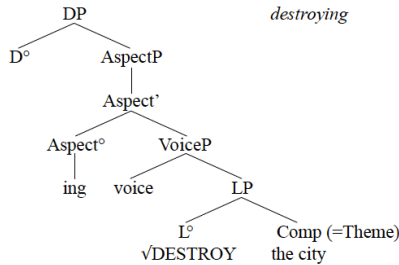


Figure 4: Alexiadou's (2001) *-ing* nominal structure

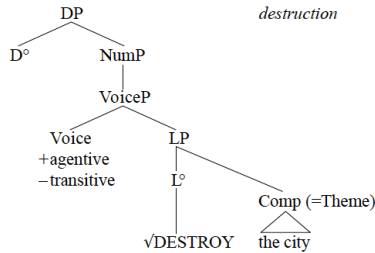


Figure 5: Alexiadou's (2001) *-tion* nominal structure

Kornfilt & Whitman (2011), following Borsley & Kornfilt (2000), assume the presence of verbal layers in nominals in different languages and propose a crosslinguistic typology ranging from VP- to CP-nominals. Nominals are divided into two categories based on their nominalizing category, which can be either N or D.

CP- and TP-nominals are argued to be nominalized by D, as evidenced by their inability to occur with adjectives – which must be hosted in NP – while *vP* and VP-nominals contain a proper nominal head. Spanish NICs and Turkish indicative nominalizations are cited as instances of CP- and TP-nominalizations, respectively. The status of the former is mainly supported by their clausal nature; as seen above, they are often interchangeable with *el que* clauses. As to the latter, the T layer is posited to explain the distinction between the mood (+/- realis) expressed in the

morphology of the heads of these nominalizations (76). These are nonetheless different from verbal heads (77), which make finer tense and mood distinctions.

(87)

Hasan [uşağ-in oda-yı temizle-diğ-in]-i söyle-di.  
 Hasan servant-GEN room-ACC clean-FactNom-3.SG-ACC say.PST (3.SG)  
 ‘Hasan said that the servant cleaned the room.’  
 Hasan [uşağ-in oda-yı temizle-me-sin]-i söyle-di.  
 Hasan servant-GEN room-ACC clean-NonFactNom-3.SG-ACC say.PST (3.SG)  
 ‘Hasan said that the servant should clean the room.’

(88)

Hasan [uşak oda-yı temizle-di/sin] de-di.  
 Hasan servant(NOM) room-ACC clean-PST/-SBJNCT (3.SG) say-PST (3.SG)  
 ‘Hasan said the servant cleaned/should clean the room.’

Italian HIs are analyzed as vP-nominals, as they allow co-occurring adjectives and accusatives (78). VP-nominals, in turn, comprise cases such as *-ing*<sub>of</sub> nominals (79b), where dependents are not assigned case. In these gerunds, furthermore, the genitive subject is not a logical subject of the underlying verb but is instead linked exclusively to the nominal layers of the structure, as evidenced by the fact that nouns such as *yesterday* or *today* can occur, unlike in POSS-*ing* gerunds (79a), which are analyzed as TP-nominalizations due to the presence of an accusative object (cf. (76)).

(89)

Il suo continuo eseguire la canzone impeccabilmente.  
 The his continuous follow.INF the song impeccably  
 lit. ‘His continuous following of the song impeccably.’

(90)

- a. John’s/\*yesterday’s criticizing the book. (Borsley & Kornfilt 2000, p. 105)
- b. Yesterday’s constant(\*ly) reading of Anna Karenina. (Kornfilt & Whitman 2011, p. 1302)

Alexiadou et al. (2011) provide a more elaborated analysis along similar lines and draw the distinction between the ‘nominal’ and ‘verbal’ nominalizations determined by the presence of nP and ClassP, which are crucially only available to the former

type (cf. Picallo 2006). Accordingly, *nP* is responsible for the creation of a nominal internal structure, while *ClassP* hosts the inflective features of the nouns. Based on their prototypical characteristics, Spanish NOMIs and SIs are then given the structures in (91) and (92), respectively. In contrast to previous accounts, Internal aspect (*Aktionsart*) is realized in *VoiceP-vP*, while external aspect is hosted in *AspectP*.

(91)

[ DP [ *ClassP*[-count] [ *nP* [ *VoiceP* [ *vP* [Root]]]]]] → NOMI

(92)

[ DP [ TP [ *Aspect* [ *VoiceP* [ *vP* [Root]]]]]] → SI

The data upon which Alexiadou et al.'s characterization rests is ultimately consistent with the CDH, however. For instance, it restricts the English verbal gerund to cases where the subject is introduced by a Saxon genitive and bars many of the gerunds in (83). As to Spanish, accusative direct objects are not allowed, in accordance with De Miguel (1995). Nonetheless, the authors remark that the presence of NFP ultimately distinguishes verbal nominalizations from those with “mixed internal structure”. Consequently, HIs can be in principle accommodated in this model, especially considering that *VoiceP* and *vP* can be nominalized by *nP*.

Iordachioaia (2020) expands on this analysis by examining the differences between *nP* (nominal) and *DP* (verbal) nominalizations. Building on Picallo (2006), she distinguishes *nPs* by their ability to license NFPs, such as AP and DP, as evidenced in their agreement in gender and number. By contrast, *DP*-nominalizations do not allow these features to be checked, and so their only NFP, namely *D*, receives default values. This entails that in Spanish the definite article is defective.

This distinction results evident when looking at the selection of anaphoric pronouns used to refer to NOMIs (83)a and SIs (93)b, as well as in the fact that the latter can only take a definite article. Though also adopting a CDH view of Spanish NIs, this model nonetheless allows to account for HIs, as it posits verbal Extended Projections (cf. VFPs) inside the nominal shell.

(93)

- a. Acostumbrado al dulce mirar de su amada, ya no podía vivir sin él/\*ello.  
'Accustomed to the sweet gaze of his beloved, he could no longer live without it.'
- b. El mirarle tan dulcemente la amada, eso/\*ése es lo que le mantiene ilusionado.  
'His lover watching him so sweetly, that/\*that is what keeps him excited.'

(De Miguel 1995, p. 254)

In addition to vP and VoiceP, Iordachioaia argues that AspectP can be nominalized by *n*. This follows from the observation that in Polish *nie*-nominals preserve the aspectual specification of their corresponding verbs, as seen in (94). No instances of such nominals are provided for Spanish, however. Beyond AspectP, TP and further VFPs cannot be nominalized by *n*. Indeed, TP is the host for nominative subjects, which are incompatible with adjectives and determiners other than the definite article.

(94)

przeczytanie/\*czytanie      gazety      w/\*przez 2 godziny  
read.PFV.NIE read.IPFV.NIE newspaper.GEN in/for      2 hours  
'The reading of the newspaper in two hours.'

(Iordachioaia 2020, p. 16)

As for D, its range of action extends from AspectP (in Romanian supines) to CP (in Greek *to oti*-clauses and Spanish *el que*-clauses). Accordingly, Spanish NICs and English verbal gerunds (POSS-*ing* in addition to POSS-*ing*) can only be nominalized by DP, as evidenced by their ability to occur with modal and event-related adverbs (cf. Salvi's analysis of Italian HIs).

(95)

[Mary probably being responsible for the accident] was considered by the DA.

(96)

Jo worried yesterday about [Pat('s) coming to dinner tonight]. (p. 13; 25)

(97)

Se me hizo demasiado cuesta arriba [el empezar de nuevo con un hombre]  
[...] (C21)



(98)

[El haber ella escrito la novela] explica su fama. (Iordachioaia 2020)

The *nP*/DP classification is also adopted in Alexiadou (2020), who further posits a functional parallel between NFPs and VFPs. Drawing on works such as Hiraiwa (2005), Wiltschko (2014) and Ramchand & Svenonius (2014), she refines the distinction between ‘nominal’ and ‘verbal’ nominalizations in terms of the semantic domains – associated to functional categories – that each of them is able to nominalize. In the essence of Iordachioaia, D and *n* are said to have different ‘ranges of action’ as nominalizers, which are reflected in the semantics of the constructions they head. This means that, just to give an example, the discourse linking function carried out by CP (as per Wiltschko’s model in Table 2) cannot be nominalized by *nP*, but only by DP. Regardless of this dichotomy, the object-like semantics of NIs is attributed to the discourse linking provided by the DP layer is present in all structures.

Table 2: Wiltschko’s (2004) model

Function:	Disc. linking	Anchoring	Point of view	Classification
V structure	CP	TP	AspectP	<i>vP</i>
N structure	DP	QuantityP (num.)	DivP (sing./pl.)	<i>nP</i>

The integration of semantic properties into the model allows to explain the contrast between the interpretation of NOMIs and SIs, briefly mentioned above, in terms of the DP/*nP* framework. Indeed, much like in the case of other nominals with “nominal” and “verbal” variants (e.g., English gerunds), the semantics of NIs have been described predominantly in terms of an event-proposition dichotomy.

To begin with NOMIs, the most compelling piece of evidence for their being eventive is their argument structure (see Lees 1960 for a classic account). Grimshaw (1990), along these lines, posits an event argument to distinguish these nouns from referential nouns (e.g., *cat*, *bread*, *China*), which cannot support arguments nor refer to events. Borer (1993, 2003) goes further and establishes that the argument structure derives from the event structure.

As to NISs, their occurrence with factive predicates has been often taken as evidence for their being fact- or proposition-denoting (e.g., De Miguel 1995, Demonte & Varela 1997). In a similar direction, Zucchi has claimed for Italian that they denote propositions as they are interchangeable with *il fatto che* ('the fact that') clauses and cannot occur with duration predicates (99)-(100).

(99)

- a. Il partire i nostri giovani per la guerra/il fatto che i nostri giovani partano per la guerra, di per sé, non spiega la nostra opposizione alla politica del governo. (p. 275)
- b. El partir nuestros jóvenes a la guerra/el que partan nuestros jóvenes a la guerra, en sí, no explica nuestra oposición a la política del gobierno.  
'Our youth leaving for war/the fact that our youth are leaving for war, by itself, does not explain our opposition to government policy.'

(100)

- a. Gianni ha visto ??il partire i nostri giovani per la guerra/il partire dei giovani.  
(p. 276)
- b. Juan ha visto \*el partir nuestros jóvenes a la guerra/el partir de los jóvenes.  
'Juan has seen our youth going off to war/the departure of the youth.'

The situation with respect to HIs is less clear. On the one hand, Zucchi maintains that Italian HIs like that in (101) are equivalent to *il fatto che* clauses. However, in English, poss-ing nominals (102), comparable in many respects to HIs, are analyzed as denoting states-of-affairs (SOAs), understood as "things one may be aware, may be informed, but which, unlike propositions, cannot properly be said to have the property of truth or falsehood, or be objects of belief" (p. 207).

(101)

Gianni apprezza il tuo eseguire la sonata. (= il fatto che tu abbia eseguito la sonata [fact-denotation]).  
'Gianni appreciates your performing the sonata.'

(102)

John remembers/is informed of the soprano's performing the song. (= SOA)

Along a similar direction, Serrano (2015) has proposed that *el que*-clauses can be analyzed as SOAs in terms of Zucchi, based on their similarities with English POSS-

ing gerunds. Both allow combining with predicates headed by verbs such as *prevent*, which, as per Zucchi, correspond to a SOA as they describe a situation that has not materialized in the real world. By contrast, in Spanish, *el hecho de que*-nominals are incompatible in these contexts.

(103)

- a. We prevented his succumbing to the temptation by hiding all the cookies from him.  
(Zucchi 1993, p. 83)
- b. We prevented ??the fact that he succumbed to the temptation by hiding all the cookies from him.

(104)

- a. Evitamos el que cayera en la tentación escondiéndole todas las galletas.
  - b. Evitamos \*el hecho de que cayera en la tentación escondiéndole todas las galletas.
- (Serrano 2015, p. 217)

Serrano further notes that NICs can also combine with these predicates, which suggests that they too denote SOAs.

(105)

La hipoteca fue concedida el 29 de junio e inmediatamente pudimos disponer de 500 millones para pagar las fichas y atrasos de los jugadores, lo que evitó [el descender de categoría].

(106)

Sé que muchas pensaréis que no es bueno que me pese día tras día, pero así evito [el caer en la tentación].  
(Serrano 2015, p. 218)

Drawing on these facts, Moulton (2020) has further provided evidence in support of these nominals denoting SOAs, by noting that *el que*-clauses cannot combine with truth values, unlike embedded clauses and *lo de que*-nominals, which correspond to propositions and nominals with propositional content, respectively (cf. Picallo 2002).

(107)

- a. #El que María se compró una casa es falso.
- b. Que María se compró una casa es falso.
- c. Lo Ø de que María se compró una casa es falso.
- d. \*El María haberse comprado una casa es falso.

This proposal runs into trouble, however, given counterexamples such as (108)-(109).

(108)

Decimos que lo repetido se gasta y pierde novedad. Pero no es del todo cierto; [no es cierto el que se haya de convertir en rutina]. (C21)

(109)

También indicó que [es falso el que las embarazadas tengan prerrogativas], o que los coyotes sean amigos de los migrantes puesto que lo único que buscan es “ganar dinero”. (C21)

On the syntactic plane, Schirakowski (2021b) provides empirical evidence that supports, on the one hand, that defective determiners can head NIs (following Iordachioaia), and on the other, that these NIs denote facts (following De Miguel). Concretely, she reports that in an anaphora resolution experiment participants prefer neuter pronouns to recover NIs headed by verbal infinitives (89%) than NOMIs (48%), which in turn tend to be recovered by masculine pronouns. These are represented in (110)a and (110)b, respectively.

At first sight, this observation suggests that the former structure represents a DP-NI, while the latter is a *nP*-NIs. However, the infinitive in (110)a is in fact structurally ambiguous. Note, in this regard, that in contrast with the infinitive in (110)b, it can occur with modal predicates (which select propositions). None of both can occur with a truth-value predicate, however.

(110)

- a. A la condesa le consolaba el comer golosinas, sin *\*el que/lo que* no soportaría la soledad en su mansión.
- b. A la condesa le consolaba el trajinar de las criadas, sin *el que/\*lo que* no soportaría la soledad en su mansión.

(111)

- a. Es posible el comer golosinas.
- b. *\*Es posible* el trajinar de las criadas.

(112)

- a. *\*Es cierto/mentira* el comer golosinas.
- b. *\*Es cierto/mentira* el trajinar de las criadas.

I will return to this issue and explain these data in 3.4.1. For now, it is sufficient to highlight the correlation between the presence of NFPs and the event interpretation, which erodes in the presence of higher verbal extended projections, leading to SOA/propositional readings.

To summarize this section, despite relying on limited data and therefore leading to some incomplete descriptions, the DP/*n*P framework allows, in principle, to account for the verbal properties found in HIs, e.g., event-related adverbials (AspectP) and the case assignment of direct objects (VoiceP/*v*P).

Based on this, I will now support a classification of NIs (represented in Figure 6) based on two central properties, namely a head hosted in *n*P and an eventive interpretation. From this perspective, NICs are characterized, syntactically, by their lack of NFPs, and semantically, by their non-eventive denotation<sup>9</sup>. NOMIs and HIs, for their part, form a single category by virtue of their *n* head and their event denotation.

Syntax:	[DP [Verbal FP... [...]]]		[DP [Nominal FP ... [Verbal FP... [...]]]]	
	[DP [VFps [ <i>v</i> P [Root]]]]		[DP [NFPs [ <i>n</i> P ([VFps) [ <i>v</i> P [Root]]]]]]	
	CP/TP-nominalizations		AspP-nominalizations	VoiceP/ <i>v</i> P/VP-nominalizations
	<i>SIs</i>		<i>HIs</i>	<i>NOMIs</i>
Semantics:	Propositional?		SOA	Eventive/Stative

Figure 6: A revisited syntactic-semantic classification of NIs

Thus, in general terms, this classification follows Alexiadou’s (2020) and Iordachioaia’s (2020) works on deverbal nominals, to which it further proposes amends. Still, some problematic cases pose a challenge to this proposal, namely NIs like those in (76)-(77), where verbal layers above AspectP combine with a

<sup>9</sup> This non-eventive denotation is often associated with the expression of facts (Hernanz 1982; De Miguel 1995).

demonstrative. These structures are therefore excluded from the upcoming analysis. Nonetheless, in 2.3.4, I will offer a few remarks on the subject.

## 2.3.2. *nP-NIs*

### 2.3.2.1. VP/*vP*/VoiceP-NIs

Infinitives of this class are on the surface syntactically heterogeneous. Some of them exhibit a fully nominal syntax, like “classic” NOMIs (113), while others contain a limited set of verbal properties that extend up to *vP* (114)-(115). In all cases, however, aspectual properties are checked in VoiceP/*vP*, as per Alexiadou’s model.

(113)

- a. [...] entonces, por vez primera, escuchó el suave batir las de olas del lago. (C21)
- b. Un día, cuando se encontraba en el jardín más singular de su padre, oyó un batir de tambores que surgía de debajo de un arbolillo.

(114)

- a. [...] en ese buscar candidata en cuanta fiesta se le cruce, bailará con Miranda [...]
- b. No es un contemplar ideas o pensamientos, sino la vida, toda la vida de hoy.

(115)

- a. Ese mirar el color actual con ojos del pasado.
- b. [...] y se sabía durante años que habría bastado un simple gesto de ella, un simbólico extender la mano (una llamada, una carta) [...]
- c. Ha sido un deshacer la casa de Madrid y un amueblar y acondicionar en serio el asubio que ha ocupado el verano entero entre unas cosas y otras.

The alternation between the eventive and manner interpretation is influenced by the matrix predicate with which the infinitive occurs, as can be seen in (116). Concretely, factive emotive predicates favor the manner reading, while perception predicates promote the event reading (Demonte & Varela 1997). In other cases, the use of demonstratives and attributes can force a manner-of-action interpretation with perception predicates, while with emotive factive predicates, the event reading can be enabled with the use of an aspectual adjective. In any case, the availability of the manner-of-action interpretation results from the presence of an event structure.

(116)

- a. Es inquietante/me molesta el gritar de los niños. (manner)  
'The screaming of children is annoying/bothers me.'
- b. Es inquietante/me molesta el constante gritar de los niños. (habitual event)  
'The constant screaming of children is annoying/bothers me.'
- c. Se oye el gritar de los niños. (atelic event)  
'The screaming of children can be heard.'

NIs of this kind typically express atelic, unbounded events, or activities in Vendler's terminology. Indeed, they are typically headed by an unergative or transitive verb with a bare NP as complement. These bare complements are notably property-denoting and therefore non-referential and non-argumental, which explains that they fail to give rise to telicity (Espinal 2010; see also Espinal 2011).

As noted by Fábregas & Varela (2006) and observed in (115)a-b, NOMIs can combine with referential direct objects. The claim that this is only allowed provided that an atelic reading is preserved, however, must be revised in view of data like (117), which reveals that vP-NIs may also yield telic readings. As revealed by (118)-(119), NIs with genitive arguments may also be telic or stative (contra De Miguel 1995).

Although the acknowledgement of these nominals may contradict the mainstream view, it nonetheless resembles the distribution of nominals in other languages, for example, gerunds in English.

(117) *Telic events*

[...] el tamboreo arreció, las mujeres se desnudaron sin arte y sin maña, fue un quitarse la ropa sin más. (C21)

(118)

En el interior de Sonia, no supo cómo ni por qué, se produjo un leve desmoronamiento, el abrirse de una grieta. (C21)

(119) *States*

Una tragedia es que el vivir de una sola especie, la nuestra, sea demasiada muerte de casi todo lo demás. (C21)

(120)

Mi cuerpo no había negociado con el suyo, oportunidad perdida para siempre, tal vez, porque este aséptico yacer era otro obstáculo que se agregaba a mis intentos de posesión. (C21)

(121)

Tonatiú asintió con un lindo caer de sus pestañas. (C21)

(122)

The US commander-in-chief in the Pacific [...] said the US appreciated New Zealand's sending a frigate to the Gulf [...] (CB)

(In Heyvaert 2008, p. 40)

(123)

At the end of today's session, European foreign ministers again condemned Saddam Hussein's taking of foreign hostages. (CB)

(In Heyvaert 2008, p. 42)

Except for (117), which nevertheless improves with a demonstrative, all telic infinitives are compatible as complements of perception predicates and allow aspectual modifiers, which confirms their eventive denotation.

(124)

Presenciamos...

- a. #Un/aquél quitarse la ropa.
- b. El abrirse de una grieta.
- c. Un lindo caer de sus pestañas.

(125)

- a. Un constante/repentino quitarse la ropa.
- b. El continuo/repentino abrirse de una grieta.
- c. Un lindo y continuo/repentino caer de sus pestañas.

Crucially, these data reveal that telicity can be achieved not only by the presence of an accusative direct object but also by an unaccusative head.

I will now demonstrate that these observations are consistent with Verkuyl's (1972) claim that telicity only emerges in the context of a direct argument with a property *a* (also known as Verkuyl's Generalization; see Borer 2005b, p. 41) by adopting and adapting Borer's analysis of ASNs (1993, 2005, 2013) to NOMIs of Spanish.

In brief, Borer assumes a V-in-N model for ASNs where argument structure follows event structure. This means that information encoded in the inner (verbal) shell does not correspond to arguments of a verbal base *per se* but is rather concerned with the event. ASNs are thus conceived as nominal expressions of events rather than nominalizations of verbs. Additionally, following Verkuyl (1972, 1989), telicity is



correlated to the presence of Quantity<sup>10</sup>, i.e., a bounding element, which can be manifested in an internal argument or an adverbial modifier.

Just as Kratzer (1996) posits VoiceP to account for external arguments, so does Borer invoke the role of *subject-of-quantity* for internal arguments, encoded in AspQ(uality). Telicity arises through the embedding of a verb in AspQ, where the event can be bounded. The specifier of AspQ (called AspQ<sup>max</sup>), is in turn headed by a <e><sub>#</sub> lacking range assignment. In languages where Verkuyl's Generalization applies (including English, Spanish and Italian), the range of <e><sub>#</sub> is assigned by the quantity-providing DP in Spec,AspQ to Asp<sup>0</sup>Q through specifier-head agreement, much in the same way that a determiner assigns quantity to mass nouns (2005b, p. 75-77). In transitives, the DP corresponds to the direct object, while in unaccusatives it represents the subject (see Burzio's Generalization). In unergatives, in turn, AspQ is absent and hence telicity fails to arise. In general terms, this means that only the highest argument within the event structure raises to the nominal domain. This is schematically represented in (126). In (127) we observe this structure applied to an ASN (cf. Borer 2013, p. 141).

(126)

- a. [N CN[V]<sup>11</sup> [E argument 1 ([F<sup>SHL12</sup>/ASPQ argument 2) [C=V ...]]]]
- b. [N C N[V] [ExS-N<sup>13</sup> argument 1 CN[V] [Event argument 1 ([F<sup>SHL</sup>/ASPQ argument 2) [C=V ...]]]]]

(127)

*The doctor's laughing*

[DP the doctor's [ExS-N ~~doctor~~ [laughingN[V]] [Event doctor [C=V laugh]]]]

---

<sup>10</sup> The notion of Quantity is adopted from Krifka's (1989, 1992) comparison between nominal Quantification and Aspect. Quantity structures include (a) Quantity (indefinite) mass DPs, (b) Quantity (indefinite) plurals, (c) Quantity (indefinite) singular DPs, (d) Definite mass DPs, (e) Definite plurals, and (f) Definite singulars.

<sup>11</sup> This represents a categorical function that projects a noun and takes a verb as complement. Broadly speaking, this represents a nominalization process in Borer's model (2013).

<sup>12</sup> Semantically vacuous extended projection (Borer 2013).

<sup>13</sup> Extended projection segment, which in this case corresponds to NFPs.

Accordingly, in unaccusatives like in (118)-0, the sole argument (i.e., argument 2) occupies provides telicity as the Subject-of-Quantity. As in Alexiadou's model internal Aspect is expressed in VoiceP/vP, the subject must move to v. However, this proposal is incompatible with the claim that suffixes are specified for (external) Aspect (e.g., Grimshaw 1990, Alexiadou 2001, Alexiadou & Grimshaw 2008). In Borer's model (2003, 2005, 2013), this is overcome by positing a neutral root, whose lexical category is determined by the functional layers it combines with. Both models can be combined by positing a structure as below.

(128)

[DP el [ClassP [<sub>NP</sub> abrirse [VoiceP [<sub>vP</sub> (de) una grieta-[Root abrir(se)]]]]]]]

Still, one can find data like the examples in (104) and (105), where an atelic interpretation is obtained. The second example, moreover, yields a manner interpretation.

(129) Atelic *caer*

El hombre del gabán seguía con los ojos [el caer de la lluvia fina] [...]

(130) Telic *caer*

¿Sabéis, dijo, [ese caer flojo, casi bobo, del muñeco que la niña ha tirado al aire]?

The first thing to note is that, as pointed out by Dowty (1991), telicity is a property that concerns whole predicates and not only single verbs. Hence, it is possible for typically telic verbs to head atelic predicates, provided that other elements introduce telicity by other means. The atelicity of (128)-(129) above can be attributed in part to the Quantity of the subject, and to the definiteness of the infinitive.

In (129), the NOMI refers to an event consisting of the falling of a mass, i.e., *la lluvia fina* 'the light rain'. On the other hand, in (130), the presence of a demonstrative and an adjective force the manner interpretation, as observed above. Furthermore, in the latter, the matrix predicate refers to a cognitive state (*saber*), which, also promotes the manner reading, as seen in the contrast between (130) and (133).

(131)

Conoció [el suave batir las de olas del lago].

The examples below show that with a definite count noun as subject, *caer* yields a telic reading.

(132)

El hombre del gabán seguía con los ojos [el caer del paracaidista], que tomó 5 minutos.

(133)

En este video se apreciaba [el caer del muñeco que la niña ha tirado al aire].

The contrast in telicity observed in these cases can be attributed to the *homogeneity* of the events, a property that, besides *divisiveness*, and *cumulativeness*, relate to telicity according to Krifka (1992, 1998) and Kiparsky (1998). Borer (2005b) synthesizes these three concepts under Quantity, as seen in (109). Accordingly, she notes that telicity not only arises in the presence of a *telos*, but also as a result of non-homogeneity. *Homogeneity* can be understood in lay terms as requiring every subset (or subevent) P to be P. Thus, the contrast in telicity between *reading books* and *reading three books* implies that any subevent of the former is *reading books*, while in the latter case, there is no subevent that equates to *reading three books*.

(134)

- a. quantity:  
P is *quantity* iff P is not *homogenous*
- b. P is *homogeneous* iff P is *cumulative* and *divisive*
  - i. P is *divisive* iff for all x with property P there is a y, proper subset of x, with property P, such that subtracting y from x yields a set with the property P.  
$$P \text{ is } \textit{divisive} \text{ iff } \forall x [P(x) \rightarrow \exists y (P(y) \wedge y < x)] \wedge \forall x, y [P(x) \wedge P(y) \wedge y < x \rightarrow P(x-y)]$$
  - ii. P is *cumulative* iff  $\forall x [P(x) \wedge P(y) \rightarrow P(x \cup y)]$

In that sense, any subevent of *el caer de la lluvia* or even *caer lluvia* constitutes an event of *caer Lluvia* on its own. In contrast, in the examples in (101) and (102), the Quantity of the subjects allow the NIs to receive a change-of-state (Accomplishment) interpretation, typical of unaccusatives.

This also allows to account for the data in (97), where despite the definiteness of the internal argument, the atelic reading is preserved. In all three cases, the event is homogeneous as every subevent equates to the event.

The presence of Quantity in NIs exhibiting up to VoiceP agrees with Table 2, where QuantityP serves an anchoring function. Indeed, further evidence that event-

denoting VP/ $\nu$ P/VoiceP-NIs always are nominalized in *n* is that they always allow adjectival modification, even in the presence of adverbials that modify VP (excluding, e.g., modal adverbials). This includes hybrid structures combining an adjective and an adverb like (135), analyzed as  $\nu$ P-nominals in Kornfilt & Whitman (2011), causatives like (68), reproduced in (136), as well as NIs with adverbials like (46), reproduced in (137) with an added aspectual modifier to evidence its eventive interpretation.

(135)

[...] en su obra se evidencia [un continuo comenzar de nuevo], dejando atrás lo que inició en el pasado porque vive en un constante cambio [...] (C21)

(136)

Utilizar a un enfermo -sea quien sea- para hacer chistes y decir pavadas, con tal de ser filmado y fotografiado, representa [un ansioso hacerse ver], a costa de un hombre que seguramente no está sano.

(137)

[Aquel conducir camiones imprudentemente durante horas] fue un espectáculo que deseo nunca más volver a presenciar.

In sum, Voice/ $\nu$ P/VP-NIs, while typically atelic (cf. Schirakowski 2021), may also express states and telic events. In the latter case, they are restricted, for structural reasons, to unaccusatives. Statives, for their part, ought to be syntactically distinguished from activity NIs.

In Borer's account (2013), the subjects of statives originate as Subjects-of-States from where they project. In the model I adopt here, a tentative solution would be to assign a [eventive/stative] specification to Voice<sup>0</sup>, in the spirit of Kratzer (1996). I will opt for this analysis as the fine-grained properties of these infinitives, let alone elaborating on syntactic theories, is out of the scope of this work.

To conclude, the following comprise the VP-based NIs available to Spanish:

(138)

a. Unaccusative [Telic]

[DP *el* [ClassP [*nP* *abrirse* [VoiceP [Voice EVENT] [VP *de una grieta* [Root ~~*abrir*~~(*se*)]]]]]]]

b. Unergative [Atelic]

[DP *el* [ClassP [*nP* *batir* [VoiceP *de las olas* [Voice EVENT] [VP [Root ~~*batir*~~]]]]]]]

c. Transitive [No Quantity: Atelic]

[DP *el* [ClassP [*nP* *beber cerveza* [VoiceP *de los a.* [Voice EVENT] [VP ~~*beber*~~ *cerveza*]]]]]]]

d. Stative

[DP *el* [ClassP [*nP* *vivir* [VoiceP *de una especie* [Voice STATE] [VP [Root ~~*vivir*~~]]]]]]]]]

### 2.3.2.2. AspectP-NIs

*nP*-NIs may combine adjectives with AspectP, which projects above VoiceP. These co-occurrences are barred in several accounts (De Miguel 1995; Alexiadou et al. 2011; Zucchi 1989 in Italian). Hernanz, (1982), on the other hand, recognizes them, although without providing an in-depth description.

(139)

[...] porque esto no ha sido amistad, sino un eterno estar esperando el minuto en que la confianza nos lleve a la cama. (C21)

‘[...] because this has not been friendship, but an eternal waiting for the minute when trust will take us to bed.’

(140)

[...] no un sencillo dejar de ser, no un golpe y una nada blanca, no el descanso, la muerte era ese lento deshacerse entre los muebles [...] (C21)

‘[...] not a simple ceasing to be, not a blow and a white nothingness, not rest, death was that slow unraveling among the furniture.’

(141)

En fin, no sé de dónde me brota este andar elucubrando chifladuras día y noche.

‘Anyway, I don't know where I get this crazy rambling day and night.’

The selection of determiners and the presence of an adjective indicate that nominalization is performed by *n*. As evidenced by (139) and (141), both referential and non-referential direct objects are allowed. The aspectual auxiliary verbs, for their

part, must be hosted in AspectP, which, according to Demirdache & Uribe-Etxebarria (2000), is located right below TP.

Drawing on Iordachioaia, I will interpret these facts as evidence that *n* may nominalize AspectP in Spanish. As in Polish *-nie* nominals, I will assume that these nominals are headed by an aspect-marked verbal structure, which includes the auxiliary verb. The NI in (139) would hence be structured as below.

(142)

[DP *un* [ClassP [AP *eterno* [<sub>NP</sub> *estar esperando el minuto...*  
[AspectP *estar* ~~*ndo*~~ [VoiceP [<sub>VP</sub> *el minuto...* [VP [Root ~~*esperar*~~

Notably, the introduction of possessives and genitive subjects reduces the acceptability of these NIs.

(143)

??Nuestro eterno estar esperando el minuto en que la confianza nos lleve a la cama.

Lit. 'Our eternal waiting for the minute when trust will take us to bed.'

(144)

??Su sencillo dejar de ser.

Lit. 'Her simple to cease to be.'

(145)

??Ese andar elucubrando chifladuras día y noche de mi hijo.

Lit. 'This day and night rambling about crazy things of my son.'

These infinitives are also incompatible with perception predicates. However, they do allow event-oriented modifiers. In (140) it is expressed nominally by the adjective *eterno*, whereas in (141) it is expressed verbally by the adjunct adverbial locution *día y noche*.

(146)

Presenciamos/vimos/oímos

- a. \*un eterno estar esperando el minuto en que la confianza nos lleve a la cama.
- b. \*este andar elucubrando chifladuras día y noche.
- c. \*un sencillo dejar de ser.

(147)

- a. Esto ha sido un eterno/constante estar esperando el minuto en que la confianza nos lleve a la cama.
- b. La muerte era ese rápido/súbito dejar de ser.
- c. No sé de dónde me brota este constante/continuo andar elucubrando chifladuras noche y día.

These infinitives are likewise incompatible with truth-value predicates, as illustrated below, which entails that they do not denote proposition. Furthermore, they are odd with cognitive predicates, which rules out that they express SOAs.

(148)

- a. \* Un eterno estar esperando el minuto en que la confianza nos lleve a la cama es cierto/falso.
- b. \* Un sencillo dejar de ser es cierto/falso.
- c. \* Este andar elucubrando chifladuras día y noche es cierto/falso.

(149)

- a. Soy consciente/me han informado de \*un/#ese eterno estar esperando el minuto en que la confianza nos lleve a la cama.
- b. Soy consciente/me han informado de \*un sencillo dejar de ser.
- c. Soy consciente/me han informado de \*este andar elucubrando chifladuras día y noche.

It must be noted, however, that not all NIs headed by aspectual periphrases can be analyzed as *nP*-NIs. Perfective infinitives, for instance, are not only incompatible with perception predicate but they also rule out adjectival modification, as seen in (150)-(153) below.

(150)

[...] se mezclaban con su sentido de sí mismo, tan baqueteado durante aquellos años de huida en casa de los Cuevas: tan lejos ahora mismo de aquel haberse sentido eternamente sacerdotal con que empezó su vida de cura mexicano, y a la vez tan próximo a una cierta radicalidad, también confusamente sacerdotal o testimonial. (C21)

(151)

[...] aquél \*eterno/\*repetido haberse sentido sacerdotal con que empezó su vida de cura mexicano.

(152)

Fuimos testigos de \*su haber llegado tarde.

(153)

- a. El \*repetido haber llegado tarde fue uno de los motivos de su despido.
- b. El haber llegado tarde repetidamente fue uno de los motivos de su despido.
- c. El/su constante llegar tarde fue uno de los motivos de su despido.

The blocking of *n* and the eventive interpretation could be attributed to perfectivity. Indeed, unlike in the progressive and terminative aspects (expressed in (139)-(141)), the perfective contains both the start and termination points of the event (Zagona 2013, p. 763), thus portraying the event as a whole in its completeness. As such, it makes sense that event modifiers cannot be projected on top of AspectP. By contrast, adverbial modifiers, which are located below AspectP (i.e., before the perfective point of view) are allowed.

All in all, these NIs retain the nominal head; however, the presence of Aspect appears to block the surfacing of some nominal elements, such as possessives and genitive subjects. Nevertheless, the eventive reading, although reduced, remains.

### 2.3.3. DP-NIs

Let us now center our attention on DP-NIs, which will occupy us for the rest of this work. In this section I shall only sketch a general description of DP-NIs, focusing on their distinctive features in comparison to *n*P-NIs. A more detailed discussion of their syntactic and semantic properties will be provided in 3.2.

NIs in Spanish are characterized by their lack of NFPs and their non-eventive denotation. Despite their internal verbality, their external distribution is comparable to that of D-NPs. As can be observed below, they may surface as arguments, appositions, attributes, and complements of prepositions.

(154) *Argument - Subject*

El no tomar la medicación antipsicótica tal como se ha recetado dificulta la recuperación tanto a corto como a largo plazo. (C21)

(155) *Argument – Direct Object*

[...] también se condenará el no conservar los libros de contabilidad o alterarlos con el fin de ocultar información. (C21)



(156) *Nominal Predicate*

[...] otro aspecto importante es que estamos cumpliendo nuestra misión como instituciones de educación superior tecnológica, que es el desarrollar tecnología propia en beneficio de nuestro país. (C21)

(157) *Apposition*

[...] de nuevo surge en este aspecto el objetivo del tesoro, el ser herramienta que facilite el acceso a la documentación por parte del usuario [...] (C21)

(158) *Comparative Clause*

[...] también estaban los más educados que se abstienen del pugilismo, por no interrumpir su siesta o el juego de azar que los mantiene más entretenidos y son menos peligrosos que el tratar de aprobar alguna nueva ley. (C21)

(159) *Prepositional Complement*

[...] es confundir el sentimentalismo con el no tener miedo de mostrar los sentimientos [...]. (C21)

As discussed above, a property that distinguishes these infinitives from other NIs is their ability to license nominative subjects. This operation, however, is not exclusive of DP-NIs but can be found in other infinitival constructions in several Romance languages. According to Mensching (2000), subjects of infinitive clauses typically appear after the verb and are assigned case by T (pp. 150-152), as shown in (160), taking an adverbial infinitive clause as example.

(160)

[AgrP [Agr castigar<sub>i</sub>][TP [T' [T t<sub>i</sub>][VP [Spec VP el juez][V' [V t<sub>i</sub>][DP a los culpables]]]]]]

I will adopt this analysis to account for the subject of DP-NIs, whether they are overtly or covertly expressed. In the latter case, e.g., in (22), reproduced in (161), a PRO subject (coreferential with a DP in the previous sentence) is to be assumed.

(161)

[...] el grupo<sub>i</sub> recalca la intención de expandir sus horizontes a nivel internacional y aún más [el PRO<sub>i</sub> dejar de pertenecer únicamente a la red] y pasar a otros medios como la televisión. (C21)

The presence of nominative subjects thus reveals a TP layer in these constructions. As we have seen, however, for several authors these nominals contain further verbal layers. For instance, in Ramirez (2003) these structures constitute nominalized CPs,

whereas Iordachioaia (2020) proposes a MoodP layer to accommodate modal adverbials, as in the example below<sup>14</sup>.

(162)

El haber escrito ella probablemente esta novela explica su fama.

[DP *el* [MoodP *probablemente* [TP *ella* [TP T [AspectP *haber* [VoiceP [VP *esta novela* [VP *escrito*]]]]]]]]]

The sentential properties of DP-NIs and their interchangeability with *el que*-clauses supports the presence of a C layer. However, there are some important contrasts between the two structures. Most notably, infinitive clauses need to be anchored to another clause with tense and person features (i.e., anchoring; see Enç 1987). Consequently, in contrast with *el que*-clauses, DP-NIs cannot always introduce an independent subject, i.e., non-coreferential with the matrix subject.

(163)

a. Me sorprende/sorprendió el que siguieras despierto a esa hora.

b. Me sorprende/sorprendió <sup>??</sup>el seguir tú despierto a esa hora.

Indeed, DP-NIs with overt subjects such as (162), while not ungrammatical, are marked and should be seen as an exception rather than as a norm.

As the data in (154)-(159) suggests, DP-NIs typically occur with a null subject, which can be coreferential with an element in the matrix predicate (i.e., be part of a control construction), or be arbitrary, in which case the infinitive clause obtains a generic interpretation<sup>15</sup>. Notably, *el que*-clauses can be odd in with coreferential and arbitrary subjects; on the other hand, their acceptability improves with independent subjects. As seen in the data below, this suggests a complementary distribution relationship between the two constructions.

(164)

a. (Creo que) el caminar PRO por las mañanas es siempre bueno.

b. (Creo que) el caminar PRO<sub>i</sub> por las mañanas me<sub>i</sub> hizo bien.

---

<sup>14</sup> A closer analysis suggests that the adverbial in this NI in fact belongs to the matrix clause and not to the infinitival subject.

<sup>15</sup> Except for (157), all DP-NIs in (154)-(159) contain an arbitrary PRO subject.

(165)

- a. ??El que uno camine por las mañanas es siempre bueno.
- b. ??El que (yo/pro<sub>i</sub>) caminara por las mañanas me<sub>i</sub> hizo bien.
- c. El que (yo/pro<sub>i</sub>) camine por las mañanas hace feliz a mi pareja<sub>k</sub>.

The sentential properties of DP-NIs and their differences with *el que*-clauses can be accounted for by positing a finiteness feature hosted in C, in the essence of Bianchi (2003), for whom non-finite embedded clauses are characterized by their lack of a (temporal and personal) deixis center and their need to be anchored in discursive elements to attain these properties.

By adopting this assumption, DP-NIs are essentially nominalized CPs headed by a [-FINITE] feature. This feature restricts their tense and the referent of their subjects to being either generic, as in (164)a, or anchored to the matrix clause or another sentence in the discourse, as in (164)b.

Taking the DP-NI in (155) as example, these infinitives would be structured as in (166).

(166)

[...] también se condenará el no conservar los libros de contabilidad o alterarlos con el fin de ocultar información.

[DP *el* [CP -fin [NegP *no* [TP PRO [TP T [VoiceP EVENT [vP *conservar los libros*...

In the next chapter I will present a refined version of this proposal, which draws on the Split-CP hypothesis (in the essence of Rizzi 1997; also assumed by Bianchi 2003) to better explain the peculiarities of DP-NIs as infinitive embedded clauses.

Having sketched out the inner verbal structure, let us now focus our attention on the DP layer and the definite article.

Drawing on the classic characterization of DP-NIs as fact-denoting, a relationship can be drawn between the definite article and the factivity of DP-NIs. This claim is advanced in Rosemeyer (2012), who argues that the determiner in NIs serves a grounding function, which in the absence of finiteness, anchors the denotation of the infinitive phrase in the discourse world. The choice of determiners is motivated by discourse, and so, as is the case with nouns, novel NIs can be introduced with an

indefinite article, whereas the definite article presupposes that the referent is known or unique. As typical arguments of factive predicates, DP-NIs denote facts, which Rosemeyer characterizes as information that is intrinsically asserted and grounded in the discourse world (see also Halliday & Hasan 1976). Since the information conveyed by facts is not new, the only determiner with which DP-NIs can be combined is the definite article.

A problem for this proposal is that it does not explain non-factive DP-NIs, like those in, which moreover have generic interpretations.

A similar proposal is advanced by Serrano (2015) for *el que*-clauses. First, she observes that the definite article is only allowed under extensional predicates, which in her view entails that the complement clause denotes a token (cf. a kind) situation. Secondly, she notes that even within these predicates the definite article is never obligatory. Instead, the definite article is only used to convey that the situation expressed by the infinitive clause was instantiated<sup>16</sup> in the real world, which explains that they typically occur with factive predicates.

Thus, whereas determinerless complement clauses (“*que*-clauses”) can denote both kinds or token situations, *el-que* clauses only yield denotation (see (167) below), which, depending on the semantics of the matrix predicate, can be instantiated in the real world or not. Much like in Rosemeyer, the function of DP is to provide an additional layer of discourse, however, for Serrano, embedded clauses acquire nominal reference when the definite article is assembled.

(167)

- a. Me molesta que no me digas la verdad.  
= Me molesta si no me dices la verdad (situation kind)/  
Me molesta cuando no me dices la verdad (token situation).
- b. Me molesta el que no me digas la verdad.  
= Me molesta cuando no me dices la verdad (token situation).

---

<sup>16</sup> This instantiation, however, is notably different from the specificity conveyed through Quantity/Aspect in NOMIs, which concerns an event and not a proposition or situation.

Transposing this to the case of DP-NIs, the lack of a definite article would entail a lack of referentiality, as its only available position for discourse linking, namely DP, is unoccupied. This, however, is inconsistent with the facts. As shown below, infinitive clauses under factive predicates can refer to specific situations regardless of the occurrence of an overt determiner.

(168)

Me dio mucha pena (el) ver a Juan en ese estado.  
= Sentí mucha pena cuando vi a Juan en ese estado.

Similarly, in generic DP-NIs the presence or absence of the definite article carries no noticeable semantic effect (e.g., cancelling genericity), as seen in (169)<sup>17</sup>. Additionally, as revealed by the data above, the fact that determinerless complement clauses can also refer to “instantiated” situations suggests that the definite article is not only means by which this can be attained. In fact, as shown by (169)-(171), the aspect of the matrix predicate and the availability of a retrievable subject can have a greater influence in eliciting a token-referring interpretation than the use of the definite article.

(169)

[El tener PRO la oportunidad de ver el Cirque du Soleil en vivo] es increíble.  
'Being able to see the Cirque du Soleil live is incredible.'

(170)

[El tener PRO la oportunidad de ver el Cirque du Soleil en vivo] fue increíble.  
'Being able to see the Cirque du Soleil live was incredible.'

(171)

[El tener PRO<sub>i</sub> la oportunidad de ver el Cirque du Soleil en vivo] nos<sub>i</sub> emociona.

Notably, by contrast, the determiner cannot be omitted in NOMIs.

(172)

- a. [...] entonces, por vez primera, escuchó \*(el) suave batir las de olas del lago.
- b. Un día, cuando se encontraba en el jardín más singular de su padre, oyó \*(un) batir de tambores que surgía de debajo de un arbolillo.

---

<sup>17</sup> I dare to say all the DP-NIs in (154)-(159) can likewise do without the definite article.

This suggests that, in the best of cases, the definite article does not uniformly convey reference to a instantiated situation when combined with complement clauses (finite and non-finite). An alternative explanation could argue that the role of the definite article is to convey referentiality, by enabling construing the infinitival phrase as an abstract entity (cf. Vanvolsem 1983). I will come back to the function of the definite article in Chapter 4.

One last property of DP-NIs to discuss is their denotation. Although most of the literature assumes that they denote facts or propositions, Serrano argues that they are SOAS. Here I will limit the discussion to advancing two arguments: the first one is that they do not denote events. This is uncontroversial and has already been described in 2.2.1. The second argument is controversial and asserts that DP-NIs do not denote facts. To begin with, it is important to note that factivity and being a fact are two different properties. Factivity is a property of certain predicates, which presuppose one of its arguments; by contrast, facts correspond to realizations of propositions, much like objects are realizations of properties (see Kratzer 2002, p. 656). Both *n*P-NIs (e.g., (116)) and DP-NIs are “factive” when they occur in factive predicates. Facts, like assertions, require the projection of a full clausal structure whose semantics can correspond to a truth value. As the example below reveals, the syntactic structure of infinitive clauses does not fit this bill, in contrast to determinerless finite embedded clauses.

(173)

- a. Es falso que ya no hay boletos para el concierto.
- b. Es falso \*(*el*) ya no haber boletos para el concierto.

(174)

- a. Es verdad que yo dije eso, pero mis palabras fueron malinterpretadas.
- b. Es verdad \*(*el*) yo haber dicho eso, pero mis palabras fueron malinterpretadas.

To the extent that DP-NIs (and infinitive clauses) cannot express truth values, they cannot be seen as facts. Thus, we are faced with the question as to whether they could be construed as SOAs, as Serrano has claimed for *el que*-clauses. Let us remember, on this matter, that the data presented above reveals that *el que*-clauses cannot be analyzed as a class as SOA-denoting, given that they can also express propositions.

Evidently, to address this question, we must provide a clear definition of what constitutes a SOA and how it is different from a proposition and a fact. If we are to claim that DP-NIs are SOAs, Zucchi's definition must be at the least amended, given that, as seen below, these nominals cannot combine with predicates like *enterarse* ('to realize').

(175)

- a. Me enteré de que ya no hay boletos para el concierto.
- b. \*Me enteré del ya no haber boletos para el concierto.

In the next chapter I will provide a more detailed distinction between propositions, facts, and SOAs and explain why NICs are limited to expressing the latter but not so *el que*-clauses.

## 2.3.4. Wrinkles

Some of the structures introduced in 2.2.1. display a combination of nominal and verbal properties that contradict the description of DP-NIs just provided. Concretely, these structures involve the co-occurrence of VFPs, such as Negation and Aspect, with a demonstrative or an indefinite article.

(176)

Y de Manolita [...] se decía que, sin su decisión de casar por segunda vez a Ramiro, sin aquel haberle obligado a redimir su pecado [...] no viviría el pálido y frágil botoncito. (Unamuno; from Hernanz 1999, p. 2348)

(177)

Ese no sentirse él mismo como poeta culto [...]. (Lope de Vega; from Skydsgaard 1977, p. 1051)

(178)

[...] el sujeto se rebela contra la injusticia de no poder hablar directamente: Y en este no poder dar un nombre exacto y bello a su situación, hay algo más que decencia, pudor, sensatez. (C21)

(179)

[...] se trata de un operar científicamente sin que las cosas cambien realmente, sin el auténtico y peligroso afán buscador que, paradójicamente, produjo a la ciencia moderna [...] (C21)

In principle, these infinitives could be accommodated in the category of DP-NIs. This, in turn, would entail that the determiner in these structures is not limited to a defective element, but can actually alternate according to the referent.

These examples, however, seem to represent extreme cases of combinations of nominal and verbal properties, and as such should not be taken as a basis for a generalization. Indeed, aside from the fact that these structures distill a particularly strong literary flavor, taken as a whole, they display a low acceptability with evaluative and perception predicates – as demonstrated below.

(180)

- a. \*Aquel haberle obligado a redimir su pecado es lamentable.
- b. \*Ese no sentirse él mismo como un poeta culto es una lástima.
- c. Este no poder dar un nombre exacto y bello a su situación es estresante.
- d. ??Un operar científicamente sin que las cosas cambien realmente es difícil de lograr.

(181)

- a. Fuimos testigos de/presenciamos ??aquel haberle obligado a redimir su pecado.
- b. Fuimos testigos de/presenciamos \*ese no sentirse él mismo como un poeta culto.
- c. Fuimos testigos de/presenciamos este no poder dar un nombre exacto y bello a su situación.
- d. Fuimos testigos de/presenciamos ??un operar científicamente sin que las cosas cambien realmente es difícil de lograr.

For these reasons, these cases will be excluded from the analysis in the next chapters.

## 2.4. Conclusion

In this chapter I have presented a review of previous descriptions of NIs in Spanish and argued against the idea that N and V properties are in complementary distribution.

Based on recent research (Alexiadou et al. 2011; Alexiadou 2020; Iordachioaia 2020), I have proposed a classification of NIs as *nP*- and DP-nominalizations. The former are eventive, contain a nominal head which establishes agreement relations with determiners and adjectives, and allow VFPs ranging from *vP* up to AspectP.



Despite having a clear preference for atelic (unbounded) events (Schirakowski 2021), they can also denote both bounded events and states. The traditional category of NOMIs constitutes only a subset of the totality of *nP*-NIs. I have further shown that the presence of event-oriented adverbial modifiers and referential direct objects is not incompatible with the eventive nature of *nP*-NIs. Along these lines, I have argued that infinitives headed by certain aspectual periphrases may also exhibit an eventive interpretation. This indicates that AspectP can be nominalized by *n* in Spanish, as also evidenced by *-nie* nominals in Polish.

DP-NIs, for their part, are characterized by their full-fledged internal verbal structure and their lack of NFPs, excluding D. Within the inner verbal shell, I have proposed that they can project all VFPs up to the C-domain. As to their semantics, I have presented evidence that suggests that they do not denote facts nor propositions as often assumed. In this respect, I have set apart these infinitives from *el que*-clauses by their inability to take truth values and by their [-finite] feature hosted in C.

The main syntactic and semantic properties of DP-NIs hence derive from their clausal nature, whereas their distinctive features with respect to finite embedded clauses seem to stem from their non-finiteness. Both syntactically and semantically, the nominal properties of these NIs are merely functional. Consequently, from a rough conceptual perspective, they can be regarded as objectified clauses.

Taking all these structures into consideration, the picture outlined in this chapter is consistent with the correlation between syntactic structure and semantics proposed in Wilschko (2014) and Ramchand & Svenonius (2014), whereby the projection of VFPs shift the denotation of deverbal nominals from events to situations and propositions. NICs fare higher than *nP*-NIs but lower than *el que*-clauses along this cline.

My next task is to analyze the properties of DP-NIs as clausal nominals, seeking to explain how their lack of finiteness restricts their meaning and syntactic structure. At the same time, I shall elaborate on why they do not denote facts nor propositions.

### 3. NICs as Sentential Nominals

In the previous chapter, I reviewed the properties of DP-NIs with respect to other nominalizations headed by infinitives. I concluded that their syntactic-semantic properties, crucially their lack of NFPs besides D and their factive interpretation is consistent with that of clausal nominal.

In this chapter, I look deeper into the syntactic and semantic properties of clausal nominals in order to explain the properties of DP-NIs. Centering on argument DP-NIs, I will first advance the hypothesis that the DP-likeness of embedded clauses is evidence of their referentiality (De Cuba & Ürögdi 2010, Haegeman & Ürögdi 2010, Sheehan & Hinzen 2011), which in turn is a property conveyed by the matrix predicate. Along these lines, I weigh up Serrano's (2015) analysis of *el que*-clauses, which postulates that the definite article is only allowed in referential clauses and expresses reference to a unique situation, i.e., definiteness.

In a related analysis, I will elaborate on the claim that DP-NIs, like *el que*-clauses, are primarily linked to SOAs, and only under certain conditions do they come to express propositions. This will lead to positing a D+FinP status for both constructions. Infinitive clauses, however, exhibit a more restricted distribution compared to *el que*-clause due to their non-finiteness, necessitating an external anchor for their logophoric center. This observation, in turn, paves the way for the discussion regarding the definiteness of DP-NIs presented in the next chapter.

#### 3.1. Patterns of Sentential Nominalization

From a typological perspective, the syntactic and semantic properties of Sentential Nominals (SNs) vary considerably among and within languages. Thus, SNs can surface as action nouns that retain some degree of sentential dependent-marking (Koptjevskaja-Tamm 1993, 2003), as seen in the examples from Basque (2) and Godoberi (3), where the case-marking of the participants is preserved.

(2) Basque

- a. Mikel        gaizto-a        iza-te-a  
 Mikel:ABS bad-ABS.SG be-AN<sup>18</sup>-ABS.SG  
 ‘Mikel’s being bad’
- b. Mikel-ek        ama-ri        diru-a        ema-te-a  
 Mikel-(SG)ERG mother-(SG)DAT money-(ABS.SG) give-AN-(SG)ABS  
 ‘Mikel’s giving the money to mother.’

(Saltarelli 1988, p. 155)

(3) Godoberi

- a. aHmadi-di    maHamadi-li    rec’i        i̯ki.  
 Ahmad-ERG Muhammad-DAT bread:ABS give:AOR  
 ‘Ahmad gave bread to Muhammad.’
- b. aHmadi-di    maHamadi-li    rec’i        i̯ki-r.  
 Ahmad-ERG Muhammad-DAT bread:ABS give-AN  
 ‘Ahmad’s giving bread to Muhammad.’

(Fedorova & Sidorenko 1994, p. 115)

In other instances, SNs display a POSS-ACC pattern, which fares higher in the scale of nominality by virtue of marking one of the arguments with a possessive. Nonetheless, the internal argument retains the sentential (accusative) marking. English POSS-ings<sup>19</sup> and Spanish HIs belong to this category.

In these cases, the denotation and pragmatic function of the SN lies between reference to an entity, as in prototypical nouns, and predication, as in proper sentences (cf. Hopper & Thompson 1984; Croft 1991).

A third pattern of SNs can be further recognized. Here a wider set of VFPs are present. In fact, these nominals often consist of a full clause, typically an embedded clause preceded by a determiner. Examples can be found in (Modern) Greek (4), Persian (5) and, evidently, Spanish (6).

(4) Greek

- a. To        oti ehis        filus    simeni    pola.  
 The-NOM that have-2SG friends mean-3SG much  
 ‘That you have friends means a lot.’

---

<sup>18</sup> Nominalizer morpheme.

<sup>19</sup> See page 31.

- b. To oti ine plusios ine psema.  
The-nom that be-3SG rich be-3SG lie.  
'That he is rich is a lie.'
- (5) Persian  
a. In ke to u-rā da'vat na-kard-i mādar-at-ro nārāhat kard.  
This that you he-OBJ invitation NEG-do.PST-2SG mother-2SG-OBJ upset DO.PST.3SG  
'That you did not invite him made mother upset.'
- (6) Spanish  
a. El que camines por las mañanas es bueno.  
'That you go for a walk in the morning is good.'  
b. El que hayas venido a la fiesta significa mucho para mí.  
'That you have come to the party means a lot to me.'

(Farudi 2007, p. 10)

As seen in the previous chapter, formal approaches to nominalization also recognize several SNs along a scale of nominality, e.g., Whitman & Kornfilt's (2011) typology, summarized in Table 3.

Table 3: Whitman & Kornfilt's (2010) typology of sentential nominals

Nominalized structure	Nominalizer	Example
CP	D	Greek: <i>to oti ehis filus</i> Spanish: <i>el que camines por las mañanas</i>
T/Mood/AspectP	D	English: <i>Ahmad's giving bread to Muhammad</i> Spanish: <i>su escribir aquella novela</i>
	<i>n</i> ?	Spanish: <i>ese no sentirse él mismo un poeta culto</i>
VoiceP/vP/VP	<i>n</i>	English: <i>the soprano's performing of the song</i>
		Spanish: <i>Un deshacer la casa de Madrid</i>
		Spanish: <i>El suave batir de las olas del lago</i>

Assuming this perspective, it is observed that NIs instantiate several syntactic structures. Focusing on DP-NIs, except for a few cases that could serve as evidence for TP-based *n*-nominals that refer to situations, I have argued that they uniformly consist of structures nominalized by a defective D (as per Alexiadou 2020, Alexiadou et al. 2011 and Iordachioaia 2020). According to these accounts, D in Spanish DP-

NIs nominalizes only up to AspectP. However, I have proposed analyzing them as [-finite] CPs, given their syntactic similarities with (*el*) *que*-clauses. Thus, aside from the possibility to take a definite article, both structures license nominative subjects and the use of the perfect periphrasis (*haber* + participle).

Despite these common properties, DP-NIs cannot always replace *el que* clauses. As illustrated by the contrast between (6)a and (7), these two structures yield different interpretations under evaluative predicates. Below (in 3.4.3) I will argue that this has to do with the ability to referring to individual situations, which is not possible for DP-NIs in these environments.

- (7) El caminar (<sup>#</sup>tú) por las mañanas es bueno.  
 ‘(you) going for a walk in the morning is good.’

This minimal pair exemplifies the two main ideas that I seek to put forward in this chapter. The first one concerns the influence of the matrix predicate on the licensing and interpretation of nominalized clauses – and arguments in general. On this matter, I will pursue the idea that the presence of sentential nominals is connected to predicates that select for referential arguments, of which factives constitute a subclass (De Cuba & Ürögdi 20, Haegeman & Ürögdi 2010, Sheehan & Hinzen 2011, Serrano 2015). Moreover, I will also argue that the interpretation of nominals as SOAs, propositions, or else is also influenced –and can be under some circumstances coerced– by the type of predicate (“container” in terms of Vendler 1967).

The second idea has to do with the distinction between finite CP-nominals and DP-NIs. Here, I will propose that the non-finiteness of NICs is responsible for some of the differences in their distribution compared to *el que*-clauses. More concretely, I will argue that the [-finite] specification hampers the reference to a specific situation, which in contrast is more easily achieved with [+FINITE] clauses.

## 3.2. The Syntax of CPs

Here I offer an overview of the main syntactic properties of CPs relevant to DP-NIs. Before centering on non-finite CPs, which constitute the verbal core of DP-NIs,

I will first discuss the notion of complementation and the role of Mood, in preparation for the discussion of Serrano's (2015) analysis of *el que*-clauses.

### 3.2.1. Complementizers and Complementation

In Generative Syntax, the C(omplementizer) is a functional category associated with the semantic properties of the clause-type, i.e., declarative (8)a, interrogative (8)b, exclamative (8)c, etc. (Adger 2003). In this work, I am concerned with DP-NIs in argument position and will therefore center on declarative CPs.

- (8)
- a. I said [that I cannot hear you].
  - b. I asked him [whether he could repeat what he said].
  - c. I am surprised [how easy that was].

Embedded clauses (also referred to as *complement* clauses) are always headed by a C. In some languages, like English, it can be omitted in some predicates; in Spanish, in contrast, it is obligatory (9).

- (9)
- Dije \*(que)<sup>20</sup> no puedo oírte.  
'I said (that) I cannot hear you.'

Complementation and argumenthood are closely related. In this sense, Noonan (1985) defines sentential complementation as "the syntactic situation that arises when a notional sentence or predication is an argument of a predicate." (p. 42). Embedded clauses, therefore, appear in contexts typically occupied by DPs, e.g., complements verbs and prepositions and subjects of predicates. In English, that CPs can surface as complements has been explained in terms of subcategorization. As can be inferred from the data in (10)-(11), languages vary in this respect. Spanish, for instance, is more flexible than English in allowing DPs as complements of desiderative predicates that typically select for a CP.

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<sup>20</sup> The omission of the complementizer is restricted to a few predicate classes that select subjunctive, e.g., *pedir*, *rogar*, *desear*, *temer* (Demonte 2016: 95).

(10)

- a. I hope/wish [<sub>CP</sub> that there will be no delays]/\*[<sub>DP</sub> a travel without delays].
- b. She insisted [<sub>CP</sub> that there was a mistake]/\*[<sub>DP</sub> something false].
- c. She said [<sub>CP</sub> that there was a mistake]/[<sub>DP</sub> something false].

(11)

- a. Espero/deseo [<sub>CP</sub> que no haya retrasos]/[<sub>DP</sub> un viaje sin retrasos].
- b. Insistió [<sub>CP</sub> que había un error]/\*[<sub>DP</sub> algo equivocado].
- c. Dijo [<sub>CP</sub> que había un error]/[<sub>DP</sub> algo equivocado].

Regarding subject CPs, if a view that does not assume the syntactic nominalization of the CP via D is adopted, it can be argued that they are hosted in the specifier position of the matrix C head, while a coreferential null DP occupies the Spec of TP (Adger 2003, pp. 299-300).

(12) [<sub>CP</sub><sub>matrix</sub> [<sub>CP</sub><sub>subject</sub> that he is rich]<sub>i</sub> [<sub>C'</sub> [<sub>C</sub> Ø] [[<sub>DP</sub> e<sub>i</sub>] [<sub>TP</sub> is a lie]]]

(13) [<sub>CP</sub><sub>matrix</sub> [<sub>CP</sub><sub>subject</sub> que él es rico]<sub>i</sub> [<sub>C'</sub> [<sub>C</sub> Ø] [[<sub>DP</sub> e<sub>i</sub>] [<sub>TP</sub> es mentira]]]

In this work, nonetheless, I assume that CPs can occur in argumental position on their own. In 3.3.3, more specifically, I will argue that referentiality is also a property of clauses and that their nominal properties are by and large derived by the properties of the predicates they occur with.

Moving on, C can be further split into several functional categories, assuming the Split-CP hypothesis (Rizzi 1997), shown below. Each of these categories serves one of the many functions otherwise attributed to C, namely specification of the type of clause (Force), hosting of topics (Top), hosting of foci, e.g., *wh*-phrases (Foc) and encoding of finiteness (Fin).

(14) ForceP > TopP > FocP > TopP > FinP

Thus, in English and Romance languages, the head of embedded clauses occupies Force<sup>0</sup>. Conversely, interrogative pronouns occupy the Spec of Focus (Rizzi 1997, p. 325).

(15) I said [<sub>ForceP</sub> [<sub>Force</sub> that] [<sub>TopP</sub> [<sub>FocP</sub> [<sub>FinP</sub> [<sub>TP</sub> I cannot hear you.

(16) I wonder [<sub>ForceP</sub> [<sub>TopP</sub> [<sub>FocP</sub> who<sub>i</sub>] [<sub>FinP</sub> [<sub>TP</sub> t<sub>i</sub> failed the exam.

In Spanish, concretely, the *C que* performs several other functions. For instance, it can encode Finiteness by heading Fin<sup>0</sup> (Demonte & Fernández Soriano 2007) in

interrogative or exclamative sentences (17), or be a Quotative (*que citativo*), as in (18). According to Etxepare (2010), the latter are matrix clauses and therefore are analyzed as DPs in which the (ForceP) reported sentence is construed as an ‘emission’ via a ‘relator’. These and other structures are out of the scope of this work, however (refer to Demonte & Fernández Soriano 2013 for a more elaborated typology of *que*). The relevant trait of all these clause kinds, however, is their lack of Force –a feature they share with subjunctive embedded clauses, as will be seen next.

(17)

¿Cómo que no te acuerdas?

[ForceP [TopP [FocP cómo [TopP [FinP que [TP no te acuerdas

(18)

Que el paquete no ha llegado.

[DP Que [RelP [ForceP] [RelP Rel<sup>0</sup> [el paquete no ha llegado.

### 3.2.2. CPs and Mood Selection

Spanish, like other Romance languages, manifests an indicative/subjunctive dichotomy. A commonly held view is that this opposition instantiates the more general *realis/irrealis* distinction (e.g., Palmer 2001). According to the RAE-ASALE (2009), the indicative mood occurs in predicates that assign a truth value, most notably in declarative sentences. The subjunctive mood, on the other hand, is exclusive of embedded clauses, and is typically found in embedded clauses that introduce either known or virtual (i.e., with a suspended truth value) information (2009).

In general terms, in Spanish the indicative occurs in assertive predicates, while modal predicates (e.g., expressing necessity, possibility, volition, as well and negation) require the use of the subjunctive (Kempchinsky 1986; RAE-ASALE 2009).

This distribution is in fact consistent across European languages with an indicative/subjunctive distinction. In this sense, Palmer (2001) observes that embedded clauses that take subjunctive are dominated by a non-assertive predicate that expresses an attitude or belief held by the grammatical subject, i.e., a propositional modality, or a potential event that is yet to take place, i.e., event



modality. The subjunctive, in fact, exhibits a close relationship with the semantics of subordination; in this regard, Jespersen (1924) regards the subjunctive as the mood of subordinated clauses (p. 314). This idea has been worked out, e.g., by Roussou (1994), who, from a syntax-based approach, proposes that all contexts where the subjunctive is required involve a sentential operator (either modal or negative; see also Manzini 1994)<sup>21</sup>.

(19)

Pro<sub>i</sub> necesito/quiero/dudo [<sub>CP</sub> que pro<sub>k</sub> participe].

[V<sub>i</sub> [<sub>CP</sub> i Op<sub>i</sub> [<sub>C</sub> T] [<sub>TP</sub> [pro] [<sub>T</sub> t]]]]

(adapted from Roussou 1994, p. 188, based on Kempchinsky 1986)

Building on Palmer's observations, a brief analysis of predicates that select subjunctive embedded clauses reveals that the semantics of the operator would be fairly disparate in nature.

(20)

a. *Speculation*

Quizá viene/venga.

'Maybe he's coming'

(Palmer 2001, p. 132)

b. *Negation*

Yo no sabía que él estaba/estuviera ahí.

'I didn't know that he was there (subj. = It is not the case that I knew that he was there)'

(Palmer 2001, p. 132)

c. *Presupposition*

Me alegra que sepas la verdad.

'I'm glad that you know the truth'

(Palmer 2001, p. 132)

d. *Volition/fear*

Espero que venga pronto.

'I hope he comes soon'

(Palmer 2001, p. 132)

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<sup>21</sup> This analysis cannot be extended to languages like Persian, where negation does not trigger subjunctive mood (see, e.g., Darzi & Kwak 2015).

The speculative subjunctive in (20)a expresses epistemic possibility in the form of hesitancy towards the truth of the proposition. In (20)b, a negative operator selects an assertive predicate, whose complement can take indicative or subjunctive. In the former, negation takes narrow scope and the truth of the clause (i.e., that he was there) is accepted. In the latter, negation takes wide scope and so the truth value is unspecified. In (20)c, the complement of the factive predicate is presupposed or, in other words, presented as shared knowledge (Butt & Benjamin 1988). Notably, these complements are *realis*; however, as they are presented as given information they cannot be asserted. Lastly, in (20)d, the subjunctive expresses a deontic modality (conditioned by subject-internal factors) directed at a yet unrealized event expected to occur in the future.

Based on these facts, some analyses have attempted to elucidate the distribution of the subjunctive mood in terms of a common semantic property. One such approach, proposed by Farkas (1992), explains mood distribution in complement clauses in terms of ‘anchoring’. Put succinctly, this account argues, from a Possible World Semantic perspective, that the indicative occurs in complement clauses that are extensionally anchored, i.e., evaluated in a single world, whereas the subjunctive is found in intensionally anchored clauses, i.e., evaluated with respect to a plurality of worlds. This proposal, however, does not provide a satisfactory explanation for the fact that factive predicates, which are *realis* (Giannakidou 1995), select subjunctive.

This issue, however, is accounted for in Siegel (2009), who suggests that the subjunctive is the default mood in Romance; as such, it is not only associated with a lack of commitment in non-assertive predicates (*irrealis contexts*) but is also licensed to avoid the repetition of presupposed content (in *realis* contexts, e.g., the truth of a factive complement). The indicative, therefore, is the marked element, restricted to conveying veridicality (cf. Giannakidou 1995). In Romance, this feature is concretely associated with the “speaker commitment to the truth of the embedded proposition” (p. 1880).

This approach effectively subsumes the plurality of contexts that trigger the subjunctive; however, as will be seen in 3.3.3 and in the next chapter, the latter claim

must be relaxed for purely assertive predicates, which, despite introducing a proposition into the discourse that is presented as true, require no commitment from the speaker (Stalnaker 1978; Farkas 1992). Thus, whoever utters (21) need not accept what Juan said as true; instead, his contribution is limited to presenting the proposition expressing an utterance made by Juan as true. By contrast, an emotive factive statement, like (22), does require a commitment to the truth of its complement. I will come back to this topic in 4.1.2.2, where I discuss the semantics of complement clauses in more detail.

(21)

Juan dice que la luna es de queso.

‘Juan says that the moon is made out of cheese.’

(22)

Me alegra que [<sup>#</sup>participaste/participaras] en la conferencia.

‘I’m glad you participated in the conference.’

Subjunctive embedded clauses are also distinguished by their temporal dependence on the matrix predicate (relative tense). Picallo (1985), based on this fact, posits that the embedded subjunctive T is anaphoric to the matrix T. More recently, Giannakidou (2011) has proposed, based on Greek data, a dependent time variable for subjunctive clauses, characterized by its weak relation with the utterance time (i.e., non-deictic temporal reference).

The subjects of subjunctive clauses in Spanish, however, cannot share the referent with the matrix subject. When the subjects are coreferential, an infinitive clause must be used.

(23)

Necesito/quiero/dudo [<sub>PRO<sub>i</sub></sub> participar].

‘I need to participate/I want to participate/I doubt participating.’

The latter phenomenon has been attributed by Roussou (1994) to the presence of the overt C. Concretely, it is claimed that the C used in these constructions is an expletive element, coindexed with the matrix, whose function is to extend the binding domain (in terms of Chomsky 1981) of the embedded clause to the subject of matrix clause, thus blocking the coreference (p. 192). In contrast, in Romanian, where the C

can be omitted, the subject of the embedded clause (which also takes subjunctive) can be coreferential only when no overt C is used (see also Terzi 1992).<sup>22</sup>

- (24)
- |                             |          |      |     |          |
|-----------------------------|----------|------|-----|----------|
| Ion                         | vrea     | ca   | să  | mănince. |
| Ion                         | want.3SG | COMP | PRT | eat.3SG  |
| 'Ion wants him/her to eat.' |          |      |     |          |

- (25)
- |                               |          |     |          |
|-------------------------------|----------|-----|----------|
| Ion                           | vrea     | să  | mănince. |
| Ion                           | want.3SG | PRT | eat.3SG  |
| 'Ion wants (him/her) to eat.' |          |     |          |

That indicative and infinitive but not subjunctive embedded clauses can be coreferential with their matrix predicate suggests that the presence of the determiner alone does not account for the subject obviation in the latter case. On the other hand, with inherently negated predicates, such as *negar*, coreference is possible despite the subjunctive (Kempchinsky 1986). This points to the selection properties of the matrix verb –or rather their sentential operator– as responsible for the subject obviation, in addition to the overt C.

More recent analyses that assume the Split-CP Hypothesis suggest that complementizers are hosted in FinP and encode mood-related information in subjunctive embedded clauses (Ledgeway 2005 for Romanian and Southern Italian languages; Demonte 2016 for Spanish). As I will discuss below, this is related with the semantic properties of the predicate expressed by the clause. In any case, the fact that the complementizer does not reach ForceP evidences the subjunctive's lack of illocutionary force and its temporal dependency on the matrix predicate. This can be

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<sup>22</sup> Giannakidou (2009) establishes that Romance languages (Italian and Spanish) the subjunctive is entirely expressed in the verb morphology, while in Balkan languages (Greek, Albanian and Romanian) it additionally involves the use of a sentential particle e.g., *ca* in Romanian). Siegel (2009), in turn, further posits a semantic distinction in the mood selection between these two linguistic groups. Accordingly, in Romance, indicative is used to convey commitment with the truth of the embedded clause by the speaker, whereas in Balkan it is associated with the judgment of the subject with regards to the proposition. Wilschko (2014), however, notes that subsuming the subjunctive under a single semantic property, such as *non-assertion* or *irrealis*, is troublesome.

clearly observed in evaluative predicates; when the adjective conveys certainty, the subject CP takes indicative, and the proposition can be asserted. On the other side, when the adjective expresses uncertainty or possibility, subjunctive is used.

(26)

- a. Es posible [<sub>FinP</sub> que [<sub>TP</sub> Juan venga]] ≠ Juan viene.  
'It is possible that John will come.'
- b. Es seguro [<sub>ForceP</sub> que [... [<sub>FinP</sub> IND [<sub>TP</sub> Juan viene]]]] = Juan viene.  
'It is certain that John will come.'

To summarize, these analyses demonstrate that mood is a sentential rather than an inflectional property, as it is sensitive to properties that operate at the propositional level, such as modality. The indicative is chiefly correlated with assertion, while the subjunctive is associated with some kind of modality that evaluates the described situation or event with respect to the world of the subject. Despite some proposals attempting to reduce the semantics of the subjunctive to a common property, in Chapter 4 (and also briefly in 3.3.4.2) it will be seen that presence of the definite article with non-asserted embedded clauses is sensitive to their definiteness. In a nutshell, embedded clauses can be provided extensionality either by being embedded under an assertive predicate or a definite predicate. The definite article in Spanish is restricted to the latter (i.e., non-asserted extensional clauses).

Definite predicates, therefore, provide extensionality to their complements much like assertive predicates do. Indeed, as will be seen, this motivates the claim that the definite article in clausal nominals in Spanish is restricted to non-asserted extensional clauses.

### 3.2.3. Non-finite CPs

Much like subjunctive clauses, non-finite clauses occur primarily as embedded (or complement) clauses in European languages (Haspelmath 1995, p. 28). This fact instantiates the broader relationship between finiteness and the semantics of subordination attested across several languages (Nikolaeva 2010, p. 1179) by which non-finiteness clauses are typically embedded under finite clauses, from which they also derive deictic information such as tense and person.

Finiteness, however, is not a mere inflectional feature of the verb but concerns the sentential domain. Morphosyntactically, the presence of overt complementizers is correlated with finite clauses. In Spanish, for instance, *que* is only present in finite embedded clauses, whereas in languages where overt complementizers can occur despite the lack of finiteness, e.g., Irish, a distinct lexical head is typically used (Adger 2007). Finiteness, moreover, is associated with two crucial semantic properties in the sentential domain, namely, assertion (e.g., Klein 1998, 2006) –and more generally, locutionary force– and temporal anchoring (e.g., Bianchi 2000, 2003; Roussou 2001). Indeed, infinitive clauses inherently lack these features and are therefore typically dependent on a finite verb, e.g., in periphrases and control constructions.

In Spanish, embedded infinitive clause can be distinguished by the reference of their subject, much like in English and other European languages. On the one hand, infinitive clauses can contain a PRO subject coreferential with the matrix subject, e.g., in control constructions. On the other hand, there are Exceptional Case marking (ECM) constructions, where the subject of the infinitive receives accusative case (see *acusativo con infinitivo*). I will only analyze the former, as the latter do not allow the presence of a D.

The presence of PRO is closely related to non-finiteness, although, as will be seen, one can occur without the other. In previous versions of Generative Syntax, finiteness is exclusively encoded in TP (e.g., Chomsky 1986), and T is responsible for assigning nominative case and licensing lexical subjects (or, alternatively, pro). Accordingly, PRO surfaces when T is empty, and no nominative case can be assigned.

In more recent works, however, (e.g., Chomsky 2000; Adger 200; Landau 2004), finiteness is also encoded in the CP domain. In Adger (2007), for instance, PRO subjects are specified for null case due to the lack of Agreement. Consequently, infinitive clauses can only merge with a null C devoid of clause-type features. Indeed, these features, as well as the tense and the reference of the subject of the embedded clause are determined by the matrix predicate. The analysis proposed for English can be therefore extended to Spanish, as observed below.

(27)

I try to see him.

I try [<sub>CP</sub> [<sub>C</sub> Ø] [<sub>TP</sub> [<sub>PRO</sub><sub>[null]</sub>] [<sub>T'</sub> [<sub>T</sub> to] [<sub>VP</sub> see him]]]]

(28)

Intento verlo.

Intento [<sub>CP</sub> [<sub>C</sub> Ø] [<sub>TP</sub> [<sub>PRO</sub><sub>[null]</sub>] [<sub>T'</sub> [<sub>T</sub> -r] [<sub>VP</sub> verlo]]]]

‘I try to see him.’

Adopting the split CP model (Rizzi 1997), moreover, non-finite complement clauses can be regarded as FinPs. By doing so, the lack of Finiteness –and consequently Force– in infinitive clauses can be more clearly accounted for. (27) and (28) are therefore structured as below.

(29)

Try [<sub>FinP</sub> Ø [<sub>TP</sub> to see him

(30)

Intento [<sub>FinP</sub> Ø [<sub>TP</sub> verlo

Subject infinitive clauses also contain a PRO coreferential with the matrix subject and thus be subject to control, e.g., (164) in Chapter 2. Alternatively, the referent of PRO can be absent in generic contexts (arbitrary PRO). As suggested by the data in (31) below, this typically occurs with matrix predicates that denote a property of a kind (cf. Borik & Espinal 2014). I will come back to this issue briefly in Section 3.3.4.2 and in the next chapter when discussing the definiteness of DP-NIs.

(31)

a. (Creo que) [<sub>FinP</sub> Caminar PRO<sub>i</sub> por las mañanas] me<sub>i</sub> hizo bien.  
‘I think that walking in the mornings was good for me.’

b. (Creo que) [<sub>FinP</sub> Caminar PRO por las mañanas] es bueno.  
‘I think that walking in the mornings is good.’

The temporal dependency of infinitive clauses in control constructions –closer than that observed in subjunctive embedded clauses– is therefore attributed to the lack of finiteness. Bianchi (2003), based on this observation, proposes a [+/-Finite] feature, and links [-Finite] to a lack of independent temporal and logophoric<sup>23</sup> centers. This

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<sup>23</sup> The Logophoric Center is roughly defined as “a speech or mental event, with its own participants and temporal coordinates, which constitutes the center of deixis” (Bianchi 2003, p. 3),

entails that, in Reichenbach's (1947) terms, non-finite clauses are unable to encode any relation to S, whereas finite clauses can relate E/R to S via the [+FINITE] feature encoded in  $\text{Fin}^0$  (p. 7). The specification of [Finite], for its part, is determined by checking the inflectional features in AgrP/TP and intervenes in the licensing of overt complementizers (see Adger 2007).

In control constructions, therefore, the logophoric center of the embedded clause is copied from the matrix clause. In these cases, infinitive clauses in Spanish can be substituted by a subjunctive clause – which are specified for [+FINITE] and have a non-PRO subject. By contrast, in generic contexts, no anaphoric relation is established; consequently, the substitution for a subjunctive clause results in a different interpretation, as the examples in (32) demonstrate.

- (32)
- a. (Creo que) que caminara por las mañanas me hizo bien.  
'(I think that) walking in the mornings was good for me.'
  - b. (Creo que) que camine por las mañanas es bueno.  
'(I think that) walking in the mornings is good.'

The possibility to exchange a (tenseless) infinitive for a subjunctive clause is enabled by the non-deictic temporal reference of the latter, as claimed by Giannakidou (2010). While this exchange is licit in most contexts, when the infinitive clause is embedded under an assertive predicate (e.g., *jurar* 'to swear'), it can only be exchanged for an indicative clause due to the illocutionary force of the matrix predicate (33). This reveals that infinitive complement clauses, and more specifically, those in subject control constructions, also carry the assertion or propositional modality provided by the matrix predicate.

- (33)
- a. Juan<sub>i</sub> jura PRO<sub>i</sub> decir la verdad.  
'Juan swears to tell the truth.'
  - b. Juan<sub>i</sub> jura que pro<sub>i</sub> dice/diga\* la verdad.  
'Juan swears to tell the truth.'

Finiteness, therefore, is rather concerned with the clause's lack of a subject and tense of its own. A formal elaboration of the properties embedded clauses and PRO



along these lines can be found in Landau (2004), who presents a typology of clausal complements based on [T]ense and [Agr]reement features that project on T and C, respectively.

This classification allows us to account for the fact that not all non-finite embedded clauses are subject to control and that some tensed clauses can appear in these constructions. An instance of the latter kind are C(ontrolled) subjunctives in Balkan languages (34). These embedded clauses exhibit obligatory control –therefore containing a PRO– yet, unlike in Spanish, they are tensed. Based on previous accounts (e.g., Varlokosta 1993 for Greek), it is argued that despite the inflection, C-subjunctives are comparable with non-finite embedded clauses in other languages in their lack of T, as they are aspectually dependent on the matrix predicate. In contrast, free subjunctives (35) denote an event independent from the matrix predicate and therefore are specified for [+T].

(34)

Tora, o Yanis elpizi/theli na figi avrio.  
 ‘Now Yanis hopes/wants to leave tomorrow.’  
 Cf. ‘Hoy Juan espera/quiere irse mañana.’

(35)

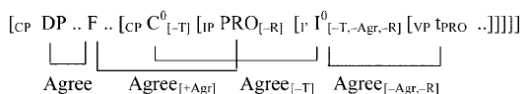
Tora, o Yanis kseri/axizi na kolimbai (\*avrio).  
 ‘Now Yanis knows how/begins to swim (tomorrow).’  
 Cf. ‘Hoy Juan sabe/empieza a nadar \*mañana.’

It is then generalized that anaphoric tense clauses, which include obligatory control constructions, like Balkan C-subjunctives and Spanish embedded infinitivals, are specified for [-T] in T<sup>0</sup> and C<sup>0</sup> (or Fin), while dependent tense clauses, such as irrealis subjunctive clauses, possess a [+T] feature in both I<sup>0</sup> and C<sup>0</sup>. By contrast, free tense clauses, which in Spanish typically correspond to indicative embedded clauses, exhibit [+T] in T<sup>0</sup> but ∅ in C<sup>0</sup> (p. 838-839). The [Agr] feature concerns morphological agreement and is therefore absent in infinitives [-Agr], but present in C-subjunctives.

The chain of agreement of an infinitive clause subject to exhaustive control (e.g., (30)) can be seen in 0. The matrix verb (F) agrees with its subject and with the embedded PRO. The embedded C<sup>0</sup> agrees with I<sup>0</sup> (T<sup>0</sup> in the terminology I have been adopting) in their [-T] specification. Lastly, I<sup>0</sup> agrees with Spec,VP (the original

position of the embedded subject) in their [-Agr] specification. The feature [+/-R] in the diagram refers to redundancy and is present only when the clause is specified for [+T; +Agr].

(36)



(Landau 2004, p. 847)

An advantage of this account is that, by defining control in terms of the aforementioned features, the contexts in which PRO occurs can be predicted without invoking Case Theory. Indeed, Landau offers an analysis of inflected infinitives in European Portuguese along these lines, according to which they are specified for [+T; +Agr], like indicative clauses (see also Raposo 1987). This stems from the fact that these infinitivals are not subject to control. As the examples below demonstrate, the logophoric center of the matrix clause is not copied by the infinitive. These data additionally show that these infinitives can occur as subjects or complements.

(37)

Será difícil eles aprovarem a proposta.

‘It will be difficult for them to approve the proposal.’

(Raposo 1987, p. 86)

(38)

Eu penso/afirmo terem os deputados trabalhado pouco.

‘I think/claim that the deputies have worked a little bit.’

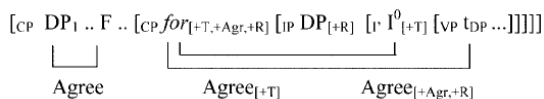
(Landau 2004, p. 850)

Similarly, *for*-infinitivals in English, which are comparable with infinitive clauses with nominative subjects in Spanish, are also claimed to be [+T]<sup>24</sup>, as they are not controlled. The gloss in (37), then, is analyzed as follows:

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<sup>24</sup> Bresnan (1972) notes, in this regard, that these constructions encode *irrealis*; therefore, they denote an event that occurs after that of the matrix predicate.

(39)



I will propose an analysis of Spanish infinitive clauses along these lines. For infinitives subject to control, I will assume the structure in 0, whereas for ‘free’ infinitives, I will propose two different analyses.

First, regarding infinitives with nominative subjects, like (40), I will argue for a [+T] specification and a lack of agreement with the matrix clause, much like in the case of *for*-infinitivals in English. Crucially, in these two constructions the subject and the tense of the embedded clause are distinct from those of the matrix clause. Unlike the English construction, however, Spanish infinitivals are not specified for *irrealis* tense.

(40)

(El) morir Juan tan repentinamente nos sorprendió.  
 ‘Juan dying so suddenly surprised us.’

(De Miguel 1995, p. 248)

As for generic infinitives, I will propose a structure based on 0 with a few crucial modifications. First, it is important to observe that the cases under consideration are restricted to contexts in which the infinitive clause acts as the subject of a kind-referring predicate (Carlson et al. 1995); consequently, F is not connected to a DP above it. Second, as PRO is not coreferential with any referent and the embedded event is not anchored in the matrix clause, the link with F must be severed. As the genericity of the subject clause in these cases is promoted by the predicate (as evidenced by the fact that with episodic predicates infinitive clauses may have a specific interpretation), it is feasible to claim that F and PRO are bound by a generic operator ranging over the whole clause, in the essence of Carlson (1977). An operationalization along these lines has in fact been brought forward by Moltmann (2006) for generic sentences in English. Accordingly, the generic operator occupies

Spec,CP<sup>25</sup> and binds both the matrix verb and the referent of generic pronouns, such as *one* and arbitrary PRO (see (41)). In these infinitives, therefore, PRO is under the control of [+gn].

(41)

Most books that one buys are not about oneself.

[<sub>CP</sub> [[+gn]]<sub>i</sub> [<sub>TP</sub> most books that one<sub>i</sub> buys are not about oneself<sub>i</sub>]]

(Moltmann 2006, p. 262)

Based on this, the generic (31)b would be structured as follows:

(42)

[<sub>ForceP</sub> [[+gn]]<sub>i</sub> [<sub>TP</sub> [<sub>FinP</sub> caminar PRO<sub>i</sub> por las mañanas] [<sub>PredP</sub> es bueno]]].

A deeper discussion on genericity and definiteness will be carried out in the next chapter. For now, it is sufficient to be aware of the syntactic properties of subject control and generic infinitive clauses, as each is associated with different semantics.

Having defined the main syntactic properties of CPs, let us now move on to the evidence for the DP shell above it.

### 3.3. D+CP

The nominal properties that clauses can display do not arise from lexical or semantic properties inside the CP. Instead, they are owed to their pragmatic and syntactic function<sup>26</sup>. In this sense, the most notable external nominal property of nominal clauses, namely their licensing as arguments, is determined by the subcategorization of the matrix predicate. Similarly, the presence of a determiner – the quintessential property of nominalized clauses in Spanish – stems from without the internal verbal structure in sentential nominalizations (e.g., Borsley & Kornfilt 2000). The resulting DP is therefore yet another instance of the V-in-N structure discussed in the previous chapter.

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<sup>25</sup> Chierchia (1995), however, suggests that Gn arises in AspectP.

<sup>26</sup> Depending on the view, syntactic function can be derived from pragmatic function (e.g., Croft 2000).

In this section I will center on arguments for DP in clausal arguments, i.e., CPs that function as subjects or complements of predicates. I will claim that they are all DPs and that the presence of D is not limited to structures with an overt determiner.

### 3.3.1. External nominal properties

In Generative Syntax, the notion that clausal arguments contain an external nominal projection has been posited at least since Lees (1960), who analyzes subject clauses as Sentences dominated by an NP. In Rosenbaum (1967), this structure is revised by positing a phonologically null N-head with a [+N] feature responsible for the nominal character of the clause. This is represented in Figures 7 and 8, respectively, which represent the sentence below.

(43) That John left early is unfortunate.

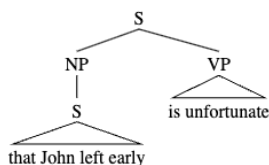


Figure 7: Lees' (1960) analysis of the clause 'the John left early is unfortunate'

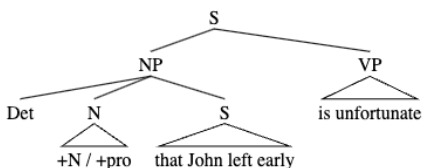


Figure 8: Rosenbaum's (1967) analysis

A more recent proposal in the same spirit presented Davies & Dubinsky (1999, 2001) postulates that in English D can dominate not only CPs, but also APs and PPs when they occur in nominal contexts. This is rooted on the observation that several syntactic properties commonly associated with NPs, such as the ability to act as a

subject (44), pronominalization (45) and verb agreement (46) are also attested in these phrases. The data below comes from Davies & Dubinsky (2001).

(44) *Subject role*

- a. [That Shelby lost it] is true.
- b. [Under the bed] is a good place to hide.
- c. [Very tall] is just how he likes his bodyguards.

(45) *Pronominalization*

- a. I think [that Shelby lost it]<sub>i</sub>. That<sub>i</sub> is possible.
- b. I found the cat [under the bed]<sub>i</sub>. That<sub>i</sub> is a good place to hide.
- c. [Very tall]<sub>i</sub> is how the boss likes her bodyguards, isn't it<sup>27</sup>?

(46) *Number agreement*

- a. [That the march should go ahead] and [that it should be cancelled] make absolutely no difference to me.
- b. [Under the bed] and [in the fireplace] are not the best (combination of) places to leave your toys. (Levine 1989, p. 105)
- c. [Very brawny] and [very studious] are what Cindy aspires to be.

In the case of non-NP subject, it is claimed that their DP-likeness is owed to the constraint that all subjects in English must project a DP<sup>27</sup>. This entails a direct correspondence between DP and the notion of subject. Non-NP complements, for their part, are inserted under D whenever the verb or preposition selects a DP complement. Both constraints, however, can be subsumed under a general syntactic principle, by which Subjects and Complements must possess a D feature, that, if left unchecked, leads to a crash in the derivation (Davies & Dubinsky 2001, p. 271).

Further observations support this claim. For instance, predicates that select CPs do not allow NP complements; conversely, predicates that canonically select for NPs, will allow non-NPs (cf. (10)). If it is assumed that non-NPs can be placed under D, then predicates uniformly select one type of complement, as seen below in (47)-(48).

(47)

I didn't particularly regret [<sub>DP</sub> that]/[<sub>DP</sub> [<sub>CP</sub> that Ted went to the mountains...]]

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<sup>27</sup> This is consistent with the claim that nominal properties are pragmatic and syntactic in nature.

(48)

I didn't particularly hope \*[<sub>DP</sub> that.]/[<sub>CP</sub> that Ted would die in the mountains itself], I just wanted him to return.

Similarly, extraction is only possible from non-NPs in canonical non-NP positions, as shown below.

(49)

Dale looked [<sub>PP</sub> under the couch]. What did you look under?

(50)

Dale chose [<sub>CP</sub> [<sub>PP</sub> under the couch (instead of behind the door.)]] \*What did you choose under?

The requirement for subjects of English to be DPs is claimed to be syntactic in nature (that is, not semantic) and not universal. In this regard, it is noted that languages like Bulgarian do not require subjects to be DPs. As evidenced in (51)-(53), infinitive clauses in this language disallow overt determiners, fail to trigger number agreement and block extraction, in contrast with clausal nominalizations.

(51) *Sentential subjects*

- a. [<sub>IP</sub> da zakasnjavaš na zasedanija] beše neprostimo.  
to be.late.2SG.IMP for meetings be.3SG.PST inexcusable  
'To be late for meetings was inexcusable.'
- b. [<sub>DP</sub> **tova/faktet** če Marija zabravi statijata] beše neprostimo.  
this/fact that Maria forget.PST the.paper be.3SG.PST inexcusable  
'(The fact) that Maria forgot the paper was inexcusable.'
- c. [<sub>DP</sub> zabravja-ne-to na knigata] beše neprostimo ot strana na Marija.  
forget-NOM-the of the.book was inexcusable from side of Maria  
'Maria's forgetting of the book was inexcusable.'

(52) *Number agreement*

- a. [<sub>IP</sub> da zakasnjavaš na zasedanija] i [<sub>IP</sub> da zabravjaš knigite]  
to be.late for meetings and to forget the.books
- b. beše neprostimo / \*bjaxa neprostimi.  
be.3SG.PST inexcusable.SG be.3PL.PST inexcusable.PL  
'To be late for meetings and to forget the books was/\*were inexcusable.'

- c. [DP **tova** če toj ne pozvni] i [DP tova če ne se izvini]  
           this that he not called and this that not self apologized
- d. ?beše neprostimo / bjaxa neprostimi.  
      be.3SG.PST inexcusable.SG be.3PL.PST inexcusable.PL  
      ‘That he didn’t call and that he didn’t apologize was/were  
      inexcusable.’

(53) *Extraction*

- a. na kakvo<sub>i</sub> misliš [ če [ da otide t<sub>i</sub> ] beše važno za nego]  
      to what you.think that to go be.3SG.PST important for him  
      ‘To what do you think that to go was important for him?’
- b. \*na kakvo<sub>i</sub> za nego beše važno [ tova če toj šteše da otide  
      t<sub>i</sub> ]  
      to what for him be.3SG.PST important this that he would to go  
      Intended: ‘To what was it important for him that he go?’

(Davies & Dubinsky 2011, p. 264-266)

From a similar perspective, Takahashi (2010) postulates that in English clauses can only move when they are base-generated in positions that license DPs. This is observed, e.g., in the passivation of sentences headed by verbs like *hope* in English.

(54)

- a. Most baseball fans (hoped/wished/insisted/reasoned) that the Giants  
      would win the World Series.
- b. \*That the Giants would win the World Series was  
      (hoped/wished/reasoned) (by most fans).

(Takahashi 2010, p. 345)

(55)

- a. Most baseball fans lamented that the Giants won the World Series.
- b. That the Giants won the World Series was lamented by some baseball  
      fans.

Conversely, it is noted that some predicates only allow canonical DPs to appear in-situ as complements (56), contra Davis & Dubinsky (cf. Grimshaw 1982). CPs, in these cases, are only licit as subjects of the corresponding passives (57).



(56)

- a. The formulation of the rule (expresses/captures/reflects/brings out) \*(the fact) that these nouns behave differently.
- b. Even Aristotle contemplated \*(the possibility) that the moon is made of cheese.
- c. The panel deliberated over \*that John would represent them.

(Arlenga 2005, p. 185)

(57)

- a. That these nouns behave differently is (expressed/captured/reflected/brought out) by this formulation.
- b. That the moon is made of cheese was even contemplated by Aristotle.
- c. That John would represent them was deliberated over by the panel.

These data are explained by positing a covert determiner, following the general requirement that constituents must be headed by a D-type head whenever they undergo movement and establish a chain with representation at LF (e.g., in passivization). In the specific case of CPs, it is claimed that they can move alone or as complement of a D. The latter alternative is observed in predicates like (57), which, unlike *hope*-class predicates, seen in (10) and (54), do allow DP-complements. The subject in (57)a, therefore, possesses the structure in (58). As can be seen, the null determiner is licensed by the movement process and is unavailable to non-derived clauses.

(58)

[<sub>DP</sub> Ø [<sub>CP</sub> That these nouns behave differently]] is expressed by this formulation.

With regards to overt determiners, Takahashi contemplates a possible correlation between the presence of overt determiners and obligatory movement. Based on data from Persian (59) and Greek (60), it is suggested that clausal nominals headed by overt determiners can remain in-situ. As (61) suggests, however, this is not a general rule. Similarly, in Spanish, the presence of overt determiners in-situ is contingent, as attested in (62)-(65).

- (59) Sara [PP az [DP in [CP ke dar in mosabeque barande na-shode]]]  
 Sarah from this that in this competition winner NEG-become.PRT.3SG  
 xeyli sharmande ast.  
 very ashamed be.3SG  
 ‘Sarah is very embarrassed that she didn’t win the competition.’  
 (Farudi 2007, p. 9)
- (60) [PP apo [DP \*(to) [CP oti etreme]]]  
 from the that be.shaking.3SG.PST  
 ‘From the fact that he was shaking.’  
 (Roussou 1991, p. 78)
- (61) Thimame [pu/oti ton sinandisa s-to sinema].  
 remember.PRES.1SG that him meet.pst.1sg in-the cinema  
 ‘I remembered I met him in the cinema.’  
 (Roussou 1994, p. 88)
- (62) Soy consciente d[DP el [CP que en el mundo de la música es muy complicado  
 hacerte un hueco]].  
 (Corpusdelespanol<sup>28</sup>; Davis, 2016-)
- (63) Finnegan, de 19 años y autor material de el crimen, confesó que no era  
 consciente de [CP que esos hombres eran policías al no llevar uniforme]  
 [...].  
 (CdE)
- (64) Además de un pago millonario, también se contempla [DP el [CP que sea  
 despojado de su pasaporte]].  
 (CdE)
- (65) Sin embargo, la ley contempla [CP que los discapacitados y los niños cobren  
 siempre].  
 (CdE)

These proposals provide us with arguments to argue for an abstract D-layer on top of CP. However, a more detailed explanation is needed to account for the alternation between overt and null determiners in Spanish. The analysis of Davies & Dubinsky and Takahashi allow us to invoke a null D for the determinerless structures. In this

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<sup>28</sup> From now on, *CdE*.

case, it could be argued that verbs in Spanish uniformly select for DPs, which can be headed by a null or an overt determiner, which in the case of DP-NIs must correspond to a definite article. If this view is adopted, however, it must then be explained under which circumstances the definite article arises and whether a semantic contrast follows. As will be seen next, the semantics of the matrix verb, and more specifically its factivity, play an important role.

### 3.3.2. Factivity

The presence of a nominal structure has been proposed on semantic grounds for complements of factive predicates. This can be observed, for instance, in Kiparsky & Kiparsky (1970), where a null head dominating a S (CP) is assumed for all argument clauses embedded under factive verbs (cf. Lees 1960 cited above).

As per Cattell (1978), factive complements refer to facts and ‘familiar ideas’. In either case, these predicates presuppose the truth-value of their complements, in contrast with, e.g., communication or volunteered-stance predicates, which in turn assert the truth value of a proposition.

This semantic distinction, therefore, imposes restrictions on the syntactic properties of the selected complements. Thus, in English, factive predicates disallow ECM constructions as complements but are acceptable *the-fact-that* DPs, as seen below. The data in (59)-(62) above is consistent with this description, as in all cases a D+CP structure occurs with a factive predicate.

(66) *Factives*

- a. \*I resent John to have been there.
- b. I resent the fact that John was there.

(67) *Non-factives*

- a. I believe John to have been there.
- b. \*I believe the fact that John was there.

Melvold (1991) proposes a similar factivity-based account although without assuming an outer nominal layer dominating CP. In his view, the presupposition carried by factive complements is merely attributed to their denotation, i.e., an

individual event, whereas complements of assertive verbs refer to truth values, and therefore cannot be presupposed.

Nevertheless, he argues that the denotation of argument CPs is reflected in their internal syntax. The denotation of factive embedded clauses is hence accounted for by positing a definite operator in the Spec of CP, associated with the event position of the verb, and licensed by a definite C-head (68). Such operator is conversely absent in non-factive CPs, whose interpretation is derived via an existential operator. This roughly translates into a contrast in terms of definiteness between factive and non-factive CPs, with the former resembling definite DPs (68)a and the latter indefinite DPs.

- (68)
- a. [CP <e\*> [Op] [C' <e> [C that [+def]] [IP<e>]]]
  - b. [DP <I\*> [D'<I\*> [D the [+def]] [NP<I> dog]]]

Similarly, in Roussou's (1994) study of Greek clausal nominals, factivity plays a central role in the distribution of complement clauses headed by *pou* and *oti*. In summary, she notes that *pu*-clauses are factive, indicating the presence of a strong presupposition, while *oti*-clauses have a broader distribution and only come to carry presuppositions when they combine the definite article. (*to*) (see (4)). This is reflected in the syntax, as only the latter admits the extraction of arguments, provided no determiner is present. In the spirit of Melvold (1991), a [+definite] feature is therefore proposed for *pu*, as it holds the same status as the D+CP *to-oti* structure.

- (69)
- a. Nomizo oti/\*pou i Maria aghorase to spiti.  
think.1sg that the Maria buy.pst.3sg the house  
'I think that Mary bought the house.'
  - b. O Yannis metaniose pou/\*oti aghorase to piti.  
the Yannis regret.pst.3sg that buy.pst.3sg the house  
'Yannis regretted that he bought the house.'
  - c. Pioni thimase oti sinandises ti?  
Whom remember.pres.2sg that meet.pst.2sg  
'Who do you remember that you met?'
  - d. Pioni thimase pou sinandises ti?  
Whom remember.pres.2sg that meet.pst.2sg  
'Who do you remember that you met?'

A comparable distinction has been recently proposed by Shim & Ihsane (2017) between factive and non-factive CPs in English, motivated by the distribution of the complementizer *that* in complement clauses, as illustrated in (70)-(71).

(70)

Dean says/believes (that) Lily doesn't eat vegetables.

(71)

Dean regrets/realizes # (that) Lily doesn't eat vegetables.

The authors claim that clauses embedded under factive predicates<sup>29,30</sup> possess a null D. By contrast, clauses embedded under non-factive predicates correspond to FinPs headed by a phonetically null C. When *that* is present in the latter, in turn, Force<sup>31</sup> is projected (72)a (cf. (15)).

Factive complement clauses are further claimed to be headed by a weak demonstrative, *d*, which lacks  $\phi$ -features, such as number agreement<sup>32</sup> (72)b. The positing of the *dP* also follows the fact that all factive predicates select for nominal complements, in contrast, e.g., with *hope*-class predicates.

(72)

- a. [<sub>FinP</sub> Fin =  $\emptyset$ ]
- b. [<sub>ForceP</sub> Force = *that* (Topic) (Focus) [<sub>FinP</sub> Fin =  $\emptyset$ ]]
- c. [<sub>dP</sub> *d* = *that* [<sub>FinP</sub> Fin =  $\emptyset$ ]]

Weak demonstrative *dP*s are furthermore distinguished from *DP*s. For instance, while the former are weak island for extraction, the latter are strong islands. Moreover, *dP*s can be complements of adjectives but not of prepositions, unlike *DP*s, as shown below.

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<sup>29</sup> According to Noonan (1985), *that* is obligatory in subject embedded clauses.

<sup>30</sup> Based on a survey, Shim & Ihsane further observe that in contemporary English *that* can be omitted also when embedded in weak factive predicates (Karttunen 1971), e.g., *know* and *realize*.

<sup>31</sup> In Spanish, however, where embedded clauses can alternate between indicative and subjunctive mood, the latter structure could only be posited for cases where indicative is used, as subjunctive clauses do not project illocutionary Force, as observed in 3.2.2. Putatively, in these cases the complementizer would occupy Fin (see (26)).

<sup>32</sup> Compare with Iordachioaia's (2020) characterization of D in Spanish *DP*-NIs.

(73)

- a. What did you believe ?<sub>[*CP* that John stole]</sub>/\*<sub>[*DP* the claim that John stole]</sub>?
- b. I was surprised [<sub>*CP*</sub> that he left]/\*<sub>[*DP* that situation]</sub>.
- c. John forgot about \*<sub>[*CP* that Jane left too early]</sub>/<sub>[*DP* that situation]</sub>.

The data from Greek and Persian seen above in (59) and (60), respectively, agree with these observations, as they are headed by a D and function as complements of adjectives and prepositions.

As we can observe, the presence of an overt determiner can be correlated to factivity. However, an alternative—and perhaps more insightful—approach, which we will examine next, suggests that the presence of D instead reflects referentiality.

### 3.3.3. Referentiality in Clauses

The nominal properties of embedded CPs have also been examined based on the idea that they reflect the clause's referentiality. While referentiality is commonly linked to factive matrix clauses, it does not directly result from factivity itself.

Along these lines, De Cuba & Ürögdi (2010) suggest that the asymmetry observed with regards to the complements that factive and non-factive predicates accept is owed to the fact that the former select exclusively for referential CPs, whereas the latter also allow non-referential cPs to occur as complements.

CPs, according to this perspective, are referential to the extent they denote a proposition. Crucially, these propositions contain no illocutionary force, need not be presupposed, and require no contextual givenness. cP-clauses, on the other hand, are non-referential objects that denote a speech act, defined as “an unresolved proposition or an open question” (p. 45). As they cannot be presupposed, they do not combine with factive predicates.

Aside from the pronominalization of embedded clauses in English (in (74), but see also (47)–(48)), support for this approach is found in Hungarian (75). In this language, the presence of the expletive accusative pronoun *azt* is restricted to non-

factive embedded clauses. According to De Cuba & Ürögdi, this pronoun is coindexed with the head of *cP*.

- (74)
- a. John supposed [*CP/cP* that Bill had done it], and Mary supposed [it/so] too.
  - b. John regretted [*CP* that Bill had done it], and Mary regretted [it/\*so] too.

- (75)
- a. János \**azt* sajnálja [*CP* hogy havazik].
  - b. János *azt* állította [*cP* [*CP* (hogy) Mari megnyerte a lottót.]]
  - c. János állította [*CP* hogy Mari megnyerte a lottót.]

The claim that *CP*s can be referential like *DP*s draws a direct parallel between both structures in the essence of Abney (1987); consequently, no *D*-layer is posited above *CP*. In this respect, this proposal also resonates with the correspondence drawn by Melvold, according to which clauses under factive predicates are definite descriptions. However, in contrast with most other proposals, De Cuba & Ürögdi argue that the structure of non-referential *cP*s is more complex than that of their referential counterparts<sup>33</sup>.

Building on these observations, Haegeman & Ürögdi (2010) note that the parallel between *DP*s and referential *CP*s is also reflected in their islandhood<sup>34</sup>, as observed in (76)-(77) (cf. Roussou 1994).

- (76)
- a. Who<sub>i</sub> did you see pictures of *t<sub>i</sub>*?
  - b. Who<sub>i</sub> did you see \*the picture of *t<sub>i</sub>*?
- (77)
- a. How do you suppose [that Maria fixed the car *t<sub>i</sub>*]?
  - b. How did you \*notice [that Maria fixed the car *t<sub>i</sub>*]?

Drawing on Campbell (1996), Haegeman & Ürögdi posit an operator chain linking the functional projection that dominates the lexical part of the phrase (*NP* in

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<sup>33</sup> Based on McCloskey (2005), the complements of non-factive predicates are argued to project an additional functional layer that serves as the locus of the illocutionary force (Force).

<sup>34</sup> *DP*s are nevertheless strong islands, whereas definite *CP*s are weak islands, allowing extraction to some degree.

DPs and TP in CPs) with the left edge of the topic field of the referential phrase (p. 147). D and C (or the corresponding projections if Split-CP is assumed) are therefore subordinators that connect the internal lexical structure of the phrase and the rest of the sentence and discourse<sup>35</sup>.

(78)

[Referential CP/DP Subordinator Op<sub>i</sub> (D/C)...[FP t<sub>i</sub> [NP/TP N/T...]]]

(Haegeman & Ürögdi 2010, p. 147)

A problem with Haegeman & Ürögdi's elaboration, however, is that referentiality is associated with non-assertiveness, which leads to the undesired collapsing of predicates with diverging semantic properties, e.g., emotive factives and desideratives. A similar account, advanced in Djärv (2021), frames the distinction between reference and assertion in terms of illocutionary potential, which, accordingly, is only available to the latter.

An alternative yet related referentiality-based account of nominal properties in clauses is presented in Sheehan & Hinzen (2011). Following Arsenijević & Hinzen (2012) and Hinzen (2012), they propose that human language possesses three basic referential strategies, each of which relates to one of the categories from an ontology comprising objects (expressed by DP), events (expressed by *v*P), and propositions (expressed by CP).

In their view, reference is ultimately deictic – connecting the object of reference with the speech context. Grammatically expressed, moreover, it allows for different conceptualizations of a single concept. Thus, for instance, the concept LAUGH can be expressed as an event ('Mary laughs') or as an object ('Mary's laugh').

Each of the three referential strategies allows for finer-grained distinctions in terms of definiteness. In all cases, the projection of functional categories closer to the

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<sup>35</sup> This resonates with Wiltse's (2014) parallel discussed in the previous chapter, specifically with regards to the role played by C and D in discourse linking.



edge of the phrase<sup>36</sup> results in an increased extensionality. In this sense, it is claimed that:

“At one end of the scale, grammar allows for maximally unspecific forms of reference, as in purely quantificational readings in the nominal domain, or in the form of reference to propositions that are possibly true and possibly false, in the clausal domain. At the other end of the scale, it permits maximally specific (‘rigid’) reference, which shows in the form of reference to specific individuals in the nominal case and to truths in the clausal case. Somewhere between these extremes lie less rigid forms of reference, involving aspects of both strategies as observed with definite descriptions and (as we will argue) factive clauses” (Sheehan & Hinzen 2011, p. 3).

Accordingly, unspecific clauses represent proposition with a non-defined truth value. These clauses are typically embedded under non-factive predicates, such as *believe* and *think*. Rigid clauses, for their part, refer to truths and constitute asserted root clauses, such as ‘I was surprised that he left.’. Lastly, the category “between these extremes” represented by clauses embedded under predicates that select for referential complements, such as factives. As definite noun phrases approach the semantics of rigid proper nouns insofar as they both refer to defined entities, so the semantics of these “definite” clauses are closer to that of root clauses in that they denote facts<sup>37</sup> (from the perspective of the speaker), as noted by Hooper & Thompson (1973). In 3.4.2 I will adopt a slightly different ontology, which notably incorporates SOAs.

A more detailed discussion of this proposal will be presented in depth in the next chapter. For now, suffice it to say that the core idea is that definiteness in clauses represents a referential shift from intensionality (a description of an event) to extensionality (reference to truth) associated with the projection of functional

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<sup>36</sup> For the concept of “phase” see Chomsky 2001.

<sup>37</sup> Understood as propositions whose truth the speaker the speaker is committed to.

categories<sup>38</sup>. As the examples below suggest, definiteness is not restricted to the presence of a definite article, but is a property selected by predicates.

- (79) I ignored<sub>[+def]/imagined<sub>[-def]</sub> an ant in my soup.</sub>
- (80) I ignored<sub>[+def]/imagined<sub>[-def]</sub> that someone called.</sub>

Based on this, Sheehan & Hinzen account for the selection properties of different predicates in terms of assertiveness and definiteness (see Table 4<sup>39</sup>). Class C and D predicates do not impose any assertivity on their complements and only form a natural class in negative terms, i.e., to the extent they are not assertive (p. 39). Looking back at the discussion in 3.2.2, however, both classes select subjunctive complements and can be regarded as presuppositional (Meinunger 2017). Classes E and F, for their part, can take either a definite or an assertive complement, whereas classes A and B allow either an indefinite or assertive CP<sup>40</sup>.

Table 4: Classification of predicates according to Sheehan & Hinzen (2011, p. 32)

		Definite	Indefinite
Assertive	Communication (strongly assertive)	Class F: communication semi-factives ( <i>disclose, divulge, confess, point out, reveal</i> )	Class A: non-factive communication preds. ( <i>say, claim, assert, report, vow</i> )
	Cognitive (weakly assertive)	Class E: cognitive semi-factives ( <i>know, discover, find out, forget, realize, grasp, see</i> )	Class B: non-factive cognitive predicates ( <i>think, believe, surprise, guess, imagine, prove, decide</i> )

<sup>38</sup> Some works use the terms ‘opaque’ and ‘transparent’ to refer to intensional and extensional interpretations of clauses.

<sup>39</sup> Based on Hooper & Thompson (1973).

<sup>40</sup> Sheehan and Hinzen note on this regard that “One can believe in the existence of a fact or in a truth, but one doesn’t doubt either a truth (asserted) or a fact (definite). Likewise, one can know a truth or a fact, but one cannot regret or resent a truth: it is a fact that one resents.” (p. 39). Hooper & Thompson (2973) refer to class E predicates as “semi-factives” as they carry a weak (cancellable) presupposition.

<b>Non-assertive</b>	Class D: emotive factives ( <i>regret, deplore, resent, detest, hate, be surprised, be glad, care, mind</i> )	Class C: non-assertive ( <i>doubt, be possible, be likely, wish, want, order, ask</i> )
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From this view, therefore, all embedded CPs are potential bearers of referentiality. Despite their orthogonality (and contrariness according to Haegeman & Ürögdi 2010 and Djärv 2021), both properties are expressed through the projection of functional categories, which result in an increased extensionality.

Assertion, in this sense, stands out among illocutionary acts in that it is the only one whose complement is evaluated with respect to the actual world at the time of the utterance time (cf. Farkas 1992; Quer 1998). By contrast, other complements that carry other illocutionary forces lie in unrealized worlds (e.g., directives) or are presupposed (e.g., expressives, as a subclass of factives). Notably, the latter do not project Force.

Regardless of the hypothesis assumed, asserted CPs are more projected and therefore more extensional than definite CPs. Consequently, only asserted embedded clauses exhibit main clause phenomena, such as topicalization (Hegarty 1992) and ‘slifting’ (Ross 1973). Similarly, in Spanish complements of assertive predicates take indicative and project ForceP while cognitive predicates expressing uncertainty take a FinP complement (cf. (26)).

(81)

- a. The class is cancelled, he said/affirmed/revealed.
- b. \*The class is cancelled, he regrets/resent/doubts.

(Adapted from Sheehan & Hinzen 2011, p. 35)

(82)

- a. (John thinks that) [this book]<sub>i</sub>; Mary read *t<sub>i</sub>*.
- b. \*John regrets/resents/realizes that [this book]<sub>i</sub>; Mary read *t<sub>i</sub>*.

Thus, we find ample support for the claim that referentiality is a property common to DPs and CPs. This being so, the need for positing a DP status for clauses with nominal properties can be questioned. However, as we will see now, the DP status is

necessary in languages where the presence of an overt determiner is always allowed, even if it is not always attested.

### 3.3.4. Overt Determiners

Following Iordachioaia (2020) and related works, I have assumed that the D in DP-NIs is defective, insofar as it establishes no agreement with a nominal head and is restricted to surfacing as a definite article (i.e., it lacks phi-features). This situation is attested in several other Indo-European languages, e.g., English, German, Romanian (Alexiadou et al. 2011), Italian (Skytte 1983, Zucchi 1989), and Greek (Roussou 1991, 1994).

Before centering on Spanish, let us look at the case of Greek *to oti*-nominals, with which *el que*-clauses share crucial syntactic and semantic properties. As will be seen, in both cases the presence of D is connected to definiteness, which extends beyond factive environments.

#### 3.3.4.1. Greek *to oti*-clauses

In Modern Greek, the selection of *pou* and *oti* is partly determined by the subcategorization properties of the predicate. *Pu*-clauses have the widest distribution, occurring in relative clauses, cleft constructions and exclamatives, aside from embedded clauses. *Oti*-clauses, in turn, are restricted to embedded clauses (Roussou 1994).

As complements of verbs, *pou*-clauses are always allowed with emotive factive predicates (69)b. Conversely, some predicates can only combine *oti*-clauses, such as *nomizo* ('to think') (69)a, while others allow both kinds of CP, e.g., (61). When either C is allowed, however, different interpretations may arise. Accordingly, in (83), *pou* expresses direct perception of the event contained in the CP, whereas *oti* does not (p. 104). This can be observed in the glosses of the examples below: whereas 0 implies

that the subject directly perceives someone leaving, when (84) is uttered this is not necessarily the case<sup>41</sup>.

(83)

Ton idha pou efevje.  
 Him sec.PST.1SG that leave.IMP.3SG  
 ‘I saw that he was leaving.’  
 (cf. Sp. ‘lo vi que se iba.’)

(84)

Ida [(to) oti efighe.]  
 Sec.PST.1SG the that leave.AOR.3SG  
 ‘I saw that he left.’  
 (cf. Sp. ‘vi que se fue.’)

Another contrast concerns that, unlike *oti*, *pou* cannot be moved out of VP, hence been barred from appearing before the matrix verb. When *oti* moves, however, it must occur with a D. In light of these data, Roussou claims that these two CPs are in a complementary distribution determined by case-marking, in which the only form licensed to appear in case-marked positions in *to-oti*, as (85) demonstrates. Note that in these examples the embedded clause is the subject of the main clause.

The presence of *to* is moreover consistent with Takahashi’s generalization. However, as seen below, *oti*-clauses need not occur with an overt D when they remain in-situ, contrary to his speculation. *To*, therefore, is not required by argument *oti*-clauses.

(85)

- a. Me stenochorise pou/(to) oti efyge.  
 1SG.ACC upset.PST.3SG that leave.PST.3SG  
 ‘That he left upset me.’
- b. To oti efyge me stenochorise.  
 the that leave.PST.3SG 1SG.ACC upset.PST.3SG  
 ‘That he left upset me.’

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<sup>41</sup> According to the judgment from a native speaker, (a) entails that the subject witnessed the event, as evidenced also by the use of the *paratatikos* past tense. In contrast, (b) also holds in the situation in which what is perceived is the absence, i.e., the result of the event. In this sense, the former complement clause denotes an event whereas the latter corresponds to a proposition. It is also worth noting that (a) is a pseudo-relative construction.

- c. \**Pou* *efyge* *me stenochorise*.  
 Intended: ‘That he left me upset me.’

(Roussou 1994, p. 109)

*Oti*- and *pu*-clauses can also alternate with subjunctive *na*-clauses –where *na* is an inflectional mark and not a complementizer (see also Holton et al. 2004). The data below demonstrate that subjunctive is triggered by the presence of negation, interrogation, or modality (cf. Giannakidou 1995).

(86)

- a. *Thimasai na efyge?*  
 remember.PRES.2SG SUBJ leave.PST.3SG  
 ‘Do you remember that he left?’
- b. *Dhen thimamai na efyge.*  
 not remember.PRES.1SG SUBJ leave.PST.3SG  
 ‘I don’t remember that he left.’
- c. *Prepei na fygei.*  
 must.PRES.3SG SUBJ leave.PRES.3SG  
 ‘He must leave.’
- d. *Thimamai \*na/oti efyge.*  
 remember.PRES.1SG that leave.PST.3SG  
 ‘I remember that he left.’

The distribution of *pou* and *oti* added to the fact that only the latter can combine with a definite article lead Roussou to characterize *pou* as a definite complementizer (as advanced in 3.3.2), whereas *oti*, being devoid of this feature itself, acquires definiteness by merging with *to*. This characterization of *pou*-clauses builds on Christidis’(1986) description of this C as a clausal determiner that heads definite descriptions, much like the definite article *to* does with NPs and *oti*-clauses.

The definiteness of *pou*-clauses and the licensing of *to* is associated with factivity, as evidenced in (69) and (85), where both *pou* and *to-oti* can occur. Moreover, as seen in (87) desiderative predicates bar *pou* and the presence of *to* yields an odd reading, although the latter can occur with predicates like *deny* or *question* (class C), like in (88).

However, the data in (89)-(90) seem to rise a problem, as they suggest that *to* can be absent in factive predicates. In the first case, when *to* is absent, the embedded clause

receives a causal interpretation, whereby the rain is the reason why the speaker is annoyed; in contrast, with the definite article or the complementizer *pu*, the clause complements the matrix verb. In (90), conversely, the embedded clause is an internal argument regardless of the presence of *to*.

- (87)  
Elpízo [(#*to*) oti **tha** ftaseis stin ora sou].  
'I hope that you will arrive on time.'
- (88)  
Arnoúmai/Amfisvitó [(*to*) oti yparchei próvlima].  
'I deny/question that there is a problem.'
- (89)  
Me enochlei [pou/(*to*) oti vrechei].  
'It annoys me that it's raining.'
- (90)  
Syneiditopoio [(*to*) oti vrechei].  
'I realize it's raining.'

The distribution of *to oti*-clauses and the CP-DP parallel claimed by Roussou and Christidis can be in fact interpreted in terms of referentiality. Thus, drawing on Sheehan & Hinzen's (2011) classification, it can be noted that the predicates that allow the presence of *to* are those that select for a definite complement. Indeed, (88) is headed by a Class F-predicate (assertive, definite), whereas (90) contains a Class D-predicate (non-assertive, definite).

As the data below shows, this also holds in the case of *na*-clauses. In these cases, however, as the embedded clause lacks its own Logophoric center, it does not refer to any instance of the proposition expressed<sup>42</sup>. Therefore, (91) below presupposes that it rains in general but not an individual instance of raining. This entails that, despite the selection properties of the emotive factive predicate in terms of definiteness, non-definite interpretations may arise due to the internal semantics of the phrase. Additionally, the lack of a definite referent does not cancel the referentiality of these clauses, as evidenced by the fact that they can still combine with *to*.

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<sup>42</sup> I will tackle the problem as to what CPs exactly refer to in 4.

(91)

Me enochlei [(to) [na vrechēi to apóyevma]].

‘It bothers me that it rains in the afternoon.’ ≈ ‘It bothers me if it rains in the afternoon.’

The definiteness of the embedded clause, therefore, is determined in part by the matrix predicate and in part by its internal structure, as it occurs with DPs. The definiteness conveyed by the predicate consists of specificity. What is true for the complement of a definite predicate (e.g., a factive) is not true for its hyperonym. Conversely, what is true for the complement of an indefinite predicate (e.g., a doxastic verb) can be true for its hyperonym. This is illustrated below in the downward entailment test proposed by Carlson (1977).

(92)

- a. “John is imagining/expecting good students” entails  
“John is imagining/expecting students”. (Indefinite, complement)
- b. “I know/remember good students” can entail  
“I know/remember students”. (Definite, asserted complement)
- c. “I ignore/deplore/resent bad students” does not entail  
“I ignore/deplore/resent students”. (Definite, presupposed complement)

(Sheehan & Hinzen 2011, p. 46)

This demonstrates that definiteness from this view is not to be equated with uniqueness. In this sense, we observe that although (91) does not entail (93), both of them describe generic situations.

(93)

Me enochlei [(to) [na vrechēi]].

‘It bothers me that it rains.’

The presence of the definite article in Greek, therefore, is consistent with the definiteness required by the matrix predicate. In principle, its projection should be correlated with an increased extensionality. However, according to the judgment of native speakers, this is hard to discern. Given the lack of further empirical data, I will not pursue this discussion any further.



### 3.3.4.2. Spanish *el que*-clauses

In Spanish, *el que*-clauses have been traditionally claimed to refer to facts, like in Greek, thus being equivalent to *el hecho de que*-phrases. On the other hand, together with DP-NIs, their occurrence has been associated with factive environments (e.g., De Miguel 1995).

Picallo (2002) argues against the former claim by noting that unlike *el hecho de que*-phrases, *el que*-clauses and DP-NIs lack a nominal head. Accordingly, this explains that the latter cannot be referred to by the interrogative pronoun *cuál*, which selects for a referent specified for Gender – absent in these nominals (cf. Iordachioaia 2020).

(94)

- a. ¿Cuál escoges, la pluma o la cartera de piel?  
'Which one do you choose, the pen or the leather wallet?
- b. ¿Cuál lamentas más, [el hecho de haberte callado] o [el hecho de que se haya enfadado]?  
'Which one do you regret more, the fact that you remained silent or the fact that he/she got upset?'
- c. \*¿Cuál lamentas más, [el haberte callado] o [el que se haya enfadado]?  
'Which one do you regret more, having remained silent or she getting upset?'

(Picallo 2002, p. 128) (Picallo 2002, p. 128)

*El que*-clauses respond differently to the diagnostic tests to determine the DP status of clauses discussed above. For instance, Cabeza Pereiro (1997) notes that they rarely trigger number inflection, in contrast to what is observed in English. As evidenced by (95)d, this restriction is not categorical, however.

(95)

- a. Pero **es probable**/\*son probables que me enrole en un barco y me marche a América.
- b. Al viejo sólo le **queda**/\*quedan agotar los insultos y dirigir al fugitivo un corte de mangas.  
'The old man can only resort to exhausting his insults and giving the fugitive a snub,'

- c. Por lo demás, el señalar a todo el mundo y sacar la lengua **estaban**/estaba haciendo de mí blanco de algunas miradas.  
‘Otherwise, pointing at everyone and sticking out my tongue were/were making me the target of some stares.’  
(Cabeza Pereiro 1997, p. 83)
- d. El no haber terminado la carrera y el no haberme mudado de ciudad **son** cosas de las que me arrepiento.  
‘Not finishing my degree and not moving to a new city are things I regret.’

Additionally, complement clauses in Spanish can be recovered by *lo* regardless of whether they are embedded under a factive predicate or not, and regardless of whether they contain a definite article. Contrast the following data with (74).

- (96)
- a. Juan cree que Luis hizo algo malo, y María lo cree también.  
‘Juan thinks Luis did something wrong, and Maria thinks so too.’
  - b. Juan lamenta (el) que Luis haya hecho algo malo, y María lo lamenta también.  
‘John regrets that Louis has done something wrong, and Mary regrets it too.’

As to the relationship with factive environments, Serrano (2015) has demonstrated that the definite article can in fact appear with predicates that do not presuppose their complement. Assuming a referentiality-based account, she further claims that the definite article signals a shift in the denotation from a set of possible situations to a unique, contextually determined situation. This being so, by uttering (97)a, the speaker refers to a specific situation<sup>43</sup>, namely such that is instantiated in the real world. By contrast, (97)b can also refer to a set of possible situations.

- (97)
- a. Al residente le molesta [el que Rubén cante esa canción].
  - b. Al residente le molesta [que Rubén cante esa canción].  
‘The guest detests that Ruben plays that song.’

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<sup>43</sup> A situation is different from an event. Thus, the interpretation (87)a is felicitous even when Ruben’s playing of the song does not occur at the utterance time. By contrast, it is infelicitous if it is said when it is not the case that the guest becomes annoyed whenever Ruben plays the song. For Serrano, in fact, a situation is a SOA.

(98)

- a. Al residente le molesta cuando Rubén toca esa canción.  
'The guest detests when Ruben plays that song.'
- b. Al residente le molesta si Rubén toca esa canción.  
'The guest detests it if Ruben plays that song.'

Drawing on different sources (Cabeza Pereiro 1997, Delbeque & Lamiroy 1999, RAE-ASALE 2009), Serrano lists the predicates that allow *el que*-clauses as arguments as follows:

(99)

- a. Predicates that allow *el que*-subjects
  - i. Psychological (*agradar, sorprender*, etc.)
  - ii. Evaluative (*es extraño, sorprendente*, etc.)
  - iii. Causal (*indicar, significar*, etc.)
  - iv. Relevance (*destacar, subrayar*, etc.)
- b. Predicates that allow *el que*-objects
  - i. Psychological (*lamentar, detestar*, etc.)
  - ii. Relevance (*destacar, restaltar*, etc.)
  - iii. Inference and consequence (*implicar, significar*, etc.)
  - iv. Weak causatives (*evitar, fomentar*, etc.)
  - v. Opinion (*cuestionar, descartar*, etc.)

Drawing on Sheehan & Hinzen's classification in Table 2, the presence of *el* is observed to be consistent with the class of predicates that select for a definite complement<sup>44</sup>.

The definite article, however, may also occur with class A predicates. This is not accounted for by Serrano and constitutes a challenge for her hypothesis, as will be discussed in the next pages.

(100)

- a. María dice/asegura *el que* sus hijos son poetas. (Indefinite, strongly assertive)  
'Maria says/claims that her children are poets.'
- b. María cree/piensa \**el que* sus hijos son poetas. (Indefinite, weakly assertive)  
'Maria thinks/believes that her children are poets.'

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<sup>44</sup> This is also consistent with the distribution of *to oti*-clauses in Greek.

- c. María espera/duda \*el que sus hijos sean poetas. (Indefinite, non-assertive)  
'Maria hopes/doubts that her children will be poets.'
- d. María lamenta/se sorprende de el que sus hijos sean poetas. (Definite, non-assertive)  
'Maria laments/is surprised that her children are poets.'
- e. María olvida/sabe/descubre el que sus hijos son poetas. (Definite, weakly assertive)  
'Maria forgets/knows/discovers that her children are poets.'
- f. María confiesa/revela el que sus hijos son poetas. (Definite, strongly assertive)  
'Maria confesses/reveals that her children are poets.'

Serrano thus draws a parallel with the semantics of N-based DPs, which involve a shift from a property of a class (NP) to a unique individual (DP) (e.g., Borik & Espinal 2012, 2014). Drawing on Kratzer's (1989), situation semantics, it is proposed that the denotation of embedded clauses ranges from properties of kinds of situations in intensional contexts to unique situations when they project a definite article and occur under a definite predicate.

To account for the fact that not all embedded clauses combine with a definite article, the functional category *Limite* ('limit', henceforth LimP) is introduced. Accordingly, LimP occurs above FinP and is correlated with the referentiality of the clause. More precisely, FinP clauses denote sets of kind situations, while LimP clauses denote sets of token situations. Only the latter instantiate in the real world. Indeed, the object of a desire predicate does not occur in the world, the object of things that cause emotions.

D, therefore, may only combine with LimP. Semantically, this assembly results in the selection of a unique situation. The functional layers present in an *el que*-clause, therefore, depend on the selection properties of the predicate it is inserted in, as the two examples below demonstrate.

(101)

Al residente le molesta

[DP <Unique Token Situation> el [LimP <Set of Token Sit.> [FinP <Properties of K. S.> que Rubén  
toque esa canción]]]

(102)

El residente quiere

[\*DP <Unique Token Situation> el [<sub>FinP</sub> <Properties of Kind Sit.> que Rubén toque esa canción]]

Serrano (2015, p. 289-290) further argues that *el que*-clauses are strong island for extraction, whereas determinerless complement clauses are weak islands (blocking the extraction of adjuncts) only under definite predicates – as predicted by Haegeman & Ürögdi.

(103)

- a. ¿Qué carrera<sub>i</sub> lamentas \*el que haya decidido dejar t<sub>i</sub>?  
‘Which studies<sub>i</sub> do you regret that I decided to leave?’
- b. ¿Qué protocolo<sub>i</sub> cuestionas \*el que se siguiera t<sub>i</sub>?  
‘Which protocol<sub>i</sub> do you question that I followed?’
- c. ¿Qué carrera<sub>i</sub> fomentas \*el que tus hijos estudien t<sub>i</sub>?  
‘Which studies<sub>i</sub> do you promote that your children study?’

(104)

- a. ¿Qué carrera<sub>i</sub> lamentaste que hubiera dejado t<sub>i</sub>?  
‘Which studies do you regret that I left?’
- b. \*¿Cuándo<sub>i</sub> lamentaste que dejara la carrera t<sub>i</sub>?  
‘\*When did you regret that I left my studies?’
- c. ¿Qué carrera<sub>i</sub> fomentas que estudien tus hijos t<sub>i</sub>?  
‘Which career<sub>i</sub> do you promote that your children study?’
- d. ¿Cuándo<sub>i</sub> fomentaste que practicaran deporte tus hijos t<sub>i</sub>?  
‘When<sub>i</sub> did you promote that your children did sport t<sub>i</sub>?’

Drawing on Bosque and Gutierrez-Rexach (2009, p. 534), she argues that this asymmetry is not connected to the left periphery of the complement clause but comes rather as a result of the presupposition conveyed by the matrix predicate, which blocks the extraction of non-presupposed constituents (e.g., adjuncts)<sup>45</sup>. In this respect, she notes that when the tense of the matrix predicate is non-episodic, complement clauses are not islands as neither of them projects Lim. As (105) reveals, this also applies to *el que*-clauses; however, in these contexts the latter still disallow the extraction of

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<sup>45</sup> Shim, & Ihsane (2017) also characterize dPs as weak islands that block the extraction of adjuncts but allow the extraction of arguments.

arguments. I shall also add that the latter allow the extraction of adjuncts under weak causatives, as seen in (106). Infinitive clauses –in (107)– display a similar pattern.

(105)

- a. ¿Cuándo<sub>i</sub> aborreces (el) que te pregunten por la tesis t<sub>i</sub>?  
‘When do you hate being asked about the thesis?’
- b. ¿Qué detestas (\*el) que constantemente te pregunten t<sub>i</sub>?  
‘What do you hate being constantly asked about?’

(106)

- a. ¿Cuándo<sub>i</sub> he impedido el que tus amigos se queden a dormir t<sub>i</sub>?  
‘When have I stopped your friends from sleeping over?’
- b. ¿En dónde<sub>i</sub> se fomenta el que los niños trabajen y estudien t<sub>i</sub>?  
‘Where are children encouraged to work and study?’

(107)

- a. ¿Qué carrera<sub>i</sub> lamentas (#el) haber dejado t<sub>i</sub>?  
‘Which studies do you regret leaving?’
- b. \*¿Cuándo<sub>i</sub> lamentaste (el) dejar la carrera t<sub>i</sub>?  
‘When did you regret leaving your studies?’
- c. ¿Qué carrera<sub>i</sub> te han impedido (\*el) estudiar t<sub>i</sub>?  
‘Which studies have you been prevented from studying?’
- d. ¿En dónde has evitado (el) hablar sobre política u otros temas polémicos t<sub>i</sub>?  
‘Where have you avoided talking about politics or other controversial topics?’

Serrano’s analysis thus suggests that extraction is disallowed from clauses that refer to unique situations. However, as revealed in (97)b, determinerless complement clauses can also attain reference to unique situations. Indeed, the definiteness (in terms of Sheehan & Hinzen) of the embedded clause in (108)a is identical to that in (108)b. Both furthermore carry a presupposition.

(108)

- a. Lamento el que mi hijo dejara la carrera de medicina.
- b. Lamento que mi hijo dejara la carrera de medicina.  
‘I regret that my child left his medical career.’

These facts suggest that, in contrast to determinerless complement clauses, *el que*-clauses are weak islands that allow the extraction of adjuncts but block the extraction of arguments (thus contradicting Bosque & Gutierrez-Rexach). This pattern, however, is observed

This leads to assessing whether the latter observation could be due to a property disconnected from the syntax of the embedded clause (as suggested by Serrano) but also independent from the presuppositionality of the matrix clause. For instance, it could be argued that the definite article creates a garden-path sentence (Fowler 1926).

Without a determiner, the islandhood of complement is compatible with the description provided for English by Haegeman & Ürögdi. However, the fact that they can denote unique situations calls into question the proposal that D is only projected when a definite article is available. This casts doubt on the idea that extraction is allowed when the embedded clause does not refer to a unique situation. Moreover, more generally, this leads us to consider alternative analyses of the role of the definite article and of D as a category. I will return to this topic in the next chapter, where I will revisit Serrano's approach in its entirety (in 4.1.2.3 and then in 4.3). For now, let us assume the LimP hypothesis.

I will now assess to what extent these properties are found in NICs. Before that, however, we must first clear up what exactly their meaning is. This leads us to the discussion concerning the meaning of DP-NIs and what it means for them to refer to SOAs.

### **3.4. Facts, propositions, and SOAs**

#### **3.4.1. Containers and sentential nominals**

In the previous chapter it was discussed that the ontology of infinitive-based nominalizations in Spanish, typically framed in terms of an event vs. propositional/fact dichotomy (e.g., De Miguel 1995), correlates with the projection of functional categories. In terms of verbal functional complexity, on the lower end, event nominalizations are headed by *n* and project up to TP. On the upper end, CP nominalizations denote propositions. These facts are consistent with the crosslinguistic correlation observed between sentential nominals (SENT pattern) and reference to facts and propositions (Koptjevskaja-Tamm 2003, p. 745).

In Vendler (1967), the contrast between the denotation of “imperfect” and “perfect” nominals is linked to the “container” (matrix) predicate they appear with. He notes that “it is events, processes, and actions, and not facts or results, that occur, take place, begin, last and end. The former, and not the latter, can be watched, heard, followed, and observed.” (p. 141). By contrast, only propositions, facts and results can combine with modal predicates, e.g., “to be probable”. Both event and propositional/fact nominals, moreover, can occur with evaluative and emotive factive predicates, i.e., predicates that carry a presupposition. In Vendler’s terms, events are fundamentally temporal entities, whereas facts are not in space nor time, and cannot ‘take place’ in any sense (p. 144). As also mentioned in the previous chapter, Zucchi (1993) complements Vendler’s ontology by introducing SOA nominals, which combine with factive predicates, but are unacceptable with belief and truth-value predicates.

The main idea behind the Vendler-Zucchi approach is that the matrix predicate discriminates between nominals based on their semantics. This draws an attractive parallel with the claim discussed in the previous section with regards to definiteness, according to which it is determined by the selection properties of the matrix predicate.

Nonetheless, neither crosslinguistically nor within individual languages does one find a perfect correspondence between predicates and the semantics they impose on their arguments. Indeed, Vendler notes that the versatility of perfect nominals demonstrates that they can refer to both events and facts depending on the selection properties of their container. Modal predicates select propositions, whereas aspectual predicates select events. In (109) below, *John’s singing* is interpreted accordingly.

(109)

- a. John’s singing is possible. (= ‘It is possible that John sings.’)
- b. John’s singing is slow. (= ‘John sings slowly’).

So too clauses denoting a proposition may combine with perception predicates, which according to Vendler, select for an event. Despite its internal syntax, the complement of a perception predicate refers to either an event or an object (or a set



thereof); indeed, in (110) what the speaker either saw Juan leaving directly or a collection of objects that suggests that Juan left.

(110)

- Vimos que Juan se fue (sin despedirse).  
'We saw that Juan left (without saying goodbye).'

Following this reasoning, Zucchi (1993) observes that predicates also discriminate between propositions (or facts) and SOAs. These include propositional attitude predicates (cf. Ramsey 1921) and truth values.

(111)

- a. \*[The soprano's performing the song] is false.  
b. [That the soprano performed the song] is false.

(112)

- a. I believe/hope \*[that the soprano will sing the song].  
b. I believe/hope \*[the soprano's singing of the song].

On the other hand, he observes that eventive nominals (e.g., *arrival*) can be interpreted as propositions under predicates like *to be informed of* and *to be aware of*. According to his analysis, these predicates "coerce" the meaning of the nominals by selecting a different lexical entry. So, these predicates would select not for an event but for a proposition stating that said event occurred.

A recent study by Frana & Moulton (2017) that builds on Zucchi claims that these nominals carry a concealed proposition (ConPs), which denote intensions of events or, in other words, event concepts. As such, they can be paraphrased by propositions, but do not refer to propositions themselves (cf. (109)a).

(113)

- a. John is informed/aware of Mary's arrival.  
(= Mary is informed/aware that Mary has arrived.)  
Cf. '*Juan es informado/consciente de la llegada de María.*'

Extending this view to (110), the CP complement can be regarded as a description (intension) of the event, namely Juan's departure. Thus, someone could hold (114)a and (114)b as true and, simultaneously, deny (114)c. Indeed, complements of perception predicates, while prototypically selecting events, can also refer to evidence pointing to the occurrence of an event, as discussed in 3.3.2.

(114)

- a. Vimos que Juan se fue.
- b. Juan se fue en coche.
- c. Vimos que Juan se fue en coche.

Thus, it is evident that, on the one hand, predicates can “coerce” the meaning of their complements according to their semantic selection properties and, on the other, that the relationship between form and meaning of nominals is not clearcut.

Indeed, in contrast to English gerunds, *nP*-NIs do not combine so easily with proposition-selecting predicates. The NIs in (115) and (116) are rejected by modal predicates, although they can occur with emotive factives. In the latter case, however, they do not denote propositions; rather, (115)c and (116)c express contempt for bird songs (i.e., the manner in which bird sings) and outdated perspectives (i.e., the manner in which some people see the world), respectively.

Notably, by contrast, some NIs that due to their low verballity could be analyzed as *nP*-NIs are acceptable with both modal predicates and emotive factives, as seen in (117). As discussed in the previous chapter, Schirakowski (2021b) has found that NIs of this kind (i.e., taking only direct object) are typically recovered by neuter pronouns, which is consistent with the properties of NICs. I will interpret this observation in addition to the data below as evidence that these NIs are in fact structurally ambiguous. Specifically, I will argue that, on the one hand, they represent *nP*-NIs when they combine with eventive predicates, as in (117)a. On the other hand, with modal predicates, e.g., (117)b, these NIs are *DP*-NIs with empty VFPs. In emotive factives (117)c, both interpretations are in principle allowed. This analysis is supported by the fact that in (117)a the omission of the definite article results in an odd reading.

(115)

- a. El cantar de los pájaros duró toda la noche.  
‘The birds’ singing went on all night.’
- b. Es posible \*el cantar de los pájaros.  
‘\*The birds’ singing is not true.’
- c. Detesto el cantar de los pájaros (≠ el que canten los pájaros).

‘I hate the birds’ singing.’

(116)

- a. Ese mirar el color actual con ojos del pasado le duró toda la vida.  
‘??This (way of) looking at the present color with eyes from the past lasted a lifetime.’
- b. \*Es posible ese mirar el color actual con ojos del pasado.  
‘\*It’s possible this looking at the present color with eyes from the past.’
- c. Algunos detestan ese mirar el color actual con ojos del pasado.  
‘Some hate that looking at the present color with eyes from the past.’

(117)

- a. El comer golosinas duró todo el día.  
‘Eating candy went on a lifetime.’
- b. Me es imposible (el) comer golosinas (= yo comer golosinas).  
‘It is impossible for me to eat candy.’
- c. Detesto (el) comer golosinas.  
‘I hate eating candy.’

As seen in the previous chapter, DP-NIs are unacceptable with predicates that exclusively select for events, which rules out the possibility that the NI in a is a coerced DP-NI. The same is true for *el que*-clauses, as the data below suggests. These sentences further reveal that these clausal nominals are not always interchangeable with their determinerless counterparts.

(118)

- a. Vimos \*el Juan irse (sin avisar/en coche).  
‘We saw Juan leaving (without warning/in a car).’
- b. Vimos \*el que Juan se fue (sin avisar/en coche).  
‘We saw that Juan left (without warning/in a car).’

(119)

- a. \*El Juan irse sin avisar es lento.  
‘\*Juan leaving without warning is slow.’
- b. \*El que Juan se fue sin avisar es lento.  
‘\*That Juan left without warning is slow.’

The definite article in fact seems to block the partial coercion observed in cases like (110). This, added to the fact that *el que*-clauses reject argument extraction, shows that the definite article syntactically and semantically “seals” the phrase. This is consistent with the claim that *el que*-clauses only arise in contexts that select for a

unique (and arguably presupposed) situation, whereas determinerless complement clauses are more flexible in terms of their semantics.

What must be discussed now is what it means exactly for *el que*-clauses to refer to ‘instantiated situations’, and how this contrasts with the classic notion that these clausal nominals denote facts. Before moving on to this issue, however, it is important to provide a clear definition of what a fact, a proposition, and a SOA is, and how they relate to clausal nominals.

### 3.4.2. Ontological Remarks

Let us begin with facts. Facts are commonly assumed to be equivalent to true propositions. This is the view adopted, e.g., in Sheehan & Hinzen (2011), for whom an embedded clause refers to a fact if the grammatical subject of the proposition in which it occurs commits to its truth (p. 33). Prior (1971), for his part, in a review of the distinction between facts and true propositions, suggests that they are only equivalent as logical constructions, in the sense that to say that ‘*p* is true’ is to say that ‘*p* is a fact’. However, this equivalence does not hold if it is assumed that facts can be propounded (asserted) (p. 5-6). Indeed, false propositions are not facts despite being able to be asserted.

SOAs, for their part, are roughly equivalent to situations. For Wittgenstein (1933), the totality of SOAs exhausts the space of possibilities, and the totality of SOAs that obtain make up the real world. Just like propositions can be true or false, SOAs can be obtaining or non-obtaining. Facts, therefore, are associated with SOAs that obtain. Inasmuch as true propositions are not quite the same as facts, so are the latter not equivalent to obtaining SOAs. Therefore, the truth of a proposition such as ‘the sun is hot’ is not due to ‘the sun being hot’ obtaining, but rather to the *fact* that the sun is hot<sup>46</sup> (Textor 2021). This shows a commonly held view in philosophy that

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<sup>46</sup> Cf. Zucchi: “the proposition that the soprano performs the song is true if and only if the state of affairs of the soprano’s performing the song is actual.” (1993, p. 210). Note that he does not establish an implication or causal relation between one and the other, but rather a material equivalence.

it is facts that make propositions and situations true. From this perspective, facts are truth-makers (Armstrong 1997), while propositions and SOAs are truth-bearers.

Kratzer (2002) establishes a similar relationship between situations (SOAs), facts and propositions. In her view, however, a fact is a particular that exists in the world and exemplifies a proposition. An argument provided in support of this claim is the semantics of counterfactuals. Thus, it can be seen that (120)a below is false despite its consequent (c) being a fact, which, if it were nothing more than a true proposition, should render the whole sentence true.

(120)

- a. If Merkel had been the Prime Minister of England, her name might have started with ‘J’<sup>47</sup>.
- b. Merkel is the Prime Minister of England (counterfactual antecedent).
- c. The Prime Minister’s name starts with a ‘J’ (fact).
- d. Merkel’s name starts with a ‘J’ (counterfactual consequent).

According to Kratzer, the fact  $f$  expressed in (120)c instantiates its corresponding proposition  $p$ , namely ‘that the Prime Minister’s name starts with a ‘J’’.  $p$ , in turn, is defined as the smallest persistent extension of  $f$ , such that  $p = \{s : f < s\}$ , where  $s$  stands for a situation. It is then claimed that “since  $f$  is a fact of the actual world, and  $p$  is persistent, the actual world is in  $p$ . Since  $f$  is only part of a single world, no other world is in  $p$ . [...] Since the actual world is the only world in  $p$ ,  $p$  is only compatible with propositions that are actually true.’ (p. 667). Therefore,  $p$  in this case is too specific for the evaluation of a counterfactual, which, by definition, does not evaluate the actual world.

The truth value of a proposition, however, is not restricted to a unique  $s$ , but extends to every situation that is maximally comparable, i.e., isomorphic (Fine 1977). The “natural” extension of a fact therefore requires the inclusion of all isomorphic situations. This being so, the relationship between situations, propositions and (propositional) facts is expressed as in (121).

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<sup>47</sup> Referring to the surname of Boris Johnson, whose premiership was concurrent with Merkel’s chancellorship. Example adapted from Kratzer, in turn adapted from Bertrand Russell.

(121)

A proposition  $p$  is a (propositional) fact of a world  $w$  iff there is an  $s < w$  such that  $p$  is the natural extension of  $s$ .

As to the metaphysics of situations, Kratzer defines them in an earlier work (1989) as “space-time chunks” (p. 612). Situations occur in (certain) worlds, and it is with respect to them that the truth of propositions is evaluated.

Thus, a proposition such as “Merkel was the chancellor of Germany” is a fact of a world that contains the situation of Merkel being the chancellor of Germany such that the proposition “Merkel was the chancellor of Germany” is its extension. Evidently, this proposition is a fact in our world. The situation of Merkel being the chancellor of Germany, for its part, extends to possible worlds (Vallicella 2000, p. 237, Kratzer 1989, see also Pollock 1984), which includes not only our world but also those worlds in which she never occupied such position.

Back to the realm of linguistics, propositions, and SOAs are expressed in different ways. For instance, as can be inferred from the previous paragraphs, propositions are normally expressed by a declarative sentence or a *that*-clause<sup>48</sup> in English, whereas the SOAs are typically encoded by POSS-ings.

In Chierchia (1984), it is ACC-ings that are related to SOAs, however, while POSS-ings are claimed to denote eventuality-functions. In the case of the former, their lack of C entails that, unlike full sentences, they do not carry a propositional function, but a function from an individual to a nominalized proposition, which he associates with states of affairs (p. 257). A similar analysis is brought forward for argument infinitive clauses in Italian. Regardless, according to this proposal, all these structures are nominalized by the ‘down’ operator, which maps properties into kinds (Chierchia 1998), in the fashion of (122). In Spanish, however, reference to individual situations is possible, as seen in 3.3.4.2. Nonetheless, following Serrano’s hypothesis, the “base” interpretation of clausal nominals is always a set of properties of a kind situation.

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<sup>48</sup> In this regard, Adger (2003) argues that C encodes information relevant to the “proposition” of the clause.

(122)

Him helping Mary  
helping Mary' (him') =  $\cap$ [help' (m)(him')]

(Chierchia 1984, p. 258)

Ramchand & Svenonius (2014), building on some ideas previously discussed in this work (e.g., Bianchi 2003; Kratzer 1989, 2008) provide a categorization of situations and propositions as expressed in (123) and (124).

(123) Situations (understood as “partial specifications of SOAs” (p. 101))

- a. Are elaborations of eventualities.
- b. Have a TIME parameter, unlike events.
- c. Have a WORLD parameter, unlike events.
- d. Can have topics (based on an individual, or a description of an individual).

(124) Propositions

- a. Are elaborations of situations.
- b. Are anchored to the utterance context, having ‘Force’ in the discourse.
- c. It is only at the level of the proposition that speaker-oriented parameters come into play.

This proposal is compatible with the ontology adopted by Sheehan & Hinzen (2011; following Arsenijevic & Hinzen 2010 and Hinzen 2011), according to which objects, events, and propositions correspond to the nominal, verbal, and propositional domains, respectively. Ramchand & Svenonius draw finer associations with syntactic layers, connecting eventualities, situations, and propositions to *vP*, *TP*, and *CP*, respectively.

The distinctive property of situations most relevant to our discussion is their WORLD parameter, which functions as an anchor by designating that the situation described is instantiated in the world. In contrast with Possible World Semantics approaches, possible situations (expressed, for instance, by the complements of volition predicates) notably lack this parameter<sup>49</sup>. As for propositions, they are

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<sup>49</sup> For Serrano, by contrast, SOAs may be instantiated or non-instantiated, i.e., possible. Ramchand & Svenonius’ analysis can nevertheless be combined with a PWS view by distinguishing between situations anchored to the real world and those anchored to alternative worlds.

distinguished by their discourse link provided by CP (cf. Table 2 in Chapter 2). This is consistent with the fact that in English SOAs are expressed by non-finite gerunds whereas propositions are encoded by (independent or embedded) CPs.

Propositions, moreover, are characterized by Ramchand & Svenonius as a relationship between a situation and an assertor that contains information about the speaker's attitude towards the utterance and about the novelty of the information to the members of the utterance situation. They arise when "Fin\* combines with a situation description to create a proposition by binding off the situational variable s\*" (p. 169).

Although I will subscribe in general terms to this ontology, there are two caveats I would like to draw attention to. First, the semantics of clausal nominals is not restricted to propositions and situations, but also encompass facts and objects with propositional content (such as ConPs); in this regard, as noted above, the matrix predicate plays an important role in determining the ultimate interpretation of its arguments. Secondly, as will be seen next, the fact that FinPs can also express SOAs suggests that the functional property responsible for propositional (including fact-) interpretations can be restricted to Force and not attributed to C as a whole.

In connection with the first point, it is worth noting that certain DPs can also combine with truth value predicates. For Kratzer (2006), for instance, nouns such as *idea* or *story* denote individuals with propositional content and therefore can be true or false. Moulton (2020) describes the denotation of these nouns as "a property of individuals whose content is the proposition they embed" (p. 266). In other words, they are objects that contain a proposition without being themselves propositions.

Moltmann (2003, 2014), based on similar observations, introduces *attitudinal objects*<sup>50</sup> as truth-bearers and objects of propositional attitudes that come to replace propositions, which, in her view, are abstract entities unable to combine directly with these (i.e., propositional attitude) predicates. Attitudinal objects are expressed by

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<sup>50</sup> Attitudinal objects are neither events nor states nor propositions.



nouns such as *claim* and *belief* and can occur with truth value predicates, like propositions, but unlike event- and SOA-denoting gerunds. On the other hand, they are more acceptable with causal predicates than propositions, as they behave (syntactically) like concrete objects.

In causal predicates, however, their acceptability depends not only on their content but also on their illocutionary force. Accordingly, “a propositional content as a pure proposition cannot be causally efficacious, but only in connection with an attitudinal or illocutionary force and an agent, that is, as part of an attitudinal object” (2014, p.693). This can be observed in the acceptability contrast between (126)c and (127)c. The latter possesses a greater illocutionary force, expressed by the deontic auxiliary, to the extent that it essentially constitutes a claim. Indeed, in this respect, it is synonymous with (127)a. Conversely, a proposition like (126)c is simply unable to cause any reaction from the hearer. A similar situation is observed with evaluative predicates in (128)b.

(125)

- a. The story/claim that Mary won the race is true. (attitudinal object)
- b. \*Mary’s winning the race is true. (SOA)
- c. \*Mary’s participation in the race is true. (event)
- d. (The proposition) that Mary won the race is true. (proposition)

(126)

- a. John’s claim that Mary won the race caused astonishment.
- b. Mary’s winning the race caused astonishment.
- c. ??(The proposition) that Mary won the race caused astonishment.  
(Moltmann 2014, p. 135<sup>51</sup>)

(127)

- a. The claim that taxes should be abolished ignited an argument.
- b. Mary’s shouting political slogans ignited an argument.
- c. The proposition that taxes should be abolished ignited an argument.

(128)

- a. John’s claim that Mary won the race was incredible.
- b. Mary’s winning the race was incredible.
- c. (??The proposition) that Mary won the race was incredible.

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<sup>51</sup> Only (a) and (c).

This suggests that propositions *per se* can only be evaluated with respect to their truth. Nonetheless, as the data above suggest, *that*-clauses, which I have associated with propositions, are acceptable both in causal and evaluative predicates. A closer inspection of these contexts reveals that they represent yet another instance of semantic coercion<sup>52</sup>.

To understand what exactly is being predicated of in cases, it is important to follow Moltmann in distinguishing among a proposition, such as “Mary won the race”, the act of uttering it, and an attitudinal object containing it, each of which can be independently astonishing and incredible. To this triad, we may add the SOA of Mary having won the race.

To the extent that what propositions refer to is truth values, it is evident that they cannot be incredible themselves. Situations, (propositional or *attitudinal*) objects, and acts of uttering (i.e., eventualities), on the other hand, can be incredible as they occur in some world – be it real or not. From this follows that what evaluative predicates predicate of when they combine with *that*-clauses is not a proposition (expressed syntactically by ForceP) but a situation, expressed syntactically by a lower functional category.

This leads us to the second issue raised above concerning the fact that SOAs can also be expressed by FinPs, as exhibited in (126)c and (128)c. The claim I attempt to make here is that whereas propositional clauses are necessarily asserted to the extent they express a truth value, clausal nominals without such illocutionary potential denote SOAs –conceived as spatio-temporal entities with different degrees of specificity.

In Spanish, where mood is expressed morphologically, this distinction is evidenced in the distribution of indicative embedded clauses, which project Force. As

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<sup>52</sup> Adopting an alternative view that does not take SOAs into consideration, Elliott (2016) observes that propositional objects (e.g., *the fact/proposition that p*) are odd with predicates such as *fear*, *imagine*, and *hear*, whereas *that*-clauses are acceptable. This is attributed to the fact that the latter do not denote propositions but are modifiers that “specify the propositional content of the eventuality introduced by the verb” (p. 2) in the essence of Moulton (2009; 2015) and Kratzer (2006), whereas the meaning of nominals is lexically specified.

the data below shows, the indicative is obligatory under assertive predicates and alternates with the subjunctive with truth value predicates; by contrast, it is odd with evaluative predicates. All these cases allow the presence of a definite article.

(129)

- a. Es cierto (el) que Juan se ha/\*haya ido sin despedirse.  
'It is true that Juan has left without saying goodbye.'
- b. Es falso (el) que Juan se ha/haya ido sin despedirse.  
'It is false that Juan has left without saying goodbye.'

(130)

Es raro/triste (el) que Juan se #ha/haya ido sin despedirse.  
It is strange/sad that Juan has left without saying goodbye.'

(131)

María quiere que Juan \*se va/se vaya de inmediato.  
'Maria wants Juan to leave immediately.'

(132)

María dijo/informó que Juan se ha/\*haya ido sin despedirse.  
'María said/informed that Juan left without saying goodbye.'

It is worth noting, however, that non-indicative clausal arguments may also be assertive. Following Siegel (2009), the mood selection in (129)-(131) can be explained in terms of veridicality. Embedded clauses that take indicative are [+veridical] and assertive. Yet, the subjunctive is underspecified for veridicality and therefore need not be non-assertive. This being so, whereas in (129)b the embedded clause occurs under a predicate that asserts its falsehood, in (130) the truth of the embedded clause is presupposed (i.e, the embedded clause is veridical to the extent that the subject is committed to its truth, despite not being asserted) and in (131) there is no assertion nor presupposition; in other words, only in (129)b is the truth of the embedded clause can be *at issue* (see Stalnaker 1978; Quer 2001), in which case it takes indicative mood. In this situation, however, the commitment to the truth of the utterance comes from without the speech act<sup>53</sup>. By contrast, (130) and (131) not only

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<sup>53</sup> In the first case, if María wrongly informed Pedro that Juan left, he could have used the indicative to quote Maria's commitment. In the second case, Pedro can use the indicative if he has just found out that it is not the case that Juan left without saying goodbye, in which case his utterance would serve the purpose of updating the common ground. See Hooper & Thompson (1973) for a classic discussion on the 'assertiveness' of embedded predicates.

carry no assertivity but are not propositional as their extension is not a truth value<sup>54</sup>. Consequently, they denote SOAs.

Moulton (2020), however, has argued that *el que*-clauses are incompatible with truth value predicates unlike *lo de que*-clauses, which he categorizes as propositional objects, on par with DPs headed by nouns like *rumor* and *idea*<sup>55</sup>.

(133)

- a. #<sup>56</sup>El que María se compró una casa es cierto/verdadero/falso.
- b. Lo de que María se compró una casa es cierto/verdadero/falso.  
'That María bought a house is true/false.'

The corpus data below nonetheless supports my claim that *el que*-clauses are compatible with assertive predicates and agrees with the mood distribution described above, which evidences that they are ForceP nominals.

(134)

Decimos que lo repetido se gasta y pierde novedad. Pero no es del todo cierto; **no es cierto** el que se haya de convertir en rutina. (CdE)

(135)

También indicó que **es falso** el que las embarazadas tengan prerrogativas, o que los coyotes sean amigos de los migrantes puesto que lo único que buscan es "ganar dinero". (CdE)

(136)

Por lo menos en la Isla, contamos con los cuatro parques para perros que reseñamos a continuación, los cuales proveen amplio espacio para la diversión y el esparcimiento de nuestros amigos de cuatro patas. Y si bien **es cierto** el que todos están ubicados en el área metropolitana de San Juan, no debemos perder las esperanzas de que haya otros municipios con visión y otros empresarios que sigan sus ejemplos y se animen a diseñar más y mejores ambientes donde nuestras mascotas puedan disfrutar libremente y con seguridad. (CdE, Web/Dialects)

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<sup>54</sup> For frameworks such as Sheehan & Hinzen (2011) and Ramchand & Svenonius (2014), however, they could be construed as non-asserted propositions. The view I am adopting here establishes a connection between assertivity (or at-issueness) and propositions in embedded contexts. Non-asserted embedded clauses are therefore not propositions.

<sup>55</sup> As expressed in previous research, for Moulton (2009; 2015; following Kratzer 2006) *that*-clauses do not denote propositions directly but sets of individuals with propositional content (type <s, t>). This allows to explain that they can appear under propositional objects.

<sup>56</sup> Judgment as per Moulton (2020)

With this in mind, the parallel between the *that*-clauses in (126)c and (128)c and the mood selection in the Spanish data further supports the claim that the former are not propositional and therefore do not project Force. In fact, insofar as they are arguments of factive predicates, they can be regarded as *d*Ps under Shim & Ihsane's (2017) approach. If this view is assumed, a further parallel emerges with Spanish, as *el que*-clauses are also FinPs nominalized by D<sup>57</sup>.

In summary, assertivity in embedded clauses is linked to the syntactic projection of ForceP and a semantic interpretation that involves either propositional or fact-referring (i.e., a true proposition) meaning. Conversely, non-assertive embedded clauses refer to situations, with their definiteness varying according to the matrix verb. This perspective differs from approaches like De Cuba & Ürögdi (2010), who argue that referential clauses inherently denote propositions. Additionally, the existence of attitudinal objects and ConPs demonstrates that propositions can be expressed without a clausal structure.

### 3.4.3. *El que*-clauses vs. NICs

The question that I address now is whether and to what extent the semantic properties of *el que*-clauses, and the conditions enabling the presence of the definite article, can be applied to NICs.

As mentioned in 3.3.4.2, *el que*-clauses are analyzed as uniformly denoting situations in Serrano (2015). This claim is supported by pointing to their similarities with POSS-ings, such as their ability to combine with predicates that leave their truth value unspecified, e.g., (137) and, on the other hand, by noting their incompatibility with (non-factive) propositional attitude predicates –a property shared with DP-NIs– as seen in (138)-(140).

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<sup>57</sup> Disregarding Serrano's LimP hypothesis.

- (137)
- a. We prevented [his succumbing to the temptation] by hiding all the cookies from him.  
(Zucchi 1993, p. 81)
  - b. Evitamos [el que sucumbiera a la tentación] escondiéndole todas las galletas.  
(Serrano 2015, p. 215)
- (138)
- a. Juan cree [(\*)el] que la soprano cantó la canción.  
'Juan believes that the soprano sang the song.'
  - b. Juan cree [(\*)el] haber cantado la canción.  
'Juan believes that he sang the song.'
- (p. 217)
- (139)
- a. Juan desea [(\*)el] que sus hijos canten la canción.  
'Juan wishes that his children sing the song.'
  - b. Juan desea [(\*)el] cantar la canción.  
'Juan wishes to sing the song.'
- (140)
- a. Cristina sabe [(\*)el] que su prima ha tenido un bebé.  
'Cristina knows that her cousin had a baby.'
  - b. Cristina sabe [(\*)el] haber tenido su prima un bebé.  
'Cristina knows that her cousin has a baby.'
- (p. 28)

Yet, following the discussion in 3.4.2, *el que*-clauses must refer to propositions when they occur with truth value predicates. This coercion, however, is also observed with other kinds of nominals; indeed, as seen in (125) for English, truth values can be predicated of different kinds of DPs in Spanish – in other words, they can carry propositional content. Thus, abstract nouns such as *interés* and *optimismo* can be propositional when a truth value is predicated of them, as in (141)a and (142)a.

- (141)
- a. “Son solo conversaciones. Aún no hay nada definido”, expresó Omar Quintana, con eso dejó claro que [sí es cierto el interés de un equipo europeo], aunque no precisó el nombre de esa institución. (C21)  
(= sí es cierto que un equipo europeo tiene interés)
  - b. [El interés de aquél equipo europeo] duró poco.
- (142)
- a. [Ese optimismo sobre el futuro de la economía del que tanto se habla] es falso.

- (= el falso que existe optimismo sobre el futuro de la economía)
- b. [Ese optimismo sobre el futuro de la economía del que tanto se habla] es efímero.

Interestingly, DP-NIs are unacceptable in these contexts, as evidenced by the fact that none of the subjects in (134)-(136) nor (141)-(142) can be replaced by a SI, as seen below. That infinitive clauses (without the definite article) are also unable to combine with truth value predicates suggests that non-finiteness is responsible for blocking the propositional interpretation and is consistent with the observation (in in 3.2.3) that embedded infinitive clauses do not project ForceP.

(143)

#no es cierto (el) tener que convertirse en rutina.

(144)

\*es falso (el) tener (las embarazadas) prerrogativas.

(145)

\*era una mentira (el) ser (ellos) la misma gente [...]

(146)

\*sí es cierto el tener interés un equipo europeo [...]

(147)

\*[El haber optimismo sobre el futuro de la economía] es falso.

Infinitive clauses under assertive predicates constitute a notable exception to this characterization, however. In these cases, the illocutionary force of the matrix predicate requires the complement to be interpreted as an asserted element. (148)a, therefore, can be rewritten as (148)b. Both structures, however, are rendered odd by the presence of a definite article.

(148)

- a. Natasha dijo [sentirse muy satisfecha con su rendimiento] y que luchará hasta alcanzar su sueño. (CdE)
- b. Natasha dijo [que se siente/sintió muy satisfecha con su rendimiento] y que luchará hasta alcanzar su sueño.
- c. Natasha dijo [#el sentirse muy satisfecha con su rendimiento] y que luchará hasta alcanzar su sueño.
- d. Natasha dijo [#el que se siente/sintió muy satisfecha con su rendimiento] y que luchará hasta alcanzar su sueño.

Asserted *el que*-clauses like (149) are also ruled out in Serrano. Still, we find corpus data, e.g., (150)-(152), that contradict this claim.

(149)

Carol dijo \*<sup>58</sup>[el que no quedaban entradas para el cine].

Intended: ‘Carol said that the tickets for the movies were sold out.’

(Serrano 2015, p. 24)

(150)

En ningún lado dice [e] que el Consejo Legislativo (CL) puede decidir aceptar o no a un gobernador electo]. Eso no existe. (CdE)

(151)

El titular del IIAP comentó [e] que se han identificado 17 comunidades indígenas como Kotsimba, Boca Inambaria y San José de Karene, entre otras asentadas en el corredor minero], con las que se trabajará en la rehabilitación y construcción de estanques para crianza de peces. (CdE)

(152)

Por sus esfuerzos, el LA Galaxy anunció [el que el atacante mexicano ha sido nombrado como el Jugador del Año del club]. (CdE)

Corpus-sourced evidence for DP-NIs under assertive predicates, however, is virtually unavailable<sup>59</sup>. Additionally, none of the *el* que-clauses in (150)–(152) can be replaced by the DP-NIs below.

(153)

En ningún lado dice #[el poder decidir el Consejo legislativo aceptar o no a un gobernador electo].

(154)

El titular del IIAP comentó \*[el haberse identificado 17 comunidades indígenas [...]

(155)

[...] el LA Galaxy anunció \*[el haber sido el atacante mexicano nombrado como el Jugador del Año del club].

While the data above could be explained as due to the lack of control, the sentences in (156)–(157) confirm that DP-NIs are generally barred under assertive predicates.

(156)

Juan dice \*[el no saber qué hacer].

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<sup>58</sup> Ungrammatical according to Serrano.

<sup>59</sup> Non-exhaustive search. The corpora *CORPES XXI 1.0* and *corpusdelespanol.org* were consulted on the 15th of January of 2024 using the query *decir/comentar/mencionar + el + INFINITIVE*.



(157)

María comentó \*[el no sentirse bien].

These observations suggest at first sight an important contrast between *el que*-clauses and DP-NIs. However, I will suggest that, after a closer inspection, the data in (150)-(152) reveal that the former can only appear under assertive complements when they are construed as expressing facts and therefore, the corpus data cited represent special cases that, nevertheless, deserve a brief discussion.

The assertive predicates found in these texts are essentially distinct from (149) in that in the latter, without any further context, we must assume that the speaker was unaware that the tickets were sold out. Therefore, the complement clause is new information relayed by the subject (i.e., Carol). By contrast, the corpus data demonstrates that complement clauses can be used to express facts in two distinct ways. First, in (150), the discursive context<sup>60</sup> and the impersonal use of *decir* suggest that it conveys not a mere assertion but an institutional fact, i.e., a proposition that becomes true merely by being uttered by an authority invested with the appropriate institutional power to do so (Searle 1995).

In (151) and (152), for their part, the predicates appear to presuppose their complements. Indeed, in both instances the speaker communicates a proposition that was supposedly true before the communicative act and that is arguably true despite the assertion as well. This implies a pragmatic process by which the speaker assumes that the complement of the clause is (potentially) known information, which results in a semantic configuration similar to that exhibited in definite assertive clauses (Sheehan & Hinzens's class A), which are characterized by presupposing the information that is communicated<sup>61</sup>.

(158)

El titular del IIAP dijo \*[el que se han identificado 17 comunidades indígenas...]

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<sup>60</sup> A text about legal procedures.

<sup>61</sup> See 4.1.2.2 in Chapter 4 for a detailed discussion on the topic.

(159)

[...] el LA Galaxy dijo \*[el que el atacante mexicano ha sido nombrado como el Jugador del Año del club].

All in all, this demonstrates that *el que*-clauses under assertive predicates are allowed in Spanish<sup>62</sup> provided they denote a fact (i.e., a true proposition). Their virtual unavailability in corpora added to the unacceptability of asserted DP-NIs suggests, on the other hand, that asserted complement clauses are not as productive as with definite predicates. Regardless, truth (either asserted or presupposed) is a necessary condition for the licensing of the definite article.

Drawing on this, two *el que*-structures can be advanced. The first one consists of a FinP nominalized by D whose reference (a set of SOAs or a unique SOA) is delimited by Lim (160)a. The second one is propositional and therefore projects ForceP. Yet, as these structures are licensed only insofar as the complement denotes a fact, LimP is also projected. If we are to follow Serrano's claim that the definite article must be adjoined to LimP, we must assume that it projects on top of Force, as in (160)b. Putatively, only fact-denoting clauses project Lim and therefore license the definite article.

(160)

- a. Es curioso  
[el que todos estén ubicados en el área metropolitana de San Juan].  
[DP [LimP [FinP
- b. Es cierto  
[el que todos están ubicados en el área metropolitana de San Juan].  
[DP [LimP [ForceP [FinP

Seen this way, the restrictions imposed by the predicates on the semantics of their arguments are expressed syntactically by means of the projection of VFPs<sup>63</sup>. For instance, under declarative and truth value-assigning predicates, clausal arguments project ForceP –which can be nominalized or not– whereas eventive predicates appear

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<sup>62</sup> This provisional claim finds support in previous research, e.g., Fernández-Rubiera (2015), who notes that in Spanish clauses embedded under assertive predicates exhibit Main Clause Phenomena (such as Topic Hanging).

<sup>63</sup> By contrast, the syntax of DPs with ConPs is not affected.

to be sensitive to the projection of categories above vP. Evaluative predicates, for their part, impose no major restriction in this sense, but require a definite interpretation by virtue of the presupposition they trigger. Lastly, the alternation between asserted and definite complements in communication and cognitive semi-factive predicates observed by Sheehan & Hinzen would entail that both structures in (160) are allowed. According to my ontology, however, this dichotomy corresponds to reference to a fact or a situation instead of reference to a truth or a fact.

To proceed with the characterization of DP-NIs, in (161) I show, based on the distribution of *el que*-clauses proposed by Serrano (in (100)), that DP-NIs are acceptable in the majority of the contexts in which their subject is coreferential with that of the matrix predicate. On the other hand, independent DP-NIs are only allowed as subjects of evaluative and causal predicates.

(161) Predicates that allow *el que*-subjects

- a. Psychological (non-propositional; *agradar, sorprender*, etc.)
  - i. Me da gusto [el que **sus hijos tengan/\*tienen** una casa propia antes de los 30].
  - ii. Me da gusto [el **tener** una casa propia antes de los 30].
  - iii. Me da gusto \*[el **tener sus hijos** una casa propia antes de los 30].
- b. Evaluative (non-propositional; *es extraño, sorprendente*, etc.)
  - i. [El que **sus hijos tengan/\*tienen** una casa propia antes de los 30] es sorprendente.
  - ii. [El **tener** una casa propia antes de los 30] es sorprendente.
  - iii. [El **tener sus hijos** una casa propia antes de los 30] es sorprendente.
- c. Causal (allows propositions; *indicar, significar*, etc.)
  - i. Para María, [el que sus **hijos tengan/\*tienen** una casa propia antes de los 30] significa una vida con menos preocupaciones.
  - ii. Para María, [el **tener** una casa propia antes de los 30] significa una vida con menos preocupaciones.
  - iii. Para María, [el **tener sus hijos** una casa propia antes de los 30] significa una vida con menos preocupaciones.
- d. Relevance (*importar, subrayar*, etc.)
  - i. A María le importa [el que **sus hijos tengan/\*tienen** una casa propia antes de los 30].
  - ii. A María le importa \*[el **tener** una casa propia antes de los 30].
  - iii. A María le importa \*[el **tener sus hijos** una casa propia antes de los 30].

(162) Predicates that allow *el que*-objects

- a. Psychological (*lamentar, detestar, etc.*)
  - i. María celebra/se jacta de [el que **sus hijos tengan/tienen** una casa propia antes de los 30].
  - ii. María celebra/se jacta de [el **tener** una casa propia antes de los 30].
  - iii. María celebra/se jacta de #[el **tener sus hijos** una casa propia antes de los 30].
- b. Relevance (*destacar, restaltar, etc.*)
  - i. María destaca/resalta [el que **sus hijos tengan/tienen** una casa propia antes de los 30] entre sus mayores logros.
  - ii. María destaca/resalta [el **tener** una casa propia antes de los 30] entre sus mayores logros.
  - iii. María destaca/resalta #[el **tener sus hijos** una casa propia antes de los 30] entre sus mayores logros.
- c. Inference and consequence (*implicar, significar, etc.*)
  - i. Para María, haber ganado la lotería significa/implica [el que **sus hijos puedan/pueden** tener una casa antes de los 30].
  - ii. Para María, haber ganado la lotería significa/implica [el **poder tener** una casa propia antes de los 30].
  - iii. Para María, haber ganado la lotería significa/implica #[el **poder tener sus hijos** una casa propia antes de los 30].
- d. Weak causatives (evitar, fomentar, etc.)
  - i. Para María, sus condiciones laborales actuales evitan/facilitan [el que **sus hijos puedan/\*pueden tener** una casa propia antes de los 30].
  - ii. Para María, sus condiciones laborales actuales evitan/facilitan [el **poder tener** una casa propia antes de los 30].
  - iii. Para María, sus condiciones laborales actuales evitan/facilitan #[el **poder tener sus hijos** una casa propia antes de los 30].
- e. Opinion (*cuestionar, descartar, etc.*)
  - i. Con base en su situación actual, María descarta/cuestiona [el que **sus hijos puedan/pueden tener** una casa propia antes de los 30].
  - ii. Con base en su situación actual, María descarta/cuestiona [el **poder tener** una casa propia antes de los 30].
  - iii. Con base en su situación actual, María descarta/cuestiona #[el **poder tener sus hijos** una casa propia antes de los 30].

The wide acceptability of control DP-NIs can be explained by appealing to the fact that their logophoric center is anchored to the matrix predicate. In this sense, they can be seen as non-redundant *el que*-clauses. Non-control DP-NIs, on the other hand, express independent situations, and hence cannot be anchored to the matrix predicate. Indeed, aside from (161)b, where the licensing of the non-controlled SI can be

attributed to the looseness of the evaluative predicate, the only other context in which it can occur, namely (161)c, does not require the situation expressed by the SI to denote a specific situation in the real world. These contrasts suggest that, despite having similar syntactic and semantic properties (both being FinPs that typically refer to SOAs), the non-finiteness of DP-NIs ultimately restricts their denotation. I will elaborate on this in the next chapter.

Assuming Serrano's analysis, we can posit two provisional structures to account for the data above. The first one occurs in control constructions and mirrors the structure of non-assertive *el que*-clauses. The second one occurs elsewhere and is characterized by the lack of LimP, which restricts the denotation of the nominal to a set of kinds of situations and blocks the reference to individual situations.

(163)

- a. María se jacta d[el tener PRO<sub>i</sub> una casa propia antes de los 30].  
[DP [LimP [FinP]]]
- b. [Gn<sub>k</sub>] Para María<sub>i</sub>, [el tener PRO<sub>k</sub> una casa propia antes de los 30]  
significa una vida con menos preocupaciones.  
[DP [FinP]]

Although I subscribe to the idea that definiteness is syntactically expressed via the projection of functional categories, and in general with Serrano's description of *el que*-clauses, I find it unnecessary to invoke a whole new category to account for the definiteness of embedded clauses. From my perspective, the main problem with the Lim hypothesis is that it fails to consider that definiteness, in terms of Sheehan & Hinzen, is a property provided by predicates to their arguments. Indeed, although nominals can encode definiteness independent from the predicate in D, the reference of two otherwise equal nominals is nonetheless influenced by the kind of predicate they occur in. This is precisely observed in (79), where the referent of the DP varies in function of the definiteness of the matrix.

Therefore, an alternative must be devised to address the licensing of the definite article without positing LimP or any other ad-hoc functional category. With this objective in mind, in the forthcoming chapter, where I center on the definiteness (and

genericity) expressed in DP-NIs, I will outline an analysis that incorporates these criteria.

### 3.5. Conclusion

In this chapter I have explored the syntactic and semantic properties of DP-NIs as instances of sentential nominals.

After exploring different proposals, I have followed Sheehan & Hinzen's analysis, which Serrano adapts to explain the presence of the definite article in *el que*-clauses. Crucially, this analysis posits that D expresses referentiality and is therefore projected in clauses embedded under definite predicates (e.g., emotive factives). Drawing on Serrano and Moulton, I have further argued that the definite article expresses that the clause denotes a unique SOA, i.e., a situation instantiated in the real world.

However, I have also challenged some of the claims made by Serrano. Whereas I maintain the assumption that definiteness, like assertion, constitutes an increased extensionality, and I subscribe to the claim that the definite article in factive predicates allows for reference to a unique situation, I have demonstrated that *el que*-clauses do not uniformly denote SOAs, as they can occur with proposition-selecting predicates, such as assertive and truth predicates. By contrast, infinitive clauses are unacceptable under these predicates and instead tend to occur in factive environments. This distinction is consistent with the fact that DP-NIs do not project Force, which anchors situation to the discourse context and hosts illocutionary force (cf. Ramchand & Svenonius 2014).

These observations leave two issues unsolved. The first one is theoretical in nature and concerns the proposal of LimP as the category that enables reference to token situations. While it allows to establish a parallel with nouns, where reference to tokens is achieved compositionally, it is nevertheless an ad-hoc category that lacks empirical support. The second issue is empirical and has to do with generic DP-NIs, which evidently do not refer to unique situations instantiated in the real world. Both will be addressed in the next chapter.

## 4. Definiteness and Genericity in DP-NIs

This chapter focuses on the semantics of the two types of nominalized infinitive clauses previously identified, i.e., definite DP-NIs comparable to factive *el que*-clauses– and generic DP-NIs.

Concerning the former, I part ways with Serrano's *Frases Límite* hypothesis and propose an alternative analysis of definite DP-NIs that preserves the correlation between definiteness and “heavy edges” as advanced by Sheehan & Hinzen (from now on also Sheehan & Hinzen) by adopting a modal approach, according to which (i) definiteness constitutes the anchoring of a situation to a single world (Farkas 1992) and (ii) all complement clauses, regardless of the definiteness of their matrix predicate, are DPs.

As for generic DP-NIs, I will argue that they are generic as clauses, to the extent they denote a kind of situation – as evidenced by their lack of subject and atemporality. Additionally, I will claim that they are generic nominals, as evidenced by their external distribution and conceptual semantics, which makes them kind-denoting expressions.

Lastly, I will discuss the function that the definite article plays in both constructions. Drawing on familiarity-based approaches, I make a case for the idea that the definite article may be promoted when an anaphoric referent is available. Based on this, I suggest a general relationship between the use of the definite article in DP-NIs and the presence of an extralinguistic anchor.

### 4.1. Revisiting Clausal Definiteness

#### 4.1.1. The NP-FinP parallel

I have been arguing for the idea that the nominal properties of embedded clauses arise when they occur with predicates that select referential complements. More specifically, I have subscribed to Sheehan & Hinzen's proposal, applied to Spanish in Serrano, which establishes an association between referentiality and definiteness both

in the nominal and the clausal domains that in either case entails the projection of functional categories:

“The more edge-heavy the phase becomes (through Determiner or Complementizer phasal heads, or movement of phase internal material into these positions), the more referential the phase becomes, giving rise to object reference and fact reference in nominals and clauses, respectively. Only outside of argument positions, however, i.e. in the final phase of a derivation, can fully extensional forms of reference be achieved.” (p. 45)

Definiteness in this sense is closely related to extensionality. In other words, the arguments selected by definite predicates refer to sets or individuals (i.e., to extensions), whereas the arguments selected by indefinite predicates refer to properties (i.e., intensions). This has been previously observed in the previous chapter in the minimal pair here reproduced below. With a cognitive predicate (weakly assertive/weakly definite), the ant may not exist, and so the DP may refer to a set of properties of the kind *ant* (cf. Carlson 1977; Chierchia 1998; Zamparelli 2002; Borik & Espinal 2014). By contrast, with a factive predicate, the existence of the ant is presupposed and therefore refers to an individual<sup>64</sup>. Still, definiteness can be expressed independently of the predicate by means of a definite determiner, such as a definite article. Note that, as evidenced in (1), in this case the referent is specific despite the indefiniteness of the predicate<sup>65</sup>.

- (1)
  - a. I ignored<sub>[+def]</sub>/imagined<sub>[-def]</sub> an ant in my soup.
  - b. I ignored<sub>[+def]</sub>/imagined<sub>[-def]</sub> the ant in my soup.
- (2)
  - a. I ignored<sub>[+def]</sub> that someone called.
  - b. I imagined<sub>[-def]</sub> that someone called.

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<sup>64</sup> The complements of *to imagine* may also refer to individuals.

<sup>65</sup> It must be noted that under an indefinite predicate the definiteness of ‘the ant’ can only be pragmatic, i.e., refer to a known or previously mentioned referent, whereas under a definite predicate, it can describe a semantically definite (i.e., unique) ant. For a discussion on these notions, see Section 3.



The same applies to embedded clauses. When no assertion is involved, they denote sets of individual SOAs under definite-selecting predicates (class D) and sets of properties or kinds of situations under indefinite-selecting predicates (class C). Extensionality in the clausal domain is further associated with the evaluation of a proposition or situation in the real world (Quer 2011), which correlates with the modality and subjectivity of indefinite-selecting predicates. This distinction is framed in terms of a token/type distinction by Serrano, who establishes three classes of predicates; their distinctive properties are presented in Table 5.

“De forma paralela al proceso que se ha propuesto en el dominio nominal, veremos que las completivas parten de la denotación de conjunto de clases (kinds) de situaciones (subordinadas de la clase 3) y en combinación con una categoría funcional a la que llamaremos *Lím*, pasan a denotar un conjunto de situaciones individuales (tokens) (completivas de las clases 1 y 2). Si, posteriormente, se ensamblan con el artículo, pasan a denotar la única situación individual descrita por la subordinada.” (2015, pp. 268-269)

Table 5: Properties of predicates that do and do not combine with the definite article in Spanish according to Serrano (2015) [Abridged]

Predicates	Properties	Class
<b>Assertion</b>	<u>Semantics</u> : true situations in the epistemic world of the subject Syntax: main Clause Phenomena Discourse: may be <i>at-issue</i>	-
<b>Emotive factives</b>	<u>Semantics</u> : two denotations. <ul style="list-style-type: none"> <li>Possible situations that can occur in the actual world (opaque version)</li> <li>Situations that do occur in the real world (transparent version)</li> </ul> <u>Discourse</u> : cannot constitute <i>at-issue</i> information nor deictic units. <u>Syntax</u> : weak islands.	1
<b>Weak causatives</b>	<u>Semantics</u> : possible situations that can occur in the actual world. Discourse: cannot constitute <i>at-issue</i> information. Syntax: some are weak islands.	2

<b>Volition, intention, influence</b>	<u>Semantics</u> : situations construed as alternative to the actual world whose occurrence is undetermined.  <u>Discourse</u> : cannot be at issue (except for complements of influence preds.).  <u>Syntax</u> : not islands.	3
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As definiteness involves a “heavy edge” and the definite article is not sufficient nor necessary to achieve a token (i.e., definite) reading, Lim comes to be the syntactic manifestation of the definiteness of clausal complements of definite predicates. In other words, it is the counterpart of Num in the nominal domain. The parallel between these two categories is worked out as follows:

In Spanish, and other Romance languages, bare NPs denote properties (type  $\langle e, t \rangle$ ) and generally require the presence of a D to function as arguments (Longobardi 1994; Chierchia 1998; Borer 2005). However, in intensional contexts, like those below, bare nouns can occur as complements of verbs. As expected, these nominals preserve the property denotation –either of a kind (3)a-(3)b, an individual (3)c, or a gradable property (3)d– and lack referentiality and quantity (Espinal 2010; Espinal 2011).

- (3)
- a. Tengo coche.  
‘I’m a car-owner.’  
(Espinal 2011, p. 63)
  - b. No busco piso.  
‘I’m not looking for a flat (*de dicto*).’  
(Espinal 2011, p. 72)
  - c. ¡Usted, señor!  
‘You, sir!’  
(Espinal 2011, p. 75)
  - d. Es muy hombre  
‘He’s very manly’  
(Espinal 2011, p. 82)

Borik & Espinal (2012; 2014), building on this, provide a compositional account of the denotation of nominal expressions that correlates with the projection of functional categories. Accordingly, when N combines with an iota operator (i) –which

maps a property onto an individual with unspecified number– (p. 18) a definite kind (type  $\langle e^k, t \rangle$ ) is obtained.

$$(4) \quad \iota P \rightarrow \iota x [P(x)]$$

Alternatively, N may combine with Number, which functions as an instantiation operator. The result of this operation is a NumP that denotes a sum of objects that instantiate the properties of the N base. When NumP combines with  $\iota$ , the resulting DP refers to the maximal sum of individual objects of type  $\langle e^0 \rangle$  that satisfy the property denoted by N (p. 21). The data in (5) show that, without the maximality of  $\iota$ , NumPs receive a quantificational or existential interpretation.

Borik and Espinal emphasize that  $\iota$  consistently conveys maximality, regardless of the phrase it is paired with. When combined with a property-denoting noun, it selects the maximal species, whereas with count nouns it denotes the maximal sum of individuals (when it is a plural definite) or the unique individual within the discourse domain that instantiates the properties of the noun.

- (5)
- a. Vimos (unos) colibríes. [Existential/Quantificational]  
'We saw (some) hummingbirds.'
  - b. Vimos a los (tres) colibríes. [Maximal sum]  
'We saw the (three) hummingbirds.' = the only three hummingbirds.
  - c. El colibrí es la única ave que puede volar en reversa. [Maximal species]  
'The hummingbird is the only bird that can fly backwards.'
  - d. El colibrí anda volando en el jardín. [Unique individual]  
'The hummingbird is flying in the garden.'

This compositional analysis can be productively applied to clausal nominals in order to account for the fact that they come to denote truth values, facts, propositions, or individual/kind situations, depending on whether they are asserted or not.

In the case of non-asserted clauses, a “bare” FinP is comparable to N in that it denotes a set of properties of a kind of a situation (K-properties). As the combination of  $\iota$  and a property-denoting category results in reference to a definite kind, which is not what *el que*-clauses encode, Lim is posited by Serrano as the category selected by D. As Table 6 attests, this parallel does not account for clausal nominals that denote

kinds. In the next pages, however, I will argue that this meaning is encoded by DP-NIs in generic environments.

Table 6: Serrano’s syntactic analysis of clausal and nominal DPs, based on Borik & Espinal (2012; 2014)

Nominal DP	Clausal DP
<b>[D [Num [NP]]]</b> <i>El gato me mordió.</i> $SG = \iota x^o \exists x^k [P(x^k) \ \& \ R(x^o, x^k) \ \& \ x^o \in Atom]$	<b>[D [Lim [FinP]]]</b> <i>Detesto <b>el</b> que toquen música en la madrugada.</i> Unique (instantiated) situation
<b>[Num [NP]]</b> <i>Vi gatos.</i> $SG(gato) = \lambda P. \lambda x^o. \exists x^k$ $[P(x^k) \ \& \ R(x^o, x^k) \ \& \ x^o \in Atom]$ $PL(gatos) = \lambda P. \lambda x^o. \exists x^k$ $[P(x^k) \ \& \ R(x^o, x^k) \ \& \ x^o \in Sum]$	<b>[Lim [FinP]]</b> <i>Detesto/Sé que tocan música en la madrugada.</i> Set of possible situations
<b>[D [NP]]</b> <i>El gato<sub>kind</sub> es el felino más común.</i> $\iota x[P(x)]$	<b>[D [FinP]]</b> Not described
<b>[NP]</b> <i>No tengo gato.</i> $P(x)$ Selected by intensional predicates	<b>[FinP]</b> <i>Quiero que toquen música en la madrugada.</i> Selected by intensional predicates

## 4.1.2. Rejecting LimP

As revealed in Table 6, Lim is a category that allows for a straightforward comparison of NP- and FinP-based DPs in terms of their compositionality. Syntactically, Lim’s function is to license D; semantically, it hosts an instantiation operator that shift the denotation of the clause from a set of properties to a set of I-situations. While I subscribe to the idea that extensionality is manifested in the projection of functional layers both in the nominal and clausal domain –and, indeed, one of the goals of this chapter is to elaborate on how this is done in DP-NIs– the necessity of positing a new category becomes questionable when one realizes that its functions can be attributed to other elements either inside the embedded clause or embedding clause.

Before elaborating on an alternative analysis, I shall bring up two challenges for the Lim hypothesis. The first one, which will be discussed in detail below, concerns the fact that complements of intensional predicates –either nominal or clausal– need

not denote properties of kinds and, therefore, reference to sets of situations can be achieved without Lim. The second challenge concerns the previously mentioned fact that the definite article is licensed under indefinite assertive predicates (albeit to a lesser extent than under factives), which demonstrates that Lim is not a necessary condition for its presence. Based on these observations, I will propose a modal approach to Sheehan & Hinzen’s classification, according to which definiteness in the clausal domain consists of propositions or situations anchored to a single world that, additionally, are true or are instantiated in the real world.

#### 4.1.2.1. Revisiting Property Denotation and Intensionality

I will now demonstrate that intensional predicates do not require their complements to be property-denoting. As we are assuming a definiteness parallel between nominal and clausal complements, I will begin by looking at the case of complement N-DPs and then transpose the analysis to complement clauses.

Let us begin by looking at volitional verbs. As the data below reveals, bare nouns are only allowed when a mass interpretation can be obtained; count nouns, for their part, must project Number.

- (6)
- a. Juan quiere \*bastón (para caminar).  
‘\*Juan wants cane.’
  - b. Juan quiere sandía(s).  
‘Juan wants watermelon(s).’
  - c. Juan quiere sal.  
‘Juan wants salt.’

This distribution is attributed in part to the properties of indefinite expressions in Romance languages and in part to the semantic properties of the governing verb. With respect to the former, these data evidence a well-known affinity between bare mass and plural nouns that set them apart from property-denoting bare nouns (BNs). Semantically, both expressions denote non-quantified homogeneous pluralities that give rise to atelicity (Borer 2005; Espinal 2010). Syntactically, although they exhibit similar external distributions, their internal structures are distinguished by the

projection of operators in plurals, such as a Classifier (e.g., in Chinese) or Number inflection (e.g., in Romance languages).

In the works of Borer (2005; 2007), all nouns are primordially mass-denoting and it is only through the presence of functional layers that they denote sets or individuals (Quantity) and convey telicity. Espinal (2010; drawing on Chierchia 1998 and Longobardi 2001), in turn, assumes a property-denoting N base, which can be either pluralized (as seen above via Num) or massified. Mass nouns denote “the extent to which the property denoted by the nominal expression (NP) extends over atomic [...] or non-atomic domains” (p. 1004). As they refer to quantities, they allow measurements – a property that sets them apart from BNs – and project QP.

The presence of the functional layers assumed for the examples in (6) is further supported by evidence from other languages, like Italian, where similar indefinite expressions incorporate the particle *di*. In the literature, *di* has been analyzed as a determiner, distinct from its homonymous preposition. Zamparelli (2008), for instance, claims that plural and mass *di*-DPs denote kinds (see also Cardinaletti & Giusti 2016).

Based on data from several Romance languages, Espinal & Cyrino (2021) analyze *di/de* as an operator hosted in D that provides indefiniteness by shifting the denotation of the expression from an entity  $\langle e \rangle$  (headed by the definite article under *de*) to a set of properties associated to a kind  $\langle e, t \rangle$ <sup>66</sup>. Accordingly, this operator is also present in Spanish BNs, although it is not phonologically realized. In either case, it encodes indefiniteness. Spanish and Italian BNs are hence structured as DP<sub>s</sub>, as per (7) and (8), respectively. Notably, the indefinite reading requires the presence of an overt article with a count noun like *bastón* (‘cane’). By contrast, mass and plural nouns are grammatical and yield an indefinite reading when combined with a null determiner.

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<sup>66</sup> “According to the present analysis, DE is an operator that cancels the effects of the iota operator associated with the definite article (DE:  $\lambda x[P(x)] \rightarrow P(x)$ ). Thus, parallel to Ident (Partee 1987), DE shifts an entity  $\langle e \rangle$  into a property  $\langle e, t \rangle$  (i.e., semantic type  $\langle e, t \rangle$ )).” (p. 182)

- (7)
- a. Juan quiere [<sub>D</sub> un \* [<sub>NP</sub> bastón (para caminar)]]].
  - b. Juan quiere [<sub>D</sub> Ø [<sub>Num</sub> [<sub>NP</sub> sandía[s]]]
  - c. Juan quiere [<sub>D</sub> Ø [<sub>Q</sub> mass [<sub>NP</sub> sandía]]].
  - d. Juan quiere [<sub>D</sub> Ø [<sub>Q</sub> [<sub>NP</sub> sal]]].
- (8)
- a. Gianni vuole [<sub>D</sub> un \* [bastone]].
  - b. Gianni vuole [<sub>D</sub> del [<sub>Num</sub> [<sub>D</sub> le [<sub>NP</sub> angurie]]]
  - c. Gianni vuole [<sub>D</sub> del [<sub>D</sub> la [<sub>Mass</sub> [<sub>NP</sub> anguria]]]
  - d. Gianni vuole [<sub>D</sub> del [<sub>D</sub> la [(<sub>Mass</sub>) <sub>NP</sub> sale]]]

From this perspective, BNs thus project a D layer. However, as I have just noted, none of the BN complements in (7) and (8) denote properties, but rather indefinite quantities. It could be argued that these nominal expressions are distinct from property BNs, which in turn owe their interpretation to the lack of D.

Espinal & Cyrino (2021) briefly note that the final interpretation of a BN is influenced by the semantics of the governing verb. A closer look at different types of intensional verbs supports the latter claim. As seen below, *necesitar* ('to need') licenses singular count BN complements that denote a non-referential property. The sentence in (9)a thus denotes a property of Juan, namely, his inability to walk unassisted. By contrast, plural and mass BN complements receive a quantificational interpretation, as under volitional verbs.

- (9)
- a. Juan necesita bastón (para caminar)/ayudante. (property-denoting)
  - b. Juan necesita sandía(s).  
'Juan needs watermelon(s).'
  - c. Juan necesita sal. (not property-denoting)  
'Juan needs (some) salt.'

On the other hand, possession-related light verbs allow both count and mass BNs, although they do not uniformly denote properties, as illustrated by (10). Directives (11) and agentives (12), for their part, only allow mass BNs. None of these denote properties.

This suggests that property-denoting BNs in Spanish are limited to a set of predicates consisting of a verb complemented by a nominal modifier (pseudo-

incorporation) which, despite serving as a syntactic complement, is non-argumental, as claimed by Espinal & McNally (2010) and Espinal (2011). Crucially, as a rule of thumb, these nouns are licensed insofar as the resulting VP expresses a comprehensible property.

- (10)
- a. Juan tiene/lleva/usa bastón. (property-denoting)  
'Juan uses a cane.' (= 'Juan is handycapped')
  - b. Juan tiene/lleva/usa sal. (not property-denoting)  
'Juan has/carries/uses salt.'
- (11)
- a. Juan \*pide/\*ordena bastón.  
'\*Juan asks for/orders cane.'
  - b. Juan pide/ordena sal.  
'Juan orders salt.'
- (12)
- a. Juan \*produce/\*hace bastón.  
'\*Juan produces/makes cane.'
  - b. Juan produce/hace sal.  
'Juan produces salt.'

Indeed, referentiality need not be expressed in the syntax, and need not even stand in a one-to-one relationship with the lexical semantics of verbs. In this regard, we shall remember that complements of intensional verbs may be non-referential despite the presence of an overt determiner. This is illustrated in (13) below.

- (13)
- a. Busco a una estudiante que habla griego. (referential)
  - b. Busco a una estudiante que hable griego. (non-referential)  
'I'm looking for a student that speaks Greek.'

This being so, it should not be controversial to posit a D layer in property-denoting count and mass BNs, as below.

- (14)
- Juan tiene [<sub>D</sub> Ø [<sub>Num</sub> [<sub>NP</sub> hijo]s]]. (= Juan es padre)
- (15)
- Gianni ha [<sub>D</sub> de [<sub>Num</sub> [<sub>D</sub> i [<sub>NP</sub> figli]]]]  
'Juan/Gianni has children.'



It must be further noted that certain BNs are allowed under predicates that otherwise disallow them when their interpretation can be enriched by the shared knowledge and the contextual information available to the participants of the communicative act (Espinal 2010). This can be observed, for instance, in the case of *pareja* ('partner'). Without any further context, its most readily available interpretation is that of a romantic partner. The possession of a romantic partner implies being in a relationship, which in turn constitutes an individual-level property. Thus, the complement of (16) may denote an indefinite individual (comparable with *una pareja*) or it can denote a situation associated to a property, namely, being in a relationship. The latter interpretation is arguably unavailable to *bastón* in (6)a. Indeed, *querer bastón* denotes no identifiable property as it does, by contrast, *usar bastón*, which expresses a walking disability.

In this sense, we observe that the property denotation of a VP of this kind is not only determined by the compositional adequacy of the verb and the nominal modifier, but also by the lexical semantics of the former. Thus, BNs under verbs like *usar* and *tener* are more readily interpreted as properties. Indeed, conceptually, possession and continuous use of an object align more naturally with a property interpretation compared to expressing desires and wants. So, for instance, whereas *tener carro* is acceptable and undoubtedly expresses a property, *querer carro* faces the same difficulties as *querer bastón*. On the other hand, a verb like *necesitar* may pseudo-incorporate a BN when the latter refers to a part of the subject, e.g., when talking about food dishes, as in (17). Certainly, owning a car is not a property of any person in the same way that being salty is a property of soups or that requiring a walking cane is a property of Juan.

(16)

Juan quiere [<sub>NP</sub> pareja].  
'Juan wants a partner.'

(17)

Esta sopa necesita [<sub>NP</sub> sal].  
'This soup needs salt.'

This reveals, on the one hand, that BNs do not uniformly denote properties, and on the other, that the property denotation is mediated by the semantics of the matrix verb. While some intensional predicates (e.g., *tener* ‘to have’) combine with property-denoting BNs, others (e.g., volitionals and directives) select non-referential pluralities and individuals. Based on these observations, if the assumption of a semantic parallel between nominal and clausal complements is to be maintained, FinPs under the latter type of predicates, like (18), must be construed as denoting a plurality of situations over which the subject’s volition ranges.

- (18)  
 Juan quiere [<sub>FinP</sub> cambiar de empleo].  
 ‘Juan wants to switch jobs.’

Conveniently, as we will see next, this stance aligns with works based on Possible World Semantics (PWS) which, moreover, allows us to understand the distinction between intensional and extensional predicates in terms of the properties of the world in which the complement is anchored.

#### 4.1.2.2.      **Extension/Intension and Possible Worlds**

To develop my alternative approach to the licensing the definite article in complement clauses in Spanish, I will adopt a modal/PWS view and define intension as a function from possible worlds to extensions (Carnap 1947; see also Lewis 1986; Heim & Kratzer 1998; Quer 2011). More specifically, I will support the claim that intensionality in the clausal domain consists of reference to a set of possible worlds mediated by a modal interpretation of the truth of a proposition (Quer 2011, p. 284).

From this perspective, true propositions do not necessarily derive their truthfulness from the actual world, but may also depend on future, hypothetical or imaginary situations. To quote Stalnaker (1999, p. 32), “we want a function taking not just the actual state of the world, but various possible states of the world into truth values. Since there are two truth values, a proposition will be a way –any way– of dividing a set of possible states of the world into two parts: the ones that are ruled out by the truth of the proposition, and the ones that are not.”

As mentioned briefly in the previous chapter, Farkas (1992; see also McCawley 1981, cap. 11) employs her concept of anchoring to account for mood selection drawing on this view. In a nutshell, it establishes, following Hintikka (1962) and Lewis (1986), that the truth of a proposition or the instantiation (or obtaining) of a situation is evaluated with respect to a world (or set thereof) introduced by a predicate, which in turn is introduced by an individual – either the participants of a conversation or a subject. Accordingly, declarative propositions like (19) are evaluated based on the common ground of the participants of the speech act, while embedded clauses (20) are evaluated with respect to worlds anchored on the subject (Quer 1998, p. 44).

(19)

Hoy es lunes.

‘Today is Monday.’

(20)

Juan cree que hoy es lunes.

‘Juan believes that today is Monday.’

Embedded clauses anchored to a single world –be it the actual world or a private world only accessible to the subject– are extensionally anchored and typically select indicative in Romance. Conversely, intensionally anchored predicates are evaluated in a set of worlds and typically select subjunctive mood. In the essence of Hintikka (1961; 1969) and Lewis (1986), the properties of the worlds introduced by each predicate are determined by its semantics, e.g., the modality or the propositional attitude conveyed. The notion of ‘world’ in this sense contrast with the spatiotemporal nature of the real world; instead, as suggested by McCawley, these worlds correspond to modal systems (1981<sup>67</sup>, p. 328).

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<sup>67</sup> McCawley notes in this sense that someone’s beliefs “have to do not only with what he[/she] takes to be the real world but with his [or her] conception of what the alternatives to that world are.” (p. 328).

Furthermore, the logical properties of modal worlds (i.e., which propositions are true in them) are always subject to a principle of cooperativity, in the sense that “ the speaker is taken as implying that the belief worlds, and so on, to which he refers agree with the real world in all relevant respects except those in which he has given the addressee reason not believe that they may differ from the real world.”

Sheehan & Hinzen's concept of definiteness is in fact compatible with PWS and the notion of extensional/intensional anchoring, provided that definite predicates in latter's sense are understood as extensional not only insofar as they introduce a single world, but also in the sense that they refer to a proposition or situation in the real world, i.e., they must possess an extensional referent (Farkas 1992; Quer 2011). This claim, also assumed by Serrano on a general level, is reflected in the fact that the truth of the complements of indefinite predicates is evaluated with respect to the grammatical subject and therefore fails to update the set of true propositions of the real world, in which conversational common ground is based<sup>68</sup>, while, conversely, definite predicates always presuppose the truths of their complements (or instantiated in the actual world, consequently allowing for a factive interpretation<sup>69</sup>. Having said that, I will now offer a review of Sheehan & Hinzen's classification (Table 4) from a PWS perspective.

We will begin with Class D, characterized as non-assertive and indefinite in Sheehan & Hinzen, and comprising essentially intensional predicates. According to Farkas, the situation denoted by the complement clause of a volitional predicate is introduced (or instantiated) in all the worlds in which the volition is satisfied. Such situation (and the referents within it), however, is not instantiated in the actual world, as the set created by the matrix predicate is composed of alternative worlds (more specifically, future worlds). Considering that volitional predicates convey a modality over the clauses they select, the sentences in (21) express the subject's preference (bouletic modality; see von Stechow 2006) for the worlds in which the SOA expressed by the complement clause obtains (in the essence of Hintikka 1969).

This can be operationalized by assigning indexes to the world and time parameters of the matrix and embedded clauses (cf. Ramchand & Svenonius 2014). Drawing once again on Farkas (1992, p. 89-93), in both examples in (21) below, the matrix predicate contains a volitional state that is part of the actual world ( $w_R$ ) at time  $t'$  and introduces

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<sup>68</sup> In Serrano's terms, these situations are "possible in the actual world".

<sup>69</sup> Except for emotive factives, this interpretation is evidently not mandatory.

a set of future worlds ( $w_{d(x)}$ ) at  $t$  (which is posterior to  $t'$ ) to which the complement clause is anchored. As a bouletic modal expression, the world and time parameters of  $w_{d(x)}$  and the world in which the situation expressed by the complement instantiates must intersect (i.e., the subject must think it possible that his or her wish be fulfilled); furthermore, the situation must be presupposed to be not instantiated at  $\langle w_R, t \rangle$  (cf. McCawley 1981, p. 327-340; Meinunger 2017). This constitutes an important difference with respect to nominal complements, as the objects they denote may be instantiated in  $w_R$ .

(21)

- a. Quiero/espero [<sub>FinP</sub> que toquen música en la cafetería].
- b. Quiero/espero [<sub>FinP</sub> escuchar música en la cafetería].

(22)  $\langle w_R, t' \rangle < w_{d(x)}, t \rangle \mid t' > t$

Moving on to extensional complements, we part from the commonly held observation that declarative/assertive sentences introduce information to the common ground that the participants of the conversation are assumed to accept as true. The truth of the asserted proposition may only hold in  $w_R$  at the time of the conversation if it is presupposed, however.

Farkas (1992), in this sense, argues that strong assertives (Class F) evaluate their complements according to the world in which the reported assertion was made. This view, in fact, departs from other authors (e.g., Stalnaker 1978) in claiming that these predicates update the common ground of the reported conversation rather than the common ground of the conversation where the assertive predicate is uttered (contra Stalnaker 1978). The subject of the assertion is therefore assumed to accept the truth of the complement only with respect to the world in which the quoted report was made. The speaker, for his part, is not committed to the truth of the embedded clause, but only to the truth of the assertion act (i.e., the matrix predicate).

So, in the sentences in (23), headed by *decir* ‘to say’ and *reportar* ‘to report’, the propositional content of the embedded clauses is true of  $w_R$  with respect to the subject (i.e., Juan’s world at the time of his utterance), but not necessarily of  $w_R$  anchored to the speaker (Farkas 1990, p. 82). However, the speaker asserts the truth of Juan having

reported that he hears music in the cafeteria<sup>70</sup>. Note, however, that when the the subject of the matrix and the embedded clause is coreferential, it is odd – albeit not impossible– for him/her not to accept the truth of the complement. As suggested in the previous chapter, these facts contradict Siegel’s (2009) argument that the indicative in Romance carries a speaker commitment.

While this analysis explains main clauses, in complement clauses the indicative is rather concerned with the truth according to the embedded subject. Thus, according to Farkas, only clauses embedded under factive verbs carry a speaker commitment. Siegel’s proposal, therefore, must be reinterpreted as suggesting that the speaker commitment encoded by the infinitive extends only to what is directly asserted and excludes further embedded propositions.

Complements of definite strong assertives (Class A), by contrast, carry a presupposition of truthfulness that can be attributed to its epistemic modal base. In this sense, for a confession to be felicitous, its content must be true (or at least assumed to be so, i.e., presupposed). Additionally, the content of a confession updates not only the common ground of the reported conversation, but also the conversation in which the utterance occurs. Thus, (24) not only implies that Juan accepts the content of the confession as true, but also that it is true  $w_R$  at the time of the utterance.

(23)

- a. Juan dice/reporta [<sub>ForceP</sub> que tocan música en la cafetería] (pero sabe que no es así).  
‘Juan says/reports that they play music in the cafeteria (but he knows it is not so).’
- b. Juan dice/reporta [<sub>ForceP</sub> escuchar música en la cafetería] (#pero sabe que no es así).  
‘Juan says/reports listening to music in the cafeteria (#but he knows it is not so).’

(24)

- a. Juan confiesa [<sub>ForceP</sub> que tocan música en la cafetería] (\*pero sabe que no es así).

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<sup>70</sup> By virtue of the illocutionary force of his utterance.

‘Juan confesses that they play music in the cafeteria (\*but he knows it is not so).’

- b. Juan confiesa [<sub>ForceP</sub> escuchar música en la cafetería] (\*pero sabe que no es así).  
 ‘Juan confesses listening to music in the cafeteria (\*but he knows it is not so).’

A similar distinction is observed with cognitive predicates. Class B, which includes knowledge verbs, such as *saber* (‘to know’) and *descubrir* (‘to discover’), as well as perception verbs, e.g., *ver* (‘to see’), introduce a single world modelled after the reality according to the subject’s knowledge (Farkas 1992, p. 89), which constitutes an epistemically accessible world (Lewis 1986, p. 27). By contrast, Class E cognitive predicates like *creer* (‘to believe’) and *imaginar* (‘to imagine’) are modelled after the subject’s beliefs, i.e., a doxastically accessible world.

As in Class A, the predicates of Class B are semi-factive, and thus may presuppose the truth of their complement. The fact that this is not possible for belief predicates, which also anchor their complement to a single world, supports a relationship between epistemic modality and factivity. This relationship can be elucidated by inspecting the contrasts between epistemic and doxastic modality. Here, I will concentrate on two, namely (i) their relationship to truth and (ii) the accessibility of the information conveyed, i.e., the mode of knowing (see Chafe 1986).

With respect to the former property, knowledge is distinguished by the fact that it always expresses a truth, whereas this is not the case for belief. In this direction, Hintikka (1962) argues that by uttering “I know *p*” the speaker commits to the truth of *p* and denies that any further information can change his view (p. 18). Applied to our discussion, this entails that all definite predicates share the property of carrying a speaker commitment, which in epistemic predicates (Classes A and B) is mediated by their modality. In logical terms, knowledge is thus distinguished from belief in that it implies its complements, as expressed below (see Hintikka 1962).

(25)

- a.  $K_ap \rightarrow p = 1$
- b.  $B_ap \rightarrow p = 0$

From a PWS perspective, Lewis notes that the subject's  $w_R$  is always included in the set of epistemically accessible worlds since only truths can be known and the actual world is always true (1986, p. 27). Evidently, this need not be the case when it comes to doxastically accessible worlds, as  $w_R$  is excluded from false beliefs. Drawing on this, we can amend Farkas' analysis and propose that the truths in the worlds introduced by knowledge predicates ( $w_{epi(x)}$ ) are also true in the world in which the embedding clause is evaluated. Indeed, leaving the metaphysical aspect of the question aside<sup>71</sup>, what Juan reveals in (24)a and entertains in (26) is that  $p$  (i.e., that some people play music in the cafeteria) is true in  $w_{epi(x)}$ ; additionally, as knowledge implies commitment, whatever is anchored to  $w_{epi(x)}$  is also taken to be true in the world in which it is uttered, that is, in  $w_R$  (in normal conditions). Note, in this sense, that the truth of the complement clause in  $w_R$  can be cancelled by embedding the knowledge predicate in a non-factive assertion, as seen in (27). The complement of *saber* is still extensionally anchored and therefore takes indicative, yet its truth does not attain  $w_R$  as it is embedded under an assertive predicate, which concerns only the subject's  $w_R$ .

(26)

Juan sabe [que tocan música en la cafetería].

'Juan knows that someone plays music in the cafeteria.'

(27)

Juan dice [que sabe [que tocan música en la cafetería]].

'Juan says that he knows that someone plays music in the cafeteria.'

Moving on to the accessibility dimension, knowledge is further distinguished from belief in that it stands in a close relationship to direct evidentiality, in the sense that for something to be known, it must have been perceived firsthand or be verifiable through some type of evidence.

In philosophy, knowledge is traditionally defined as Justified True Belief.  $S$  knows  $p$  iff (i)  $p$  is true; (ii)  $S$  believes that  $p$ ; and (iii)  $S$  is justified in believing that

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<sup>71</sup> One can utter "I know  $p$ " even if  $p$  is false –and even if one knows that it is so. The meaning of the assertion is independent of one's mental states and of the actual state of affairs in the real world.



*p*. The latter point requires known propositions to be epistemically appropriate and thus sets knowledge apart from correct (or lucky) guesses. Belief, moreover, is not intrinsically connected to uncertainty; Stalnaker (2006), in this regard, calls belief “subjective certainty” (p. 179) as to believe *p* may imply believing that one knows *p*. However, belief is distinctively not justified (see Ichikawa 2017).

In linguistic typology, the relationship between knowledge and evidence (justification) is well known and has been widely documented, to the extent that they are often overlapped (e.g., Palmer 1986; Plungian 2001).

Cornillie (2009), however, disentangles and delimitates the two concepts and argues against a connection between epistemicity and specific modes of information (e.g., inference). From his stance epistemic modality is rather concerned with the speaker’s and hearer’s evaluation of the source of information, which does not necessarily result in a commitment to the truth of the complement. Instead, speaker commitment has to do with the reliability (trustworthiness) of the information. Shared information is notably more reliable than private or subjective information (p. 58).

If knowledge conveys a commitment, it is therefore due to the (assumed) reliability of the information rather than because of the qualities of epistemic modality. This confirms the intuition raised regarding the relationship between epistemicity and verifiability (in the form of sharedness of the information), which, conversely, is not a necessary condition for belief.

Belief, indeed, is subjective in the sense that it does not describe the real world. While beliefs can be shared, such situations are contingent. As a modal system, belief serves as a reference world for desires and intensions. Thus, the worlds in which someone’s desires are fulfilled are always anchored in his/her belief world (McCawley 1981; Lewis 1986).

Several sets of desires and intentions may be held simultaneously by any given person; however, only one set of beliefs can be maintained at a given time. Belief sides with knowledge with regards to this and to internal consistency; that it to say that no (rational) agent can accept to know or believe contradictory propositions

(McGrath & Devin 2024). However, between individuals, contradictory beliefs may coexist (as illustrated in (28)). Thus, supposing there are two individuals in a communicative context, say A and B, A can believe  $p$  (and utter so) and B can simultaneously believe  $\neg p$  (and utter so) without either of them having to change their opinion. In such case, their subjective vision of the world will remain the same in general terms. By contrast, if  $p$  is true in  $w_R$  and A knows  $p$  (and utters so), B cannot know  $\neg p$ . Consequently, claiming to know  $\neg p$  by B would be false and result in a flagrant contradiction within the conversation. In the end, either B will correct his assertion, or he will reveal that what he claims to know is but a belief.

(28)

- a.  $K_{ap} \wedge K_a \neg p = 0$
- b.  $B_{ap} \wedge B_a \neg p = 0$  intrapersonal / 1 interpersonal

Without digging deeper into the philosophical discussion, we can assume that clausal definiteness – correlated with extensionality and reference to a fact in Sheehen & Hinzen – is observed under epistemics as result of conditions (i) and (iii) of knowledge as Justified True Belief presented above, which belief does not meet.

Emotive factives share with epistemics the property of presupposing the truth of their complements. However, they are not anchored to a subject-dependent (individual) world, but directly to  $w_R$  (Farkas 1990, p. 101). This distinction becomes evident when comparing sentences with nested complement clauses, e.g., (27) and (29). As illustrated below, complements of factive predicates are presupposed even when embedded under indefinite assertive predicates, in contrast to what occurs with epistemics.

Indeed, in epistemic predicates, the presupposition is triggered by the modal operator, which must be anchored to  $w_R$  or another predicate that carries a presupposition in order to activate. Thus, in a sentence like (27), the presupposition fails to arise due to the epistemic clause being anchored to the subject of an indefinite predicate, which, as mentioned above, fails to update the set of true propositions at  $w_R$ . In (29), by contrast, this is not a problem given that the factive clause is anchored to  $w_R$  ‘by default’.

(29)

Juan dice [que detesta [que toquen música en la cafetería]].

Moreover, unlike Classes A and B, their complements take subjunctive. The latter fact – as discussed in 2.3. in the previous chapter – can be explained by the non-assertivity of the predicate (Giannakidou 2015), and by the fact that the complement is not at-issue, i.e., it is presented as known or shared information (Quer 2001; Siegel 2009).

Lastly, with respect to weak causatives, which in Serrano are described as the only class aside from full factives that allow a definite article and denote “possible situations that normally occur in the world” (2015, p. 256), I will argue that they can be either anchored extensionally, in which case they are like definite predicates in the sense that they are evaluated with respect to someone’s reality, or they are anchored intensionally, i.e., on a set of alternative worlds.

For instance, (30) can express either that Juan successfully avoids listening to music in the cafeteria, or that he tries not to do it but is unsuccessful in his attempts. In the former case, the predicate behaves more like a true causative, while in the latter it is closer to a directive. In either case, Juan has influence over the outcome.

(30)

- a. Juan evita [que toquen música en la cafetería].  
‘Juan prevents music from being played in the cafeteria.’
- b. Juan evita [escuchar música en la cafetería].  
‘Juan avoids listening to music in the cafeteria.’

To summarize, the argument I have advanced demonstrates, first, that there is no requirement for complements of intensional predicate to denote properties, and secondly, that insofar as intensionality in the clausal domain is concerned with a modal-mediated reference to a set of worlds –against reference to a single world in extensional predicates– intensional predicates select complements that denote pluralities of situations in possible worlds. Thirdly, the analysis of Sheehan & Hinzen’s predicate classification reveals an intriguing correlation between definiteness, extensional anchoring, and modality (synthesized in Table 7). On the one hand, all definite predicates link their complements to  $w_R$  in some way, either by

establishing a direct anchor, or by virtue of the epistemic nature of the worlds they introduce, which, as discussed above, contain only true propositions. Indefinite predicates, on the other hand, may establish an extensional or intensional anchor, yet they never link the truth (or instantiation) of their complements to the  $w_R$  in which the conversation unfolds; in other words, they are true in subjective worlds. Definite embedded clauses, therefore, exhibit extensional anchoring (evaluation with respect to a single world) and, in addition to that, extensional reference (i.e., their referent is in the actual world).

Table 7: Reinterpretation of Sheehan & Hinzen’s classification

	Definite	Indefinite
Assertive	Anchoring: <ul style="list-style-type: none"> <li>• Extensional</li> <li>• Epistemically accessible world</li> </ul> Presupposition <sup>72</sup> : Yes	Anchoring: <ul style="list-style-type: none"> <li>• Extensional</li> <li>• Non-modal world</li> </ul> Presupposition: No
Weakly assertive	Anchoring: <ul style="list-style-type: none"> <li>• Extensional</li> <li>• Epistemically accessible world</li> </ul> Presupposition: Yes	Anchoring: <ul style="list-style-type: none"> <li>• Extensional</li> <li>• Doxastically accessible world</li> </ul> Presupposition: No
Nonassertive	Anchoring: <ul style="list-style-type: none"> <li>• To <math>w_R</math></li> <li>• Non-modal</li> </ul> Presupposition: Yes	Anchoring: <ul style="list-style-type: none"> <li>• Intensional</li> <li>• Different modalities</li> </ul> Presupposition: No

By this I do not imply, however, that embedded clauses are unable to denote properties. For instance, the complement clauses in the two examples in (31) are evidently property-denoting. This meaning, however, arises compositionally and is associated with the presence of a non-referential and non-argumental NP. Furthermore, it must be noted that such interpretation is only available to intensionally anchored predicates. Under a factive predicate, like (32), the complement denotes not a property but the instantiation of such property in  $w_R$ , i.e., a SOA. Note however, that the property-denotation of these clauses correlates with their being copulas.

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<sup>72</sup> Truth of the complement presupposed in  $w_R$ .

- (31) Juan quiere [ser pelirrojo].  
 ‘Juan wants to be redhaired.’

- (32) Juan lamenta [ser pelirrojo].  
 ‘Juan resents being redhaired.’

Therefore, from this approach, part of the denotation is determined by the matrix predicate instead of Lim. What must be explained now is how is the definite article is licensed and what role it plays.

#### 4.1.2.3. D in (Non-Generic) Complement Clauses

The essence of the claim I will now put forward is that, as it occurs with nominals, definiteness and referentiality of complement clauses is hosted in DP. So, to draw yet another parallel between the nominal and clausal domains, I will propose that, as assumed for argumental all other noun phrases in Spanish, all complement clauses project a D layer, irrespective of whether the head is phonologically realized. This idea is based on the principles that arguments in Spanish must be Determiner Phrases (DPs) and that complement clauses function uniformly as arguments of predicates.

It is important to clarify, however, that this does not contradict the claim that referentiality is influenced by the semantics of the matrix clause. In fact, despite the clear correspondence between syntactic weight and extensionality, the projection of D is not sufficient to render expressions referential. Much like complement BNs are not uniformly property-denoting, so are definite DPs not uniformly referential, as illustrated by 0 below. Being non-referential, it can be said that the “referent” of the definite article is “lighter” than that of a DP.

- (33) Levanten la mano si tienen hambre.  
 Lit. ‘raise the hand if you are hungry.’

Additionally, I will claim that the semantic contrasts in the denotation of complement clauses is ultimately determined by the ontological properties of their referents (i.e., propositions, situations), which are syntactically encoded by VFPs. As

will be seen, this preserves the notion that the presence of the definite article is semantically and not syntactically determined.

Thus, even though on the syntactic plane this proposal echoes works on English cited in the previous chapter that assume a generalized D layer (Davies & Dubinsky 1999; Takahashi 2010), the semantic component, which adopts a PWS/modal view, is crucial for the description of the role of D and the distribution of the definite article.

Two crucial differences with respect to English must be taken into account, however. First, as per Chierchia's Nominal Mapping Parameter, English Ns are argumental. Factive predicates in this language are therefore unique in disallowing BN internal arguments. In this sense, they exhibit a behavior comparable to that of Romance predicates, which require D by default. The advantage of Shim & Ihsane's proposal discussed in 3.3.2 is precisely that it accounts for this distinction. Factive complement clauses are *dP* because their nominal counterparts must be DPs.

Secondly, unlike in English, all inflected complement clauses in Spanish contain an overt complementizer. They differ only the projection of Force and the presence of the definite article. In both languages factive complements are distinguished by the overt projection of an additional functional layer, namely an obligatory C in English and an optional D in Spanish.

Based on this, I will assume two sole functional slots on top of argument FinPs; ForceP, which encodes assertion, and DP, which hosts information connected to the definiteness of the clause. Furthermore, I will propose a phonologically null variable in DP, that, in the essence of Campbell (1996) and Haegeman & Ürögdi (2010), serves as a bridge linking the semantic properties of the predicate with the denotation of the complement clause<sup>73</sup>.

In essence, this implies that referentiality arises from the presence of an operator chain between the specifier of DP/CP and a referential variable associated with a lexical head. This, indeed, is in many respects similar to the analysis of noun-headed

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<sup>73</sup> See page 70 of this work.

DPs (N-DPs) found in Borer (2005). Accordingly, D hosts open values that are assigned range “by appropriate members of the functional lexicon.” This means that the functional structure of a definite expression, e.g., *the cat*, consists of open value  $\langle e \rangle$  and the definite article, which carries a referential index. *The* assigns range to  $\langle e \rangle$  by binding it to its index. The referent of *the*, in turn, is to be found in the discourse<sup>74</sup> (see Figure 7). From Chierchia’s (and Espinal’s) perspective, this entails splitting  $\iota$  from the article.

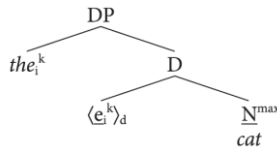


Figure 9: Borer's DP structure (2005, p. 69)

In clausal DPs the open value shall encode information related to the type of anchoring of the clause, which, as I have discussed, constitutes ‘definiteness’ in the clausal domain.

With predicates of propositional attitude, the open value denotes a proposition accessible in an epistemic or doxastic world anchored to the subject. In both cases are complements extensionally anchored, yet only epistemics carry a presupposition of truth in  $w_R$ , which is responsible for their definiteness. With intensional predicates, the open value denotes a set of situations contained in a set of modal worlds (e.g., bouletically accessible worlds in volitional predicates). With pure assertives, the operator specifies a proposition that is true or false in  $w_R$  according to the subject<sup>75</sup>.

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<sup>74</sup> Borer further adds: “We note here that in the case of  $\langle e \rangle_d$ , the open value is in effect associated with a logical variable, assigned reference by a discourse antecedent, through the mediation of *the*. In turn, the assignment of range by *the*, a discourse anaphor, to  $\langle e \rangle_d$  is a special case of numerous possible value assignments to  $\langle e \rangle_d$ , all having in common the eventual licensing of the mapping of predicates to objects and/or quantifiers (where superscripting is used for range assignment, subscripts indicate binding, and underlining marks predication relations [...])” (p. 69)

<sup>75</sup> In cases in which the proposition is interpreted as a fact, the subject argument is erased, and it is instead anchored to a non-subjective  $w_R$

Lastly, in factives, the open value denotes a situation that is (presupposed to be) instantiated in  $w_R$ .

(34)

- a. Juan<sub>i</sub> confiesa [<sub>DP</sub>  $\emptyset$  [<sub>D</sub>  $\emptyset$  =  $p \in w_{epi}(J_i)$  [<sub>ForceP</sub> [<sub>FinP</sub> que tocan música en la cafetería]]]].
- b. Juan<sub>i</sub> descubre [<sub>DP</sub>  $\emptyset$  [<sub>D</sub>  $\emptyset$  =  $p \in w_{epi}(J_i)$  [<sub>ForceP</sub> [<sub>FinP</sub> que tocan música en la cafetería]]]].
- c. Juan<sub>i</sub> detesta [<sub>DP</sub>  $\emptyset/el$  [<sub>D</sub>  $\emptyset$  =  $s \in w_R$  [<sub>FinP</sub> que toquen música en la cafetería]]]].
- d. Juan<sub>i</sub> quiere [<sub>DP</sub>  $\emptyset$  [<sub>D</sub>  $\emptyset$  =  $S \subseteq W_{bou}(J_i)$  [<sub>FinP</sub> que toquen música en la cafetería]]]].
- e. Juan<sub>i</sub> cree [<sub>DP</sub>  $\emptyset$  [<sub>D</sub>  $\emptyset$  =  $p \in w_{dox}(J_i)$  [<sub>ForceP</sub> [<sub>FinP</sub> que tocan música en la cafetería]]]].
- f. Juan<sub>i</sub> dice [<sub>DP</sub>  $\emptyset$  [<sub>D</sub>  $\emptyset$  =  $p \in w_R(J_i)$  [<sub>ForceP</sub> [<sub>FinP</sub> que tocan música en la cafetería]]]].

As can be observed, the presence of the definite article is restricted to embedded clauses anchored to the real world, i.e., factive predicates and, to a very limited extent, assertive predicates (provided the communicated clause denotes a fact). As I am assuming that DP-NIs in control constructions have the same semantics as *el que*-clauses, this analysis can be in principle applied to the latter structures without further modification.

This analysis preserves the possibility for determinerless complement clauses embedded under factive predicates to denote sets of possible situations, as argued by Serrano. In these cases, the range of the null determiner is a set of situations in possible worlds, as illustrated in (35). There the complement of the verb is anchored to  $w_R$  by virtue of its factivity. However, the conditional clause denotes a set of situations and not a single situation. The definiteness of the clause, nevertheless, can be confirmed by applying the downward entailment test, introduced in p. 81. (35)a does not entail (35)b.



(35)

- a. Al residente le molesta que Rubén cante esa canción (= si Rubén canta esa canción, el residente se molesta).  
[<sub>DP</sub> ∅ [<sub>D</sub> ∅ = S ⊆ W [<sub>FinP</sub> que Rubén cante esa canción]]].
- b. Al residente le molesta que Rubén cante (= si Rubén canta, el residente se molesta.)

This analysis echoes to some extent Rosemeyer's (2012) proposal, according to which the definite article anchors the infinitive clause. As we can see, however, this is a function of D as a category and not only of the definite article. What is more, the presence of D can be attributed to the argumenthood of the constituent, much as it occurs in the case of N-DPs. Unlike in the latter, however, the definite article in *el/que*-clauses and NICs appear to be fully determined by the matrix clause, as its omission in environments that license it does not result in ungrammaticality; by contrast, its presence in environments that do not allow it (e.g., under modal predicates), do result in ungrammaticality.

As per the discussion in 3.3.4.1, this analysis can also be further applied to Greek, assuming Roussou's description. Notably, with coreferential subjunctive embedded clauses, the definite article is only allowed with factive complements, which mirrors the distribution observed in Spanish. See (36)-(39). A thorough application of this analysis to Greek is a task for further research.

(36)

Me stenaxorese [<sub>DP</sub> to [<sub>D</sub> s ∈ W<sub>R</sub> [<sub>CP</sub> otí efighe]]].  
'That he left upset me.'

(37)

O Yanis elpizi/theli [<sub>DP</sub> (\*to) [<sub>D</sub> S ⊆ W<sub>bou</sub>(Y<sub>i</sub>) [<sub>FinP</sub> na figi avrio]]].  
'Yanis hopes/wants to leave tomorrow.'

(38)

O Yanis kseri [<sub>DP</sub> (\*to) [<sub>D</sub> p ∈ W<sub>epi</sub>(Y<sub>i</sub>) [<sub>ForceP</sub> [<sub>FinP</sub> na kolimbai]]]].  
'Yanis knows how to swim.'

(39)

Me enokhli [<sub>DP</sub> (to) [<sub>D</sub> na [<sub>FinP</sub> aryisou]]].  
'It annoys me to arrive late.'

Back to Spanish, this proposal leaves two important questions unresolved. In this first place, it excludes sentences containing generic DP-NIs, like (40) below, which

do not refer to token situations (neither single tokens nor sets thereof) instantiated in  $w_R$  but rather kinds of situation –provisionally analyzed in the previous chapter as lacking Lim.

- (40) [Gn<sub>k</sub>] Para María<sub>i</sub>, [DP el [FinP tener PRO<sub>k</sub> una casa propia antes de los 30]]]  
significa una vida con menos preocupaciones.

‘For Maria, owning a house before turning 30 means a life with less worries.’

Secondly, while it explains when and how the definite article arises, it does provide any additional information as to the factors that motivate its occurrence (and not only license it).

I will now discuss the properties of the definite article in generic DP-NIs. After that, I will attempt to synthesize the function of the definite article in NICs as a whole and discuss its arbitrariness.

## 4.2. Genericity

Definite expressions and kinds are conceptually related. In particular, kinds have been noted to share crucial semantic qualities with proper names as they are both referential and denote unique entities, which in the case of proper names<sup>76</sup> corresponds to individuals and in the case of kinds concerns groups (e.g., Carlson 1977; Heyer 1985; Davidse 1991; Carlson et al. 1995).

I will now discuss in which sense and to what extent DP-NIs can be claimed to denote kinds, and whether the definite article plays the same role as in definite kind DPs.

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<sup>76</sup> Additionally, some kinds are proper names, as noted below (Carlson et al 1995, p. 65).

- 1) *Homo sapiens* lived in Australia for at least 40,000 years.
- 2) El hombre/humano vivió en Australia por al menos 40 mil años.

### 4.2.1. Nominal and Clausal Genericity

Carlson et al. (1995) distinguish between two different but closely related notions of ‘genericity’. The first one applies to nominal expressions and consists essentially in reference to a kind. As seen below, kinds can be expressed via a definite DP or a BN in English, whereas in Spanish (and Romance languages in general), canonical kinds correspond to definite singular DPs (Chierchia 1998; Borik & Espinal 2014) and can only be conveyed by bare plurals in a few contexts (Chierchia 1998; Dobrovie-Sorin 2009).

- (41)
- a. The blue whale is the largest mammal.
  - b. Whales are the largest mammal.
  - c. La ballena azul es el mamífero más grande.
- (42)
- a. Zebra sharks can reproduce asexually.
  - b. \*(Los) tiburones cebrá pueden reproducirse asexualmente.
- (43)
- a. Students must write a report on invertebrates.
  - b. \*(Los) estudiantes deben escribir un reporte sobre invertebrados.

Kinds are closely related to properties and can be seen as containing essentially the same information. Along these lines, Chierchia (1998) describes properties as “something that (at a world) is true of false of individuals”, whereas kinds are “something that at a world has concrete [...] manifestations” (p. 352). Kinds, in this sense, are individuals that represent concrete manifestations of bundles of properties in a given world. As also noted by Chierchia, kinds are “functions from worlds (or situations) into pluralities, the sum of all instances of a kind” (p. 349).

The second notion of genericity concerns the clausal domain and is found in sentences that “report a kind of general property” or “a regularity which summarizes groups” (p. 2). Just like in generic nominals one abstracts from particular objects, generic sentences express generalizations of particular events and facts. However, although generic nominals unequivocally denote kinds – which encompasses all the elements of the set that instantiate the properties associated with the relevant kind (see Chierchia 1998) – generic sentences may allow exceptions. Thus, although (44)

denotes a generic event, it remains true even if John does not always smoke after dinner.

(44)

John (usually) smokes a cigar after dinner.

(adapted from Carlson et al. 1995, p. 3)

Still, we find universally quantified predicates that are true for every situation or “for every object of a certain sort” (p. 4). Aside from sentences that involve an overt quantifier (such as *always*) (45), this is observed in some kind-level predicates, e.g., *to be invented*, as well as in predicates that express “normative” generalizations (Dahl 1975), as in (46). In the latter two types of sentences, definite singular expressions consistently refer to kinds.

(45)

- a. John always smokes after dinner.
- b. Juan siempre fuma después de cenar.

(46)

- a. The airplane was invented in 1903.
- b. El avión se inventó en 1903.

(47)

- a. The madrigal is polyphonic.

(Carlson et al. 1995, p. 13)

- b. El madrigal es polifónico.

Ambiguity between specific and generic interpretations arises in definite DPs in individual-level predicates, which allow both kind- ( $\langle e^k \rangle$ ) and individual-denoting ( $\langle e^o \rangle$ ) expressions, in contrast with stage-level predicates, which unambiguously select for individuals. This is observed, for instance, in the examples below, where *el gato* ‘the cat’ may refer to a single cat or to the species *Felis catus*.

(48)

- a. El gato<sub>KIND</sub> tiene 30 dientes.  
‘Cats have 30 teeth.’
- b. El gato<sub>KIND</sub> come carne.  
‘Cats eat meat.’

For Carlson et al., this evidences a dual function of nouns. Namely, on the one hand, they designate a kind, and on the other, they express a set of objects associated with this kind. Following Carlson (1977), both denotations are argued to be connected

via the realization relation  $R$ , which essentially asserts that an individual is a specimen of a kind, as can be seen below.

- (49)
- a.  $[[cat]] := \text{Felis catus}$
  - b.  $[[cat]] := \lambda x[R(x, \text{Felis catus})]$

Borik & Espinal (2012) follow this view and essentially assume a kind-denotation for Ns in definite-referring DPs. Definite individual DPs, on the other hand, project Number and thus express a relation between an individual.

- (50)
- a.  $\iota x^o. \exists x^k [\text{gato}(x^k) \ \& \ R^{77}(x^o, x^k)]$  *definite object/individual*
  - b.  $\iota x^k [\text{gato}(x^k)]$  *definite kind*.

Indefinite expressions, by contrast, do not consistently denote kinds in predicates that allow for generic interpretations (Carlson et al. 1995, p. 15). So, we observe in the data below that only the DP in 39a, which occurs in a predicate that requires a kind-denoting expression, denotes a kind – more specifically, a subkind. Meanwhile, (51)a and (51)b must refer to a nonspecific individual madrigal and cat, respectively; if the predicate is interpreted as characterizing (i.e., generic), the subject is also construed generically, and so the predicate applies, in principle, for any individual of its kind.

- (51)
- a. Un avión se inventó en 1903.  
'An airplane was invented in 1903.'
  - b. Un madrigal es polifónico.  
'A madrigal is polyphonic.'
  - c. Un gato tiene 30 dientes.  
'A cat has 30 teeth.'

In Spanish, Borik & Espinal (2012) further observe a similar situation with plural definites, which are essentially “generic” with kind- and individual-level predicates in the sense that they do not refer to a specific set of individuals. However, they do not uniformly refer to kinds like singular definite expressions do. In fact, the only

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<sup>77</sup> Operator  $R$  relates kinds to individuals.

contexts in which these DPs can refer to kinds are in kind-level predicates like (52), which, as seen above, require a kind-denoting expression. In other generic contexts, e.g., sentences like (53), they denote instead “the maximal sum of contextually determined individuals specified in the domain of discourse.” (p. 49).

As noted in 4.1.1, the presence of Number enables the reference to tokens. Generic definite plurals further contain an intensional operator ( $\hat{\phantom{x}}$ ), which abstract the interpretation of the DP over particular worlds or situations – typically  $w_R$  – in contrast with specific definite plurals, which are fully extensional.

- (52)  
En India se están extinguiendo los tigres.<sup>78</sup>  
‘Tigers are becoming extinct in India.’

- (53)  
Los gatos tienen 30 dientes.  
 $\hat{\iota}x^o \exists x^k [\text{cat}(x^k) \ \& \ R^{79}(x^o, x^k) \ \& \ x^o \in \text{Sum}] \ \& \ \text{has 30 teeth}(x^o)$

Chierchia (1998) proposes an intensional operator for all kind-level predicates, which, accordingly, express properties “concerning the distribution of a plurality or totality of things across worlds and times” (p. 382). Indeed, individual-level predicates, e.g. (54), apply to individuals that represent kinds (via  $R$ ). By contrast, sentences like (55) are not true for each of the members that instantiate the kind but only apply to corresponding the kind as an entity.

- (54) The tiger roars.  
Gn roar( $\iota x^o. \exists x^k [\text{tiger}(x^k) \ \& \ R(x^o, x^k)]$ )<sup>80</sup>  
(55) The tiger is rare.  
Gn rare( $\hat{\iota}x^k [\text{tiger}(x^k)]$ )

All in all, as can be observed, generic-deferring DPs are restricted to generic predicates. As advanced in the previous chapter, in the formal semantic tradition (since Carlson 1977) this is accounted for by positing a generic operator that ranges

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<sup>78</sup> Dobrovie-Sorin & Laca 2003, p. 245.

<sup>79</sup> Operator  $R$  relates kinds to individuals.

<sup>80</sup> Carlson et al.’s structure is employed; Chierchia’s is essentially equivalent.

both over the predicate and its arguments. In its simplest form, it can be expressed as a function as in (56), applied to (48)a.

- (56)  
Gn (tener 30 dientes (el gato)).

Building on this proposal, Carlson et al. (1995) further propose that all generic sentences contain a restrictor with a situation variable that pragmatically determines the situations (or worlds) in which the generalization holds (cf. Kleiber 1985; Krifka 1987), as shown in (57).

As evidenced by the examples below, such restrictor is overtly expressed in conditional sentences, where the situation of the antecedent restricts the situations in which the generalization holds. Similarly, in non-conditional sentences like (59)-(60) the subject acts as a restrictor. Accordingly, in (59) the generalization of meowing situations is restricted to every member of the maximal sum of discourse-definite cats<sup>81</sup>. The situation variable, in any case, is to be interpreted as expressing roughly “normal” situations. Some characterizations, however, do not involve a situational variable and express instead generalizations of stative properties (also known as dispositional sentences), e.g., (60).

- (57)  
Gn [...s...;...] (Restrictor [...s...]; Matrix [...s...])
- (58)  
Los gatos tienen hambre cuando maúllan.  
Gn [x;s] ( $\wedge x^o \exists x^k [\text{cat}(x^k) \ \& \ R(x^o, x^k) \ \& \ x^o \in \text{Sum}] \ \& \ \text{meow}(x) \text{ in } s;$   
hungry(x) in s)
- (59)  
Los gatos maúllan.  
Gn [x;s] ( $\wedge x^o \exists x^k [\text{cat}(x^k) \ \& \ R(x^o, x^k) \ \& \ x^o \in \text{Sum}] \ \& \ \text{meow}(x) \text{ in } s)$
- (60)  
Los gatos son peludos.  
Gn [x;] ( $\wedge x^o \exists x^k [\text{cat}(x^k) \ \& \ R(x^o, x^k) \ \& \ x^o \in \text{Sum}] \ \& \ \text{furry}(x)$ )

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<sup>81</sup> The restrictor can consist of situations that contain the subject and are “normal” with respect to meowing (cf. Carlson et al. 1995: 31).

The pragmatic character of the restrictor shows once again that, except for a few cases, generic sentences are not universally quantified. Thus, in the examples above, the situations and entities bound by the operator are rather hard to delimit. Indeed, it is not true that cats are without exception hungry whenever they meow or that cats are always meowing or that all cats, without exception, are furry.

Several proposals have attempted to subsume the semantics of Gn under a single semantic property, such as prototypicality (e.g., Heyer 1985; 1990) or stereotypicality (e.g., Declerck 1986). Here, I will only discuss and advocate for an account according to which Gn is essentially a modal operator (e.g., Dahl 1975; Heim 1982; Chierchia 1998) and generic sentences are intensional.

Essentially, as assumed by Heim (1982), it is claimed that dispositional sentences (like (60)) can be reinterpreted as lawlike conditional structures. A generalization about cats such as “all cats are furry” would then correspond to the conditional “if x is a cat, it is furry”. Conditional sentences, in turn, are characterized by possessing a modal base ( $B_w$ ), which can be understood as a function that maps a possible world (typically the real world) onto a set of possible worlds. In addition to this modal base, an ordering source ( $\leq$ ) provides an ordering of possible worlds according to their ‘normality’. Applied to Carlson et al.’s model, this entails a relationship between Gn and the predicate as expressed in (61).

- (61)  $Gn[x_1, \dots, x_i; y_1, \dots, y_j]$ (Restrictor; Matrix) is true in  $w$  relative to a modal base  $B_w$  and an ordering source  $\leq_w$  iff:  
 For every  $x_1$  and every  $w' \in B_w$  such that Restrictor $[x_1, \dots, x_i]$  is true in  $w'$ , there is a world  $w''$  in  $B_w$  such that  $w'' \leq_w w'$ , and for every world  $w''' \leq_w w''$ ,  $\exists y_1, \dots, y_j$  Matrix $[\{x_i\}, y_1, \dots, y_j]$  is true in  $w'''$ .

From this perspective, the sentence in (60) then expresses that all entities that are cats in the worlds of the modal base are such that, in every world which is most normal according to the ordering source, they will be furry. An advantage of this representation is that it avoids over- and undergeneralizations, as it does not imply that all cats are furry, but it simply states that worlds in which there are cats without fur are less normal than worlds in which all cats have fur (cf. Carlson et al. 1995, p. 52-53).



As noted above, Chierchia (1998) regards singular (definite) kinds, which his view are always mass descriptions, as functions from worlds into a collective or totality. This means that the subject of (45), expressed as below, is a function from worlds (that outreach the real world) into a collective of tigers, that is, it denotes the collective of tigers in each world in the domain set.

$$(62) \quad \text{The tiger} = \lambda w [g(\iota \text{ MASS}(\text{tiger}_w))]^{82}$$

Another convenient property of this approach is that by regarding generic sentences as intensional context the existence of the entities involved (as seen in volitional sentences) is not presupposed, which proves useful to account for DP-NIs in generic sentences, as they typically express situations whose instantiation in  $w_R$  is uncertain.

Further nuances regarding the objects generalized can also be incorporated into this analysis. For instance, the contrast between generalizations like (60) and (63) can be understood by appealing to their modal bases. Thus, whereas the former expresses epistemic necessity, which requires that the proposition be true in all the worlds in the ordering source, the latter takes a prototypical base that allows exceptions in the real world<sup>83</sup>.

$$(63) \quad \text{Two plus two equals four.}$$

Having provided a general sketch on genericity, let us now center our attention on the denotation of generic DP-NIs.

#### 4.2.2. Generic DP-NIs as Definite Kinds

Drawing on the discussion above, we can see that generic DP-NIs bear both nominal and clausal genericity. As generic clauses, they convey generalizations over events in a world, i.e., situations, while as generic nominals, they denote abstractions

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<sup>82</sup>  $g$  is a generic operator.

<sup>83</sup> Kratzer (1981) talks of stereotypical modal bases.

of things that have concrete manifestations at some world. In the latter sense, we find that generic DP-NIs typically occur in individual- and kind-level predicates, much like kind-denoting nouns. Moreover, the fact that they cannot occur with truth value predicates (as seen in the previous chapter) is evidence that they are not predicates, i.e., things that are true at some world.

(64)

- a. El tener PRO una casa propia antes de los 30 es sorprendente.  
'Owning a house before turning 30 is incredible.'
- b. Para María*i*, el tener PRO una casa propia antes de los 30 significa una vida con menos preocupaciones.  
'For Maria, owning a house before turning 30 means a life with less worries.'

(65)

Durante este (sic.) temporada de fin de año y que está por llegar la Navidad, [es común el utilizar papel y diferentes materiales para la envoltura de regalos o presentes]. [CdE]

Following Moltmann (2006), I have provisionally claimed that the generic interpretation of these DP-NIs results from the binding of the arbitrary PRO by Gn. A sentence such as (64)a hence describes a generalization about a situation, much like the sentences in (48) express generalizations about cats. In both cases the subject is generically interpreted, and so *el gato* in the latter refers to a kind (or species), whereas in the former the SI expresses the kind situation of owning a home before turning 30.

Although Serrano focuses on *el que*-clauses that, by containing an overt referential subject, denote specific situations (e.g., (66)), we observe that the introduction of a generic subject and the presence of an overt quantifier can bring the meaning of these constructions close to that expressed by generic DP-NIs. As evidenced below, however, in the latter case (67)a the subject clause is only generic to the extent it expresses a habit. By contrast, the indefiniteness of the embedded subject provides the *el que*-clause in (67) with a similar genericity to that borne by the SI in (64)a. In this regard, we further observe a contrast in the aspect associated with the present tense in both sentences, which in (67) is habitual, whereas in (67)a is atemporal.

(66)

El que María tenga una casa propia antes de los 30 es sorprendente.  
'That María has a house before turning 30 is incredible.'

(67)

- a. El que alguien tenga una casa propia antes de los 30 es sorprendente.  
'That anyone would have a house before turning 30 is incredible.'
- b. El que María siempre tenga que trabajar hasta tarde es sorprendente.  
'That María always has to work until late is incredible.'

Despite being semantically similar, (64)a and (67)a are not formally identical. Crucially, the subject of the latter is bound by an existential quantifier, which is in turn bound by the generic operator, while the former lacks quantification altogether.

Lacking tense and subject, infinitive clauses are inherently generic and express the basic skeleton of an event or state. Their underspecified nature leaves them at the complete mercy of the matrix predicate for their instantiation. When they surface as arguments in a generic sentence, whatever is predicated of them holds true for every instance of the situation they describe in the same fashion as when one predicates something of a kind of object.

The presence of a definite article in DP-NIs further supports a parallel with kind-denoting nominals, and more concretely, with definite kind DPs. As we will see next, the relationship between generic clausal nominals and kind expressions has been previously noticed.

#### 4.2.2.1. Generic Clausal Nominals

The association between subjectless clausal nominals and referring to a kind has been previously explored, e.g., in Heyvaert's (2008) investigation on English gerundives<sup>84</sup>. Essentially, she claims that the presence of a subject is responsible for the reference of the nominal in terms of genericity. Subjectless gerundives, like 0, are generic in the sense that they express a process type, (cf. Schachter 1976), akin to the N-DP illustrated in (69), which denotes a kind of object (or kind of entity).

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<sup>84</sup> Heyvaert deals only with PRO-ing (subject) and POSS-ing (subjectless) constructions in terms of Grimm & McNally's (2015) typology.

(68)

[Going to the beach] is enjoyable. (Schachter 1976, p. 215)

(69)

Milk is enjoyable.

Drawing on Davidse (1999, p. 211), Heyvaert further draws a semantic parallel with kind-denoting BNs, by noting that in the same way that they are definite to the extent they denote a unique kind (cf. Chierchia 1998), so are generic gerundives definite by expressing “types of activities and conditions that are unique among a series of types of activities and conditions one can engage in.”

Subjectless gerundives in English are conceptually and paradigmatically associated with uncountable<sup>85</sup> kind nouns in that while the latter denote spatially unbounded entities, gerunds characteristically express temporally unbounded abstract activities that are not instantiated at any time nor are associated to any participant. As evidenced by the examples below, one can easily substitute one for the other.

(70)

- a. Do you like *caviar*? I’ve never tasted it.
- b. Do you like *driving fast cars*? No, I hate it.

(Quirk 1985, p. 353; Heyvaert p. 60)

(71)

I think the key is going to be the cost of health care, in *controlling the cost of health care*. (CB) (= cost control) (Heyvaert 2008: 61)

These characteristics are consistent with the fact that, unlike count kind-denoting nouns, which may surface as BPs or (definite or indefinite) DPs, generic gerundives are always determinerless – much like mass nouns. Gerundives, however, may combine with a possessive determiner, in which case its referent occupies the external argument of the verb. Except for cases like (70)b where genericity is understood as habituality, gerundives with an identifiable subject designate an instantiation of the corresponding process type. Thus, in the example below, the subject expresses the

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<sup>85</sup> In detailed classifications, this term encompasses both mass and abstract nouns.

instantiation of the process type *playing the piano* by Kim at a time *t* that precedes the utterance time.

Gerundives associated with these semantics need not express their subject via a possessive but may also contain a PRO with an anaphorical or discursively determined referent. In either case, the subject is not bound by Gn.

(72) [Kim's playing the piano with such passion] surprised me.

From a formal approach, Grimm & McNally (2015) provide a similar description according to which subjectless gerundives are essentially kind-denoting unless they combine with a token-selecting predicate or they project D, in which case they designate an instantiated event. As represented in the structure in 60, a generic gerundive is associated with an event<sup>86</sup> kind ( $e_k$ ) nominalized by the predicate-selecting up ( $^{\text{I}}$ ) operator (Chierchia 1998).

(73) Singing the song is a duty.  
 $\text{duty}({}^{\text{I}}(\lambda e_k[[{}^{\text{U}}\text{singing}(e_k)\wedge\text{Theme}(s,e_k)\wedge\text{Agent}(y_i,e_k)]])$

When D is projected, the referent of the possessive saturates one of the participant variables. Possessives, moreover, carry an existential import (Peters & Westerstahl 2013), which presupposes the existence of their referents. This, according to Grimm & McNally (2015, p. 93) facilitates the inference of an individual event associated to the relevant kind.

On this point, both Heyvaert and Grimm & McNally observe that only gerundives with identifiable subjects can combine with factive predicates. The latter argue that this is restricted structures with possessive subjects, as noted by the contrast below, where only (74) presupposes that children were singing.

- (74)
- a. No child's singing (of) the song upset us.
  - b. No child singing the song upset us.

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<sup>86</sup> Following Davidson (1967).

Subjectless gerundives, by contrast, are essentially non-factive (see also Noonan 1985), which is expected given the relationship between instantiation and factivity. Indeed, as evidenced by the data below, we observe that these contexts disallow the generic interpretation of PRO, which must be either controlled or anaphorically/exophorically interpreted. The same can be said for Spanish in the case of infinitivals.

- (75)  
 PRO<sub>i</sub>/\*<sub>k</sub> playing the piano with such passion surprised me<sub>i</sub>.
- (76)  
 My math teacher was very patient when it came to explaining things.  
 However, PRO<sub>i</sub>=the students not paying attention really upset her.
- (77)  
 (El) tocar<sub>i</sub>/\*<sub>k</sub> el piano me<sub>i</sub> sorprendió.  
 ‘Playing the piano surprised me.’
- (78)  
 (El) no poner PRO<sub>i</sub>=los estudiantes atención molestaba al maestro.  
 ‘Not paying attention bothered the teacher.’

This evidences a distinction between generic and non-generic evaluative predicates that can be conveniently accounted for by the modal analysis of generic sentences advanced earlier. As observed in 4.1.2.2, the factivity of the latter is associated with the anchoring of their complements to  $w_R$  –a property that plays a role in the licensing of the definite article in Spanish. In contrast, in generic evaluations, the modal base creates an intensional context that is incompatible with a factive interpretation of the subject, as the evaluation of the proposition is not made with respect to  $w_R$  only but a plurality of worlds.

The relationship between the lack of subject and the denotation of a type of process observed in generic gerundives can also be claimed for generic DP-NIs in Spanish. Indeed, the lack of subject inherent to non-control infinitive clauses explains the contrast observed with respect to generic *el que*-clauses, like (67)a, whose subject is ultimately bound by a quantifier. Subjectless infinitive clauses, by contrast, are better expressed by an anonymous function, that is, not bound to an identifier or, in this case, to any referent. Following this, the infinitive clause in (64)a can be assigned the structure below, which essentially expresses an abstraction over an argument  $x$

(the subject) that returns true if there is an argument  $y$  such that it is a house and it is owned by  $x$  by the age of 30. When inserted into an appropriate context, such as an evaluative predicate,  $x$  is bound by the generic operator (as per Moltmann 2006), which, in our view, is modal.

(79)

El tener una casa antes de los 30 es sorprendente.

$\lambda x. \exists y (\text{house}(y) \ \& \ \text{owns}(x,y) \ \& \ \text{AgeAtOwnership}(x,y) < 30)$

The lambda abstraction of  $x$  is consistent with the role of PRO in syntactic theory as a pronoun subject to binding constraints (e.g., Landau 2000; 2004) which semantically corresponds to an unsaturated argument position (e.g., Jackendoff 1972). Indeed, in contrast with control DP-NIs, which receive tense specification from the matrix clause, generic DP-NIs are atemporal and abstract, and hint at no instantiation in  $WR$ .

#### 4.2.2.2. D in Generic DP-NIs

While formula in (79) appropriately accounts for the abstract meaning of generic DP-NIs, it does not take into consideration the iota operator conveyed by the definite article not the nominal (i.e., entity-denoting) character of DP-NIs

As per Borik & Espinal (2014), kind DPs in Spanish are composed via the assembly of an iota operator (expressed by the definite article) with a property-denoting ( $\langle e^k, t \rangle$ ) NP. Conceptually, they express definite bundles of properties associated with a kind (Espinal 2010).

The compositional analysis of kind-denoting DPs can in fact be applied to generic NICs as well and combined with the formula in (79). Taking as example the semantics of *el gato* in (50)b, repeated for convenience in (80), I will argue that just like the property *gato* combines with a kind ( $x^k$ ), so does the property *tener una casa antes de los 30* combines with a SOA-kind ( $s^k$ ), resulting in the kind of SOA associated with the properties of “owning a house before 30”. As in the case of *el gato*, the assembly of iota shifts the semantic type of NP, resulting in an individual of type  $\langle e \rangle$ , the canonical type of arguments.

(80)

$\iota x^k[\text{gato}(x^k)]$   
 $[\text{DP}[i] \text{el} [\text{NP}[\langle e^k, i \rangle] \text{gato}]]$

(81)

$\iota y^k[(\lambda s^k(\lambda x. \exists y(\text{casa}(y) \ \& \ \text{tener}(x, y) \ \& \ \text{EdadProp}(x, y) < 30)(s^k)))]$   
 $[\text{DP}[i] \text{el} [\text{FinP}[\text{Kind}] \text{tener una casa antes de los 30}]]$

Such a parallel between generic infinitive clauses and definite kinds entails that in both structures the definite article is mandatory to achieve the kind denotation. This claim is challenged, however, by the fact that determinerless infinitive clauses have essentially the same meaning as DP-NIs in generic environments. By contrast, kind-denoting BN subjects are unacceptable in Spanish.

(82)

- a.  $*(\text{La})$  lava es sorprendente.  
 ‘Lava is amazing.’
- b.  $*(\text{El})$  gato es sorprendente.  
 ‘The cat is amazing.’
- c.  $(\text{El})$  tener una casa antes de los 30 es sorprendente.  
 ‘Owning a house before turning 30 is amazing.’

This situation depicts a case similar to what Serrano observes with respect to *el* *que*-clauses, where reference to a unique token situation can be achieved both with and without the definite article. Furthermore, the fact that (determinerless) infinitive clauses can function as arguments of predicates is consistent with the presence of a D layer.

Indeed, I will interpret these facts as evidence for the presence of a D layer in all argument infinitive clauses, regardless of the presence of a definite article. On this matter, I will advance a solution to account for the semantics of determinerless clauses by drawing on Chierchia’s (1998) analysis of argumental bare DPs.

Chierchia observes that in Italian<sup>87</sup>, bare DPs in generic sentences (83) are interpreted as kinds, whereas in non-generic sentences, e.g., (84), they receive an existential interpretation. This contrast is reflected in the internal syntax of nominals;

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<sup>87</sup> Bare DPs show a comparable distribution in Italian and Spanish. See Contreras (1986) for a (generative) account of these nominals in the latter.



however, it is ultimately attributed to the semantics of the matrix predicate. Accordingly, in the former case, D is occupied by the type-shifting ‘down’ ( $\cap$ ) operator, which turns properties into entities, effectively nominalizing them. By contrast, in a non-generic sentence, D is occupied by an existential quantifier, as also observed in (51)a-c. In either structure, the respective operator is encoded by a null determiner ( $\delta$ ). As noted in (85)-(86), this also applies to mass nouns, which share conceptual properties with clausal nominals. Notably, despite the referential properties, both sorts of DPs denote entities. In this vein, Dobrovie-Sorin (2009) argues that existential bare plurals in Romance denote sums.

- (83) Leo corteggia sempre [ $DP \cap \delta$  [ $NP$  belle ragazze]].  
 ‘Leo always courts nice girls.’  
 (84) Leo ha corteggiato questa estate [ $DP \exists \delta$  [ $NP$  belle ragazze]].  
 ‘Leo last summer courted nice girls.’  
 (85) Leo come sempre [ $DP \cap \delta$  [ $NP$  pan]].  
 ‘Leo always eats bread.’  
 (86) Leo está comiendo [ $DP \exists \delta$  [ $pan$ ]].  
 ‘Leo is eating bread.’

Taking these structures as reference, we can posit that argument infinitive clauses are nominalized by the down operator, which is phonologically null. As seen in (87) below, the property-denoting clause, associated with a SOA-kind, is nominalized by the down operator, resulting in (or preserving for this effect) a kind. Note the parallel with gerundives as per Grimm & McNally in (73).

- (87)  
 $[DP \delta \text{ tener una casa antes de los 30}]$  es sorprendente.  
 $\cap (\lambda s^k (\lambda x. \exists y (\text{casa}(y) \ \& \ \text{tener}(x,y) \ \& \ \text{EdadProp}(x,y) < 30))) (s^k))$

SIs and determinerless infinitive clauses are hence distinguished by the operator that nominalizes them, namely, iota and ‘down’, respectively, which agrees with Chierchia’s claim that D in Romance must be occupied by either of those.

- (88)  
 $[DP \iota e \iota < e > [\text{FinP} < e, \iota > \text{tener PRO una casa antes de los 30}]]$  es sorprendente.  
 (89)  
 $[DP \cap \emptyset < e > [\text{FinP} < e, \iota > \text{tener PRO en una casa antes de los 30}]]$  es sorprendente.

This proposal effectively entails the assumption of a default D layer also in these structures, which, when considered alongside the claim brought forward in 4.1.2.3, suggests the necessity of positing a D layer for nominalized clauses in general<sup>88</sup>. However, as only plural and non-count nouns can surface as kind BNs, this analysis suggests that infinitive clauses possess a dual nature, akin to count nouns when they occur with a definite article and like non-count nouns when they take a null determiner. This, in turn, dilutes the role of the definite article. Indeed, in contrast to what is observed in factive contexts, in generic environments it appears to play no major function other than being a nominalizer.

This takes us to the last issue of this chapter, namely the function of the definite article. In this respect, let us begin by discussion two notions of definiteness and assess whether it can be claimed that DP-NIs convey either one or both of them and under which conditions.

### 4.3. On the role of the definite article

To summarize the two analyses carried out up to this point, I have maintained Serrano's hypothesis that in factive predicates the definite article signals reference to a specific token situation, which I have argued is enabled by the anchoring of the complement clause to  $w_R$ , which is a distinctive property of factive predicates. As for generic infinitive clauses, which are kind-denoting primarily as a result of their lack of subject, I have argued that the definite article plays the role of a nominalizer, just like in definite kinds, where it combines with a property-denoting NP.

Serrano's hypothesis effectively establishes a connection between the definite article and uniqueness, one of the notions most often related to definiteness. As we will see, however, the uniqueness expressed by clauses is different from that of nominal phrases.

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<sup>88</sup> This view thus opposes works that support a CP-DP parallelism, such as Alexiadou et al. (2008), for whom both CPs and DPs can function as arguments.

Additionally, we should explore the possibility that the definite article conveys givenness, which has not yet been explored.

### **4.3.1. Notions and properties of definiteness**

#### **4.3.1.1. Uniqueness and familiarity**

Uniqueness and familiarity are the two main notions associated with definiteness in the nominal domain in general and the definite article in specific. Pre-theoretically, both concepts are related in so far as they ultimately involve reference to a single individual.

From a uniqueness perspective, definite descriptions denote unique elements that can be captured by appropriate descriptions. In other words, they refer to a single individual (i.e., a token) associated with the properties of the corresponding NP. This is the view adopted in classic works such as Frege (1892), Russell (1905) and Strawson (1950).

(90)

[<sub>DP</sub> El [<sub>NP</sub> alcalde]] cumple hoy años.

‘The mayor is celebrating his birthday today.’

From a familiarity perspective, in turn, the definite article picks out referents that are known (or familiar) to the participants of the discourse (see, e.g., Heim 1982). Definite DPs, in this sense, derive their definiteness from deictic and anaphoric relations.

(91) Juan tiene un niño y una niña. El niño estuvo en nuestra casa.

‘Juan has a boy and a girl. The boy was at our house.’

Both notions can be accommodated under a single account. For Löbner (1985; 2011), for instance, uniqueness – understood as reference to a single element – can be conveyed in two ways. On the one hand, “semantic definites” are unique independently from the utterance context. On the other hand, the uniqueness of “pragmatic definites” relies on the context, being derived from deictic and anaphoric relations, for example.

Nouns display different degrees of definiteness depending on the concept they express. In this regard, Löbner proposes the following four-fold classification, where each concept type corresponds to a noun type.

- Sortal nouns are of type  $\langle e, t \rangle$  and characterize their potential referents in terms of properties; each instance of the corresponding nouns may denote a variable quantity of entities.
- Individual nouns are individual terms of type  $\langle e \rangle$ ; they include proper names, institutions and other contextually unique entities. They are inherently unique and therefore typically disallow pluralization or combining with indefinite determiners.
- Relational nouns are of type  $\langle e, \langle e, t \rangle \rangle$  and correspond to binary relational concepts, involving a further argument in addition to the referential argument. Like sortal nouns, for any given possessor, the referent of these nouns varies in quantity.
- Functional nouns are of type  $\langle e, e \rangle$ . Like relationals, they involve a possessor argument; however, for any given possessor, they denote a single unique referent.

As can be deduced, definiteness is an inherent property of individual and functional nouns for this proposal. Crucially, however, non-inherently unique nouns can be rendered unique by combining with a definite article. Indeed, definite DPs uniformly denote individual or functional concepts. From Löbner's perspective, however, only those definite DPs headed by inherently unique nouns are semantically definite. By contrast, non-inherently unique nouns require contextual information to attain a unique interpretation.

This contrast is manifested in the examples below. While *el papa* is conceptually unique (in the sense that it denotes a singleton), *el niño* in the example above needs a previous context for the disambiguation of its referent. Note in this sense that uttering only the second sentence of (91) results in an implicature whereby the speaker assumes that the hearer knows the referent. Despite the lack of anaphoricity, this would also constitute an instance of pragmatic definiteness.

(92)

El papa estuvo en nuestra casa.  
'The Pope was at our house.'

Interestingly, semantic definiteness –and uniqueness in Löbner's sense– is independent of reference and extensionality. This is observed, e.g., in the example below, where DP in brackets is clearly non-referential despite being unique. Löbner, in fact, describes this particular example as referring to a generic situation (p. 305).

(93) I do not want my daughter to marry [the lover of the foreigner].

Similar cases of non-referential semantic definites can be found in Spanish in cases like (94). Kinds –and specifically definite kinds in Romance, e.g., (95)– are also unique in this sense, i.e., they constitute individual nouns but refer to no specific entity. It is worth noting, for this effect, that inherently unique nouns that typically denote single individuals, such as *el papa*, have no problem combining with kind-level predicates.

(94)

Todos los domingos vamos al cine.  
'We go to the cinema every Sunday.'

(95)

El gato tiene 30 dientes.  
'The cat has 30 teeth.'

(96)

El papa es siempre un hombre.  
'The Pope is always a man.'

Semantic and pragmatic definites can be differentially expressed in natural languages. For instance, in German, Schwarz (2009; see also Ebert 1971) observes that anaphoric definiteness can only be encoded by the non-contracted ("strong") definite article. By contrast, the uniqueness of the contracted ("weak") article is non-contextual (i.e., inherent).

(97)

- a. Bei der Gutshausbesichtigung hat mich eines der Zimmer besonders beeindruckt. Angeblich hat Goethe #im/in dem Jahr 1810 eine Nacht in dem Zimmer verbracht.  
'During the tour of the manor house, I was particularly impressed by one of the rooms. Goethe is said to have spent a night in the room in 1810.'
- b. Ich bin den ganzen Tag im/in dem Zimmer geblieben.  
'I spent the whole day in the room.'

Applying these facts to Spanish, we observe that factive ("unique") DP-NIs cannot be regarded as semantically definite as they do not denote inherently unique concepts. Rather, as noted before, their definiteness stems from their reference to a fact. Interestingly, NOMIs can refer to functional concepts – a property that can be attributed to their increased nominality. This is more clearly perceived when they yield a manner interpretation, as below.

(98) El rugir del león es tan fuerte que se oye por toda la planicie.

'The lion's roar is so loud that it is heard throughout the plain.'

On the other hand, the conceptual definiteness of generic DP-NIs is more in line with the semantic definiteness of inherently unique concepts. As process types (following Heyvaert 2008) –or rather– situation types, they refer to one and only one definite kind of situation. Indeed, the presence of the definite article in cases like (79) facilitates a maximal interpretation, as opposed to when the determiner is null. Although this in principle agrees with the distinction between singular and plural definite kinds in Romance, and the proposed relationship between DP-NIs and count definite kinds, which unlike non-count (and plural) kinds require the assembly of *iota* (embodied by the definite article), the perceived contrast is rather subjective and hard to prove in the facts. Consequently, both generic argument infinitive clauses must be assumed to possess the same degree of uniqueness.

Still, the possibility that the definite article may play a different role in non-factive contexts is worth exploring. In this vein, we observe data, like (99)–(101) below, that suggests an anaphoric function. Notably, all these cases describe generic situations.

(99)

En primer lugar, quiero desmitificar **eso de que la fruta engorda más como postre que antes de comer**. Nada más lejos de la realidad, si nos comemos una manzana antes de comer engordaremos lo mismo que si nos la comemos después porque las calorías de ésta no se modifican, se mantienen constantes. [...]

Yo suelo recomendar el ingerir la fruta antes de las comidas en los regímenes de adelgazamiento ¿por qué? no por el hecho de que engorde menos sino porque es un "truquillo" para saciarte un poquito antes de las comidas. Es el mismo truco que el recomendar tomar una ensalada de primer plato. [...]

(C21)

(100)

La Teoría de Subastas consigue esquivar la indeterminación que suele aparecer en los problemas de negociación considerando que el vendedor (que actúa como monopolista) posee todo el poder de negociación. De una manera más precisa, **se asume que el organizador de la subasta tiene la capacidad de auto-comprometerse**, [...]. Esto implica, por ejemplo, que los compradores se comportan con la certeza de que el vendedor no intentará, una vez que han presentado las pujas, modificar las normas e iniciar una renegociación. El poseer esta capacidad puede reportar ventajas a los vendedores. [...]

(C21)

(101)

Las personas que se relacionan con animales se sienten mejor. **Tener una mascota** desvía la atención de los problemas del propietario, ya que el tener una mascota es un compromiso que necesita de alimentación y cuidados. Es un ser vivo que necesita de otro ser vivo. Con ese enfoque el dueño de la mascota no puede detenerse mucho en un estado deprimido. Algunos psiquiatras recomiendan loros como mascotas ideal (sic.) para algunos pacientes con síntomas de depresión. Las aves pueden ser leales, cariñosos y dar una buena compañía.

(CdE)

In this vein, we shall take a closer look at the tripartite relationship between presupposition, anaphoric relations, and definiteness. As we will see, these properties play an important role in the assignment of reference in familiarity-based accounts.

### 4.3.1.2. Presupposition and anaphora

The relationship between definiteness and presupposition has been observed at least since Frege (2892), for whom definite DPs presuppose the existence of a unique entity associated with the properties of the NP.

The presence of a presupposition can be posited for both anaphoric and non-anaphoric uses of the definite article. Indeed, with regards to the latter, Schwarz (2009) observes that in German (102)b is an odd answer to (102)a, as the weak definite article presupposes the uniqueness of the fence post. The same is true for Spanish.

(102)

- a. *What did you do in the yard?*
- b. Ich habe ein Vogelhäuschen #am Zaunpfahl angehängt.  
Cf. Puse una pajarera en #el poste de la valla.  
'I hung a birdhouse on the fence post.'
- c. Ich habe ein Vogelhäuschen an einem Zaunpfahl angehängt.  
Cf. Puse una pajarera en un poste de la valla.  
'I hung a birdhouse on a fence post.'

It must be noted, however, that not all instances of definite DPs carry a presupposition of uniqueness. Zamparelli (2000; see also Cheng et al. 2017), in this regard, observes that this is an exclusive property of argument DPs. As observed in (103), the presupposition of maximality conveyed by the determiner in definite plurals (cf. Borik & Espinal 2012) is lost. Similarly, in generic environments, the definite article may be semantically vacuous, e.g., in (104), where the DPs refer to kinds. The latter observation supports the separation of the definite article from the iota operator – which encodes uniqueness – and suggests that generic definite plurals are comparable to bare plurals, like the one in (83). Nonetheless, this claim sharply contrasts with the role played by the definite article in singular kinds and their conceptual uniqueness, consistent with Chierchia's treatment of argument bare plurals, seen in 4.2.2.2.



(103)

- a. ??[John's tools] are here and John's tools are also there.  
(Argument – Maximality)
- b. These are [John's tools], and those are also John's tools.  
(Predicative – No maximality)

(Cheng et al. 2017: 88)

(104)

- \*(I) grandi castori costruiscono dighe.
- \*(Los) grandes castores construyen diques.

Familiarity-based accounts also assume presuppositionality. From this view, however, the definite article presupposes a familiar discourse referent (Heim 1983) which is to be retrieved anaphorically or accommodated, i.e., added to the discourse context (Van der Sandt 1992) when no anaphoric relation can be established. In the latter case, the hearer adjusts his assumptions (or mental map) about the context to adequately interpret the presuppositions in the speaker's utterances, including those triggered by definite DPs (see Beaver 1997).

Asher (2001) extends the presence of presuppositions to deictic uses of definite DPs. He notes that in cases like (105)-(107) below, the use of the definite article can only arise from a deictic relationship. These discourse referents must be anchored to nonlinguistic elements.

(105)

Move the window to the lower left (on a computer screen).

(106)

Close the window in the bedroom.

(107)

Context: *You've just checked into a hotel and the clerk says:*  
Your room is up the stairs and right at the end of the corridor.

Accommodation in these cases is insufficient to account for the conversational function of the definiteness of these expressions. In (107), for instance, Asher notes that accommodating the referent for *the stairs* fails to capture the intended interpretation, namely, that the stairs are related to the addressee's goal, i.e., to get to his room. The presupposition that arises in these contexts is hence rhetorical and links the definite expression to an object in the real world, resulting in a mutual belief that all concerned participants in the conversation refer to the same entity. Crucially, the

discourse will only be felicitous if the addressee believes he or she can identify the relevant entity (associated with the presupposition) and use it for some conversationally relevant purpose (p. 221). Consequently, if in (92) the addressee fails to identify the rhetorical function of the speaker, she will fail to identify the stairs being referred to.

The anchoring of deictic definites yields a *de re* (i.e., extensional) interpretation due to their direct relation to the referent. Here, we observe a crucial parallel with the licensing of the definite article in factive complement clauses. Indeed, both owe the licensing of the definite article to their referents being extralinguistically anchored. However, only in the former is the associated presupposition triggered by the definite article itself. In fact, while the reference and definiteness of complement clauses are largely dependent on the matrix clause, the presupposition of uniqueness of definite N-DPs remains under extensional and intensional predicates – despite the *de dicto/de re* alternation.

(108)

- a. Juan requiere al director de la escuela de su hijo. (intensional; *de dicto/de re*)  
'Juan requests the principal of his son's school.'
- b. Juan conoce al director de la escuela de su hijo. (epistemic; *de re*)  
'Juan knows the principal of his son's school.'
- c. Juan detesta al directo de la escuela de su hijo. (emotive factive; *de re*)  
'Juan dislikes the principal of his son's school.'

Despite the distinctive properties of deictic definites, Asher sees his notion of Anchoring as a special case of presuppositional binding. In fact, anaphoric DPs follow the same felicity conditions, and in both cases, the conversational goal of the speaker is to establish a mutual belief as to the referent of the definite DP.

The role played by the discursive context in the assignment of definiteness is not limited to uses of definite DPs that can be subsumed under familiarity (i.e., anaphoric and deictic DPs), but can be extended to cases of semantic definiteness. In this vein, Schwarz (2009) argues that weak definites introduce situation pronouns that restrict the domain in which the definiteness of the DP is evaluated. The unique entity referred to by these definite expressions is therefore restricted to a situational domain. The

situational domain can be determined by a topic situation, which in turn can be derived from the relevant sentence's Question Under Discussion (QUD; see Roberts 1996; Büring 2003). This is observed in the example below, where the contracted definite is licensed by the relationship of 'the sandbox' to 'the garden', which appears in the QUD of the conversation.

(109)

- a. *What did the kids do in the yard today?*
- b. *They went looking for Easter Eggs.*
  - i. *Who found anything?*
  - ii. Hans hat alle Eier im Sandkasten gefunden.

Other weak definites are evaluated concerning larger situations. These expressions overlap with Löbner's functional and individual nouns and include expressions like "the mayor" and "the train station", which share the property of being inherently unique.

In both cases, the definiteness of the DP relies to some extent on the common ground. In (98), the uniqueness of the sandbox, which stems from its connection to the yard, is related to the world knowledge of yards and the spaces and objects that can be found in them. Similarly, when it comes to individual nouns, their inherent uniqueness is not always a priori nor lexically determined, as in the case of leadership positions and service places (e.g., "the train station"), whose uniqueness is conventional. In this vein, Asher highlights that anchoring involves the linking of cognitively accessible discourse referents to conversational goals (2001, p. 227).

Without disregarding the particular characteristics of semantic and pragmatic definites, all definite descriptions can be hence grouped under the property of presupposing not the existence of a unique entity –which only applies to some of these expressions– but an accessible referent in the common ground, which is then to be retrieved from the discursive or utterance context, or from the addressee's world knowledge. In all cases, the intended goal is to achieve a shared identification of the referent.

This observation could help to explain that complement clauses in non-presuppositional copulative and semi-copulative predicates (e.g., causal and relevance predicates, see 3.4.3) allow the presence of the definite article. As illustrated in (110), when a referent for PRO is available, the definite article leads the hearer to assume that the situation expressed by the clause is known and occurs in  $w_R$ .

(110)

El no tener un seguro médico me ocasiona muchos problemas.

‘Not having health insurance causes me a lot of problems.’

As can be expected, when no referent can be assigned to PRO, these clauses yield a (non-presuppositional) generic reading, as shown in (111). Note that the contrast in these two examples is that in (110) a relationship between the infinitive clause and a specific situation (namely, having problems) is asserted, whereas in (111) the infinitive clause is connected to a generic situation (namely, the building of one’s image drawing from others).

(111)

El ser niño implica primordialmente construirse a partir de los otros. (C21)

‘Being a child implies primarily to build oneself from others.’

Support for a conceptual overlap between deixis and anaphoricity has been proposed from multiple theoretical perspectives. Talmy (2018, 2020) unifies anaphoric and deictic reference within a cognitive framework, proposing that both involve the identification of cues directing participants to the “targeted” referent, facilitating mutual attention.

Incidentally, in Discourse Representation Theory, the discourse and utterance context –associated with anaphora and deixis, respectively– play a central role in the meaning of sentences. On this issue, Kamp (2008, p. 13) establishes:

“[...] utterance interpretation takes place within the setting of a “contextual environment” which consists of (i) a representational context, a tuple of [discourse representation structure]s, two of which are the discourse context  $K_{Dis}$  and the utterance context  $K_{Utt}$ ; and (ii) a model of the world in which the given utterance is made, and which contains (among many other things) the entities (speaker,

time, addressee) associated with this utterance. Anchors provide links between discourse referents from the former and entities belonging to the latter.”

Discourse structure is complemented by the world knowledge (comprising generalizations and laws, and knowledge of particular objects, events, and situations) and the information regarding the immediate extralinguistic environment held by the participants (p. 14).

Drawing on these observations, it is possible to account for the definiteness of DP-NIs denoting token situations in  $w_R$  and anaphoric DP-NIs with a single mechanism. In the former case, the referent of the nominalized clause can be seen as deictic as it is in  $w_R$ , that is, in the utterance context. As for the latter, which includes the examples in (99)-(101), the referent is anchored to the discursive context. Both types of DP-NIs are ultimately consistent with the structure presented in 4.1.2.3, which separates the referent of a definite DP from the definite article itself.

The main distinction between these two structures lies in the value of D. Whereas anaphoric DP-NIs recover a clause, the referent of specific DP-NIs is a nonlinguistic element. This distinction is not exclusive to these constructions nor clausal nominals but is also observed with N-DPs, as observed below. The crucial contrast between the deictic referent of (113) and (115) is that the latter refers to an object in the world, whereas the former denotes a situation in our world. Let us recall that in Sheehan & Hinzen (2011), this is construed as reference to a fact<sup>89</sup>, which fares higher in extensionality than propositions with suspended or undefined truth values.

(112)

De una manera más precisa, se asume que el organizador de la subasta tiene la capacidad de auto-comprometerse; [...].

[<sub>DP</sub> <sub>EI</sub> [<sub>D</sub> Ø = i [<sub>FinP</sub> poseer esta capacidad]]] puede reportar ventajas a los vendedores.

‘More precisely, it is assumed that the auction organizer has the ability to self-commit [...]. Possessing this capability can bring advantages to sellers.’

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<sup>89</sup> As a reminder, in my approach a “fact” constitutes a true proposition, and a proposition is necessarily asserted.

(113)

Juan<sub>i</sub> detesta [<sub>DP</sub> e<sub>i</sub> [<sub>D</sub> Ø<sub>i</sub> = s ∈ <sub>WR</sub> [<sub>FinP</sub> tener PRO<sub>i</sub> que trabajar los domingos]]].  
 ‘Juan hates having to work on the weekends.’

(114)

Por el parque anda [un gato callejero]<sub>i</sub>. [<sub>DP</sub> E<sub>se</sub><sub>i</sub> [<sub>D</sub> Ø = <e><sub>i</sub> [gato]]] come mucho.  
 ‘A stray cat is roaming the park. That cat eats a lot.’

(115)

Context: *someone points at a cat*  
 [<sub>DP</sub> E<sub>se</sub><sub>i</sub> [<sub>D</sub> Ø<sub>i</sub> = <e><sub>deictic</sub> [gato]]] come mucho.  
 ‘That cat eats too much.’

This analysis could be potentially applied to cases like (116) below as well, where the SI is coreferential with an asserted sentence (i.e., a proposition). Here the definite article can be potentially anchored –anaphorically– to the coreferential proposition, or –deictically– to the corresponding situation.

(116)

Hace dos meses dejé la casa de mis padres y me mudé a vivir en el centro de la ciudad. Lo que más me gusta de vivir aquí es que tengo acceso rápido a servicios y transporte público, así como una mayor actividad comercial y cultural, que no encontraba viviendo en el pueblo en el que crecí, donde nunca pasa nada. Sin embargo, [el vivir en el centro de la ciudad me ha causado algunos inconvenientes], como problemas de sueño y alergia a causa del ruido y la contaminación del aire.

‘Two months ago, I left my parents’ house and moved to live in the city center. What I like most about living here is that I have quick access to services and public transportation, as well as more commercial and cultural activity, which I didn’t find living in the town where I grew up, where nothing ever happens. However, [living in the city center has caused me some inconveniences], such as sleep and allergy problems due to noise and air pollution.’

Indeed, as long as the nonlinguistic context remains the same, all uses of a particular definite DP (i.e., coreferential DPs) can derive their definiteness via deixis. In (107), for instance, every ensuing mention of *the stairs* can be deictic (in this conversation) as long as the space and the communicative goal remain the same. Similarly, in the example above, the possibility to anchor the SI to <sub>WR</sub> via the matrix clause, thus not taking into account previous mentions, is always available.

However, unlike N-DPs, which require the definite article to establish an anaphoric relation, complement clauses can do without it. In this regard, whereas every deictic or anaphoric use of *the stairs* in the example below must be definite; in (99)-(101) the definite article can be omitted. This evidences an important problem for this approach, namely, that in anaphoric DP-NIs, particularly those that also refer to a kind situation, it cannot be known for a fact whether the definite article recovers a discursive referent or serves another function, i.e., achieve generic reference, or express definiteness, as could be the case in (116). In either case, moreover, the determiner can be null.

First-mention DP-NIs, e.g., (117)-(118) constitute another problem. Although it could be argued that the definite article here is used to recover a deictic referent –for instance, when the speaker has enough reasons to assume that the addressee knows the referent– there is no way to distinguish this use from the compositional definite article found in definite kinds.

(117)

El comer con las manos es mal visto en algunas culturas.

‘Eating with the hands is frowned upon in some cultures.’

(118)

El caminar de reversa cuesta abajo con los ojos cerrados es siempre una mala idea.

‘Walking backwards downhill with your eyes closed is always a bad idea.’

### 4.3.2. Optionality

As has been demonstrated, any hypothesis concerning the function of the definite article in complement clauses in Spanish must take into account that it is never obligatory.

I have taken this as evidence that it is D as a category and not the definite article as an element that is responsible for the nominalization of the clause. In this vein, the syntactic-semantic analysis that I propose assumes that neither in definite (i.e., causative and factive predicates) nor in generic environments is the definite article required to achieve reference to an instantiated situation or to a kind. The definite

article, from this view, is not a cause but a consequence of the DP status of the clause, which, as proposed above, is itself a product of its syntactic and pragmatic function.

The optional nature the definite article hence limits the prediction of the analysis I have proposed to a mere preference (as opposed to a categorical use) when an extralinguistic anchor is available.

Along these lines, it could be argued that the definite article is promoted on pragmatic grounds. In factive DP-NIs, for instance, it could serve to assert that the situation is instantiated in  $w_R$  when the speaker has reasons to believe that the addressee ignores it. Alternatively, the definite article could be favored when the speaker assumes that the situation referred to is accessible, for instance, when he believes it is common knowledge.

Any hypothesis on the function of the definite article must also deal with the fact that neither the literature on nominalized infinitives nor on complement clauses provides quantitative data as to the frequency of the definite article in these constructions in Spanish.

For this reason, before one can carry out a deeper exploration into the extralinguistic properties associated with the use of the definite article can— which is unfortunately out of the scope of this work —it is important to evaluate the influence of the type of predicate and the availability of an anaphoric referent on the presence of the definite article by empirical means. This will not only help to evaluate the fitness of the hypothesis that I have set forward but will also shed light on the applicability of more general claims regarding DP-NIs, such as the connection between factivity and the definite article.

## 4.4. Conclusion

In this chapter I have proposed a modal analysis of complement clauses that allows to account for the licensing of the definite article without invoking Serrano's *Frase Límite* while preserving the idea that definite complement clauses are extensional, as per Sheehan & Hinzen. Drawing on Farkas' concept of anchoring, I



have established that the predicates in which the definite article is licensed are characteristically anchored to the real world ( $w_R$ ). Drawing on Borer's DP model, and considering that Romance arguments must project D, I have proposed an analysis whereby all complement clauses are DPs – which results from their argumenthood. Their contrasting degrees of referentiality, expressed in LimP and D in Serrano's approach, are rather encoded solely in D in my approach. Unlike in DPs headed by nouns, however, the referent of NICs (and *el que*-clauses) is fully dependent on the selection properties of the matrix predicate.

I have also proposed a description of generic DP-NIs according to which they denote kinds of situations. Although conceptually unique (cf. Carlson et al. 1995, Chierchia 1998), the definite article merely plays a nominalizing role, which can alternatively be taken over by the 'down' operator, resulting in a determinerless argument infinitive clause.

Additionally, I have explored the idea that the definite article may be used to convey an anaphoric relation to a previously introduced referent in the discourse. On this matter, I have discussed Asher's notion of anchoring, which allows to explain the definiteness of anaphoric and deictic definites. I have also noted that these expressions and factive DP-NIs share the property of being anchored to a definite element in the extralinguistic context and carrying a presupposition. Notably, the omission of the definite article conveys no significant contrast in terms of meaning nor grammaticality. This being so, the definite article is not a necessary element to convey either specificity nor genericity. This fact does not have any consequences for the claim that arguments NICs are DPs.

In the following chapter I present an empirical investigation of the hypotheses regarding the function of the definite article that I discussed in this chapter.

## 5. An Empirical Study on the Function of the Definite Article in NICs<sup>90</sup>

In the previous chapter, I have proposed that the contexts in which the definite article occurs coincides with those in which the infinitive clause is anchored to a definite extralinguistic element, be it a situation in  $w_R$  or an anaphoric referent. This claim, however, excludes some generic DP-NIs (that is, NICs), in which the definite article appears to be only a type-shifting operator. In all cases I have assumed that DP is projected, which, in line with the discussion in Chapter 2, is a requirement imposed by predicates.

The limited empirical evidence presented in the previous chapter suggests that the definite article is not used frequently in DP-NIs in these predicates. In this chapter, I propose to explore this issue further by means of an empirical study, which allows for a better control of variables in comparison to corpora studies, particularly when it comes to semantic and pragmatic factors.

The questionnaire-based experiment that I present now tests the hypothesis outlined above by exploring the relationship between the presence of the definite article in argument infinitive clauses and two variables, namely (i) the semantic properties of the matrix clause and (ii) the presence of an anaphoric referent.

The findings of this study will shed light on whether the definite article plays a single or multiple roles in these constructions. In this vein, if the definite article is found to occur more frequently under predicates in which the infinitive clause refers to a unique situation would support Serrano's hypothesis and speak against the conjecture that it can also recover anaphoric antecedents. Conversely, a preference for the definite article in anaphoric contexts would put the relationship between the definite article and extensionality into doubt. Alternatively, however, the definite

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<sup>90</sup> The data used for the corpus exploration and the results of the experiment are available at <https://osf.io/8mgf4/>.

article could be favored by both factors, which would be consistent with a more general role correlated with referential environments and the presence of a definite extralinguistic anchor.

## 5.1. Antecedents

To the best of my knowledge, no synchronic empirical exploration on the role of the definite article in NICs or *el que*-clauses has been conducted to this date. Classic works on NIs, such as Plann (1981), Hernanz (1982), De Miguel (1995) and Ramirez (2003) rely on limited literary or self-produced data.

Serrano (2015) cites corpora data in her study, which she uses to support that the definite article is in fact restricted to complement clauses under certain classes of verbs. She does not conduct, however, an extensive corpus search, and so the extent to which her prediction fits the data remains unknown.

As briefly mentioned in 2.3.1, Schirakowski (2021b) empirically explored the internal structure of NIs. None of her experiments, however, address the distinction between verbal infinitives with and without an overt determiner. As also mentioned above, however, the findings of her anaphora resolution experiment are consistent with the hypothesis that the determiner of NICs is defective.

The lack of previous studies on the function of the definite article in nominalized clauses renders the empirical study I propose fully exploratory, aimed at testing the hypothesis so far pursued. Testing hypotheses through empirical means is crucial in science, as it enables us to verify what is true in the real world. A pertinent example is Grimm and McNally's (2013) study on English ASNs. Their research found that ASNs in corpora do not often align with the properties described in Grimshaw's (1990) influential work. Notably, they discovered that, contrary to the latter's description, ASNs (e.g., *the presentation of the book*) rarely occur with an overt complement. Additionally, they found that event-oriented modifiers can appear with non-argument-supporting nouns. This demonstrates the importance of empirical testing in challenging and refining established theoretical claims.

In view of this lack of empirical bases, I have conducted a preliminary corpus search to obtain a comprehensive understanding of the distribution of the definite article in infinitive clauses and to better interpret the results of the questionnaire-based study. Building on the discussion of the two previous chapters, this corpus search was aimed at exploring the frequency of the definite article in argument infinitive clauses in three environments, namely, (i) factive and causative predicates, (ii) generic predicates, and (iii) intensional predicates.

The data were obtained from 16 queries run in the CORPES XXI (v.1.03; RAE 2024) corpus. 6 consisted of factive and causative verbs (*causar*, *alegrar*, *lamentar*) followed by an infinitive. 6 consisted of generic verbs (*ser siempre*, *implicar* and *significar* in the third person singular of the present indicative) preceded by an infinitive and a noun (to exclude lexicalized infinitives e.g., *el poder es siempre tentador* ‘power is always tempting’). The last 4 queries consisted of an intensional verb (*desear*, *esperar*) followed by an infinitive. Half of the queries contained a definite article before the infinitive verb, as shown in Table 8. The data were manually inspected to verify that the infinitive clauses were indeed arguments and to filter out any false positives.

Table 8: Distribution of determiners in argument infinitive clauses – Data from CORPES XXI (v.1.03)

Predicate	Search Query	Def Art.	Null Art.
		Abs. Freq. (Norm. Freq.)	Abs. Freq. (Norm. Freq.)
<u>Causative and factive predicates</u>			
<i>(Token reference; PRO coreferential with clitic pronoun or DP in the previous context)</i>			
<b>Causar</b>	• Causar <sub>LEMA</sub> +el+INF	18	154
	• Causar <sub>LEMA</sub> +INF	(0,04/Million)	(0,4/Million)
<b>Alegrar</b>	• Alegrar <sub>LEMA</sub> +el+INF	5	564
	• Alegrar <sub>LEMA</sub> +INF	(0,01/Million)	(1,38/Million)
<b>Lamentar</b>	• Lamentar <sub>LEMA</sub> +el+INF	3	531
	• Lamentar <sub>LEMA</sub> +INF	(>0,01/Million)	(1,3/Million)

<u>Generic predicates</u>			
<i>(Kind reference; arbitrary PRO)</i>			
<b>Ser siempre</b>	• INF+NOUN+es+siempre	0	12
	• el+INF+NOUN+es+siempre		(0,02/Million)
<b>Implicar</b>	• INF+NOUN+implica	2	78
	• el+INF+NOUN+implica	(>0,01/Million)	(0,2/Million)
<b>Significar</b>	• INF+NOUN+significa	2	103
	• el+INF+NOUN+significa	(>0,01/Million)	(0,25/Million)
<u>Assertive predicates</u>			
<i>(Propositional; PRO coreferential with clitic pronoun or DP in the previous context)</i>			
<b>Decir</b>	• Decir <sub>LEMA</sub> +el+INF	0 <sup>91</sup>	8910
	• Decir <sub>LEMA</sub> +INF		(21,82/Million)
<b>Comunicar</b>	• Comunicar <sub>LEMA</sub> +INF		7
	• Comunicar <sub>LEMA</sub> +el+INF	0	(0,01/Million)
<u>Intensional predicates</u>			
<i>(Do not allow the definite article)</i>			
<b>Desear</b>	• Desear <sub>LEMA</sub> +el+INF		21,998
	• Desear <sub>LEMA</sub> +INF	0	(4427,35/Million)
<b>Esperar</b>	• Esperar <sub>LEMA</sub> +el+INF		16,755
	• Esperar <sub>LEMA</sub> +INF	0 <sup>92</sup>	(3372,13/Million)

The data in Table 8 confirms that the definite article appears in infinitive clauses under definite and generic predicates but is excluded from assertive and intensional predicates, as described in the previous chapters. Interestingly, the overall occurrence of infinitive clauses is higher in the latter two categories. However, the most notable

<sup>91</sup> This query returned 8 results, of which all were false positives.

<sup>92</sup> This query returned 12 results, out of which 11 were NOMIs. The remaining observation is a false positive.

finding is the surprisingly low frequency of the definite article under definite and generic predicates.

These findings can be seen *prima facie* as suggestive evidence that the role of the definite article is not related to definiteness or what is more, that it plays no role at all. The data presented in the previous chapters, however, argues against such a categorical view. Indeed, we have presented arguments and evidence that align with the notion that the distribution of the definite article is greatly determined by semantic features. Nevertheless, the low occurrence of the definite article is striking and unexpected from any perspective.

The results of this corpus search shall serve as a foundation for the questionnaire-based study that I will now present.

## **5.2. Experiment design**

### **5.2.1. Overview**

The main goal of the empirical study is to identify the contexts in which the definite article is allowed and preferred before infinitival clauses. I sought to test the hypothesis that this is decided by the referentiality of the infinitive clause, which is in turn provided by the semantics of the matrix clause. This hypothesis predicts that clauses embedded under factive predicates will prefer the definite article. However, as mentioned in the previous chapters, no previous study has considered generic infinitive clauses. The experiment shall give answers as to whether a definite denotation is necessary for the presence of the definite article or, instead, it is associated with some other notion of definiteness.

The experiment consisted of a forced-choice binary questionnaire. Participants were native speakers of European Spanish recruited through the platform Prolific.com for an experiment on “the way native Spanish speakers express themselves”.

The questionnaire was created and hosted in the platform PsyToolKit (v.3.4.4; Stoet 2010). Participants were presented with a series of texts, each of which contained a blank that had to be filled out by selecting one of two alternatives. In the

critical items, these two options were an infinitive clause or a DP-NI (i.e., an infinitive clause preceded by a definite article). Both options were grammatical under all conditions.

The data was then quantitatively analyzed, first by exploring the frequency of the definite article relative to the independent variables, and then by conducting a Generalized Mixed Effects Model analysis to determine the effect of the latter.

### 5.2.2. Variables and Conditions

The dependent variable was the presence of the definite article, as determined by the participants’ choices. The two independent variables were the type of predicate—categorized as either generic or factive—in which the infinitive clause occurred and the presence of an anaphoric referent, resulting in a 2x2<sup>93</sup> design. The experimental conditions are summarized in Table 9.

Table 9: Experimental Conditions

Type of Predicate	No anaphoric referent	Anaphoric referent (a): Instantiated (b): Non-instantiated
Specific	Condition 1	Condition 2(a), (b)
Generic	Condition 3	Condition 4(a), (b)

#### Type of predicate

- **Generic:** under this condition the infinitive clause was subject to an individual- or kind-level copula. The verb was inflected in all instances in the third person of the singular and in the present tense to elicit a ‘characterizing’ interpretation of the subject clause, evaluated in a timeless present (cf. Lyons 1977, p. 194; Heyvaert 2008, p. 65). No clitic pronouns were included to guarantee the

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<sup>93</sup> The presence of subconditions 2a-b and 4a-b effectively results in a 2x3 design. The type of anaphoric referent (when present), however, was only taken into consideration in some of the statistical models.

arbitrary interpretation of PRO and thus the generic interpretation of the infinitive subject clause.

(1) El encontrar un lince en el jardín es poco común en esta zona.

- **Specific:** under this condition the infinitive clause was the subject of an emotive factive, causative or evaluative predicate – all of which allow for *el que*-clauses that denote definite token situations (Serrano 2015). To ensure reference to a unique situation, the matrix verb was inflected in past perfect or present progressive so that the situation would be anchored to the speech event time (cf. Heyvaert 2008). Pronominal verbs were used to establish coreference with the subject of the infinitive clause, therefore enabling reference to a token situation – regardless of the definite article (cf. Serrano 2015). In all cases, the clitic pronoun corresponded to the first person to reinforce the factuality of the situations described and avoid reportative interpretations<sup>94</sup>.

(2) El encontrar un lince en el jardín nos sorprendió mucho.

### Anaphoric element

- **Available:** under this condition, the blank to be occupied by the infinitive clause was preceded by 3 to 5 sentences, the first of which contained an element that referred to the situation expressed by the infinitive clause. Although this context does not in principle exclude the possibility that the infinitive clause be connected to a nonlinguistic element outside the discursive factor, I expect a higher frequency of DP-NIs if the presence of an anaphoric relation is indeed connected to the use of the definite article.

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<sup>94</sup> Compare the sentences below. The factuality of the first sentence from the perspective of the speaker is stronger in (i), as the situation that caused the surprise was perceived first-hand. By contrast, the truth of the first sentence in (ii) can be derived from Juan's report, without further evidence. Although in both cases the second sentence presupposes the truth of its antecedent, it is unclear whether this distinction may have any effect on the definiteness of the clause, which I have claimed is linked to the anchoring of the situation denoted in the real world.

- (i) Encontramos un tigre en el jardín. Nos sorprendimos mucho.
- (ii) Juan encontró un tigre en el jardín. Se sorprendió mucho.



Aside from this coreferential element, the preceding context contained at least one more referent to promote the referent-recovery function of the definite article. This is schematically represented in (3) below.

(3) Referent 1 (Situation)<sub>Ref=i</sub>... Referent 2<sub>Ref=k</sub>... Infinitive clause<sub>Ref=i</sub>

These items were further subdivided into two groups, according to the type of their anaphoric referent. The number of items with one or other condition was balanced. This distinction aims to explore whether only anaphoric referents that exist in the real world (more precisely, that are presupposed) trigger the presence of the definite article.

- **Instantiated:** in these cases, the coreferential element was an asserted sentence, i.e., a proposition (associated with a token situation). Just like in the *factive predicate* condition, all instances within this condition were inflected in the first person of the singular and in the present or past tense. See the example below.
- (4) Ayer **encontramos un lince en el jardín**. Aunque la casa está cerca del bosque y seguido nos visitan ardillas y diario vemos toda clase de insectos, (el) encontrar un lince en el jardín nos sorprendió mucho.
- **Non-instantiated:** in these cases, the coreferential element consisted of an abstract DP, semantically related to the situation expressed by the infinitive clause. The coreferential element was purportedly non-identical to the infinitive clause to avoid a priming effect by which participants would tend to repeat the initial subject clause. See below.
- (5) **Dominar varios idiomas** es considerado un atractivo en lo profesional. A menudo, la gente admira a los políglotas por su habilidad para comunicarse en múltiples idiomas, lo que puede abrir puertas a oportunidades laborales y enriquecer la vida personal al facilitar la conexión con personas de diferentes culturas. Con la globalización, sin embargo, (el) saber más de dos idiomas no es tan inusual como era antes.

- **Not available:** under this condition, the blank to be occupied by the infinitive clause appeared at the beginning of the text, thus restricting the definite article's ability to recover a known referent. These items consisted typically of a single sentence, which could be followed by an additional phrase for acceptability reasons. See below.
- (6) El saber más de dos idiomas no es tan inusual como era antes.

### 5.2.3. Stimuli

Twelve sets of critical items were created, each featuring a unique discursive context and an infinitive subject clause. The experimental stimuli were then split into four lists, each containing one item from the original sets, covering all 12 possible combinations of the two independent variables. Participants were presented with only one list to minimize problems due to a lack of concentration and to avoid priming effects. The experiment also included 10 filler items and 4 control items, totaling 26 stimuli per participant. The order of all items—critical, filler, and control—was randomized for each trial. See the Appendix for the full list of items.

#### Critical items

Each set contained an item with one of the four possible permutations of the levels of the independent variables described above. The type of event conveyed by the infinitive clause was further controlled, so that states, atelic and telic events were expressed each by 4 sets.

\_\_\_\_\_ conlleva varios inconvenientes, como el ruido constante, el tráfico y el alto costo de vida.

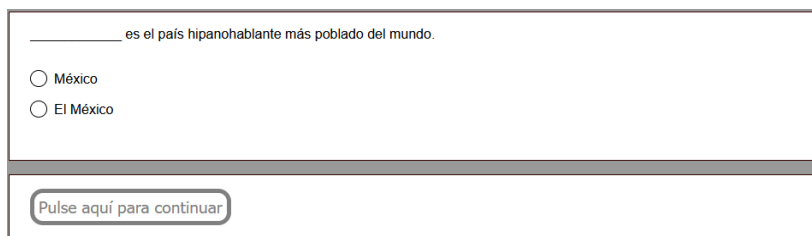
☐ El vivir en el centro de la ciudad
 ☐ Vivir en el centro de la ciudad

Pulse aquí para continuar

Figure 10: Example of a critical item as seen by the participants. Psytoolkit.org

## Control items

Control items were also binary forced-choice questions. In these cases, the blank was to be filled with a noun phrase. Participants had to choose between a bare DP and a definite DP. In half of these items, the blank was preceded by a short paragraph that included a nominal expression coreferential to the missing part. In contrast to the critical items, only one option was grammatical. Therefore, participants who failed to select the correct answer were disqualified and their responses were discarded. All participants were exposed to the same 4 control items.



\_\_\_\_\_ es el país hispanohablante más poblado del mundo.

☐ México

☐ El México

Pulse aquí para continuar

Figure 11: Example of a control item as seen by the participants. Psytoolkit.org

## Filler items

All fillers were binary forced-choice questions. Two different types of items were used. The first one was concerned with differential object marking; in these stimuli the blank corresponded to a direct object, which could be filled out either by a DP (alone) or a DP preceded by the *a* particle. In all cases the relevant constituent was the complement of a perception verb. Half of the items expressed a referential DP complement, while the other half denoted non-referential complements. The second structure mirrored the design of the critical items, with the exception that the choice was made between an inflected complement clause and an *el que*-clause.

La empresa para la que trabajo busca \_\_\_\_\_ experto en coches eléctricos. El candidato ideal deberá tener al menos 5 años de experiencia en un puesto similar, además de habilidades de resolución de problemas.

☐ a un mecánico

☐ un mecánico

Pulse aquí para continuar

Figure 12: Example of a filler item as seen by the participants. Psytoolkit.org

## Other items

In addition to these stimuli, the questionnaire contained a pre-screening question that asked participants about the country in which they spent the most part of their first 20 years of live. The answers of participants who declared having been raised in any country other than Spain were excluded.

At the end of the questionnaire, moreover, participants had a chance to provide comments on the experiment.

### 5.2.4. Participants and responses

Candidates were recruited through the platform Prolific.com. Eligible participants were pre-screen according to three filters:

- Location: Spain
- First language: Spanish
- Age: 20-50 years old

The pre-screening question at the beginning of the questionnaire further ensured that only native speakers of European Spanish took part in the study. In order to control for dialectal variations, the answers of participants who did not state having grown up in Spain were excluded.

40 candidates were recruited – 10 for each of the experimental conditions and item lists. Each of them was randomly assigned to one of the four item lists.

The estimated completion time was set at 12 minutes, averaging 25,71 seconds per item. This was to ensure that they could read all the items at a moderate speed without rushing their choices. However, the median completion time observed was 5

minutes and 43 seconds. In view of this, completion times of less than 3 minutes (i.e., 6,42 seconds per item) were excluded. The responses from 3 participants were excluded on this basis.

The responses from one participant were further excluded from the data set, as they reported having been raised in Chile. To make up for this data, an additional volunteer participant –not personally known to the research and with the same demographic characteristics required for all other candidates– was recruited. Consequently, 38 sets of answers were considered for the quantitative analysis in total.

### 5.2.5. Statistical Analyses

The data was subject to two statistical analyses. First, the relationship between the definite article and the independent variables was analyzed by conducting a Chi-square test.

Secondly, four Mixed-Effects Logistic Regression models were fitted and used to estimate the likelihood of the preference for the definite article. As revealed in the table below, half of the models assumed an interaction between anaphora and the type of predicate in which the infinitive clause appears, while, independently, half of the models assumed a distinction between instantiated and non-instantiated anaphoric referents. The participant and the lexicalization (i.e., the lexical elements contained in the infinitive clause – verb, complements, and adjuncts) were considered random effects. This part of the analysis was done using the lme4 package (v1.1-35.3, Bates et al. 2015) in an R (R Core Team, 2021) script.

Table 10: Fixed and Mixed Effects

Model	Fixed Effects	Random Effects
1	<ul style="list-style-type: none"> <li>Type of Predicate</li> <li>Type of Anaphoric Referent</li> <li>Type of Predicate * Type of Anaphoric Referent</li> </ul>	<ul style="list-style-type: none"> <li>Lexicalization</li> <li>Participant</li> </ul>
2	<ul style="list-style-type: none"> <li>Type of Predicate</li> <li>Type of Anaphoric Referent</li> </ul>	<ul style="list-style-type: none"> <li>Lexicalization</li> <li>Participant</li> </ul>
3	<ul style="list-style-type: none"> <li>Type of Predicate</li> </ul>	<ul style="list-style-type: none"> <li>Lexicalization</li> </ul>

	<ul style="list-style-type: none"> <li>• Anaphoric Referent (present/absent)</li> <li>• Type of Predicate * Anaphoric Referent</li> </ul>	<ul style="list-style-type: none"> <li>• Participant</li> </ul>
4	<ul style="list-style-type: none"> <li>• Type of Predicate</li> <li>• Anaphoric Referent</li> </ul>	<ul style="list-style-type: none"> <li>• Lexicalization</li> <li>• Participant</li> </ul>

The selection of the model was conducted based on the Akaike Information Criterion (AIC) as no test set was available to evaluate the model's performance. Additionally, the fitness of the model was assessed according to  $R^2$ , which quantifies the proportion of the variance of the definite article explained by the independent variables (conditional) and by the whole model (conditional).

## 5.2.6. Hypotheses

Below I present a summary of the hypotheses considered, with their corresponding expected results.

As the research question investigates the use of the definite article to express definite token (specific) situations, the null hypothesis must assume no such function. A first alternative hypothesis predicts that the definite article occurs only when the infinitive clause denotes a specific situation (as per Serrano), while a second one predicts that it is only used to recover anaphoric referents. In addition to these, the alternative hypothesis that the definite article is not (or seldomly) used must also be considered.

### **H0: the definite article is not associated with definiteness**

- The use of the definite article is not determined by the type of predicate nor by the presence of an anaphoric relation.
- The frequency of the definite article is not significantly different among experimental conditions.
- None of the independent variables predict the preference for the definite article in the statistical model.

**H1: the definite article is licensed when the infinitive clause denotes a specific situation**

- The use of the definite article is promoted in predicates where it denotes a specific situation, understood as a definite token situation<sup>95</sup>.
  - Higher preference for the definite article under the *specific predicate* condition.
  - The presence of an instantiated anaphoric referent further promotes the definite article under the *specific predicate* condition.
- The presence of an anaphoric referent plays no role.

**H2: the definite article is licensed when the infinitive clause is coreferential with a previously introduced discursive referent**

- The use of the definite article is promoted when an anaphoric relation can be established with a discursive referent.
  - Higher preference for the definite article under the *anaphora* condition.
- The type of predicate in which the infinitive clause appears (and consequently whether it refers to a kind or token situation) plays no role.

## 5.3. Results

### 5.3.1. Frequency Distribution

In general terms, the preference for the definite article is low. Out of the total 444 observations, only 41 (8,99%) correspond to DP-NIs.

In terms of the independent variables, a higher preference for the definite article is observed with specific predicates (11,71%) than with generic predicates (6,76%), as evidenced by Figure 13. This relationship was found to be not statistically significant by a chi-square test ( $\chi^2(1, n=444) = 3,25$ ;  $p = 0,071$ ), which suggests no difference between the two groups.

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<sup>95</sup> Selected, e.g., by non-generic factive and clausal predicates.

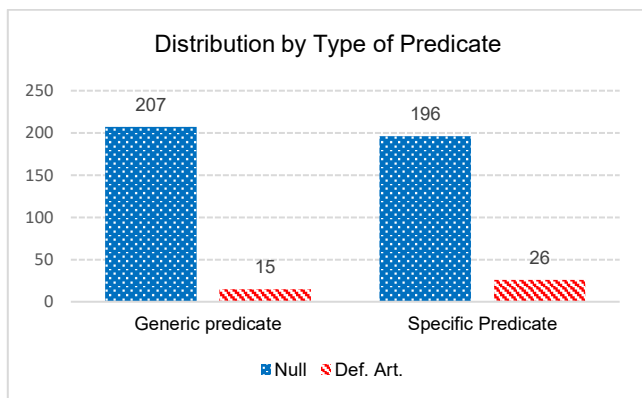


Figure 13

With regards to the presence of an anaphoric referent, as shown in Figure 14, the definite article is more common when such referent is available (11,71% vs. 6,76%). Moreover, the definite article occurs more frequently with *non-instantiated* referents (15,32%) than with *instantiated* ones (8,11%). See Figure 15.

The relation between the condition *Anaphora* and the definite article is not statistically significant according to a chi-square test ( $\chi^2(1, n=444) = 3,25$ ;  $p = 0,071$ ). By contrast, when considering the type of anaphoric, the relationship is statistically significant ( $\chi^2(1, n=444) = 6,691$ ;  $p = 0,035$ ).

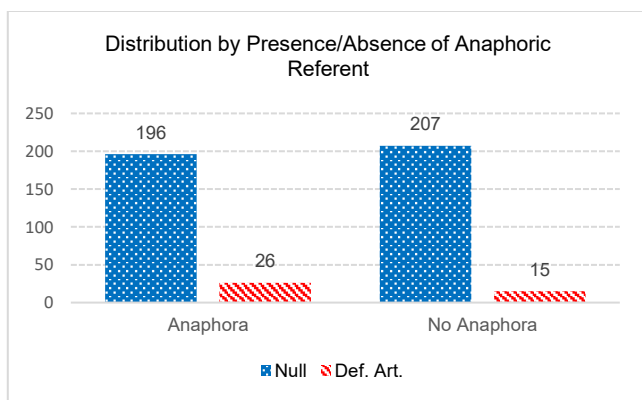


Figure 14



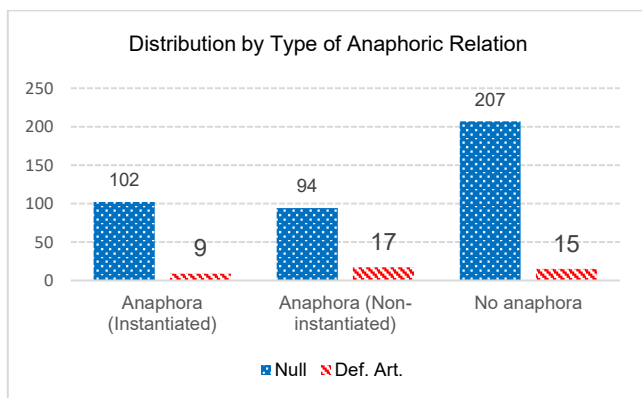


Figure 15

The random variables show increased variation associated with lexicalization, as shown in Figure 16.

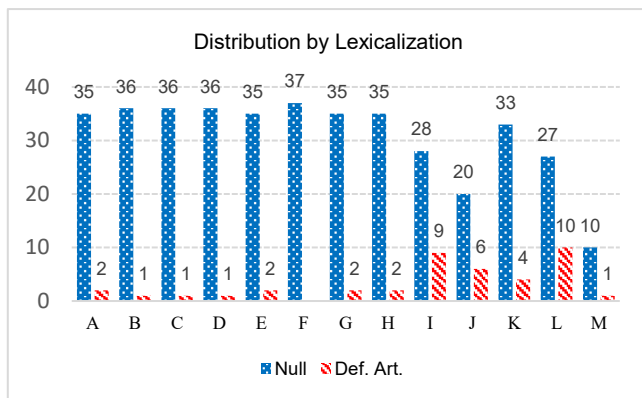


Figure 16

(a) vivir en el centro de la ciudad; (b) trabajar en un hospital veterinario; (c) llegar a la cima del Bishorn; (d) creer en el horóscopo; (e) navegar por el Pacífico; (f) encontrar un apartamento en Madrid; (g) vivir en el décimo piso; (h) lanzar monedas a las fuentes; (i) encontrar un lince en el jardín; (j) saber más de dos idiomas; (k) caminar en la arena; (l) escribir un libro; (m) hablar más de dos idiomas

As to the distribution by participant, the option with the definite article was chosen on average once. 16 out of 37 participants never preferred this option and none of them selected it in more than half of the items, as can be seen in Figure 17.

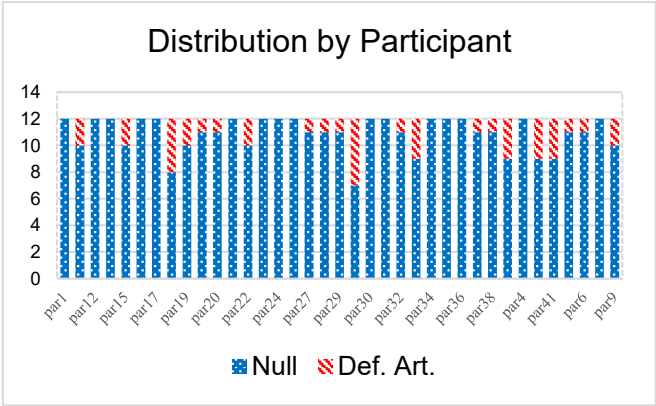


Figure 17

### 5.3.2. Statistical Modelling

Models 3 and 4 yielded the lowest (i.e., the best) AIC scores, although not by much. This can be attributed to their simplicity with respect to Models 1 and 2 (a property that is valued by this scoring system). The value of the marginal  $R^2$  (0.08) is higher in Model 3, which makes it the best model to account for the data. Regardless, all models exhibit a large gap between marginal and conditional  $R^2$ , which suggests an important role played by the random factors.

**Model 1**

AIC = 258,2. None of the predictors are statistically significant at  $p = 0.05$ .

Dep. Variable (Definite Article)			
Predictors	Odds Ratios	CI	p
(Intercept)	0.03	0.01 – 0.13	<0.001
pred type [sp]	1.92	0.39 – 9.44	0.424
anaphora type [a_nin]	1.93	0.32 – 11.64	0.476
anaphora type [nin]	0.90	0.18 – 4.41	0.895
pred type [sp] × anaphora type [a_nin]	1.50	0.19 – 11.82	0.702
pred type [sp] × anaphora type [nin]	0.83	0.11 – 6.03	0.855
<b>Random Effects</b>			
$\sigma^2$		3.29	
$\tau_{00}$ participant		1.27	
$\tau_{00}$ lexicalization		0.95	
ICC		0.40	
N participant		37	
N lexicalization		13	
Observations		444	
Marginal $R^2$ / Conditional $R^2$		0.054 / 0.435	

**Model 2**

AIC = 256,4. None of the predictors are statistically significant at  $p = 0.05$ .

Dep. Variable (Definite Article)			
Predictors	Odds Ratios	CI	p
(Intercept)	0.04	0.01 – 0.13	<0.001
pred type [sp]	2.39	0.91 – 6.28	0.079
anaphora [nan]	0.63	0.19 – 2.09	0.453
pred type [sp] × anaphora [nan]	0.66	0.14 – 3.08	0.594
<b>Random Effects</b>			
$\sigma^2$		3.29	
$\tau_{00}$ participant		1.23	
$\tau_{00}$ lexicalization		1.01	
ICC		0.41	
N participant		37	
N lexicalization		13	
Observations		444	
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>		0.040 / 0.429	

**Model 3 (Preferred)**

AIC = 254,7. None of the predictors are statistically significant at  $p = 0.05$ .

Dep. Variable (Definite Article)			
Predictors	Odds Ratios	CI	p
(Intercept)	0.03	0.01 – 0.10	< <b>0.001</b>
pred type [sp]	2.07	0.98 – 4.38	0.057
anaphora type [a_nin]	2.46	0.70 – 8.72	0.162
anaphora type [nin]	0.80	0.29 – 2.26	0.680
<b>Random Effects</b>			
$\sigma^2$		3.29	
$\tau_{00}$ participant		1.24	
$\tau_{00}$ lexicalization		0.94	
ICC		0.40	
N <sub>participant</sub>		37	
N <sub>lexicalization</sub>		13	
Observations		444	
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>		<b>0.059</b> / 0.434	

**Model 4**

AIC = 254,7. None of the predictors are statistically significant at  $p = 0.05$ .

Dep. Variable (Definite Article)			
Predictors	Odds Ratios	CI	p
(Intercept)	0.04	0.02 – 0.13	<0.001
pred type [sp]	2.02	0.96 – 4.27	0.064
anaphora [nan]	0.49	0.23 – 1.04	0.062
Random Effects			
$\sigma^2$		3.29	
$\tau_{00}$ participant		1.21	
$\tau_{00}$ lexicalization		1.00	
ICC		0.40	
N <sub>participant</sub>		37	
N <sub>lexicalization</sub>		13	
Observations		444	
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>		0.044 / 0.429	

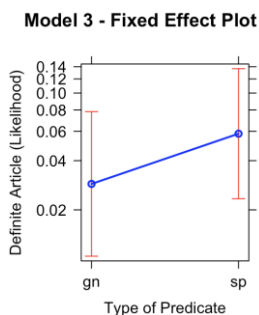
**5.4. Discussion**

Based on the statistical analyses, the data fail to reject H0, as no statistically significant correlation was found between the presence of the definite article and the independent variables proposed. Notably, however, the distribution of the definite article was not random, but low under all conditions, which is the expected distribution in a scenario in which the definite article not only does not play a role but is unacceptable. Although this is not predicted by the literature, it is nevertheless consistent with the data in the limited corpus study presented at the beginning of this chapter.

Despite the low frequencies, the descriptive analysis suggests a general preference for the definite article under both *definite* conditions, i.e., under specific matrix

clauses and when an anaphoric referent is available. Nonetheless, the only statistically significant correlation observed concerns the availability and type of anaphoric referents.

In the logistic regression model, both variables display effects in the same direction. Moreover, the p-value of the predictor *specific predicate* approaches the level of statistical significance. However, a closer look at this effect reveals overlapping confidence intervals (seen in Fig X), which cast doubt on its reliability.



The statistical model also shows that the variance is greater among participants and lexicalizations than among experimental conditions, as additionally reflected by the  $R^2$  values. Indeed, whereas the fixed factors explain only 6% of the variance, the variance ascribed to the random factors adds up to 37%.

As can be seen in Figure 18, three lexicalizations have a particularly strong positive effect on the preference for the definite article. These are, namely, *encontrar un lince en el jardín* (encoded as *i*), *saber más de dos idiomas* (encoded as *j*), and *escribir un libro* (encoded as *l*). Eventivity cannot be posited as the relevant property, given that *j* refers to a state. Similarly, transitivity cannot be said to promote the definite article, as *encontrar un apartamento en Madrid* (encoded as *f*) has the largest negative effect.

The data also fails to show any correlation between the definite article and infinitive clauses that denote a true situation. In this regard, *f* in the *specific* condition expresses a truth (in the sense that it is indeed difficult to find an apartment in Madrid

in the current world) that is potentially known by most adults in Spanish and yet has a negative effect on the occurrence of the definite article.

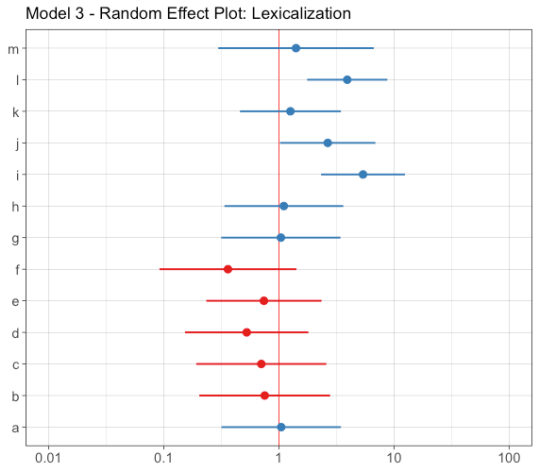


Figure 18: Effect of Lexicalization on the preference for the definite article  
 (a) *vivir en el centro de la ciudad*; (b) *trabajar en un hospital veterinario*; (c) *llegar a la cima del Bishorn*; (d) *creer en el horóscopo*; (e) *navegar por el Pacífico*; (f) *encontrar un apartamento en Madrid*; (g) *vivir en el décimo piso*; (h) *lanzar monedas a las fuentes*; (i) *encontrar un lince en el jardín*; (j) *saber más de dos idiomas*; (k) *caminar en la arena*; (l) *escribir un libro*; (m) *hablar más de dos idiomas*.

With regards to within-participant variation, we observe in Figure 19 that the effect is roughly divided between those who never selected the alternative with the definite article (on the negative side) and those who preferred it at least once (on the positive side).



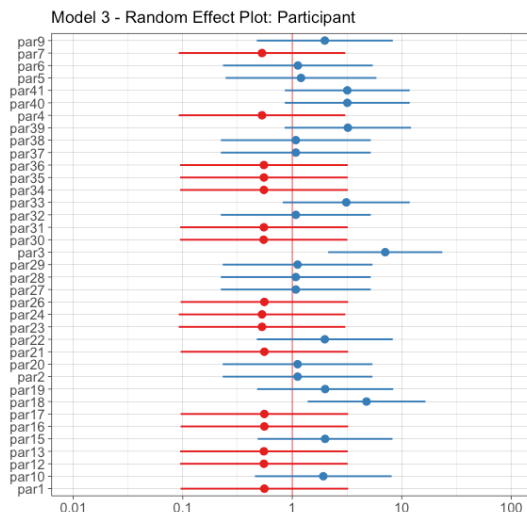


Figure 19: Effect of Participant on the preference for the definite article.

Given the overall low preference for the definite article, it is hard to argue for two populations of speakers, namely, those who allow it and those who do not.

We can, however, ponder whether the surprisingly fast response times observed are in any way related to the low preference for the definite article. A linear regression analysis conducted to test this claim shows a positive correlation between the number of times participants chose the definite article and their response time –excluding outliers (response times above 10 minutes) that accounts for 12,96% of the variance ( $F(1, 35) = 4.915$ ). Although weak, this association is statistically significant ( $p = 0,036$ ). See Figure 20.

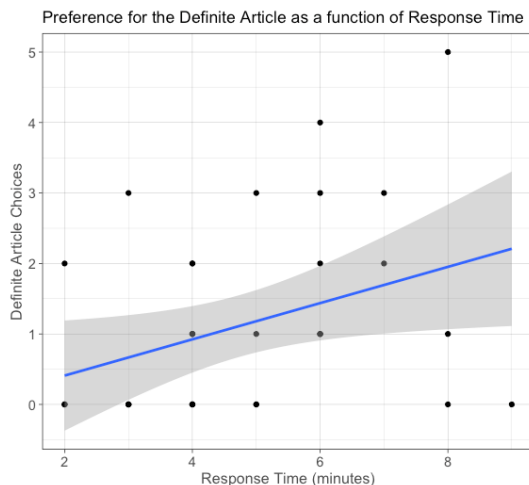


Figure 20: Preference for the Definite Article as a function of Response Time

Incidentally, the low preference for the definite article could be explained by noting the fact that participants were forced to choose between two options. Therefore, the conditions in which both options would be deemed as equally acceptable or unacceptable are unknown.

If, as proposed in the previous chapter, the definite article does not convey definiteness itself but is rather licensed in contexts that are conveyed definiteness by the matrix verb (excluding first mention generic NICs) and, on top of that, all meanings available to NICs – be it a generic (kind) situation or a specific (token) situation – can also be expressed by a determinerless infinitive clause, we can argue that participants had a clear incentive to answer parsimoniously. This would align with a dispensable role for the definite article, limited in the best of cases to stressing the type of situation referred to (i.e., a factive or a generic situation).<sup>96</sup>

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<sup>96</sup>I am personally critical about this explanation. If the definite article is associated with well-delimited semantic properties and enabled in a limited set of syntactic environments, it is hard to understand why a speaker would need to further stress that the situation is factive or generic.

Despite its apparent lack of purpose, we shall not forget that the definite article is sensitive to the syntactic and semantic requirements of the matrix clause. Indeed, as seen in Chapter 3, NICs (and *el que*-clauses) block the extraction of arguments and are disallowed in eventive predicates. Similarly, the findings of this investigation are independent of the observation brought up in Chapter 4 as to the barring of NICs under non-definite predicates.

The function of the definite article thus remains elusive. Nevertheless, it must be stated that, as in any scientific enquiry, hypotheses cannot be confirmed by the data from a single empirical investigation. For this reason, further works on NICs should seek to confirm or reject these observations and seek alternative hypotheses to explain what – if any – is the role of the definite article. These eventual future studies would benefit from alternative experiment designs, e.g., by using graded acceptability scales, and by allowing participants to choose both options. Indeed, given that the definite article is only seldomly preferred, these changes could provide a clearer picture of the contexts in which the definite article occurs.

## 5.5. Conclusion

I conducted a questionnaire-based empirical study on the function of the definite article in NICs. Using a forced binary-choice design, participants overwhelmingly preferred the determinerless infinitive clause in all conditions (definite and generic predicates; anaphoric referent available and unavailable). The data was analyzed with statistical modelling methods (Binary mixed effects model). No correlation could be found with the type of predicate (generic or definite) nor with the availability of an anaphoric referent.

These results do not align with either of the two hypotheses tested, namely, (i) that it expresses definiteness –and thus occurs under definite (i.e., presuppositional) predicates– and (ii) that it encodes anaphoricity –and thus occurs when the referent of the clause has been previously introduced. The frequency of the definite article observed in the experiment further agrees with the findings of the corpus exploration presented at the beginning of the chapter.

Despite the low preference for the definite article, the results of the experiment are nonetheless consistent with the claim made in Chapter 4 that the definite article is not necessary on syntactic nor on semantic grounds, and that any function performed by it (in terms of range assignment to  $\langle e \rangle$ ) can also be performed by a null determiner.

In any case, and to conclude this chapter, further empirical investigations are needed to corroborate these findings.

## 6. General Conclusion

### 6.1. Recapitulation

In this dissertation I have studied the nominal properties of nominalized infinitive clauses (NICs) in Spanish, clearing up previous assumptions and advancing new hypotheses regarding their syntactic structure and semantics.

In Chapter 2 I presented a critical review of the literature on nominalized infinitive-based structures in Spanish. Drawing on corpus-sourced data, I demonstrated that the co-occurrence of verbal and nominal properties is more varied than often assumed. Following the Functional Nominalization Thesis (Borsley & Kornfilt 2000; Kornfilt & Whitman 2011), I argued that all nominal infinitive structures display an interplay between nominal and verbal functional projections (NFPs and VFPs, respectively), whereby an increased number of the latter restricts the projection of the former. Drawing chiefly on Alexiadou (2020) and Iordachioaia (2020), I have further distinguished NIs as *n*- and D-nominals. In *n*P-nominalizations, the infinitive behaves like a proper noun, allowing the assembly of NFPs and establishing agreement with D. Semantically, these infinitives denote events. The latter, which correspond to NICs, are in turn characterized by their lack of nominal properties, notably restricted to the projection of a defective D; their denotation, however, is less clear, being claimed to correspond to propositions or facts by some authors and states-of-affairs (or ‘situations’) by others.

In Chapter 3, I assessed the syntactic and semantic properties of nominalized infinitive clauses (NICs) with relation to sentential (or clausal) nominals. I have discussed previous proposals, in particular the claim that nominal properties in complement clauses are associated – and specifically the presence of a D layer – with factivity, as has been argued for Modern Greek (Roussou 1994) and English (Shim & Ihsane 2017). I have discussed Serrano’s analysis of *el que*-clauses, for whom the definite article encodes referentiality and explored to what extent it can be extended to infinitive clauses. I have shown that, in comparison to *el que*-clauses, the

distribution of NICs is considerably more restricted as a result of being non-finite at their core. As such, they lack a logophoric center (Bianchi 2003) and hence require their temporal reference and subject to be coreferential with those of the matrix clause or, alternatively, unbounded (and hence arbitrary).

In the semantic plane, I have drawn a connection between the distribution of NICs and states of affairs. In line with Ramchand & Svenonius (2014), I have assumed a hierarchical relationship between events, SOAs and propositions expressed in the verbal syntax. Drawing on various sources, I have distinguished propositions from situations in that they bear locutionary content and a truth value, whereas situations are distinct from events in that they are evaluated with respect to a given world or set of worlds. NICs are unacceptable under assertive and truth-value (i.e., proposition-selecting) predicates, and instead tend to occur with definite (i.e., referential) predicates.

In Chapter 4 I revisited Serrano's (2015) proposal, according to which the definite article in *el que*-clauses is responsible for achieving reference to a unique situation instantiated in the real world. I proposed an alternative analysis to her hypothesis that D may only be inserted on top of clauses headed by LimP (*Frase Límite*), which is turn provided by definite matrix clauses (in the essence of Sheehan & Hinzen 2011).

Citing literature on *di/de* constructions (e.g., Cardinaletti & Giusti 2016; Espinal & Cyrino 2021), I have argued for a D layer in bare nouns – both indefinite and property-denoting. I have then transposed this analysis to complement clauses, assuming a syntactic-semantic parallel between N-DPs and clausal DPs. As a result, just like a D layer is present in non-referential bare nouns, so can a D layer be posited for non-referential complement clauses, e.g., under intensional predicates. Crucially, this approach entails that presence of such layer need not convey referentiality but can be occupied by operators with different functions.

Drawing on Farkas (1992), I have reinterpreted Sheehan & Hinzen's (2011) notion of clausal definiteness –on which Serrano bases her analysis of *el que*-clauses to explain the presence of the definite article- from a modal semantics perspective. In

this regard, I have noted that the definite article is only licensed in clauses embedded under predicates anchored to  $w_R$ , which correspond to the class of ‘definite predicates’ in Sheehan & Hinzen’s classification of clause-selecting predicates. The definite article is barred from all other semantic classes, which are crucially anchored to modal worlds. This approach thus draws a parallel with the intensional/extensional reference of N-DPs in the same contexts and allows to account for the referentiality of NICs without invoking LimP.

Based on the fact that NICs do not always denote specific situations, I have argued for a separate analysis for NICs embedded under generic predicates, which I have claimed refer to kinds of situations. In this vein, I have proposed a syntactic structure analogue to that of definite kind nouns, where the definite article combines with a predicative structure (i.e., type  $\langle e, t \rangle$ ), resulting in reference to a kind.

Following this, I have proposed a generalized syntactic structure for complement clauses in Spanish. Accordingly, insofar as these structures are argumental and referential, they all constitute DPs.

D can be headed by an operator that may perform different functions. Since the ontological properties of complements (such as their reference to events, situations, or propositions) are also greatly influenced by the selection properties of the matrix predicate, D acts as a mediator, connecting the nominal clause’s denotation with the matrix predicate (cf. Borer 2005b; Haegeman & Ürögdi 2011). The definite article, from this approach, is only able to assign range to clauses denoting a situation in  $w_R$  (under definite predicates) or a kind of situation (under generic predicates); by contrast, determinerless complement clauses are headed by a null D that is compatible with other referents, such as propositions (when embedded under assertive verbs) and situations anchored to modal worlds (when embedded under modal verbs). Drawing on Grimm & McNally’s (2015) analysis of English gerunds, I have further proposed that the determiner of generic infinitive clauses is an operator that transforms predicative clauses into kind-denoting entities.

A welcome consequence of the claim that D is always projected in complement clause, and the differential role played by the definite article in definite and generic environments, is that it aligns with the requirement that all arguments in Romance languages project a DP structure. However, the fact that the definite article can always be omitted in complement clauses remains puzzling as it contradicts the clausal-nominal parallel. In this regard, I briefly explored the hypothesis that it might be licensed in environments where the referent of the clause is familiar.

To settle this issue, in Chapter 5, I conducted an empirical study directed at finding out the function of the definite article in NICs. Following the discussion in the previous chapter, I essentially tested two hypotheses, namely, that the definite article is restricted to infinitive clauses embedded under definite predicates (i.e., it conveys uniqueness), and that the definite article encodes that the content of the nominalized clause is known (i.e., conveys familiarity). This study found a weak correlation between the definite article and definite matrix predicates on the one hand and the availability of an anaphoric referent on the other. Neither of these associations, however, are statistically significant.

These findings, added to the observation that determinerless infinitive clauses can be used in either environment, suggest that the definite article is not an autonomous operator capable of shifting the denotation of the nominalized clause. Its presence, nonetheless, has consequences for the semantics and syntax of the clause. Notably, in contrast to determinerless infinitive clauses, NICs block the extraction of arguments (i.e., they are islands) and disallow combining with event- and proposition-selecting predicates.

Alternatively, the results of the empirical study could be interpreted as suggesting that the presence of the definite article is due to pragmatic and discursive factors and not syntactic and semantic ones. This, however, is to be investigated by future studies.

In sum: NICs are sentential structures that derive their nominal status primarily from their syntactic distribution as arguments, leading to the projection of a D layer. Semantically, this nominalization results in reference to situations. The anchoring of



the situation depends on the modal properties of the matrix clause. Under definite and generic predicates, a definite article may occur, although, in reality, its presence is infrequent.

## 6.2. Consequences for Linguistic Theory and the Grammar of Spanish

In the first place, the description of hybrid NIs, as well as the analysis of generic NICs, broadens the field of research on NIs. Indeed, contrary to the traditional view that nominal and verbal properties are in complementary distribution, it has been observed that infinitive-based nominals in Spanish are more diverse than often assumed. On this matter, I have provided evidence that suggests that *n*P-NIs can effectively nominalize AspectPs, which call for a revision of the ranges of action of *n* and D as nominalizers.

In the second place, the association between VFPs and the expression of events, SOAs and propositions observed in NICs is relevant for research on the syntax-semantic interface. Concerning particularly the distinction between the latter two (i.e., SOAs and propositions), the contrasting distribution of NICs with respect to *el que*-clauses—concretely their inability to express truth values—evidences a correlation between finiteness and propositions.

In the third place, the generalized DP structure proposed for complement clauses – perhaps one of the most controversial claims made in this dissertation – has implications for several lines of research. Firstly, it rejects that the semantic distinction between definite and assertive complements is reflected syntactically in a CP/DP distinction (as assumed, e.g., in Shim & Ihsane 2017; Djärv 2021). Secondly, it opposes the claim that CPs can be referential (as proposed, e.g., by De Cuba & Ürögdi 2010). Lastly, it allows extending the requirement that all arguments in Spanish must be DPs.

In the fourth place, the low preference for the definite article by all the participants of the experiment suggests that its occurrence is not necessary to achieve whatever meaning can be also expressed by a determinerless argument infinitive clause.

### **6.3. Unresolved Issues and Suggestions for Further Research**

Although not within the main scope of this study, the data presented in Chapter 2 indicates that the internal combinatorial characteristics of NI structures in Spanish are more complex than commonly perceived. AspectP-NIs are distinctive in that, despite being unquestionably distinct from NICs, they exhibit only a few properties in common with classic nominal infinitives. In addition, other structures appear to transcend the event-situation/state-of-affairs dichotomy (see 2.3.4). These patterns are often rather idiosyncratic and seem to be favored by the elevated register of the texts in which they appear (i.e., literary prose). Consequently, future research should investigate further the meaning of these NIs and determine the correlation between literary registers and the occurrence of infrequent combinations of nominal and verbal properties.

Centering on NICs, a noteworthy phenomenon that merits further examination is their islandhood pattern. As illustrated in Chapter 3, they prohibit the extraction of arguments but permit, under specific circumstances, the extraction of adjuncts. This pattern contrasts with that observed in determinerless complement clauses in Spanish and English.

Nevertheless, the most significant unanswered question pertains to the function of the definite article in NICs. The empirical study revealed a low preference for the definite article, which is inconsistent with the assertion that it conveys definiteness, be it uniqueness (reference to a token situation) or familiarity (reference to a known situation). To gain a deeper understanding of this phenomenon, future studies could benefit from employing alternative methodologies, such as conducting larger-scale

corpus studies, and from utilizing alternative experimental designs, including acceptability judgment tasks and non-binary choice questionnaires.

# Appendix: Materials for the Empirical Study on the Function of the Definite Article in DP- NIs

*Here I list all the items contained in the questionnaire presented in Chapter 5.  
The numbers in brackets next to the answers indicate the number of participants  
who selected that option.*

## **Instruction and Screening Questions**

Before the beginning of each trial, participants were presented with the following text, which briefly explained the purpose of the investigation and provided them with instructions as to how to answer the questions.

### **Instructions**

## **Cuestionario sobre el uso del español**

**Motivación:** Este cuestionario es parte de una investigación que estudia la manera en que los hablantes de español se expresan. Esta investigación no está interesada con la corrección lingüística, sino con lo que las expresiones que las personas en realidad emplean.

**Instrucciones:** Tu tarea consiste en completar los textos que se le mostrarán a continuación eligiendo una de las dos opciones. Elige la opción que tú usarías, sin tener en cuenta lo que dicen las academias de la lengua. **No hay respuestas correctas ni incorrectas.**

### **Screening Questions**

- Escribe aquí el país en el creciste (o pasaste la mayor parte de tus primeros 20 años): \_\_\_\_\_
- Escribe aquí el código que se te proporcionó en Prolific (si no cuentas con uno, escribe " voluntario"): \_\_\_\_\_

## Critical items

Items concerned with the use of the definite article in NICs were distributed in four balanced lists.

### List A

1. \_\_\_\_\_ conlleva varios inconvenientes, como el ruido constante, el tráfico y el alto costo de vida.
  - El vivir en el centro de la ciudad [1]
  - Vivir en el centro de la ciudad [10]

[Generic / No anaphora]

2. \_\_\_\_\_ me está causando problemas de salud.
  - Trabajar en un hospital veterinario [11]
  - El trabajar en un hospital veterinario [0]

[Specific / No anaphora]

3. El año pasado llegué a la cima del monte Bishorn con unos amigos en una expedición a los Alpes. La escalada y la belleza de los paisajes nos dejaron sin aliento, literal y metafóricamente. Aun así, \_\_\_\_\_ no es tan complicado como parece y con un guía cualquiera lo puede lograr.
  - El Llegar a la cima del Bishorn [1]
  - Llegar a la cima del Bishorn [10]

[Generic / Anaphora: Instantiated]

4. Creer en la astrología y el horóscopo refleja una inclinación hacia la espiritualidad o la búsqueda de significado en la vida. Algunas personas encuentran consuelo o guía en la interpretación de sus horóscopos, mientras que otras pueden verlo simplemente como una forma de entretenimiento o incluso relacionarlo con la brujería. En mi caso caso, \_\_\_\_\_ me ha ocasionado problemas con amigos y familiares, pues creen que es charlatanería.
  - Creer en el horóscopo [11]
  - El creer en el horóscopo [0]

[Specific / Anaphora: Non-instantiated]

5. \_\_\_\_\_ no es tan sencillo como podría pensarse (por su nombre).
  - El navegar por el Pacífico [0]
  - Navegar por el Pacífico [11]

[Generic / No anaphora]

6. (El) encontrar un apartamento en Madrid me está resultando una pesadilla.
- Encontrar un apartamento en Madrid [11]
  - El encontrar un apartamento en Madrid [0]

[Specific / Anaphora: Non-instantiated]

7. Vivo en el décimo piso de un edificio. Aunque subir y bajar en ascensor lleva más tiempo, y en ocasiones hay que usar las escaleras, la tranquilidad y las vistas que tengo de la ciudad lo compensan. Además, las rentas suelen ser más bajas. Aun así, \_\_\_\_\_ no es para todos. Requiere adaptación y un gusto por las alturas.
- Vivir en el décimo piso [10]
  - El vivir en el décimo piso [1]

[Generic / Anaphora: Instantiated]

8. Arrojar monedas a las fuentes, al igual que tocar madera y llevar amuletos alrededor del cuello, son costumbres asociadas a la buena suerte que se han propagado por distintas partes del mundo a lo largo de la historia. En mi caso, \_\_\_\_\_ no me trajo ninguna suerte en mi último viaje a Roma.
- El lanzar monedas a las fuentes [0]
  - Lanzar monedas a las fuentes [11]

[Specific / Anaphora: Non-instantiated]

9. \_\_\_\_\_ es muy poco común en esta zona.
- Encontrar un lince en el jardín [10]
  - El encontrar un lince en el jardín [1]

[Generic / No anaphora]

10. \_\_\_\_\_ no me ha sido de mucha utilidad en el ámbito laboral, a pesar de que trabajo para una multinacional.
- El saber más de dos idiomas [1]
  - Saber más de dos idiomas [10]

[Specific / No anaphora]

11. Desplazarse por la arena es más complicado que hacerlo en una superficie dura. La textura de la arena dificulta mantener el equilibrio y cada paso requiere más esfuerzo, lo que a su vez implica más actividad muscular. De hecho, \_\_\_\_\_ tiene beneficios para la salud, pues estimula músculos y tendones que normalmente no se activan en las superficies duras.
- Caminar en la arena [10]

- El caminar en la arena [1]

[Generic / Anaphora: Non-instantiated]

12. Publicar un libro es un objetivo personal o profesional para muchas personas. Es una oportunidad para compartir ideas, historias y dejar un legado duradero. Sin embargo, desde hace más de un año, \_\_\_\_\_ a mí sólo me ha significado dolores de cabeza.
  - El escribir un libro [4]
  - Escribir un libro [7]

[Specific / Anaphora: Instantiated]

### List B

1. \_\_\_\_\_ me ha causado algunos inconvenientes, como problemas de sueño y alergia a causa del ruido y la contaminación del aire.
  - El vivir en el centro de la ciudad [0]
  - Vivir en el centro de la ciudad [9]

[Specific / No anaphora]

2. Trabajo en un hospital veterinario desde hace cinco años. Aunque a menudo se piensa que es menos complicado que tratar con personas, la verdad es que implica tomar decisiones y manejar emociones igual de desafiantes. Al igual que en los hospitales para humanos, a veces debo quedarme hasta muy tarde. Por otra parte, tener que tratar con los dueños muchas veces representa un reto adicional. En fin, \_\_\_\_\_ es más estresante de lo que podría pensarse.
  - Trabajar en un hospital veterinario [9]
  - El trabajar en un hospital veterinario [0]

[Specific / Anaphora: Instantiated]

3. El año pasado llegué a la cima del monte Bishorn con unos amigos en una expedición a los Alpes. La escalada y la belleza de los paisajes nos dejaron sin aliento, literal y metafóricamente. Aun así, \_\_\_\_\_ me pareció relativamente fácil. Lo volvería a hacer sin duda.
  - El llegar a la cima del Bishorn [0]
  - Llegar a la cima del Bishorn [9]

[Specific / Anaphora: Instantiated]

4. \_\_\_\_\_ no es una religión.
  - Creer en el horóscopo [9]
  - El creer en el horóscopo [0]

[Generic / No anaphora]

5. \_\_\_\_\_ nos está resultando particularmente complicado en este viaje.
- El navegar por el Pacífico [1]
  - Navegar por el Pacífico [8]

[Specific / No anaphora]

6. Hallar un apartamento en Madrid, como en muchas otras grandes ciudades europeas, se está volviendo un proceso largo y engorroso. A pesar de que Madrid solía ser conocida por ser una ciudad relativamente accesible en términos de vivienda, en los últimos años la demanda ha superado por mucho la oferta disponible. Este desequilibrio ha desencadenado una competencia despiadada, por lo que \_\_\_\_\_ es más caro y estresante que nunca.
- Encontrar un apartamento en Madrid [9]
  - El encontrar un apartamento en Madrid [0]

[Generic / Anaphora: Instantiated]

7. Vivo en el décimo piso de un edificio. Aunque subir y bajar en ascensor lleva más tiempo, y en ocasiones hay que usar las escaleras, la tranquilidad y las vistas que tengo de la ciudad lo compensan. Sin embargo, en las últimas dos semanas \_\_\_\_\_ me ha estado fastidiando, desde que el ascensor se averió.
- El vivir en el décimo piso [1]
  - Vivir en el décimo piso [8]

[Specific / Anaphora: Instantiated]

8. \_\_\_\_\_ viene de creencias antiguas que relacionaban los cuerpos de agua con espíritus o dioses, como se pensaba en la antigua Roma.
- Lanzar monedas a la fuente [7]
  - El lanzar monedas a la fuente [2]

[Generic / No anaphora]

9. \_\_\_\_\_ nos sorprendió mucho.
- El encontrar un lince en el jardín [3]
  - Encontrar un lince en el jardín [6]

[Specific / No anaphora]



10. Dominar varios idiomas es considerado un atractivo en lo profesional. A menudo, la gente admira a los políglotas por su habilidad para comunicarse en múltiples idiomas, lo que puede abrir puertas a oportunidades laborales y enriquecer la vida personal al facilitar la conexión con personas de diferentes culturas. Con la globalización, sin embargo, \_\_\_\_\_ no es tan inusual como era antes. Por eso, algunas empresas esperan que la mayoría de sus empleados sean multilingües.
- Saber más de dos idiomas [7]
  - El saber más de dos idiomas [2]

[Generic / Anaphora: Non-instantiated]

11. Desplazarse por la arena es más complicado que hacerlo en una superficie dura. La textura de la arena dificulta mantener el equilibrio y cada paso requiere más esfuerzo muscular, por lo que algunos doctores lo recomiendan. En mi caso, \_\_\_\_\_ me ha servido para mejorar la circulación de las piernas.
- El caminar en la arena [3]
  - Caminar en la arena [6]

[Specific / Anaphora: Non-instantiated]

12. \_\_\_\_\_ requiere años de trabajo duro y de paciencia.
- Escribir un libro [9]
  - El escribir un libro [0]

[Generic / No anaphora]

### List C

1. Hace dos meses dejé la casa de mis padres y me mudé a vivir en el centro de la ciudad. Lo que más me gusta de vivir aquí es que tengo acceso rápido a servicios y transporte público, así como una mayor actividad comercial y cultural, que no encontraba viviendo en el pueblo en el que crecí, donde nunca pasa nada. Sin embargo, \_\_\_\_\_ conlleva varios inconvenientes, como el ruido constante, el tráfico y el alto costo de vida.
- Vivir en el centro de la ciudad [7]
  - El vivir en el centro de la ciudad [0]

[Generic / Anaphora: Instantiated]

2. Trabajo en un hospital veterinario desde hace cinco años y hace unos meses comencé un pequeño negocio. Mi pasión son los animales, pero me doy cuenta de que con el negocio podría ganar más dinero si me dedicara a él de tiempo completo. Además, \_\_\_\_\_ me está causando problemas de salud. Por ello, estoy seriamente considerando renunciar.
- El trabajar en un hospital veterinario [0]
  - Trabajar en un hospital veterinario [7]

[Specific / Anaphora: Instantiated]

3. \_\_\_\_\_ no es tan complicado como parece y con un guía cualquiera lo puede lograr.
- Llegar a la cima del Bishorn [7]
  - El llegar a la cima del Bishorn [0]

[Generic / No anaphora]

4. \_\_\_\_\_ me ha ocasionado problemas con amigos y familiares, pues creen que es charlatanería.
- El creer en el horóscopo [0]
  - Creer en el horóscopo [7]

[Specific / No anaphora]

5. Atravesar el Pacífico es una experiencia única y desafiante. Las vastas extensiones de agua ofrecen un paisaje impresionante, pero también pueden presentar condiciones tan imprevisibles como las que se ven en el Atlántico. En efecto, a pesar de su nombre, \_\_\_\_\_ **es tan sencillo como podría pensarse.**
- Navegar el Pacífico [7]
  - El navegar por el Pacífico [0]

[Generic / Anaphora: Non-instantiated]

6. Hallar un apartamento en Madrid, como en muchas otras grandes ciudades europeas, se está volviendo un proceso largo y engorroso. A pesar de que Madrid solía ser conocida por ser una ciudad relativamente accesible en términos de vivienda, en los últimos años la demanda ha superado por mucho la oferta disponible. Este desequilibrio ha desencadenado en una competencia despiadada. Debido a esto, \_\_\_\_\_ me está resultando una pesadilla.
- El encontrar un apartamento en Madrid [0]
  - Encontrar un apartamento en Madrid [7]

[Specific / Non-instantiated]

7. \_\_\_\_\_ no es para todos. Requiere adaptación y un gusto por las alturas.
- Vivir en el décimo piso [7]
  - El vivir en el décimo piso [0]

[Generic / No anaphora]

8. \_\_\_\_\_ no me trajo ninguna suerte en mi último viaje a Roma.
- El lanzar monedas a las fuentes [0]
  - Lanzar monedas a las fuentes [7]

[Specific / No anaphora]

9. Ayer encontramos un lince en el jardín. Aunque la casa está cerca del bosque y por eso seguido nos visitan ardillas y toda clase de insectos, \_\_\_\_\_ es muy poco común en esta zona.
- Encontrar un lince en el jardín [6]
  - El encontrar un lince en el jardín [1]

[Generic / Anaphora: Instantiated]

10. Dominar varios idiomas es considerado un atractivo en la profesional. A menudo, la gente admira a los políglotas por su habilidad para comunicarse en múltiples idiomas, lo que puede abrir puertas a oportunidades laborales y enriquecer la vida personal al facilitar la conexión con personas de diferentes culturas. En mi caso, \_\_\_\_\_ no me ha sido de mucha utilidad en el ámbito laboral, a pesar de que trabajo para una multinacional.
- El hablar más de dos idiomas [3]
  - Hablar más de dos idiomas [4]

[Generic / Anaphora: Non-instantiated]

11. \_\_\_\_\_ tiene beneficios para la salud, pues estimula músculos y tendones que normalmente no se activan en las superficies duras.
- Caminar en la arena [7]
  - El caminar en la arena [0]

[Generic / No anaphora]

12. (El) producir un libro sólo me ha causado dolores de cabeza por lo difícil que es.
- El escribir un libro [4]
  - Escribir un libro [3]

[Specific / No anaphora]

### List D

1. Hace dos meses dejé la casa de mis padres y me mudé a vivir en el centro de la ciudad. Lo que más me gusta de vivir aquí es que tengo acceso rápido a servicios y transporte público, así como una mayor actividad comercial y cultural, que no encontraba viviendo en el pueblo en el que crecí, donde nunca pasa nada. Sin embargo, \_\_\_\_\_ me ha causado algunos inconvenientes, como problemas de sueño y alergia a causa del ruido y la contaminación del aire.
  - Vivir en el centro de la ciudad [9]
  - El vivir en el centro de la ciudad [1]

[Specific / Anaphora: Instantiated]

2. \_\_\_\_\_ es más complicado de lo que podría pensarse.
  - El trabajar en un hospital veterinario [1]
  - Trabajar en un hospital veterinario [9]

[Generic / No anaphora]

3. \_\_\_\_\_ me pareció relativamente fácil. Lo volvería a hacer sin duda.
  - Llegar a la cima del Bishorn [10]
  - El llegar a la cima del Bishorn [0]

[Specific / No anaphora]

4. Creer en la astrología y el horóscopo refleja una inclinación hacia la espiritualidad o la búsqueda de significado en la vida. Algunas personas encuentran consuelo o guía en la interpretación de sus horóscopos, mientras que otras pueden verlo simplemente como una forma de entretenimiento o incluso relacionarlo con la brujería. En cualquier caso, \_\_\_\_\_ no es una religión.
  - El creer en el horóscopo [1]
  - Creer en el horóscopo [9]

[Generic / Anaphora: Instantiated]

5. Atravesar el Pacífico es una experiencia única y desafiante. Las vastas extensiones de agua ofrecen un paisaje impresionante, pero también pueden presentar condiciones tan imprevisibles como las que se ven en el Atlántico. A pesar de mi experiencia previa, sin embargo, \_\_\_\_\_ **nos está resultando particularmente complicado en este viaje.**
  - Navegar por el Pacífico [9]
  - El navegar por el Pacífico [1]

[Specific / Anaphora: Instantiated]

6. \_\_\_\_\_ es más caro y estresante que nunca.
- El encontrar un apartamento en Madrid [0]
  - Encontrar un apartamento en Madrid [10]

[Generic / No anaphora]

7. \_\_\_\_\_ me ha estado fastidiando, desde que el ascensor se averió.
- Vivir en el décimo piso [10]
  - El vivir en el décimo piso [0]

[Specific / No anaphora]

8. Arrojar monedas a las fuentes, al igual que tocar madera y llevar amuletos alrededor del cuello, son costumbres asociadas a la buena suerte que se han propagado por distintas partes del mundo a lo largo de la historia. \_\_\_\_\_ **viene de creencias antiguas** que relacionaban los cuerpos de agua con espíritus o dioses, como se pensaba en la antigua Roma.
- El lanzar monedas a las fuentes [0]
  - Lanzar monedas a las fuentes [10]

[Generic: Anaphora: Non-instantiated]

9. Ayer encontramos un lince en el jardín. Aunque la casa está cerca del bosque y por eso seguido nos visitan ardillas y toda clase de insectos, \_\_\_\_\_ nos sorprendió mucho.
- Encontrar un lince en el jardín [6]
  - El encontrar un lince en el jardín [4]

[Specific / Anaphora: Instantiated]

10. \_\_\_\_\_ no es tan inusual como era antes. Por eso, algunas empresas esperan que la mayoría de sus empleados sean multilingües.
- El hablar más de dos idiomas [1]
  - Hablar más de dos idiomas [9]

[Generic / No anaphora]

11. \_\_\_\_\_ me ha servido para mejorar la circulación de las piernas.
- Caminar en la arena [10]
  - El caminar en la arena [0]

[Specific / No anaphora]

12. Publicar un libro es un objetivo personal o profesional para muchas personas. Es una oportunidad para compartir ideas, historias y dejar un legado duradero. Si bien hay autores prolíficos, en la mayoría de los casos, \_\_\_\_\_ requiere años de trabajo duro y de paciencia.

- El escribir un libro [2]
- Escribir un libro [8]

[Generic / Anaphora: Non-instantiated]

## Control items

*In all items only one of the choices is grammatical.*

1. El perrito de las praderas es una criatura pequeña y social que habita en las vastas llanuras de América del Norte. Estos animales son conocidos por su comportamiento curioso y sus hábitos de excavación. A pesar de su pequeño tamaño, \_\_\_\_\_ desempeña un papel importante en su ecosistema, contribuyendo a la biodiversidad y al equilibrio del hábitat.
  - El perrito de las praderas [38]
  - Perrito de las praderas (\*) [0]
2. \_\_\_\_\_ es el país hispanohablante más poblado del mundo.
  - México [38]
  - El México (\*) [0]
3. El té negro ofrece una serie de beneficios para la salud. Rico en antioxidantes, ayuda a proteger el cuerpo contra el daño celular y reduce el riesgo de enfermedades crónicas. Por otra parte, \_\_\_\_\_ contiene cafeína, que proporciona un impulso de energía y mejora la concentración.
  - el té negro [38]
  - té negro (\*) [0]
4. \_\_\_\_\_ contiene 93,000 lemas en su última edición.
  - El diccionario de la RAE [38]
  - Diccionario de la RAE [0]

## Filler items

*8 items test the presence of the differential object mark ('a') in Spanish; 2 additional items test the use of the article in finite complement clauses (i.e., el que-clauses). Half of them contain a previous context, consisting of at least one full sentence before the clause containing the blank, to emulate the conditions of the critical items.*

1. La empresa para la que trabajo busca \_\_\_\_\_ experto en coches eléctricos. El candidato ideal deberá tener al menos 5 años de experiencia en un puesto similar, además de habilidades de resolución de problemas.
  - A un mecánico [18]
  - Un mecánico [21]
2. Mientras limpiaba el ático de la casa de mi madre me encontré con una foto muy antigua de su familia. Me sorprendió que sólo pude reconocer \_\_\_\_\_. El resto, incluida mi propia madre, lucían muy diferentes.
  - Uno de mis tíos [1]
  - A uno de mis tíos [38]
3. Un zoólogo estudia \_\_\_\_\_ y su comportamiento, anatomía, fisiología, evolución y ecología. Investiga las interacciones de los animales con su entorno y otros organismos, y puede especializarse en diversas áreas como la conservación de especies, la biología marina, la entomología (estudio de insectos) o la ornitología (estudio de aves).
  - A los animales [27]
  - Los animales [12]
4. Desde hace algunos meses, mi pareja y yo hemos estado considerando adoptar a una mascota, pero no nos decidíamos sobre si sería mejor un perro o un gato. El otro día vimos \_\_\_\_\_ afuera de una pescadería y lo llevamos a casa. Desde entonces vive con nosotros.
  - Un gato [24]
  - A un gato [15]
5. Anoche vi \_\_\_\_\_ que circulaba solo con tres ruedas.
  - A un coche [4]
  - Un coche [35]
6. Todas las mañanas escucho \_\_\_\_\_ que canta mientras se ducha.
  - Mi vecino [0]
  - A mi vecino [39]
7. Nunca he visto \_\_\_\_\_.
  - A un fantasma [8]
  - Un fantasma [31]
8. En el bosque se puede oír \_\_\_\_\_ cantar día y noche.
  - Los pájaros [5]
  - A los pájaros [34]
9. \_\_\_\_\_ a la fiesta me sorprendió mucho.
  - El que mis vecinos hayan venido [11]
  - Que mis vecinos hayan venido [28]

10. En mi empresa hay una notable falta de personal, por lo que frecuentemente me toca hacer horas extras. Me gusta mucho mi trabajo, así que no me importa trabajar más tiempo para cumplir con nuestras metas. Sin embargo, me frustra que mi jefe no se esfuerce por contratar más personal para equilibrar la carga de trabajo. \_\_\_\_\_ para solucionar esta situación es lamentable.
- Que no se tomen medidas [34]
  - El que no se tomen medidas [5]



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