

DETERMINERS AND QUANTIFIERS IN SPANISH: TYPES, TESTS AND THEORIES

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ABSTRACT. This article provides an overview about the main facts and analytical options in the domain of determiners and quantifiers in Spanish. It covers the main classification of determiners and their basic syntactic and semantic properties (§1), the differences in behaviour between quantifiers and determiners in the strict sense (§2), the notion of definiteness and the contrasts in the use of the definite and indefinite articles (§3), the notion of specificity (§4) and the main types of quantifiers and how they can be identified (§5). In terms of analytical problems, it discusses whether determiners should be considered heads or not (§6), the areas within the determiner and quantifier domain (§7), the nature of the indefinite article as an element that shares properties with existential quantifiers (§8), the problems posed by proper names (§9) and the possible existence of phonologically null determiners in Spanish (§10). Conclusions are presented in §11.

Keywords: determiners, quantifiers, definiteness, specificity, DP-hypothesis, bare nominals, proper names

RESUMEN. Este artículo proporciona al lector una revisión detallada de los principales fenómenos y opciones analíticas que tienen que ver con el dominio de los cuantificadores y determinantes en español. El trabajo discute la clasificación básica de determinantes y cuantificadores en sus propiedades sintácticas y semánticas fundamentales (§1), las diferencias de comportamiento entre cuantificadores y determinantes en sentido estricto (§2), la noción de definitud y los principales contrastes del español en el uso del artículo definido e indefinido (§3), el concepto de especificidad (§4) y los principales tipos de cuantificadores y qué pruebas permiten identificarlos (§5). Con respecto a las opciones analíticas, discute si los determinantes deberían considerarse núcleos o no (§6), las áreas sintácticas dentro del dominio de cuantificadores y determinantes (§7), la naturaleza del artículo indefinido como un elemento que comparte propiedades con los cuantificadores existenciales (§8), los problemas analíticos que producen los nombres propios (§9) y la posible existencia de determinantes fonológicamente nulos en español (§10). Se presentan conclusiones en §11.

Palabras clave: determinantes, cuantificadores, definitud, especificidad, hipótesis del SD, nominales escuetos, nombres propios

1. Introduction: determiners and quantifiers in natural languages

Most natural languages contain some items that combine with nouns and whose role is to provide information about their reference or to restrict the statements about such nouns to groups or quantities (Leonetti 1999, 2016; Gutiérrez Rexach 2016). Some of these items in the case of Spanish are listed in (1).

(1) este 'this', el 'the', un 'a', dos 'two', muchos 'many', ningún 'no'...

In a wide sense, traditional grammars referred to these items collectively as *adjetivos determinativos* 'determinative adjectives' or *determinantes* 'determiners', by virtue of a couple of central syntactic properties that will be discussed in §1.1, common to all of them. However, more restrictively the notion of determiner is restricted to the items that, in combination with nouns, are used to define their reference giving rise to notions such as specificity or definiteness, which, to put it bluntly, depend on whether the speaker identifies the reference

of the entity or not, and whether the speaker presupposes that the hearer will be able to identify the reference or not. The items in (2) are determiners in this restrictive sense:

- (2) el 'the', un 'a', este 'this', aquel 'that', mi 'mine'...

In this restrictive sense, the items whose role is to define the number of entities in a group or the quantity of an entity are quantifiers. In general terms, quantifiers in combination with count nouns define the number of units in a group in more or less precise ways (3), while the quantifiers that combine with mass nouns provide information about their quantity (4).

- (3) a. tres estudiantes
three students
b. muchos estudiantes
many students
c. ningún estudiante
no student
- (4) a. poca sal
little salt
b. demasiada poesía
too-much poetry
c. suficiente agua
enough water

There is a division of labour both from a syntactic and a semantic perspective between the noun and the determiner or quantifier. In a nominal constituent like *el chico* 'the boy', the common noun *chico* 'boy' is used to identify a class of entities through descriptive properties, namely those that we associate to the entities that in the world we would call 'boy' –that is, the noun is responsible for expressing the relevant concept–. In contrast, the determiner *el* does not provide any information about the descriptive properties of the entity, but is used as a formal mark that indicates that the hearer must look for a known referent that corresponds to the description of boy in the context of interpretation. Translated into practical terms, the determiner tells the hearer that the boy discussed is a specific boy that he or she should be able to identify from the information that he shares with the speaker.

As we will see, some quantifiers double as nouns or adjectives. The so-called quantificational light nouns (6; cf. RAE& ASALE 2009: §12.5) take prepositional complements that correspond to the common noun that they affect.

- (6) a. un montón de amigos
a lot of friends
b. una botella de vino
a bottle of wine
c. la mayoría de votantes
the majority of voters

Because these quantifiers can also be used as lexical nouns, they can produce ambiguities that normally are solved by the linguistic context. Out of context, *una botella de vino* 'a bottle of wine' can describe two different things: a glass object designed to contain wine –where *botella* is interpreted as a lexical noun– or a specific quantity of wine that corresponds to the measure of a standard bottle –where *botella* is used as a quantifier–. The difference between the two readings becomes apparent, for instance, in the type of predicates that select each one

of them. In the first interpretation, the noun *botella* is a lexical noun and combines with verbs that select actions that can be performed –roughly– on glass objects (7).

- (7) a. Rompí una botella de vino.
 broke.1sg a bottle of wine
 'I broke a bottle of wine'
 b. Lavé una botella de vino.
 washed.1sg a bottle of wine
 'I washed a bottle of wine'
 c. Me golpeó con una botella de vino.
 me hit.3sg with a bottle of wine
 'He hit me with a bottle of wine'

The second interpretation, where *botella* is a quantifier, has the noun *vino* 'wine' as the element responsible to define the class of entities through their descriptive properties, and therefore combines with predicates that denote events that can be performed with alcoholic liquids (8).

- (8) a. Me bebí una botella de vino.
 me drank.1sg a bottle of wine
 'I drank a bottle of wine'
 b. Derramé una botella de vino.
 Spilled.1sg a bottle of wine
 'I spilled a bottle of wine'
 c. Échale una botella de vino al ponche.
 put-it a bottle of wine to.the punch
 'Add a bottle of wine to the punch'

Still, some predicates are compatible with both readings.

- (9) Me compré una botella de vino.
 me bought.1sg a bottle of wine
 'I bought a bottle of wine' ('I bought a bottle to put wine' or 'I bought the quantity of wine that fits in a bottle')

See §1.2. for the case of adjectives that act as quantifiers or determiners under certain conditions.

1.1. The role of determiners and the role of quantifiers in syntax and semantics

Determiners in the wide sense –that is, both quantifiers and determiners in the strict sense– can be identified in Spanish by one crucial property: they are necessary to license the preverbal subject. In contrast to Germanic languages like English, that allows preverbal bare nouns in generic interpretations (10), Spanish needs that in such syntactic position the noun is accompanied by a quantifier (11a) or determiner (11b) –see (13)-(16) for some exceptions to this generalisation–.

- (10) Dogs bark.
 (11) a. El perro ladra.
 the dog barks
 'The dog is barking'

- b. Ningún perro ladra.
 no dog barks
 'No dog is barking'
 c. *Perros ladran.
 dogs bark
 Intended: 'Dogs bark'

This licensing role cannot be performed by adjectives, in general (12). This implies that the traditional name given to determiners and quantifiers, determinative adjectives, is at best misleading in suggesting that they should be considered adjectives in a grammatically relevant sense. Members of the class of adjectives that can license the preverbal position of subjects in Spanish are not considered proper adjectives –and in fact they lose some of the properties that are definitionally related to adjectives–, as we will see in §1.2.

- (12) *Perros blancos ladran.
 dogs white bark
 Intended: 'White dogs bark'

It is important to note, however, that there are systematic exceptions to the generalisation that any noun must be combined with a determiner in order to be a preverbal subject. First of all, proper names in Spanish can always appear in this position without an overt determiner or quantifier.

- (13) a. Arizona es seca.
 Arizona is dry
 b. Pedro tiene dos hermanas.
 Pedro has two sisters

Common nouns can also function as subjects in preverbal position in three cases. The first one is when the noun is restricted by modifiers that delimit the class of entities, such as restrictive relative clauses, participial constructions or prepositional phrases. This suggests that in such cases the restricting capacity of the modifiers is enough to delimit the denotation of the common noun to a specific subkind of the noun, and that is enough to license the preverbal position.

- (14) a. Niños que habían sido abandonados han firmado esta petición.
 children that had been abandoned have signed this petition
 'Children that had been abandoned have signed this petition'
 b. Estudiantes con beca no deben pagar las tasas.
 students with scholarship not must pay the fees
 'Students with a scholarship must not pay the fees'

The availability of subjects such as those in (14) is facilitated when the statement is modal in nature, something that imposes a non-specific reading to the subject. In (14b) it is implied that we refer to any student with a scholarship, not to concrete members of that group. Still, readings where the group denoted is specific are possible (14a), but note that in such case the relative clause refers to a specific, episodic event that defines that group, thus providing the information that the group is formed by specific individuals –those that participated in that instance of the event–.

Second, coordination of two bare common nouns also allows them to appear as preverbal subjects. In such cases, it is also the case that the nouns are interpreted non-specifically, as any member of the groups.

- (15) a. Niños y mayores disfrutaron del espectáculo.
 children and adults enjoyed the show
 'Both children and adults enjoyed the show'
 b. Españoles y franceses llevan siglos enfadados unos con los otros.
 Spaniards and Frenchmen carry centuries angry ones with the others
 'Spaniards and Frenchmen have been angry to each other for centuries'
 c. Perros y gatos salieron de la cueva.
 dogs and cats exited of the cave
 'Dogs and cats came out of the cave'.

Third, if the preverbal subject is also interpreted as a contrastive focus, it can be available in preverbal subject position. We mark in capital letters the emphatic intonation of the focus.

- (16) PERROS vinieron, no gatos.
 DOGS came, not cats
 'It was dogs that came, not cats'

Once these exceptional cases are controlled for, the fact that determiners and quantifiers license preverbal subjects is perhaps the most reliable criterion to identify the members of this class. This criterion allows us, for instance, to determine that even if the quantificational nouns mentioned in (6) above are interpreted in some semantic respects as quantifiers, they should not be entirely assimilated to the class. As (17) shows, they still need to combine with a proper quantifier (17a) or a determiner (17b) to license the noun in preverbal position.

- (17) a. Dos botellas de vino son demasiado.
 two bottles of wine are too-much
 b. La botella de vino que te bebiste es demasiado.
 the bottle of wine that you drank.2sg is too-much
 c. *Botella de vino es demasiado.
 bottle of wine is too-much

1.1.1. Classes of determiners and quantifiers: main guidelines

Several subtypes of determiners and quantifiers can be identified following the test that we have mentioned above. Among determiners, most grammars single out the following classes: definite articles (18a), indefinite articles (18b; but see §8), demonstratives (18c) and possessives (18d).

- (18) a. el 'the'
 b. un 'a'
 c. este 'this, ese 'that', aquel 'that'
 d. mi 'my', tu 'your', su 'his/her/their', nuestro 'our', vuestro 'your'

There are many differences in syntax and interpretation among the classes in (18), but we will discuss them in the sections below.

With respect to quantifiers, a few remarks should be made before we proceed with the presentation of the subclasses. The definition that we have provided of quantifiers, as opposed

to determiners, is semantic in nature –we will see below in §2 that some more fine-grained tests also are semantic in nature–. This makes some classes of units that do not combine with nouns fall within the definition of quantifier, which is perhaps unfortunate when one attempts a syntactic description of the phenomenon. Specifically, the semantic definition of quantifier extends to degree adverbials such as those in (19), which combine with adjectives and operate on the values that they express within their semantic scales.

- (19) a. muy frío
 very cold
 b. demasiado caliente
 too hot
 c. bastante rojo
 quite red
 d. un poco verde
 a bit green

Even though many of the degree adverbials are also used as quantifiers in combination with nouns (cf. 20), we will not treat them in this article. Even though the unification of quantity and degree seems intuitively plausible, there are technical problems that complicate any attempt in this direction. For instance, degree elements take values of a property, while quantifiers do not operate over values in any obvious sense: they count units or define measures of a substance. It is unclear what type of semantic operator would give well-formed semantic formulas with both types of objects.

- (20) a. demasiada agua
 too-much water
 b. bastante sal
 enough salt
 c. un poco de azúcar
 a bit of sugar

Second, in the literature on quantifiers, the adverbials in (21), known as presuppositional or focal quantifiers, are also mentioned.

- (21) tampoco 'neither', también 'also', hasta 'even', solo 'only'...
 (22) Juan también aprobó el examen.
 Juan also passed the test

While these quantifiers are unable to license preverbal subjects on their own, they presuppose some form of quantification over one of the nouns in the sentence. In (22), for instance, it is presupposed that there was another individual, not just Juan, that passed the exam. We will leave also these quantifiers aside, and focus solely on the items that meet the semantic requisites for being a quantifier and additionally license common nouns in preverbal subject position.

Once the set of items is thus restricted, there are two main classes: indefinite quantifiers, that express an imprecise quantity without giving it a numerical value (23a), and quantifiers that specify the number of items, which correspond to the class of cardinal numerals (23b).

- (23) a. muchos 'many', pocos 'few', suficientes 'enough', varios 'several'...
 b. dos 'two', tres 'three', dieciséis 'sixteen', cien 'hundred'...

Indefinite quantifiers can accompany both mass and count nouns (24), while numerals are restricted to count nouns, and in combination with nouns that are possibly mass trigger count readings (25).

- (24) a. mucha sal
much salt
b. muchos libros
many books
- (25) a. tres libros
three books
b. tres sales
three salts 'three types of salt'

Among the indefinite quantifiers, the main division is between universal quantifiers and existential quantifiers, that are also called 'indefinite' in the strict sense. Universal quantifiers express that, given the set of properties defined by the common noun, the statement applies to every element contained in that class (26), while existential quantifiers restrict the quantity to only a subset of such elements (27).

- (26) Cada estudiante trajo un libro.
each student brought a book
'Each student brought a book' (= 'For everybody that was a student, it is true that that student brought a book')
- (27) Varios estudiantes trajeron un libro.
several students brought a book
'Several students brought a book' (= 'For at least some that were students, it is true that they brought a book')

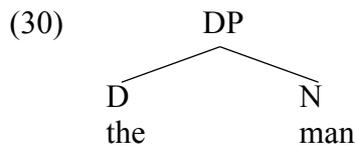
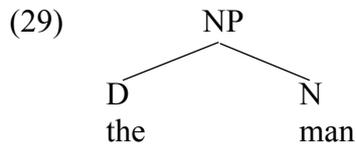
The existential quantifiers can further be divided in two groups, depending on whether they imply some sort of evaluation about the quantity that they express –whether it exceeds some standard, is enough for some purpose, etc.–. Those that incorporate this evaluation component are called evaluative quantifiers (28a, 28b). An example of the class that lacks this component is (27), or (28c).

- (28) a. Demasiados estudiantes suspendieron.
too-many students failed
'Too many students failed' (= 'More students than it was desirable / expected failed')
- b. Pocos estudiantes suspendieron.
few students failed
'Few students failed' (= 'Less students than usual / expected failed').
- c. Algunos estudiantes suspendieron.
Some students failed
'Some students failed'

1.1.2. The syntax of determiners and quantifiers: main claims and questions

Going now to more theoretical claims, the main debate that refers to determiners and quantifiers has to do with the notion of headedness within nominal constituents. While we will discuss this issue in detail in §6, in this subsection we will give some general guidelines that will be useful to consider the discussion that follows.

In traditional terms, determiners and quantifiers are seen as modifiers of the noun, which is the head of the construction –hence the use of 'adjective' to characterise both classes in traditional grammars–. However, since Abney (1987) a completely different position has emerged whereby the determiner –and by extension the quantifier– acts as a head that has the common noun in its complement. (29) corresponds to a representation following Chomsky (1965: 129); (30) represents the structure after Abney (1987), with the determiner heading the construction.



With many ramifications that we will explore in §6, the basic difference between the two proposals refers to three aspects of the relation between nominal constituents and the elements that take them as arguments.

a) Whether the presence of the determiner is necessary in order to turn the common noun – itself a predicate, expressing a set of properties– into an object that can saturate an argument position of the element that it combines with. If the role of the determiner is to turn the predicate into an argument, it would be expected that the head should be the determiner.

b) Whether the formal selectional restrictions of the heads that pick nominal constituents are satisfied by the determiner or by the common noun. Notice that here we talk about formal restrictions, not those referring to conceptual semantics: obviously, a nominal expression like *una cerveza* 'a beer' would combine better as the object of a verb like *beber* 'drink' than a nominal expression like *una bombilla* 'a lightbulb', but this can be explained by the different concepts that the nouns *beer* and *lightbulb* express, the former satisfying better our world knowledge understanding of what things are usually drunk. By 'formal restrictions' we rather refer to whether there are predicates that select specifically for nominal constituents with a determiner, or even for a determiner of a particular type. One potential case would be psychological predicates like *gustar* 'like', which require internal arguments with a determiner in Spanish even when they occupy a postverbal position (31). If this restriction is interpreted correctly as the verb selecting for a determiner, it would support the view that nominal constituents are projections of DP and not of NP –notice that there are no cases where a head selects for the modifier of another head–.

- (31) Me gustan *(las) manzanas.
 me like.3pl the apples
 'I like apples'

c) Whether the presence of a determiner is crucial for syntactic formal processes such as movement, case checking or case assignment, so that it can be argued that the syntactic label of a nominal expression without determiners is different from the one of a nominal expression that contains determiners. This aspect is complicated by the possibility that some nominal

expressions that do not have overt determiners might in fact have phonologically null versions of them, as we will see in §6.

These three problems have been discussed in proposals about the internal syntax of determiners. The current situation is that a growing number of scholars do not accept the DP-hypothesis of Abney (1987), which in contrast was virtually undisputed within generative syntax studies during the 90s and 00s.

There is a second dimension to this debate, and it is the possibility that not all types of determiners and / or quantifiers occupy the same positions. Even on the assumption that Abney (1987) was essentially right in his DP proposal, several basic facts suggest that one cannot simply assume that all determiners and all quantifiers occupy the same position within the nominal constituent. Consider, to begin with, the fact that in Spanish a cardinal numeral can, but does not have to, combine with a determiner.

- (32) a. Dos chicos vinieron.
 two boys came
 b. Los dos chicos vinieron.
 the two boys came

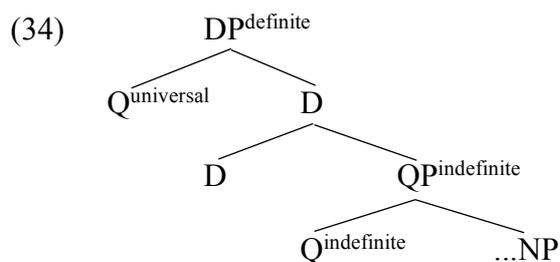
There are two interesting aspects of this contrast. The first one is that (32a) shows that the cardinal can act as a 'determiner' in the wide sense that it, alone, can license the preverbal subject position of an argument; however, in (32b) the determiner position is occupied by the definite article. Thus, the cardinal numeral can either appear in two different positions – related by movement or not–, or we must conclude that elements that do not occupy the D position can also license an argument. The second interesting aspect is that (32b) strongly suggests that within the structure of a nominal constituent we must make at least two positions available for determiners and quantifiers, so that there is syntactic space to host both *los* and *dos* in the same constituent.

Moreover, while a cardinal has to follow the article if it combines with it, a universal quantifier like *todos* 'all' must precede it:

- (33) Todos los chicos vinieron.
 all the boys came

It seems, again, that an additional position has to be made available within a nominal constituent, in the area of elements that are able to license the constituent in preverbal subject position.

These facts have triggered a second, parallel syntactic debate that we will address in detail in §7: how complex is the syntax of the space where determiners and quantifiers are hosted? Most authors that have studied the internal syntactic organisation of determiners and quantifiers have proposed a number of syntactic layers that correspond to different classes of elements, and have argued that these layers are ultimately responsible for the readings that determiners and quantifiers produce; as we will see in detail, Zamparelli (2000) proposes an organisation where non-universal quantifiers are below the position of determiners, while universal quantifiers are above them. Non-specificity, specificity and definiteness are defined within this space, either as layers or as movement operations involving two or more of the layers.



This research program gives rise to a number of questions that are the object of different debates, beyond the obvious question of how many layers should be postulated in syntax.

a) Assuming the existence of different layers in the determiner and quantifier domain, how is the work divided between syntax and the lexicon in order to make the different readings emerge? For instance, with respect to the cardinal numeral, is it inherently non-specific and it can only acquire specific readings by moving to the DP layer? This question is particularly relevant, in the context of Spanish, in the case of *un* 'a', which descriptively shares properties with both quantifiers and determiners. We will discuss this specific case in §8.

b) How are the layers ordered? What type of logic determines how they are ordered, and what are the combinations of layers that produce grammatical results?

c) Is the organisation of these layers autonomous or does it show significant parallels with the better studied and perhaps better understood organisation in the sentential domain? Abney (1987) in fact cited as supporting evidence for his DP proposal that it was a first step towards a parallel analysis of the functional structure in clauses and in nominal constituents, and Wiltschko (2014) has argued in some detail that nominal projections should be understood as conceptually different instantiations of the same basic primitives that are used to build clauses. In intuitive terms, DP is a projection whose role is to anchor the reference of the nominal, perhaps deictically, to the context of utterance. Tense, in the clausal domain, can be interpreted as essentially performing the same role, to anchor the truth value of a statement, perhaps deictically inside the temporal dimension, to the context of utterance.

We leave here the presentation of the main syntactic questions related to determiners and quantifiers, and move now to the semantic issues.

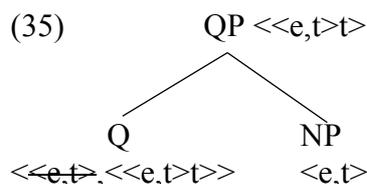
1.1.3. The semantics of determiners and quantifiers: main claims

As we have seen, there is a wide notion of determiner which puts together both quantifiers and determiners in the narrow sense, and which is justified by the fact that both elements can be used to license preverbal subjects. Not surprisingly given the existence of a parallel syntactic function, from the semantic side there have been attempts to find also a unified semantic account of the two groups. But before we discuss this issue, a small background is relevant with respect to the standard semantic analysis of quantifiers.

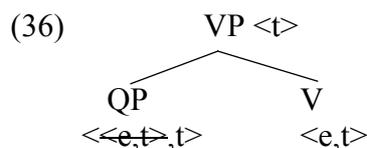
Semantically, quantifiers are viewed as binary functions that relate two sets (Lindström 1966, Montague 1969, Barwise & Cooper 1981, van Benthem 1984, Keenan & Stavi 1986). In Montague's notation, where the semantic type $\langle e \rangle$ represents an individual and the type $\langle t \rangle$ represents a proposition, quantifiers are of type $\langle \langle e, t \rangle, t \rangle$. Let us unpack what this means.

The formula expresses that a quantifier is a function that eats objects of type $\langle e, t \rangle$ – predicates– and produces a function of type $\langle \langle e, t \rangle, t \rangle$ –that is, a function from another predicate to a proposition–. Doing it step by step, the first part of the function is satisfied by the noun phrase that the quantifier combines with. For instance, when the quantifier *dos* 'two' combines with the noun phrase *chicos* 'boys', it takes the noun phrase as a predicate and the

combination obtained is of type $\langle\langle e,t\rangle,t\rangle$. (35) expresses this assuming the quantifier heads the combination



The second set, and the second predicate of type $\langle e,t\rangle$ is external to the DP structure. It is the predicate that takes the DP as an argument, for instance the verb *cantar* 'sing' in a sentence like *Dos chicos cantan* 'Two boys sing'. Again, schematically (36):



The quantifier, then, expresses a relation between two sets: the set of entities that satisfies the description of 'boy' and the set of entities that satisfies the description of 'sing'. The quantifier restricts the relation between the two sets with a number or a measure. In the particular case of *dos* 'two', the relation is obvious: there are two entities that both satisfy the description of 'boy' and 'sing', that is, there are two entities that are both boys and sing.

From a slightly different perspective, quantifiers are operators. Operators are semantic objects that have the capacity to manipulate the interpretation of constituents they are not directly combined with. Continuing with *dos* 'two', notice that in (37) it is possible to interpret that the expression *un libro* in actuality denotes two different books, each one read by one of the two boys.

- (37) *Dos chicos leyeron un libro.*
 two boys read a book
 'Two boys read a book'

Operators impose a particular type of semantic structure in natural language. Any operator must find a variable of the appropriate type, which is the constituent whose meaning is manipulated by it. In (37), the variable is *un libro*. The variable defines the scope of the quantifier, which is the syntactic constituent with which the operator is linked. Any operator that does not find a variable of the appropriate type produces ungrammatical results; technically, the situation where there is an operator but no variable associated to it is known as an infraction on the Condition on Quantifier Binding ('Every quantified phrase must properly bind a variable', May 1977) or Vacuous Quantification (Partee et al. 1990). (38) illustrates this situation: *cada* 'each' is a quantifier, and it does not find any variable in its scope to manipulate.

- (38) **Cada chico vio a Juan.*
 each boy saw DOM Juan

As we saw above, any operator needs to combine with a predicate within the nominal structure. This predicate internal to the structure is its restrictor, that is, a set of properties that delimits the types of entities that the operator quantifies. In our example *dos chicos* 'two boys'

the restrictor is the set of properties denoted by *chicos* 'boys'. Of course, the set of properties that restrict the operator does not need to be necessarily restricted to the noun used: any modifier that adds descriptive properties to the denotation of the NP will be included. In an example like *dos chicos con gafas* 'two boys with glasses', the quantifier does not simply count how many boys were there, but specifically how many boys with glasses. This makes adjectives, prepositional phrases used as modifiers and relative clauses all relevant to define the restrictor of an operator.

Some pronominal expressions cover both the operator and the restrictor: for instance, the pronoun *nadie* 'nobody', which is also quantificational, expresses both the quantifier ('zero') and the restrictor (roughly, 'humans'). In general, quantifiers that are expressed as pronouns or adverbs, and therefore do not combine with nouns, subsume the restrictor lexically (eg., *nunca* 'never' is restricted to time intervals, *nada* 'nothing' is restricted to non-animate entities.

(39) summarises the three components of a quantifier structure with another example:

- | | | | | |
|------|-----------------------|----------|--|--------------------------------|
| (39) | (Muchos) | (chicos) | | (suspendieron una asignatura.) |
| | many | boys | | failed a course |
| | [OPERATOR RESTRICTOR] | | | [SCOPE] |

So what happens with determiners in the strict sense, such as *el* 'the' or *este* 'this'? Here is where the semantic unification we mentioned in the first paragraph becomes relevant. The idea is that, despite some differences that we will discuss in §2, the semantic contribution of a strict determiner is essentially the same as the one we just described for quantifiers. This proposal is known as the theory of Generalised Quantifiers (Barwise & Cooper 1981, with the philosophical antecedent of Mostowski 1957; see also Higginbotham & May 1981, Keenan 1981).

Take the case of *el* 'the', and let us examine, following Barwise & Cooper (1981: §3), what the meaning contribution of this determiner is in a sentence like (40).

- (40) Los estudiantes aprobaron.
 the students passed
 'The students passed'

Assume that there is a defined set of students composed of 15 members, and that the subject in (40) refers to this group, which we assume the hearer can identify. Intuitively, the meaning of this sentence is not satisfied if 12 of the students passed and 3 failed, or if only one of the students passed. This situation in the real world is better described as (41), where we have changed the determiner.

- (41) Unos estudiantes (del grupo) aprobaron.
 some students of-the group passed
 'Some students of the group passed'

This shows us that using *los* 'the' or *unos* 'some' has implications for the relation between the set defined by *estudiantes* 'students' and the set defined by *aprobaron* 'passed'. In other words, choosing one or another determiner alters the interpretation of how many members are both in the set of being a student and in the set of passing an exam. If we use the definite article, each one of the 15 students has passed the exam, and if we use the indefinite article in the plural it is enough if only a subset of them passed. This is exactly the same contribution that we have described for quantifiers: expressing a relation between two sets. In §3 we will

go back to this property of the two types of articles, developing their quantificational character as Russell (1905) first proposed.

Consider now the interpretation of (42), where the contribution of the article is a bit more subtle.

- (42) El estudiante aprobó.
the student passed

Intuitively, this sentence is only true if there is an entity that is a student, that entity passed the exam and, moreover, the entity that is a student is uniquely identified in the context (see §3.2 below for more details about this): if in the context there is no unique student, but we have talked about three, the hearer would react to this formulation and would at least ask us to clarify which one of the three students we refer to. This implies that in the singular the definite article is giving the indication that there is one single entity that, in the context, satisfies the description of the restrictor. If that single entity, the only student that can be interpreted given the context, also happens to have passed the exam, then (42) is true.

The proposal, then, is that the objects of natural language that we have called strict determiners should also be treated semantically as quantifiers in at least the following respects:

- a) they are used to relate two sets (one of them denoted by the noun phrase they combine with)
- b) they can provide information with respect to a quantity, as it is the case with the definite article

We will see in §2 that, despite these similarities in their semantic analysis, there are clear differences in their grammatical behaviour. The reader should keep in mind while reading these pages that the extent to which it is possible –without twisting the facts– to unify quantifiers and strict determiners into a single class from a syntactic perspective is debatable.

1.2. *D-like and Q-like adjectives*

Before going deeper into the differences between determiners and quantifiers, a few remarks are in order with respect to a restricted number of adjectives that can also display some of the properties of determiners and quantifiers. The adjectives are the following (taking as a starting point RAE & ASALE 2009: §13.9a):

- (43) Adjectives that share properties with quantifiers
- a. numeroso 'numerous'
 - b. distinto 'different'
 - c. diferente 'different'
 - d. múltiple 'several'
- (44) Adjectives that share properties with determiners
- a. cierto 'certain'
 - b. determinado 'determined'
 - c. dicho 'said'
 - d. tamaño 'such'
 - e. semejante 'such'

We are excluding from this list one class entirely: the one of adjectives that share properties with pronouns –in the specific sense that they can express identity with an

antecedent or are used in reflexive constructions—, such as *mismo* 'self / same' or *propio* 'own'. We restrict ourselves to the adjectives that double as quantifiers or determiners in the strict sense. Moreover, with respect to RAE & ASALE (2009) we exclude from these lists adjectives that, even if they develop a use that is distinct from their use as adjectives, do not arrive to the syntactic stage where they can license preverbal subjects. Notice that all the adjectives listed have this capacity, sometimes restricted to the plural.

- (45) Adjectives that share properties with quantifiers
- a. Numerosos fontaneros vinieron.
many plumbers came
 - b. Distintos actores vinieron.
several actors came
 - c. Diferentes políticos vinieron.
different politicians came
 - d. Múltiples estudiantes vinieron.
several students came
- (46) Adjectives that share properties with determiners
- a. Cierta partido ha cometido una estafa.
certain party has committed a fraud
'A certain party has committed a fraud'
 - b. Determinado partido ha cometido una estafa.
determined party has committed a fraud
'A particular party has committed a fraud'
 - c. Dicho partido ha sido ilegalizado.
said party has been banned
'The party just mentioned has been banned'
 - d. Tamaña tontería me ofende.
such nonsense me offends
'Such nonsense offends me'
 - e. Semejante tontería me ofende.
such nonsense me offends
'Such nonsense offends me'

In contrast, other adjectives whose meaning also describes a quantity or some condition related to the identifiability of the nominal constituent lack this capacity. Among the adjectives listed in RAE & ASALE (2009) here are a few of those that belong to this group.

- (47) a. *Cuantiosos estudiantes vinieron.
considerable students came
- b. *Nutridos estudiantes vinieron.
considerable students came
- (48) a. *Susodicho partido fue ilegalizado.
above-said party was banned
- b. *Consabido partido fue ilegalizado.
well-known party was banned

These adjectives do express quantities (47) or inform the hearer about whether their referent is identifiable –and sometimes, how it is identifiable–, but they are not grammaticalised as determiners from this perspective. In fact, in some cases these adjectives still allow degree modification:

- (49) a. una fortuna muy cuantiosa
 a wealth very considerable
 'a very considerable wealth'
 b. un grupo muy nutrido
 a group very considerable
 'a very considerable group'

In contrast, the adjectives belonging to the group that can be used as proper quantifiers and determiners reject degree modification when they are used as such; this property can be used to differentiate between their proper adjectival use and their use as these functional items (50). This contrast shows that, in contrast to the group in (47) and (48), it is not just the meaning they express that connects them with determiners and quantifiers, but also their grammatical behaviour.

- (50) a. un grupo muy numeroso
 a group very large
 b. *Muy numerosos estudiantes vinieron.
 very numerous students came
- (51) a. una respuesta muy distinta
 an answer very different
 b. *Muy diferentes estudiantes vinieron.
 very different students came
- (52) a. una respuesta muy cierta
 an answer very true
 b. *Muy cierto partido fue ilegalizado.
 very certain party was banned
- (53) a. una razón muy determinada
 a reason very concrete
 b. *Muy determinado partido fue ilegalizado.
 very determined party was banned

There is, in general, an obvious relation between the meaning of the word as an adjective and the use as a quantifier or a determiner. Obviously, given that *determinado* 'determined' refers to the property of being concrete and identifiable, it is not surprising that it can be used as a determiner; because *numeroso* 'numerous' expresses a quantity, it is not surprising either that it can double as a quantifier. That said, the lexical meaning of the adjective is not all that counts, and sometimes the connection between the adjectival meaning and the determiner use is lost –as it is the case with *cierto* 'certain' in contemporary Spanish, even though it is possible to track a historical relation with the meaning that it has in constructions like (54), where it expresses a vague similarity to the class denoted by the noun it modifies (cf. Eguren & Sánchez 2007).

- (54) una cierta desazón
 a certain unease
 'something that is an unease from some perspective'

Notice, along the same lines, that even though *cierto* and *determinado* express specificity without presupposing that the hearer can identify the referent (Eguren & Sánchez 2007), other

adjectives that would obviously be able to describe the specificity of an object, such as *específico* 'specific' cannot be used as determiners.

- (55) *Específico chico vino.
specific boy came

Therefore, the semantics is not all that counts. The meaning of the adjective must be of a type that makes it compatible with the semantic function of quantifiers and determiners, but beyond this there has to take place a formal grammaticalisation process that allows the item to be used as a member of the relevant functional category. See also, along these lines, Eguren & Sánchez (2003) on the historical evolution and synchronic grammatical behaviour of *otro* 'other'.

It is possible to state a generalisation that distinguishes between the quantifier-like adjectives and the determiner-like adjectives. All the quantifier-like adjectives display this role in the plural. Notice that all the examples in (45) above involve plural subjects. (56) shows that as soon as the subject is singular the quantifier-like adjective cannot be used to license the subject in preverbal position.

- (56) a. *Numeroso fontanero vino.
many plumber came
b. *Distinto actor vino.
several actor came
c. *Diferente político vino.
different politician came
d. *Múltiple estudiante vino.
several student came

One could blame the meaning expressed by the adjective in two of these cases: (56a) and (56d), given that the lexical meaning assumes a plurality of entities. However, this explanation is not so obvious in the case of (56b) and (56c), given that –when used as adjectives– both elements allow a reading in the singular where the distinction is established between the singular DP they build and an entity assumed in the discourse, perhaps previously mentioned (see Laca & Tasmowski 2003 for this restriction in French, and Eguren & Sánchez 2010 for a discussion of this in Spanish).

- (57) Tienes que leer un libro distinto.
must.2sg to read a book different
'You must read a different book'

This restriction does not extend to the adjectives that double as determiners in the strict sense; note that in (46) above the subjects are singular. The exception for some speakers is the adjective *determinado* 'determined'. As Eguren & Sánchez (2007) note, in the singular some speakers cannot license the preverbal subject with this adjective and must add a determiner (47).

- (58) Un determinado partido ha sido ilegalizado.
a determined party has been banned

In an informal study we conducted with speakers of European Spanish, we saw that there are at least two groups. The first group agrees with Eguren & Sánchez (2007) in preferring

(58) to (46b), while the second group accepts both. For both groups, the plural version does not require another determiner, that is, (59) is equally acceptable for both groups.

- (59) Determinados políticos vinieron.
determined politicians came

Both groups allow also the singular version without a determiner in object position, or after prepositions.

- (60) Vi a determinado político.
saw.1sg DOM determined politician
'I saw a certain politician'

We have, thus, an instance of microvariation in the use of this adjective.

Leaving the potential complication of *determinado* behind, the fact that all quantifier-like adjectives are restricted to the plural is reminiscent of a similar restriction in the domain of quantifiers: cardinal numerals. Notice that every numeral –we leave aside *un* 'one' for reasons that will be discussed in §8– forces the NP it combines with to be grammatically plural (Borer 2005).

- (61) a. cero libros
zero books
b. uno coma dos libros
one point two books
c. veinte libros
twenty books

This fact suggests that the syntactic position of quantifier-like adjectives should be the same, or closely related to, the one occupied by numerals –the difference, obviously, being just in the lexical meaning of each one, given that quantifier-like adjectives do not express precise cardinality values–.

In contrast, in the domain of determiners in the strict sense there is no documented case –to the best of our knowledge– where the determiner is forced to combine with a plural noun phrase. If the position occupied by determiner-like adjectives is the same, or closely related to, the one that items like *el* or *un* occupy, the fact that they are available both in singular and plural becomes easier to understand.

This class of adjectives have been studied in detail by Eguren & Sánchez in a series of articles (2003 for *otro*, 2007 for *cierto* and other adjectives used to express specificity, and 2010 for *diferente* and *distinto*). Their analysis in all cases provides a detailed description of their semantic and syntactic distribution, and the grammaticalisation process that explains the evolution from adjective to determiner or quantifier, but it does not provide a formal account of how both uses survive in contemporary Spanish. Fábregas (2018) attempts to provide a formalisation of why both uses can persist. The ingredients of the analysis are the following:

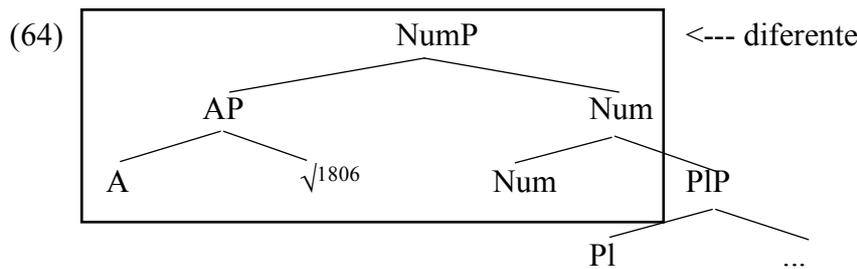
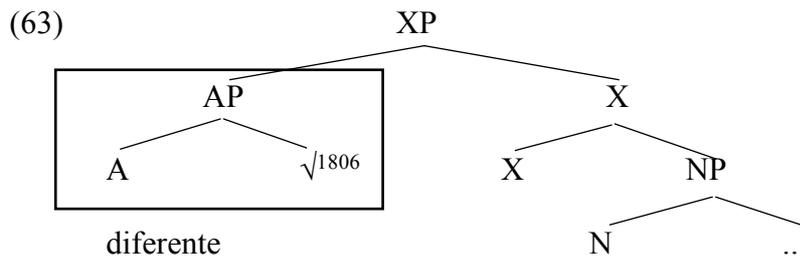
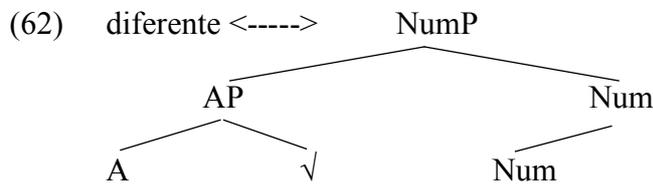
a) Adjectives are modifiers, but they are not necessarily restricted to one type of semantic object. While most adjectives are introduced in the NP area, adding descriptive properties to the denotation of a common noun, nothing blocks in principle that –if they express the right semantic notion– they can also be used as modifiers of other notions such as quantification or even definiteness / specificity.

b) However, the semantic is a necessary but not sufficient condition. The double role of the adjective must be somehow codified grammatically, specifically as part of the information about the features that the lexical element can identify in the structure.

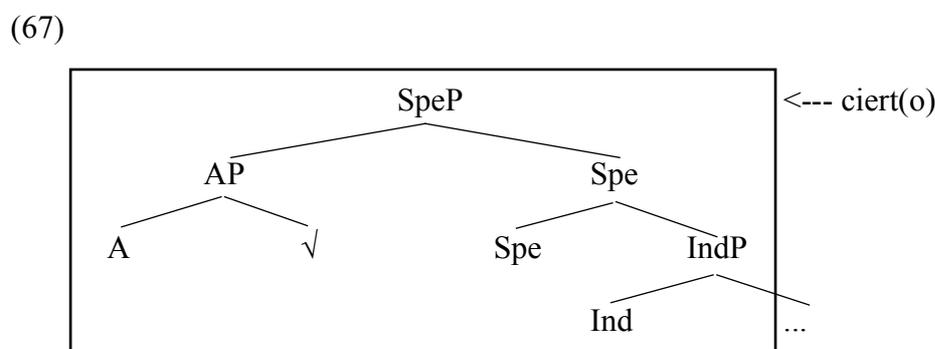
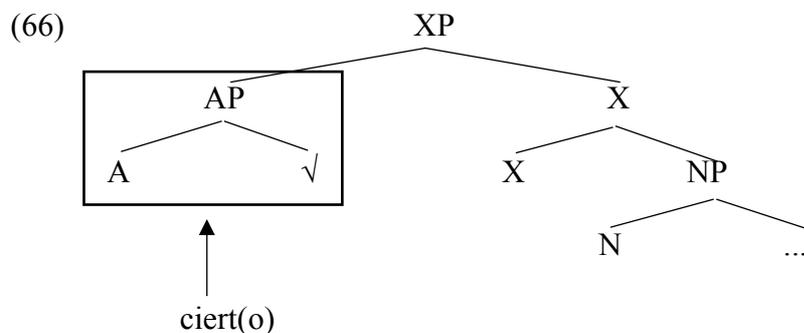
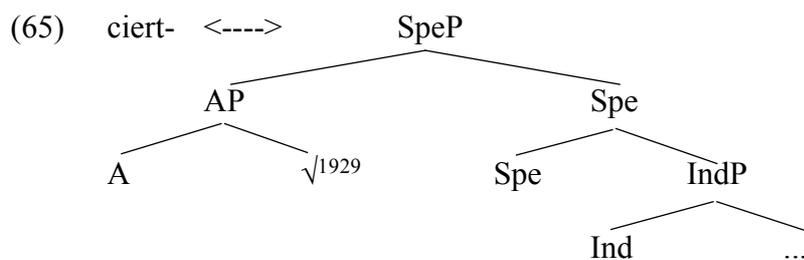
c) The main difference between quantifier-like and determiner-like adjectives is syntactic: the first group is introduced in the quantification area, in the same position as cardinal numerals, and the second group is introduced as modifiers in the determiner area.

d) When used as determiners or quantifiers, the items identify not just the features corresponding to the modifier, but also those expressed by the head that they modify. Technically, Fábregas (2018) assumes Phrasal Spell Out (Caha 2009): a lexical exponent can identify any syntactic constituent, not just terminal nodes (heads).

(62) presents the lexical entry of *diferente*. When used as an adjective, the exponent only spells out the specifier (of category AP; cf. 63); when used as a quantifier, it spells out the whole constituent, and therefore occupies the space that a quantifier could have occupied (64).



Mutatis mutandis, the same can be said of a determiner-like adjective, such as *cierto* 'certain'. In this case, it is introduced as a modifier of a D head responsible for specificity. We will go back to the nature of specificity in §4.



Independently of whether this technical approach is fine, the goal it tries to achieve is to provide an explanation of why not any adjective that expresses a property related to quantity or identificability can be used as a determiner: the meaning has to be compatible with the heads responsible for cardinality and specificity, but in addition to that the specific lexical item must be listed in the language as able to spell out the complex structure that involves also the relevant functional head, not just the AP structure.

With this background in mind, we will now develop the details of the questions and issues that we have introduced already. The next section will discuss the differences between quantifiers and determiners in the proper sense.

2. Determiners against quantifiers: tests and properties

In section §1 we showed that it is possible to call of a macroclass of determiners in the wide sense that puts together two types of entities that combine with common nouns: quantifiers and determiners in a restricted sense. This macroclass is granted by two characteristics, one syntactic and another semantic: both types of elements license preverbal subjects, and both elements have been proposed to be amenable to an analysis in terms of generalised quantifiers. In addition to these two similarities, there are other more superficial parallelisms in the behaviour of the two classes –more superficial because they involve properties that are not exclusive of the two elements–. In Spanish, most quantifiers and most determiners agree in gender and number with the nouns.

- | | | |
|------|-----------|--------|
| (68) | a. el | chico |
| | the.m.sg | boy |
| | b. la | chica |
| | the.f.sg | girl |
| | c. los | chicos |
| | the.m.pl | boys |
| | d. las | chicas |
| | the.f.pl | girls |
| (69) | a. mucho | calor |
| | much.m.sg | heat |
| | b. mucha | agua |
| | much.f.sg | water |
| | c. muchos | chicos |
| | many.m.pl | boys |
| | d. muchas | chicas |
| | many.f.pl | girls |

However, most adjectives also follow this agreement pattern –a fact that also justifies that traditional grammars use the term 'determinative adjectives'–.

However, this does not mean that the behaviour of quantifiers and strict determiners should be seen as entirely homogeneous. This section addresses the differences between the two subclasses of elements, and provides a few tests that allow to determine where an item should be classified.

2.1. Scope and scope ambiguities with quantifiers

We noted that quantifiers are operators, and as such they take variables under their scope. The operator manipulates the meaning of the variable, and if the operator is quantificational in nature this means that the operator can modify the interpretation of the number or measure of the variable.

Consider (70).

- (70) Cinco chicos trajeron tres libros.
 five boys brought three books

This sentence has two interpretation; in the first one, we end up with 15 books, and in the second one we end up with only 3 books. In the interpretation where we have 15 books, the quantifier *cinco* 'five' manipulates the nominal *tres libros* 'three books' as a variable, and multiplies its number –three– by the number it expresses –five–, producing the reading that there are 15 books (3x5). This is a typical situation for an operator: the notion that it expresses is extended to the interpretation of a constituent that is inside its scope, acting as its variable. Let us call this long-distance manipulation of meaning.

The second property that is illustrated by (70) and is considered typical of quantifiers is that (70) displays a scope ambiguity (Klima 1964, Chomsky 1975, Reinhart 1976, May 1977, 1985, Kiss 1991, Bartos 2000). The interpretation described in the paragraph above is the one triggered when the nominal *tres libros* 'three books' stays in the scope of the operator *cinco* 'five'. But because that nominal contains itself an operator, *tres* 'three', it can escape from the scope of the operator *cinco* 'five', in which case we obtain the reading that there are also three books: the sentence is interpreted as 'There are three x, where x is a book, such that five y, where y is a boy, brought them'. An expression that contains a quantifier, therefore, can

produce scope ambiguities depending on whether it stays under the scope of another quantifier, or it escapes from it.

Therefore, one direct way of identifying whether something is a quantifier is to see whether it gives rise to meaning ambiguities in interaction with an object that we already know is a quantifier. Among the typical objects that have been argued to act as quantifiers in natural language we have the negation (71a), modal operators (71b) and of course pronouns like *todos* 'all' (71c).

- (71) a. No vinieron muchos estudiantes.
 not came many students
 'Many students did not come'
 b. Debes leer dos libros.
 must.2sg read two books
 'You must read two books'
 c. Todos los hombres quieren a dos mujeres.
 all the men love DOM two women
 'Every men loves two women'

Let us examine the scope ambiguity in each case. In (71a), if the quantifier *muchos* 'many' stays under the scope of the negation, we obtain a reading where we say that few students came (that is, 'not many' or in a frequent way of representing the scope, 'not' > 'many'). If *muchos* escapes from the scope of the negation, we say that there were many students that did not come –for instance, that we expected a particular set of students to come, and they did not show up– (that is, 'many' > 'not').

In (71b), the reading where *dos libros* 'two books' is below the modal operator ('must' > 'two'), we say that you have to read two books, but we have no specific books in mind when we say this. It does not matter to me whether you read *It* and *The Shining* or whether you read *Pride and Prejudice* and *Sense and Sensibility*. When we have the inverse scope relation ('two' > 'must') we say that there are two books in particular such as you must read them: for instance, you must read *Catcher in the Rye* and *To Kill a Mockingbird*, and any combination of two other books would simply not work.

In (71c) the reading where *dos* 'two' is in the scope of *todos* 'every' essentially says that for every man his love is shared with two different women, no matter what their identities are. In the inverse scope reading ('two' > 'every'), each man loves exactly the same two women –for instance, Marie Curie and Vera Rubin–.

Evidence that this scope ambiguity depends on the presence of a quantifier that combines with the noun phrase comes from the absence of an ambiguity in the cases where the noun phrase lacks any type of determiner or quantifier –that is, with so-called bare noun phrases–.

- (72) No vinieron estudiantes.
 not came students
 'No students came'

In (72) the only interpretation is that no member of the class that can be described as 'students' came. Bare noun phrases must always stay under the scope of operators that are above them in the syntactic structure, and have no possibility to escape from it. If the bare noun could escape from the scope of the negation in (72) we would have obtained a reading along the lines of 'there were students that did not come', something that does not correspond to the speaker's intuitions here.

2.2. *Limits of the notion of scope and scope ambiguities with strict determiners*

Let us now move to the strict determiners, such as *este* 'this' and *el* 'the', and examine how many of these behavioural properties they also display. In general, while individual members of the class might share some of this behaviour, the conclusion will be that they do not act like quantifiers in every respect in a systematic way.

Let us start with whether the strict determiners are able to affect, in long distance, the interpretation of other nominal expressions, taken as variables. On the surface, it seems that the definite article has this possibility in an example like (73), where perhaps not by chance *los* 'the' is interpreted in a similar way to *todos* 'all': it expresses a group of entities, unique and identifiable, and it denotes that the predicate is true of every single member of that group.

- (73) Los chicos leyeron un libro.
 the boys read a book
 'The boys read a book'

Importantly, there is one interpretation of this sentence where each boy read a different book, that is, where despite the singular nature of *un libro* 'a book' the nominal constituent is interpreted as referring to a group of books, perhaps as many as boys are in the group. This is similar to the effect that a quantifier has.

However, note that even in this situation it cannot be claimed that the determiner extends to the other nominal all its properties. As we have already mentioned, the definite article conveys the idea of identifiability through uniqueness, and carries definiteness –essentially in all cases–. This uniqueness requirement and the definiteness are not extended to the other nominals in their syntactic context. In (73), the interpretation of *un libro* 'a book' is necessarily indefinite, that is, the meaning of this nominal is not manipulated in such a way that we refer to a book that is uniquely identifiable in the context.

A similar observation can be made with respect to demonstratives. (74) allows for an interpretation where there is more than one book, like the article. Demonstratives, as opposed to articles, incorporate lexically a deictic meaning. Deixis (Fillmore 1975) is a pragmatic notion used to describe the situations where the reference of an expression is determined by taking into account the context of utterance, that is, the place and time where the speaker and the hearer are located when the proposition is asserted. In this sense, *estos* 'these' identifies the reference of the nominal by their proximity to the speaker –in time or place within the speech context, or the extralinguistic reality– (Eguren 1999).

- (74) Estos chicos leyeron un libro.
 these boys read a book
 'These boys read a book'

Note that the deixis information is never extended to the other nominals. That is: *un libro* 'a book' in (74) is never interpreted as taking its reference deictically by proximity to the speaker. Consider now possessives.

- (75) Tus amigos leyeron un libro.
 your friends read a book
 'Your friends read a book'

Like demonstratives, possessives can incorporate a deictic component, in this case 'person': the distinction between the first and the second person generally corresponds to a distinction between speaker and hearer, which are notions that must be necessarily defined in the context

of utterance. They trigger definite readings where the reference of the nominal is identified by their relation to the deictically anchored person. Again, this person deixis is never extended to the nominal *un libro* 'a book' in this example: there is no entailment that the book belongs to the hearer, or that it is to be taken as definite.

This situation suggests that, to the extent that some determiners in the plural are able to operate over the reference of a variable, this might be a property related to plural number and not to the determiners themselves. The readings that we have identified where in the same sentence there is a plural determiner and another nominal in singular that is interpreted as plural are distributive readings: given a group of entities, the event is performed by each one of these entities individually, not by all of them collectively –and therefore it is possible that each one of them read a different book–. Link (1983) famously proposed a distributivity operator responsible for these readings, in relation to the presence of a plural expression in the linguistic utterance. This could be a way of accounting for the pattern of facts we have just seen.

It is important to keep in mind, however, that even if it turned out to be the case that strict determiners themselves are able to control the interpretation of variables, this capacity does not extend to their uniqueness or their deictic information. At best, from this perspective determiners would contain an operator responsible for their quantificational aspects, and in addition to that other syntactic or semantic components that do not act as operators in the same sense that we described above.

However, the proposal that strict determiners do contain a component that acts like the quantifiers that we have described above faces an important challenge. We have seen that another property of quantifiers is that they allow the nominal that contains them to escape the scope of another quantifier, triggering scope ambiguities. We have also seen that this ambiguity is not triggered when we have a bare noun. The question now is whether a nominal that contains a strict determiner also shows this flexibility. Let us see this –we will not use at this point examples containing the form *un* 'a', given the debate about whether it belongs to the class of quantifiers or the class of strict determiners (cf. §8)–.

Let us start with the definite article (76).

- (76) Algunos chicos vieron al profesor.
 some boys saw DOM-the teacher
 'Some boys saw the teacher'

(76) displays an ambiguity between a distributive and a collective reading (respectively, 'The boys saw the teacher individually, at different times' and 'The boys saw the teacher all at the same time, together'), but in both cases the expression *el profesor* 'the teacher' is interpreted as a unique, singular entity that the hearer is assumed to identify. No ambiguity alludes to a difference in interpretation in what the nominal expression refers to.

Similarly, there is no ambiguity with demonstratives and possessives of first and second person.

- (77) a. Algunos chicos vieron a este profesor.
 some boys saw DOM this teacher
 'Some boys saw this teacher'
 b. Algunos chicos vieron a mi profesor.
 some boys saw DOM my teacher
 'Some boys saw my teacher'

Does this necessarily mean that the semantic proposal of generalised quantifiers is wrong? Not really. One alternative account would be to say that strict determiners –with the potential exception of the indefinite article, if it belongs to this class– can never function as variables under the scope of quantifiers, and therefore their interpretation can never be affected by the presence of an operator above. This would not exclude that they contain a quantifier inside their structure, but such quantifier would be just one of the components of their meaning, and in addition to it there would be information about how reference is obtained –deixis, uniqueness, etc.– that is not showing the behaviour that we would expect of operators at least in the sense that they do not extend the interpretation in long distance.

In fact, if we look at third person possessives we automatically see that they do allow an interpretation as variables bound by a higher operator (in contrast to first and second person pronouns, that do not act as variables except for some restricted contexts described in detail in Kratzer 2009). (78) allows an interpretation where each boy brought his own book to the class, and therefore where the nominal *su libro* 'his book' is interpreted with plural reference.

- (78) Todos los chicos trajeron su libro a clase.
 all the boys brought their book to class
 'All the boys brought their (own) book to class'

Taking this option to a syntactic extreme could imply that strict determiners contain a quantifier within their structure, roughly along the lines in (79): (79a) would be the projection of quantifiers –call it QP for the time being, and we will go back to the issue in more theoretical terms in §7– and (79b) would correspond to a strict determiner, where the operator structure is dominated by layers responsible for reference-related notions such as definiteness and specificity.



One potential problem of this approach is that strict determiners can in fact combine overtly with some quantifiers –not in all cases, though–. For instance, *cada* 'each' does not combine with any overt determiner, but *muchos* 'many', *dos* 'two' and the other cardinals, or *pocos* 'few' are able to do so.

- (80) a. *{el / este / mi} cada chico
 the this my each boy
 b. sus muchos amigos
 his many friends
 c. estos dos estudiantes
 these two students
 d. las pocas explicaciones que ha dado
 the few explanations that has given

However, we cannot exclude the possibility that these quantifiers, rather than being heads materialising Q, are in fact modifiers of that head. One piece of evidence that these elements should be seen as modifiers that are closely related to the quantification area is that they can be coordinated with other modifiers.

- (81) a. muchas y grandes voces
 many and loud screams
 b. dos y únicos motivos
 two and only motives
 c. pocas e insuficientes explicaciones
 few and unsatisfying explanations

We will go back to the nature and position of quantifiers in the nominal domain in §7.

Thus, to conclude this discussion, the strict determiners contrast in their surface behaviour with quantifiers with respect to their scope possibilities. This can be taken as an empirical test to determine the adscription of items to one of the two classes, even if it does not refute entirely the proposal that in semantic terms strict determiners share a type with quantifiers as $\langle\langle e,t \rangle, \langle\langle e,t \rangle, t \rangle$ functions. What is also clear, from a semantic perspective, is that strict determiners add information about reference that is not codified in the meaning of a quantifier, something that is potentially related to the fact that they cannot be taken as variables by another quantifier.

2.3. De dicto and de re readings with the definite article

The fact that strict determiners contain information used to determine the reference of the nominal constituent produces two types of interpretations that nominal structures that lack a strict determiner do not produce. The distinction is automatically visible with noun phrases in combination with the definite article *el* 'the', such as (82).

- (82) el presidente de Francia
 the president of France

(82) can be used in two senses: in order to refer to the individual that at the moment of utterance fits the description of the NP –that is, in August 2018, Emmanuel Macron– or to describe a set of properties that at each moment would be matched by a single individual whose concrete identity varies across time. The first interpretation, where (82) equals Emmanuel Macron, is called *de re* reading –literally, 'reading about the entity'–. The second reading is called *de dicto* –literally, 'about the saying'–. This distinction was discussed by Russell (1905) and further developed in Quine (1960), although this second author treated it in a sense that overlaps with the distinction between specific and non-specific interpretations (§4 below) which also allowed to talk about the difference in the case of indefinite quantifiers.¹

Speakers can use (82) in either meaning, but the two readings are not identical. Quine (1960) noted that the distinction can be tested by embedding the proposition that contains (82) under an attitude verb –such as *creer* 'believe', *pensar* 'think', *querer* 'want', *recordar* 'know', that is, verbs used to describe the content of the mental states of humans, be it their perceptions, their desires, their beliefs, etc.–. Take a sentence like (83):

¹ Specifically, Quine (1960) argued that the distinction is behind the two interpretations that can be given to the sentence in (i): that John believes that some particular person is a spy (de re, in Quine's description) and that John believes that there is at least one person that is a spy –that is, that spies exist–. However, these two readings are closer, as we will see, to the distinction between specific and non-specific interpretations of indefinite quantifiers, where in the specific reading the speaker has some concrete entity in mind.

- (i) John thinks that someone is a spy.

- (83) María cree que ha visto al presidente de Francia.
 María believes that she has seen DOM.the president of France
 'María believes that she has seen the president of France'

This sentence can mean in fact two different things, depending on the *de dicto* or *de re* reading of *el presidente de Francia*. In the first reading, María believes that she has seen the person described by the NP 'president of France', and in the second reading María believes that she has seen Emmanuel Macron. Only in the second case is (83) truth equivalent to (84).

- (84) María cree que ha visto a Emmanuel Macron.
 María believes that she has seen DOM Emmanuel Macron
 'María believes that she has seen Emmanuel Macron'

If María believes, incorrectly, that the current president of France is Nicolas Sarkozy and she has seen Emmanuel Macron, (83) is false in the *de dicto* reading, but true in the *de re* reading, simply because María has seen the individual that is the president of France now, but she did not believe that the person she was seeing was the one that matches the description 'president of France'.

To continue with the distinction, note that the most natural interpretation of a generic sentence is *de dicto* (85).

- (85) El presidente de Francia nombra al primer ministro.
 The president of France appoints the Prime Minister

What (85) says is that whoever, at a particular point, satisfies the description 'president of France' has the power to appoint the Prime Minister. When Emmanuel Macron stops satisfying this description, he will still be the same person –*de re*–, but he will not have the power to appoint the Prime Minister.

These two readings are a property of so-called definite descriptions, which are noun phrases combined with a definite determiner, article or otherwise. Note that possessives and demonstratives can also trigger the two readings, even if they are less clear in the second case due to deixis.

- (86) Mi pareja decide adónde vamos de vacaciones.
 My partner decides where go.1pl of holidays
 'My partner decides where we go on holidays'

(86) has the same two readings as before. Imagine that my partner is called Hortensia. In the *de re* reading, I say that Hortensia is the one that decides where we go on holidays; she might have done that before being my partner and might continue doing so if we break up; no other person tells me where to go on holidays. In the *de dicto* reading, I say that whoever is my partner at a particular moment decides where we spend the holidays. If now my partner is Hortensia, she is the one that decides, but before her it was Heliodora that decided, and if we break up someone else will.

- (87) Este escritor me gusta mucho.
 this writer me likes a.lot
 'I like this writer a lot'

Here, the two interpretations might even influence in what properties the speaker likes about the person referred to by *este escritor* 'this writer'. In the *de re* reading, the speaker likes the person –assume that is Stephen King–, while in the *de dicto* reading the speaker likes whoever wrote a particular text, perhaps ignoring who that person is. In the case of an anonymous text like *Lazarillo de Tormes*, only the *de dicto* reading makes sense in (87), unless the speaker has some knowledge about the identity of the author of that book which the rest of us lacks –in which case the *de re* reading can be available–.

In the case of quantifiers, the existence of the two readings is not always possible. Consider (88), with a universal quantifier.

- (88) María cree que conoce a todos los estudiantes del curso.
 María thinks that knows DOM all the students of.the course
 'María thinks that she knows every student of the course'

María's belief can be that she knows everybody that satisfies the description 'student of the course' (*de dicto*) or that she knows a set of individuals that corresponds to the students of the course, say Juan, Luis and Mónica, even if María might ignore that they are students in that course (*de re*). Thus, the two readings are possible, but note that the nominal expression is definite: it contains *los* 'the'. In the use of *todo* 'each' without the definite article, only the *de dicto* reading is available.

- (89) María cree que conoce a todo estudiante del curso.
 María believes that knows DOM every student of.the course
 'María believes that she knows every student of the course'

Something similar happens with *cada* 'each'.

- (90) María cree que conoce a cada estudiante del curso que ha tomado una asignatura con
 Maria believes that knows DOM each student of.the course that has taken a course
 with
 ella.
 her
 'María believes that she knows each student of the course that has taken a subject with her'.

Evaluative indefinite quantifiers like *muchos* 'many', *pocos* 'few', *suficientes* 'enough' or *bastantes* 'quite' can also trigger the *de re* reading. (91) is naturally interpreted as María's belief being that a particular quantity of entities that satisfy the description of 'student' did something, but it can also mean that a group of definite individuals (Juan, Luis, Pedro...) that is evaluated as big, small, etc. performed the action, without María necessarily knowing that they are students.

- (91) María cree que {muchos / pocos / suficientes / demasiados} estudiantes fueron a la
 María believes that many few enough too.many students went to the
 fiesta.
 party

Also, the cardinals allow the two readings. (92), for instance, can mean that María's belief is that the stealing was performed by two people, who had to be students, or that she believes

that the stealing was performed by Mariano and Soraya, who happen to be two students in the course.

- (92) *María cree que dos estudiantes han robado la estatua.*
 María believes that two students have stolen the statue
 'María believes that two students have stolen the statue'

In this case, what might be behind the two readings is the existence of partitive readings ({many, few, enough, two} of the students in a particular group), which relates in turn to specific interpretations. We will get back to the two interpretations in §4.

The conclusion is, then, that unless a notion related to identifiability, such as definiteness or specificity, is involved in the interpretation of the nominal expression, there is no possibility to have the two readings that we have described. Any definite noun phrase has the two options, but quantifiers that can also get a specific reading also display a similar contrast. The two readings are therefore directly related to the referential properties defined by strict determiners. The question, which we leave open now, is how indefinite quantifiers come to express notions like specificity, which in fact relate to the domain of reference. §7 will offer some proposals about this property.

3. Definite and indefinite determiners: tests and properties

Now that we have described the main differences between quantifiers and strict determiners, we will use the following two sections to discuss in detail the notions that strict determiners express, with particular attention to two concepts: definiteness and specificity. This section concentrates on how definiteness is codified grammatically in Spanish, while the next one will treat in detail the notion of specificity, which is almost completely restricted to indefinite noun phrases –with exceptions that we will point out in due course, and which depend on a particular understanding of what should count as specificity–. After presenting the notion of definiteness and the tests that allow to differentiate between definites and indefinites (§3.1.) we will present in detail the distribution of the definite article (§3.2.) and the so-called indefinite article (§3.3.).

3.1. General issues

The main difference between the form *el* and the form *un* has to do with the syntactic and pragmatic notion of definiteness; before describing in detail the distribution of the two determiners in Spanish, let us discuss what definiteness is about.

3.1.1. The notion of definiteness

Intuitively and in vague terms, definiteness is the property of some referential expressions that convey the information that the addressee should be able to identify the referent. Despite the straightforward appearance of this definition, it is filled with problems that have been the object of many discussions (among others, Vendler 1968, Hawkins 1991, Du Bois 1980, Neale 1990). Part of the problem is that –to the extent that the definition above makes direct reference to the addressee, a participant in the speech act– the notion is put in pragmatic terms, which brings up the problem of what type of information is conveyed grammatically in a language that has determiners in order to produce the desired pragmatic effect. On the assumption that pragmatics is not directly grammaticalised in a syntactic structure, as opposed to semantics, the question is what semantic notion underlies definiteness.

The first proposal in order to account for this property is Russell (1905), who bases his definition in the notion of uniqueness: a sentence containing a definite expression of the form

el x 'the x' is true if there is exactly one entity that satisfies the description of x in the relevant context of utterance.

- (93) El perro ha ladrado.
the dog has barked

(93) is therefore true if there is exactly one dog in the context of utterance (and that dog has barked). Following Heim (2011), (94) represents the denotation of the definite article for Russell (1905) –note that here the uniqueness condition is represented as part of the denotation, not as a presupposition–.

- (94) $[[el]] = \lambda P.\lambda Q.\exists x[\forall y[P(y)\leftrightarrow x=y] \& Q(x)]$

That is, the definite article –following the theory of Generalised Quantifiers that we discussed in §1– is a binary function that takes two predicates (P and Q) and additionally has quantificational force –there exists one x–. The uniqueness condition is enforced by the biconditional statement that, in that context, any object y that satisfies the property described by the common noun is identical to x. Strawson (1950), following Frege (1892), revised Russell's analysis proposing that the uniqueness condition is not part of the denotation, but a presupposition (95). This position is assumed by most contemporary semanticists. Notice that in (95) the uniqueness statement that any y that satisfies P is identical to x is restricting the function that applies the predicate P, so that if the condition is not satisfied the formula does not output a truth value.

- (95) $[[el]] = \lambda P:\exists x\forall y[P(y)\leftrightarrow x=y].\lambda Q.\exists x[P(x) \& Q(x)]$

This proposal faced an immediate challenge with plural noun phrases combined with the definite article: that is, if we talk of *los perros* 'the dogs' and we assume that there are four dogs, the uniqueness requisite is not satisfied by any of the individual dogs. The solution proposed for these cases (Sharvy 1980) was to invoke maximality: if the dogs are a, b, c and d, the formula $\text{Maximal}([[dog]])$ consists of the element a+b+c+d, which is a singleton. Maximality guarantees then that the uniqueness condition is satisfied by the maximal group a+b+c+d, which is unique in the context of speech. This corresponds to our intuition about the meaning of (96): that every entity that is a dog in the context has barked.

- (96) Los perros han ladrado.
the dogs have barked

The specific way in which uniqueness should be interpreted is also subject to debate, in many ways to turn it into a notion that can be operationalised in pragmatics. Ariel (1988, 1990) relates uniqueness with the notion of discourse accessibility, defined following Sperber & Wilson (1986) in terms of how easy it is to recall that notion from the previous discourse or the context of speech –more accessible assumptions are those that are easier to recall–. Abbott (2010) points out that this notion is insufficient to the extent that accessibility already presupposes uniqueness (accessing a referent in memory already implies that said referent is definite, that is, identifiable by the addressee). Gundel et al. (1993) take a different route based on the givenness degree associated to the nominal expression: an expression has a higher degree of givenness if the addressee, at that particular context, is able to identify the intended referent of that nominal expression based solely on the description provided by the noun phrase. For this reason, the notion of definiteness is associated to entities that have been

activated in the discourse, as in the example (97), where the definite nominal refers anaphorically to an indefinite expression:

- (97) [Un perro]_i ladró. [El perro]_i tenía el pelo blanco.
 a dog barked the dog had the hair white
 'A dog barked. The dog had white hair'

Birner & Ward (1998), however, point out that the definite article is used in some contexts where it is not implied that the hearer can identify the referent –maybe the speaker does not know the identity either–. (98) offers a couple of examples.

- (98) El ganador del concurso viajará a Noruega.
 the winner of.the competition will.travel to Norway
 'The winner of the competition will travel to Norway'

In (98) nobody can identify the winner before the competition has taken place. Birner & Ward (1998) therefore substitute the notion of identificability with one of individuation, which is weaker: individuation means that the speaker believes that the addressee is able to individuate the referent under discussion from others within the context. Individuation is performed by a property that differentiates that referent from all the other referents in the discourse, for instance that the referent is the unique winner of the competition, and that he or she will travel to Norway.

From the perspective of uniqueness, then, the proper way in which this notion connects with the pragmatic use of definiteness is unclear, but uniqueness is not the only approach to what definiteness expresses.

One approach that is particularly common in traditional grammars (for instance, Alcina & Blecua 1975) is to base the distinction in (discourse) familiarity. From this perspective, the main property of definite expressions is that they designate discourse referents that have already been established in the discourse. Indefinite expressions introduce new discourse referents, as in (97), while the definite expression refers to those referents at the point at which they have already been introduced (see in particular Heim 1982 for a modern formulation of this idea). This perspective also needs to use the discourse and the discourse context as a tool to describe the meaning of the grammaticalised definite and indefinite markers, and in principle cannot deal with cases where the definite expression lacks an antecedent –that is, when the definite article can be used in the first mention of a nominal expression–. (99) presents a few examples of this.

- (99) a. No te caigas al suelo.
 not you fall to.the floor
 'Don't fall to the floor'
 b. El sol está rojo.
 the sun is red
 'The sun is red'

These cases are, interestingly, directly accounted for in a theory of uniqueness, because they refer to entities that under normal circumstances are always unique in the discourse –in our planet there is only one object that satisfies the description 'sun', and wherever we are there is only one specific space that satisfies the description 'floor'–, but within Heim's (1982) theory they cannot be directly interpreted. Heim proposes a rule of accommodation for this cases without an antecedent such as that the addressee must find a contextually relevant

referent that satisfies that description and can be an already established discourse referent because it is part of the common knowledge of speaker and addressee.

Löbner (1985) is an extension of Russell (1905) that directly opposes Heim's view: in this theory, the primary function of definiteness is dissociated from familiarity, but in order to convey the information that the nominal expression –by virtue of its description– unambiguously refers to an entity within the domain of discourse. The approach is particularly successful in accounting for the use of definite expressions such as (98) or the following.

- (100) a. el presidente de Francia
 the president of France
 b. el estudiante más alto
 the student most tall
 'the tallest student'
 c. la cabeza de Pedro
 the head of Pedro

The expressions in (100) contain an NP whose descriptive properties can only be satisfied by one referent in the world –on the assumption that in the real world France only has one president and Pedro only has one head–, so they refer unambiguously. There is a clear connection between the uniqueness-based approach and this one.

This theory can easily accommodate also the examples that have to do with familiarity –to the extent that familiarity is a form of producing unambiguous reference–. However, it cannot account for cases such as (101), pointed out by Lewis (1979), where any form of uniqueness or absence of ambiguity in reference automatically fails.

- (101) El perro se peleó con otro perro.
 the dog SE fought with another dog
 'The dog got in a fight with another dog'

Here there are two distinct dogs within the same context of speech, so it is impossible to say that any of them is unique in the sense described above. There are two NPs with exactly the same descriptive content, each one of them introducing a different referent. Other relevant cases are those where the definite article is used deictically, that is, in order to refer to an entity that is present in the context and which the speaker might be pointing towards. In (102) there could be multiple glasses in the context of utterance, and the speaker is pointing to one of them.

- (102) El vaso se va a caer.
 the glass SE goes to fall
 'The glass is going to fall'

Lewis (1979), thus, proposes that any intuition about the uniqueness associated to the definite article is in fact reducible to the notion of salience. Salience, in broad terms, is the relative relevance that something has within the communication between the speaker and the hearer. Something is more or less salient depending on the relevance that it has within the discourse. If among all the glasses in the table the speaker overtly points to one of them, that is the most relevant glass and therefore the most salient one; in (101) the definite subject might refer for instance to the dog that had been mentioned before, a dog that is owned by the hearer or the speaker, or a dog that has some salient property that is contextually significant.

This notion of definiteness is clearly pragmatic in nature because it involves a notion that unlike uniqueness has no relation with quantification, and unlike familiarity has no designated grammatical constructions that can express it –for example, topic-hood–. Saliency is not even something that corresponds to a grammatical constituent: something salient might be directly mentioned in the grammatical construction or not, and when it is directly mentioned it does not necessarily correspond to a syntactic, phonological or morphological constituent.

Thus, to summarise: definiteness is, in broad terms, used to convey that the hearer should be able to know the referent that the speaker is talking about. The discussion is about which notion of knowing the referent is the one that better describes the distribution of definite determiners: saliency, absence of ambiguity, familiarity, individuation, givenness, accessibility, among other conceivable options. A second point of disagreement is whether definiteness should be taken to be a purely pragmatic option –as Lewis (1979) does– or is better conceived as a grammatical notion that has precise pragmatic effects –as the other authors except Russell (1905) do; currently nobody denies that there is a pragmatic side to definiteness, and as we saw above all the theories need to make reference more or less strongly to the context of utterance, at the minimum through the assumptions that the speaker makes about the knowledge that the addressee has–.

3.1.2. Tests for (in)definiteness

Let us now consider the grammatical and pragmatic tests for (in)definiteness that can be used to determine whether an expression is definite or indefinite. The main one is the so-called Definiteness Effect. The Definiteness Effect, which is subject to some cross-linguistic variation, is the incompatibility between presentational predicates like *hay* 'there is' and definite nominals (cf. Milsark 1977, Rando & Napoli 1978, Higginbotham 1987, Keenan 1987, 2003, Comorovski 1995, Ward & Birner 1995, Zucchi 1995, McNally 1998). The pattern of data for Spanish is that expressions that trigger definiteness produce ungrammatical results, including proportional expressions containing a partitive coda (103c, 103d) and universal quantifiers (103e, 103f).

- (103) a. *Había el chico en el jardín.
 there.was the boy in the garden
 b. *Había ese chico en el jardín.
 there.was that boy in the garden
 c. *Había la mayoría de estudiantes en el jardín.
 there.was the most of students in the garden
 d. *No había ninguno de los estudiantes en el jardín.
 not there.was none of the students in the garden
 e. *Había todos los estudiantes en el jardín.
 there.was all the students in the garden
 f. *Había cada estudiante en un jardín.
 there.was each student in one garden

In contrast, indefinite determiners and quantifiers can combine with the presentational predicates, including in Spanish those that are specific.

- (104) a. Había un estudiante en el jardín.
 there.was a student in the garden
 b. Había cierto estudiante en el jardín.
 there.was certain student in the garden
 c. Había varios estudiantes en el jardín.

- there.was several students in the garden
 d. Había cincuenta estudiantes en el jardín.
 there.was fifty students in the garden
 e. Había menos de cinco estudiantes en el jardín.
 there.were less than five students in the garden

There is an interesting contrast between the interrogative determiners *qué* 'what' and *cuál* 'which': the second one presupposes that the expected answer comes from a definite, familiar and known set of potential options. For instance, asking *¿Cuál de los libros quieres?* 'Which one of the books you want?' implies that the hearer can identify a specific group of books and pick one as the answer, while *¿Qué libro quieres?* lit. 'What book do you want?' does not restrict the set of possible answers to a known group (Pesetsky 2000).

The set of potential answers makes a difference between the two interrogatives also with respect to the definiteness effect, as can be seen in (105):

- (105) a. *¿Qué libro hay en la mesa?*
 what book there.is on the table?
 b. *#¿Cuál hay en la mesa?*
 which there.is on the table?

Note, however, that (105b) is not as bad as one would expect. The reason is that, as we said, the interrogative *cuál* 'which' is related to the presupposition that there is a defined set of potential answers from which the hearer has to pick one, and this relates to the so-called 'list reading', which is one of the contexts where the definiteness effect is avoided in a language like Spanish. The so-called list reading is one specific instance of a variety of contexts where the definiteness is not associated to the existence of a specific referent, previously given in the discourse, but is associated to situations where the hearer is able to assume saliency or uniqueness due to the prototypical or characteristic nature of the entity mentioned inside the situation. In this sense, the nominal expression is more descriptive of the components or members of an enumeration, and typically are interpreted as expressing different kinds of entities –not tokens taken from those kinds– (RAE & ASALE 2009: §15.6p). Imagine that we ask a waiter to give us the list of dishes that compose a menu; in that situation, the nominal expression refers to kinds of elements, foods, and the goal is to describe the menu, not to identify a specific token that might have been given previously in the discourse. (106a) shows that the definiteness effect is better in this context, and (106b) and (106c) provide other comparable cases.

- (106) a. Hay la paella, la sopa de fideos, la tortilla...
 there.is the paella, the soup of noodles, the omelette...
 b. Hay la esperanza y la desesperanza.
 there.is the hope and the despair
 c. Hay los que quieren hacer más y los que no quieren hacer nada.
 there.is those that want do more, and those that not want do nothing
 'There are those that want to do more and those that do not want to do anything'

Other cases where the prototypical character of the entity, with a kind interpretation and without a previous discourse referent, allows for definite expressions include nominal constituents with expressions such as *consabido* 'well-known', *típico* 'typical', *de costumbre* 'of habit, habitual', *de siempre* 'of always', and their synonyms.

- (107) a. Había el típico calor de agosto.
 there.was the typical heat of August
 b. Había el ruido de siempre.
 there.was the noise of always
 c. Había el esperable malestar.
 there.was the expected discomfort

When the nominal expression is used to present a set of properties or a particular quantity, and therefore there is no specific token corresponding to that description that is being referred to, the adjective *mismo* 'same' also avoids the definiteness effect (RAE & ASALE 2009: §15.6n).

- (108) a. Había los mismos problemas que antes.
 there.were the same problems as before
 b. Había la misma ternura en sus ojos.
 there.was the same tenderness in his eyes

A second family of constructions where the definiteness effect is avoided are cases where the definite noun expression is used to express a quantity, not to identify a specific referent given in the previous discourse. This involves for instance light nouns that are used to express quantities –as we mentioned in §1 above–; contrast this with proportional quantifiers, that cannot be used to avoid the definiteness effect, as was noted in (103) (RAE & ASALE 2009: §15.6j).

- (109) a. Había solo la mitad.
 there.was only the half
 b. Había la tira de personas.
 there.was the strip of people
 'There were a lot of people'

Also, some superlatives used to describe the quantity of something that is involved in the statement avoid this effect. Note that in (110a), for instance, one is not identifying a specific piece of information that might have been mentioned in the discourse, but a specific quantity of information that is minimally sufficient (examples adapted from RAE & ASALE 2009: §15.6k-l).

- (110) a. Hay la suficiente información para hacer esto.
 there.is the sufficient information to do this
 b. No hay el menor problema.
 not there.is the smallest problem
 c. No hay el consenso necesario.
 not there.is the agreement necessary

All in all, the crash in the definiteness effect seems to be one that involves, on the one side, the presentational nature of the predicate used (*hay*) and the uses of definiteness that specifically involve referring back to a previously mentioned entity that by then is given in the discourse –and therefore has already been presented–. The ways of avoiding it involve either situations where the uniqueness or salience requirement of definite expressions is satisfied by the prototypical character of the entities mentioned, perhaps restricted to the kinds

of objects that compose a list, or the existence of a quantity that, in itself, does not have a specific referent.

Leaving these exceptions aside, the test allows us to conclude that proper names are always definite:

- (111) *Hay Pedro y María.
 there.is Pedro and María

Similarly, it shows that prenominal possessives (112a) are definite, as opposed to postnominal ones (112b), which do not trigger definiteness by themselves.

- (112) a. *Hay mi madre.
 there.is my mother
 b. Hay problemas míos.
 there.are problems mine
 'There are some problems of mine'

Another case where the test is useful is in a case like *ambos* 'both', which given that it refers to groups that are exactly composed of two members could have been considered, intuitively, as an indefinite quantifier similar to *dos* 'two'. The test also diagnoses as definite the quantifier *ambos* 'both', which then is more appropriately considered as is a universal quantifier that is restricted to groups composed of exactly two members.

- (113) *Hay ambos estudiantes.
 there.are both students

While the definiteness effect is the main test in determining whether a nominal expression is definite or not, it is not the only test that works in Spanish: cataphoric reference under ellipsis also can be used. Cataphora is different from anaphora despite the fact that in both cases we talk about the referential relation between two nominal expression, such as one of them takes its reference from the other. In the case of anaphora, the expression that is mentioned in the second place takes its reference from the first one, while in cataphora it is the opposite. (114a) is a case of anaphora, while (114b) is a case of cataphora (Bosque 1993).

- (114) a. Un ejemplo de anáfora es este.
 an example of anaphora is this.one
 b. Este es un ejemplo de catáfora.
 this is an example of cataphora

As we can see, indefinite expressions can be involved in both, but not if ellipsis is also part of the construction. If a cataphoric expression elides the common noun because it is identical to the one of the expression that is used to define the reference, as in (115), the cataphoric expression must be definite.

- (115) Los \emptyset_i de Madrid son unos estudiantes_i estupendos.
 the from Madrid are some students wonderful
 'The students from Madrid are some wonderful students'

This explains the ungrammaticality of (116) vs. the grammaticality of (117) in the intended reading.

- (116) a. *Algunos \emptyset_i de Madrid son unos estudiantes_i estupendos.
 some from Madrid are some students wonderful
 b. *Dos \emptyset_i de Madrid son unos estudiantes_i estupendos.
 two from Madrid are some students wonderful
 c. *Ninguno \emptyset_i de Madrid es un estudiante_i estupendo.
 none from Madrid are some students wonderful
- (117) a. Estos \emptyset_i de Madrid son unos estudiantes_i estupendos.
 these from Madrid are some students wonderful
 b. Todos los \emptyset_i de Madrid son unos estudiantes_i estupendos.
 all the from Madrid are some students wonderful
 c. Los \emptyset_i míos de Madrid son unos estudiantes_i estupendos.
 the mine from Madrid are some students wonderful

With this, we finish the discussion about the general notion of definiteness and move to the description of the distribution of the two articles in the case of Spanish.

3.2. *Properties and uses of el*

The article *el* 'the' conveys definiteness, and as such –generally speaking– it is specialised in uses of a nominal expression whose common trait is that the addressee is expected to be able to identify the referent –with the complications involved in the notion of 'identification' that is actually behind definiteness, discussed in §3.1.1–. In a sense, the different uses of the definite article have to do with the different ways in which the identification can be performed: for instance, by anaphoric reference to a previously mentioned entity, by association with an entity that had already been introduced, or by the information contained inside the nominal expression itself. We will follow closely here Alarcos (1967), Lázaro Carreter (1975), Álvarez Martínez (1989), Eguren (1990), Roca (1996), Leonetti (1998, 1999a, 1999b) and RAE & ASALE (2009: §14.5-8). The definite article is the prototypical example of a definite determiner because it lacks other parts of meaning associated to demonstratives (deixis), possessive pronouns (person and the relation with another entity) or universal quantifiers, so to some extent the discussion about its uses in the works cited reproduces the debate about how definiteness should be characterised. For instance, Bello (1847) and Lázaro Carreter (1975) emphasise the relation between the definite article and the notion of familiarity, as Heim (1982) does, while Leonetti (1998) emphasises its relation to uniqueness in terms similar to Löbner (1985).

One first basic use of the definite article is the so-called anaphoric one, where –as we saw in some examples above– the nominal that contains this determiner has a referent that coincides with a previously introduced entity in the discourse; this previously introduced entity is generally introduced with a nominal expression with the indefinite article.

- (118) Ha pasado [una vaca]_i. [La vaca]_i tenía la piel parda.
 has passed a cow. the cow had the skin brownish-gray

In these cases, a few conditions have to be met: (i) the definite expression correlates with an another overtly expressed nominal expression; (ii) there should be identity between the kinds denoted by the NPs in those expressions –that is, if the second one talks about a cow, the other expression must also talk about a cow– and (iii) the definite expression must be

introduced after the other expression that it establishes a relation with. If all but the third condition are met, we can be talking about cataphora, as was discussed above.

- (119) La de María es una habitación estupenda.
 the of María is a room wonderful
 'The one of María is a wonderful room'

A version of the identification-by-anaphora situation where the second condition is not respected, but the first and the third are, is the so-called 'associative anaphora' situation (Kleiber 1990). In this situation, there is no identity between the types of entities that each nominal expression describes, but the definite one describes a concept that can be directly associated –through world knowledge– to the class that has been introduced in the previous discourse. In other words: even if the two expressions do not describe exactly the same concepts, the two concepts are associated to each other in a way that introducing the first is able to evoke the second concept in the mind of the addressee. Let us give a few examples to illustrate this.

In (120) the first time that a door is mentioned it is accompanied by the definite article, conveying the meaning that it can be identified by the hearer. The reason is that a house has been introduced in the previous speech, and our world knowledge tells us that houses have doors: so in a sense introducing the house involves introducing, by association, all the other entities that our world knowledge tells us are typically related to a house. This connection between the two concepts is further confirmed by the fact that in order to interpret the door as definite, one must assume that it is the door of the house that has just been introduced.

- (120) Vimos [una casa]_i. [La puerta]_i estaba abierta.
 saw.1pl a house the door was open

Here the association involves a part-whole relation –because a door is part of a typical house–, but this is not the only way to establish the connection. Objects of the personal sphere of a human can also trigger the same connections, as the one that is established in (121) between the client and the coat that he was wearing.

- (121) Entró [un cliente]_i, y dejó [el abrigo]_i en la mesa.
 entered a client and left the coat on the table

In general, any type of world knowledge relevant to establish connections between concepts that the speaker and hearer share is enough to license identification by associative anaphora: if one knows that any thesis requires a tutor, (122) is a perfectly natural sequence.

- (122) Han dejado [una tesis]_i en secretaría para que la firme [el tutor]_i.
 have left a thesis in secretary's-office so that it signs the tutor
 'Someone left a thesis at the secretary's office so that the tutor signs it'

However, previous mention in any form is not the only way to make something identifiable by the hearer. As we saw, since Russell (1905) a number of proposals argue that definiteness has the notion of uniqueness at its core. This is empirically supported by the existence of contexts where in the first mention a nominal expression is definite because it refers to an entity that is unique in the context.

- (123) a. Ha salido el sol.

- has come the sun
- b. Ha venido el Papa.
has come the Pope
- c. Cuidado con el agujero.
beware with the hole

Importantly, in most of these cases one has to assume that the context is restricted to a subset of the entities in the real world; for instance, in the most clear case of this, (123c) does not imply that there is only one hole in the universe, but rather that in the context that is immediately relevant for the utterance there is only one hole that can constitute a risk for the hearer. This contextual restriction is also relevant for (123a), because depending on the planet where we are which star counts as the sun can vary and some of them, like Tatooine, might have two suns, and in (123b), because in the whole history of humanity there have been several individuals that have been Popes, and in fact as of August 2018 there are technically two different individuals in possession of that title.

In some cases, it is not the world knowledge alone that reduces the set of potential referents to one: the information provided inside the definite expression itself is contributing to this. Consider (124): in any plausible contextual restriction, we typically still have more than one president, more than one wish and more than one relative. However, we only have one president of the company where I work; only one wish that is identified with wanting to go to the movies tonight, and only one relative that is the oldest of them all. The modifiers and complements of the noun that restrict the reference to only one are internal to the nominal expression –underlined in (124)–, and they are responsible for the uniqueness interpretation. Such situations are known as endophoras, that is, cases where the definite article is licensed by the material that is internal to the same nominal expression where it appears.

- (124) a. el presidente de la compañía en que trabajo
the president of the company in which I work
- b. el deseo de ir al cine esta noche
the desire of go to.the cinema tonight
'the wish of going to the movies tonight'
- c. el pariente más viejo de la familia
the relative most old of the family

We saw that uniqueness, however, has its challenges –those that triggered analyses of definiteness based on the notion of salience–. Beyond examples like (125), where there are two entities that satisfy the same set of properties in the sentence, Leonetti (1999a: 793) mentions cases like (126) where our world knowledge tells us that under normal circumstances there would be at least two objects of the same type in the relevant context.

- (125) a. El perro se peleó con otro perro.
the dog SE fought with other dog
'The dog got into a fight with another dog'
- b. El alumno ha hecho el trabajo con otro alumno.
the student has written the essay with another student
- (126) a. Puso la mano sobre la mesa.
put.3sg the hand on the table
- b. Cuando llegamos ella estaba en la ventana.
when arrived.1pl she was at the window
- c. La había besado en la mejilla.

her had.3sg kissed on the cheek

One way to avoid giving up the notion of uniqueness is what Leonetti (1999a) proposes: the uniqueness is satisfied in the communicative context by the role described by the NP part of the definite expression within stereotypical or semi-stereotypical situations: what is relevant for the identification in (126a) is not which one of the two hands is put on the table, but that the subject is performing an action that is identified by placing one hand on the table. The notion is stereotypicality of the situation is clear in some cases like (127).

- (127) a. ir a la cárcel
 go to the jail
 b. ir al médico
 go to.the doctor
 c. tomar el autobús
 take the bus

Beyond these core cases of uses of the definite article, there are others that are less prototypical because they convey meanings that are similar to other types of definite expressions. The definite article in combination with plural NPs can have a meaning similar to a universal quantifier (128). In (128), in principle it is strongly implied that the student saw all the movies directed by Hitchcock, something that in this interpretation gives the same denotation as (129), with a universal quantifier.

- (128) He visto las películas de Hitchcock.
 have.1sg seen the movies by Hitchcock
 (129) He visto todas las películas de Hitchcock.
 have.1sg seen all the movies by Hitchcock

However, the two expressions are not synonymous: in (128) the idea that one refers to the entirety of the elements that compose the set of movies directed by Hitchcock is just an implicature that can be cancelled with an overt expression (130a), but in (129) this idea is part of the entailments and cannot be cancelled (130b).

- (130) a. He visto las películas de Hitchcock, pero no todas.
 have.1sg seen the movies by Hitchcock, but not all
 b. He visto todas las películas de Hitchcock, (*pero no cada una de ellas).
 have.1sg seen all the movies by Hitchcock, but not each one of them

This is expected: referring to every member in a set is a way of satisfying the identification conveyed by the definite article –if all the members in a set are such that the predicate applies to them, the speaker can know that any member in the set is such that the predicate applies to it–, but it is not the only way to satisfy the requirement. In contrast a universal quantifier directly expresses the idea that the entire set is included in the extension of the predicate, so the proposition is contradictory if it is explicitly added that the predicate does not apply to all the members.

A weaker form of universality is genericity: in a generic statement a set of characteristic properties are ascribed to all the members of the class denoted by the NP (Chierchia 1995, Krifka et al. 1995), but exceptions are tolerated. In Spanish, definite expressions can have a generic reference without the help of additional operators –see the next subsection for the generic use of the indefinite article, where we discuss which operators trigger this meaning in

such cases—. In the absence of that type of operators, generic reference is expressed with definite noun phrases in Spanish. In such cases a whole kind of entities is identified; (131a) is the direct translation of the generic bare noun in the English sentence (131b).

- (131) a. La pizza es mala para la salud.
 the pizza is bad for the health
 b. Pizza is bad for your health.

See §10 below for the distribution of noun phrases without determiners in Spanish.

The definite article can also have so-called deictic uses where their meaning contribution is similar to the demonstrative determiners. As we already say, deixis is a form of identification which takes the immediate context of utterance to anchor the reference. Adverbials like *ahora* 'now', *luego* 'later' or *aquí* 'here' refer to entities by locating them with respect to the utterance coordinates: 'now' is 'the time at which this utterance takes place', 'later' is 'some time after this utterance takes place' and 'here' is 'the place at which this utterance takes place'. The deictic use of the definite article involves cases where the identification is made possible without any previous mention or enough descriptive content at the NP level to restrict the set of potential referents, just by the sheer fact that the intended referent is present in the situational context where the definite expression is used. If we are in a kitchen we can utter (132) even if there are several knives there and we did not mention one before, perhaps disambiguating by pointing directly to the knife we want the hearer to give us.

- (132) Dame el cuchillo.
 give-me the knife

In such context, (132) is equivalent to (133), with a demonstrative.

- (133) Dame ese cuchillo.
 give-me that knife

In fact, historically the definite articles in Spanish come from the distal Latin demonstratives *ille*, *illa*, *illud*, which doubled as anaphoric expressions (Penny 1993: 145-147). The deictic use of the definite article is particularly frequent with temporal expressions (RAE & ASALE 2009: §14.8c-d):

- (134) Vendrá el lunes.
 will.come.3sg the Monday
 'He will come on Monday'
 (135) Vendrá este lunes.
 will-come.3sg this Monday
 'He will come this Monday'

Let us now consider this variety of uses from a slightly more theoretical perspective. Part of the literature has distinguished three main uses of definite expressions (Vergnaud & Zubizarreta 1992, Longobardi 1994, Beyssade 2013, Aguilar-Guevara 2014, Espinal & Cyrino 2017): strong referential definites, weak definites and expletive definites. The strong referential definites have the wider distribution and convey the notions of familiarity and uniqueness. The anaphoric uses –excluding the associative anaphora uses– are examples of this, as it is also the deictic use (136 provides a second instance of this).

- (136) La profesora quiere hablar con tu padre.
the teacher wants talk with your father

The strong definites, as in (136), can be in preverbal position, while the weak definites are restricted in Spanish to postverbal positions, and they do not convey uniqueness. (137) is one of the examples provided by Espinal & Cyrino (2017); as we can see, here –as in the cases that Leonetti (1999a) argued satisfy uniqueness due to the stereotypicality of the situation– it is not implied that the surgeon had only one finger.

- (137) El bebé cogía el dedo del cirujano.
the baby grabbed the finger of.the surgeon
'The hand of the baby grasped the finger of the surgeon'

In §2 we discussed that most definite determiners are unable to act as variables under the scope of a quantificational operator, but we noted that some exceptions could be found with respect to the definite article. The distinction between strong and weak definites is relevant for this: strong definites can never be under the scope of a quantifier, while weak definites are there. In the two interpretations in (138) –that each student talked to the same teacher, unique in that context, or that each student talked to a different teacher, his or her own– the first one corresponds to the strong definite reading, while the second does not.

- (138) Todos los estudiantes hablaron con el profesor.
all the students talked with the teacher
'Every student talked to the teacher'
1. 'There is exactly one teacher such that every student talked to him'
2. 'Each student talked to his / her own teacher'

In correspondence with the positional distinction we have just mentioned, the same referential expression in (139) only allows the reading where the same teacher talked to each student –the first interpretation above–.

- (139) El profesor habló con todos los estudiantes.
the teacher talked with all the students
'The (same) teacher talked with all the students'

Many cases of weak definites relate to the associative anaphora contexts above, and it is typically the case that their definiteness is obtained by association with an entity that relates to them.

An even more restricted distribution is presented by so-called expletive definites. In Spanish, these are restricted not only to postverbal position, but also to combinations with relational nouns that can establish an inalienable possession relation with another participant in the context, and there is no presupposition of uniqueness, and they do not even presuppose any form of definiteness. Many of the stereotypical situations that license the use of the definite article in Leonetti's (1999a) sense are expletive uses, as are also the ones in (140):

- (140) a. Juan apagó el ordenador.
Juan switched.off the computer
b. Los chicos se rompieron la pierna.
the boys SE broke the leg

There is no sense in which in (140a) we talk of a known, familiar, unique or salient computer in the context of utterance; (140a) can be the first sentence in a novel that talks about a big office where there are multiple computers. What matters here is that we associate the computer with Juan, as the computer that Juan was using or the he found there. In (140b), notice that it does not matter which one of the two legs each student broke, and there are multiple legs –non unique– that should be involved in the truth meaning of the sentence. Of course, both nouns describe entities that are either in a part-whole relation with the subject or belong to their personal sphere. Like weak definites, expletive definites are under the scope of quantifiers (140b, which forces the reading where each boy broke his or her own leg), but unlike weak definites they do not even contribute any referentiality to the nominal. For this reason, the use of the definite article in combination with proper names –a use that is documented in several varieties of colloquial Spanish– is also expletive, on the assumption that the proper name is able to refer itself.

- (141) La María no ha venido.
 the María not has come
 'María has not come'

Thus, in general, the definite article in its strong interpretation is related to familiarity and uniqueness, which can be obtained in a variety of forms, and cannot be the variable of an operator. The weak and expletive uses can be taken as variables, and do not contribute familiarity; if anything, they involve a weaker notion of uniqueness that is dependent on context.

Let us now move to the properties and uses of the indefinite article.

3.3. *Properties and uses of un*

One first salient property of the indefinite Spanish article is that it comes historically from a numeral –*unus, una, unum* 'one' (Penny 1993: 146)– and it still seems to be used as such in the singular. This raises the issue of whether this form should be considered a quantifier that doubles as a determiner, a quantifier only or a determiner that can trigger cardinality readings. We will, at this point, only describe its distribution, including the apparently cardinal uses, while we will leave the analytical debate of how the indefinite article should be analysed to §8.

In the works that have concentrated in the indefinite article (see for Spanish Alonso 1933, Alarcos 1967, Lapesa 1975, Ridruejo 1981, Álvarez Martínez 1986, Leonetti 1999a, 1999b, Gutiérrez 2008, RAE & ASALE 2009: §15.3-8), five main uses have been singled out. Unlike what was the case with the definite article, where some broad notion of identificability underlied all the different uses, here it is more difficult to find one common denominator for the five uses –unless we want to use the negative property 'non-identifying' to play that role–.

In contrast to the idea that the definite article can convey familiarity in some cases –for instance, the anaphoric ones– one of the uses of the indefinite article is as a presentational article, that is, the form used when the speaker wants to introduce a new referent in the discourse. This first mention use is illustrated in (142):

- (142) Ha llegado un estudiante.
 has arrived a student

In (142) the information conveyed implies that the addressee should not be able to identify the particular student that arrived. However, first mention is not all there is to the indefinite article, because it also seems to carry a notion of non-uniqueness. On the assumption that

(given our cultural norms) a woman has only one husband, (143) is weird precisely because we expect the husband that we are mentioning for the first time to be unique to that woman.

- (143) #Ha llegado un marido de tu cliente.
has arrived a husband of your client

A better characterisation of the first mention use would then be that the indefinite article conveys the idea that the speaker should not be able to identify a unique referent for the nominal expression that carries it; the first mention context is likely to ask for the indefinite article precisely because, being the first mention and all things being equal, we do not expect the addressee to be able to single out a unique referent; if the cultural norms or some other procedure of the kind discussed above –associative anaphora, endophora, etc.– is at play, then the indefinite article is not appropriate.

A different way in which the requisite that the addressee is able to identify a unique referent can be avoided is when the nominal expression is used as a predicate –that is, to introduce properties that describe a discourse referent, and not to introduce or refer to one of them–. This is the descriptive or predicative use of the indefinite article, that is quite typical in the function of complement of copulative verbs:

- (144) Mi hermano es un hombre muy atractivo.
my brother is a man very attractive
'My brother is a very attractive man'

Other instances of the same situation, but where the nominal expression does not syntactically constitute the predication in the clause, are presented in (145).

- (145) a. Me has causado un problema enorme.
me have.2sg caused a problem huge
'You have caused me a huge problem'
b. Llegó Juan, un simpático andaluz.
arrived Juan, a cheerful Andalusian
c. Tengo un resfriado de campeonato.
have.1sg a cold of championship
'I have a huge cold'
d. Me echó una mirada preocupada.
me threw.3sg a look worried
'He threw me a glance that conveyed worry'
e. Vive una vida piadosa.
lives a life devout
'He lives a devout life'

This use is also facilitated by NPs whose descriptive content is evaluative, such as *catástrofe* 'catastrophe', *desastre* 'disaster', *éxito* 'success', *locura* 'stupidity', *maravilla* 'marvel', etc. (RAE & ASALE 2009: §15.4e).

- (146) Esto es una {maravilla / catástrofe / estupidez}.
this is a wonder catastrophe stupidity

This descriptive use relates to the so-called emphatic or evaluative use of the indefinite article (Fernández Lagunilla 1983), where –with or without modifiers– it is implied that the

quality or quantity of the notion described by the nominal expression exceeds some expectation; this use is also able to produce consecutive structures.

- (147) a. Llevo un día...
 carry.1sg a day
 'I am having such a day....'
 b. Tengo un hambre que asusta.
 have.1sg a hunger that frightens
 'I am so hungry that it is frightening'
 c. Tiene unos ojos preciosos.
 has some eyes beautiful
 'She has such pretty eyes'

The third contrast between the definite and the indefinite article has to do with quantification. If the use of the definite article with plurals implies –*ceteris paribus*– the idea that all the members of the set are included there, the use of the indefinite article in the plural implies that not all the members of the set are included.

- (148) He visto unas películas de Hitchcock.
 have.1sg seen some movies of Hitchcock
 'I have seen some movies by Hitchcock'

In such use, the quantifier *alguno* 'some' in the plural is equally acceptable.

- (149) He visto algunas películas de Hitchcock.
 have.1sg seen some movies by Hitchcock

Again, this meaning is cancellable in the context:

- (150) He visto algunas películas de Hitchcock; de hecho, las he visto todas.
 have.1sg seen some movies of Hitchcock; in fact, them have.1sg seen all
 'I have watched some movies by Hitchcock; in fact, I have seen them all'

In the singular, the indefinite article can have uses where it is used to express a cardinality of one; this is the use whose relation to the determiner uses is unclear. This use is clear in contexts such as (151), where it is clear that the sentence makes a statement about the number of suitcases that one can take to the flight, not just about whether an identifiable suitcase is mentioned or not.

- (151) Tiene derecho a embarcar una maleta.
 have.3sg right to board one suitcase
 'You have the right to carry one suitcase'

In contrast, this cardinality value is irrelevant in the most normal interpretation of (152):

- (152) Han dejado aquí una maleta.
 have.3pl left here a suitcase

For obvious reasons –given that the cardinality value is 1– this use of the indefinite article is impossible in the plural. (153) excludes the cardinality interpretation.

- (153) He encontrado unas maletas.
have.1sg found some suitcases

Among the linguistic marks of the cardinal use, we can highlight the quantifier *solo* 'only' or the adverb *exactamente* 'exactly', and other expressions that imply the presence of precise numerical references (RAE & ASALE 2009: §15.3i-1). (154) are instances where the cardinal meaning is forced.

- (154) a. Trajo exactamente una botella.
brought exactly one bottle
b. Tengo un solo problema.
have.1sg one single problem
c. Tengo solo un problema.
have.1sg only one problem

Another trait of this cardinal use is that, like other numerals, licenses partitive constructions:

- (155) a. una estudiante de las cinco que vinieron
one students from the five that came
b. dos estudiantes de las cinco que vinieron
two students from the five that came

See §10 for the analytical problem of whether this cardinal interpretation should be viewed as a semantic extension of the indefinite use or vice versa. Ultimately the problem is whether the indefinite article should be considered as belonging to the family of quantifiers, like the cardinal numerals, or to the family of determiners, like the definite article.

The fifth and last use of the indefinite article is generic, as it was the case with the definite article. However, in contrast with definite generic expressions, the indefinite article does not express in Spanish genericity by itself: it is necessary that in the linguistic context there are other elements, typically operators, that trigger the generic meaning in the indefinite expression. Consider the contrast in (156).

- (156) a. La vivienda costó más cara a partir de 1990.
the housing costed more expensive at coming of 1990
'Housing became more expensive from 1990'
b. Una vivienda costó más cara a partir de 1990.
a housing costed more expensive at coming of 1990
'A house become more expensive from 1990'

The first sentence allows for a generic reading of the subject where we do not talk about a particular house, but refer to the whole class of objects that can be used for housing – admitting exceptions, as we saw–. The second sentence can only be interpreted in a non-generic way: we talk about a particular house that got more expensive while, perhaps, all the other houses lowered their prices.

Imperfective aspect, for instance the imperfectum indicative or the present, allow the generic reading (157a, 157b); also, adverbs like *normalmente* 'normally', *típicamente* 'typically' or *frecuentemente* 'frequently', that do not quantify over temporal intervals but over instances of situations (157c); also, individual level predicates (Carlson 1977) (157d) (RAE & ASALE 2009: §15.8j).

- (157) a. Una vivienda cuesta más cara en este barrio.
 a housing costs more expensive in this neighbourhood
 'Housing is more expensive in this neighbourhood'
 b. Una ardilla podía cruzar España de árbol en árbol.
 a squirrel could cross Spain from tree in tree
 'A squirrel could cross Spain jumping from tree to tree'
 c. Un español típicamente bebe vino.
 a spaniard typically drinks wine
 d. Un español es amable.
 a spaniard is kind

In all these cases, it seems that the indefinite article has the capacity to be under the scope of quantifiers that trigger genericity: the present tense, adverbs that quantify over situations, or individual level adjectives, associated to genericity themselves (Chierchia 1995).

4. Specificity: tests and properties

A core division within indefinites has to do with the notion of specificity. While –broadly speaking– all definite expressions are also specific, indefinite expressions can be either specific or non-specific. This section will discuss the concept of specificity, illustrate the division between the two groups and give a few tests in Spanish to identify if a nominal is specific or not.

Even though there are between three (Leonetti 1999a) and seven (von Heusinger 2011) notions of specificity, there are some common properties to all of them. When a nominal expression is specific, the speaker intends to refer to a particular entity that he or she has in mind. This contrasts with definiteness that, as we saw, was addressee-oriented in the sense that it made an assumption about the addressee being able to identify the referent of the definite expression. Specificity, on the other hand, is oriented towards a discourse participant or another salient entity in the discourse that can hold attitudes, beliefs and thoughts, so that it is possible for him or her to keep a particular entity in mind that the specific nominal refers to.

4.1. *Notions of specificity*

The literature about specificity is very extensive; an antecedent is Quine (1960), with the distinction that we already discussed (§2) between *de re* and *de dicto* readings –in fact, some theories of specificity, such as Partee (1970), claimed that specificity is just the manifestation of the same distinction, but in the domain of indefinite expressions–. Other central contributions about this notion are Baker (1966), Karttunen (1968, 1969), Fodor (1970), Farkas (1981), Fodor & Sag (1982), Pesetsky (1987), Enç (1991), Diesing (1992), Ruys (1992), Abusch (1994), Reinhart (1997), Chierchia (2001), von Heusinger (2002, 2011), Leonetti (2004) and Ionin (2006). The way in which specificity should be exactly interpreted, however, varies from author to author, sometimes in radical terms that allow for definite expressions to also show a distinction between specific and non specific interpretations.

Leonetti (1999a: 858-860) singles out three different versions of the notion of specificity. The one that he calls pragmatic depends on whether the speaker intends to refer to a particular entity with the expression, even if he or she cannot identify it. In (158), adapted from Leonetti (1999a), the indefinite is specific because the speaker knows that there is a particular coworker of his friend that has phoned, even if he might be unable to know the identity of that person.

- (158) Te ha llamado un colega del trabajo.
 you has phoned a colleague from.the job

'One of your coworkers has phoned'

In contrast, (159) is non specific in the interpretation that the friend has to talk with any coworker, and the speaker does not have in mind one particular coworker that he recommends that should be contacted.

(159) Habla con un colega.
talk with one colleague
'Talk to a coworker'

A second notion of specificity, that is related more to the philosophical tradition inside logic, has to do with the relation between the indefinite expression and the scope of quantifiers in the same linguistic context. A specific expression is one that is not taken as a variable in the scope of a higher quantifier, while a non specific expression stays in the scope and therefore has its meaning affected by the meaning of the operator. In this sense, definite expressions can also be non-specific, because as we saw under certain conditions they can be manipulated as variables by operators.

In (160), there are two possible interpretations: that there is one book that each student has to read –for instance *Don Quijote*– and that each student has to read a book that might be different from the other students, so that there could be multiple books involved. The first reading would be called specific in this context –note that there is still one sense in which the speaker intends to refer to a particular book in this interpretation–, while the second would not be –the speaker might even lack any knowledge about the books that the students could read, and the sentence simply says that as part of the course assignment they have to find a book and read it–.

(160) Todos los estudiantes deben leer un libro.
all the students must read a book

The third notion of specificity that Leonetti (1999a) singles out is the one that is related to partitivity. In this notion, an expression is specific if its intended referent comes from a set of entities that, at that moment of the communication, has been provided contextually. This interpretation could be traced back to Milsark (1974). In this sense, (161) is necessarily specific because it is overtly partitive: it picks one of the members of a set that, in the discourse, had been already identified –a particular set of books that we assume the addressee is able to identify at that point–.

(161) Uno de los libros del curso ha sido sustituido por otro.
one of the books of the course has been substituted by another

The speaker might ignore at that point the referent of the book that has been substituted. In this sense, (162) is ambiguous between the specific and the non-specific reading in the following sense: in the specific reading, we talk about many of the students of a given set that is already introduced in the discourse –for instance, the students of a particular course–, while in the non-specific reading we just state that many students have that property without restricting our claim to a given set of students.

(162) Muchos estudiantes toman asignaturas de economía.
many students take subjects of economy
'Many students take economy courses'

- a. 'Many of the students take economy courses' (specific)
- b. 'Economy courses are popular among students' (non-specific)

In this sense it is also possible to have definite expressions that are non-specific: in the generic reading of the definite article, we do not pick elements from a particular set that has already been introduced in the discourse.

- (163) Los españoles son bajitos.
 the Spaniards are short
 'Spaniard are short'

Von Heusinger (2011) provides an even more detailed classification of the senses in which something is specific or not. What he calls referential specificity makes the distinction on the base of whether the indefinite expression entails that there exists an entity that fits the description given or not. This notion is relevant in the context of attitude predicates, such as (164).

- (164) Pedro cree que María le es infiel con un actor.
 Pedro believes that María him is unfaithful with an actor

The two interpretations depend on whether the speaker thinks that there exists an actor such that María has been unfaithful to Pedro with him. If the speaker believes that, the indefinite expression is specific, but if the speaker believes that Pedro is wrong and there exists no actor with which María has had an affair, then the indefinite is non-specific. In this sense, a definite expression could also be non-specific: if Pedro believes that someone is the king of France but the speaker knows that such expression does not have a referent in the real world because there exists, in actuality, no king of France, then (165) illustrates an instance of a non-specific definite expression.

- (165) Pedro cree que ha conocido al rey de Francia.
 Pedro believes that has met the king of France

Note that in this sense, the distinction is very close –and virtually undistinguishable from– the de dicto / de re distinction that we presented above.

The second interpretation of specificity is the one that relates to the scope of quantifiers, and coincides with Leonetti's second interpretation.

The third sense of 'specificity' is what von Heusinger (2011) calls 'epistemic specificity', which is similar but not identical to Leonetti's first sense. In the epistemic notion of specificity, an expression is non-specific if the speaker ignores or is indifferent to the referent of the indefinite. In a sentence like (161), the specific interpretation would be one where the speaker knows which book in particular has been substituted, and the non-specific reading is the one where the speaker ignores at that point the particular book that has been replaced. Expressions where the speaker conveys directly his or her indifference about the particular referent, such as the ones with *cualquier* 'no matter which' (166) are also non-specific in this sense.

- (166) a. Cualquier estudiante puede aprobar el curso.
 any student can pass the course
 b. Léete cualquier libro.
 read-you any book

- c. Podemos ir a cualquier sitio.
can. 1pl go to any place

In the epistemic sense, definites can also be non-specific: notice that in (167) the speaker probably ignores who the winner of the election would be.

- (167) El candidato elegido tendrá que resolver este problema.
the candidate chosen will.have to solve this problem

Von Heusinger's fourth notion of specificity is the partitive one, that he characterised as presuppositional (Milsark 1974) or discourse-linked (d-linked, Pesetsky 1987).

In the fifth sense, specificity is related to topicality: an expression is specific if it performs, syntactically and pragmatically, the role of topic in the sentence, as a referent that is under discussion in the proposition. In this sense (168a) is specific, and the same expression is non-specific in (168b). Notice that, to the extent that many definite expressions are not topics, this also implies that definites can be non-specific.

- (168) a. Algunos problemas no pueden resolverse.
some problems not can solve-SE
'Some problems cannot be solved'
b. No pueden resolverse algunos problemas.
not can solve-SE some problems
'There are some problems that cannot be solved'

The sixth sense of specificity is 'specificity as noteworthiness', where the nominal expression is used to introduce some property that, within the context of discourse, is significant or deserves a particular mention. This notion is clearly pragmatic and depends on the role that the expression plays for the argumentation that the discourse is following. For instance, in (169) the indefinite expression would be specific if the property of having long hair turns to be noteworthy for that person, but non-specific if it is not.

- (169) La chica tenía un pelo largo y sedoso.
the girl had a hair long and silky
'The girl had long and silky hair'

Similarly, the seventh notion, 'specificity as discourse prominence', also depends on the flow of the narration or argumentation in the text: something is specific if it introduces a discourse referent that will continue to be referred to in the following discourse. In this sense, any indefinite expression that appears in a text with definite expressions in an anaphoric relation would be specific.

As we see, all these notions of specificity cut the cake in different ways, some of them allowing definites to be non-specific and others restricting the distinction to the realm of indefinites, on the assumption that any definite will be specific. It is of course desirable to either find a common denominator to all these notions of specificity, or to determine which ones are the senses that grammars are sensitive to, and which ones are rather interpretations that depend on extralinguistic factors. This task is complicated by some of the same factors that we saw appeared when trying to define definiteness: first of all, reference is a semantic notion that can be grammaticalised but whose proper characterisation almost unavoidably must invoke discourse properties, that are properly pragmatic in nature.

The more traditional characterisation of specificity is the one that tries to unify all uses under the common umbrella of the speaker's intended reference, that is, that when the speaker uses the nominal expression he or she has in mind a particular referent that is introduced in the discourse. However, as both Leonetti (1999a) and von Heusinger (2002) point out, this is a definition that is too restrictive, because it does not cover for instance the cases where the speaker is unaware of the identity of the referent even if it is specific. Von Heusinger (2002: 45) defines specificity in terms of the notion of referential anchoring: the reference of a specific expression is anchored to a discourse participant, typically the speaker, or to another discourse referent. The addressee interprets something as specific when he or she can identify the anchor –speaker or another entity mentioned in the discourse– in whose mental representation there is a referent for that expression, and also identify that the anchor has the intention to refer through the expression. In more prosaic terms, the addressee must be able to interpret that the mental representation of the anchor includes a particular referent that corresponds to the nominal expression.

4.2. Contexts that trigger non-specificity in the strong sense

There are several linguistic contexts that favour or license non-specific interpretations (Fodor 1970, Jackendoff 1972, Givón 1978, Leonetti 1990, 1999a). Interrogative operators are able to do this:

- (170) ¿Tienes un libro de matemáticas?
 have.2sg a book of mathematics?
 'Do you have a book of mathematics?'

Imperative contexts also trigger the non-specific reading of indefinites.

- (171) Lee muchos libros.
 read many books

Modal operators, such as modal auxiliaries and the future and the conditional forms, also produce non-specific contexts.

- (172) a. Puedes comprarte un libro.
 can.2sg buy a book
 'You can buy a book'
 b. Algún día tendré una casa.
 some day will.have.1sg a house
 'Some day I will have a house'
 c. Me comería un plato de sopa.
 me would.eat a dish of soup
 'I would eat a dish of soup'

Conditional sentences are another context of non-specificity:

- (173) Si ves a un niño perdido, avisa a las autoridades.
 if see.2sg a boy lost, call the authorities
 'If you see a lost child, call the authorities'

Individual level predicates, that as we saw license the generic interpretation of indefinites, can produce non-specific contexts in which the particular referent of the nominal expression is not relevant.

- (174) Es genial encontrar un amigo.
 is great find a friend
 'It is great to find a friend'

Negation can also trigger non-specific contexts, because it can suspend the entailment that there exists a particular referent for the indefinite expression.

- (175) No tengo muchos amigos.
 not have many friends
 'I don't have many friends'

Finally, a class of predicates –so-called intensional predicates, that tend to express wishes, necessities, preferences, intentions or plans– through their meaning can also create contexts where the reference of the expression is suspended, as they involve situations that have no actual reality. Among these predicates we have the verbs *querer* 'want', *preferir* 'prefer', *desear* 'desire', *intentar* 'try', *buscar* 'search', *pedir* 'ask for', *esperar* 'hope', *permitir* 'allow' and *planear* 'plan', adjectives like *necesario* 'necessary', *preferible* 'preferable', *obligatorio* 'compulsory' or *deseable* 'desirable', and the preposition *para* 'for', used to introduce finality and intention. All of them allow the non-specific reading.

- (176) a. Busco un libro.
 search a book
 'I am looking for a book'
 b. Prefiero un libro que hable de otra cosa.
 prefer. 1sg a book that speaks of other thing
 'I prefer a book that talks about something else'
 c. Es necesario traer un libro.
 is necessary bring a book
 'It is necessary to come with a book'
 d. Lo hice para encontrar un trabajo.
 it did to find a job
 'I did it in order to find a job'

In all these contexts, there is entailment of existence associated to the indefinite, that is, it is not entailed that there is a referent for the indefinite expression. As Leonetti (1999a: 863) points out, outside these contexts the notion of non-specificity is weaker: the speaker does not suspend the idea that there is a referent for the indefinite expression. The non-specific reading in this weak sense implies that pragmatically the speaker is not interested in communicating the reference of the expression, which anyways is there. This is, for instance, the case of the epistemic specificity.

- (177) Un político ha sido detenido por corrupción.
 a politician has been detained for corruption

In any interpretation in (177) there is a referent for *un político*, but the difference is that in one interpretation the speaker is not interested in communicating that a concrete politician has

been detained –maybe the speaker ignores who the politician is–, and in the other interpretation this is part of the information that the speaker intends to communicate.

4.3. *Grammatical phenomena related to specificity*

There are a number of phenomena that in Spanish allow to differentiate between the specific and the non-specific interpretation of nominal expressions. The strongest predictor of strong non-specificity –suspending the existential entailments of the nominal expression– is the mood of the verb in subordinate relative clauses (Rivero 1977). The sentence in (178) allows both readings, with and without a referent for the indefinite.

- (178) Quiero comprarme un libro.
 want.1sg buy a book
 'I want to buy a book'

Each reading corresponds to one of the two sentences in (179): the one where the subordinate sentence is in indicative is interpreted as a situation where the speaker thinks of a particular book that he or she wants to buy; the one in subjunctive (179b) corresponds to the non-specific interpretation where any book would do, and in fact no book might be found by the speaker when he or she tries to buy one.

- (179) a. Quiero comprarme un libro que habla de Italia.
 want.1sg buy a book that speaks.ind of Italy
 b. Quiero comprarme un libro que hable de Italia.
 want.1sg buy a book that speaks.sbj of Italy

A second phenomenon is the possibility of having prenominal qualitative adjectives combined with the nominal expression (Bosque 2001). The presence of a prenominal qualitative adjective in Spanish triggers the specific interpretation; this means that in (180) the speaker must have a particular book in mind that he or she wants to buy.

- (180) Quiero comprarme un estupendo libro.
 want.1sg buy a wonderful book

Both readings, specific and non-specific, are possible with a postnominal adjective, as in (181).

- (181) Quiero comprarme un libro estupendo.
 want.1sg buy a book wonderful

Because imperatives and interrogatives create contexts for non-specifics, nominal expressions containing prenominal qualitative adjectives tend to be avoided in such sentences (Bosque 2001).

- (182) a. *Regálame un estupendo libro.
 give.me a wonderful book
 'Give me a wonderful book as a present'
 b. *¿Me regalas un estupendo libro?
 me give.2sg a wonderful book?
 'Will you give me as a present a wonderful book?'

Another property that is generally related to specificity is differential object marking (DOM) in direct objects, that is, the accusative *a* 'at' marking. When a nominal expression is specific, DOM is compulsory if another set of properties is met –for instance, the human nature of the referent; see Fábregas (2013) for a detailed overview–. However, as López (2012) discusses in detail, while absence of DOM in human direct objects is a clear test for non-specificity, some non-specifics (184) can combine with DOM, which makes this test less reliable to diagnose the specific nature of an expression.

- (183) a. Busco a mi hermana.
 search DOM my sister
 'I look for my sister'
 b. Busco un amigo.
 search a friend
 'I am looking for a friend' (non-specific)
- (184) a. No busco a nadie.
 not search DOM nobody
 'I am not looking for anyone'
 b. Busco a un amigo que sepa de estas cosas.
 search DOM a friend that knows.sbj of these things
 'I am looking for a friend that knows of these things'

In the weaker sense of specificity, there are also other constructions that are influenced by the non-specific nature of an indefinite expression. As we saw, topichood triggers specificity in this weaker sense: the preverbal position of an indefinite, therefore, favours the specific reading –although it does not exclude a non-specific interpretation in terms of epistemic non-specificity, for instance–, while the postverbal position is easier to associate to non-specific readings where the referent introduced by the indefinite is not relevant for the following discourse.

- (185) a. Un espía me sigue a todas partes.
 a spy me follows to every place
 b. Tengo un espía que me sigue a todas partes.
 have.1sg a spy that me follows to every place

Partitive structures also tend to be specific –definitionally, they are specific in one of the common uses of the term–, but again both readings are allowed if we take into account whether the particular referent of the indefinite is part of what the speaker tries to communicate (Leonetti 1999a: 869). In (186) it is natural to have a specific reading where we talk about a particular member of the group, but (187) is more naturally interpreted in a way where the particular reference of the doctors that recommend that toothpaste is not important.

- (186) Uno de los médicos ha venido a buscarte.
 one of the doctors has come to search.you
 'One of the doctors has come here looking for you'
- (187) Seis de cada siete médicos recomiendan esta pasta de dientes.
 six of each seven doctors recommend this paste of teeth
 'Six out of each seven doctors recommend this toothpaste'

Let us finish here the discussion about specificity and move now to the quantifiers.

5. Types of quantifiers: tests and properties

The difference between definite and indefinite expressions, which is relevant for the determiners, finds a parallelism in the domain of quantifiers in the form of the basic distinction between universal and existential quantifiers; in fact, as we will see, the notions of definiteness and specificity are sometimes relevant to differentiate between individual quantifiers.

5.1. Universal and non-universal quantifiers

The main division within the quantifier domain is the one between universal quantifiers and those that are non-universal, or existential. The universal quantifiers are those that take all the entities that belong to a given set –that set can be contextually restricted, as we will see–. In Spanish (Sánchez López 1999: 1037, López Palma 1999: 49-51) the universal quantifiers are listed in (188).

- (188) a. todo
 b. cada
 c. ambos
 d. cualquiera

(188a) can be combined with the definite article or not; when it does not combine with the definite article it is restricted to the singular –like *cada*–, but is restricted to contexts that trigger non-specificity –particularly, the interpretations of epistemic non-specificity–.

- (189) a. Todos los chicos pueden aprender inglés.
 all the boys can learn English
 b. Todo chico puede aprender inglés.
 every boy can learn English

Thus, (189a) allows two interpretations: a specific one where we talk about every boy in a given set known by the addressee, and a non-specific one where we talk, generically, about any boy in the universe. In the first case, the universal quantification is restricted to every member in a given set. In (189b) only the second reading is allowed, and we cannot be talking about all the boys from a given set.

Similarly, *cualquiera* 'any' is restricted to non-specific interpretations when interpreted as a universal quantifier (see below for non-universal uses).

- (190) Cualquier chico puede aprender inglés.
 any boy can learn English

As for *cada* 'each', it contrasts with *todo* in the singular in that it requires specific contexts.

- (191) Cada chico aprendió una lengua.
 each boy learnt a language

Judging from the definiteness effect (§3.1), all the universal quantifiers are definite:

- (192) a. *Hay todos los chicos.
 there.is all the boys
 b. *Hay todo chico.
 there.is every boy

- c. *Hay cada chico en un jardín.
there.is each boy in a garden
- d. *Hay ambos chicos.
there.are both boys
- e. *Hay cualquier chico.
there.is any boy

The quantifier *cualquiera* 'any' is an indifference quantifier or free choice item (like other expressions such as *quienquiera* 'whoever', *sea quien sea* 'whoever may be', etc.): a quantifier whereby the speaker wants to convey the information that it is not relevant for the utterance which one inside the set of entities is chosen (Sánchez López 1999: 1041; Menéndez Benito 2004; Aloni & Van Rooij 2007; Alonso-Ovalle & Menéndez-Benito 2010). The different consequences of this indifference trigger the different readings: the universal reading is triggered in cases where the speaker is indifferent about which item is chosen because the properties apply equally to every member of the class. Non-universal readings are also possible, as in (193): in such cases, the indifference means that the speaker ignores the identity of the set member that performs the action, or that this identity is not relevant in the utterance.

- (193) Cualquier postre me sirve.
any dessert me serves
'Any dessert would be fine for me'

With respect to *cada* 'each' it is differentiated from the other universal quantifiers in that it triggers distributive readings. A distributive reading is one which states, as part of its truth conditions, that the property described by the predicate applies to every member of the set individually. In (194a), there are two possible readings: in the distributive reading, for each boy it is true that that boy lifted a piano; in the second reading, called collective, no boy lifted a piano on his own, but rather all the boys together lifted one single piano. (194b), on the contrary, only has the distributive reading.

- (194) a. Todos los chicos levantaron un piano.
all the boys lifted a piano
b. Cada chico levantó un piano.
each boy lifted a piano

The rest of the quantifiers in Spanish are non-universal –also known as existential–: what they have in common is that they do not state that the predicate applies to every member of the set. Inside them, there are several classes depending on the type of quantification they perform (following Fernández Ramírez 1951, Seco 1989, Martínez 1989, López Palma 1999, Sánchez López 1999):

- a) Negative quantifiers (where $N = 0$): *ninguno* 'none'
- b) Particularisers or existence quantifiers (where $N =$ at least 1): *algún* 'some' and the indefinite article
- c) Numerals: *dos* 'two', *veinte* 'twenty'...
- d) Evaluative: *muchos* 'many', *pocos* 'few'...²

² Interrogative and exclamative determiners (and pronouns) such as *qué* 'which' or *qué de* 'what of' are also existential quantifiers; we leave them outside of this overview given their connection to specific modalities.

These non-universal quantifiers act all like indefinite determiners with respect to the definiteness effect test (195) and trigger specific / non-specific readings at least in one of the notions discussed in §4 –the partitive interpretation of specificity–, sometimes several of them.

- (195) (No) hay {ningún / un / muchos / tres} {libro / libros}.
 not there.is no a many three book books

The capacity to support partitive constructions is in fact the main test to differentiate grammatically between universal and non-universal quantifiers. A partitive structure is one that explicitly conveys the information that the property expressed by the predicate applies to a proper subset of the members of a group, that is, never to the whole set. In Spanish the set from which some members are selected is grammaticalised as a prepositional structure with *de* 'of'.

- (196) a. ninguno de los estudiantes
 none of the students
 b. alguno de los estudiantes
 one of the students
 c. siete de los estudiantes
 seven of the students
 d. varios de los estudiantes
 several of the students
 e. muchos de los estudiantes
 many of the students

As Brucart (1994) notes, non-universal quantifiers are not the only elements that can be the head of partitive structures (nouns like *mayoría* 'majority' or *mitad* 'half' can also do it), but if we restrict ourselves to the determiners as diagnosed by the property of licensing a preverbal subject (cf. §1), only the non-universal quantifiers can support partitive structures. As (197) shows, this option is not available in the case of universal quantifiers.

- (197) a. *todos de los chicos
 all of the boys
 b. *todo de los chicos
 every of the boys
 c. *cada de los chicos
 each of the boys
 d. *ambos de los chicos
 both of the boys

The partitive test allows us to test whether *cualquiera* 'whichever' is interpreted as universal or not; in (198) it is interpreted as a non-universal quantifier.

- (198) cualquiera de los chicos
 any of the boys

Notice further that (197c) contrasts with (199), where there is a non-universal pronoun *uno* 'one' that supports the partitive structure. Here the meaning is universal because *cada* 'each'

generalises over each single member of the set, but formally the structure contains a non-universal form whose presence is compulsory.

- (199) cada uno de los chicos
each one of the boys

5.2. Evaluative and non-evaluative non-universal quantifiers

Within the non-universal quantifiers, the next big division is the one that involves the distinction between quantifiers that evaluate the quantity with respect to some standard value and those that do not do it. (200a) provides several non-evaluative quantifiers, and (200b) provides some that are evaluative.

- (200) a. algún 'some', dos 'two', ningún 'none', varios 'several'...
b. muchos 'many', bastantes 'quite', suficientes 'enough'...

One test to identify the evaluative quantifiers is that they semantically support the presence of an over comparison (Sánchez López 1999: 1047):

- (201) *Había {varios / dos / algunos} estudiantes, comparados con lo que es normal.
there.were several two some students, compared with what is normal
(202) Había {muchos / pocos / suficientes} estudiantes, comparados con lo que es normal.
there.were many / few / enough students, compared with what is normal

Among the non-evaluative quantifiers, Fernández Ramírez (1951: §187) singles out the class of existence quantifiers. The existence quantifiers are specialised in expressing in claims about the existence of at least one member of the class. The negative quantifiers belong to this class, making the statement that there exists no member of the class in the relevant context (203).

- (203) No hay ningún perro aquí.
not there.is no dog here
'There is no dog here'.

In comparison to them, *algún* 'some' acts like a positive polarity item that states that there is at least one member of the set in the relevant context. (204) can be roughly paraphrased as 'there is at least one entity that is a dog here' (Martí 2009).

- (204) Hay algún perro aquí.
there.is some dog here

Note that the quantifier in (204) rejects negative sentences.

- (205) *No hay algún perro aquí.
not there.is some dog here

In plural, *unos* and *algunos* 'some' imply that there are at least two members. This follows naturally from the combination of the existential meaning and the semantics of the plural number. *Unos* 'some', unlike *un* 'a', cannot be in negative contexts (González Rodríguez 2008).

- (206) a. *No hay unos chicos.
not there.are some boys
b. *No hay algunos chicos.
not there.are some boys

5.3. Monotonic and non-monotonic quantifiers

Within the non-universal quantifiers there is a second distinction that is useful to differentiate between the two classes of existence quantifiers, but can also be extended to the other classes: one based on monotonicity (Barwise & Cooper 1981).

A quantifier is monotonic if it licenses an entailment relation between two predicates P and Q, such that one of the two expresses a subset of the situations expressed by the other. Imagine that P is the predicate 'walk fast', and Q is the predicate 'walk'. P applies to a subset of the relations that Q applies to: every situation that can be described as 'walk fast' is a situation that can be also described as 'walk', but not every situation where one walks is a situation where one walks fast.

A quantifier is monotonic if it licenses an entailment relation between P and Q when they are in a subset relation as we just described. It is non-monotonic if that is not the case. Consider first a non-monotonic quantifier.

- (207) a. Exactamente seis estudiantes caminaban rápido.
exactly six students walked fast
b. Exactamente seis estudiantes caminaban.
exactly six students walked

In (207) none of the two sentences entails the other. If exactly six students walked, we cannot deduce from it that there were six students walking fast (maybe only 3 out of the 6 students walked fast). If exactly six students walked fast, we cannot deduce from it that the total number of students walking was six: other students might be walking in that context, only that not fast. *Exactamente seis* 'exactly six' is, therefore, a non-monotonic quantifier.

Consider in contrast the quantifier *algún* 'some'.

- (208) a. Algún estudiante caminaba rápido.
some student walked fast
b. Algún estudiante caminaba.
some student walked

Here the first proposition entails the second: if there was at least one student that walked fast, it follows that there was at least one student that walked. Here, the situation that applies to a smaller subset of cases ('walk fast') entails the situation that applies to a wider subset of cases ('walk'). The opposite does not hold: if there is one student that walks, we cannot conclude that there is one student that walks fast –he or she might be walking slowly–.

There are two types of monotonicity, depending on the direction of the entailment. The entailment from the subset of situations to the superset of situations characterises so-called upward entailing monotone quantifiers or (in short) monotone increasing quantifiers. Universal quantifiers are also upward entailing:

- (209) a. Todos los estudiantes caminaban rápido.
all the students walked fast
b. Todos los estudiantes caminaban.
all the students walked

In contrast, the entailment from the more general situation to the less specific situation is known as downward entailment, and the quantifiers that license this relation are called monotone decreasing quantifiers. The negative quantifiers are the prototypical representatives of this group. Consider (210).

- (210) a. Ningún estudiante caminaba rápido.
 no student walked fast
 b. Ningún estudiante caminaba.
 no student walked

If it is true that there is no student walking, it is necessarily true that there is no student walking fast either. The opposite does not hold: maybe there is no student walking fast in the relevant context, but five of them that are walking.

We have now finished with the general description of quantifiers and determiners in Spanish: we have seen that, despite some similarities that show that both types of elements belong to a superclass with common properties –syntactic and semantic–, it is possible to find properties that differentiate quantifiers in the strict sense from determiners in the strict sense. The superclass is characterised by a number of notions: definiteness, which has been studied prototypically in the determiner domain but is also relevant to differentiate between universal and non-universal quantifiers, and specificity, that cross-cuts determiners and quantifiers. Within quantifiers in the strict sense, we have seen that scope ambiguities are characteristic of this group, and that there is a number of subclasses within them, depending on the nature of the quantification that they perform.

In the rest of the article, we will discuss a number of analytical problems that are caused by these empirical facts. Let us start with the problem of whether the determiners and quantifiers should be viewed as the syntactic head of the nominal constituents that carry them or not.

6. Theories about determiners and quantifiers (I): the head of nominal constituents

In the description above, there have been a few recurrent questions that we have already discussed a bit, such as for instance why it is the case that a class of items –determiners in the broad sense– has the capacity to license arguments in the preverbal subject position, or what is the property that both quantifiers and determiners (in the strict sense) have that explains their parallelisms: the definite / indefinite and specific / non-specific distinctions are relevant for both, as we saw. These problems and questions are directly relevant for the issue of whether quantifiers and determiners are the head of nominal constituents or not.

6.1. *Determiners as the head of nominal constituents: the DP-hypothesis*

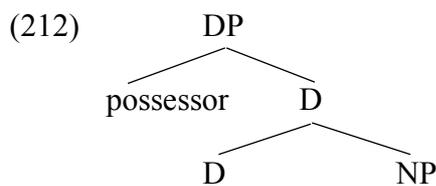
It is probably fair to say that for many years, the so-called DP-hypothesis (Abney 1987) was standardly assumed in generative grammar (but not only; see Sag et al. 2003 within the HPSG framework). Its core idea is that there is a parallelism between the sentential and the nominal domain such as that the determiner performs roughly the same role in nouns as tense or complementisers perform on verbs: formally, D is a functional head that selects a predicate (NP) in the same way that C and T are functional heads that contain in their complement another predicate (VP).

Two observations –or rather, two interpretations of these observations– are generally cited as the main arguments in favour of the DP hypothesis. The first one comes from Abney (1987: 37-52). In the same way that within the sentential domain the subject of a predicate agrees, it is possible to find possessor agreement cross-linguistically. (211) reproduces one

instance of agreement in Yupik Eskimo (1987: 39-42) where the parallelism with sentential agreement can be seen.

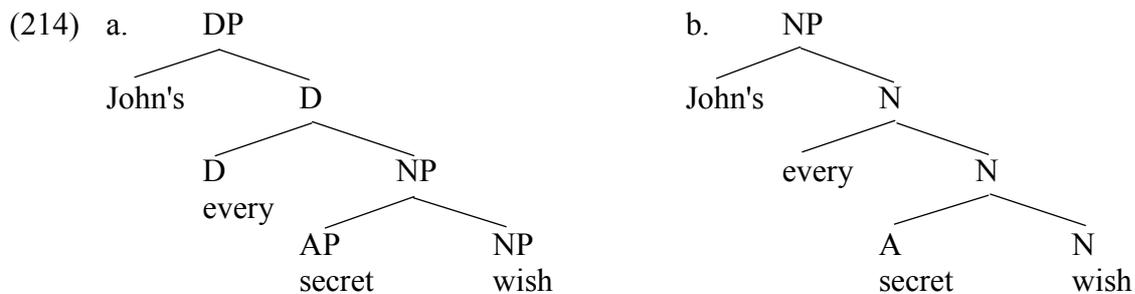
- (211) a. angute-t kiputa-a-t
 man-erg.pl buy-om-s.pl
 'The men bought it'
 b. angute-t kuig-a-t
 man-erg.pl river-sg-agr.pl
 'the men's river'

Similarly, this type of agreement between the possessor and the noun is found in Hungarian. Abney's (1987) proposal is that the nominal constituent contains a functional layer headed by D in whose specifier the possessor is located.



On the assumption –general at the time when Abney wrote his work– that each head can only host one specifier, a structure like (213; Abney 1987: 270) is an argument that next to NP there should be a second head able to host the specifier. That is, theory-internal reasons in the 80s forced the structure to be (214a) and not (214b). The restriction that there should be only one specifier per head, however, is no longer assumed in modern times, which makes this argument vacuous within the current theoretical universe.

- (213) John's every secret wish



A related reasoning is due to Longobardi (1994). Abney (1987) emphasised the parallelism between sentences and nominal constituents in terms of agreement with a potential subject, proposing that homogeneously the 'subject' (possessor in the case of the nominal) is located in the specifier of a functional projection. Longobardi (1994) emphasises the semantic side of the story: on the assumption that NP is a predicate (type $\langle e,t \rangle$ in Montague's terms), the question is what causes the predicate to become an argument of a verb or another predicate that selects it. Longobardi's (1994) proposal is that the role of the determiner is precisely this one: to turn the predicate into an argument. Once the determiner is introduced in the nominal constituent, the expression can be interpreted as a constant that can satisfy the open variable position of the predicate. Assume (parting ways somehow with the generalised quantifier theory) that the determiner in the proper sense is an object of type $\langle \langle e,t \rangle, e \rangle$ that, when

combined with the $\langle e,t \rangle$ denoted by the NP, produces an object of type $\langle e \rangle$ that denotes an individual and not a predicate.

This property, then, would explain why in Romance languages the presence of a determiner (in the wide sense, that is, including quantifiers) licenses nominal expressions in the prototypical argument position, preverbal subject.

- (215) *(un) chico vino.
a boy came

Beyond this core reasoning, there were a number of additional arguments that supported the DP-hypothesis in the beginning.

a) Verbs select as arguments both pronouns and nominal expressions. If one assumes that pronouns belong to the determiner category –as in the Spanish tradition has been argued since Bello (1847), based on similarities between articles and pronouns (216)–, then treating nominal expressions as projections of D allows for a consistent characterisation of the types of elements that verbs take as arguments, always DPs.

- (216) la / la, los / los, las / las
the / her, the /them, the / them

b) Ellipsis shows that the NP, with all the material it contains –including modifiers– acts as a constituent to the exclusion of the determiner. It is well-known that only syntactic constituents can undergo ellipsis, and (217) shows that the adjective and the noun can undergo this process to the exclusion of the determiner.

- (217) a. Me gustan estos libros científicos, y a ti te gustan esos ~~libros científicos~~.
me like.3pl these books scientific and to you you like.3pl those
'I like these scientific books and you like those'
b. *Me gustan estos libros científicos, y a ti te gustan ~~estos libros~~ históricos.
me like.3pl these books scientific, and to you you like.3pl those books historical

c) In some languages, like Hebrew and Italian, some evidence has been gathered that under certain conditions the N moves to a higher position related to referentiality. On the assumption that this position is D, the movement operation involves two heads, N and D. Following the constraint of head movement in Travis (1984), N and D must be in a head-complement relation, which means that the structure should be, minimally [DP D [NP N]], not [NP D N]. See §9 below, where the case of proper names is discussed. (218) shows that, on the surface, the proper noun in Italian can appear before and after the possessive; when it is before the possessive, it occupies the position of the determiner, that is compulsory if the proper name is after the possessive.

- (218) a. il mio Gianni
the my Gianni
'the Gianni that is related to me'
b. Gianni mio
Gianni mine
'my Gianni'

- (223) b. Lamento {que / *si} María venga.
 regret.1sg that / whether María comes
 a. Pienso que María {viene / *venga}.
 think.1sg that María comes.ind / comes.sbj
 b. Quiero que María {venga / *viene}.
 want.1sg that María comes.sbj / comes.ind

However, with respect to nominal constituents, there are no clear instances of a parallel situation where for instance a class of verbs selects just possessive determiners, or just definite determiners, etc. We mentioned in §1 that psychological verbs take subjects that must carry a determiner, but this can be explained by semantic or syntactic reasons other than selection: it could be that the predicates force particular readings on their arguments (see Seres & Espinal 2018) or that the syntactic position where the argument is introduced requires a determiner introduced as a modifier of the noun. Even these verbs do not impose a particular type of determiner on their arguments.

- (224) a. Me gustan las manzanas.
 me like.3pl the apples
 b. Me gustan algunas manzanas.
 me like.3pl some apples
 c. Me gustan estas manzanas.
 me like.3pl these apples
 d. Me gustan siete manzanas.
 me like.3pl seven apples
 e. Me gustan tus manzanas.
 me like.3pl your apples
 'I like { \emptyset / some / these / seven / your} apples'

This asymmetry suggests that D is not the head of the construction.

Similarly, a second sign that C is the head in the clausal domain is that C has the ability to determine the form of the head that it introduces. This is behind the distinction between finite and non-finite complementisers (Bruening 2009: 29-30).

- (225) a. I would like for the Jamaicans to win.
 b. I expect that the Jamaicans will win.

Then, if D was the head of the nominal constituent, it would determine the shape of the material that is introduced, but this is not clearly true –although it has been proposed in the case of adjectives in German, that take weak inflection if the determiner is definite and strong inflection if it is indefinite; see Leu (2015) for an analysis that does not involve treating D as the head of the construction–. As the contrast in (226) shows, it is the head noun that determines the shape –in terms of agreement– of both adjectives and determiners / quantifiers.

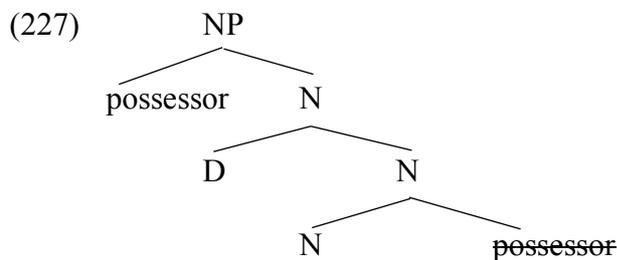
- (226) a. todos esos lobos blancos
 all.m.pl these.m.pl wolves white.m.pl
 'all these white wolves'
 b. todas esas jirafas blancas
 all.f.pl these.f.pl giraffes white.f.pl
 'all these white giraffes'

6.3. Reinterpreting the DP-hypothesis arguments inside the NP-hypothesis

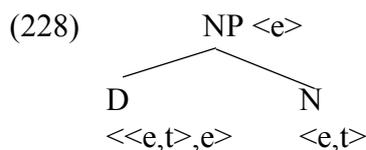
Given these two asymmetries, the DP-hypothesis is not as solid as one would assume otherwise. In fact, the arguments that were initially established to support the DP-hypothesis can be easily accommodated in an NP structure where the DP is a modifier.

We have seen that some of the arguments given there were strictly theory internal: the need for a specifier position and to some extent the incorporation of N to D are two examples of this, because with a distinct set of theoretical assumptions these phenomena would not count as evidence that there is an additional head above N –let alone that such head is specifically D–. The parallelisms between clauses and nominal constituents, to the extent they are empirically correct, might make the model more elegant or more parsimonious, but they can hardly count as arguments that the correct structure of a nominal expression should be parallel to a clause.

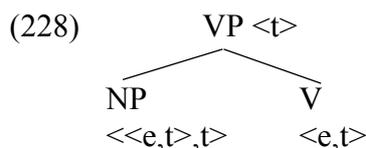
As Salzmann (2018) notices, the agreement pattern that Abney (1987) used as an argument to support the existence of a DP structure does not in itself imply that there should be a DP layer: one could equally argue that the possessor triggers agreement on the head noun from a derived specifier position (apud Salzmann 2018: 6):



Bruening (2009: 31) casts doubt on the claim that determiners are there to turn NP predicates into arguments, contra Longobardi (1994), noting that overwhelmingly their cross-linguistic role is more obviously related to definiteness and other reference-related notions. However, he shows that even if Longobardi (1994) was right it would not imply that D should be a head: a specifier of the appropriate type will also, by compositionality, produce the desired type-change from $\langle e, t \rangle$ to $\langle e \rangle$.



This would be entirely parallel to an NP introducing an argument of a predicate, where even though the combination changes the type of the verb we do not assume that the argument should be the head that selects VP.

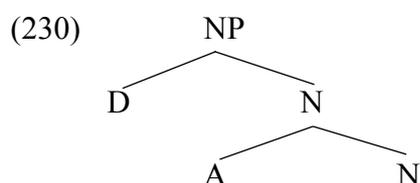


With respect to the argument that nominal expressions should be DP because pronouns are DPs and verbs select both, Salzmann (2018) makes two observations. One of them is that it is unclear that any argument of a verb should belong to the same type: if we treat a bare noun phrase as an argument in (229) –see §10 for more about this–, we have to either conclude that

predicates can take nominals without D as arguments or, alternatively, that the bare noun in fact contains a phonologically null D. However, once we allow for phonologically null structure, nothing excludes that the pronoun could actually be a projection of a null NP structure where the determiner part is its specifier. Thus, the same arguments that apply to nominal expressions if we treat them as NPs with Ds as specifiers can extend also to the pronouns, saving the consistency of selection.

- (229) comer manzanas
eat apples

Another argument for the DP-hypothesis was the idea that nouns and modifiers can undergo ellipsis without the determiner. Salzmann (2018) notes that this just shows that at some point in the derivation the noun and the adjective form a constituent to the exclusion of the determiner, but this is satisfied already in (230). Without additional assumptions –for instance that only maximal projections can undergo ellipsis– this does not guarantee that DP is the head.



Then we have the N-to-D movement proposal made for some nouns in some languages, where the alternation between the article and the proper name in first position suggested that the noun has head-moved to the determiner, an operation that as we saw is possible only if both N and D are heads in a head-complement relation. Bruening (2009: 33) discusses that in this context Cinque (2005) has argued that any movement involving the noun within the nominal expression is phrasal (NP, not N); Hankamer & Mikkelsen (2005) have also argued against N-to-D movement in Scandinavian. In addition to phrasal movement, it could also be the case that the different position of nouns within the nominal expression is due to some other operations, such as reprojection of the N head (cf. Georgi & Müller 2010).

However, even if it turned out to be right that N head-moves to a higher position under some circumstances, it would still need to be shown that that specific head is indeed D and not another functional projection related to NP.

Finally, the argument that D must be the head because D seems to select N and not vice versa is also flawed: if the requisite that makes determiners combine with NPs is semantic in nature (for instance, because the determiner needs to combine with a predicate expressed at the NP level to satisfy its denotation), then a structure like (228) above would be able to account for the property without implying that D projects as a head.

6.4. Conclusion

All in all, it is fair to say that currently there are no strong empirical arguments in favour of treating D as the head of the nominal constituents in which they appear. If D was really the head, it would be necessary to dissociate selection from headedness in order to account for the asymmetries between CP selection and DP selection, and also something should be said about the agreement patterns found within nominal constituents, where the NP seems to be responsible for the form of determiners and not vice versa. We have seen, also, that the position that D is necessary to turn the NP into an argument is controversial, and even if it was correct it would not force a syntactic analysis where D is the head.

The relation between determiners (in the strict sense) and quantifiers, both being able to license nominal constituents in prototypical argument positions, could be therefore reduced to a semantic principle: what these items do, as generalised quantifiers, is making it possible that the predicate expressed by an NP is related to the predicate expressed by a VP. The relation would not be expressed in syntactic terms (for instance saying that both determiners and quantifiers are selected by predicates), but would reduce to a semantic condition.

The theories that currently adopt the DP-hypothesis, in fact, emphasise the conceptual elegance of the idea that the nominal constituent reproduces the same basic structure that we find in clauses; that is, the appeal of the DP-hypothesis in the contemporary literature is that it allows a formalisation of the idea that language builds structures with a very small set of units that are manifested in slightly different terms across domains. But this takes us to the next section, where the potential areas defined by determiners and quantifiers will be discussed.

7. Theories about determiners and quantifiers (II): the internal organisation of the area and the emergence of the relevant readings

There are two families of theories that discuss the internal organisation of the quantifier and determiner area: those that focus on the parallelism between clauses and nominal expressions, finding equivalents inside the nominal domain for the best established clausal functional projections, and those that leave that conceptual issue on the background and rather try to account through syntax for the distinctions based on definiteness and specificity. While all the approaches we will present in this section assume the DP-hypothesis, note that nothing prevents, in principle, that the same areas would be defined as different layers of specifiers within one single NP constituent –that is, that given their meaning and function, a subset of the determiners would necessarily be introduced below another subset of them–.

7.1. Parallelisms between clauses and nominal expressions

The DP-hypothesis had been proposed in a context that emphasised the parallelisms between CP and nominal expressions, and we have seen in §6.1. above that part of the argumentation involved treating possessors as nominal subjects that in some languages actually triggered overt agreement.

Inside this general context, there have been two different proposals about what should be the parallel between D and the projections at the clausal level. One first line of research has treated D as the parallel of Tense (see, for instance, Wiltschko 2014: 78). Part of the arguments have to do with the idea of deictic anchoring. The prototypical function of D is to express referentiality, which is defined through the utterance context –we have seen in §3 that the notion of definiteness has a clear pragmatic side, conveying information about identifiability that might require deictic anchoring, or at least considering a salient or accessible referent in the discourse context–. Similarly, tense is also a deictic category that anchors the proposition to a particular time period using the time of utterance as the landmark: before now, now and after now, to put it bluntly. In this sense, D and T would be parallel in that their role is to take a set of properties expressed by a lexical layer (NP and VP) and anchor that set to the context of utterance.

In the previous family of theories, C should be considered as parallel to case marking or P (see for instance Emonds 1985, Dubinsky & Williams 1995, Kayne 2000), among other reasons because cross-linguistically it is common that prepositions grammaticalise as complementisers and because both case/P and complementisers are used to link the constituents they introduce to external heads that select them (respectively, the predicate that takes the nominal expression and the predicate that introduces a subordinate clause).

A second line of reasoning, however, has been to propose that D is in fact parallel to C, not to T. This approach (see for instance Hinzen & Sheehan 2015) proposes that the typology of

clause types should be treated as differences in referentiality; as C codifies, by assumption, the clause type, C contains some form of referentiality, and therefore should be seen as a parallel to D. Clauses where the speaker takes no stance with respect to the truth value of the proposition –not presupposing they are true– are weakly referential clauses (231), while factive clauses (232) whose truth is presupposed by the speaker are parallel to definite noun phrases, which also presuppose the existence of a referent.

- (231) Es posible [que María venga].
 is possible that María comes
 'It is possible that María comes'.
 (232) Es lamentable [que María venga].
 is regrettable that María comes
 'It is regrettable that María will come'.

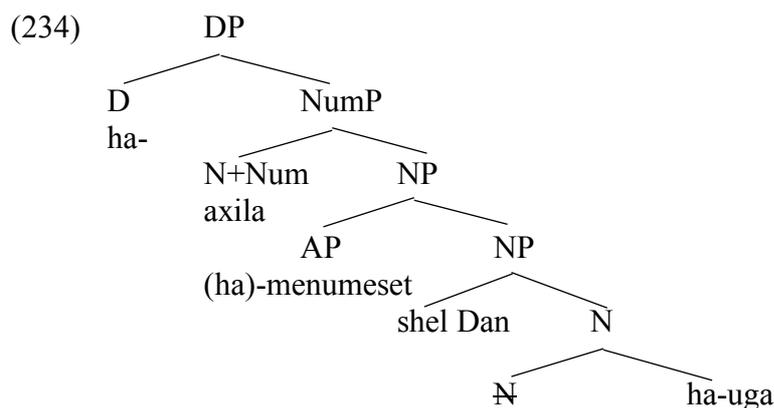
Hinzen & Sheehan (2015) emphasise a second parallelism that is important in their analysis: assuming phase theory (Chomsky 2000), D and C are two of the heads that are able to define their complements as a closed domain that is dispatched to the interfaces to be interpreted.

This parallelism between C and D as phase-defining heads is the cornerstone of Ticio's (2003) proposal on the equivalence between clauses and nominal expressions. Following Grohmann's (2000) proposal that the clause has three domains, she extends it to three areas in the nominal structure. The lowest domain both in clauses and nominal expressions is responsible for theta-assignment. In the nominal domain, this is NP, which introduces the possible arguments of the noun; in the verbal domain, this is VP. The intermediate domain is responsible for the definition of the formal relations of agreement and case marking, which in the case of nouns would be for instance genitive case marking. The highest domain codifies the information relevant to discourse, which in the case of DP has to do with the identification of reference, and in the case of CP has to do with information structure. Ticio's proposal is that a definite DP defines a strong domain which does not allow extraction of an argument (**¿De quién_i leíste [este libro t_i]? 'Of who did you read that book?')* in the same way that some CPs reject extraction from their complement, pursuing the equivalence even further.

However, within the research of the internal structure of nominal expressions, D is not the only head that has been proposed in the functional domain. Ritter (1991), using facts from N-head movement in Hebrew, argued that number features also project as a head within the nominal expression. The specific fact she used to argue for NumberP is (233).

- (233) ha-axila ha-menumeset shel dan et ha-uga
 the-eating the-polite of Dan ACC the-cake
 'Dan's polite eating of the cake'

Given that the noun *axila* 'eating' is a nominalisation, it has to be base generated in a lower position where it can introduce the arguments referring to the person that eats and the thing that is eaten, but it surfaces in a high position, leaving all arguments and the adjective behind. Because all the modifiers and arguments are left behind, Ritter argues that N moves head-to-head. The landing head cannot be D, because this head is occupied by *ha* 'the'. Thus, an intermediate head must be between D and N, and Ritter (1991) proposes that this is NumberP.



With respect to the parallelism between NumP and a projection within the clausal domain, Travis (1992) argued that NumP –which she treats as essentially a projection related to quantification– is an instantiation of Aspect Phrase, the head responsible for grammatical aspect. Among the evidence that she cites, there is the fact that Tagalog uses the same morphology to mark plural and progressive aspect, but also that progressive aspect in a telic verb has the same basic effect as plural number on a count noun: in both cases, one turns something that was bounded and delimited into something that is unbounded and non-delimited (see also Megerdoomian 2008).

(235) a. Juan comió una tarta.

Juan ate a cake

'Juan ate a cake' (bounded: the cake is eaten)

b. Juan estuvo comiendo una tarta.

Juan was eating a cake

'Juan was eating a cake' (unbounded: the cake is not eaten completely)

(236) a. Juan comió una tarta.

Juan ate a cake

'Juan ate a cake' (bounded: the cake is eaten)

b. Juan comió tartas.

Juan ate cakes' (unbounded: there is no specific cake such as it is completely eaten)

On the relation between grammatical aspect and quantification, see for instance Krifka (1989), Tenny (1987), Parsons (1990) and Arche (2014): the general observation is that grammatical aspect involves quantifying over distinct subphases of the eventuality time, in a way parallel to how number and other types of quantification act over the description of the NP.

Wiltschko (2014) generalises the NumP to a position responsible for the phi features of the noun (number, gender, person), and also argues for a parallelism between grammatical aspect and the phi feature head within the nominal domain. In her view –where she wants to dissociate the function played by these heads from the conceptual notion of time–, aspect is a category whose function is to provide a point-of-view about the eventuality defined by the VP. Obvious values for this point-of-view in a language like Spanish are imperfective –focusing on the internal duration of the event, excluding the initial and final moments–, perfective –focusing on the final moment, or taking the whole running time of the eventuality including both beginning and end–, perfect –focusing on the state after termination of the event– or prospective –focusing on the state immediately preceding the initial point of the event–. The phi feature head would perform a similar function, giving a particular point of

nominal expression, including the NP itself and all restrictive modifiers that are used to select a (sub)kind of the entities denoted by them.

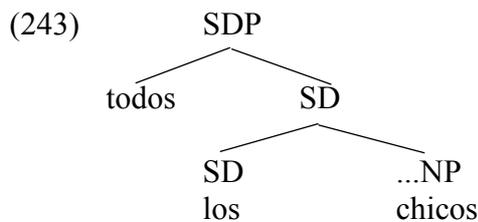
- (240) [KindP[clase] Kind de [NP tigre]]
 type of tiger
 'type of tiger'

The strong determiner phrase is the one that introduces referentiality. All determiners that directly codify definiteness are base-merged there, including the universal quantifiers –which as we saw in §5.1 act as definites with respect to the combination with *hay* 'there.is'–. The weak determiner phrase –also called Predicative Determiner Phrase– hosts non-universal quantifiers, where Zamparelli (1995, 2000) also includes the Italian and the Spanish indefinite article *un* 'a'. Importantly, alone, the WDP does not contain reference: it still denotes a predicate, just like KindP and NP, and by assumption is not enough in itself to license a nominal expression in argument position. A case of nominal expression projecting WDP but no SDP is for instance the predicate that combines with the copulative verb in (241) –remember we have called this the descriptive use of the indefinite article in §3.2–:

- (241) Juan es un médico estupendo.
 Juan is a doctor wonderful
 'Juan is a wonderful doctor'

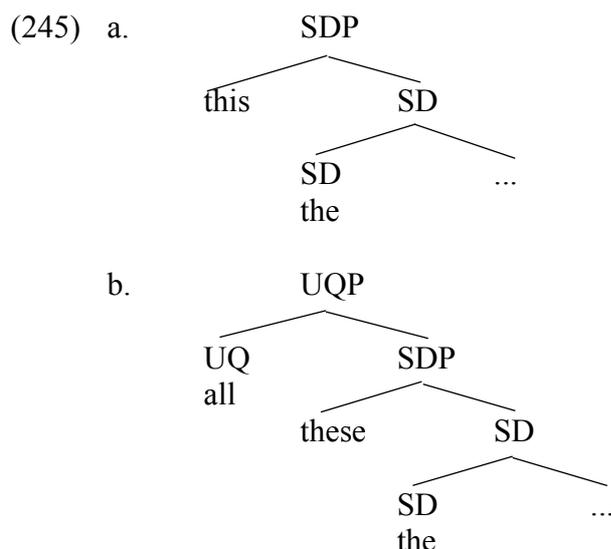
As a side note, we should point out that Zamparelli (1995) can treat a sequence like (242) as (243), that is, with the universal quantifier in the specifier of the head responsible for referentiality and the article in the head position.

- (242) todos los chicos
 all the boys
 'all the boys'



However, given that *todos estos chicos* 'all these boys' is also possible, it might become necessary to split the universal quantifier projection from the strong determiner projection. The reason is that in several languages, such as Modern Greek, demonstratives co-occur with the definite article (244). This suggests that the demonstrative itself should be projected as a specifier of SDP, which in turn could make it necessary to find an additional head for the universal quantifier *todos* 'all' –on the usual assumptions of the DP-hypothesis, which does not allow multiple specifiers inside the same projection–.

- (244) autos o kyrios
 this the gentleman
 'this gentleman'



Going now back to the letter, not the spirit, of Zamparelli (1995, 2000), let us consider how he derives the definite / indefinite distinction, and the specific / non-specific distinction. Importantly, the notion of specificity that he considers is two-fold: whether the nominal expression presupposes the existence of a referent or not, and whether the nominal expression is a variable under the scope of an operator or not. We will restrict the discussion to nominal expressions in argumental positions –excluding uses as predicates such as (241) above.

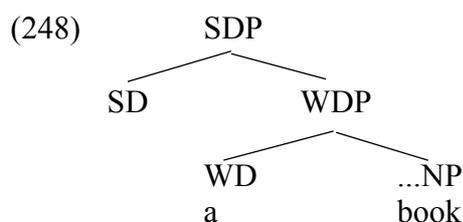
Zamparelli (1995: 119-121) states two principles that govern the interpretability of SDP:

- (246) a. A filled SDP layer triggers presupposition of existence.
 b. An SDP without lexical material is interpreted as a variable.

This rule is able to derive the distinction between specificity and non-specificity, in the strong sense. Remember the two interpretations that an intensional predicate like *querer* 'want' triggers in an indefinite nominal expression.

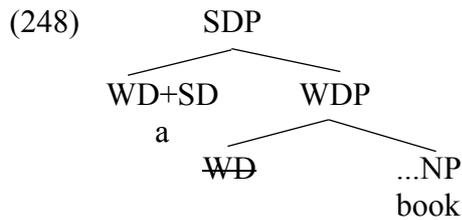
- (247) Quiero comprar un libro.
 want.1sg buy a book
 'I want to buy a book'
 Specific: 'There is a book that exists, and I want to buy it.'
 Non-specific: 'I want to buy any book, and maybe I don't find one.'

In both cases the indefinite article is base generated in the WDP; SDP must be present, because otherwise the nominal expression cannot act as an argument.



Without further operations, (248) is the non-specific reading. The SDP is empty, so there is no presupposition of existence and the nominal expression is a variable under the scope of the modal operator *querer* 'want'. In order to trigger the specific reading, presupposing that a

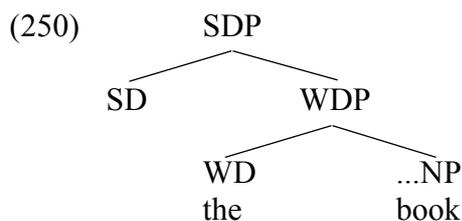
particular book exists, SDP must be filled: the indefinite article rises to SDP –we can assume head movement in this case–.



Is definiteness also codified in the syntax? No, this does not seem to be the case. The main reason is that definite determiners, as we saw, next to the strong referential readings, can also have weak referential or expletive readings where the definite article is taken as a variable (249).

- (249) Los chicos se rompieron el brazo.
 the boys SE broke.3pl the arm
 'The boys broke their arms'

For a definite expression like (249) it has to be the case that SDP is empty of lexical material, which means that the article must be introduced in WDP in this case at least.

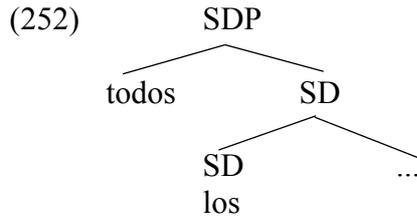


Thus, it cannot be said that WDP is the position occupied by any indefinite determiner. We have seen that it cannot be said either that SDP is restricted to definite determiners, because in specific readings the indefinites must fill SDP also. The conclusion is that the definiteness contrast needs to be lexically codified by the specific items that are introduced in the determiner domain: *el* 'the' will inherently convey definiteness, while *un* 'a' would not contain the semantic information that triggers definiteness.

As additional support for this idea, consider (251), where the definite expression is used as a predicate –remember also the de dicto readings that were presented in §1, where the definite description is relevant as predicate–.

- (251) Juan es el ganador del concurso.
 Juan is the winner of.the competition

Why are universal quantifiers definite? In Zamparelli's (1995) theory, the explanation is simple: they are introduced as specifiers of the SDP, and once they fill the SDP they trigger a presuppositional reading where the SDP cannot act as a variable.



However, in this domain we have an additional argument that universal quantifiers should be introduced in an even higher position. As we saw, *todo* 'every' is chosen in non-specific contexts where *cada* 'each' is not possible.

- (253) Todo estudiante puede leer esto.
 every student can read this
 'Any student can read this'

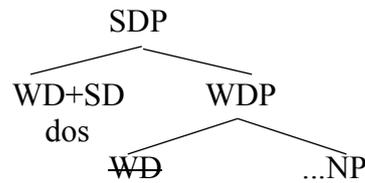
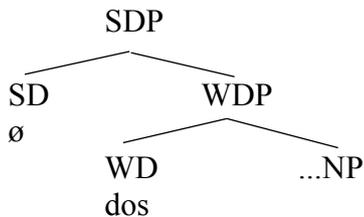
The indifference reading associated to this quantifier in a sentence like (253) involves a non-referential reading where the modal verb takes the expression as a variable. This would mean that (254) should be the right structure, with SDP empty.

- (254) [UQP todo [SDP \emptyset ...[NP estudiante]]]

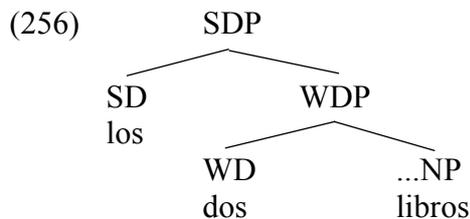
Non-universal quantifiers are treated as the indefinite *un* 'a': they are base generated in WDP, adding another property to the predicate part of the nominal expression –its cardinality, its quantity, etc.–, and the specific / non-specific contrast is explained in the same way as with the indefinites.

- (255) a. Non-specific

- b. Specific



The indefinite quantifiers can combine with a definite, which precedes them. Then they are part of a definite expression, which presupposes existence.



'the two books'

An interesting property of this proposal is that it makes a claim about what counts as specificity in grammatical structures: from all the notions of specificity discussed in §4, it

implies that the one that is grammaticalised is the one that has to do with the presupposition of existence and the scope relations between operators. The epistemic specificity, in contrast, which is triggered when we know that there is a referent but we ignore or we don't care about its identity, would not be properly specificity from the perspective of the DP structure: it would have to depend on other factors that are not directly codified in the determiner area.

- (257) El estudiante que se rompió un brazo, sea quien sea, está en el hospital.
 the student that SE broke an arm, be whoever be, is in the hospital
 'The student who broke his arm, whoever he is, is at the hospital'

Another property of the proposal is that it is well-equipped to deal with the relation between determiners and quantifiers that is one of the underlying issues in any analysis of the determiner area. We saw that even though determiners are quantifiers, semantically, sometimes they cannot be used as variables. Zamparelli (1995) elegantly accounts for this apparent contradiction: the distinction between variables and constants is not directly codified in the syntactic structure, but depends on whether SDP is filled with lexical material or not. In themselves, the determiners are quantifiers homogeneously, and if they stay in WDP they have all prototypical properties of quantifiers. It is the SDP layer that introduces the notions that make them look different from quantifiers; when the items move to SDP (or are base-generated there) they trigger a referential interpretation that can support other notions (deixis, for instance) that are not involved in operator-variable pairs.

Similarly, it is not true that both determiners and quantifiers license nominal expressions in argument positions. What happens, rather, is that a syntactic head, SD, licenses them there, and the determiners and operators can move to SDP or not, depending on whether they are specific or not. The same expression without SDP will act as a predicate, independently of whether it contains the same determiner or quantifier as the one acting as an argument.

Explicative as the proposal is, there are several aspects that it cannot derive from the perspective of Spanish. One of them is that, given that indefinite articles are introduced below SDP, it allows that indefinite articles can combine with definite articles and demonstratives.

- (258) *estos unos chicos
 these some boys

It cannot be the case that the indefinite article must compulsorily move to SDP, because then it would only have specific readings, and it cannot be the case that the definite determiners are base generated in WDP, because they can combine with most indefinite quantifiers (e.g., *los muchos problemas* 'the many problems'). Syntax, in this system, cannot explain the incompatibility, which might be due –for instance– to a clash between the contradictory information that the definite article and the indefinite article convey. Note that this can only be a partial explanation, because in principle the cardinal meaning of *un* 'a' as 'one' should not trigger the incompatibility.

- (259) a. los dos chicos
 the two boys
 b. *el un chico
 the one boy
 c. el único chico
 the only boy

One way of solving the problem would be to say that *un* 'a' is always an article and never a cardinal numeral. This takes us to the debate on the nature of *un* 'a' in Spanish, which we discuss in the following section.

8. Theories about determiners and quantifiers (III): on the nature of *un*

One of the most active traditional debates in the field of quantification and determination in Spanish is the nature of the form *un* 'a' (see Alonso 1933, Alarcos 1967, Lapesa 1975, Lázaro Carreter 1975, Renzi 1976, Álvarez Martínez 1986, Lorenzo 1995, Laca & Tasmowski 1996, Leonetti 1999a, 1999b, Rigau 1999, Sánchez López 1999, Brucart & Rigau 2002, Gutiérrez 2008, as well as Heim 1982, whose analysis for English has influenced the proposals made for Spanish after her). The debate concentrates on whether *un* 'a' should be considered a quantifier or not. There are three positions in the debate.

The first position is that the form is a quantifier, and as such should be assimilated to other indefinite quantifiers like *algún* 'some, any' (Alonso 1933, Alarcos 1967, Álvarez Martínez 1986, Lorenzo 1995, Sánchez López 1999, Brucart & Rigau 2002). An additional argument in support of this idea is that the indefinite is used sometimes as a cardinal numeral meaning '1'.

A second position is that the form is an indefinite article, not a quantifier, used to introduce a new discourse referent –in opposition to the definite article–; the similarity with the cardinal numeral is explained historically (Lapesa 1975). The hypothesis is also pursued in Lázaro Carreter (1975), Renzi (1976), Laca & Tasmowski (1996), Leonetti (1999a) and Rigau (1999).

The third position is defended in Gutiérrez (2008): the form is an indefinite article, but there is a homophonous form *un* used as a cardinal quantifier meaning '1'. The plural forms *unos* and *unas* can only be articles, because the plural meaning is incompatible with the cardinality '1', while the singular *un* could be either 'a' or 'one', depending on other properties.

8.1. Arguments that the indefinite article is a quantifier

The position that the indefinite article is a quantifier is in principle supported by several facts that have been discussed in the literature.

The first one is that, cross-linguistically, it is frequent that the so-called indefinite article comes from a numeral expression meaning '1'. This is the case in Romance languages, but for instance also in English, where the Old English form *a:n* produced both *a(n)* and *one*, depending on prosodic factors.

Second (Alarcos 1968), the indefinite article is able to combine with the indifference quantifier *cualquiera* 'any', something impossible for undisputed determiners (260):

- (260) a. un libro cualquiera
 a book any
 'any book'
 b. *{el / este / tu} libro cualquiera
 the this your book any

The same quantifier can combine with cardinal numerals, so in this respect the indefinite article patterns with quantifiers.

- (261) dos libros cualesquiera
 two books any
 'any two books'

Third, the indefinite article can appear without a noun and head partitive structures, something impossible for the definite article (262). Undisputed quantifiers share these two properties (263).

- (262) a. uno de los tres chicos
 one of the three boys
 b. *el de los tres chicos
 the of the three boys
 (263) muchos de los cuarenta chicos
 many of the forty boys

8.2. Arguments that the indefinite article is a determiner

However, there are also other phenomena that suggest that the indefinite article patterns with the determiners.

In the strict sense, if the form *un* is a quantifier it should be an operator that is able to define a scope. Heim (1982) shows that the form *un* 'a' introduces a variable in the discourse, and that variable can be bound by a quantifier at any point. Her main argument is sentences like (264), which are known in the literature as Donkey-sentences.

- (264) Every farmer that owns a donkey beats it.

The natural way of interpreting the sentence is as follows: 'for every donkey that is owned by a farmer, it is the case that the farmer beats that donkey'. Importantly, then, the indefinite expression 'a donkey' must be interpreted as universally quantified, not existentially quantified. If the indefinite form *un* 'a' was itself an operator, judging from this example, it should be a universal quantifier. However, we have seen plenty of evidence that this form does not map with universal quantifiers –for instance with respect to definiteness effects–, and in other cases it would have to be interpreted as an existential quantifier, as in (265), which by no means implies that every boy came.

- (265) Ha venido un chico.
 has come a boy

Heim (1982) then argued that the role of the indefinite is to introduce a variable in the discourse, and as a variable it can be bound by different types of operators. Remember that we saw that the definite article is also able to act as a variable, and therefore that this property does not mean that an expression is not a determiner.

Other properties argue directly that the expression is not a quantifier. First of all, remember that the use of the indefinite article extends to nominal expressions used as predicates, or where the descriptive content is salient. It is difficult to see how the quantification would be instantiated in these cases.

- (266) Pedro es un médico estupendo.
 Pedro is a doctor wonderful

Third, Gutiérrez (2008: 296) notes that the form *unos* cannot be used to answer quantity questions:

- (267) A: ¿Cuántos niños vinieron?
 how many boys came

- B. *Unos
 B. Algunos
 'some'

Note also that this plural form cannot license partitive constructions (Gutiérrez Rexach 2003: 424).

- (268) {algunos / *unos} de los estudiantes
 some some of the students

Also (Gutiérrez 2008: 293), the adjective *mismo* 'self' used to manifest identity with a previous referent cannot combine with indefinite quantifiers (269), because they do not codify information related to the reference of the expression. It can combine with the definite article, and also with the indefinite one (270).

- (269) *{muchos / pocos / bastantes} mismos niños
 many few quite.many same children
 (270) {el / un} mismo niño
 the / a same boy
 'the same boy (as before) / one same boy'

Another property that makes the indefinite article act like a determiner and not a quantifier is the combination with adjectives that express notions related to identity (Gutiérrez 2008: 290), like *cierto* 'certain' –which Eguren & Sánchez (2007) treat as an adjective of imprecision– and *determinado* 'determined', which conveys the idea that there is a specific referent.

- (271) un {cierto / determinado} sufrimiento
 a certain / determined suffering
 'something of a suffering / a particular suffering'

Indefinite quantifiers cannot combine with them.

- (272) *{dos / muchos / algunos} {ciertos / determinados} casos
 two many some certain determined cases

This combinatorial property can suggest that the meaning that *un* 'a' conveys has to do with reference, as the theory that proposes that it is a determiner expects. In contrast, proper quantifiers do not express notions related to identificability and expectedly they reject these adjectives.

Gutiérrez (2008) goes back to some of the arguments that the indefinite article is a quantifier, provided in §8.1 above, and shows that they are not incompatible with a determiner analysis. The reason that *un* 'a' can combine with *cualquiera* 'any', but not the definite determiners, is that definiteness is of semantic nature: *cualquiera* expresses indifference about identity, which is not compatible with the identification associated to definiteness. With respect to why *un* 'a' can appear without a noun, but *el* 'the' cannot, Gutiérrez (2008: 292) proposes that the reason is phonological: the definite article always lacks stress and phonologically cliticises to the noun phrase, but the indefinite article still carries stress. On the assumption that a clitic cannot sustain itself in phonology, this explains

why the definite article cannot license ellipsis of the whole NP, but the indefinite article allows it.

8.3. *Two different un: a cardinal quantifier and a determiner*

However, there are still several properties of *un* 'a' that are not compatible with the view that this form is a determiner. Interestingly, they never extend to the plural form *unos* 'some'.

First, one has to explain why it is the case that cross-linguistically there is this connection between the cardinal for '1' and the indefinite article, as we saw. Second, it is still true that the singular form can license partitive constructions, which as we saw is a property of non-universal quantifiers:

- (273) uno de los estudiantes
one of the students

Third, as we saw in §3, the indefinite article can be modified by expressions like *solo* 'only' or *exactamente* 'exactly' when it denotes the cardinality '1'.

- (274) exactamente un estudiante
exactly one student

This is not the case with the plural form, again.

- (275) *exactamente unos estudiantes
exactly some students

In some contexts, it contrasts with cardinal numerals of values different than '1', such as (276). Even without the modifiers noted above, it can denote a cardinality of '1' unequivocally in some sentences, like (277).

- (276) Puedes comprarte un juguete, no dos.
can.2sg buy-you a toy not two
'You can buy one toy, not two'
(277) Cada menú da derecho a una bebida.
each menu gives right to one drink

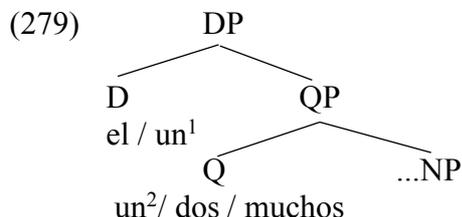
Again, this is never the case with the plural *unos*. It cannot contrast with quantifiers (cardinal numerals or others) and it is never used to express a quantity.

- (278) *Vinieron unos estudiantes, no muchos.
came.3pl some students, not many
Intended: 'Only few students came, not many'

The solution that Gutiérrez (2008) proposes for this puzzle is elegant and simple. The indefinite article *un* 'a', which allows a plural form *unos*, is a determiner used to introduce new referents in the discourse and more generally nominal expressions where the identity is not relevant, as in predicates. However, for historical reasons, there is also another *un* 'one', a cardinal numeral with a value of '1', which is of course a quantifier (like *dos* 'two' and the rest). This cardinal lacks a plural form, and that is why the form *unos* 'some' must necessarily correspond to the determiner *un* 'a'.

The cardinal *un* 'one' is the one that appears in partitive structures, in combination with expressions that express precise quantities, and in contrast with other cardinals.

Going now to the structure, Gutiérrez (2008: 313) proposes that both the indefinite and definite articles should be merged in the same projection, for her DP, while the indefinite quantifiers –including the cardinal corresponding to '1'– are merged in a lower projection.

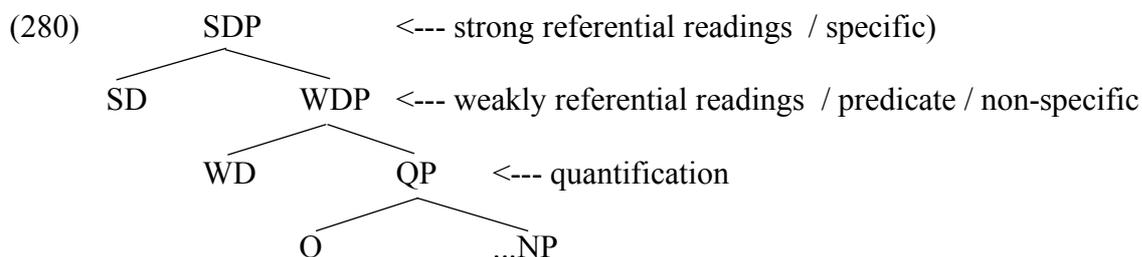


The form *unos* necessarily merges in DP.

Two remarks are in order here; they might be interpreted as problems for the theory, or as open issues that imply that some additional mechanism besides the syntactic structure has to be invoked at this point.

The first is possibly simpler to solve. The proposal that Gutiérrez (2008) makes does not clearly allow for a distinction between weakly referential and strongly referential definite phrases, and the specific vs. non-specific contrast. The structure, given the assumptions in (279), in principle places in the same position the definite article when it is weakly referential and when it is strongly referential, and the indefinite article is also there when it is specific or non-specific. The claim that the theory makes, then, is that these distinctions should derive from other properties not contained in the syntactic structure internal to the nominal constituent –for instance, the position that the whole nominal expression occupies inside the clause when it receives an interpretation (Diesing 1992)–.

Note that the QP position in Gutiérrez (2008) is not equivalent to the WDP in Zamparelli (1995). Even if most indefinite quantifiers are merged in WDP in the second proposal, we saw that given their use as variables in expletive contexts, the definite determiner would also have to appear there. Gutiérrez (2008) is clear that her QP is only for proper quantifiers, and explicitly rejects the claim that indefinite expressions are always quantificational –as we saw for the indefinite article–. If both theories are combined, one would have to propose at least three layers, as in (280), letting the specific/non-specific contrast be accounted for in Zamparelli's terms and differentiating quantifiers from indefinite determiners.



Still, the difference between definites and indefinites would be a lexical matter –given that the indefinite article in this proposal is still able to move to SD and the definite article can be generated in WD–.

The second comment about the structure is more difficult to solve, as far as we understand it. Basically, the problem is the following: we know that the definite determiner is always unable to combine with the form *un*. If the form *un* were just an indefinite determiner, the

incompatibility between *el* and *un* would reduce to a crash in the opposite instructions they convey about identificability. However, the crash extends to the cardinal *un* 'one':

- (281) *Vino el un chico, no los dos.
 came the one boy, not the two
 Intended: 'One boy that you know came, not the two you know'.

Note that the incompatibility is difficult to explain syntactically. If the cardinal is merged in Q, there are only two ways of accounting for the crash in syntax: either *el* 'the' is compulsorily base merged also in Q, or the cardinal for '1' must compulsorily move to DP. The first option is untenable given that the definite article can combine with other quantifiers –so it cannot be generated in Q– (282).

- (282) los dos chicos
 the two boys

The second option is difficult to maintain. It would imply that '1', unlike the other quantifiers, is forced to move to the D domain even when it is interpreted as a cardinal. That movement operation would then be completely vacuous semantically, which also makes it difficult to find a trigger for it.

In semantic terms, one alternative that does not involve the syntactic structure could be the uniqueness interpretation associated to the definite article in some theories. If the notion of definiteness involves a uniqueness interpretation, in a singular noun phrase the information that the cardinality is '1' would be presupposed by uniqueness. Thus the combination of the definite article and the cardinal '1' would be redundant.

Importantly, this explanation assumes that redundancy is a cause for ungrammaticality; this might not be completely true, given that native speakers can produce combinations like *subir arriba* 'to ascend upwards'. Remember also that not all theories about definiteness accept that uniqueness is the right notion (cf. §3.1.1).

Let us now leave this issue here, and move to the general question of what happens with nominal expressions that lack a determiner even though they are used as arguments.

9. Theories about determiners and quantifiers (IV): on proper names

There are two main types of determiner-less nominal expressions merged in argument position. The first type is proper names, as in (283), and the second type is common nouns with or without modifiers, as in (284).

- (283) Ha venido María.
 has come María
 (284) Han venido estudiantes.
 have.3pl come students
 'Students have come'

Each one of the two cases is different. In the first case, no theory denies that the proper name is an argument and the discussion centers on what they mean and how they obtain their referential status in the absence of an overt determiner. In the second case, some theories deny that they are arguments in the strict sense. This section is devoted to the first class of determiner-less nominal expressions, while §10 deals with cases like (284).

9.1. *The meaning of proper names*

There is agreement that proper names are nominal expressions that convey reference: they are referential by themselves, in the sense that they identify an entity without the help of overt definite determiners (see among many others Mill 1843, Donnellan 1966, Evans 1973, Kripke 1980, Salmon 1981, Recanati 1997, Lewis 1986, Fernández-Leborans 1999). A few tests show this easily if we compare a proper name with a common noun.

First, the proper name can be referred back by a pronoun, but not the determiner-less common noun:

- (285) a. Ha venido Juan_i, porque él_i en persona quiere hablarte.
 has come Juan, because he in person wants talk-you
 'Juan has come because he himself wants to talk to you'
 b. *Han venido niños_i, porque ellos_i en persona quieren hablarte.
 have come boys because they in person want talk-you
 Intended: 'Some boys have come because they themselves want to talk to you'

Second, because they directly convey reference, proper names reject modifiers, just like pronouns –and in contrast to common nouns–.

- (286) a. *María guapa
 María pretty
 b. *ella guapa
 she pretty
 c. niña guapa
 girl pretty

When the proper name is modified, it acts grammatically as a common noun in Spanish: it needs to combine with a determiner or quantifier in order to be licensed in argument position.

- (287) *(El) Madrid del siglo pasado era muy diferente.
 the Madrid of.the centiry past was very different
 'The Madrid of the past century was very different'

In logical terms, the proper name itself expresses an entity of type <e>, a constant, that satisfies the argument position of a predicate. Being of type <e> itself, it does not overtly combine with determiners –which, as we have seen, turn the <e,t> predicate in an <e>–, meaning that in sequences like (288) the determiner is expletive.

- (288) (La) Merkel ha estado en España.
 the Merkel has been in Spain

An open issue, that we will discuss in §9.2, is how the noun comes to express an individual constant: most theories propose that in fact the proper name is part of a structure that contains a D element, so underlyingly their structure is the same of a common noun with a definite determiner.

If there is agreement that proper names refer, there is disagreement with respect to whether they contain a predicate. In particular, the debate has revolved around the question of whether a proper name can be related to a definite description in the sense of Russell (1905), as in (289).

- (289) a. Donald Trump
 b. el presidente de EEUU
 the president of USA

It (289a) is at least covertly related to (289b), it means that the proper name, just like the definite description, contains a referential part and a predicative part. This proposal for proper names, known as the Descriptivist Theory or as the Frege-Russell theory (because Russell 1905 argued for it based on previous work by Frege), proposes that the predicative part of (289a) would be the properties that are used to identify in this world the individual we know as Donald Trump, such as those in (290).

- (290) a. the 45th president of the USA
 b. the guy that made a cameo appearance in Home Alone 2
 c. the guy that appeared in The Apprentice
 d. the guy that had a fight with Rosie O'Donnell
 ...

Every proper name would be associated to a cluster of properties, covertly. The only condition is that at least one of the properties in a given world picks only one individual, and therefore it is enough to identify it. In our example, (290a) is such property, at least for this world.

One argument in favour of this approach comes from Russell (1905) himself: a person that does not know Donald Trump at all but only has the information that he is the current president of the USA can make the statement in (291) on the basis of what he knows is the role of the person that acts as a president. It is not even necessary that the speaker can identify Donald Trump if a picture of him is there.

- (291) Donald Trump is completely irresponsible.

The alternative to this descriptivist theory is the proposal that proper names are rigid designators (Kripke 1980). In this theory, the proper name lacks any property-denoting aspect, and it is just a referential expression that identifies an individual in the universe of discourse. Kripke provides three arguments against the descriptive theory of meaning. Imagine that María makes the following statement:

- (292) This painting represents Aristotle.

In the descriptive theory, *Aristotle* stands for a cluster of properties. Imagine the properties are things like 'the teacher of Alexander the Great' and 'the most important philosopher of Ancient Greece'. Now imagine that the world was different than we know it to be, and in that world Aristotle died at the age of 18, with the consequence that he would never teach Alexander the Great or become the greatest philosopher –assume that in that world Plato did both things–Alternatively, imagine it is discovered that old history is wrong and Plato wrote the works previously attributed to Aristotle, and taught Alexander. According to the descriptivist theory, in these cases, María meant to say Plato instead of Aristotle, but intuitively this is not right for (292): María still means that the individual called Aristotle is represented in the painting. Thus, the reference cannot be based on the properties that we attribute to the individuals referred to by the proper names.

A second argument is that, if the meaning of *Aristotle* was 'the philosopher that taught Alexander', then the sentence in (293) should be a trivial statement, because it would equal

'The philosopher that taught Alexander was the philosopher that taught Alexander', which is not how the addressee feels about the proposition.

- (293) Aristóteles es el filósofo que enseñó a Alejandro Magno.
Aristotle is the philosopher that taught ACC Alexander Great

The third argument is about false beliefs associated to the referent of a proper name. Imagine that María believes that Angela Merkel is the president of USA. If María says then something like *I saw Angela Merkel* because she saw the individual with that name, this would mean that María actually says that she saw Donald Trump (as for 2018), but this is not what María wanted to report.

An effect of the theory that proper names are rigid designators is the treatment of pairs of sentences like (294).

- (294) a. He visto al presidente de EEUU.
have.1sg seen the president of USA
b. He visto a Donald Trump.
have.1sg seen Donald Trump

Depending on the moment and world where this is uttered, the definite description in (294a) would refer to different individuals: Barack Obama if it is uttered in 2010, George W. Bush if it is uttered in 2003, etc. In other possible worlds it might even refer to Woody Allen, Mariano Rajoy or Benjamin Franklin. The direct object in (294b), in contrast, would refer to the same individual in 2003, 2010 and 2018 –Kripke says that even across possible worlds it would necessarily refer to the individual we know as Donald Trump, under any circumstances–. This is what being a rigid designator means.

While the rigid designator theory has been adopted by many semanticists, it is not completely devoid of problems. We know that Alexander the Great was also called Ozymandias, and we can say a sentence like (295).

- (295) Alexander the Great was Ozymandias.

If the proper name was only referring, (295) should be a tautology: we would say that some individual is identical to himself. This is against our intuition: we are informing someone with (295) that the two names are used for the same person.

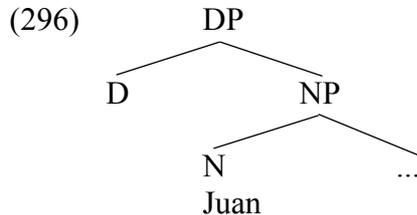
There are two ways out of this problem: Kripke (1980) argued that the proper name is assigned to a referent in what he calls an 'initial baptism' where the name becomes a rigid designator for that individual. This theory of reference is causal: the referent is associated to the proper name in that ceremony. From this perspective (295) is not vacuous, given that it means to say that the same individual that once was assigned the name *Alexander* got in a different baptism assigned the name *Ozymandias*.

The second way out is in part going back to the descriptivist theory, but instead of proposing that there is a cluster of noteworthy properties that identify the referent it is claimed that the only property described is purely denominative (Kneale 1962, Kleiber 1981): the proper name *Alexander* means 'the x that is called *Alexander*'. (295) is then not trivial because it says that the x called *Alexander* is identical to the x called *Ozymandias*.

What is undisputed, however, is that the proper name refers in a way that common nouns can only do through a determiner. In the next subsection we will present the most standard account of the internal syntactic structure of proper names.

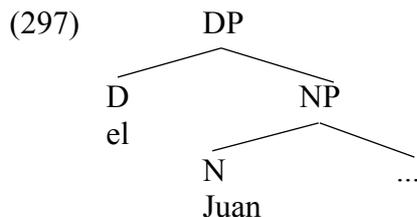
9.2. *The internal syntactic structure of proper names*

The most influential analysis of proper names comes from Longobardi (1994). His main claim is that proper names are, syntactically, like common nouns, and underlyingly they participate in the same type of structure as common nouns. Specifically, they are NPs that become referential only when they combine with a determiner.

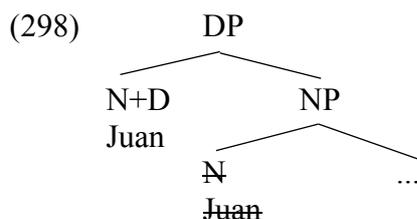


In Longobardi's (1994) theory, there is no way to become an argument without D; a common noun and a proper name would equally have to be dominated by DP to become arguments (see also Stowell 1989).

There are two alternatives to fill the DP position. The first one is to introduce a definite determiner there. These are the cases where the expletive article appears with the proper name, an option that is compulsory for instance in Contemporary Catalan, and which Spanish allows in some registers.



The second option is that the N head-moves to D –Longobardi (1994) assumes the DP-hypothesis, but as far as we understand it his claims can still be kept if the NP moved phrasally to a higher position–.



This movement operation is visible in Italian. The consequence is that, inherently, the proper name is nothing but a common noun that has moved to D (see also Borer 2005). In Italian, there is evidence for this movement through possessives. The proper name can alternate between a structure where it follows the possessive and the D position is occupied by the article, and one where there is no article and the possessive follows it. Longobardi's proposal (1994: 623) is that in the first case the proper name stays in N, as a common noun, and in the second case it moves to D.

- (299) a. *il mio Gianni*
 the my Gianni
 b. *Gianni mio*

Gianny my

In Spanish the pattern does not replicate, possibly because the possessive already occupies the D position.

- (300) a. mi Juan
 my Juan
 b. *Juan mi(o)
 Juan my(ne)

In fact, assuming Longobardi's (1994) explanation, Italian and Spanish contrast in that the presence of modifiers blocks movement of N to D. In Italian (301) the adjective can follow the proper name when there is no article (Longobardi 1994: 624).

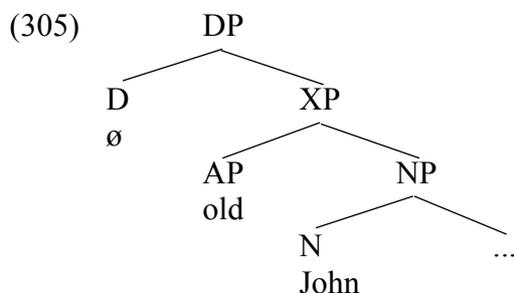
- (301) a. il vecchio Camerese
 the old Camerese
 b. Camerese vecchio
 Camerese old

In Spanish, (301b) is impossible. Whenever the proper name is modified, it stays in the N layer and the D position has to be filled by a determiner. Syntactically, the proper name behaves as a common noun in this context. We can speculate, if head-movement is assumed, that the modifiers in Spanish introduce extra head positions that intervene between N and D.

- (302) a. el simpático Rajoy
 the nice Rajoy
 b. *Rajoy simpático
 Rajoy nice
 (303) *Simpático Rajoy fue presidente unos años.
 nice Rajoy was president some years

With respect to English, modification seems to be compatible on the surface with a proper name without an article (304). However, Longobardi (1994) proposes that English in fact is like Spanish, only that the D position is occupied by an empty determiner.

- (304) I love old John.



Note that this proposal about proper names is in principle compatible with the descriptive semantic theory mentioned in §9.1: the proper name is underlyingly a common noun, only that when it acts as a proper name it has been combined with a DP, and in the standard case it has moved to the DP projection –by assumption, through head-movement–.

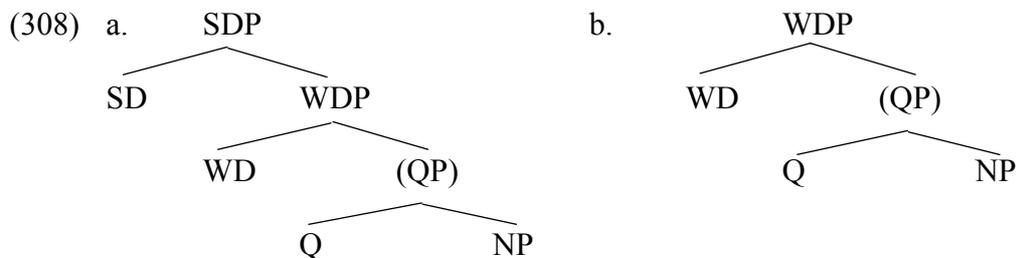
This nature as a common noun is related to two different uses of the proper name. In the first one, it appears in combination with some (pseudo-)copulative verbs to express some similarities between an entity and the referent of the proper name. Note that in this context there is no reference related to the noun.

- (306) a. Barcelona parecía Nueva York aquellos días.
 Barcelona seemed New York those days
 b. Pilar parece Chomsky.
 Pilar seems Chomsky
 c. Pedro se volvió Sherlock Holmes.
 Pedro SE became Sherlock Holmes

Second (Jonasson 1991), the proper name can be used metaphorically to express a set of properties that are prototypically instantiated in the referent they normally associate to them. In such cases the use of an overt determiner is compulsory with or without modifiers, typically (but not exclusively) the indefinite article in the ponderative and evaluative descriptive use.

- (307) a. Este político es un Churchill.
 this politician is a Churchill
 'This politician has the salient properties of Churchill'
 b. Este cantante es un Gardel.
 this singer is a Gardel
 'This singer has the salient properties of Gardel'

This alternation suggests –combining now Longobardi (1994) with Zamparelli's (1995, 2000) proposal– that it should be possible to build a proper name without a SDP constituent that forces it to act as an argument, as in (308b).



In the cases where the SDP projection is lexically filled by the noun, SD is interpreted as referential (not as a variable) and as such it can satisfy an argument position.

With these last examples in hand, we would expect the proper name to denote at least some property –perhaps just the denominative property 'to be called X'–. An analysis as a rigid designator could claim that the property-denotation of the common noun becomes overwritten when the N is interpreted at D, but this is an extra assumption that the other theory would not have to make.

What we have seen in Longobardi's (1994) analysis and its combination with Zamparelli's is that only nouns combined with a determiner can act as proper arguments. We have to insist at this point that even if Longobardi assumes the DP hypothesis, as Zamparelli does (2000), Bruening (2009) has shown that it is not necessary that the determiner projects as a head in the structure to turn the predicate into a referential expression. Therefore, the question of whether D is a head or not is independent of the question of whether D is necessary to license

something as an argument. Longobardi's (1994) arguments support the DP-hypothesis only to the extent that the data force a head-movement analysis of N –not a phrasal one–, and only to the extent that the landing position is unequivocally D.

In the next section, we will revisit the claim that D is necessary for an NP to act as an argument through the discussion of common nouns that are apparently in argument positions even though on the surface they do not combine with a determiner or quantifier.

10. Theories about determiners and quantifiers (V): on bare nouns used as arguments

Bare nouns such as those in (309), which in appearance at least occupy an argument position, have been controversial in the literature. Two main positions have been argued for in terms of whether they contain a determiner: Fiengo (1974), Otero (1976), Carlson (1977) and Contreras (1986, 1996) have argued that these nominal expressions contain empty determiners in English or Spanish, while Lois (1989), Wonder (1990) and Masullo (1992) have argued that there is no determiner and the nominal expression is part of the predicate, or is licensed as an argument by other means, such as partitive case. In this section we will first revise the facts about the restrictions that Spanish imposes on bare nouns in argument positions, and we will then present the arguments for and against the presence of empty determiners in these nominal expressions.

10.1. The data: the restricted syntactic distribution of bare nouns in argument positions

There are two main sets of restrictions for bare nouns in these contexts: a first set depends on the count or mass nature of the lexical noun, and a second set depends on the positions where these elements can occupy, in terms of the grammatical functions that they would correspond to.

10.1.1. Plurals, countability and mass nouns

Contrast the two sentences in (310):

- (310) a. He comido arroz.
 have.1sg eaten rice
 b. *He comido uva.
 have.1sg eaten grape

The difference between the two common nouns has to do with the count / mass distinction (Pelletier 1975, Ter Meulen 1980, Bosque 1983). While the noun *arroz* 'rice' is mass, the noun *uva* 'grape' is count, as shown among other things by the fact that the second, but not the first, can combine naturally with cardinal numerals without a taxonomic interpretation (types of the noun); the first, but not the second, can combine naturally with quantifiers such as *mucho* 'much' in the singular.

- (311) a. mucho arroz
 much rice
 b. #mucha uva
 much grape
 c. #dos arroces
 two rices
 (possible as 'two types of rice')
 d. dos uvas
 two grapes

The generalisation is, then, that a mass noun can be a bare noun in argument position in the singular, while a count noun cannot; (310b) becomes grammatical if the count noun appears as a bare plural.

- (311) He comido uvas.
 have.1sg eaten grapes
 'I have eaten grapes'

The singular of mass nouns behaves grammatically like the bare plural of count nouns in a number of respects (see Bosque 1996: 20 and folls.). Besides being able to appear without overt determiners in the object position of many verbs, we have the fact that they both admit the same comparative quantifiers (312), they both combine with *cantidad* 'quantity' (313) – thus, they do not express numbers of items, but quantities of a substance or group– and they both can act as predicates in combination with copulative verbs (314).

- (312) a. menos madera
 less wood
 b. menos niños
 fewer boys
 c. #menos niño
 less boy
- (313) a. una pequeña cantidad de sal
 a small quantity of salt
 b. una pequeña cantidad de libros
 a small quantity of books
 c. #una pequeña cantidad de libro
 a small quantity of book
- (314) a. Esto es agua.
 this is water
 b. Esto son cajas.
 this are boxes
 c. *Esto es caja.
 this is box

This being the main restriction, there are also some more restricted cases of singular count nouns that appear without overt determiners (Alonso 1933, Sánchez de Zavala 1976, Masullo 1992, Espinal 2010), such as the ones in (315).

- (315) a. Busco piso.
 search.1sg house
 b. No tengo novia.
 not have.1sg girlfriend
 c. Lo hizo a mano.
 it did.3sg at hand
 'He did it by hand'

Leaving the contexts where these nouns can appear as predicates for the moment (see the next subsection), the distribution of these bare count nouns in the singular is facilitated by a number of factors. One of them is the presence of intensional verbs –remember in §4 that these verbs, like *preferir* 'prefer', *buscar* 'search' or *desear* 'desire' trigger strong non-

specificity contexts where the existence of a referent for the nominal expression is suspended—.

- (316) a. Necesito coche.
 need.1sg car
 b. *Rompí coche.
 broke.1sg car
- (317) a. He solicitado secretaria.
 have asked.for secretary
 b. *He conocido secretaria.
 have met secretary
- (318) a. Busco puesto.
 search.1sg position
 b. *He dejado puesto.
 have.1sg left position

Note that the fact that intensional verbs suspend the reference of the nominal expression under their scope might license these nominals in the singular because, anyways, there is no specific referent associated to them, and a kind interpretation of the nouns is easy to obtain – what one has asked for in (317a) is not that a particular person becomes your secretary, but that an entity that belongs to the type 'secretary' is assigned to her—.

Remember in §4 that, next to intensional verbs, negation could also produce non-specific readings of indefinite expressions. Negation is also able to license count singular bare nouns (Fernández Ramírez 1951: §3.2., Benincà 1980, Bosque 1996).

- (319) a. No he visto persona que haga estas cosas.
 not have.1sg seen person that does these things
 b. *He visto persona que hace estas cosas.
 have seen person that does these things
- (320) a. No encuentro libro de mi gusto.
 not find.1sg book of my taste
 b. *Encuentro libro de mi gusto.
 find.1sg book of my taste

As coordination is one operation that licenses preverbal subjects without determiner (§1), it can also facilitate the presence of singular count bare nouns:

- (321) Madre e hija vinieron.
 mother and daughter came.3pl

Outside from these grammatical contexts, semantic and lexical factors seem to be at play (Bosque 1996, Dobrovie-Sorin & Laca 1996, 2003). One first group of cases involves pairs of direct objects and lexical verbs where the meaning connection is so tight that in a sense one can think that the meaning of the verb already presupposes the class of objects denoted by the direct object (Bosque 1996: 46, his example 38).

- (322) a. Hice fotocopia.
 made photocopy
 b. *Rompí fotocopia.
 broke photocopy

- (323) a. Adjunto informe.
attach report
b. *Leo informe.
read report
- (324) a. Se formuló resolución.
SE stated resolution
b. *Se ocultó resolución
SE hid resolution

In many of these cases one can think of a single lexical verb that expresses both the meaning of the verb and the direct object: (322a) could be *fotocopiar* 'to photocopy', or (324a) could be *resolver* 'to determine in court'. The impression that the direct object and the verb form one complex predicate is reinforced by examples where the verb is light in its meaning, such as *tener hambre* 'have hunger, be hungry', *tener frío* 'have cold, be cold' –with mass nouns– and *tener casa* 'have house', *tener perro* 'have dog' –with count nouns–. It is true, as we see from the last cases, that not all the conceivable examples have an equivalent lexical verb. Anscombe (1986) for French has proposed that these cases without an intensional predicate or negation are possible because in them the predicate expresses a prototypical situation that can easily be used to classify events and entities that participate in those events. The examples in (325) can be related to this notion of prototypicality (see in particular Espinal 2010 for examples like those).

- (325) a. Juan tiene novia.
Juan has girlfriend
b. Supermán lleva capa.
Superman wears cape
c. Hay examen.
there.is exam

(325a) can be used to classify the subject in one of the several socially-relevant groups that are defined by the civil status of an individual –single, married, etc.–. The predicate expresses a typical set of properties that can be judged as similar to 'not to be single', and in this sense it is naturally understood that the bare noun, rather than acting as a proper argument of the verb, is used to restrict the type of situation that it expresses.

As for (325b), note that the prototypicality that the predicate conveys implies that we have a stereotypical image of the subject and we are describing it (rather than informing about what he has among his items of clothing). In fact (Bosque 1996), note that if we use adjectives to modify the bare noun, we are forced to use those that express the prototype –in the case of Superman, the cape is red, but the prototype does not say anything about whether one should like the cape or not–.

- (326) a. Supermán lleva capa roja.
Superman wears cape red
b. *Supermán lleva capa bonita.
Superman wears cape nice

As for (325c), the notion that licenses it is the idea that we are talking about an (instantiation of an) event that is either periodic or planned in a calendar (Bosque 1996: 45). The idea is that the exam is an event that one expects in a certain context, and also that is

generally announced in a specific time frame. The following examples are also instances of the same type of condition.

- (327) a. Hay reunión de departamento.
 there.is meeting of department
 b. Tendremos boda el mes que viene.
 will.have.1pl wedding the month that comes
 'We will have a wedding next month'
 c. Hemos organizado fiesta.
 have.1pl organised party

In contrast (Giry-Schneider 1991), any happening that is unexpected given the normal course of events would not be naturally expressed with a determinerless bare count noun (example from Bosque 1996: 45).

- (328) Hubo atropello de peatón.
 there.was running of pedestrian
 Intended: 'There was a running over of a pedestrian'

Thus, to summarise: the condition in general is that count nouns cannot appear without determiners unless they are in the plural. In the singular, their distribution is restricted to well-defined syntactic contexts also known to trigger non-specificity or license determinerless readings in unexpected positions –such as the preverbal subject one–; additionally, there are semantic conditions on prototypicality and lexical constraints which suggest that the noun is co-defining the predicate more than acting as one of its arguments.

10.1.2. Syntactic positions

With respect to the positions that bare common nouns can occupy, the examples that we have seen up to now show that they can appear as direct objects of the transitive predicates, provided the conditions on number and countability are satisfied.

- (329) a. Traigo sal.
 bring.1sg salt
 b. Traigo botellas.
 bring.1sg bottles

In the subject position, unless focalisation is present –see below–, the bare nouns can appear postverbally with the class of verbs known as unaccusative, where by hypothesis (Burzio 1986) the subject is non-agentive and occupies a base position that is equivalent to the direct object of transitive verbs (Suñer 1982, Torrego 1989, Masullo 1992, Lapesa 1975).

- (330) a. Llegan trenes.
 arrive.3pl trains
 b. Sale aire.
 comes.3sg air
 c. Mueren niños.
 die.3pl children

Contrast this with the postverbal subject of verbs where the subject is interpreted as an agent, including transitive and unergative verbs of the *correr* 'run' type.

- (331) a. *Estornudan niños.
sneeze.3pl boys
b. *Comen niños la sopa.
eat.3pl boys the soup
c. *Nadan bañistas.
swim.3pl swimmers
d. *Leen profesores las tesis.
read.3pl teachers the theses

The possibility extends also to the postverbal position of subjects in passive sentences, where the subject is also non-agentive and comes from an underlying object position (Lapesa 1975).

- (332) a. Fue encontrado oro.
was found gold
b. Fueron establecidas leyes severas.
were established laws strict

See Laca (1996) for the effects that bare nominals have in the aspectual interpretation of the predicates, be it as postverbal subjects or as direct objects.

After prepositions, the restrictions are even stronger. Common nouns without a determiner do not accept the prepositional *a* 'at' that marks some animate and inanimate direct objects, possibly because bare noun phrases have a non-specific reading and the prepositional marking in the object is related to specific readings of the subject (see Fábregas 2013 for an overview).

- (333) Vi (*a) niños en el parque.
saw at children in the park

The ban extends to indirect objects, that also are marked with *a* 'at': bare common nouns are rejected in such contexts, independently of the possible prototypicality that one could associate to some of these situations.

- (334) a. *Di caramelos a niños.
gave candy to children
b. *Di importancia a problemas.
gave importance to problems
c. ??Entrego paquetes a clientes.
deliver packages to clients

Of course, nominal expressions that contain modifiers or coordination structures that can license determiner-less common nouns in preverbal subject position are allowed, but as we have already suggested this is not a real exception: the modifiers or the coordination substitute the determiner in these cases.

- (335) a. Di caramelos a niños y mayores.
gave candy to children and adults
b. Di importancia a problemas que no debería haber considerado.
gave importance to problems that not should have considered
c. Entrego paquetes a clientes millonarios que me dan propina.

deliver packages to clients millionaires that me give tip

With respect to other types of prepositional complements and modifiers, bare common nouns typically appear as noun modifiers that define subtypes of the noun (336), manner complements of verbs (337), cause complements (338), locative complements (339) and temporal complements (340).

- (336) a. un ladrón de joyas
 a thief of jewels
 b. una casa de veraneo
 a house of holiday-summer
 'a summer house'
- (337) a. escribir algo a mano
 write something at hand
 'write something by hand'
 b. comer algo con cuchara
 eat something with spoon
- (338) a. muerto por bala
 dead by bullet
 b. hacer algo por miedo
 do something by fear
- (339) a. estar en clase
 be in class
 b. discutir algo en casa
 discuss something in house
 'discuss something at home'
- (340) a. recoger algo en invierno
 collect something in winter
 b. entrenar en lunes
 train in Mondays

A few remarks are in order with each of the classes. About (336), note that these bare nouns used to define subtypes are internal to the NP, more internal than for instance qualitative adjectives (341), and cannot be substituted by a possessive pronoun because they do not introduce new referents. They contrast, then, with nouns combined with determiners in the same context (Sánchez 1997).

- (341) a. un ladrón de joyas elegante
 a thief of jewels elegant
 b. #un ladrón elegante de joyas
 a thief elegant of jewels
- (342) a. *el ladrón de las joyas elegante
 the thief of the jewels elegant
 b. el ladrón elegante de las joyas
 the thief elegant of the jewels

With respect to (337), Bosque (1996) emphasises that these modifiers are not instruments, but define different manners of performing the event. (337a) cannot answer a question like 'What did you use to write the letter?', or 'With what did you write the letter?', but a question

like 'How did you write the letter?'. With a determiner, the preposition might change, but in any case now the pattern reverses and the manner reading is out.

- (343) a. escribir algo con la mano
write something with the hand
b. comer algo con la cuchara
eat something with the spoon

Note that (344) is not grammatical, presumably (Bosque 1996: 51) because there is a stereotypical notion that using a chair is not a manner of breaking a window.

- (344) romper la ventana con silla
break the window with chair

In parallel to this, (338) defines a manner while (345), with a determiner, defines rather the instrument used to cause death.

- (345) matar a alguien con una bala
kill at someone with a bullet

With respect to (339) and (340), Masullo (1996) proposes that the notion of prototypicality is also relevant in such cases: one does not just express a location or a time period, but rather defines a situation at taking place, typically, in a place or in a time frame that repeats periodically –remember the examples above of the type *Hay examen* 'there.is exam'–. When one is *en clase* 'at class' one is not just located in the physical space that is defined by the classroom, but is also taking part in the prototypical activities that occur there. When one says that a particular fruit is collected *en invierno* 'in winter', one is defining the nature of the fruit as one whose internal properties have an internal disposition to mature typically in winter. Contrast this with (346), where no such interpretations are forced.

- (346) a. estar en la clase
be in the classroom
b. recoger algo en un invierno
collect something in a winter

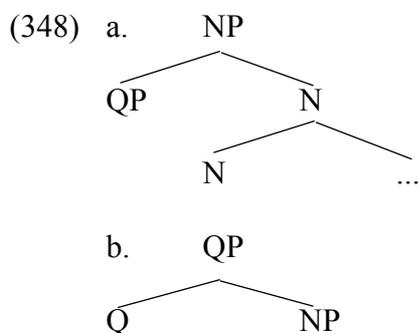
Finally, there is a restriction related to argument structure: if the nominal expression receives focus, and typically carries contrastive stress, it can be licensed in contexts such as the preverbal position:

- (347) CHICOS vinieron, no adultos.
boys came, not adults

Having presented the main contexts and restrictions for bare common nouns, let us now see how they have been analysed. We will divide the proposals in two classes: those that argue that there is a silent determiner in such cases –at least in the cases where they are interpreted as arguments–, and those that argue that there is no determiner in the nominal expressions.

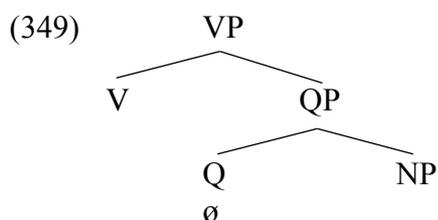
10.2. Bare nouns as nominals without determiners

The first set of proposals treats the common nouns above as containing determiners or quantifiers internal to their structure, only that these are phonologically empty. The question is orthogonal to the problem of whether the determiner is a head or a specifier; tellingly, Contreras (1986) defended that these nominal expressions had a silent quantifier as a specifier (348a), while in (1996) he presented an analysis where it is a head (348b).

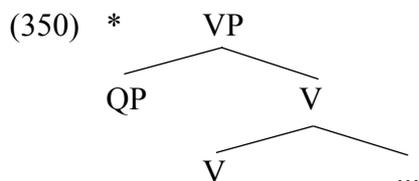


In both cases, the assumption is –as Stowell (1989) and Longobardi (1994) explicitly argued– that a nominal expression cannot be licensed in argument position unless it contains a generalised quantifier, be it a strict determiner or a quantifier.

Contreras' (1986) proposal is that the positional restrictions of (apparently) bare common nouns follow from a principle about how a silent head is licensed in the syntactic context. He assumes the Empty Category Principle (Chomsky 1981), and proposes that the empty quantifier is only licensed when the nominal appears in the complement position of a lexical head. This explains why the direct object position is possible, as well as the postverbal position of subjects which by hypothesis are merged as internal arguments. In both situations one can assume that the nominal expression did not leave the position of complement of V.



In contrast, the subjects that are interpreted as agents are not in a complement position even when they appear postverbally, given that they are merged (by hypothesis) as specifiers of VP (or vP). (350) does not satisfy the Empty Category Principle.



The preverbal subject position is again a specifier not immediately introduced by a lexical head, so this would explain why the empty quantifier is not licensed in such cases.

One can speculate that after prepositions the distribution is even less restrictive because P is not a proper licenser for the empty quantifier; the open question is why some adjuncts can appear after the preposition –such as those interpreted as manners–, but it is very plausible

that these should be seen more as predicates –modifiers of the event– than as arguments. Instruments, which as we saw require a determiner, would be proper participants in the event, not predicates.

Contreras (1986, 1996) specifically proposes that the empty category in such cases is a quantifier, something that explains why generally count nouns must appear in plural in these contexts –the quantity interpretation is not licensed by a single individual–. Bosque (1996: 97) correctly points out that this proposal faces the problem (Benincà 1980) that the bare plural of a common noun is not always interpreted quantificatively. In contrast to (351a), (351b) is compatible with a reading where Juan only takes one pill a day. Consider also (352), which is a way of asking if one person has one child, and the plural is not interpreted as a group.

(351) a. Juan toma algunas pastillas todos los días.

Juan takes some pills all the days

'Juan takes some pills every day'

b. Juan toma pastillas todos los días.

Juan takes pills all the days

'Juan takes pills every day'

(352) ¿Tienes hijos?

have.2sg children?

'Do you have any children?'

The proposal, however, has several problems. One of them is that, as we saw, it is not the case that bare nominals are licensed in any context where they are governed by a lexical verb (remember for instance that the intensional verbs are able to do so in the singular, but other verbs are only able to do it if there is a notion of prototypicality or some match between object and verb in lexical meaning). It is also unclear that a focus interpretation would license the empty quantifier.

10.3. *Bare nouns as nominals with silent determiners*

The alternative is that what we see is what we get, and therefore that bare nominals really lack a determiner or quantifier. This idea has two versions, depending on whether the bare noun is interpreted as a predicate or it is still an argument.

Masullo (1992) –see also Chung & Ladusaw (2003)– proposes that the bare nominals are in fact restrictors of the main predicate that, in the proper sense, act more as predicates than as arguments. He proposes a process of incorporation of the bare noun to the predicate. Assuming, as Baker (1988) does, that incorporation requires a head-complement configuration allows Masullo (1992) to account for the fact that bare nominals tend to appear in complement position. The preverbal subject position is a specifier site, and there is no incorporation from specifier to head. The restrictions in prepositional contexts naturally follow if the intervening P head at least makes the incorporation more difficult.

The incorporation analysis is better equipped than the analysis involving a silent Q to deal with the cases where, as we saw, there is a tight lexical relation between the noun and the predicate. If incorporation creates a complex predicate where the incorporated nominal restricts the type of event that the verb expresses, the notion of prototypicality naturally follows, because then we would only expect incorporation to be natural if the resulting predicate is a plausible subtype of the event, one that is already established culturally or by other means. The incorporation analysis is also compatible with the observation that bare nouns tend to be adjacent to the verb (Bosque 1996: 98):

- (353) a. Le regalé (generosamente) esta cartera a María.
 her gave generously this wallet to María
 b. Le regalé (*generosamente) carteras a María.
 her gave generously wallets to María

The proposal is also well-equipped to treat the instances where we saw that the verb is lightly interpreted and the bare noun restricts its denotation and even selects the arguments (as in *tener hambre* 'to have hunger, to be hungry'). However, Bosque (1996) points out two problems for such account, or better put, for the specific proposal that there is an incorporation process between the object and the verb.

One of them is that the bare noun can be focalised, as we saw, and then it is separated from the verb. This extends beyond the preverbal subject position:

- (354) PENA me da, no risa.
 sadness me gives, not laughter
 'It makes me sad, it does not make me laugh'

The other one is that nothing prevents the bare noun to be externalised in a relative clause:

- (355) la pena que me da
 the sadness that me gives
 'the sadness that it produces me'

Note, however, that these problems specifically target the claim that there is a syntactic incorporation process involved. Chung & Ladusaw (2003) propose that the restriction can be performed in semantics, by treating the nominal as a predicate that composes with the verb. If they are right, these examples do not contradict the proposal that the bare nominals are predicates and not arguments.

In contrast, Lois (1987) proposes that even though these nominals lack a determiner or quantifier in their syntactic structure, they are arguments. In this analysis, having a D or Q is not necessary to become an argument, contra Longobardi (1994), but of course there has to be something that licenses the nominal expression in that position. In Lois (1987), this is case: in particular, the bare nominals receive partitive case, not nominative or accusative. The merit of this theory is that it provides an independent syntactic account of why bare nouns cannot receive the *a* marking even when they are objects; it is also well-equipped to deal with the restriction that indirect objects (which use dative case) do not license bare nominals, and it can be extended to other prepositional contexts provided that the cases where the bare noun is allowed are treated as predicates.

The problem for this theory, however, is that it forces the conclusion that the same structure will be able to assign nominative / accusative or partitive depending on the presence or absence of determiners in the nominal expression (Contreras 1996). In (356a), the argument would receive nominative and in (356b) it would receive partitive, even though in both cases there is agreement between subject and verb.

- (356) a. Llegaron los trenes.
 arrived.3pl the trains
 b. Llegaron trenes.
 arrived.3pl trains

As we see, none of the theories is free of problems. It is perfectly conceivable that bare noun phrases do not form a homogeneous class: in some of them the analysis as restrictors of the predicate is very tempting –particularly when there is a lexical matching between noun and verb–, while in other cases the restrictor proposal does not seem to be appropriate –for instance, in focus contexts– and it could be the case that for such cases Contreras (1986) was right in the claim that there should be a silent Q (or D) –the restriction on datives is a good example of this–. This matches our intuitions that in some cases the bare noun seems to define a subtype of the predicate, while in others (such as 356b) it is more difficult to imagine what prototypical subtype is expressed and an argument analysis seems more appropriate.

11. Conclusions

It is time to wrap up. In this overview, we have seen that there are some common threads in all the discussions about the nature of quantifiers and determiners; here we will sum them up and present a few conclusions about each one of them.

In the more descriptive side, here are the main issues that are still open:

- a) What is the relation between a quantifier and a strict determiner?
- b) What is the proper definition of the notion of definiteness?
- c) Which of the many notions of specificity is defined in the grammar of natural languages?

With respect to (a), we have seen that there is evidence that quantifiers and determiners must form a natural class in some respect: they are able to license particular syntactic positions, specifically in Spanish the preverbal subject position. We have also seen that the notions of specificity and definiteness, which deal with reference, are relevant to classify quantifiers in classes. Conversely, we have seen that at least in the case of the definite and indefinite article there is also evidence that some form of quantification is at play –remember that indefinites can introduce new variables in the discourse and definites can be related to a notion of uniqueness and produce weak referential readings where they can also act as variables–. However, despite the claims made in the Generalised Quantifier Theory, there are empirical differences between a quantifier and a proper determiner in terms of the scopal relations that they define and the impossibility of extending in long distance the referential information to other nominal expressions that would be under their scope. Some of the theories about these objects have proposed to account for this apparently contradictory situation by appealing to the presence of two layers (QP and DP in Gutiérrez 2008, WDP and SDP in Zamparelli 1995), attempting to associate the referential information to a layer that dominates a quantifier but is distinct from it. In several parts of this article we have seen that the division is not clean, with for instance the definite article being able to be base merged in both of them. The relation between quantifiers and determiners is, therefore, still not cleanly captured in the existing proposals.

With respect to definiteness, we have seen that an old philosophical tradition has associated it to uniqueness as a specific form of quantification, but such theory has to face the problem that the same common noun can be used twice, referring to two different entities, in the same sentence –therefore contradicting uniqueness in its literal interpretation–. This has prompted pragmatically-based theories about definiteness that appeal to notions such as salience, but these theories leave open the issue of which information the definite codifies grammatically in order to trigger the appropriate pragmatic interpretation. Conversely, if we lack a clear grammatical definition of definiteness, what we understand as an indefinite is also unclear.

Note that the problem affects what we understand as definiteness within one single language. A cross-linguistic definition of definiteness is even more complicated to find, but at least one would have the option to propose that different languages grammaticalise different ways of expressing identification –in vague terms–, and therefore that what we call a definite in language X might not be identical to what we call a definite in language Y. It is difficult to maintain that the same variable definition of definiteness would apply within one single language, in a way that some uses of the same morphological exponent (*el / un*) appeal to one notion and other uses appeal to a different notion. It seems plausible that part of the problem is that there is no agreement with respect to how the pragmatic interpretation connects to the formal semantic information associated to items and structures as entailments or presuppositions.

In the case of specificity, the main problem is that, as a term, it has been used to express very different notions within distinct linguistic traditions, ranging from definitions based on scope to others based on the notion of givenness and topicality. There is a strong sense of specificity that is related to a well-defined set of syntactic contexts –intensional verbs, negation, etc.– and has to do with whether it is presupposed that there is a referent for the nominal expression or not. At least for Spanish and English, this notion is the one that has the best chance to be grammaticalised in the syntactic structure. Beyond this, a parallel debate has to do with whether the distinction between specificity and non-specificity should be accounted in syntax or in semantics –in the second case, as interpretation instructions that are not relevant while we build the structure–. If the interpretation is syntactic, then the question is whether it is defined in the internal syntax of the nominal expression –as different layers, or through different movement configurations– or in the wider syntactic contexts, for instance placing non-specific elements within a clause domain and specific elements in another domain within the clause.

These issues are already complex, but the theoretical and analytical questions are even more difficult to approach. In this overview we have highlighted the following issues:

- a) Are determiners / quantifiers heads within the nominal expression?
- b) Do nominal expressions without a determiner function as arguments?

The first question ultimately connects with the very general problem of whether grammar has a reduced set of primitives to build all the existing configurations or not. We have seen that determiners do not seem to act like heads with respect to two properties: (i) they do not seem to be selected by heads, as for instance CP does and (ii) they do not seem to impose formal requirements on the material they introduce, as CP also does. From this respect, the syntactic evidence suggests that they should be viewed as specifiers of nominal expressions, despite some preliminar evidence for N-to-D movement, which would presuppose –given current assumptions– that D is a head that introduces a constituent that contains NP. If D is a head, it is clear that definiteness should not be considered a notion that is expressed by a feature that somehow can be selected by other heads, and by the same token the information associated to D should not have the power to select formally different objects in its complement. This position is not unthinkable –perhaps connecting with the idea that definiteness is rather a pragmatic notion–, but it certainly weakens the DP-hypothesis significantly.

In fact, the appeal of the DP-hypothesis is rather conceptual more than explanatory of the phenomena that define DPs. The proposal that DP is a high functional layer in the nominal expression ultimately implies that nominals share the syntactic structure of clauses in relevant respects. We have seen that it has been argued that DPs produce the same contrasts as CPs with respect to extraction of constituents from their domains, and it has been claimed that the

different types of propositions selected by types of predicates are parallel to the different types of nominal expressions with respect to their referentiality. In other traditions, DP is parallel to TP as a position that introduces the 'subject' of the nominal –its possessor– and is used to anchor the expression to the utterance context. If such approaches are successful, one could push for the view that natural languages have a very small set of functional heads to build complex structures, and these functional heads are basically shared by clauses and nominals, even if they are conceptually interpreted in different ways.

The question of whether Ds are necessary for a nominal expression to become an argument is, as we have said repeatedly, orthogonal to the previous question. The debate, in this sense, reduces to the issue of whether the role of Ds is to turn a predicate (NP) into an individual that can saturate one of the argument positions of the predicate that introduces it. If this is the role of determiners, then proper names must carry them –a position that is less controversial, given their semantics– as well as bare common nouns used as arguments –a position that is very controversial–. If determiners do not play this role, then they would rather be devices used to convey notions of definiteness or specificity.

Empirically, the problem is further complicated by the possibility that some bare noun phrases that apparently occupy an argument position are actually used to restrict the predicate, not saturating in the proper sense any of the verb's arguments.

A restriction such as the one that Spanish imposes on preverbal subjects –which compulsorily must carry a determiner or quantifier– suggests that determiners must be somehow required in specific syntactic positions, beyond the information about referentiality. In contrast, we have also seen other cases where intuitively the noun and the predicate must match in some sense, supporting the proposal that in such cases they should be viewed as part of the predicate rather than as arguments; in this second case, an analysis based on syntactic incorporation is problematic, but there are other technical ways of making the restriction possible. We have seen that the conflicting evidence suggests that bare common nouns do not form a unified and homogeneous class. In some instances the idea that they carry a determiner with specific licensing conditions is plausible (remember for instance indirect objects), and it could be the case that in such instances the presence of the determiner is directly related to their use as arguments. In other instances, they are completely non-referential and plausibly used to restrict the predicate (remember in this respect the manner interpretation, as opposed to the instrumental one).

It seems to us that the only way of disentangling this issue is to clarify how definiteness and specificity are expressed within the language, starting from whether there are formal features present in the syntax that directly express these notions. Once this problem is addressed, we will be in a better position to understand why determiners are required in some syntactic contexts but not others, and at that point we can pose the question of whether the restriction has something to do with argumenthood or not.

Despite all these open questions, we hope to have been able to provide the reader with a sufficiently detailed state of the art of what we currently know about determiners and quantifiers in Spanish

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